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## **Socio-Economic Challenges Faced by Pakistan**

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International Institute of Islamic Economics (IIIE), International  
Islamic University, Islamabad, Pakistan

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# **SOCIO-ECONOMIC CHALLENGES FACED BY PAKISTAN**

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## ***Foreword***

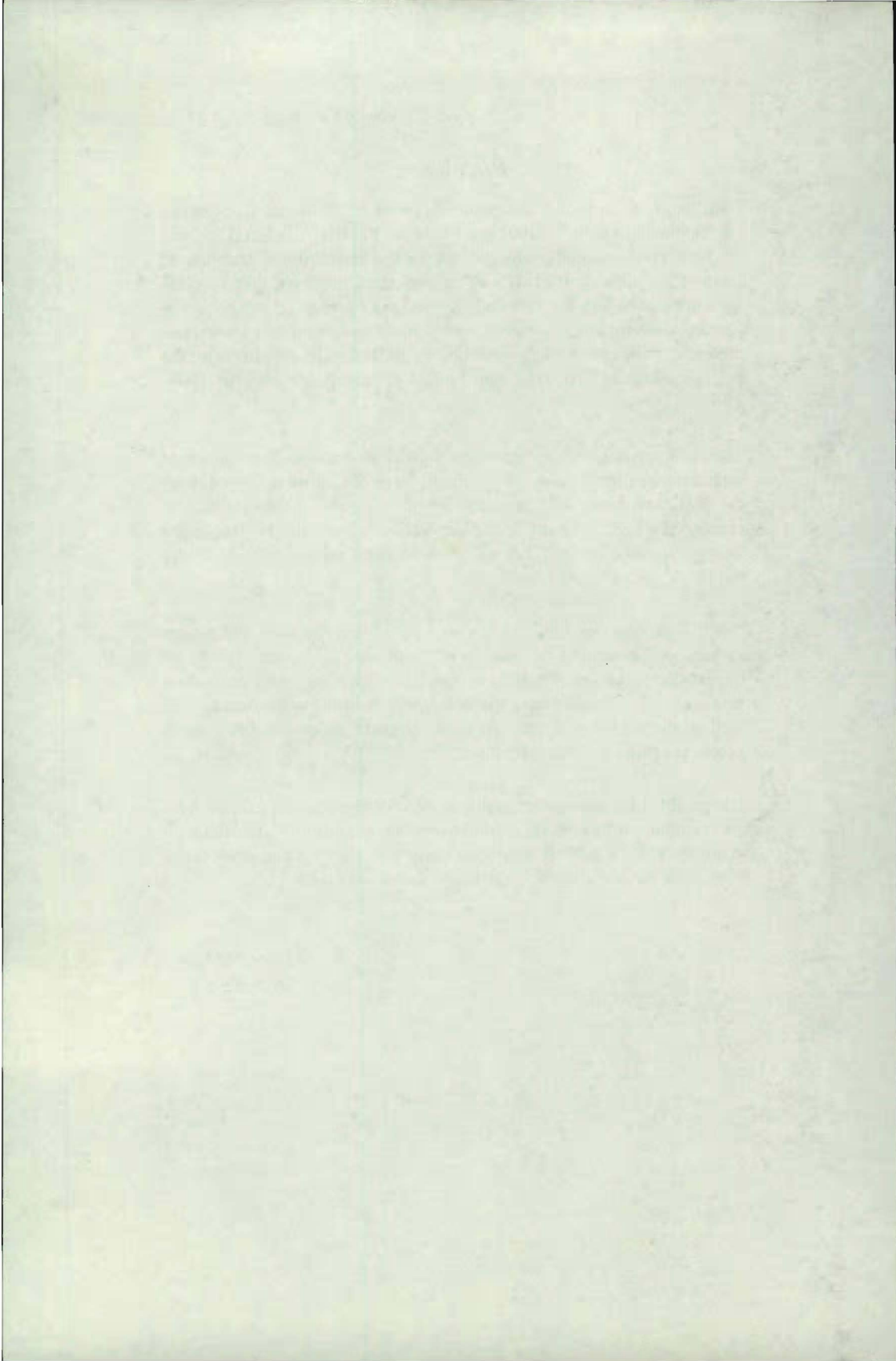
I am happy to note that the proceedings of the National Conference on "Socio-Economic Challenges Faced by Pakistan" held on 2<sup>nd</sup> and 3<sup>rd</sup> June 2008 are being brought out by the International Institute of Islamic Economics, IIUI. It was an important initiative taken by the Institute just before the first budget was being presented by the newly elected Government. It was expected that the considered views and analysis made by leading economists of Pakistan would help the policy makers in finalizing their budget proposals for the year 2008-2009.

The economy since then has taken a grave downturn. The continued imbalances in the balance of payments have forced us to fall back on the IMF assistance and in accepting their conditionalities. Inflation rate is very high. The rupee has depreciated considerably. Banks are facing liquidity crunch. Tax collection targets agreed with IMF are not being met.

I still feel that the Proceedings will be of relevance to the policy makers as the leading economists of Pakistan had predicted some of the problems we are facing now, and had suggested many corrective measures. The Proceedings, therefore, will help the policy makers as well as the students of economics to critically appreciate the present economic problems faced by Pakistan.

I hope the Institute would continue to organize similar conferences and seminars to bridge the gap between the economists and financial decision-makers as well as to encourage the teachers and students to engage in analytical work on Pakistan's economy.

*Dr. Anwar H. Siddiqui*  
*President, IIUI*





## ***Preface***

The International Institute of Islamic Economics is devoted to the cause of education and research since its very date of inception (1983). It has earned commendable recognition both at the national and international level, particularly in the Islamic World. The primary objectives of the Institute include:

- Teaching of modern economics, with emphasis on Islamic economics, banking & finance, and other related disciplines at Bachelor, Master and Doctoral levels with international standards.
- Conducting research in the relevant areas to address the leading issues faced by the Muslim World in general and Pakistan in particular
- Providing consultancy services to public and private organizations and arranging training programs for in-service workers.
- Promoting coordination with leading educational and research institutions of the world through workshops, seminars, colloquia, conferences, exchange of staff and students, scholarships and stipends.

The Institute decided to organize a national conference and to provide the academicians, researchers and technocrats with a forum for dialogue and exchange of ideas. The objective was not only to pinpoint and discuss the multi-dimensional problems faced by the nation at scholarly level but also to find the possible way outs to overcome the challenges and to explore plausible suggestions for convenience of the policy makers, executives and business people. The conference was held at the crucial time when the newly elected government had just taken over charge and it was preparing to present the first budget while the general public was looking forward with great expectations.

The faculty, research team and supporting staff of IIIE worked really very hard for a long time to have the conference an event of success. We appreciate their devotion and dedication. The credit also goes to the graduate students who were equally involved in the process from beginning to the end. We acknowledged their enthusiasm, struggle and assistance with thanks. The conference provided them with a golden opportunity of learning and direct interaction with the renowned scholars. The role of Dr. Anwar Hussain Siddiqui, President of the University needs no explanation. He motivated and constantly pushed the organizers to meet the objectives of the conference. His interests manifest from his personal presence in all sessions of the conference and placement of all the facilities available in the University at our disposal. We are particularly grateful for his kindness and patronage.

Dr. Nasim Shah Shirazi  
Director IIIE

## IV

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## **Introduction**

This book is a collection of papers presented by eminent economists and social scientist during the two days national conference under the title "Socio-Economic Challenges Faced by Pakistan" held on 2<sup>nd</sup> & 3<sup>rd</sup> June 2008 at the Convention Centre of the International Islamic University (IIU), Islamabad. The conference was organized by the International Institute of Islamic Economics (IIIE) with the objective to provide an appropriate forum for debate and policy discussions on the emerging issues faced by the economy and to facilitate the governmental efforts, in the upcoming budget to address the emerging issues faced by the economy at the critical juncture which according to some was characterized as economic "melt down". That this national conference was indeed a success is manifest from overwhelming participation of the eminent economists from all parts of the country who either presented scholarly papers or took part in the dialogue by chairing various sessions of the conference and contributing their valuable suggestions.

The prominent figures on the national screen like Mr. Sartaj Aziz, formerly Minister for Finance and currently Vice Chancellor, Beaconhouse National University, Lahore, Dr. Zubair Sherpao, formerly Minister for Commerce, Mr. Ahsan Iqbal, formerly Minister for Planning/Education, Mr. Saeed Ahmad Qureshi, formerly Secretary General and Deputy Chairman, Planning Commission and Dr. Zafar Altaf, formerly Secretary, Agriculture; were kind enough to chair different sessions of the conference and provided valuable inputs to the deliberation process. We are particularly thankful to these dignitaries who spared their precious time to grace the conference. Thanks are due to all the worthy scholars and participants whose contributions, patience and sincerity for the national cause made this conference a mile stone.

Besides the inaugural session, the conference was spread over six regular sessions distributed from morning to evening on both days with only short breaks. The papers contained in this volume dilate upon variety of issues and a progression from broad policy framework to macro-economic and sectoral problems has been maintained in the text. The broad issues addressed in the conference may be summarized as under:

1. Development Policies in Pakistan
2. Inflation, Debt and Budgetary Issues
3. Employment Strategies
4. Poverty, Housing and Economic Reforms
5. Fiscal and Monetary Policy
6. Food Security and Energy Crisis

It seems appropriate to summarize the main ideas and arguments presented by the worthy scholars in sequential order for the convenience of the general readers.

Dr. Arshad Zaman in the paper entitled "*In Search of Policy*" dilates on the policy challenges faced by the new PPP government and highlights the actions and priorities that the government ought to follow in the prevailing difficult situation. The author emphasizes that it is necessary at the outset to restore the confidence of markets and

stake-holders by returning to the facts and putting an end to statistical mendacity. In the short run, the government should endeavor for financial stability while in the medium run every effort has to be made to establish (ensure) economic management. The author calls for reorganization and minimization of the distortions by integrating and merging planning, and development division with economic affairs into a ministry of finance and development.

The cause of the present crisis, according to the author, is not the deficit in domestic and external finances per se; rather it is the deficit (slackness) in the economic management. The author provides a critical review of the economic policies of the past military-led government under the title of 'what went wrong'. Pakistan benefited from exceptional financial flows from abroad after 9/11 resulting into unprecedented rise in foreign reserves despite the widening current account deficit. However, the government failed to realize the transient nature of this opportunity; rather an illusionary fiscal space was created, and committed a series of policy blunders; for instance, channeling the resource to consumption. The resources were allocated towards import-intensive consumer industries and the banks encouraged expansion of consumer credit, thereby injecting instability into the system. The present government has to bear the consequences anyhow. It has to address the popular expectations by providing relief to the poor masses, in the immediate and short run.

Dr. Pervez Tahir maintains in his paper "*Macroeconomic fundamentalism, populism or what?*" that the relentless pursuit of growth during the past eight years was socio-graphically pro-elite and geographically pro-largest province, which benefited at the cost of voiceless poor and smaller provinces. Euphoria emitting from the false claims of the achievement of macro-economic stability has evaporated. In fact, the record of performance for the past nine years is hardly enviable given the goals of the regime. A comparison of 2006/07 with 1999/00 is indicative of major failures, the current account deficit is more than threefold, inflation rate is twice of what was to begin with and tax to GDP ratio declined. Hopes of the poverty stricken masses to benefit from the trickle down of the growth as a consequence of macro economic stability, did not materialize.

The economy is at present facing multidimensional crisis. The author suggests development and relief programs to mitigate the miseries of the poor and shelter-less as a democratic government can ill afford to be seen as doing nothing. The regime should not be scared to be dubbed as "populist" and need not heed to the advices calling for elevating macro-economic fundamentalism as a major driver, which will result into nothing but increasing misery of the populace. Some of the measures suggested by the author are (a) Write off the loans taken by small farmers in rural areas and smaller loans extended by House Building Corporation in urban areas. (b) Re-designation of the current intern programs into National Development Volunteers Program and further expansion (c) Conversion of National Energy Conservation Centre into a regulatory authority to mount energy auditing at a national scale wherein incentives should be provided for local manufacture of energy savers and (d) Setting of a deadline for full payment of the compensation to earthquake victims.

Dr. Kaiser Bengali in his brief discourse note "*Budgeting for Industrial Revival*" highlights the enormity of the crisis being faced by the economy. Budget and current



account deficit and inflation are posing grave threats, which can further aggravate with devastating effects if there is a reduction in foreign capital inflow. According to the author, explicit policy tilt towards services and financial sector at the cost of commodity producing sectors such as agriculture and manufacturing during the past nine years is a major factor explaining the current economic scenario.

In order to improve the situation through enhancing revenue generation and correction of the distortions biased against manufacturing activity, the author makes a variety of recommendations. Raising import duty on consumer items by 5% and restriction on imports of inessential items is suggested to check the trade deficit. At the same time, it is advisable to facilitate the domestic industry to regain its share within the country. Stock market has not served as a source of resource mobilization; rather it promoted the speculative activities competing with manufacturing. Thus, the exemption of capital gains tax is necessary if the shares are held for more than six months. The author also recommends the wealth tax on luxury housing to inject equity in the system as well as raising relative profitability of manufacturing. In the same vein, the author views that gas pricing for manufacturing sector should not be discriminatory.

Dr. Mohammad Rafiq Khan, in his paper "*Stabilization of Pakistan's Economy Demand – A Hit at Root and Sacrifices at Top Level*" investigates the causes and effects of the destabilization of the economy in an interlinked framework. A major conclusion of the paper is that unless the leadership realizes its faults it would be impossible to put Pakistan's economy back on the right track. The author calls for developing the linkage between macro-economic and micro-economic models, which could facilitate distribution of wealth, and genuine allocations in the budget. It needs correction of the existing set up, which produces little and consumes more. The author recommends a closer collaboration of economists with technologists, engineers and scientists in order to produce interdisciplinary minds with versatile approach to identify production-oriented projects and economize on the talents of the country.

Dr. Ather Maqsood Ahmed, in his paper entitled "*A Critical Appraisal of Taxation System in Pakistan*" examines the reforms undertaken by the past government in tax policy and administrative structure to achieve the objectives of resource mobilization. The author argues that while efforts to minimize the distortions have been made, the system continues to be afflicted with variety of challenges and constraints. Due to sub-optimal tax effort, Pakistan continues to lag behind by at least five percentage points from the average of the developing world in tax/GDP ratio, and it constitutes a major failure. This inadequacy stems from legislative restrictions compounded by plethora of exemptions and huge undocumented economy. The author maintains that phasing out of customs and excise has been too fast as compared to the pace of GST implementation. Delayed response to internal and external shocks and expenditure over-runs has led the country into present economic crises. According to his views, "it will be quite a while before the country regains its position of strength" even after application of corrective measures.

Dr. Abdul Qayyum in his paper entitled "*Does Monetary Policy Play Effective Role in Controlling Inflation in Pakistan*" is suggestive of the finding that when growth of



money supply is effectively controlled, inflation gets controlled. During the past few years, State Bank of Pakistan failed to control money supply and that led to inflationary trends in the economy. There appears to be a lack of coordination between Fiscal and Monetary authorities, thereby rendering the Reaction Function of the money market inconsistent overtime. Variety of issues such as monetary transmission mechanisms, lag structure of the changes and nature of relationship between instruments and goals of the monetary policy are only poorly understood by the policy makers. The author advises to be careful in calculation of the targeted level of M2.

It seems that SBP aligns the growth of money with the growth target of the real sector fixed by the government, which in case of failure (to achieve the target GDP growth rates) poses a question for the monetary authority. The paper finds that demand for credit by the private sector is insensitive to the interest rate and therefore this instrument is ineffective in controlling money supply. The SBP has failed to restrain the government from borrowing beyond agreed level, and this practice is likely to continue in future to finance higher deficits.

Dr. Shahid Hasan Siddiqui in the paper *"Performance of Banking Sector in Pakistan"* provides a dissection of the banking sector during the period 2000-2007. Various dignitaries of the past regime used to highlight "banking" as the fast growing segment of the economy, which played a key role in supporting the real sector. The present analysis however depicts a different picture. The commercial banks have appropriated huge pre-tax profits at the cost of millions of small savers who were not only deprived of their due shares; rather the banks have been paying negative real returns on small deposits. The author notes with concern that the State Bank did not take any serious notice of this malpractice except lip service. The banks have been promoting easy credit policy to finance consumer goods, which has further aggravated the current account deficit of Pakistan and has led to enhance the outstanding external debt, accelerate inflation and reduce the foreign exchange reserves.

Most of commercial banks were privatized during the past regime and their administrative control passed on to foreign owners. The proceeds thus collected have been utilized to finance current expenditure of the government rather than to retire the outstanding public debts. The privatized banks have played a key role in getting the outstanding loans of chronic defaulters written off under the umbrella of the State Bank. The financial sector of Pakistan now looks like a colony of the Federal Reserve System where the multi-nationals have full freedom to play their game and to expropriate the real value. The banking sector has expanded during this period at the expense of the real sector where growth has been sluggish and non-sustainable and where poverty is rule of the day. Those operating under the banner of Islamic Banking have also failed to achieve their real objectives and they are equally exploiting the depositors, as do their counterparts. The author offers certain suggestions to improve the prevailing situation, such as provision of rate of return higher than inflation rate on saving accounts and excluding the foreigners in the privatization process of the banks.

In their paper *"Emerging debt scenario and debt burden costs in Pakistan"* Dr. Eatnaz Ahmed, Alia H. Khan and Muhammad Idrees viewed foreign and domestic borrowing by the public sector to have negative influence on the domestic saving effort. However,



the authors also maintain that foreign aid had a positive role in economic growth. They take a position contrary to the perception that foreign borrowing was exclusively used in consumption and had no effect on economic growth. Stagnation and decline, in the economic growth during 1990s has been attributed to curtailment in foreign aid inflow and rising debt servicing cost. The authors argue that the foreign resource inflow to Pakistan was linked with the logistic support in Afghan war during 1980 and to Pakistan's active role in fight against the terrorism in the post 9/11 era rather than having been linked to economic performance.

In the context of debt management, the performance of Pakistan remained substandard and poor primarily due to weak institutions and failure to reckon with the totality of the objectives. Thus, public sector inefficiency and corruption has to be addressed in a framework of public sector management rather than economic management in isolation. The authors also highlighted the importance of the fiscal discipline with its entire contingent requirement to equip the economy to confront imbalances and social challenges, which are very much visible at present.

Dr. Hafiz M. Yasin, in his paper *"The Debt Problem of Pakistan: What can we do?"* begins with the crucial issue of persistent deficits on the revenue side of the federal budget and also on the current account of the balance of payments of Pakistan. The twin deficits have manifested into accumulation of large stacks of internal and external debts overtime. This piling up of debts is now posing severe economic, political and social problems for the nation. The problem of fiscal imbalance, according to the author, needs immediate attention and a reappraisal of the prevailing tax- expenditure position. A structural change in the foreign trade sector is also required but due to expanding development needs, this is possible only in the medium and long run.

The study presents an optimal tax-expenditure structure within a CGE model, taking the 1989-90 data as the benchmark. The model is then used for dynamic analysis of the fiscal structure both during the democratic period of 1990's and the military-led regime of 1999-00 onwards. It is shown that the twin deficits as well as indebtedness of the nation have reached overtime to a stage when further look-over is not affordable. The official reports of the past government used to show the sustainability issue in technical terms like the debt/GDP ratio and project it to be light. However the issue is very serious in real terms. In particular, the ever expanding stack of external debt and its servicing in foreign exchange is a real burden, which cannot be tolerated for long. Hence it calls for particular attention of the new government and harsh but appropriate decisions in the right direction.

Ms. Haleema Sadia and Mr. Farooq Rashid in their paper *"Globalization and Socio-economic Indicators in Pakistan"* assess the impact of globalization on poverty incidence, inequality and human development for the two time periods, 1980-2006 and 1990-2008. The study finds a very weak role of trade liberalization towards socio-economic development while the foreign direct investment is identified to be totally ineffective in this context. The study concludes that globalization has not yet generated any positive result for the poverty-stricken population of Pakistan. The authors suggest



a re-examination of the approaches towards globalization and to focus upon the issues related to socio-economic health of the country and population.

Dr. Abdul Salam, in his paper entitled ***“Current Food Security Situation: Challenges and Opportunities”*** highlights the fragility of food security situation characterized by rising prices and shortages of food items. As such a critical evaluation of the marketing system and statistical edifice was overdue. On the basis of the data on most important food grains from 1990-91 to 2006-07, the author recommends that judicious use of the fertilizers is most important factor influencing production. Equally important is to estimate distortions in the commodity markets, keeping in view both the input and output prices.

The author maintains that the productivity differentials between progressive and average farmers promise of vast potential for improving the yield. In order to realize this potential, crop production technology of average farmers has to be upgraded to the level of progressive farmers. The author suggests that while the development of new breeds is essential but time consuming, the agronomic aspects of food grain production (such as plant population, seed rate and inter-culture crop rotation) have positive impact in the short run. Research & Development System needs to be strengthened and made more relevant to the needs, the outdated statistical system related to crop production data has to be improved to serve for the policy formulation on solid grounds, while eliminating the false sense of satisfaction and the smugness.

Dr. Abid A. Burki and Dr. Mushtaq A. Khan in their paper ***“Impact of Higher Wheat Prices on Poverty in Pakistan: Futuristic of Food Security”*** conduct the situation analysis on the basis of household level data from PIHS 2001-02 and evaluate the impact of higher wheat prices on the poverty levels. In such an exercise obviously the net wheat consumer lose while the growers gain, the overall poverty level, for instance, reduces by 3 percentage points when wheat prices increase from Rs. 300 to Rs. 425 per 40 kg, as was the case in 2001-02. This overall decline in poverty was mostly due to reduction in rural poverty from 40% to 38% and a rise in urban poverty from 20.5% to 21.2%. However, when wheat prices increase to Rs. 625, rural poverty is further reduced while poverty in the urban areas worsens. In terms of provinces, a rise in wheat price leads to further worsening of the poverty situation in NWFP and Balochistan while the remaining two provinces of Punjab and Sindh gain. The authors also highlight that the price increase mostly benefits well off farmers and only 10% of the share of additional income goes to poor. Introduction of the international wheat prices results into a dead weight loss of Rs. 214 billion at fixed wheat supply level of 2001-02.

Ms. Saima Ayaz, Dr. Zakir Hussain, Dr. Sofia Anwer and Dr. Waqar Akram in their joint paper ***“Producers and Consumers Subsidy Equivalents of Wheat Crop in Pakistan”*** examine the net impact of government intervention on the producers and consumers of wheat. Utilizing the time series data for 1987-88 to 2006/07, an evaluation of the policy measures through estimation of PSE and CSE has been carried out. The authors conclude that wheat crop was heavily taxed and the overall transfers through price support, state trading and overvalued exchange rate were negative for producers. It is further added that positive support to growers through input subsidy and



infrastructure investment was not sufficient to counter balance the effect of negative factors. Hence, the consumers of wheat emerged as major beneficiaries.

The authors recommend that free play of the market forces be permitted and market economy should prevail in both resource and product market, implicit taxation of the producers needs to be avoided as well as overvaluation of exchange rate be dispensed with. Economic prices of the crops must be reckoned by the policy makers to provide level playing field to the growers.

Dr. Sabur Ghayur, in his paper ***“Strategy for Generating Employment: Some Short and Medium Term Measures”*** investigates the options to raise productivity, technical and vocational training and related measures for the provision of expanded work opportunities to the labor force. The author describes the 100 Day program of the new government as a step in right direction, which recognizes the importance of creation of decent work opportunities for sustainable socio-economic development and underscores the importance of dovetailing the needed measures into the Medium Term Development Framework (MTDF) and Poverty Reduction Strategy (PRS). It is argued that a framework in terms of Policy and Strategy for the employment generation; TVET and Human Resource Development (HRD) has to be laid down to avert the sub-optimality of other measures.

According to the available information, currently 3.1 million out of 50.05 million labour force are unemployed, a situation slightly better than 2001-02 but the scope of employment generated had impaired. Employees having income of over Rs. 4000-5000 were only 46% while 55% of the female employees were drawing less than Rs. 1500 per month during 2005/06. During 2001-02 to 2005-06, there has been a decline in the self-employment and a rise in the share of unpaid family helper. Promotion of self-employment and small-scale business through provision of liberal credit is recommended by the author, in addition to absorption of the educated youth under the coverage of National Internship Program. Furthermore, the Housing and Construction Sector should be used as an engine of growth and employment generation. The author emphasizes the promotion of overseas migration through aggressive marketing and dissemination of the information. An enhancement of technical and vocational competence is imperative for raising productivity as well as chances of employment inside and outside Pakistan.

Mr. Javed Iqbal and Ms. Misbah Nosheen in their paper ***“Impact of Trade Liberalization on wages and Employment in the Large Scale Manufacturing Industries of Pakistan”*** investigate the impact of liberalization on the outcome of labour market such as wages and employment, using the data from 1970-71 to 2000-01 for 16 industrial categories. The panel data were subjected to Generalized Methods of Moments for estimation.

The results of the exercise are specific to the choice of the indicator simulating the impact of the trade liberalization. In case of the direct measure of the liberalization, the tariff rate, there is a positive effect on employment but no effect on wages. When openness is used as a measure of liberalization, it has negative effect on employment



and no effect on wages. According to authors, there is a need to opt for neutral trade through selective export promotion policies consistent with our comparative advantage. Active and necessary support from correct national economic policies and institutions is a must for accrual of benefit from liberalization. Similarly, the problem like market failures and rigidity of factor mobility has to be addressed.

Dr. G.M. Arif and Mr. Nasir Iqbal in a pioneering attempt explore the relationship between infrastructure development and poverty incidence in their paper *"Infrastructure and Poverty Nexus: the case of Pakistan"* using Mouza Statistics 2003 and PSLQ 2004-05. The association between availability of infrastructure such as access to roads, availability of electricity, and health/educational outlets and poverty levels for different regions of Punjab province is assessed.

The study finds that regions where poverty levels are low, such as Barani Punjab, Rice/Wheat Punjab and Mixed Punjab are blessed with the availability of infrastructure, particularly, access to roads. In contrast, the regions confronted with relatively poor infrastructure facilities register high level of poverty. The analysis also indicates a positive correlation between availability of physical infrastructure (such as roads) and the presence of educational facilities for both girls and boys.

Mr. Ali Salman and Mr. Jawad Aslam in their paper *"Property Rights: Ensuring Wellbeing through Low Income housing"* highlight the importance of explicit and well-articulated property rights for the development of the country, under capitalism. Using the De-Soto framework as explicated in the "Mystery of Capital" the authors propose a policy in the housing sector for low-income population. According to the authors, there is a vast market around US\$15 billion for low income houses and there is a need to address this unmet demand through market mechanism supported by a combination of ownership of a clean and unambiguous title. This ownership little can be converted into capital and used to facilitate the poor in their access to the housing.

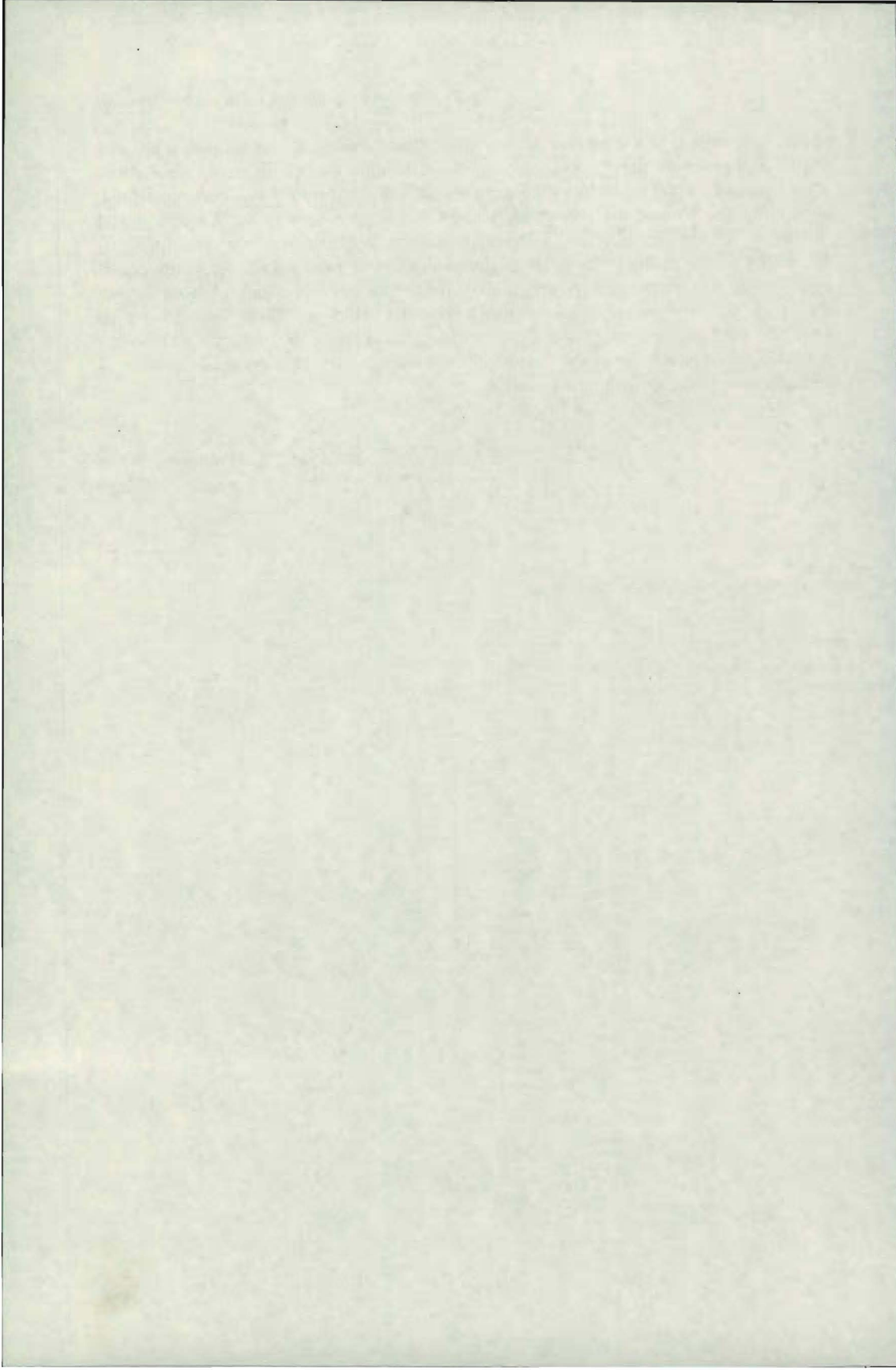
Mr. Javed Anwar, in his paper entitled *"Energy Security and the Developing Country: Issues, Strategies and Options"* investigates the energy related problems faced by the developing world with a focus on Pakistan. While the reliable and adequate energy supply is imperative for human and economic growth, the global energy resources are sufficient only for next 20 to 30 years, though at a rising extraction cost. Pakistan being heavily energy deficit is overly dependent on oil imports. The author suggests that in order to reduce the import dependency, Pakistan must tap new energy sources besides adopting conservation and efficiency measures. Pakistan should also exploit its unique geo-strategic location wherein it can serve as a transit country under the regional energy cooperation objective. This in turn is likely to enhance the security of supply and improve economic efficiency.

Mr. Suleman Hafeez Siddiqui, and Mr. Hasan Mujtaba Nawaz Saleem, in their paper entitled *"Service-Led Growth and Industrial Policy: Lessons from Pakistan"* examine the sectoral composition of output and describe it as transition from an agrarian economy to the service economy wherein the service sector currently accounts for over half of the GDP and 44% of employment. The paper also presents an analysis of the structural changes in the industrial sector under the SAP (1990-2007) and the shift from



import substitution to export orientation. The authors argue that this transition has had negligible impact on the competitiveness, diversification and employment generation. An alternative model of services-led growth and industrial policy has been presented, identifying the commodity producing sectors and service sectors as 'hardware' and 'software' of the economy, with tremendous complementarities and inter-linkages. According to the authors, the goals of diversification of production, competitiveness, employment promotion and poverty alleviation can be achieved through an adequate choice of industrial policy, while focusing upon the spillover effects for value added activities in these sectors. The failure to integrate services sector with commodity producing sectors will be at the cost of the worsening external imbalances as well as rendering economic growth unsustainable.

*Prof. Dr. Mohammad Irfan*  
*Editor*



## **In Search of Policy**

*Arshad Zaman<sup>1</sup>*

In addition to their main work - collection of data, and the construction and validation of theoretical models - economists are also called upon to "whisper in the ears of princes."<sup>2</sup> It is to this last task - to "provide guidelines for policy formulation and budget making"<sup>3</sup> - that participants have been called by the organizers of this conference. This paper attempts to respond to this call.

Policy means different things to different people. It is the premise of this paper that 'policy' is not confined to *statements* issued by government; rather, it refers to the government's *behaviour* in markets and other public places.<sup>4</sup> Policy in this view is 'strategic' in nature, where governments seek to prevail with the knowledge that competing and affected groups will plot to de-rail and foil their plans.

There is in other words no inert 'policy package' no 'programme' that an expert, expert group, or foreign lender can put together and present to policy makers, or the policy-makers to the parliament. Instead, policy-making is a continuous process in which much of the task consists of identifying, continuously, a changing core group of actions that align the policy makers' interest with those of the nation, and around which a consensus of those who matter can be forged in order to prevail. Where government consists of competing groups with different objectives and goals, and extra-governmental (national and foreign) groups vie for political control and influence, different policies may be pursued by these different factions.

Clearly, in this view of policy, the task is not to find a clever tax, structure an ingenious bond, or design a resonantly named expenditure programme. Instead, effort must be focused on setting priorities among goals, identifying supportive coalitions and opposing groups, and designing and pursuing a dynamic course of covert and overt actions to empower allies and neutralize opponents, so as to achieve those objectives. Naturally, the guidelines for this kind of policy formulation can only be talked about in the most general terms in this paper.

For the purposes of this paper then we shall seek to identify an agenda on budgetary, financial, and economic policy, in the national interest, that can be pursued by the leadership of the present Pakistan People's Party government, with the support of its coalition partners and key stakeholders.

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<sup>2</sup> The phrase is attributed to Alvin Roth by Michael Bruno, "Econometrics and the Design of Economic Reform," *Econometrica*, 57: 2 (March 1989), 275-306.

<sup>3</sup> International Institute of Islamic Economics, International Islamic University, Islamabad. Call for Papers on Economic Policies, April 2008.

<sup>4</sup> This view is spelt out in greater detail in Arshad Zaman, Understanding Policy, PIDE Lecture Series, Pakistan Institute of Development Economics, Islamabad, 2007.



### ***Policy Problems and Priorities***

There are three major problems confronting the new government. First, despite its covert understandings with the United States of America and its electoral victory, the People's Party government has been less successful in working out a *modus vivendi* with the president than it has been in keeping its other domestic coalition partners on board. The consequence of this standoff, for the purposes of this paper, has been the continued paralysis of economic decision-making, which began on March 9, 2007 with the government's dismissal of the chief justice. Second, as oil prices began their spectacular rise - from just above US\$ 50 per barrel in late January 2007 to over US\$ 130 per barrel currently (end May 2008) - neither the previous government, nor the caretaker government, nor the present government, have been in a position to deal effectively with the situation.<sup>5</sup> Finally, with economic management adrift for over a year, the economy itself has been weakened as investment, exports, and production capacity have suffered.

The first priority of government policy therefore has to be to resolve this standoff. The interests of none of the protagonists, not to mention the people of Pakistan, are served by the continued drift of the economy. Largely due to this paralysis, the overall fiscal deficit is thought to have increased from the budgeted level of 4% to 10% of GDP in 2007-2008.<sup>6</sup> In other words, the budgetary cost alone of the inaction induced by this tussle for power is about 6% of GDP, or nearly Rs 1.8 billion per day.

### ***Toward a Policy Agenda***

There is, quite frankly, little that the government can do in the present environment and it would be unrealistic to expect a full substantive statement of the new government's policy proposals in the federal budget to be presented to the national assembly (reportedly on June 7, 2008).<sup>7</sup> On the assumption, however, that the government can acquire some space for taking policy initiatives, the task of outlining an agenda could be approached in terms of actions aimed at quick results, short-term results, and medium-term results. Within each of this three-way division there is much that can be done with no or low political costs, and much that would have to be phased in a way that aligns the government's ability to incur political costs with the costs themselves. Equally, given the urgency of problems, action on all three should begin immediately.

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<sup>5</sup> This is based on readily available data for NYMEX Light Sweet crude, which fell from around US\$ 75 per barrel in the third quarter of calendar 2006 to around US\$ 50 per barrel in February 2007, just before the judiciary crisis. Since then, there has been a secular trend in the rise in oil prices in which they have reached a high of around US\$ 135 per barrel in the middle of May 2008. The previous government first pre-occupied with the judiciary crisis and then with electioneering failed to address the emergent problem, as did the caretaker government. The present government, seeking popular support in the midst of its conflict with the presidency, has been equally loath to address the issue.

<sup>6</sup> Reported, for example, at <http://www.geo.tv/4-10-2008/16580.htm>, and elsewhere.

<sup>7</sup> According to press reports the Annual Plan Co-ordination Committee (APCC) met on May 23-24, 2008, without agreeing on the size of the Public Sector Development Programme (PSDP) for 2008-2009, and a meeting of the National Economic Council (NEC) to approve the Annual Plan for 2008-2009 is to be held on June 1, 2008.

## **1. Urgent Actions: Restore Confidence**

Although the government's authority is in contest, it is to the interest of all parties to the conflict that the impression that no one is in charge of economic management is dispelled quickly. The prime minister should seek to reach an understanding with the key stakeholders to insulate the debate on economic policy from the political conflict underway, at least temporarily. This would mean a moratorium on government criticism of past economic policies and performance, no matter how justified; and restraint on the part of the presidency from public statements and private advice to government on economic matters, even if permissible under the constitution.

At the same time, the government should put an end to statistical and conceptual mendacity, while attempting to restore the confidence of markets. This is essential not only in itself but as a basis for formulating policies on a correct appreciation of economic realities. In using available statistics, the government should be aware of three pitfalls of recent practice. First, national accounts have been re-based in a non-transparent manner leading to suspicion that estimates of gross domestic product (GDP) and growth may be inflated.<sup>8</sup> Second, in this way, negative performance has been minimized by selectively citing statistics (on debt, for example) as a ratio of inflated GDP estimates but where this is unsuitable, in absolute terms (like public revenue, which has declined as a ratio of GDP) - often, at current prices: taking credit instead of blame for inflation, in blatant disregard of common sense. Finally, in the absence of effective legislative oversight, estimates reported in recent budgets appear to exhibit a degree of arbitrariness: in deliberately understating interest payments, for example, in which margins of error should be small if government finances are being managed well. As a result, historical statistics have to be used with some care as a basis for policy formulation.

In building confidence, the government should take pains to avoid such transparent gimmicks. At the same time, the government should explain its predicament in a nuanced attempt to prepare the nation for the sacrifices that lie ahead without undermining the confidence of investors and lenders. All of these call for economic managers - especially the finance minister - to assume a much higher profile in the media than at present. These important initiatives can be pursued at insignificant financial cost and should yield political benefits in excess of costs.

## **2. Short-Term Actions: Restore Financial Stability**

The most urgent challenge calling for short-term actions to achieve immediate and medium-term results is to stop the hemorrhaging in domestic and external finances, contain rising prices and falling exchange rates, and lay the groundwork for sustained growth in fixed investment, production capacity, and exports. This is a large subject to

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<sup>8</sup> National accounts were re-based to 1999-2000; work is currently underway to re-base them again to 2005-2006. When Kaiser Bengali, a respected economist heading a Canadian government funded non-government research centre, questioned government data, the government had him removed from his position.



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which a short paper like this cannot begin to do justice. What is presented therefore is a thumbnail sketch of an approach to policy initiatives to accomplish these aims.

### **2.1 What Went Wrong?**

Any approach to policy must begin with an understanding of our present economic predicament. Economists have been long aware that sudden large windfall incomes can produce short-term benefits that if mismanaged can be overshadowed by the costs of readjustment when the windfall disappears. The phenomenon, first studied in the context of the discovery of natural gas in the North Sea by Netherlands, is called the "Dutch disease."<sup>9</sup>

Something very similar appears to have happened in Pakistan in the last five years or so. In the wake of "9/11" Pakistan benefited from exceptional financial flows from abroad - first in the form of the flight home of workers' savings, increasingly through the banking system due to anti-money laundering initiatives, and then by way of debt relief and exceptional overt and covert public capital inflows (into Pakistan directly and through Afghanistan).<sup>10</sup> Official flows accelerated especially after the president's meeting with Mr. Bush at Camp David on June 24, 2003, with the result that Pakistan was able to decline further assistance from the International Monetary Fund (IMF) in November 2004.

This massive inflow of capital led to a surplus on the balance of payments and a slight appreciation of the exchange rate (in real terms<sup>11</sup>) despite rising imports and a widening current account deficit, and to an unprecedented rise in external reserves (to a high of about one year of imports). Despite some sterilization efforts by the State Bank of Pakistan, there was an equally massive surge in domestic liquidity, and interest rates fell to as low as 2% per annum or less, even as the volume of credit flows to private (and public) sector accelerated. The government, unfortunately, failed to appreciate that the surplus was being accumulated *despite* a structural weakening, and not *because* of a strengthening, of the balance of payments.

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<sup>9</sup> The term was coined in 1977: "The Dutch Disease," *The Economist*, November 26, 1977, 82-83. The classic academic reference is W. M. Corden and J. Peter Neary, "Booming Sector and De-industrialisation in a Small Open Economy," *The Economic Journal* 92 (December), 825-848. For a short popular presentation see Christine Ebrahim-zadeh, "Dutch disease: Too much wealth, managed unwisely," *Finance and Development*, 40: 1 (March 2003), pp-pp.

<sup>10</sup> For a recent account of events up to the imposition of Emergency November 3, 2007 see Shuja Nawaz, *Crossed Swords: Pakistan, Its Army, and the Wars Within*, Oxford University Press, Karachi, 2008, pp. 538-561.

<sup>11</sup> According to one methodology, the IMF found that "the ... real value of the rupee rose by almost 10 percent from December 2004 to June 2006, a period when strong domestic demand put pressure on prices and the external current account, and the external terms-of-trade deteriorated." International Monetary Fund, Pakistan: Staff Report for the 2006 Article IV Consultation, November 1, 2006, Box 3, page 14 (emphasis in original). See also Staff Report for the 2007 Article IV Consultation, November 8, 2007, Box 2, page 14, which finds only a "slight overvaluation" of the rupee a year later. With the sharp fall in the exchange rate in May 2008, this is likely to have been corrected.



This failure to read its external payments position correctly was accompanied by a parallel failure to assess its fiscal position correctly. Significant savings on debt service payments (due to debt relief on foreign debt, and reduced interest payments on domestic public debt in comparison to budgeted amounts, due to lower interest rates) created an illusion of increased fiscal space. An illusion that was strengthened by misreading the purely statistical exercise of re-basing official GDP estimates to conclude that a higher nominal value of fiscal deficit was within the limits of fiscal prudence, since it was not as much as a ratio of the higher re-based GDP. As a result, the government went on a spending spree, and public spending rose at unprecedented rates. There was therefore a massive growth in public and private consumption, and to a lesser extent in investment, expenditure, that was heavily import-oriented.

This sharp rise in aggregate demand spurred economic activity, and economic growth, which had been low to unremarkable in the first three to four years of the military regime, jumped up sharply in 2004-2005 and again in 2005-2006.<sup>12</sup> In classic Dutch disease fashion, however resources were reallocated toward inefficient import-intensive consumer industries that were not sustainable without these exceptional capital flows. Understandably, given their professional background, experience, and permanent residence, the government's economic managers not only did not understand the situation but had a decidedly short-term focus and hence did not see the need to transform these exceptional events to build the foundations for long-term sustainable economic growth.

This was reflected in an absence of strategy and a series of policy blunders. Even as aggregate demand was allowed to grow without bound, no effort was made to enhance supply by encouraging fixed investment in productive capacity or to provide for the infrastructure requirements of economic growth. Thus, apart from the rise in external reserves, the government's perennial boast was that everyone now had access to consumer durables, in which the example of 'motorcycles in rural areas' was often cited. From the frequency (and belligerence) with which this was cited as the ultimate measure of how growth was enabling people to raise their standards of living, there is reason to believe that the government saw the spread of consumer durables not only as defining its economic strategy but its political strategy as well.<sup>13</sup>

To implement this strategy, the government encouraged the expansion of consumer credit by banks (enhancing bank profits, it may be mentioned), allowed liberal imports of cars, motorcycles, mobile phones, television sets, refrigerators, fans, etc. partly by a massive reduction in tariffs - reducing maximum tariff to 25% with only 4 tariff slabs, far in excess of our international commitments (under the World Trade Organization: basically 50%, except 70% for automobiles) - and encouraged the growth of domestic consumer goods industry. But the implications of the higher

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<sup>12</sup> Contrary to persistent government propaganda, with the exception of these two years, economic growth was below long-term trends during this period, according to official statistics.

<sup>13</sup> In televised interviews prior to the elections, Pervez Musharraf rejected the findings of numerous polls showing his declining popularity by citing the availability of consumer durables, especially in rural areas, which he thought were under-represented in the polling samples



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penetration of consumer durables in society for public investment in construction and maintenance of roads, the provision of electricity (not a single megawatt of power generation capacity was added by the government), the higher import requirements for fuel and for imported inputs required the domestic consumer goods industry, and the impact of lower tariffs on the viability of domestic industry, were all simply ignored. The result of these blunders made headlines as flyovers collapsed (one within days of its inauguration by the president), and electricity shortages led to frequent riots, among others.

Yet the economic managers succeeded in presenting this transitory affluence as a structural shift in the growth path to foreign investors with the result that private capital followed public capital, not only by way of receipts from sale of bonds (conventional, Islamic *sukuk*, and global depository receipts) but also in the form mainly of portfolio but also of some direct investment. In addition to private external borrowing, the government resorted to sale of public assets to finance the growing deficit in external finances needed to sustain the illusion of affluence. Crucially, the process was facilitated by the military government's ability to override constitutional and legal requirements.

Not surprisingly, this path could not be sustained beyond two to three years. First, in the flush of apparent success, the government's enthusiasm for genuine reform waned, complacency rose, efforts to mobilize revenue became lax, public spending rose rapidly, and the system of budgeting and financial controls fell into disrepair as rising debt-financed demand was considered sufficient to drive the economy. Second, the ruling of the Supreme Court on June 23, 2006, annulling the sale of a 75% share in the Pakistan Steel Mills, planted the first seeds of doubt about the sustainability of the government's strategy in the minds of investors.<sup>14</sup> Finally, the unexpected refusal of the chief justice, who had ruled on the Steel Mills case, to accept his dismissal on March 9, 2007 sparked protests across the country raising doubts also about the government's ability to maintain domestic tranquility.<sup>15</sup>

In 2007, instead of dealing with the new situation, the government decided to stay the course and declared that elections would be held on schedule within three months after expiration of current assembly's term on November 15, 2007. As a result, only politically expedient initiatives were undertaken, in the misplaced hope that existing external reserves and the ability to secure funds as before would allow it to finance the temporary costs of economic neglect. Thus it was considered politically expedient (1) to pitch the development budget for 2007-2008 at an unprecedented level of Rs 536 billion, (2) avoid any more price adjustment in such critical areas like

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<sup>14</sup> The sale was to a group led by Russia's *Magnitogorsky Metallurgichesky Kombinat OAO*, in partnership with *Tuwairqi* Steel Mills of Saudi Arabia, and Arif Habib Securities Limited for US\$ 362 million.

<sup>15</sup> Following the suspension of the chief justice on March 9, 2007, milestones in the growing political crisis include the mayhem in Karachi on May 12, 2007, the controversial presidential election of October 6, 2007, the declaration of emergency on November 3, 2007, the attempted assassination of Benazir Bhutto on October 18, 2007 and her assassination on December 27, 2007, the elections of February 18, 2008, and the delay in the formation of the new government (the prime minister was sworn in on March 25 while the cabinet took its oath of office on March 31, 2008)



petroleum, electricity, wheat, etc., and (3) show a budget deficit of only 4% of GDP, because it was important to ensure that Pakistan's credit rating remained favorable, even though it must have been known at the time that the true figure was closer to 6%; a manoeuvre facilitated by the absence of parliamentary oversight.

Whether the present crisis would not have occurred had the chief justice walked away and had oil prices not risen, as some in government argue, is now academic. In the event, the sharp deterioration in the country's terms of trade exposed the fragility of the government's economic strategy. Although banking and financial services, engaged in handling these flows, have experienced a boom, resources are likely to have been pulled away from productive sectors. As confidence has waned, these exceptional flows have fallen, economic management has weakened, and the nation faces a crisis in external and domestic finances as unprecedented as the capital flows that led to it. The failure of government policy to adopt well-known responses to such conditions has both exacerbated the crisis and delayed the adjustment response.

## **2.2 Stabilizing External Finances**

To the extent that Pakistan follows, a flexible exchange rate regime the market has already adjusted for the expected deterioration in our external payments position, by the depreciation of the rupee - gradually over this fiscal year (2007-2008) and more sharply in the last month. In addition, however, given the size of the current and anticipated deficit in external payments, there is a need to consider pragmatic remedies unconstrained by dogmatic commitments to economic liberalism. In the short-run, a 'no option off limits' programme of import compression should be devised and implemented speedily.

Although data are not readily available for the current fiscal year, by piecing together isolated reports in the press it would appear that the deficit on the current account of the balance of payments which rose from US\$ 1.75 billion in 2004-2005 to US\$ 5.6 billion the next year, and US\$ 7.6 billion the next, may well top US\$ 12 billion in 2007-2008.<sup>16</sup> This kind of increase was never sustainable and as exceptional flows on both the current and capital accounts have dried up progressively since the beginning of the political crises, the burden of financing has fallen on external reserves, which have fallen by over US\$ 5 billion in the last seven months.<sup>17</sup>

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<sup>16</sup> This may be a conservative guesstimate. Data are only available up to January 2008; see State Bank of Pakistan, *The State of Pakistan's Economy. Second Quarterly Report for FY08*, State Bank of Pakistan, Karachi, May 2008. In his press conference of 9 April, then finance minister Ishaq Dar was quoted as saying that as on March 31, 2008 the current account deficit stood at US\$ 8.5 billion and if corrective measures had not been taken it could have gone over \$ 10 billion by June 30, 2008. He also said the previous governments during 1999 to 2007 added \$5 billion in Pakistan's external debt. According to other reports, however, the current account deficit may have topped US\$ 13 billion in the first 10 months of the fiscal year.

<sup>17</sup> From US\$ 16.5 billion at the end of October 2007 to about US\$ 11.5 billion at present (late May 2008). The fall in exceptional capital flows reflects mainly the suspension of financing from multilateral financial institutions, and to a lesser extent the cancellation of planned bond issues, reduction in the flow of foreign portfolio and direct investment, and delays in the privatisation programme.

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It is not surprising then that the World Bank and the International Monetary Fund are eagerly circling Pakistan. There is a real danger that the government may turn to them; for apart from financial support, the government would be greatly tempted to reap the additional political benefits of both enlisting new foreign allies to neutralize those supporting the presidency, and finding convenient scapegoats to blame for the harsh domestic measures that have become necessary. This triumph of politics over economics however would be unfortunate. Not because of any sentimental commitment to residual sovereignty, but because sovereign action, unconstrained by the dogmatic commitments of these lenders, can yield superior results - as the experience of Malaysia, among others, convincingly demonstrates.<sup>18</sup>

### **2.3 Stabilizing Public Finances**

By the time this paper is presented the government would have finalized its estimates for 2007-2008 and its budget for 2008-2009. This paper therefore is confined to a discussion of the main problems that the government hopefully would have addressed in the budget and in its post-budget efforts at deficit reduction.

In his widely reported press conference of April 9, 2008, Ishaq Dar, finance minister from March 31 to May 13, 2008, disclosed that the overall fiscal deficit for 2007-2008 was approaching 9.5% of GDP, or some Rs 950 billion, compared to a budget target of Rs 400 billion.<sup>19</sup> Although he expressed the hope that with corrective measures it could be brought down to 6% of GDP by the end of the fiscal year, the actual deficit is unlikely to be less than 7-8% of GDP (or some Rs 700-800 billion).

This overrun in the budget will be largely due to the unanticipated rise in subsidies provided to oil marketing companies (perhaps some Rs 165 billion, compared to budget estimates of Rs 15 billion) and to electricity distribution companies (perhaps some Rs 150 billion, compared to budget estimates of around Rs 50 billion). In addition to this overrun of Rs 250 billion, unbudgeted subsidies to textiles and fertilizers would add some Rs 50 billion to this figure and for wheat imports another Rs 50 billion, raising the overrun due to these four items alone to Rs 450 billion.<sup>20</sup> Even if expenditure cuts and other measures yield savings of Rs 100 billion, it is hard to see how an overall deficit of some Rs 750 billion could be avoided.

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<sup>18</sup> For a comparative study examining poverty and growth, see Mahmood Hasan Khan, "When is economic growth pro-poor? Experiences in Malaysia and Pakistan," IMF Working Paper WP/02/85, International Monetary Fund, Washington, DC, May 2002.

<sup>19</sup> According to the State Bank of Pakistan this sharp rise in the deficit reflects both "a decline in revenue growth as well as rising current spending." Quoted by Kaleem Omar, Pre-budget blues, Business and Finance Review, The News, May 19, 2008.

<sup>20</sup> More recent press reports suggest that budget documents may report an overall deficit for 2007-2008 of 6.5% of GDP. Whatever the case, with development expenditures budgeted at below 6% of GDP, and subject very likely to major cuts, the government is bound to end up violating the requirement of the Fiscal Responsibility and Debt Limitation Act, 2005 (to bring the revenue budget in balance in 2007-2008).



While the size of the deficit in the current year is largely academic, the impact on inflation, real wages, poverty, and income distribution, of such an extensive recourse to deficit financing in a year when prices of imports and imported inputs have also risen sharply, can only have been severely negative. While in the short run, the greater burden of adjustment has to fall on the expenditure side, in medium-term there has to be a fresh look at tax policy and administration, with the aim of substantially improving the revenue effort. At a minimum, tax revenue collected, which has fallen to less than 10% of GDP, should be raised to 10.5% in the next fiscal year (the level achieved in 1998-1999) and higher in subsequent years.<sup>21</sup>

#### **2.4 Rationalizing Subsidies**

The provision of subsidies is a legitimate goal of government. Subsidies, however, should not be unintentional, and should be narrowly targeted to intended recipients. This is not true of the large bulk of budgetary subsidies provided today by government. In addition the policy framework under which petroleum products are subsidized and electricity tariffs are set, have led to a massive unsustainable rise in these unintended subsidies. To compound matters a conspiracy of silence surrounds the utter failure of corporatisation and privatization efforts in the power sector, on the advice of foreign lenders, with the result that government continues to seek a solution to these problems in further privatization rather than in sensible revisions of the policy framework.

In the energy sector, the government sets the price of petroleum products (and natural gas) at points of sale. With the budget perennially under pressure, when world prices fall below domestic prices the government absorbs the difference by imposing a petroleum development levy (PDL) on the oil marketing companies. Having 'taxed' the consumer in good times, the government feels constrained to subsidize them when international prices rise above domestic prices by granting a price differential claim (PDC) to oil marketing companies.<sup>22</sup> With oil prices having more than doubled in US dollar terms this year, the government has sought to protect the consumer by passing on very little of the price increase, while providing preferential credit and budget subsidies to the oil marketing companies. The ends, means, and rationale of this regime needs to be re-examined: if revenue is the goal, then taxation of corporate profits may be more appropriate; if price stabilization, then arrangements appropriate to that aim should be put in place.

The situation is much worse with electricity prices, in fixing which the National Electric Power Regulation Authority (NEPRA) also plays a role. The restructuring of the Power Wing of WAPDA has been a monumental policy failure; it has led to undue

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<sup>21</sup> As an example of the juvenile efforts to conceal facts, the previous government frequently cited that it had raised tax revenues from Rs 306 billion in 1998-1999 to Rs 1,000 billion in 2007-2008, knowing full well that incomes had risen by more with the result that the tax/GDP ratio had fallen. Similarly, in seeking to hide the rise in external debt, it would claim that the debt burden had fallen from 104% to less than 60% of GDP, ignoring that that much of decline in this ratio was attributable to rebasing of the GDP.

<sup>22</sup> The Oil and Gas regulatory Authority (OGRA) determines the import parity price of petroleum products, which serves as the basis for calculations of PDL/PDC



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fragmentation, a proliferation of enterprises, and little behavioural change, with highly adverse unintentional results.<sup>23</sup> At present, NEPRA fixes eight different electricity tariffs for each of the eight distribution companies.<sup>24</sup> To provide uniform tariffs across the country however the government imposes the minimum tariff, within the list of NEPRA approved tariffs for individual DISCOs, and provides a subsidy to each distribution company, to cover their losses.<sup>25</sup> This situation which has arisen due to thoughtless, piecemeal policy-making by government is completely untenable and also requires a fundamental review. What is required is an integrated review of the NEPRA Act, the restructuring plan of the Power Wing of WAPDA, and privatization plans and experience, to arrive at a sensible course of action. A temporary solution may lie in amending the NEPRA Act to allow the government to fix tariffs at the average of the NEPRA awards, putting in place a system of cross-subsidies with a neutral impact on the budget.

By contrast, at present only a meager cash subsidy of Rs 6 billion is provided specifically for the poor through *Baitul Maal*. Even when we add *zakat* and other transfer programs through utility stores and provincial governments, these would not amount to more Rs 20 billion. Clearly, there is scope for massive expansion in cash transfers, especially if the current level of subsidies of Rs 450 billion is maintained, and much of this is freed by price adjustment. There is a need, however, to ensure that the process is transparent and free of malpractices. One suggestion could be the preparation of an internal subsidy budget, along the lines of the old foreign exchange budget.

### **2.5 Addressing Popular Expectations**

While a few brave economists in government continue to cite selective statistics in support of the claim that poverty and inequality has come down over the last decade, the consensus of scholarly opinion supports the opposite view. Not only are more Pakistanis poor, in absolute numbers and as a proportion of the total population, but inequality has worsened both within and across cities and rural areas.<sup>26</sup> There is also

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<sup>23</sup> The institutional structure of the electricity sub-sector however has become quite complicated in recent years: the Power Wing of WAPDA has been reconstituted as a holding company (Pakistan Electric Power Company, PEPCO), with 13 wholly-owned subsidiaries, dealing with generation (4 generation companies, or GENCOs), transmission (National Transmission and Dispatch Company, NTDC), and distribution (8 distribution companies, DISCOs, 1 for each major city). Additionally, there is the so-called TESCO that looks after federally administered tribal areas (FATA), but where there is a regular bleeding of Rs 14 billion annually in non-receipt of electricity bills, which then inevitably also fall in the subsidies required sustaining the operations of PEPCO.

<sup>24</sup> NEPRA approved tariffs have varied from Rs 3.00 per kwh for Lahore to Rs 6.50 per kwh for Hyderabad and Peshawar

<sup>25</sup> Moreover, PEPCO requires heavy subsidies to allow it to purchase most of its power from independent power producers at market prices, or to buy gas and fuel, also at market prices, to generate the little power that it does.

<sup>26</sup> Talat Anwar, "Changes in inequality of consumption and opportunities in Pakistan during 2001-2002 and 2004-2005," Research Report No. 3, UNDP Centre for Research on Poverty Reduction and Income Distribution, Islamabad, December 2006. The IMF, not surprisingly, does not share this concern about rising

evidence that large sections of society - unskilled and semi-skilled workers, craftsmen, and even skilled workers in rural areas - have suffered a decline in real wages over this period. While real wages of government employees have increased on average this is largely the result of special scales introduced by government to attract private sector employees at high wages; real wages of lower income government employees are thought to have declined.<sup>27</sup>

More importantly, in the perception of housewives, job-seekers, and shoppers at week-day bazaars, there has been a sharp rise in any index of misery that may be compiled. Although the present ideological moorings of the Pakistan People's Party are uncertain, the legacy of its early commitments continues to cast a long shadow and many expect that it would provide some non-cosmetic relief to the poor and low-income groups of society. Policy advisers to government should therefore devote some effort to design a suitable programme to alleviate both absolute and relative poverty. This should be centerpiece of the new government's budget - if not this year, then in the next.

While this is not the place to spell out the potential contours of such a programme, it should be pointed out that both theory and experience militate against programmes based on earmarked taxes. Apart from their inefficiency on theoretical grounds, our experience with earmarked taxes - the *iqra* surcharge comes to mind - suggests conclusively that the revenue they yield cannot be protected from the urgency of expenditure demands. It is for this reason that government should eschew recourse to earmarked surcharges (or taxes) despite their being easy to sell to the public and easier to collect, but then squander.

Given the infrastructure requirements of the economy, the government should also consider an ambitious works programme, possibly with the help of the International Labour Organization. In the past, initiatives in this direction have been less successful because of the relative lack of absolute rather than relative poverty in the country. With anecdotal evidence of the rise in suicides, sale of kidneys to repay debts, and other examples of misery and destitution not heard of before, the opportunity to supplement incomes even through harder labour may find more receptivity among the poor than in the past. Food for works programs can also be designed in consultation with World Food Program, which has issued warnings that many people will be facing difficulty in having two meals a day.

## **2.6 Non-Budget Policies: Rationalising Economic Regulation**

The government's pre-occupation with the budget and its financing leaves little time to explore non-financial interventions that can yield large political benefits and

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poverty; claiming that since 2001-2002, "implementation of pro-poor policies has helped lower poverty rates." See International Monetary Fund, Staff report for the 2007 Article IV Consultation, November 8, 2007, p. 4, and elsewhere

<sup>27</sup> Muhammad Irfan, Poverty and Resource Management in Pakistan, Mimeograph, 2007, Appendix Table 22, based on labour force survey data for 1997-1998, 1999-2000, 2001-2002, 2002-2004, and 2005-2006. Upper income groups have experienced increases in real wages, so that wage inequality has increased. Moreover, it is in the following two years that conditions are thought to have deteriorated quite severely.



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alleviate the difficulties of common citizens at a small cost. The government, either through legislative committees or through executive councils or commissions, should conduct public hearings in an effort to see if the public could be served better by service providers in both the private and the public sectors.

For example, there is an urgent need to conduct hearings on the banking sector where misguided notions of allowing the market a free reign have led to malpractices that are not condoned elsewhere. As a result, banking profits have surged to the point where predatory foreign investment is being attracted. There is a need to review credit card and other consumer credit operations where banks should be subjected to truth in lending laws and prevented from imposing arbitrary, extortionate charges on customers in default, in line with global best practice. The government could also keep a close eye on all bank charges, but especially unjustifiable *ad valorem* charges on fixed cost services (like inter-bank and wire transfers) that banks provide.<sup>28</sup> Similarly, price fixing, collusion, and other malpractices should be identified with a view to reform in the public interest. The Competition Commission has done good work in this area but it needs further political support.

### **2.7 Re-combating Corruption**

In negotiating power agreements the People's Party government will be treading over familiar ground that in the past had led to allegations of grand corruption against many of the same persons who have returned to government in the wake of the National Reconciliation Act, 2008. There is a need for greater transparency this time around and abstention from any measures that would call for more reconciliation in the future.

## **3. Medium-Term Actions: Establish and Empower Economic Management**

The root cause of the present economic crisis is not so much the 'deficit' in domestic and external finances as it is the 'deficit' in national economic management.

### **3.1 Establish a Locus of Economic Decision-Taking**

The present structure of national economic management, established in the 1960s, is geared toward the mobilization and utilization of foreign loans and grants (the planning commission and the economic affairs division), and the distribution of the proceeds of these loans and public revenues by the federation among the provinces (the national economic council). The economic co-ordination committee (ECC) of the cabinet takes a piecemeal view of economic crises and is excessively preoccupied with providing financial support for the political maintenance of government.

There is no forum in government where an integrated view of national economic problems can be taken, and a course of strategic behavior by the government in the economy can be formulated and adopted. There is an urgent need to remedy this defect. This can be done in several ways: (i) by redefining the role, functioning, and membership of the economic coordination committee of the cabinet; or (ii) by

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<sup>28</sup> These suggestions are broadly consistent with the recommendations of State Bank of Pakistan, *Financial Stability Review 2006*, Chapter 1, pp. 33-34. <http://sbp.org.pk/fsr/2006/index.htm>.

establishing a new national economic management committee; or (iii) by creating an office of a deputy prime minister for economic affairs to look after the main economic ministries; among others.

There is also a need to emphasize and preserve a separation between line and staff functions of administration. This distinction is not clearly understood at even senior levels of administration where involvement in execution is considered a natural component of successful discharge of advisory functions. Thus it is not considered anomalous that a constitutionally 'advisory' body, the National Economic Council, has an 'Executive' Committee.

### ***3.2 Integrate Finance, Revenue and Development***

The Cold War is over and with it the ideological underpinnings, sources, volumes, and procedural requirements of foreign capital flows. Yet, the organizational structure and work processes that characterize economic management in Pakistan have remained largely unchanged from the form given to them by the Harvard Advisory Group in the 1960s.<sup>29</sup> In fact, to cater to the ambitions of civil servants ministries have suffered greater fragmentation. At present therefore we have separate ministries dealing with revenue (federal board of revenue), current expenditure and domestic finance (finance), capital expenditure (planning and development), and foreign finance (economic affairs).

This state of affairs can only be described as absurd. It is high time that the entire framework and process is reviewed by a competent government commission that is charged with making recommendations to the standing organization committee of the cabinet. In the meantime, however, the gross distortion of planning and budgeting for capital expenditures separately from current expenditures should be eliminated by merging at least the planning and development division and the economic affairs division into a ministry for finance and development.

### ***3.3 Re-think the Neo-Liberal Strategy***

It is a peculiar feature of our political landscape that all mainstream political parties are committed to the ideology of economic liberalism, understood somewhat simplistically.<sup>30</sup> As a result, despite cataclysmic political changes all governments continue to subscribe to neo-liberal notions of economic liberalization, de-regulation, privatization, etc. This reflects no doubt the close links between ideology and finance but even so, the government should try to move from the naïve liberalism that has characterized previous governments to at least a more thoughtful liberalism for which support can be found among its foreign financiers.

None but the most naïve would advocate that the government has no role to play in regulating markets. All thoughtful advocates of economic liberalization stress the

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<sup>29</sup> Albert Waterston, *Planning in Pakistan*, Baltimore: The Johns Hopkins Press, 1963, and George Rosen, *Western Economists and Eastern Societies: Agents of Change in South Asia, 1950-1970* (The Johns Hopkins Studies in Development), Baltimore: The Johns Hopkins Press, 1985

<sup>30</sup> Given its origins, the present ideological commitments of the Pakistan People's Party are especially ironic



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need for proper sequencing of reforms. In particular, everyone agrees that the establishment of an effective regulatory framework must precede privatization and other liberalization initiatives. Also everyone recognizes that the markets for labour and finance are special, and the application of simplistic notions of liberalization to these two markets can have disastrous consequences. Above all, no thoughtful advocate of liberalization, or of any other economic strategy for that matter, will recommend that the government should ignore the results of experience and place blind faith in ideological prescriptions.

These lessons have been ignored at great cost in Pakistan, where economic liberalization has outpaced the development of a regulatory infrastructure that would prevent collusive and monopolistic practices, which is an essential prerequisite for the efficient working of markets. We have commented on the poor performance of regulatory bodies in the power sector (NEPRA and OGRA). In other sectors as well - from the Pakistan Telecommunications Corporation (PTC) to the Pakistan Electronic Media Regulation Authority (PEMRA) - there is little evidence that newly created regulatory bodies have acted in the public interest, or have shown more independence than government departments.

Similarly, there is a need to revisit the fundamental premises guiding the process of liberalization. As noted earlier, the privatization of Karachi Electric Supply Corporation (KESC) should teach enough lessons regarding the limits to which the private sector can be trusted to deliver such essential services as distribution of electricity. Yet, there has been no effort to bring the results of our practical experience to bear on the extensive privatization programme still in the pipeline: including such major assets like Pakistan State Oil (PSO, which controls more than 70% of country's petroleum distribution points), Pakistan Petroleum Limited (PPL, owners of the Sui gas field), Sui Northern Gas Pipelines Limited and Sui Southern Gas Company (SNGPL and SSGC, the two gas transmission and distribution companies), among others.

Even if it is granted that there are inefficiencies in public sector, there is by now ample evidence that privatization has led to a worsening rather than improvement in the situation. Ways must be found therefore to overcome these shortcomings, rather than putting blind faith in privatization as panacea for all the ills of government ownership. At the same time ways should be explored to improve the performance of public utilities and enterprises through appointments of chief executives and board of directors by a process of parliamentary approval, giving them the necessary autonomy, assurance of tenure, and incentives to perform and be accountable without fear of political intervention. There is a fundamental flaw in the idea of selling public assets to finance current expenditures on rising oil prices, the purchase of aircrafts, or on consumption.

### *3.4 Continue to Strengthen Institutions of Governance*

A more pressing need in the medium-term is to embark on a program of restructuring institutions of governance to enhance their capacity and ability to deliver services and protect the rights and property of citizens, which have been massively eroded in the last two decades. There has been a tendency, a remnant of our colonial past, in which public institutions to serve the people end up serving the service providers more than the intended recipients. Thus government hospitals are seen primarily as



providing employment to physicians rather than good medical care to patients; schools and universities, to provide jobs to teachers that educate the students; and so on. In this the recently concluded work of the Governance Commission should provide guidance, and the advice of its chairman should be sought on a continuing basis.

## **Conclusion**

In closing I can do no better than follow the example of Dr. Mubashir Hasan thirty five years ago who, while presenting the budget for 1972-73, quoted from the 1967 foundation documents of the Pakistan People's Party:

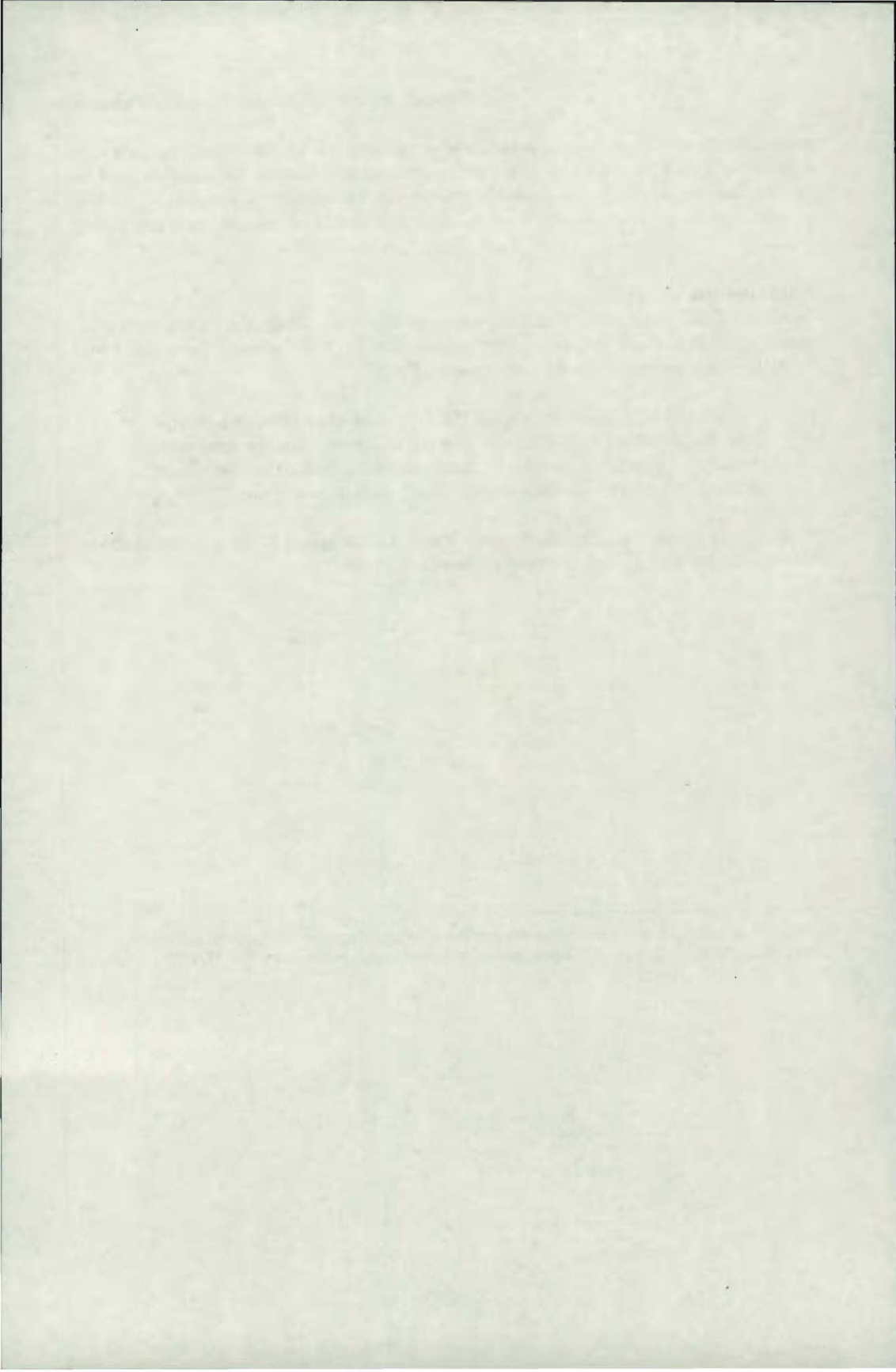
"It is never a pleasant task to take the long road when there is a shorter one, but the objective conditions of Pakistan require that the long road be taken. Experience has shown that in matters which affect the whole destiny of a people the short and easy road, in truth, is a mirage."<sup>31</sup>

It remains to be seen whether the People's Party of 2008 is true to the aspirations of the founders of the Party; proving wrong those who say that:

ستم سازوں میں نہ جیاں نکھو اب نرم سے پاؤں ہونے چاہیے  
بھری گردن آرزو پر چلا کر کم اپنے دامن سے دھونے چاہیے  
نوشی سے تو پھولے ساتے نہیں ہیں دکھانے کو پلکیں بھگونے چاہیے  
بتیں سکھانے سے فرصت نہیں تھی مرے مال پر آج رونے چاہیے  
(گلیم ماہ)

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<sup>31</sup> Foundation and policy documents of the Pakistan People's Party, December 1967, quoted by Finance Minister Mubashir Hasan in his first budget speech on Radio Pakistan at Murree on June 17, 1972



# Macroeconomic fundamentalism, populism or what?

Dr. Pervez Tahir<sup>1</sup>

**Abstract:** *With a democratic coalition in place, Pakistan's economy is once again at the crossroads. Eight years of relentless pursuit of growth has benefited the elite and the largest province but marginalized smaller provinces and pushed a large segment of population into abject poverty. The claims of macroeconomic stability have also turned out to be false. The 100-day programme announced by the coalition stops short of providing much needed relief. It seems the coalition is scared to be dubbed as populist. With high fiscal and current account deficits and soaring inflation, the coalition is being misled towards prescribing more of the same, i.e. macroeconomic fundamentalism. Though blamed on differences on the "How to" questions on judicial restoration, the fault lines that have appeared in the coalition since the announcement of the 100-day programme can in effect be traced back to differing political economy perspectives. If the coming budget follows suit, the result is also likely to be more of the same, i.e. increasing economic misery. The paper explores alternative, pro-people choices for the budget.*

## 1. Introduction

The outcome of the elections on 18 February and the formation of a coalition by the democratic forces have generated a moment of ferment, economic, political and social. Many paid for this great opportunity to arrive at against the wishes of 'Establishment' with their lives while thousands endured great personal suffering. Political leaders, lawyers and the civil society have done us pride as a nation. The image of the country on the world stage has undergone a sea-change. The return of democratic governance cannot but be vastly and wholeheartedly welcome. It makes us feel that our citizenship has been restored.

Citizens have rights, not just social and political, but also economic. The right to development is as inalienable as any other. And this right to development was violated as blatantly as other rights in the past eight years of ruthless pursuit of macroeconomic fundamentalism. Section 2 dilates on this period and exposes at some length the edifice of lies that was built in a mad preference for anti-poor growth. With such shaky foundations, the meltdown occurred in less than six months. Section 3 analyses the accusations of populism hurled by the diehard economic establishmentarians, which includes conservative politicians and pro-(immiserizing) growth economists and their backers in the international financial institutions. It discusses the fears that the coalition leadership itself has of being dubbed as economically destructive populists. The signals about policy continuity and the slow-motion on providing relief to the suffering public result directly from this tendency to lie low. Sections 4-6 propose resource mobilization measures, an immediate relief package and a medium term programme to overcome Pakistan's unending social deficit. These proposals are pro-poor and popular, but not populist by any reckoning. The last Section presents some conclusions.

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<sup>1</sup> The author, a former Chief Economist of Pakistan, is at present Mahbub ul Haq Professor of Economics, at GC University, Lahore. Assistance provided by Ms Nadia Saleem, Assistant Professor at GCU is gratefully acknowledged.



## **2. Macroeconomic Fundamentalism**

When the National Assembly was packed up and a military regime took over in October 1999, it lost no time in painting an extremely bleak picture of the economy. The nineties were described as a "lost decade" by the then State Bank Governor. Mr. Shaukat Aziz led the *Khazana khali* orchestra, blaming politicians' loot and plunder to have brought the economy to a standstill. In his autobiography, the coup leader dubbed the period of political rule starting from 1988 as the "dreadful decade of democracy", during which "the nation plummeted to the depth of economic bankruptcy" (Musharraf 2006, Ch. 9). Thus "In 1999 I was on the horns of a dilemma, made worse by limited financial resources and by an economy in extreme distress: should our strategy be to allocate maximum resources to education and health, or to development projects that would boost the economy? I decided on the latter because we needed a revived economy" (pp.308-*ibid*).

A four-pronged strategy was adopted to deal with the mess perceived to be created by the politicians: (1) achieving macroeconomic stability (2) making structural reforms to remove microeconomic distortions (3) improving the quality of economic governance and (4) alleviating poverty. Poverty reduction was the last on the agenda. It also turned out to be the least. "During the first two or three years, when we were working hard on macroeconomic stabilization, there was a lot of criticism of our policies. I was quite blunt in my public pronouncements and always maintained that growth would take place only when macroeconomic stability was firmly established." When stabilization was declared to have been achieved and "growth picked up as predicted, the critics shifted their stance: now they bellyached that unemployment and poverty had not been reduced." And "Now that both the unemployment rate and poverty have begun to decrease, there is a hue and cry that income inequalities are sharpening." Conceding that "It is true that high growth brings some bad side effects, such as inflation and temporary income inequalities, but these problems can be taken care of by the right policy instruments" (pp. 182-6 *ibid*).

It is obvious that the regime looked at the strategy in terms of sequential phases. First stabilization, then growth, followed by jobs and poverty reduction, and finally equity and protection of purchasing power through appropriate policy instruments. In fact, the regime barely got past the growth phase and the economy returned to instability. Table 1 gives the supporting numbers.

**Table1: Indicators of Imprudence**

| Indicators                             | 1999-00 | 2006-07 |
|--|---------|---------|
| 1. Fiscal deficit/GDP                  | 5.4     | 4.3     |
| 2. Tax/GDP ratio                       | 10.7    | 10.2    |
| 3. Current account deficit/GDP         | 1.6     | 4.9     |
| 4. Rate of inflation                   | 3.6     | 7.8     |
| 5. Debt/GDP ratio                      | 83.7    | 55.2    |
| 6. Exports/imports ratio               | 85.3    | 62.5    |
| 7. National saving/investment ratio    | 88.3    | 78.3    |
| 8. Bank borrowing/fiscal deficit ratio | 19.3    | 36.5    |

*Source:* SBP, Ministry of Finance



In drawing comparisons, the benchmark of 1999-00 and the end-year of 2006-07 have been chosen carefully. As the coup happened on 12 October, 1999, i.e. at the start of the second quarter of the fiscal year 1999-00, the economy for that year was effectively managed by the military-authoritarian regime even though the planning was done by the ousted government of PML (N). Secondly, the GDP was rebased since 1999-00. This makes comparisons with any previous year illegitimate, unless the earlier series was readjusted accordingly, which the military-authoritarian regime failed to do. Of course this was only one example of the havoc that has been played with the statistical system of the country in the past eight years. Again, we have chosen 2006-07 over 2007-08 not merely because the full-year data may not yet be available for the latter, but because it was a fairly normal year from the standpoint of the military-authoritarian regime. Although the whistle of 9<sup>th</sup> March 2007 announced the end of game with the unceremonious dislodging of Chief Justice and other dignitaries of the judicial system, the oil and wheat price shocks, lawyer's movement, Mohtarma Benazir Bhutto's martyrdom, elections, change of government happened in 2007-08. Economic management for the predominant part of the year rested with the military-led regime, but it could cite, not entirely justifiably, these unusual factors for the economic meltdown.

Stabilizers of the Washington consensus variety - the macroeconomic fundamentalists - believe the indicators 1-5 in Table 1 to be the fundamentals of economic prudence. As already noted in the words of its architect, the military-led regime bluntly pursued these fundamentals of stabilization. Despite the unfettered freedom from the pressures faced by a political regime and a tenure longer than any democratic dispensation would allowed anywhere for a consistent economic policy framework, the record is not very enviable in terms of its own stated goals. In 2006-07, the current account deficit had risen 3-fold, the rate of inflation was more than double and the tax/GDP ratio actually declined. Fiscal deficit, billed as the mother of all evils, declined by just one percentage point. There was, however, a major reduction in debt/GDP ratio, thanks largely to the re-scheduling and the grants bonanza in the wake of 9/11.

This single-minded pursuit of macroeconomic fundamentalism failed to achieve stable prices and growth. It imposed untold costs on the economy and unbearable misery on the society. As indicators 6-8 in Table 1 reveal, the country's capacity to pay for its imports through its exports declined significantly, as did its ability to finance total investment nationally. Although fiscal deficit declined slightly, the proportion financed by the inflation-fuelling bank borrowing rose sharply.

Social sectors, the poor, the vulnerable, women and the backward regions suffered for seven long years in the hope raised by the military-led regime that once the macroeconomic stability is ensured there will be growth and, in its wake, trickle down and social improvement. Economic stability remained elusive, as the evidence presented in Table 1 above indicate. There was growth, a lot of it achieved by massaging, fudging and misinterpreting the data. The shabbiest example relates to 2004-05 when a GDP growth of 6.6 per cent was jacked up to as high as 9 per cent. The manipulators fell prey to their own traps when the election gambit to "achieve" a GDP target of 7 per cent by falsely claiming a bumper wheat crop in 2006-07 backfired.

Whatever growth took place was anti-poor and anti-social, concentrated in sectors in which the stakeholders of the regime had a vested interest. Table 2 reveals this picture.

**Table 2: Anti-Poor Growth, 2000-07**

| Sectors                 | Average annual growth (%) |
|-------------------------|---------------------------|
| Commodity sector        | 4.9                       |
| (Agriculture)           | (2.5)                     |
| (Construction)          | (7.0)                     |
| Services sector         | 6.4                       |
| (Finance and insurance) | (13.1)                    |
| Overall GDP             | 5.7                       |

*Source:* Federal Bureau of Statistics (FBS)

It will be seen that the generally agreed pro-poor sector of agriculture grew at a rate less than half of overall GDP growth, barely above population growth. Commodity sector, the work site of toiling people, also lagged behind overall GDP growth. The growth concentrated in the services sector, and within this sector, the highest growth of 13.1 per cent was experienced by the sub-sector of the banker prime minister, i.e. the finance and insurance. This is not a very job-intensive sector. Even high employment elasticity would not mean much in a situation of mass unemployment. If anything, there were huge job losses as a result of privatization. Another high growth sector was construction, resulting mainly from large construction contracts of mega PSDP projects awarded to the non-civilian public sector agencies. The pattern of growth benefited largely the support base of the military-led regime and could not led to poverty reduction. All claims in this regard have to be taken with a pinch of salt.

**Table 3**  
Growth, Inequality and poverty in Pakistan

| Decades | Poverty | Inequality | Growth |
|---------|---------|------------|--------|
| 1960s   | ↑       | ↓          | ↑      |
| 1970s   | ↓       | ↑          | ↓      |
| 1980s   | ↓       | ↓          | ↑      |
| 1990s   | ↑       | ↑          | ↓      |
| 2000s   | ↓       | ↑          | ↑      |

*Source:* Computed from Economic Surveys and other documents

In Table 3, a snapshot of growth, inequality and poverty is presented for six decades. What comes out as an ugly reality is that the present decade is the only decade which experienced high growth as well as rising inequality. One explanation is the dubious nature of the claims about growth. Another explanation is that the source of growth was located in the services sector, which is not where ordinary people work and earn their keep. It was a bubble gum powered by massive creation of consumer credit with financial sector itself being the main beneficiary. There is a certain growth elasticity of poverty reduction, as is evident from the experience of the eighties. But the elasticity



works better in a more equal setting than in a less equal one. We should also keep in mind that the estimation of value added in the services sector is a lot worse than in the main commodity sectors, leaving greater room for fudging. So far as poverty is concerned, its reduction has always been related to a massive inflow of remittances, as was the case in the seventies and the eighties and even now, rather than the miracle of some policy.

### **3. Fears of Populism**

Time has come to reduce poverty and institute equity through effective policy. The problem has to be attacked directly, as (Late) Dr. Mahbub ul Haq used to say. Political economy, let us face it, is a game played in the interest of constituents of ruling groups. Economics only tells us the real cost of decisions; it does not always tell the basis of decisions. All the talk about good economic governance and discipline in the past eight years was meant for the non-constituents. In contrast, the constituents of the regime – the financial sector, the real estate sector and the military sector and its political satellites – thrived in terms of incentives, tax relief, budget allocations and job appropriation.

The constituents of democratic governance are the people. Need we remind that it will have to be a government of the people, by the people, for the people? No amount of logic will convince the people that they have to continue to wait for the trickle down even under their own government. Their stark reality is the increasing difficulty of keeping the body and soul together. We must remember that even if we believe the figures projected by the Ex-Premier Mr. Shaukat Aziz, poverty has declined by a mere 2 percentage points between 1990 and 2005.

The military-led regime protected the rich unashamedly and earned kudos for its “financial management” and the policy of reducing fiscal and current account deficit. Ironically, a regime defending the poor is ostracized as a promoter of populism. Cambridge Advanced Learner’s Dictionary defines populism as “political ideas and activities that are intended to represent ordinary people’s needs and wishes”. What is wrong with this? The Dictionary puts a rider on it in italicized capital letters, a double emphasis: “*MAINLY DISAPPROVING*”. Thus the term is used in the sense of disapproving the representation of people’s needs and wishes. And yet democracy is about people’s needs and wishes! The PPP-I regime earned this title as did many in Latin America (Burki 1980; Burki and Edwards 1996).

What follows is a documentation of the record of the non-populist, military-led regime on the needs and wishes of ordinary people. Social sector expenditure and support to the poor have not only been low, but actually lower than the past levels. Table 4 paints this picture of neglect.

**Table 4: Public Expenditure on Social Sectors and Food Assistance**  
(% of GDP)

| Year    | Education | Health | Water Supply and Sanitation | Food Subsidies and Support |
|---------|-----------|--------|-----------------------------|----------------------------|
| 2000-01 | 1.34      | 0.42   | 0.11                        | 0.25                       |
| 2001-02 | 1.49      | 0.43   | 0.10                        | 0.17                       |
| 2002-03 | 1.61      | 0.46   | 0.07                        | 0.27                       |
| 2003-04 | 1.73      | 0.48   | 0.10                        | 0.20                       |
| 2004-05 | 1.80      | 0.48   | 0.10                        | 0.12                       |
| 2005-06 | 1.87      | 0.52   | 0.14                        | 0.12                       |
| 2006-07 | 1.86      | 0.61   | 0.19                        | 0.10                       |

*Source:* Ministry of Finance

Food subsidies have been withdrawn and are now only marginal. Following up on education, which is considered the great social leveler, a provider of opportunities and hope to the large mass of the excluded ordinary people, the expenditure is not only low but it has been falling compared to the past decades. It is a pittance when compared to other, not very developed countries. It ranges from 2.7 per cent of GDP in the African state of Mauritania to as high as 9.1 per cent in Cuba.

**Table 5: Public Expenditure on Education: International Comparisons, 2006**

| Country    | % of GDP |
|------------|----------|
| Cuba       | 9.1      |
| Djibouti   | 8.4      |
| Maldova    | 7.6      |
| Seychelles | 6.5      |
| Iran       | 5.2      |
| Egypt      | 4.2      |
| Indonesia  | 3.6      |
| Mauritania | 2.7      |
| Pakistan   | 1.8      |

*Source:* UNESCO

Provincial distribution is an important dimension of equity and inclusiveness of the development process. Table 6 gives an idea of the epistemic marginalization of the smaller provinces. While the federal expenditure has been rising largely because of its new-found love for higher education, the largest province has barely maintained its share in the total spending on education. All other provinces witnessed continued declines in their shares. When districts were ranked by the net primary enrolment ratio for 1998, all top ten districts belonged to Punjab. By 2005, only one district from NWFP made it to top ten. The other nine districts were still from the Punjab. Table 7 gives details.



**Table 6: Public Expenditure on Education by Levels of Government**  
(% Distribution)

| Year    | Federal | Punjab | Sindh | NWFP | Balochistan |
|---------|---------|--------|-------|------|-------------|
| 2000-01 | 11.7    | 44.1   | 21.9  | 15.6 | 6.7         |
| 2001-02 | 17.4    | 41.4   | 21.5  | 13.4 | 6.3         |
| 2002-03 | 18.9    | 40.4   | 20.0  | 15.2 | 5.5         |
| 2003-04 | 18.0    | 45.8   | 18.6  | 12.3 | 5.3         |
| 2004-05 | 21.7    | 43.3   | 17.7  | 12.3 | 5.0         |
| 2005-06 | 23.8    | 39.5   | 19.5  | 12.9 | 4.3         |
| 2006-07 | 25.2    | 44.0   | 14.3  | 12.0 | 4.5         |

*Source:* Ministry of Finance

**Table 7: District Ranking by Net Primary Enrolment Ratio**

| District       | Rank 1998 | District   | Rank 2005 |
|----------------|-----------|------------|-----------|
| Gujrat         | 1         | Sialkot    | 1         |
| Rawalpindi     | 2         | Narowal    | 2         |
| Sialkot        | 3         | Jhelum     | 3         |
| Jhelum         | 4         | Chakwal    | 4         |
| Lahore         | 5         | Gujrat     | 5         |
| Mandi Bahaudin | 6         | Rawalpindi | 6         |
| Chakwal        | 7         | Abbotabad  | 7         |
| Faisalabad     | 8         | Attock     | 8         |
| Toba Tek Singh | 9         | Lahore     | 9         |
| Gujranwala     | 10        | Gujranwala | 10        |

*Source:* Planning Commission

**Table 8: Public Expenditure on Education by Levels of Education**  
(% Distribution)

| Year    | Primary | Secondary | Higher |
|---------|---------|-----------|--------|
| 2000-01 | 47.7    | 28.2      | 24.1   |
| 2001-02 | 32.7    | 28.5      | 38.8   |
| 2002-03 | 42.4    | 25.8      | 31.8   |
| 2003-04 | 44.3    | 24.0      | 31.7   |
| 2004-05 | 42.2    | 23.9      | 33.9   |
| 2005-06 | 38.0    | 23.9      | 38.1   |
| 2006-07 | 32.9    | 21.2      | 45.9   |

*Source:* Ministry of Finance

Table 8 shows that the share of primary education in total expenditure after seven years is far below the share at the beginning of the period. Secondary education has also been neglected. Higher education has been pushed at the expense of primary and secondary education. Small wonder, the country is lagging in 2 out of 3 indicators for the MDG related to universal primary education (UPE). On the whole, it is lagging on 12 out of 22 indicators, dimming the prospects of achieving the MDGs by the not too distant 2015. Table 9 reports the status of all goals.

**Table 9: Progress on Medium Term Development Goals (MDG)  
Indicators, 2006**

| MDGs               | Ahead | On Track | Lagging |
|--------------------|-------|----------|---------|
| 1. Poverty         | 1     | 2        | -       |
| 2. UPE             | 1     | -        | 2       |
| 3. Gender          | 1     | 3        | -       |
| 4. Child Mortality | 1     | 3        | 2       |
| 5. Maternal Health | -     | 1        | 4       |
| 6. HIV/AIDS        | 1     | 3        | -       |
| 7. Environment     | 2     | 3        | 4       |
| Total              | 7     | 15       | 12      |

*Source:* Planning Commission

**Table 10: GDP versus HDI Rank - 2006**

| Country   | GDP per capita (PPPS) rank minus HDI rank |
|-----------|---|
| Sri Lanka | 13  |
| Pakistan  | - 6                                       |

To conclude this section, the single-minded focus on twin-deficits and GDP growth improves the GDP ranking, but does not automatically translates into human development. As Table 10 shows, Sri Lanka has a higher Human Development Index than Pakistan despite a lower ranking in GDP per capita in terms of purchasing power parity dollars. This kind of non-populist strategy should be feared as much as the free-spending populism.

#### **4. What is to be Done in the Budget?**

No doubt the macroeconomic fundamentals handed down to the representatives of the people are the worst ever. Fiscal deficit, current account deficit, inflation – all present an appalling picture. The beggar's bowl (*kashkol*) claimed to be broken is still there for all to see, the treasury is empty (*aur khazana khali hai*). It is an economy of shortages and the caretakers, a mere extension of the previous chairtakers, were about to take us back to the days of the ration cards. While the hapless poor masses wait for the trickle down, those who promised it have themselves left for the promised land, to be followed soon by the founding father of the mess. The economic challenge facing democratic government is enormous. Balancing the demands of immediate relief with the



imperatives of medium term economic revival and long term development presents a daunting task.

The detractors are already busy selling the notion that the ordinary folks care only about where the next meal will come from and abolition of 58 (2) b or a, exit of Mushraf, etc. has nothing to do with it. We know that a fully functioning democratic system is necessary for setting up transparent, even-handed and predictable rules for economic initiatives to flourish and sustain. While the constitutional package and judicial restoration must be taken up in right earnest, there is no escape from an immediate relief package that must send a strong message of hope to the people who were left behind, to the sectors which were neglected and to the regions which were ignored. More important, there is the need to remove the long-standing social deficit over the medium term. The package should be financed by a transfer of resources from the beneficiaries of the past eight years to those who were marginalized. This mechanism will disturb macroeconomic stability the least and bleed the state exchequer to a minimum.

**Table 11: Distribution of National Expenditure by Deciles**  
(% Distribution)

| Deciles         | 2001 | 2005 |
|-----------------|------|------|
| 1               | 4.4  | 4.1  |
| 2               | 5.7  | 5.4  |
| 3               | 6.5  | 6.2  |
| 4               | 7.2  | 7.0  |
| 5               | 8.0  | 7.8  |
| 6               | 8.8  | 8.6  |
| 7               | 9.9  | 9.8  |
| 8               | 11.4 | 11.4 |
| 9               | 13.8 | 14.2 |
| 10              | 24.2 | 25.6 |
| Rich/poor ratio | 5.50 | 6.24 |

*Source:* PIHS/PSLM

Who should bear the burden of reducing the social deficit is made clear in Table 11, which gives by deciles the respective expenditure (income) shares and the changes between 2001 and 2005. The data leave no doubt that the rich became richer and the poor became poorer. The bottom 30 per cent falling in deciles 1-3 lost the most, the next 30 per cent lost less, the next 10 per cent still less. Overall, 70 per cent of the households experienced a reduction in their relative spending. Only the 8<sup>th</sup> decile maintained its position. The top 20 per cent gained and the top 10 per cent gained massively. This gives a fairly good idea of their respective abilities to pay.

## **5. Immediate Relief Measures**

The sector which suffered the most, and has the largest concentration of the poor, is the rural sector. Here the urgent need is relief from the crushing burden of debt. Those who ruled for eight years wrote off billions owed by their constituents. The democratic

### *Macroeconomic fundamentalism, populism or what?*

rulers must do the same for their constituents. Loans taken by small farmers, including a reasonable threshold of micro credit, should be written off. In the urban sector, smaller loans extended by the House Building Finance Corporation should be written off.

The poor who have built dwellings of 2-3 marlas on state land, both in urban and rural areas, should be given the ownership rights. This need not cause any fiscal hurt.

Utility Stores, a corporation set up by Prime Minister Bhutto, should be provincialised and retail only flour (*atta*), sugar (*cheeni*), tea leaves (*chai*), pulses (*chane ki daal*) and onions (*piyaz*), all in loose form. That is how the poorest buy these items. Prices should be brought down to the level prevailing on the day the Charter of Democracy was signed.

The caretakers stopped the interns programme started by the PML (Q) Government as a palliative to the rising numbers of the educated unemployed. This should be revamped by incorporating in it also the national volunteers programme and redesigned along the lines of National Development Volunteers Programme (NDVP) started by Prime Minister Z.A. Bhutto in the seventies.

Lady Health Workers (LHW) Programme, a gift of Mohtarma Benazir Bhutto to rural women, has been doing well but not expanding fast enough. Its strength needs to be raised by 50 per cent for an adequate coverage. It should also be extended to Katchi Abadis in urban areas and small towns. Tawana Pakistan Programme, the only package providing much-needed nutrition to rural girls in their schools, was stopped not because the concept and design was wrong, but because bureaucracy failed to manage it. It must be revived in its original spirit.

Prime Minister Nawaz Sharif and Chief Minister Shahbaz Sharif had started effective programmes for urban transport. They need to be revived immediately through public-private partnerships. The poor and the lower middle class start their day with the humiliation inflicted by the overcrowded transport. They deserve better. Let's face it. The damage to the balance of payments caused by the yellow cab (*peel-taxi*) scheme was nothing when compared to the massive imbalance that has resulted from the import of cars, cell phones, etc.

It costs a lot less in terms of time and money to add a unit of energy through conservation than through new power stations. A massive awareness programme should be started immediately, not just for the poor public but also for the elites and bureaucrats. All taxes on energy savers should be withdrawn forthwith and the National Energy Conservation Centre converted into a regulatory authority to ensure energy auditing on a large scale. An incentives package should be announced for local manufacturers of energy saving equipment. The use of airconditioners should be checked bluntly.



In Azad Kashmir and other areas affected by the earthquake, a deadline should be set for paying compensation that has been delayed for so long. The long winter of their discontent should have an end now.

Federal Government should write off its loans to Balochistan and the NWFP and FATA should be provided funds for reconstruction of houses demolished or destroyed in the past 5 years by military action.

## **6. A Medium Term Programme of Resource Mobilization to Remove Social Deficit**

Instead of going for the twin deficits, the democratic government should announce A Medium Term Programme of Resource Mobilization to Remove Social Deficit. Social deficit has 3 critical dimensions:

1. Access to food for everybody
2. Every child in the school going age to be in school
3. Universal insurance cover for everyone's health

This might look like an unrealizable dream *because* it has never been seriously tried. It is doable within the five years of the present parliament. But it will require resources, not rhetoric.

**Access to food** will involve a massive programme of food for work in urban areas, land to grow food in the rural areas and cash transfers for those who cannot work in rural as well as urban areas.

**100 % primary enrolment** is achievable if the policy focus shifts away from buildings to recruiting and training teachers and mobilizing students for enrolment, both monitored effectively. Masjid school scheme can best help.

**Health insurance for everyone** has become an economic necessity. Our cheap labour is not so cheap if health costs are fully accounted for. The enormous burden of disease is seriously undermining national productivity. Another important reason is that many children do not attend school or drop out for health reason. The labours in the informal sector need particular attention in this regard.

**Resource mobilization** efforts should not involve donors. This gives them the leverage to impose worst-practice, which kills local initiative and innovation. Foreign-funded programmes lack ownership, and mostly lead more to debt accumulation than the desired outcomes. This is the **first** element in the strategy to mobilize resources.

**Secondly**, the present resources devoted to food security, primary education and health cover in development as well as current budgets should continue. All PSDP funds that were placed directly under the Prime Minister/President for buying political support should also be diverted to this programme.

**Thirdly**, the following taxes should be imposed and the yield earmarked for the removal of social deficit.

- The financial sector, which has been making enormous profits due to low taxation and high gaps between the rates on advances and deposits, has the ability to cough up more through an increase in the corporate income tax. It must contribute more than its present contribution of 3.9 per cent to total tax revenue.
- Stocks have recently become moody to warn the government against removing the suspension of capital gains tax. There is an enormous ability to pay here and the tax must be collected. The stock players have to get used to paying their due.
- Sale and purchase of property has produced massive capital gains. Taxing some away will not hurt
- Wealth Tax was abolished to please some powerful vested interests. It should be re-imposed.
- Death Duties were also abolished in deference to property interests. They should be brought back.
- A regulatory duty should be imposed on all imports except food, medicines and petroleum products.

**Fourthly**, a 5 per cent cut should be made in defence budget for this programme. In addition, corporate income tax should be extended to all military business ventures.

**Finally**, the PPP government had introduced comprehensive land reform in 1976-77 which were not implemented because of its ouster by a military-authoritarian regime. All the economic and social arguments for land reform continue to hold with greater force because of the mass poverty in rural areas linked essentially to rising assetlessness. Policy on state land distribution should form part of a comprehensive land distribution package.

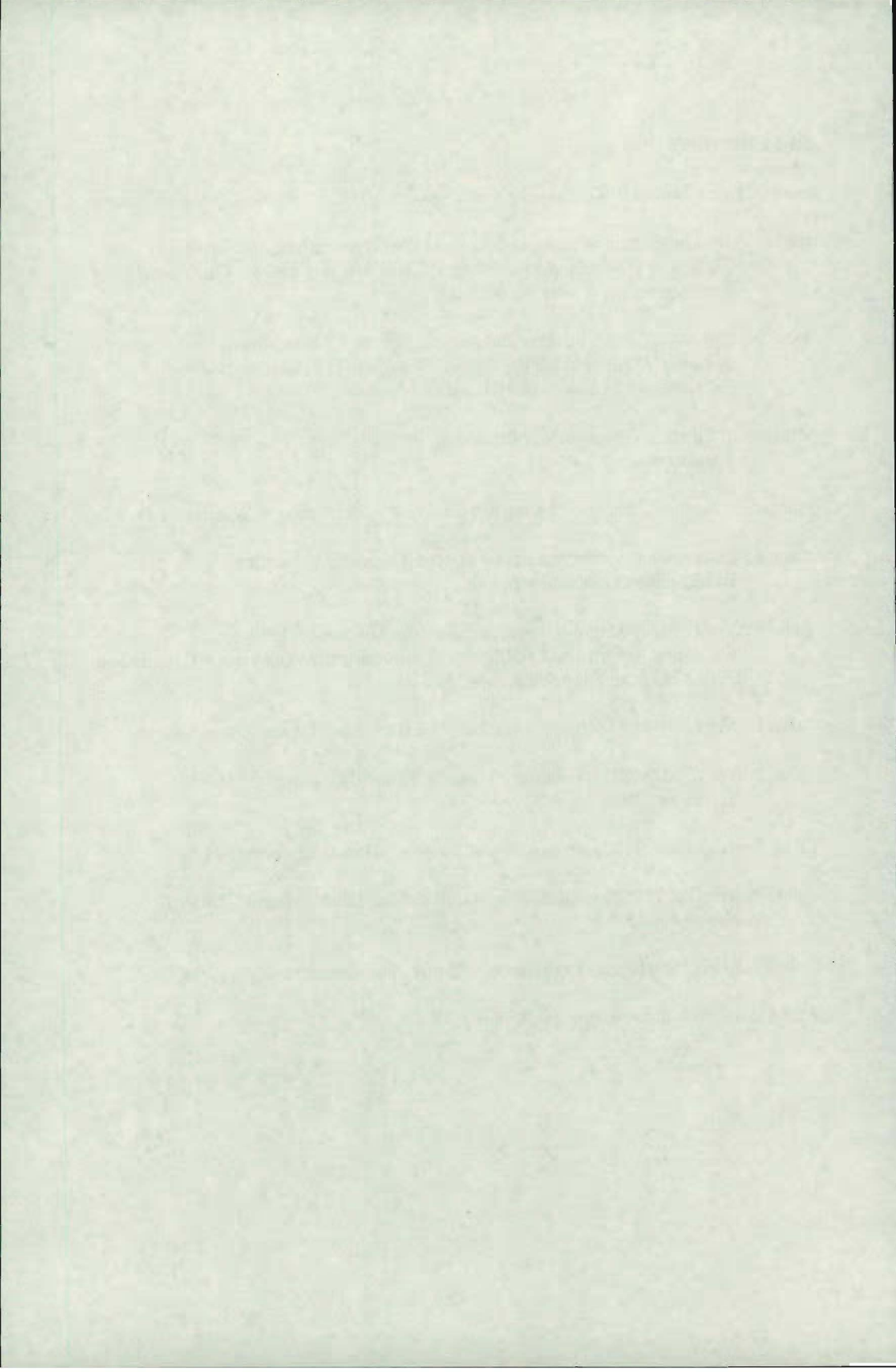
## **7. Conclusion**

This paper has argued that any economic programme following the hackneyed script of financial consolidation by tackling fiscal and current account deficits will meet with strong public disapproval. The public has gone through its motions for the past 8 years, only to be back to square one, and is unlikely to have any appetite left for this. A democratic government can ill-afford to be seen as doing more of the same. The programme of relief, development and resource mobilization proposed here is the minimum that the first budget of the democratic government must announce and implement for spreading the message that democracy has tangible economic benefits to falsify the propaganda of the anti-democratic forces that democracy cannot feed, clothe and shelter the poor.



## REFERENCES

- Burki, Shahid Javed (1980) *Pakistan under Bhutto, 1971-77*. London: Macmillan.
- Burki, Shahid Javed and Sebastian Edwards (1996) *Dismantling the Populist State: The Unfinished Revolution in Latin America and the Caribbean*. Washington, D.C.: The World Bank.
- Irfan, Muhammad (2008) "Poverty and Natural Resource Management in Pakistan". Paper read at the Annual Session of the Pakistan Society of Development Economists. Islamabad.
- Ministry of Finance, Government of Pakistan. Progress Reports on PRSP. Various issues.
- Musharraf, Pervez (2006) *In the Line of Fire*. New York: Simon & Schuster.
- Planning Commission, Government of Pakistan. Pakistan Millennium Development Goals Report 2006.
- Tahir, Pervez (2007a) *Return to Politicization: The Disconnect between Economic Reforms and Political and Administrative Governance*. Islamabad: LEAD-Pakistan Discussion Paper 19.
- Tahir, Pervez (2007b) "An Agenda for Energy Efficiency," *Dawn*, August 20.
- Tahir, Pervez (2007c) "The Economic Case for Political Continuity." *Dawn*, September 10.
- Tahir, Pervez (2007d) "Mysterious Wheat Surplus." *Dawn*, September 24.
- Tahir, Pervez (2007e) "Peasants' Long March and the Land Reforms." *Dawn*, November 5.
- United Nations Development Programme. Human Development Report 2006.
- World Bank. World Development Report 2008.





# Budgeting for Industrial Revival

## Policy Discourse Notes

*Dr. Kaiser Bengali<sup>1</sup>*

### Introduction

Statements like 'the economy is in crisis' are now beginning to sound like clichés. However, it is true that the economy is currently in crisis – and seriously so. Budget and current account deficits and inflation are already in crisis mode and a slow down in capital inflows can trigger a balance of payments crisis as well. Failure to take corrective measures can have devastating economic and political consequences.

One major factor that can be identified as being responsible for the country to reach this state is the rather explicit policy tilt over the last nine years towards services and financial sectors at the expense of commodity producing sectors; particularly agriculture and manufacturing. The change of government and the up-coming budget provides the opportunity to rectify the course.

Budgets determine allocation of resources and influence the direction that the economy – and its component sectors – takes. Given that it is the stated goal of the government to promote commodity-producing sectors, it is time to remove fiscal biases against manufacturing and introduce corrective measures for competing non-commodity producing sectors and activities.

### Tax Proposals

Herewith, the following tax measures to *reduce* costs to manufacturing sector and rationalize the costs to competing non-commodity producing sectors can be considered. Needless to say, each of the suggested measures will need to be empirically analyzed with respect to its impacts.

#### *1. Sales Tax on Manufactured Goods*

The industrial sector has been suffering from rising cost of manufacturing inputs, and one of the significant costs is that of indirect taxation. As such, one measure – and a strong positive signal to the private sector – can be a reduction of sales tax rate from 15% to 12.5% (and to 7.5% eventually) on all items that are manufactured in the country. The measure will raise profitability from manufacturing activity.

This will not be a 'trade protective' measure, since such items that are imported will also be subject to the lower duty rate. The measure is likely to reduce revenues in the short term, but part or most of the decline may be made up from medium term revenue gains from growth in industrial output and exports.

#### *2. Sales Tax on Retail Trade and Services*

Retail trade and services constitute major competing activities to manufacturing. Attempts to generate revenues from Sales Tax on the retail trade and services sectors have not been successful to date. Consideration may be given to levying sales tax on the basis of the square foot area of the business premises at a rate that is a percentage of the

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## ***Budgeting for industrial revival***

property tax rate of the premises and vary, as well, by sector. Thus, businesses that are located in high-priced premises and businesses in high value products, e.g., jewelry, will pay sales tax at higher rates. All other sales tax measures relating to retail trade/services may be removed. The revenue receipts can be expected to be substantial. The measure will reduce profitability – vis-à-vis manufacturing – in the retail trade and services sectors

### ***3. Import Duty Rate***

The average import duty rate has been brought down to even below what is required by WTO regulations. This has placed the domestic industry at a disadvantageous position, losing market share even within the country. A 5-percentage point across the board increase in import duty for all consumer items may be considered. The measure will serve to enhance import duty receipts somewhat and curb the rate of growth of imports, with positive impact on trade balance. It will reduce profitability – vis-à-vis manufacturing – from engaging in the competing import trade.

### ***4. Import Restriction***

Consideration may also be given to placing a range of inessential consumer items on the negative list. The import control measure will cause a slight reduction in import revenues, but serve to rein in somewhat the rate of growth of the trade deficit. The measure will help domestic industry regain/retain market share within the country.

### ***5. Cost of Imports***

Under-invoicing of imports is a serious impediment to domestic industry. A measure equivalent to the concept of the 'right of first purchase' may be helpful. Operationally, the Customs should place the Invoices of all arriving goods consignments on the website and entitle any party within a 3-5 working days period to purchase the consignment by paying, say, a minimum 25% premium. The measure will protect domestic industry from unfair practices and enhance import duty receipts. The measure will discourage import-intensive industries and reduce profitability – vis-à-vis manufacturing – from engaging in the competing import trade.

### ***6. Capital Gains Tax***

The capital market constitutes a major competing activity to manufacturing. Profits in the capital markets have been super-large – and exempt from taxation. Resultantly, growth in capitalization has been on account of (excessive) trading in the same scrip of a very small number of companies, rather than on account of expansion of the base. In the event, stock markets have not served as a source of resource mobilization, which is its basic function.

Removing of the CVT and the exemption from Capital Gains Tax may be considered, levying the latter @, say, 5%. Capital Gains Tax may be exempted if the shares have been held for a period of at least six months. At the same time, consideration may be given to exempting dividends from income tax. The measure will discourage speculative trading and encourage the long-term (genuine) investors, along with raising some revenues for the exchequer. The measure will reduce profitability – vis-à-vis manufacturing – in the competing capital market.



## **7. Land Prices**

Land prices have increased to a point where it is often the single largest item in fixed capital cost. Resultantly, profitability from engaging in real estate business and development often exceeds that from engaging in manufacturing activity. There could be merit in the shift if relative profitability from real estate or from manufacturing was determined by genuine market forces. This is not the case and land price inflation is due to speculation, facilitated by flawed institutional factors. However, despite market factors, there is merit in curbing land prices through policy measures, given that land is a finite commodity and increase in land prices does not imply wealth creation. (Inflated land prices have also rendered housing unaffordable for not only the poor, but also for the middle class – a contradiction of the commitment to housing for all by the PPP government).

Land speculation has been facilitated by:

- (1) absence of computerized land records, leading to cornering of plots by speculators and
- (2) under-valuation of land, leading to revenue loss for the government.

Consideration may be given to

- (1) completing the process of computerization of land records (urban and rural) across the country within a year, and
- (2) introduce the concept of 'right of first purchase' to enable the government to purchase any property for sale at a premium of, say 20%-25%. The measure will curb speculative trading in land, bring down land prices, and generate revenues from transfer taxes and fees for local governments. The measure will reduce profitability – vis-à-vis manufacturing – in the competing real estate market.

## **8. Wealth Tax on Luxury Housing**

Luxury housing competes with commodity producing sectors for investment funds. A tax on luxury housing will raise cost therein and raise relative profitability in manufacturing.

Further, there are other efficiency and equity factors in favour of imposing wealth tax on luxury housing. Large fiscal deficits force governments to borrow, resulting into 'crowding-out' of private investment. Deficits can be contained either by raising revenues or curtailing expenditure. The latter is constrained by severe political constraints, particularly under political governments that come to power on a wave of unmet needs and demands. Revenue generation through indirect tax sources raises the cost of production and competitiveness.

Direct revenues, adjusted for the indirect component of withholding taxes, constitutes about 20% of total tax revenues. There is, however, considerable scope for revenue collection. The last decade has been characterized by substantial growth in the income of the upper 10% of the population. Their contribution to the national exchequer has remained nominal and static. Not surprisingly, while the bottom 10% of the population pays 16% of their income in taxes; the top 10% pay only 12%. This aspect of social injustice presents a challenge to the PPP.

## ***Budgeting for industrial revival***

Given the laxity in the documentation of the economy and pervasive tendency to under-report or fail to report income, the income tax regime is failing to collect taxes adequately – leading to accumulation of wealth from unaccounted income. Consideration may, therefore, be given to tax the obvious and measurable taxable base – urban residential land. As in (2) above, a fixed rate per square feet may be levied on all urban plots above, say, 400 square yards. Thus, if the rate is a mere Rs. 1 per square foot per month, the tax burden on a 1000 square yard plot would be Rs. 108,000 per year – less than half the monthly household expenditure bill for households in the upper 10% income bracket or less than 5 percent of their total annual expenditures. The aggregate revenue gain for the government is likely to be significant.

### ***9. Windfall Gains Tax***

There are sectors of the economy (lately, oil, banking) that accrue windfall profits on account of exogenous factors. Consideration may be given to imposing a Windfall Gains Tax. The tax will not impose any adverse impact on economic activity, but will be a source of revenues to the national exchequer. The measure will reduce profitability somewhat – vis-à-vis manufacturing – in competing sectors.

### ***10. Gas Pricing***

Natural gas prices are structured such that domestic users are subsidized and the tab is placed on industry. A reversal is in order. Even if gas rates for industry are not revised downwards, the rise in domestic gas prices, particularly gas used for commercial purposes, will correct the relative price distortion, contribute to conservation of gas, and accrue greater revenues for the government.



# Stabilization of Pakistan Economy Demands: A Hit at Root and Sacrifices at Top Level

Mohammad Rafiq Khan<sup>1</sup>

**Abstract:** *This article develops an inter-linkage between causes and effects that led to the destabilization of Pakistan economy and suggests some measures to stabilize it by discovering the missing link between Microeconomic and Macroeconomic models in the light of the local conditions and environment of Pakistan and thrashing out where the leadership has remained trapped. The article concludes that unless the leadership doesn't realize its faults, it is not possible to correct our position and to destabilize the economy. It offers both macro and micro level solutions that may be helpful in pulling Pakistan economy back to normal and defines the future track for sustainable development.*

## 1. Introduction

Pakistan is currently facing biggest challenges in its quest for economic stability and to achieve the ideals of "Sustainable Development" and "Inclusive Growth". Hot debates are going on in the concerned national circles to work out solutions of the prevailing and expected future economic crises. "How to resolve it?" is a very difficult question floated by almost all those who feel genuinely tagged when the nation as a whole is in trouble. Here, an attempt is made to answer this question, though not completely but partially where a ray of feasibility of making some effective changes can be seen. The fundamental principle to address a problem is the assessment of our own collective self for the wrongs done in the past and repenting on the identified mistakes. This will lead us to the identification of cause and effect and ultimately to the measures essential for the economic recovery.

The salient features of the historical landmarks are presented below to know clearly what has been the shape of Pakistan economy in the past and what its current status is. The objection is to design an appropriate strategy for future development.

## 2. Historical Overview of Pakistan Economy

When India was partitioned in 1947, the lion's share of resources went to Bharat. The residents of Pakistan had to depend solely on traditional agriculture for their survival. We had almost no large scale industry and even the small scale industrial base was insignificant. Pakistan had to take start from a scratch to build up its economy. If we compare our present techno-economic status as nuclear power with the position prevailing at independence, the pace of progress is worth appreciating. The analytical view of this march from nothing to something has been presented by authors both at home (Ahmad and Amjad, 1982, Hasan, 2006) and abroad (Papanek, 1967, Lewis, 1970).

For analysis, most of the authors have divided the economic life of Pakistan from 1947 to 2008 into the following periods:

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### *Stabilization of Pakistan Economy Demands*

1. 1947-1958: Marked by the struggle for democracy and fortification of industrial base.
2. 1958-1969: Marked by first military takeover succeeded by controlled democracy and rapid built up of industrial sector.
3. 1969-1977: Marked by second military take over and war with India, which translated into separation of East Pakistan in 1971 and followed by authoritative civil regime marked by large scale nationalization of establishments and institutions in different sectors,
4. 1977-1988: Marked by third military take over and economic recovery from the state of recession through deregulation and denationalization.
5. 1988-1999: Marked by unstable democratic rule and economic recession again.
6. 1999-Date: Marked by fourth military takeover and economic reinstatement with apparently attractive macroeconomic indicators.

Both positive and negative points of different periods are outlined below with overall conclusion at the end.

**Period 1** may be characterized by initial build up of mercantile capital with highly significant role of the state and neglect of the agriculture sector. Two factors that helped in transformation of agriculture based mercantile capital into industrial capital were devaluation of Indian currency in 1949 and Korean Boom (Amjad, 2008). The referred devaluation led to suspension of trade between India and Pakistan which finally translated into blocking of major imports from former to latter. The Boom due to Korean War that spread over from 1950 to 1952, gave fairly good chance to traders to make high profits for subsequent investment into new industries to produce consumer goods, later under Import Substitution Policy. This gesture was further supported by the state protection of the local infant industries and high duties on imports. The state also helped private sector by establishing the Pakistan Industrial Development Corporation (PIDC) that played an extensive role in providing the industrial base to partially cover the consumer goods for home needs and partially help the entrepreneurs, through the mechanics of installation, operation and sale to private sector.

The agriculture sector was neglected on the assumption that Pakistan was self sufficient in agricultural produce for the survival of its residents (Hasan, 2006) and will be able to meet its food needs comfortably in future because the population growth was within limits (1.4%). This dream was shattered by wheat crop failures of 1952 and 1953. This, along with subsequent unexpected rise in population, resulted into increased demand for food grain that had to be met through supplies from USA under PL-480 Scheme, which continued for almost a decade. The import of food grain also reduced investment in industry due to scarcity of resources. The second setback to the industry was due to a slump in the home market of food products (Hamid, 1974). Another setback was the



tighter controls on foreign exchange by the State Bank, which discouraged exports of the manufactured goods.

**Period 2** which witnessed the first military take over of 1959. This was accompanied by pro-Western policies and significantly high increase in foreign aid. It provided some attractions for the entrepreneurs from both home and abroad. The Martial Law regime also banned the trade unions to make business environment more conducive for the investor. This resulted into mass industrialization with a high growth rate. The regime did not neglect the agriculture sector and tried to encourage the farmer by giving subsidy on fertilizer and plant protection (Rashid, 2008). The massive support to agriculture sector often known as the "Green Revolution" resulted an increase in growth rate from 3.5% in 1960-65 to 4.1% in 1965-70 (Hasan, 2006). The overall growth rate of economy in this period was 6.7%, which was comparable with some front line Asian countries. So much so, Pakistan started being referred to as a model for many developing countries.

The major setbacks to the Pakistan economy in this period were the outbreak of 1965 War and nationwide political turmoil against Field Martial Ayub Khan which ended into another Martial Law of 1969 and take over by General Yahya Khan. His short period had to face 1971 War and separation of East Pakistan. In spite of a fairly good progress in agriculture sector, the Country was pulled into severe drought in 1966-67 which translated into grain shortage. Despite all these negative forces, this period is considered as "successful period of economic management" (Hasan, 2006).

**Period 3** started with Bhutto's taking over as first civilian martial law administrator in December 1971. The nation was in extreme shock due to separation of East Pakistan with 90,000 soldiers as prisoners of war in India. Thus, the public at large was mentally prepared to accept Mr. Bhutto in any form. He entered politics with the philosophy of socialism and the slogan of 'Roti, Kapra and Makan' to everyone (Provision of basic needs of food, clothing and housing) which fortified his acceptability. Mr. Bhutto attempted a change from private to public ownership and nationalized the major sectors particularly industry, banking and education. He rather tried to have full control of educational institutions as students those days were the major political force in the Country. The consequences of this unplanned change were disastrous. Extraordinary encouragement of workers against the owners resulted into almost no discipline in industry. The industrial units started falling sick. This sickness ultimately translated into closure of many units. Thus, the growth of industry stopped and the attempted change set the stage for a major bias against export strategy. The economic consequences included increase in the defense establishments, expansion of government departments, additional burden of education expenditure due to nationalization and elimination of private enterprise. The worst of all was an air of lawlessness that could be clearly seen in public institutions. The investors drained their capital out and there was a drastic reduction in foreign exchange reserves. To reverse these effects, the succeeding governments tried to privatize the nationalized units but some major segments like banking, insurance and industry remained with the state till late 1990s (Hasan, 2006)



## *Stabilization of Pakistan Economy Demands*

**Period 4** started with military takeover under the leadership of General Zia-ul-Haq. This period is marked by successful governance with the help of centrally controlled democratic forces. It had not to see any significant labor unrest or student agitation. There was no novelty and no innovation, yet it was helpful in getting Pakistan out of the economic recession that it inherited from the previous regime. The economy grew at a reasonable growth rate of 6.6% per annum for the following major reasons:

1. Long term Tarbela Dam Project was completed as a result of which the cultivated land increased by 10 million acres (Hasan, 2006).
2. Fertilizer and cement installations started earlier matured and thus became function to add value to performance of the manufacturing sector and also to the overall economy.
3. State support to Afghan Mujahiddin at war against the Soviet Union from 1980 onwards being basically in the interest of USA, led to huge economic and military aid from America and thus Pakistan was helped indirectly.
4. As the economic situation was favorable, there were extensive remittances from abroad and foreign investment.

There were many structural problems, however, that remained unattended by government in this period. The economic situation started deteriorating in later half of the decade (1985 to 1990). The economy faced severe challenges in terms of declining growth, accelerating inflation, increasing poverty and widening income inequality. These also included the poor climate for private sector investment, heavy dependence on exports of cotton based goods and the inelasticity of the tax system (Hasan, 2006). Some of these problems were intensified towards the end of 1980s.

**Period 5** was the era of the rotational democratic political governments of Benazir and Nawaz Sharif. The weak macroeconomic management under the new democratic governments of the time, lack of commitment to execute competent structural reforms and corruption in public spending resulted in poor economic outcomes. Moreover, the structural problems of public debt, weakness in exports, poor revenue collection, inadequate investments in human capital and physical infrastructure, and low quality of public institutions and governance further added to the pressures facing the economy. Economic growth slowed to an average of 4% by the end of the 1990s (from 6.7% per annum in the 1980s) with more and more people falling below the poverty line while investment rate decelerated from an average of 19% of GDP in 1980s to 15.6% by 1999. The economy passed through crisis after crises during the decade. Inappropriate sequencing of financial reforms in the early 1990s, particularly introduction of foreign currency accounts and the use of short-term commercial borrowings translated into rapidly increasing total indebtedness of the economy. The repayment of both internal and external liabilities created excess pressure on government resources. The fiscal and current account deficit reached as high as 7% and 5% of GDP respectively and the associated build up of public debt and external debt was recorded at over 100% of GDP and 335% of Foreign Exchange Earnings respectively. This emerged as the major source of macroeconomic imbalances during this time (MCB, 2007)



**Period 6** of the Pakistan economy starting from October 1999 and headed by General Pervaz Muasharaf with Shaukat Aziz as the principal economic manager, has been widely hailed by a large number of expert organizations and institutions<sup>2</sup>. The growth rate sustained around 7% from 2004 to 2007. There was great improvement in the foreign exchange situation and there was a rapid growth in hard currency reserves. The 2005 estimate of foreign debt was around US\$40 billion, which decreased with the assistance of IMF and debt-relief from the United States. However, it has been widely admitted that in the absence of US assistance, the inflationary pressures and low savings rate along with other economic factors, would have rendered it very difficult to sustain a high growth rate. The structure of the Pakistan economy is said to have changed from agriculture base to a strong service base. The agriculture accounts for roughly 20% of GDP. The service sector, on the other hand, accounts for 53% of GDP (Wikipedia). Significant foreign investments can be seen in several areas such as telecommunications, real estate, energy and many others (Governor SBP, 2007). Pakistan also signed a Free Trade Agreement with China with the hope to triple bilateral trade from \$4.2 billion to \$15 billion within the next five years and Pakistan's exports in 2007 amounted to \$20.58 billion (World Fact Book, 2008)

There are many for and against opinions on the performance of Pakistan economy in this period. Some experts are of the view that the current success of the economy is largely due to the comprehensive structural reforms, macroeconomic and financial discipline of the military-led semi-democratic regime while others indebted it to 9/11 event and declaration of Pakistan as the frontline state in the so called war against terrorism, after which foreign direct investment and remittances encountered high growth globally.

Before political unrest and judicial crises in March 2007, Pakistan started being considered among the fastest growing economies of the region as it was growing at an average rate of 7% for the years 2004- 2007 (MCB, 2007). The economic growth prospects were considered better than ever before as foreign direct investment, remittances and foreign exchange reserves exhibited new records. Tax revenue collection increased substantially. The agricultural performance had been strong while that of the service sector had been remarkable.

The government gave the impression that it was vital to restore macroeconomic stability for creating employment opportunities and preventing people from falling below the poverty line. Thus extensive structural reforms in almost all the key sectors of the economy were needed to enhance economic incentives, improve resource allocation, and remove hurdles in the way of private sector development. It is with this view that a series of structural reform measures were initiated in areas of privatization and deregulation, trade liberalization, banking sector, capital markets, tax system and tax administration and the agriculture sector (MCB, 2007).

The most remarkable development was seen on the external front where for the first time in the economic history. Pakistan was able to exhibit a current account surplus of

<sup>2</sup> Gulf Research Center, 2008, MCB, 2007, Daily Times of Pakistan, 2007, Pakistan Times, 2007, IMF, 2007.

USD 331 million and thereby substantial improvement could be seen in Pakistan's balance of payments. When the foreign investors started showing interest in rapidly growing economies of Asia, Pakistan also attracted their attention considerably. The foreign direct investment and inflow of remittances accelerated the pace of economy, even further.

### **3. Current Situation**

After taking into consideration the facts and figures cited above, it can be concluded that in spite of economic recessions encountered in Period 3 and 5, the Pakistan economy performed well in terms of macroeconomic indicators. The fruits of this performance were reaped, however, by selected few. The benefits never adequately reached the common man in any period.

Currently, the Pakistan economy is passing through the worst phase as such a situation was never encountered before. This is reflected in the criticism made by different economists both from home and abroad. Views of only a few are presented below.

Teslik, LH. (2008) writes that "Pakistan's turmoil has already pinched the country's economy, stoking inflation and prompting concerns among regional trading partners". He states that inflation and power shortages are posing more concrete problem in near future. Although the official figure for inflation in late 2007 is 8.8 percent, in his opinion, "more pressingly for much of the country's population, the prices of beverages and food items, including basic foodstuffs like wheat products, rose at an even higher rate". The things will deteriorate further with the political turmoil which also threatens foreign direct investment.

In a most recent study Chaudhry and Chaudhary (2008), have clearly concluded that the effect of increase in food price level on poverty levels is "substantially greater" than that of increase in energy prices. It was significantly higher on rural than on urban population. Moreover, the increase in food price inflation (say 20 %) may translate into significant increase in poverty head count (36 to 44%).

### **4. Economic Crises in Pakistan – Causes and Effects**

The cause and effect inter-linkages with reference to the factors responsible for the current economic crises in Pakistan are highlighted below.

#### **4.1 International Political Scenario**

If interpreted in political terms, the current economic crises may be having many reasons behind it, but the major one is the 9/11 event. The post-script of this story is that it has pushed out the war of terror from the home of many global players to our doorsteps. The transaction has been very cleverly done, taking the advantage of our ignorance and strategic political situation in 2001. The investment the big lords had to make, can be coined in terms of some grants, promises made to us for our future development and help in boosting of our foreign trade through quotas and tariff relaxation etc. Many of us, who had their interests across the borders, helped to conclude these transactions. These apparent favors have now taken the shape of a



coercive force threatening that if we don't stand by our benefactors in the war of terror, these may be withdrawn and we may be pushed back to the position where we will be more backward than that in 2001. If this happens, our projects will be blocked where they are. The roads will remain unfinished with dust and debris in their environment and the luxurious salaries being enjoyed by government officials may suffer severe cuts. The question arises that what will happen to the common man who is already under the intense pressure of inflation and sky-rocketing prices of stuffs urgently needed to keep body and soul together. The promises made by great economists imported from abroad to make us join the front line of Asian Tigers have already left him (common man) helpless in depression and sorrows as the benefits of what was planned have not reached the lower strata of society

#### **4.2 Lack of Confidence in Collective Self**

The major wrong that we have done and are still continuing to do is our sole reliance on imported ideas and economic models that ultimately lead to lack of national self reliance and development of indigenous innovation systems. Unfortunately, the ideas that crop up in the developed countries are in tune with their own conditions and environment but in no case suit to the conditions and environment of the developing countries. The end result is that a self sustained innovation system urgently required to solve indigenous problems is inhibited to develop. The local talent and expertise, which is in a better position to understand and solve these problems, is not given a chance to contribute efficiently.

The results of our sole reliance on foreign advice and consultancy are disastrous. The experts and think tanks in the developed countries mostly depend on macroeconomic indicators and they are successful in achieving the desired results. There is a sanction of worldwide recognized experts behind the fact that the macroeconomic model imported from abroad has failed to deliver in the developing countries including Pakistan. One of these experts ought to be quoted here:<sup>3</sup>

"The problem of development must be defined as selective attack on the worst forms of poverty. Development goals must be defined in terms of progressive reduction and eventual elimination of malnutrition, disease illiteracy, squalor, unemployment and inequalities. We were taught to take care of the GNP because it will take care of poverty. Let us reverse this disorder and take care of poverty because it will take care of GNP. In other words, let us worry about contents of GNP even more than its rate of increase."

The statement was made in 1971 and even today after thirty seven years, the macroeconomic policies adopted since the beginning have not been able to correct the condition of lower classes. The major issue before the developing countries is still as how to overcome the problem of unemployment, inequality and poverty. The irony is that these victims of macroeconomic model yet look towards the West for solution of

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<sup>3</sup> Mehboob-ul-Haq, "Employment and Income distribution in the 1970s: A New Perspective", *Pakistan Economic and Social Review*, 1971.

their socio-economic problems without realizing that if the same trend continues, the problem will magnify year by year along with the creation of many others.

#### **4.3 Budget Allocation and Utilization**

The next aspect for serious consideration may be the over allocation of non-development budgets to different public departments, underutilization of annual budgets and subsequent surrender to the circles, which are already getting more than their due. The author recalls an episode of his career<sup>4</sup>. He noticed that many colleges, in spite of sufficient budget allocation under-establishment charges, were deplorably deficient in teaching staff. In one of the girl colleges, there were only 3 staff members against 14 sanctioned posts. In another, there were 7 against 35. There were many subjects in which not a single teacher was available and thus the teachers of other disciplines were asked to teach the students. When the officials were asked to tell, "where goes the unutilized budget?", the answer was that it is surrendered to the Government of the Punjab for utilization elsewhere. How the surplus would have been spent otherwise, everyone knows. This is just one example from education department; there could be a large number of similar stories from other departments; better not to narrate the names. It may be fruitful to cast a glance on different establishments for having a rough idea about the wastage of resources.

There are many institutes which were opened for the sheer objective of accommodating a single person who came from abroad after getting a degree or training in a small field. In our universities, there are a large number of departments which are teaching very similar courses, if not the same, but they are functioning independently. Examples may be public administration, business administration, business education, etc. These can be integrated in a single department easily and without loss to students. A recent wise step taken by Government of Pakistan is the integration of three institutions i.e. Administrative Staff College, NIPA and Civil Service Academy into one institution. This may translate into a drastic reduction in the expenditure. Similarly, there are many other subjects that can be combined to function under the same roof like social work and sociology, philosophy and psychology, Urdu, Persian and Arabic (Oriental Languages) and so on.

#### **4.4 Food and Energy**

Currently, the food and energy are the biggest references while taking decisions at the macro-economic level. We have been in the list of agricultural countries that are expected to be self-sufficient in food supplies. To face an acute shortage of wheat flour is really an irony. It is our misfortune that we are suffering from water shortages, occasional famines and desertification.

In addition to the usual factors cited above, there are yet many things to be thought about in the context of food supplies. One of such factors is the rapid urbanization that is engulfing the cultivable land. Have we ever put this question to our collective self, "If mushroom growth of rapidly expanding urban colonies continues at the current pace, from where will come our food in future?" The answer is not difficult but none

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<sup>4</sup> Director Colleges, Gujranwala Division



talks in these terms due to vast profit of the people involved in the real estate business. Once the author put this question to the chief executive of a high class lending bank and the answer was that his business is concerned with loans and not with its impact on food problem

Where we are facing an acute shortage of energy, we are also wasting it unconsciously. In this context, the first question that comes in mind is, "Are we managing the distribution of available electricity efficiently?" The answer will be "certainly not". The next question will be "have we ever rightly identified the causes of line losses and theft and if done so, have we ever developed some measures and implemented them to eradicate this menace from our society. We have huge literature on the renewable resources of energy but we are not in a mood to consider that burning of solid waste openly in homes, on roads and in the fields for its disposal not only creates air pollutants but is also synonymous with wasting of the national wealth, which could be otherwise harnessed to produce thermoelectric power. Similarly, dumping of large quantities of solid waste under the ground without reaping the benefits associated with techno-economic disposal is a wasteful exercise. It is now globally resolved that the solid waste can be better exploited through proper management of constructing landfills in which anaerobic bacteria can naturally split it into simple components that can be easily taken up by plants as nutrients along with the production of large quantities of biogas. Methane is the major component of both natural gas and biogas which is used as fuel in industries and a raw material for commercial products like fertilizers. It is extensively substituting gasoline as a fuel for vehicles as it produces relatively less air pollutants. In many countries, it is also being used as a fuel for the production of thermoelectric power, where the generators are installed near the landfills to avoid expensive network of pipelines for supplying gas.

#### **4.5 The Missing Link**

It will not be fair to advise that we should set aside the macroeconomic model and switch over to the microeconomic alternative. The point to be made here is that there exists a link between these two models that is missing. It needs to be highlighted and thrashed out in detail to assess what is the best from both sides that may be combined and subsequently applied not only to solve the problem of unemployment, inequality and poverty but also to bring forth a package that guarantees prosperity for the people of Pakistan as a whole. This is essential with reference to the gloomy socioeconomic future ahead and the problem multiplicity that is due as a gift of ensuing globalization, for which we are not prepared from any angle to combat.

### **5. Solutions at Different Levels**

What can be the solution to the mega problems narrated above? It is the question which is extremely difficult to answer. Yet there is no harm in making an attempt to dig out the answer and present it to the suffering community. The same has been done in the following sections basing everything on extreme sincerity of the author and expectation of similar sincerity from others. The situation cannot be changed until the vested interests are put aside by the implementing forces. An important example of this thought from an Indian expert, currently working with IMF is given below as an illustration of the mindset of the author.



Rajan R.G. (2006) attempted to identify some causes of persistence of underdevelopment and stated that of these were the constituencies and rent preservation. He argued that each "constituency prefers reforms that preserve only its rents and expand its opportunities". That is why no comprehensive reform path can command broad support. The conclusion leads to the bitter reality that the vested interests don't give way to any reform to be through. As our socio-economic environment is not different from India, we can apply the theme to illustrate the hurdles in the way of the reforms, such as first generation and second generation land reforms and nationalization of industries.

It may be safely conceived that there are two levels where the solutions can be offered: Macro-economic Level and Microeconomic Level. These are discussed briefly as under:

### **5.1 Macroeconomic Level**

The strategy that can be transparently viewed as a solution in the prevailing kaleidoscopic socioeconomic scenario of twenty-first century is 'Fair Distribution of Income'. This solution has been floated many times in the history of Pakistan. The irony is that this has been publicly stated and heard by all concerned but silently turned down by the decision makers. The reason is that a sect of society which owns most of the wealth is not in a mood to accept it as a problem solver due to their vested interests. This does not mean that no attempt has been made on the goal of redistribution of income. The first attempt was through different generations of land reforms. Although the reforms were undertaken but these were translated into null and void since there was no serious intention to see their practical manifestation. The big landlords did not forego even an acre of land in favor of tenancy and the have-nots continued to remain have-nots. On the industrial side, nationalization was carried out under the cover of the slogan of "Roti, Kapra and Makan". Further, it was done in a hatch patch manner with untimely and irresponsible encouragement of the workforce. The results were highly undesirable as they ultimately translated into drastic reduction of production efficiency and transfer of capital abroad by the entrepreneur. A significant percentage of industrial units fell sick and many were closed. The final victim was the national economy, which had to bear the strongest blow hardly encountered in the history of the nation. Since then many crests and troughs are seen on the graph of national economic efficiency measured in terms of macroeconomic indicators. These ups and downs have not yet stopped out of which the current economic crises, has appeared on the scene. It is so severe that every Pakistani feels concerned about it.

The situation analysis gives us a warning that we have to be very careful while reorganizing our economic model based on redistribution of income. The major question to be put to those who claim to be the saviors of the nation will be whether they are sincerely in a mood to take up this exercise with strong determination and good intentions. If the answer is real yes, Allah almighty will positively show us the ways to accomplish it smoothly.



The next aspect for serious consideration may be the imposition of cuts in non-development budgets through the realistic allocations for various public departments. The data about all wasteful exercises done in the past should be gathered and analyzed to know the cause and effect, which will form the basis of thrashing out where the scissors can be applied to cut short the expenditures. This does not imply that cuts are imposed even if the budget allocation is adequate. It will also be better to identify who have been the victims of budget underutilization and subsequent surrender to the circles, which are already getting more than their due share.

There is a solution to the problem of rapid urbanization and mushroom growth of colonies on agricultural land. The state should decide, in the first instance, that nobody will be permitted to own a plot for building residence more than the permitted dimensions. The next step will be that we should examine the option of vertical movement instead of horizontal movement. This will economize in land both in general and agricultural contexts and will lead to a secure future for our generations.

Another serious aspect to be highlighted is the luxurious architecture that plans to make every room air conditioned without considering as to where from the required electricity will be supplied to run them. State level decisions are needed to mentally prepare the people for future shortages of electric power and revert to the traditional or semi-classical techniques of keeping the rooms cold.

#### **4.2 Microeconomic Level**

A number of solutions can emerge from the microeconomic model. The examples may be techno-economic disposal of wastes, micro-financing and many others. Let us recall that Gandhi asked the Indian leadership to put "spinner wheel" as an insignia on the Indian flag. Its significance was chaining of technology from the lowest to the highest level in such a way that it is in tune with the national conditions and environment. Moreover the labor intensity during the transitions from lower to upper level would not affect the overall employment situation of the nation. Although the proposal did not materialize but its impact can be viewed in the pattern of Indian technology that exhibits diversity from lowest to highest scale of production. All the players are competing very well with each other in the market. This does not mean that India has done very well and has been able to eradicate poverty or that its common man is very prosperous. However, the economy as a whole is quite stable.

**Disposal of Solid Waste:** Techno-economic disposal of solid waste can effectively address the problem of electrical shortage. This is because the technology is based on the concept of 'Law of Conservation of Resources' which states that the total amount of resources in the universe remains constant, although they may change from one form to another. The transformation of one form into another is just like mass and energy. This law provides a strong basis for sustainable development and can be used to cure all the economic evils to stabilize the shaky economies. According to the law, a waste is no more a waste as every waste can be assigned an economic value. Sometimes, a waste, after proper treatment may even turn out to be more valuable than the stuff from which it is produced.



The production of thermoelectric power by incineration of solid waste is more than a half century old story. The author was first time introduced to this important technology in early 1970s by a young man who was doing job in a power plant of New York Council that was based on the incineration of municipal waste to produce thermoelectric power. He told the author that he had delivered a talk on production of thermoelectric power by incineration of biomass of municipal solid waste to the councilors of Lahore Municipal Corporation and they have honored him with the shield as a token to the guest speaker. He was back to the job and was almost forgotten for a long period. Later, it was disclosed to the author (while participating in a PTV program on environment) that LMC got a study done on production of thermoelectric power by incineration of municipal solid waste but its recommendations were not implemented.

The next two episodes that can be quoted in this context are study tours of the post-graduate students of Government College Lahore to Rahwali and Pattoki Sugar Mills. The former utilized its sugarcane solid waste, popularly known as 'Bagasse', as fuel in multiple effect evaporators for concentrating sugarcane juice. A lot of excess energy in this process was dissipated in the atmosphere and not harnessed to produce electricity. The latter mill was reaping both benefits; it was concentrating the juice as well as harnessing energy to produce electricity by using steam boilers and turbines to meet their domestic demand. This technology being efficient, is commonly used by sugar mills these days to dispose of solid waste and to produce electricity side by side.

The fourth episode started its constitutional make up when the author got actively involved in studies on Environmental Economics at Lahore School of Economics and carried out some projects on techno-economic disposal of liquid and gaseous pollutants. At this juncture he also worked on the disposal of solid waste by incineration of its biomass to produce electricity. All the ingredients were integrated, which finally translated into a pilot plan to carry out studies in a systematic manner. The central theme was techno-economic disposal of solid wastes produced from an institution to city level.

In the first phase, the economic viability of the production and disposal of solid waste was studied in four educational institutions: LSE, LUMS, KC and GCUL. The primary data concerning the amount and composition of solid waste, production of thermoelectric power and the prices of machinery and equipment involved was collected. The data were analysed to design the project that was subsequently appraised to determine its B/C Ratio, NPV by applying discounted cash flow techniques and payback period (PBP) was determined.

The results indicated that installation of thermoelectric power plant was not feasible in LSE, LUMS and KC but it was feasible for GCUL. The data, of course, guided that the projects could be pulled towards feasibility through well planned strategies.

In the second phase, the research work was further extended to village level, urban colony level and on City of Lahore as a whole. The study is likely to give promising messages to the residents of Lahore and to the nation at large.



The major constraint on the installation of thermoelectric power plants seems to be the low heating value of municipal solid waste due to the presence of a high proportion of construction material in the garbage that cannot be burnt, and also some toxic material, which produces pollutants. An action plan may be framed to handle these problems. For example, the municipal authorities can be advised to introduce the concept of separate collection of waste components at source. The source may be a residential house, a site in an institution, a spot in a manufacturing factory and so on. The concerned authorities are expected to provide plastic bags of different colors for each spot for collecting different waste components separately. The public may be educated and made aware of the value of the process with the help of media and personal contact, which will guarantee a significant saving in terms of recyclables and thermoelectric power production, etc. Moreover, it will provide a clean way of separating recyclables from non-recyclables, infectious from non-infectious, toxic from non-toxic and incinerable from non-incinerable wastes. In addition, the people carrying out this exercise will have multifold benefits through resale of recyclable at the registered and authorized points and production of thermoelectric power from incinerable biomass. Chemists and mechanical engineers can help in installing scrubbers to trap air polluting gases coming out of incinerators to avoid their diffusion into the atmosphere. The biomass that will be free from construction material, dust, etc will definitely have higher heating value than that of mixed materials.

The solid wastes can be disposed off through the alternative technique of landfills. The major requisite is that the techniques should be properly designed. Porous pipes will be required for internal collection of biogas which may in turn be integrated and supplied as fuel for the production of electricity, household consumption and other purposes. The residue left after the natural breakdown of biomass by anaerobic bacteria is rich in nutrients which may be supplied to the farmers as natural manure.

Likewise, the liquid pollutants can be disposed off techno-economically by producing methane, natural manure and clean water that can be supplied to the farms for irrigation purpose. The waste water treatment technology can be studied and plants installed at different scales of processing. The designs can be better worked out by the combined efforts of chemists, engineers and economists.

To cut short, there can be hundreds of the projects like the ones discussed above. These can be identified and enlisted for study and research to add significant value to the national production, which is the basic target for alleviation of poverty and minimization of inequality from the developing countries including Pakistan.

## **6. Conclusion and Recommendation**

From the integration of the facts, figures, experiments, observations and inferences cited above, it can be concluded that Pakistan economy can be put back on the normal track by developing linkages between causes and effects and adequate measures by exploring linkage between macroeconomic and microeconomic models. This strategy can be devised by reorganization of the whole development plan through a well-thought mechanism for fair distribution of wealth and genuine allocations in the budgets, particularly through the elimination of the set ups that produce little and consume more.

### *Stabilization of Pakistan Economy Demands*

A final tip may be:

“Let the macroeconomic players play their game as they cannot escape the international pressures to use macroeconomic indicators as tools. They are the need of the day for sorting out short time solutions. A group should be created to identify the production enhancement projects, properly study them and carefully implement them. To this end, the Economists should work in collaboration with Technologists, Engineers and Scientists to learn about technologies in depth and make them learn practical economics. This exercise will produce interdisciplinary minds with versatile approach. After achieving this target, the nation will own competent personnel capable to handle both sides of the picture. As a natural consequence, the country will economize in use of its talented workforce. The plan framed to carry out this exercise should be long term; spread over at least two decades.”



## REFERENCES

- Ahmed, V and Rashid, A. 1982. *The Management of Pakistan's Economy*, Oxford University Press Karachi.
- American Institute of Pakistan Studies. 2006. Pakistan Studies Economy (Retrieved on 2006-11-20).
- Amjad, R. 2008. An Employment and Decent Work Strategy for the Punjab: Background Paper for Speech at government of the Punjab Lecture Series (Available with Punjab Planning and Development Website)
- Burki, SJ. 2007. Punjab Bounty and its Economic Prospects. Background Paper for Speech at government of the Punjab Lecture Series (Available with Punjab Planning and Development Website)
- Chaudhry, AA and Chaudhry, TT, 2008. The Effect of Rising Food and Fuel Costs on Poverty in Pakistan. Fourth International Conference on Management of Pakistan Economy, Main Theme: Ensuring Stable and Inclusive Growth, Held by Lahore School of Economics from April 24<sup>th</sup> to 25<sup>th</sup>.
- Daily Times of Pakistan. Jan 12, 2006. 7% Growth Achieved in FY 05-06
- Governor, State Bank of Pakistan. Feb 12, 2007. Daily Times of Pakistan
- Governor, State Bank of Pakistan. April 1, 2007. Foreign Investment to Reach \$7 Billion During Current Fiscal Year, Pak Tribune
- Gulf Research Center. 2008. GCC Investments in Pakistan and Future Trends.
- International Monetary Fund (October 2007). Report for Selected Countries and Subjects.
- Hamid, N. 1974. The Burden of Capitalist Growth: A Study of Real Wages and Consumption in Pakistan. *Pakistan Economic and Social Review*, spring 1974.
- Haq, M. 1971. Employment and Income distribution in the 1970s: A New Perspective. *Pakistan Economic and Social Review*, June to December, Page 6.
- Hasan, P. 2006. State and Pakistan Economy: Where Have We Come From? Where Do We Go? Paper presented in The 22<sup>nd</sup> Annual General Meeting and Conference at Lahore from 19<sup>th</sup> to 21<sup>st</sup> December, 2006

*Stabilization of Pakistan Economy Demands*

Lewis, SR Jr. Pakistan's Industrialization and Trade Policies, London Oxford University Press.

Muslim Commercial Bank Ltd. 2007. Tales of Success Quid Pro Quo 45 (Retrieved on 2008-02-12).

Pakistan Times. Feb 2, 2007. Pakistan Economy Registers 7% Growth Rate for 4th Consecutive Year (Retrieved on 2008-02-12).

Papanek, G. 1967. Social Goals and Private Enterprise, Cambridge Mass. Harvard University.

Rajan, RG. 2006. The Persistence of Underdevelopment: Constituencies and Competitive Rent Preservation. Proceedings of the 22<sup>nd</sup> Annual General Meeting and Conference Organized by the Pakistan Society of Development Economists in Lahore from 19<sup>th</sup> Dec. to 21<sup>st</sup> December.

Teslik, LH. 2008. Pakistan Confronts Economic Tremors  
[indexresearch.blogspot.com/2008\\_04\\_01\\_archive.html](http://indexresearch.blogspot.com/2008_04_01_archive.html)

Pakistan Ministry of Finance /YesPakistan.com. 2004. Overview of Pakistan's Economy.  
<http://www.yespakistan.com/economy/overview-pak.asp>  
<http://www.finance.gov.pk/survey/overview.htm>

Wikipedia (Free Encyclopedia)

<http://en.wikipedia.org/wiki/Pakistan>

The World Factbook. 2008. Pakistan: Economy



# A Critical Appraisal of Taxation System in Pakistan

*Dr. Ather Maqsood Ahmed<sup>1</sup>*

## 1. Introduction

The text book objective of taxation system is to mobilize sufficient resources for the smooth functioning of the economy. This is ensured by minimizing tax distortions, protecting vertical and horizontal equity, and offering maximum facilitation to taxpayers to comply with their tax obligations at minimum costs. Besides being simple and fair, the taxation system is required to be growth promoting through steady flow of domestic and foreign savings towards productive investment.

Notwithstanding the clarity of the objectives, the tax systems in most of the developing economies are generally too complicated and cumbersome. Over the years, their ability to generate adequate resources has declined drastically due to faulty tax policy design and outdated structure of tax administration. There is an inherent tendency to protect the colonial era legacy with little respect for the taxpayers, who are considered adversaries rather than business partners. On their end, the taxpayers regard tax administrators unfair, incompetent, arbitrary, and predatory. Consequently, the conflict not only makes tax collection difficult, it also promotes tax evasion and avoidance. Pakistan also suffers from this syndrome and requires a fundamental departure from this approach.

The purpose of present paper is to critically review the tax policy and administrative structure of Pakistan in the light of various reform initiatives. The study seeks to determine how tax policy initiatives have been helpful in changing the tax mix and improving the tax yield. In other words, it seeks to evaluate whether or not the on-going tax administration reform program has encouraged efficiency gains through improvement in business processes. It is true that efforts have been made to minimize tax distortions, but the system continues to suffer from various challenges and constraints despite these interventions. Therefore, as a secondary objective, the present study intends to highlight these challenges with a view to offer solutions for improvement in resource mobilization efforts. We start with a brief review of the federal taxation system of Pakistan.

## 2. Structure of Federal Taxes

The Federal Board of Revenue (FBR) has been entrusted with the job of managing and collecting federal taxes in Pakistan. Based on their incidence, these taxes are broadly categorized into two types – Direct and Indirect taxes. Direct taxes mainly include individual income tax and corporate tax – both are based on taxable income earned during a tax year.<sup>2</sup> Income tax is progressive by design because the tax rate increases with higher slabs of income. The tax is collected in advance, essentially from corporations on pay-as-you-earn basis some payments however made with annual returns; and deductions by the withholding agents at source – for example, on payrolls by employers; on contract income by government institutions and departments; on

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<sup>1</sup> The author is former Member (Fiscal Research and Statistics), Federal Board of Revenue.

<sup>2</sup> Since a reasonable proportion of Withholding Taxes (WHT) is presumptive in nature, it can at best be regarded as indirect tax.

imports and exports by the customs department; and on utility bills by telephone and electricity departments. A smaller portion of direct taxes is collected in the shape of Capital Value Tax (CVT) on property and stocks, and the rest through Workers Welfare Fund (WWF).

The indirect taxes include General Sales Tax (levied on domestic production and imports, theoretically in the value-added mode), and Federal Excise and Customs Duties. Whereas GST (domestic) by design is a consumption based tax, but it is mainly collected at the manufacturing stage, thereby affecting the production activity. On the other hand, GST (at import stage) is collected on goods imported into the country. Its rate is applicable on the value of import, *inclusive* of customs duty, wherever applicable.<sup>3</sup> With the introduction of GST, the significance of Federal Excise Duty (FED) has reduced considerably. Until 2006-07, it was largely used to regulate consumption of selected goods and less emphasis was on its resource generation capacity for the national exchequer. However, with the inclusion of various services in tax net, the significance of FED has re-emerged. Despite being a consumption based tax like GST, it is also being collected at the manufacturing stage. Finally, Customs Duty (CD) is charged on dutiable imports of goods. In bygone days, its prime purpose was revenue generation plus protection of domestic 'infant' industry. However, due to rapid changes in international environment after globalization and deregulation, both these functions have gradually lost their significance with the passage of time.

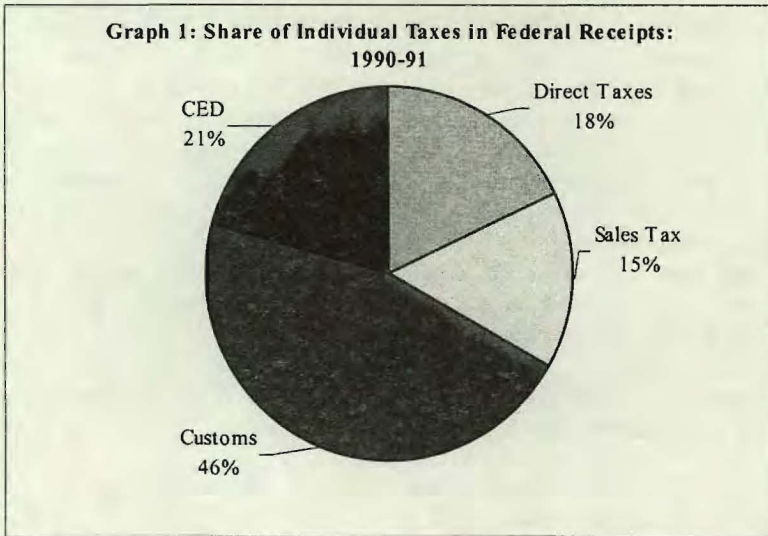
### **3. Tax Policy Environment**

The tax structure in Pakistan was quite complex and cumbersome for a considerable period of time. Until the second half of the 1980s decade, there was heavy reliance on custom and central (now federal) excise duties. The system, by design had a microscopic focus on production and commercial activities, with limited care for the cost of production and competitiveness of the concerned areas. It was operating on the principle of complete assessment and examination thereby causing considerable delays and harassment to the taxpayers. The business processes laws and procedures were cumbersome and their interpretation open to discretion. As a result, there was huge litigation burden on taxpayers. The system was largely regressive as the share of direct taxes was extremely low. It not only distorted the overall taxation system but also aggravated efficiency and equity concerns (Graph 1). No wonder that the tax management was seen as revenue hungry leviathan with little respect for its stakeholders.

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<sup>3</sup> Until 1990, Sales tax was operating in a cascading mode. However, with growing popularity of VAT and its worldwide acceptability, GST was introduced in Pakistan in 1990-91 initially at the manufacturing stage, but it was converted into a full-fledged value-added tax in 1995 and its coverage was also extended.





#### **4. The Change of Focus**

Given the skewed nature of the system, the necessity for reform was long overdue in diversified areas. To start with, there was a need to move away from taxes on investment and production and instead to focus on income and consumption taxation. This implied drastic changes in the composition of the taxation structure and the way it was administered. Secondly, the prevalence of high rate structure was neither consistent with international best practice, nor it was determined through the interplay of market forces.<sup>4</sup> Resultantly, it encouraged tax evasion and avoidance. Thus, a downward review of rates became imperative. Thirdly, in view of the narrowness of tax base due to legislative design of the system, mushroom-growth of exemptions and concessions, and sub-optimal tax effort, it was necessary to have a careful review of the entire system and reduce the leakages by plugging the loopholes. Fourthly, given the large size of the informal economy, it was essential to encourage commercial and industrial concerns to document their business transactions. Simultaneously, it was necessary to introduce a transparent system of audits to serve as effective deterrence rather than a source of revenue. Finally, effort was also needed to improve tax administration through innovative initiatives with respect to human resource, business process re-engineering and automation to improve efficiency of the system. Let us now concentrate on tax policy changes introduced over a span of several years since 1990's.

##### **4.1 Tax Policy Reforms**

The tax policy initiatives largely related to changes in tax rate structure and broadening of tax base. We begin with direct taxes.

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<sup>4</sup> Furthermore, little effort was made to determine whether or not the rate structure has entered the prohibitive range – the Laffer curve phenomenon.

(i) *Direct Taxes:* The three important components of direct taxes are voluntary payments – i.e., with returns and advance payments, revenue generated through creating demand, and withholding taxes. Within this setup, the core objective was to improve voluntary compliance through policy changes focusing on three areas, namely, (a) upward revisions in the ‘tax-free’ basic threshold in view of the rising per capita incomes, (b) reduction in corporate rates steadily to encourage corporatization in the country and minimizing distortion between banking, private and public companies; and (c) reduction and rationalization of the withholding tax rates to bring hard-to-tax segments in the tax net and improve overall tax compliance. Specifically, these changes took the following shape and direction.

- **Changes in Threshold:** Over the years the tax-free basic threshold increased from
  - Rs. 40,000 – Rs. 50,000 in 1996-97
  - Rs. 50,000 – Rs. 60,000 in 2001-02
  - Rs. 60,000 – Rs. 80,000 in 2002-03
  - Rs. 80,000 – Rs. 100,000 in 2003-04
  - It was further increased to Rs. 150,000 in 2006-07 for salaried persons.
- Regarding corporate rate structure, a five year program was introduced at the start of the millennium requiring a 3% reduction in the banking company rate each year and a 2% rate reduction in the private company rates. As a result, a uniform rate of 35% was adopted in 2007-08 [Table 1]. As indicated, the rationale for this change was probably to attract and promote investment in the country by offering a level-playing field to three types of corporations.

**Table 1: Downward Revision in Corporate Rate Structure**  
(Banking, Public and Private Companies)

| Assessment Year | Banking Company (%) | Public Company (%) | Private Company (%) |
|-----------------|---------------------|--------------------|---------------------|
| 1992-93         | 66                  | 44                 | 55                  |
| 2002-03         | 50                  | 35                 | 45                  |
| 2003-04         | 47                  | 35                 | 43                  |
| 2004-05         | 44                  | 35                 | 41                  |
| 2005-06         | 41                  | 35                 | 39                  |
| 2006-07         | 38                  | 35                 | 37                  |
| 2007-08         | 35                  | 35                 | 35                  |

*Source: FBR Data Bank*



- Besides introducing new withholding taxes such as on cash withdrawal etc., the changes were largely concentrated on revising and streamlining the rate structure and redefining their taxability.<sup>5</sup>
- (ii) *General Sales Tax*: One of the major reforms in the Sales Tax regime was the introduction of General Sales Tax in the beginning of 1990s, even though full-fledged GST in VAT mode was not effective until 1995-96. Frequent revisions in the GST rates were made to determine the optimal standard rate for Pakistan. The evidence in the following Table 2 should confirm that the standard rate has varied between 12.5% and 18% between 1990-91 and 1997-98 and a rate of 15% has been partially applicable since 1998-99.<sup>6</sup> Rather than sticking with uniform rate, certain distortions like higher rate of 20% and further tax of 3% were introduced from 2001-02 onwards on one pre-text or the other. Even though a single rate of 15% was introduced in fiscal year 2004-05, it has again been tinkered with by introducing higher rates of 17.5% and 20% for certain commodities.

**Table 2: Experimentation with Standard Rate Structure of General Sales Tax**

| <i>Year</i>          | <i>Description</i>  |
|----------------------|---|
| 1990-91 to 1994-95   | 12.5%   |
| 1995-96              | 18%   |
| 1996-97              | 18% and 12.5%   |
| 1997-98              | 18%   |
| 1998-99              | 12.5% and 15%   |
| 1999-2001            | 15%   |
| 2001-2002 to 2003-04 | 15% and 20% on some items, plus 3% further tax + uniformity of rate restored                                      |
| 2004-05 onwards      | The concept of zero-rating introduced starting with ginned cotton and extended to five leading export industries. |
| 2006-07              | Higher rate of 17.5% and 20% re-introduced for selected commodities   |
| 2008-09              | Rate increased to 16%   |

*Source: FBR Data Bank*

A big exception to VAT structure was introduced in 2004-05 with zero-rating of ginned cotton. Later on the concept was extended to five export-oriented industries and few

<sup>5</sup> See FBR Quarterly Review (2007) for complete details.

<sup>6</sup> In view of serious financial crunch faced by the Government, the GST rate has been raised to 16% in 2008-09.

additional units. It is a clear aberration in the VAT structure, and notwithstanding the appropriateness of the logic that refund handling was problematic, this change requires rectification as early as possible. Furthermore, unfortunately, the single-minded view of enhancing tax revenue through higher rates has prevailed again. The GST standard rate has been raised to 16% in 2008-09, which definitely is a policy reversal. In our opinion, bad economic management should not be an excuse for extra tax burden on tax compliant narrow base.

(iii) *Customs Duties*: Since Pakistan's taxation system has over-relied on international trade taxes in the past, the process of tariff rationalization and reduction, i.e., downward adjustment in customs tariff structure was the natural outcome. Prior to this change, the use of high rates of customs duty to protect domestic infant industry from international competitors was widespread.<sup>7</sup> While the 'infant industry' argument in those days might have been valid to some extent but it introduced serious inefficiencies in the system. Thus the objective of tariff reforms in the late 1980s was to make indigenous industries more competitive, efficient and receptive to face the future trade-related challenges emanating from regional countries and the world at large. Moreover, a downward revision was also necessary to reduce the gap between bound tariff under WTO and applied tariff, and to reduce the incidence of smuggling. It is evident that the maximum statutory rate of customs duty has reduced gradually from 80% in 1993-94 to 25% in 2003-04 (Table 3). With reduction in the maximum rate of duty, the number of slabs was also reduced. The rates of duty are 25%, 20%, 15%, 10%, and 5%. Additionally, the zero rate of duty was also introduced in 2007-08. Another important change within the tariff structure has been the reduction of effective rate of duty even after attaining the maximum statutory rate of 25%. The process of tariff rationalization to sort-out the problem of tariff escalation has continued since last few years. With these changes, the rates faced by finished products are maximum, followed by raw materials and primary products.<sup>8</sup>

**Table 3: Maximum Statutory and Effective Rates of Customs Duties**

| Year    | Maximum Statutory Rates | Effective Rate with respect to Dutiable Imports | Effective Rate with respect to Total Imports |
|---------|-------------------------|---|--|
| 1993-94 | 80                      | 38  | 25   |
| 1994-95 | 70                      | 36  | 24   |
| 1995-96 | 65                      | 33  | 22   |
| 1996-97 | 65                      | 24  | 19   |
| 1997-98 | 45                      | 22  | 17   |
| 1998-99 | 45                      | 18  | 14   |

<sup>7</sup> The automobile industry continues to enjoy 'undue' protection even today.

<sup>8</sup> Another policy reversal has been witnessed in 2008-09 whereby the maximum rate of duty on certain so-called luxury items has been raised to 35%.



|         |    |    |    |
|---------|----|----|----|
| 1999-00 | 35 | 18 | 12 |
| 2000-01 | 35 | 17 | 10 |
| 2001-02 | 30 | 12 | 8  |
| 2002-03 | 25 | 16 | 10 |
| 2003-04 | 25 | 14 | 10 |
| 2004-05 | 25 | 13 | 9  |
| 2005-06 | 25 | 13 | 8  |
| 2006-07 | 25 | 12 | 7  |

*Source: FBR Data Bank*

#### **4.2 The Changes in Tax Administration**

The major administrative reforms revolved around changes in systems and procedures, re-organization of administrative structure, improvement in infra-structure facilities, and emphasis on human resource development and automation. By far the most important change was a departure from a system of complete assessment to self-assessment. Simultaneously, laws and procedures across all taxes were simplified for tax compliance. The FBR and its field offices were restructured on functional lines. For internal taxes the reorganization resulted into large and regional tax offices (LTUs and RTOs) and for trade related taxes, this led to Model Customs Collectories (MCCs).

### **5. Outcome of Reforms**

It is unfortunate and at time quite disturbing that the anticipated efficiency gains of the reform program have not been accrued in a manner that was originally perceived. Barring few exceptions, very little improvement has been recorded in key performance indicators. Over the years a significant effort was put in to streamline the business processes, yet the gains have largely been made in changing the tax mix and meeting the revenue targets, which were quite missed in the past. The latest data confirms that the composition of tax pie has changed. The direct taxes along with GST have gained prominence. The share of the former has reached close to 40% and of GST nearly 38%. The rest is being contributed by federal excise and customs duties. This is a complete change over the earlier position shown in Graph 1 above. There is no doubt that this has been a major accomplishment. However, it would have been ideal had appropriate efforts made to avoid revenue loss due to tax substitutability. According to recent estimates, the revenue loss due to sharp reduction and rationalization of tariffs on the one hand and phasing out of excise duties on the other has been over three percentage points, if not more. The other significant achievement, from taxpayers' perspective has been the introduction of self-assessment system after simplifying laws and procedures. However, the major failures have been in the areas of effective enforcement backed by a transparent system of audit and penalties, integration of taxpayer accounts, and improvement in tax base. Moreover, the pace of infrastructure development and automation of business process has been slow. No wonder the reform project is receiving adverse assessment repeatedly.

## 6. Challenges and Constraints

The obvious question is why the taxation system remains less than optimal in terms of revenue yield and taxpayers' satisfaction despite these tax policy initiatives and changes in the administrative structure. One of the reasons is that there are numerous constraints and impediments that restrict the free flow of activities. In the following, we concentrate only on few of them.

### 1.1 Low and Stagnant Tax/GDP Ratio

The foremost concern is with regard to diminutive tax effort. The Tax/GDP ratio is low and generally stagnant. While the information presented as under (Table 4) is self-explanatory, nonetheless it is sufficient to raise concern about the contribution of sub-national (Provincial) governments. One is tempted to claim that provinces do not possess buoyant tax bases and therefore their resource mobilization effort is low. However, this approach of tackling the issue is self-defeating. It is well known that agriculture and services like transportation, trade & commerce, properties etc. are legislatively in the provincial domain of taxation. Even though one can argue that maximum tax yield is not possible as these are hard-to-tax areas, but it is also true that no serious effort has been made to understand why it is so and how to get around this problem. All we know is that the share of agriculture in GDP is over 20% and that of services over 50% and that the tax contribution of these sectors is not commensurate with these shares [Ahmed and Ahmed (2006)]. This state of affairs is simply appalling unless proven otherwise.

**Table 4: Tax Effort in Pakistan – Revenue to GDP Ratios**

| FY      | Total Revenue | Tax Revenue | Federal Taxes* | FBR Revenue | Sur-charges | Provincial Taxes |
|---------|---------------|-------------|----------------|-------------|-------------|------------------|
| 1999-00 | 13.4          | 10.6        | 10.1           | 9.1         | 1.0         | 0.5              |
| 2000-01 | 13.2          | 10.5        | 10.1           | 9.3         | 0.7         | 0.5              |
| 2001-02 | 14.0          | 10.8        | 10.3           | 9.1         | 1.2         | 0.4              |
| 2002-03 | 14.8          | 11.4        | 11.0           | 9.4         | 1.4         | 0.4              |
| 2003-04 | 15.1          | 11.9        | 11.4           | 9.2         | 1.1         | 0.5              |
| 2004-05 | 14.3          | 10.6        | 10.1           | 9.1         | 0.4         | 0.5              |
| 2005-06 | 14.9          | 11.3        | 10.9           | 9.4         | 0.7         | 0.5              |
| 2006-07 | 15.6          | 10.9        | 10.5           | 9.7         | 0.7         | 0.4              |
| 2007-08 | 15.3          | 10.6        | 10.1           | 9.6         | 0.5         | 0.5              |

\* Also include some minor taxes.

**Source:** Pakistan Economic Survey (Various Editions) and FBR Data Bank.

The second reason for low tax effort is the waning importance of surcharges. The share of petroleum and natural gas surcharges in Tax/GDP ratio peaked at 1.4% in 2002-03. Since then their contribution has diminished to 0.5% in the most recent year. Even when these levies were 'wrongly' perceived as sources of revenue, almost the entire amount was returned to the oil sector in the shape of petroleum differential claim (PDC)



resulting from freezing of domestic prices. Going forward, this levy has no potential to generate funds for the government. Thus, the possibility of further reduction in tax and revenue ratios is quite obvious.

The final point concerning these ratios relates to 'robustness' or otherwise of GDP figures. Starting from 1999-2000 onwards, the year-after-year issues of Pakistan Economic Survey have reported so varying numbers of GDP (at market prices) that maintaining a steady course of policy action has become a real challenge. At times the variation between the revised and the earlier reported GDP figures seems to be quite amazing. We do not offer any comments on whether or not such changes were introduced to keep other ratios (such as fiscal deficit to GDP and debt to GDP) within 'sustainable' limits, suffice is to say that this adventurism has left serious adverse impact on many other indicators (including the expenditure to GDP ratio in case of education and health), besides putting extra pressure on the resource generating departments of the government.

## **6.2 Narrow Tax Base:**

The second constraint in raising enough revenues for the state is the fact that the tax base is extremely narrow. One can easily imagine the vulnerability of a tax system where a quarter of revenue receipts are generated by only one sector; and twenty odd sectors/services nearly exhaust the entire tax collection. Whatever may be the reasons, the earlier effort in late 1990s to forcibly increase the tax base has not worked. In fact it has back fired. Not only the compliance rate declined sharply, the entire process of maintaining spurious bases of GST and NTN also resulted into increased cost of collection.<sup>9</sup> The reasons for narrower tax basis are many but the major ones are discussed here. Firstly, the federal and provincial governments have gradually lost their love for maintaining records of industrial units and business establishments.<sup>10</sup> As a consequence, there is no way of meaningfully validating the records of taxpayers held either by the FBR or the provincial revenue boards. Secondly, over the years successive governments have granted wide-ranging exemptions to innumerable business concerns either for promoting economic activity or for other motives best known to them. The classic example is the lifetime exemption to Independent Power Projects (IPPs). How can these sovereign assurances and guarantees to foreign companies be reversed appears to be a serious obstacle. Thirdly, the preference of the businesses in the country to stay 'informal' has never been checked in a forthright manner. Resultantly, the shutter power has increased to monstrous proportions. Finally and quite strangely, the appetite among the field staff of tax administration to know their business partners is generally missing. If confronted, it will be quite embarrassing for the tax collector to exactly know the number of business establishments in his/her jurisdiction who should be paying taxes and are actually tax compliant.

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<sup>9</sup> While some effort has been made towards cleansing of GST and NTN databases through NADRA, it is feared that the issue of broadening of base would continue to haunt tax authorities for quite sometime to come.

<sup>10</sup> Those who may have doubts about this statement are encouraged to consult Census of Manufacturing Industries of the Federal Bureau of Statistics.



### **6.3 Weak Tax Compliance by the Corporate Sector**

Irrespective of the fact that the corporate sector contributes close to 70% of direct tax receipts, it is also true that the overall compliance is very low. Given that there are more than fifty thousand corporations registered with the Securities and Exchange Corporation and slightly over thirty seven thousand having the NADRA verified national tax numbers speaks volumes about the reliability and accuracy of the database of a vital sector of the economy. Even more disturbing is the fact that only 16,444 corporations filed their returns indicating that the corporate compliance rate in Pakistan was only 44.2% in 2007 and 42.8% in 2006. A further analysis of filed returns portrays the real dismal situation. Of 16,444 returns, only 27% declared taxable business income, 16% claimed business losses, and a staggering 58% claimed that they had NIL income to declare. Translated into numbers, it means that only 4395 business concerns in the corporate sector declared 'taxable' income during 2007 when the overall real growth of the economy was above 7%. Without going into further details, this outcome should be sufficient to make the point that there is tremendous scope to enhance tax collection provided the tax authorities are adequately equipped with the required information along with strong political support to confront and penalize the delinquent taxpayers, including some of the leading multinational companies.

### **6.4 Stakeholders' Adverse Perception**

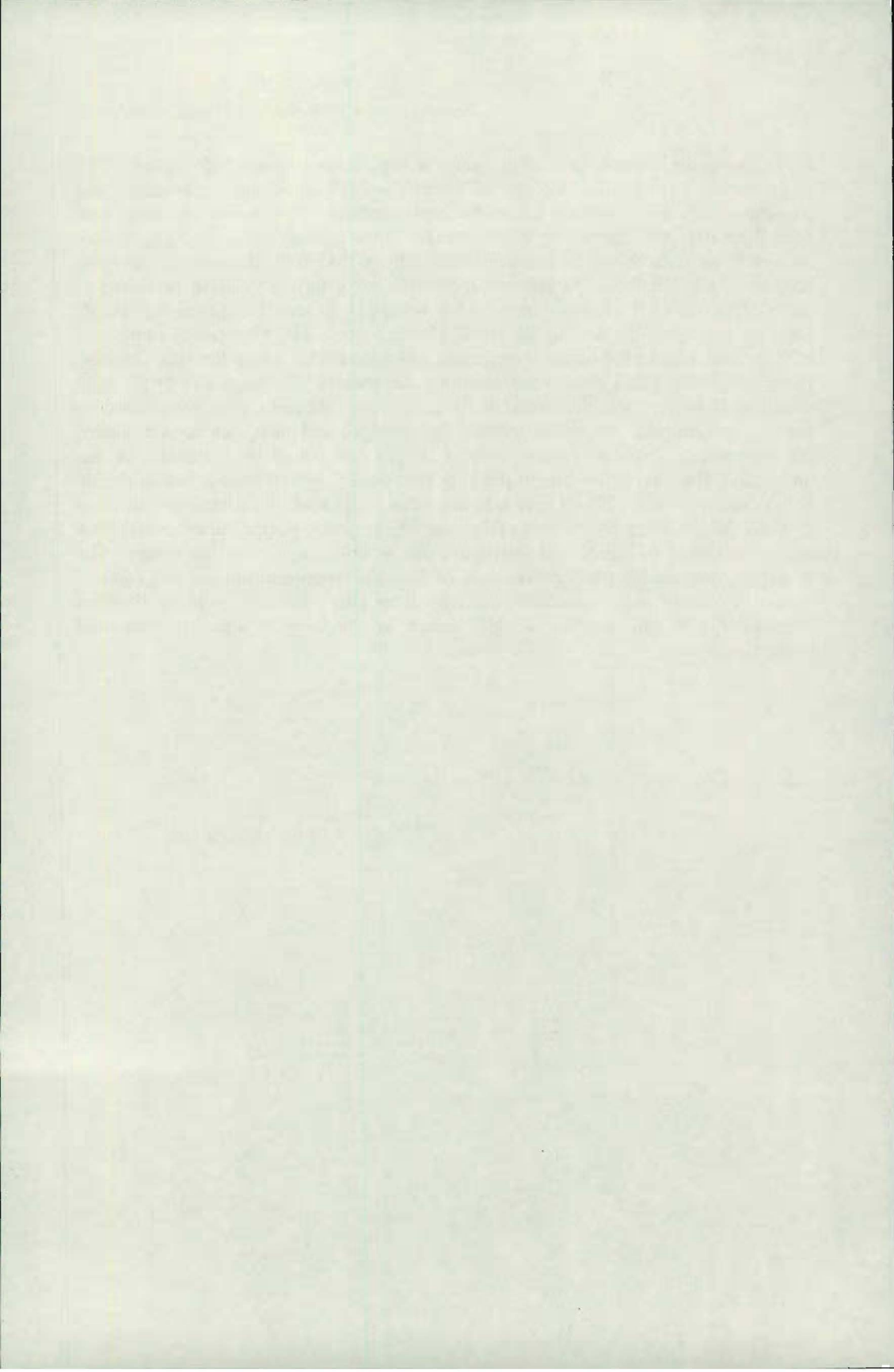
Despite all the improvements and simplifications in the system, it is unfortunate that the taxpayers do not rate government/ tax administration favorably. The serious concern is about the way tax money is being spent. While the general population is deprived of basic necessities, health, education, sanitation and safe drinking water, the huge expenditure on other 'necessary' heads overruns, which are hard to justify. The golden rule of taxpayer's satisfaction is that each penny of tax collection should be spent the way the taxpayer would like to see it. Otherwise it will invite resentment and encourage evasion and avoidance. Unfortunately, this aspect is receiving least priority of the government and people wonder as to where does the money go?

## **7. Concluding Remarks**

There is no denying that the taxation system in Pakistan has been exposed to remarkable changes over the years through interplay of tax policy and administrative reforms. Whereas the exclusive focus of the former has been a downward revision in tax rates and broadening of the tax base, the effort in the later case emphasized on business process re-engineering, reorganization of field formations on functional lines, implementation of revised laws and procedures, and a switch from manual to automated system. The intended purpose of these reform initiatives was to raise revenue collection, both in nominal and real terms, and to create a cordial relationship with the taxpayers. The present study has identified many areas where gains have been made. On the other hand, a number of areas have also been highlighted where more effort is needed. The most critical area of concern has been revenue inadequacy due to sub-optimal tax effort, narrowness of tax base originating from legislative restrictions, plethora of exemptions and concessions, and the presence of huge undocumented informal economy. Even though the rationale for reduction in tax rates was ingrained in the theory of demand, it did not work completely as envisaged due to these constraints. Sadly, even the low rates have failed to motivate people to pay their due taxes.



Furthermore, the revenue loss due to change in focus from customs and excise to GST could not be arrested. Either the process of tariff rationalization and rate reduction and phasing-out of excises was too fast or the implementation of GST was too sluggish or both. Similarly, notwithstanding varied changes introduced on the administrative side, efficiency gains have not been materialized fully as has been the case in emerging economies like Thailand, Turkey and India. The tax effort in Pakistan measured in terms of Tax to GDP ratio continues to lag behind by at least five percentage points from the average of the developing world. The medium to long-term policy strategy of FBR did take cognizance of this shortcoming and it started the march towards a change. Even though the initial gains were small but the process of change was in the right direction. However, with the arrival of fiscal year 2008-09 and taking over charge by the new government, the whole scenario has changed and there has been a sudden policy reversal. 'Difficult economic times' is put forward as the rationale for this turnaround. How naïve this line of thinking has been? It is well known that deliberate policy inaction from 2003-04 onwards has more to do with the drastic measures of 2008-09 than anything else. This was the time when primary surplus turned into deficit, oil prices started to climb, and inflation made its initial ripples in the system. The country is now paying the price not only of delayed response to internal and external shocks but also of huge expenditure overruns. Even after corrective measures (if taken immediately), it will be quite a while before the economy regains its position of strength.





# Does Monetary Policy Play Effective Role in Controlling Inflation in Pakistan

*Dr. Abdul Qayyum<sup>1</sup>*

## 1. Introduction

Inflation is politically costly for the government (Haque and Qayyum, 2006). High and persistent inflation is a regressive tax which adversely affects the poor (Baily, 1956, and Fisher and Modigliani, 1978a, 1978b). The poor are extremely limited in their options to protect themselves against inflation; they are normally asset-poor, while most of their saving is in the form of cash. Inflation erodes cash savings and protects the rich who hold real assets (Fisher and Modigliani, 1978a). Given the well-known costs of inflation, policy now in all countries is inflation-averse. Studies have also found that high and volatile inflation has been detrimental to growth and financial sector development. Inflation obscures relative price changes and thus inhibits optimal resource allocation.

In order to formulate appropriate policy to control inflation, it is important to have an up to date knowledge about the very factors that are responsible for it. Unquestionably, empirical evidence points to "inflation being always and everywhere a monetary phenomenon" [Friedman (1963)]. However, there still remains some debate on whether supply-side factors could cause inflation without a reference to demand side factors. The proponents of this thought hold that supply constraints drive up prices of specific goods and have wider repercussions on the overall price level. Similarly, there are a number of possible sources of rising costs such as wages, profits, imported inflation, exchange rate, commodity prices, external shocks, exhaustion of natural resources, and taxes. For example, in Pakistan, increases in the wheat support price have frequently been blamed for increasing inflation.

Since 1970s controlling inflation has been a top priority for policy makers all over the world. Despite a long and unsettled theoretical debate regarding the causes of inflation, there is consensus among economists and policy makers that maintaining price stability is the prime objective of monetary policy (King, 1999 and Blejer, et al., 2000). Since monetary policy is formulated and conducted by the central bank, therefore, maintaining price stability is the responsibility of a central bank and it is accountable for not achieving stable prices (Goodfriend, 2000, King, 1999, and Blejer and Leon, 2000). Like other central banks of the world, the State Bank of Pakistan (SBP) is also explicitly mandated to ensure price stability. It is claimed that State Bank of Pakistan is fully capable of implementing its own independent monetary policy consistent with the needs of the domestic economy and ought to be forward-looking to achieve its inflation target (Khan and Schimmelpfennig, 2006).

The recent rise of inflation in Pakistan has once again triggered a debate on the causes of inflation similar to the debate that took place during nineties (see for example Khan and Qasim, 1996). Even policymakers are divided on the issue as to what has caused inflation. Policymakers on one side have contended that the current inflation has been caused by cost push factors, such as wheat procurement price and oil price

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increases (Economic Survey GoP 2005, 2006). On the other hand, it is also argued that accommodative monetary policy is responsible for current surge in inflation (Akhtar, 2006). Further it is pointed out that monetary overhang is a cause of inflation (SBP, 2007 and Sherani, 2005). It is not surprising to conclude that policymakers are pointing to the factors beyond their control as the cause of inflation whereas commentators and analysts are pointing to a policy failure and the inability of SBP to control growth of money supply. The main objective of this study is to assess the efforts of SBP to control inflation in Pakistan.

Next section discusses the salient features of monetary policy in Pakistan including objectives, monetary targets and instruments. Section 3 contains analyses and discusses the results and final section concludes the study.

## **2. Salient Features of the Monetary Policy**

State Bank of Pakistan was established with two broad objectives; to secure monetary stability and to find fuller utilization of the country's productive resources. These objectives are contained under the head of 'Functions and Responsibilities of the Central Board' by making it responsible to secure monetary stability and soundness of the financial system. The State Bank of Pakistan Act 1956 (amended) states that 'the target rates of growth and inflation set by the Federal Government are the targets of monetary policy'. Therefore, target rate of inflation is the prime objective of monetary policy in Pakistan.

Monetary policy management is one of the primary goals of the State Bank of Pakistan (SBP). In Pakistan, the monetary policy has been supportive of the dual objectives; promoting economic growth and price stability. However, during the period from 2001 to 2005, monetary policy in Pakistan was biased towards supporting growth because of the expectations that inflation could be maintained at low levels while giving the economy a monetary stimulus. Inflation started accelerating in 2005 that forced a reversal of monetary policy (SBP-MPS, 2006).

The SBP is claiming to maintain a tight monetary policy to deal with inflation, particularly core inflation, since September 2004 (SBP Annual Report, 2006-07). Further it is claimed that monetary policy has had a visible impact on core inflation during FY06 and FY07. However, by the end of financial year 2007, core inflation started increasing. The stated reason is reserve money growth and supply management problem.

It is observed that the tight monetary policy stance has now started to lose some of its steam as manifested by a moderate increase in KIBOR and banks' lending rates, almost flat Monetary Conditions Index (MCI), a fall in the effective CRR, and persistently high annualized M2 growth rate.

First we discuss the state of inflation, which is the prime objective of monetary policy in Pakistan, during the period from 1991 to 2008. The target and actual rate of inflation is given in Table-1 and percentage deviation of actual rate of inflation from the targeted rate is presented in Figure 1. As can be seen from the table, from 1991 to 1997 the actual rate of inflation remained above the target level. After 1997 till 2003 the actual rate of inflation remained below the target level which implies that it was under the control of



authorities. It started rising from 2004-05 onward and remained above the target level except for the year 2006-07 when it was exactly equal to the target rate. At the end of the financial year 2007-08, the actual inflation substantially (100% higher) surpassed the target level of inflation set by the Federal government/SBP.

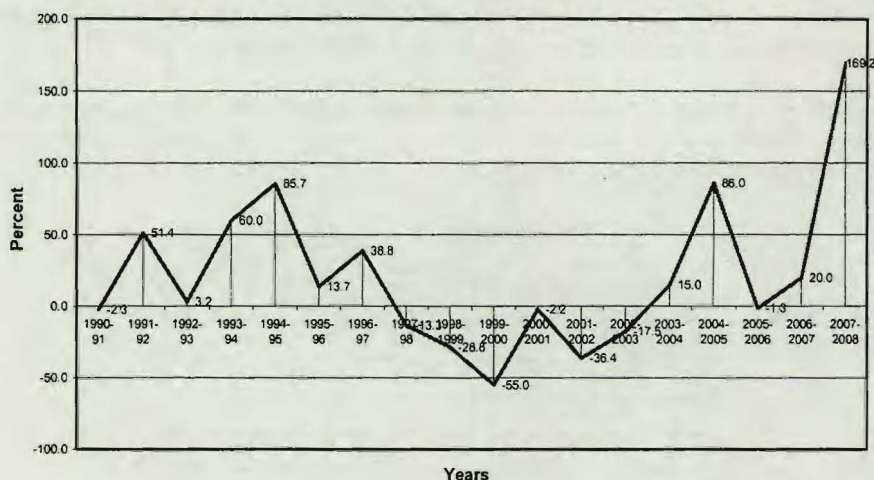
In order to achieve the objectives of monetary policy, the SBP targets monetary aggregate (M2) in accordance with the targets of real GDP growth and inflation set by the Government are shown below:

**Table 1: Targeted and Actual Rate of Inflation**

| <b>Years</b> | <b>Actual</b> | <b>Target</b> |
|--------------|---------------|---------------|
| 1990-91      | 12.7          | 13.0          |
| 1991-92      | 10.6          | 7.0           |
| 1992-93      | 9.8           | 9.5           |
| 1993-94      | 11.2          | 7.0           |
| 1994-95      | 13.0          | 7.0           |
| 1995-96      | 10.8          | 9.5           |
| 1996-97      | 11.8          | 8.5           |
| 1997-98      | 7.8           | 9.0           |
| 1998-99      | 5.7           | 8.0           |
| 1999-00      | 3.6           | 8.0           |
| 2000-01      | 4.4           | 4.5           |
| 2001-02      | 3.5           | 5.5           |
| 2002-03      | 3.3           | 4.0           |
| 2003-04      | 4.6           | 4.0           |
| 2004-05      | 9.3           | 5.0           |
| 2005-06      | 7.9           | 8.0           |
| 2006-07      | 7.8           | 6.5           |
| 2007-08      | 17.5          | 6.5           |

**Source:** Compiled from SBP Annual Reports

Figure: 1 Percentage Deviation of Actual from Targeted Inflation



## 2.1 M2 Growth as a Monetary Target

In order to control inflation, one of the important and crucial intermediate target variables of monetary policy in Pakistan is money supply. The growth of private sector credit and broad money (M2) are leading indicators of inflation in Pakistan (Khan and Schimmelpfennig, 2006). It is already established that excess money supply growth causes inflation in Pakistan (Qayyum, 2006). Therefore, the SBP has been using M2 aggregate (i.e., currency + demand deposits + time deposits) as an intermediate target to control inflation (Akhtar, 2006). The selection of M2 as a policy variable is based on the assumption that the demand for M2 function is stable and it has strong association with the rate of inflation. The stability of M2 demand function has been established in a number of studies such as Qayyum (2006), among others. The money growth and rate of inflation have positive relationship, having coefficient of correlation as 0.27. Further, money growth in the current year and rate of inflation in the next year also have positive relationship as indicated by the cross correlations coefficient of 0.44.

By using the estimated money demand function, the SBP sets, the target rate of growth for M2. Fisher's equation of exchange is conventionally used by the SBP to calculate the growth target for M2. It assumes that there is one to one relationship between prices and money supply in Pakistan. The change in M2 can be decomposed as change in Y and change in P, assuming that the velocity of money remain more or less constant.

According to the law and practice, the target rate of growth of GDP and rate of inflation are fixed by the Federal Government. The SBP just combines the two targets to obtain target growth rate of money supply. During calculation of the target value, it is implicitly assumed that the velocity of circulation remains constant. However recent studies have found that the velocity of money in Pakistan is not constant and it is showing decreasing trend since 1973 (Qayyum, 2006). This decline in velocity is due to the structural changes in the financial sector of Pakistan that induced the process of monetization and expansion of commercial banking during last two decades. This



declining trend implies that formulation of monetary policy must consider development in the real and financial sectors and treat them as constraints on the policy. Further, it is doubtful whether the rate of growth of money supply determined by SBP and used as an instrument to combat inflation is appropriate for the purpose. For example, if the target rate of growth of GDP and inflation are fixed by the Federal Government as 8% and 5% respectively, then target rate of growth in M2 is worked out to be 13% under the existing formulation ( $\hat{M} = \alpha\hat{P} + B\hat{Y}$ ). However, if there is decline in velocity by 2%, then the target rate of M2 growth would have been 15% rather than 13%.

The actual and targeted M2 growth for the period 1991 to 2007 is presented in Table 2. As can be seen, after 2001, the actual M2 growth remained higher than the target rate of money growth set by the SBP to control inflation. It implies that either the SBP failed to control growth of money supply or it followed a loose monetary policy during this period. However the SBP claims that it is pursuing tight monetary policy since 2004 but empirical evidence contradicts the claim. The money supply growth in first round affects the real GDP growth and in second round it affects inflation. In Pakistan, the growth in M2 affects the rate of inflation after one year (Qayyum, 2006). Positive deviation of money growth from target level is indicative that inflation is going to rise in future. The business sector in Pakistan was expecting a rise in inflation (PIDE, 2007) along with the speeches of the then governor of SBP.

**Table No. 2: Targeted and Actual M2 Growth in Pakistan**

| Years   | <i>Target</i> |        | <i>Actual</i> |        |
|---------|---------------|--------|---------------|--------|
|         | Target        | Growth | Actual        | Growth |
| 1990-91 | 34.2          | 10.80  | 59.39         | 17.4   |
| 1991-92 | 48.2          | 12.90  | 104.93        | 26.2   |
| 1993-94 | 79.4          | 14.03  | 108.01        | 18.1   |
| 1994-95 | 76.3          | 11.51  | 121.24        | 17.2   |
| 1995-96 | 100.5         | 13.00  | 113.94        | 13.8   |
| 1996-97 | 116.0         | 12.36  | 114.60        | 12.2   |
| 1997-98 | 150.0         | 14.24  | 153.09        | 14.5   |
| 1998-99 | 164.0         | 13.64  | 74.22         | 6.2    |
| 1999-00 | 121.0         | 09.44  | 120.99        | 9.4    |
| 2000-01 | 147.0         | 10.50  | 126.03        | 9.0    |
| 2001-02 | 146.0         | 09.50  | 235.33        | 15.4   |
| 2002-03 | 190.0         | 10.80  | 219.87        | 12.5   |
| 2003-04 | 230.0         | 11.10  | 317.40        | 12.3   |
| 2004-05 | 280.0         | 11.30  | 745.2         | 19.3   |
| 2005-06 | 380.0         | 12.8   | 446.3         | 15.2   |
| 2006-07 | 459.9         | 13.5   | 659.9         | 19.3   |
| 2007-08 | -             | 13.7   | -             | 15.2   |

*Source:* Compiled from the Annual Reports of the SBP.

*\*Target/Actual:* Million Rs., *Growth:* in percent

## 2.2 Instruments of Monetary Policy

The last two decades witnessed a number of changes in the monetary sector of Pakistan. In the beginning of 1980s, monetary authorities in Pakistan decided to abandon the fixed exchange rate mechanism and adopted the floating exchange rate system. This step is supposed to have activated another important channel of monetary transmission mechanism in Pakistan. Further in late 1980s, the authorities started working on comprehensive financial sector reforms with the help of international financial agencies such as International Monetary Fund and World Bank (Ahmed, 2006 and Khan and Khan, 2007). Consequently, a number of steps were taken to modernize the monetary sector. On this road, the monetary authorities have taken steps to utilize the market based instruments of monetary policy in Pakistan.

After the start of financial sector reforms, the Open Market Operation (OMO) has become an important instrument of monetary policy. The SBP can influence/ manage domestic liquidity through purchase or sale of government securities in the secondary market. The OMO can also be used to maintain the level of reserve money according to the operating target. Other instruments are discussed in the next sections.

### 2.2.1 Cash Reserve Requirement

Cash Reserve Requirement (CRR) is another instrument of monetary policy. The SBP imposes this conditionality on all deposits of scheduled banks.. Currently, the reserve requirement of every bank is fixed as 9 percent of average weekly deposits. However, under another condition the amount of these reserves should not be less than 4 percent of daily deposits. Apart from the reserve requirement, every bank has to maintain 15 percent of total daily deposits as a liquidity requirement, where liquidity includes cash, gold and government securities. Movement of CRR during the last two decades is presented in the Table 3.

Table No. 3: Cash Reserve Requirement

| No | Effective From | Percentage of Demand and Time Liabilities |                |
|----|----------------|---|----------------|
|    |                | Minimum                                   | Weekly Average |
| 1  | 01-01-1991     | -   | 5.0            |
| 2  | 28-07-1997     | 4.0                                       | 5.0            |
| 3  | 22-06-1998     | -   | 3.75           |
| 4  | 05-09-1998     | 4.0                                       | 5.0            |
| 5  | 19-05-1999     | 2.5                                       | 3.5            |
| 6  | 12-07-1999     | 4.0                                       | 5.0            |
| 7  | 07-10-2000     | 6.0                                       | 7.0            |
| 8  | 16-12-2000     | 4.0                                       | 5.0            |
| 9  | 30-12-2001     | 3.0                                       | 5.0            |
| 10 | 06-01-2001     | 4.0                                       | 5.0            |
|    | 23-05-2008     | 9.00                                      |                |

Source: Compiled from SBP Annual Reports 2005, 2006



### 2.2.2 Discount Rate

Current Monetary Policy seeks to arrest rising inflation through change in discount rate and CRR. The assumption is that the two changes would cut down money supply and therefore inflation. The transmission mechanism i.e. link among interest rate, money supply and inflation is not completely understood or at least has not been made explicit by SBP. It appears that complete understanding of issues like the effectiveness of different channels, lag structure of monetary policy changes, magnitude of pass-through of policy changes to inflation and output and nature of relationship amongst instruments and goals of monetary policy (inflation and output) is lacking.

The movement in interest rate has been presented in Table 4. As can be seen, the rate of interest was at the peak level of 14% on April 03, 1999 and June 07, 2001. Then it started to decline and reached at the lowest level of 7.5% on November 18, 2002 and it remained at this level until April 11, 2005. This implies that during 2001 – 2005, SBP was following very loose monetary policy. Now it has reached at 12 % level on May 21, 2008.

**Table 4: Discount Rate**

|    | Date            | Change (Basis Points) | Rate  |
|----|-----------------|-----------------------|-------|
| 1  | April 03, 99    | -                     | 14.0  |
| 2  | May 19, 99      | -100                  | 13.0  |
| 3  | January 05,00   | -100                  | 11.0  |
| 4  | September 19,00 | 100                   | 12.0  |
| 5  | October 05, 00  | 100                   | 13.0  |
| 6  | June 07, 01     | 100                   | 14.0  |
| 7  | July 19, 01     | -100                  | 13.0  |
| 8  | August 17,01    | -100                  | 12.0  |
| 9  | October 20,01   | -200                  | 10.0  |
| 10 | January 23, 02  | -100                  | 9.0   |
| 11 | November 18,02  | -150                  | 7.5   |
| 12 | April 11,2005   | 150                   | 9.00  |
| 13 | July 22, 2006   | 50                    | 9.50  |
| 14 | August 01, 2007 | 50                    | 10.00 |
| 15 | January 31,2008 | 50                    | 10.5  |
| 16 | May 21, 2008    | 150                   | 12.00 |

**Source:** Compiled from Annual Reports of SBP

The monetary tightening policy pursued by SBP seems to lay major emphasis upon the interest rate channel. This brings to fore the question of effectiveness of the interest rate channel of the transmission mechanism. From the Monetary Policy Statement, it is not clear whether the issues of lags and the magnitude of pass-through fraction of changes in the interest rate to inflation have been investigated at the SBP level or that independent studies on the subject have been accounted for.

It is interesting to note that during recent past, interest rate and money growth are negatively correlated, that is -0.71. Interest rate also significantly affects the current and

future rate of inflation as correlation coefficient between the two are -0.36 and -0.45 respectively. In this regard, studies show that interest rate influences inflation with a lag of 12 to 18 months (Kemal, 2006) and the magnitude of impact is very small (Khan and Qayyum, 2007, Qayyum, Khan and Khawaja, 2007). However, Khan (2007) shows that the relationship between interest rate and inflation is positive. If the demand for goods and services does not increase, the firms may pass on the increase in financial cost to the consumers thereby raising inflation.

Increase in interest rate will affect demand for credit to the business sector. The transmission mechanism reveals that it affects money market rate, saving rate and lending rate. Studies have found that it takes 12 to 18 month to affect lending rates and upto two years to affect saving rates in Pakistan. It implies that any change in the rate of interest (discount rate) will affect the lending rate (credit rate) followed by the rate of return on savings (deposit rates). Through this channel, the demand for credit by the private business sector would decrease. However, evidences indicate that demand for credit by the private business sector is not much affected by movements in the interest rate. Therefore, movement in interest rate would be ineffective to control money supply.

The SBP seems to have based its money supply growth and hence the stance of monetary policy, keeping in view the growth target fixed by the government. The question arises as to what happens to money growth if the actual output growth is less than the targeted level?

Any increase in interest rate would increase servicing or payments on government debt thereby increasing the fiscal deficit. Given that the government has been borrowing, beyond the agreed level from the SBP, and that the SBP has not been able to restrain the government from doing so, it is very likely that government would finance the higher deficit on account of higher interest payment by borrowing further from the central bank. Thus a part of the decline in monetary growth due to discount rate policy might be offset due to over borrowing by the government.

### **3. Conclusions**

This paper is written with the objective of getting a clear understanding of the Monetary Policy Framework in Pakistan and its effectiveness as a tool to control inflation. In this regard, we presented the salient features of current Monetary Policy. We have come up with the following findings.

The monetary authority was successful in controlling inflation when it could control the money supply target. The calculation of money supply target needs to be improved by incorporating velocity consideration so as to get appropriate target level of M2. It is also concluded that in the recent years SBP has failed to control money supply and hence the rate of inflation within the set target level.

There seems to be a lack of coordination between Fiscal and Monetary Authorities. The Reaction Functions of Monetary Policy seems to be inconsistent overtime. The understanding of issues regarding monetary transmission mechanism seems to be lacking and needs fresh investigation.



## References

- Akhtar, S. (2006) Pakistan—Economic Outlook and Prospects, Speech Delivered at the Adam Smith Institute, Thun, Switzerland, June 27.
- Bailey, M. J. (1956) The Welfare Cost of Inflationary Finance. *Journal of Political Economy* 64, 93-110. Bernanke, B. S. (2005) Inflation in Latin America—A New Era?, Remarks at the Stanford Institute for Economic Policy Research Economic Summit, February 11, 2005. Available via the Internet at: <http://www.federalreserve.gov/boarddocs/speeches/2005/20050211/default.htm>
- Bernanke, B. S., T. Laubach, F. S. Mishkin and A. S. Posen (1999), "Inflation Targeting: Lessons from the International Experience", Princeton, NJ: Princeton University Press.
- Blejer, M. I., and A. M. Leone (2000) Introduction and Overview, In Blejer, et al. *Inflation Targeting in Practice: Strategic and Operational Issues and Application to Emerging Economies*. Washington, D. C: International Monetary Fund.
- Blejer, M. I., A. Ize, A. M. Leone, and S. Werlang (2000) *Inflation Targeting in Practice: Strategic and Operational Issues and Application to Emerging Economies*. Washington, D. C: International Monetary Fund.
- Blinder, A., C. Goodheart, P. Hildebrand, D. Lipton and C. Wyplosz (2001), How Does Central Bank Talk? Geneva Report on the World Economy 3, ICMB and CEPR.
- Cecchetti, S. G. (2000) Making Monetary Policy: Objectives and Rules, *Oxford Review of Economic Policy* 16:4, 43-59.
- Fischer, S. and F. Modigliani (1978a) Towards Understanding of the Costs of Inflation, In K. Brunner and A. H. Meltzer (ed.) *The Costs and Consequences of Inflation*. Carnegie-Rochester Conference Series on Public Policy, Vol. 15, 5-42.
- Fischer, S. and F. Modigliani (1978b) Towards Understanding of the Real Effects and the Costs of Inflation, *Weltwirtschaftliches Archiv* 114, 810-832.
- Friedman, M. (1963) *Inflation: Causes and Consequences*, New York: Asia Publishing House.
- Geraats, P. M. (2005a), "Transparency of Monetary Policy: Does the Institutional Framework Matter? (Mimeographed)

- Goodfriend, M. (2000) Maintaining Low Inflation: Rationale and Reality, In Blejer, *et al. Inflation Targeting in Practice: Strategic and Operational Issues and Application to Emerging Economies*, International Monetary Fund
- Hahn, V. (2002), "The Transparency of the Central Bank Objectives (Mimeographed). Pakistan, Government of (Various Issues) *Pakistan Economic Survey* Ministry of Finance, Government of Pakistan
- Khan, M. Arshad and A. Qayyum (2007), "Trade, Financial and Growth Nexus in Pakistan", *Economic Analysis Working Papers*, Vol. 6, No. 14.
- Khan, A. H. and M. A. Qasim (1996) Inflation in Pakistan Revisited, *The Pakistan Development Review* 35:4, 747-759. Khan, S. (2007), "Channels and Lags In Effects of Monetary Policy's Transmission Mechanism: A Case of Pakistan", Unpublished Ph.D Dissertation (Pakistan Institute of Development Economics, Islamabad).
- Khawaja, M. I. and Musleh ud Din (2007) "Banking: Interest Rate Spread, Inelastic Deposit Supply and Mergers" *The Pakistan Development Review*, Vol. 45, No. 4, pp. 1055-1070.
- King, M. (1999) Challenges for Monetary Policy: New and Old, in New Challenges for Monetary Policy, Proceedings of the Symposium sponsored by the Federal Reserve Bank of Kansas City Liviatan, N. (2003) Fiscal Dominance and Monetary Policy Dominance in the Israeli Monetary Experience, Bank of Israel Discussion Paper No.2003.17.
- Malik, W. S. and Ahmed, M. A. (2007) Taylor Rule and Macroeconomics Performance in Pakistan, Pakistan Institute of Development Economics Working Paper No.34
- Qayyum, A. (2006) Money, Inflation and Growth in Pakistan, *the Pakistan Development Review*. 45:2.203-212
- Qayyum, A. and Faiz Bilques (2005) P-star Model: A Leading Indicator of Inflation for Pakistan, *the Pakistan Development Review*, 44:2, 117-129
- Qayyum, A., Khan, S. and Khawaja, M. I. (2005), "Interest Rate Pass-through in Pakistan: Evidence from transfer Function Approach", *The Pakistan Development Review*, Vol. 44, No. 4, pp. 975-1001. Roll, E. et al. (1993), *Independent and Accountable: A New Mandate for the Bank of England*, London. Centre for Economic Policy Research.
- Sherani, S. (2005), *The Dark Side of the Force*, ABN-AMRO, *Economic Focus—Pakistan*. Monday, May 30. State Bank of Pakistan (2006) Monetary Policy Statement, State Bank of Pakistan (2006).



# Performance of Banking Sector in Pakistan

Dr. Shahid Hasan Siddiqui<sup>1</sup>

## 1. An Overview<sup>2</sup>

The Governor State Bank of Pakistan (SBP) last year said that the banking sector is the best sector in Pakistan and is the best performing sector in the region.<sup>3</sup> She subsequently also said that banking sector is the biggest success story of Pakistan's economy and that this sector has played a key role in supporting real sector development.<sup>4</sup> These statements are indeed surprising as the banks, during the past few years, have been reducing the rate of returns on deposits resulting in serious negative impact on the economy including discouraging savings, increasing trade & current account deficits and enlarging the gulf between the rich and the poor. In this paper an attempt has been made to assess the performance of the banking sector during last few years and its impact on Pakistan's economy.

Following is the comparative position of deposits, advances and pre-tax profit of the Pakistani banking sector over six years span:

### Comparative Position of the Banking Sector

*Rupees in billion*

| Variables            | CY00 | CY06  | Rise   | % Rise |
|----------------------|------|-------|--------|--------|
| Total Deposits       | 1341 | 3202  | 1861   | 139    |
| Total Advances       | 1020 | 2526  | 1506   | 148    |
| Total Assets         | 1808 | 4282  | 2474   | 137    |
| Total pre-tax profit | 4.5  | 123.6 | 119 .1 | 2646   |

*Source: Banking System Review 2005 and 2006 by State Bank of Pakistan*

It will be seen that the total deposits of the banking sector, which on December 31, 2000 were Rs. 1341 billion, rose to Rs.3202 billion on December 31, 2006 showing a rise of 139 percent. The total advances during the same period also rose from Rs.1020 billion to Rs. 2526 billion showing a rise of 148 percent. The total assets of the banking sector also recorded a rise of 137 percent during this period. It is however, surprisingly observed that the total pre-tax profit of the banking sector which stood at Rs.4.5 billion for the CY2000 rose to Rs.123.6 billion for the CY2006. This is simply unheard of in the banking history that the pre-tax profit rose by 2646 percent while the total deposits, advances and assets rose by as low as about 6 percent of this phenomenal rise. This abnormal rise in profitability of the banking sector has been achieved mainly by:

- (a) Reducing the rate of returns paid to depositors notwithstanding that these deposits were secured on profit and loss sharing (PLS) basis.

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<sup>2</sup> The whole paper is a single essay without formal sections and sub-sections. We have inserted certain headings at appropriate places taking care, however, that paragraphs and structure remains in tact. (Literary Editor)

<sup>3</sup> Dr. Shamshad Akhtar, Interview at PTV reported by the Business Recorder (Karachi) Feb. 24, 2007.

<sup>4</sup> Dawn (Karachi), March 05, 2007.

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- (b) Over-exposure to and unholy involvement of many banks in speculative activities mainly in stock market.

It may also be mentioned that had banks paid the same average real rate of returns to depositors between 2001 and 2007 and even not shared the phenomenal rise in their profitability, the millions of depositors would have received an additional profit of Rs.700 billion over and above the amount already passed on to them. It is therefore, obvious that the rise in profitability of banks has been achieved at the cost of millions of depositors.

The imprudent policy of lowering interest rates has however, benefited the borrowers of banks who are much smaller in number. As on December 31, 2006 the total number of depositors of banks was 25.01 million whereas the total number of borrowers was 5.17 million out of which only 140100 big borrowers had availed advances of Rs.1875.3 billion that account for 79 percent of the total advances of the banking sector. The other major beneficiaries of this policy have been the shareholders, including sponsor directors of banks. Following is the position of profit/equity ratio of four major banks<sup>5</sup>:

### **Profit/Equity Ratio of Banks**

| Item                           | CY00   | CY06   |
|--------------------------------|--------|--------|
| Pre-tax profit / equity ratio  | 18.8 % | 48.9 % |
| After-tax profit /equity ratio | 9.3 %  | 32.3%  |

It will be seen that between CY00 and CY06 the return on equity of these banks has gone up tremendously. The average rate of returns paid by these banks to depositors however, continued to decline notwithstanding their enhanced profitability. The two major banks out of these four banks were sold to foreigners at throw-away price in CY02 and CY04. The following comparative position of average rate of returns paid by commercial banks to depositors is self-explanatory:

### **Average Rate of Returns Paid by Commercial Banks viz-a-viz Profitability**

|      | Rate of Return                           | CY2000 | CY2002  | CY2004       | CY2006       |
|------|--|--------|---------|--------------|--------------|
| i.   | Pre-tax profit<br>(Rs in billions)       | 7      | 29.4    | 52.1         | 123.4        |
| ii.  | Average rate of returns                  | 6.57%  | 4.41%   | 1.30%        | 3.40%        |
| iii. | Average rate of inflation                | 3.60%  | 3.50%   | 4.60%        | 7.90%        |
| iv.  | Real average rate of<br>returns (ii-iii) | +2.97% | + 0.91% | (-<br>3.30)% | (-<br>4.50)% |

**Source:** Derived from Annual Reports of Commercial Banks.

<sup>5</sup> Privatized banks: HBL, UBL, MCB. Allied Bank of Pakistan



It will be observed that banks have now been paying negative real rate of returns on the average to depositors, which is nothing but exploitation. The Governor SBP in 1993 said "A banking system that gives a rate of return to small savers which is negative in real terms is an exploitative one as it taxes the savings of the poor who keep them in banks." He further said "The SBP should not sit on the side walks of the banking system as a silent witness to the transfer of resources from the small savers to the rich and powerful defaulters of bank loans."<sup>6</sup> He also advocated the need of paying a rate of return to depositors of banks minimum one percent above the inflation rate.<sup>7</sup> It is recalled that the SBP Annual Report 1995 – 1996 also observed: "The first pre-requisite of an efficient banking system should be to provide a positive real rate of return to savers".

It therefore, looks surprising that SBP is now not only assisting the banks in exploiting the depositors by approving the rate of returns which are lower than the inflation rate but is also appreciating the performance of the banks. The 1973 Constitution of the Islamic Republic of Pakistan requires the State to ensure that all forms of exploitations are eliminated but in the case of exploitation by banks, SBP itself is presiding over this process of exploitation.

## **2. State of the Economy and Role of the Banking Sector**

The SBP has been pursuing the policy of lowering interest rates in the country which has been detrimental to the national economy as well. Due to low interest rates and soft monetary stance, the tendency of diverting the proceeds of bank loans availed for trade, industry and exports has been witnessed. This mis-utilization in collusion with bankers, in some cases, has been done for undertaking speculative activities in stocks, real estate markets, investment in National Saving Schemes and hoarding of wheat and sugar etc. SBP failed to take effective action against these malpractices. Some of the banks' executives were also involved in speculative activities in their personal capacity. The March 2005 stock exchange scandal was also due to involvement of the commercial banks, which we had accused in these words:

"The Ministry of Finance, State Bank of Pakistan, some big brokers, some commercial banks, some investment banks, DFIs, some senior banks' executives in their personal capacity, Privatization Commission, some politicians, industrialists, feudal and Chairman ERRA of working hand in glove while engineering the March 2005 crash."<sup>8</sup>

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<sup>6</sup> Muhammad Yaqub, "State Bank Autonomy, Financial Discipline and the Need for Further Institutional Reforms", *Major Macro-economic Policy Issues in Pakistan*. Enlarged Edition. 1995, SBP, Karachi.

<sup>7</sup> ---, "The level and Structure of Mark-up Rates in Pakistan", *Major Macro-economic Policy Issues in Pakistan 1995*, enlarged edition, SBP, Karachi.

<sup>8</sup> Siddiqui, Shahid Hasan, Lecture delivered on "Stock Market Scandal", at Pakistan Peoples Party, Central Secretariat, Karachi. Dawn (Karachi). November 27, 2006.

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The margin of profit in stock market business has been so high and that too tax-free that many industrialists were tempted to divert their activities from industrial production and export business to speculative business. The following comparative statistics are worth noting:

### **Profit Margin in Real and Financial Sectors**

|    | <b>Sector</b>  | <b>FY05</b>     | <b>FY08</b>   |
|----|--|-----------------|---|
| 1. | Large scale manufacturing (LSM) growth rate.                     | 19.9 %          | 4.84% (July 07–March 08) -- Heaviest fall in Pakistan's history.    |
| 2. | Market Capitalization of Karachi Stock Exchange. (KSE) 100 index | Rs.2068 billion | Rs.4329 billion (May 14, 2008)- Highest rise in Pakistan's history. |

The above figures indicate that the growth rate of LSM is fast declining resulting in low production, enhanced un-employment, rising poverty and widening of the gulf between the rich and the poor. The Karachi Stock Exchange (KSE) 100 index, on the other hand, is fast moving up enhancing the market capitalization at a pace for which there is no precedence in the history of Pakistan. The beneficiaries of this phenomenal rise, in addition to the government and sponsors directors of listed companies, are only few thousand investors who deal with the KSE.

There has also been over-emphasis on consumer finance scheme by banks even for purchasing luxury items. This has also contributed to the enhancement of imports bill and hence the wider trade deficit in FY04 which has been increasing at an alarming rate since then. The scheme must therefore, be re-examined by SBP. We had, a couple of years ago, termed the Consumer Finance Scheme for the purchase of luxury items as 'target killing of the middle class'. It is now apprehended that substantial quantum of these advances, recklessly allowed by banks, will also become difficult for recovery in due course of time.

Banks have also been allowing advances at concessional rates of interest for exports purposes but, in some cases, these loans have been mis-utilized and banks have failed to check diversion of these funds. The Governor SBP in November 2002 said:

"The periods of low and subsidized rates have led to an expansion in the demand for export refinance but a reduction in the volume of exports. Subsidized rates, in the past have given rise to a lot of misuse and misallocation of resources. The arbitrage between the subsidized rate and the market rates has created distortions in the financial system in terms of artificial deposits, spurious collaterals and bad loans taken on the strength of those collaterals."<sup>9</sup>

<sup>9</sup> Ishrat Hussain "Why Reforms Must Continue", Dawn(Karachi) November 11, 2002.



After about five and a half years of the above observation, SBP in its Annual Report for 2006-07 concedes:

“The availability of concessional finance on exports is also an incentive to over-invoice the value of exports so as to obtain large funds at subsidized rates which can then be invested in other high return avenues such as real estate, stock market or even the national savings”.

It is important to note that the exports of Pakistan recorded a rise of \$7800 million between FY02 and FY07. According to information provided in the SBP report referred to above, it appears that during CY02 and CY06, the total quantum of over-invoicing was to the order of about \$5500 million. The actual rise in exports during these years would therefore, be only about \$2300 million. The oft-repeated claims of Musharraf Administration that phenomenal rise in exports have been achieved due to prudent economic policies are therefore, questionable. It is therefore, worrying that during last seven years the total concessions provided to exporters to the tune of about Rs.465 billion were without any real success. The cost of these huge concessions has been borne by the common man.

The Governor SBP, Dr. Shamshad Akhtar repeatedly asserted (between April 2006 and June 2006) that the Export Refinance Rate will not be reduced. She said:

“The government can not subsidize loans any more as the refinance scheme in the past has been misused and subsidized funds have been channeled in speculative activities.”<sup>10</sup>

It is surprising to note that within two months of this firm statement, the Governor, SBP announced (on July 14, 2006) that rate of interest under the Export Finance Scheme has been reduced and that exporters can borrow at 7.5 percent instead of 9 percent earlier.<sup>11</sup> This reduction amounts to encouraging over-invoicing in exports, mis-utilization of banks' funds and promoting casino culture in stock market. It is therefore not supervising to see a crisis in the stock market in the coming months.

We have all along been criticizing the policy of lowering interest rates for the last about ten years. This is on record that we had warned about seven years ago by stating “The present government has persisted with the policy of lowering the interest rates. This is having an over-all negative impact on the economy”. While observing that the banks, by lowering rates of return on deposits, are discouraging savings in the country, it was suggested that “The policy of lowering interest rates needs revision”.<sup>12</sup>

<sup>10</sup> Press Conference at a meeting at SITE Association of Industry, at Karachi. Dawn (Karachi), May 18, 2006.

<sup>11</sup> Press Conference at Karachi Dawn (Karachi), July 15, 2006.

<sup>12</sup> Siddiqui, Shahid Hasan, “Policy of lowering interest rates not in harmony with ground realities”, The News International, (Karachi) February 26. 2001.

Had these submissions been given serious considerations by the authorities concerned, the present economic crises in the country could have been averted. It was however, after six years of our above warning when the Governor SBP conceded that the artificially lowered interest rate has negative impact on the economy and that the country is still paying the price of this policy.<sup>13</sup> We may now add that some of the present policies of SBP are also wrong; the price of which is being paid now and would also continue to be paid in coming years.

The negative impact of consumption-led growth, imprudent lending policies of banks, policy of lowering interest-rates, mis-utilization of banks' advances, over-involvement of banks in stocks market, payment of negative real rates of returns to depositors, policies based on casino, speculative and hoarding culture and poor quality worrisome foreign investments etc., can be seen in the deterioration of most macro-economic indicators during last five years.

Pakistan's economy is in serious crisis mainly due to imprudent policies pursued during last eight years. The persistent high & rising inflation, unsustainable fiscal and current account deficits, declining GDP growth rates, falling foreign exchange reserves, rise in domestic and external debts at an accelerated pace, low and declining rate of national savings and high savings-investment gap etc., are posing serious risks and challenges to the economy. It is unfortunately a fact that in addition to external factors and imprudent economic policies of the government, the policies of SBP & commercial banks and rampant corruption at all level in the country have also contributed to these negative trends in the economy. The following are some comparative indicators:

**Negative Impact of Bankers Policies on Macro Economic Indicators**

| Indicator   | FY03*                  | FY08                             | Trend |
|---|------------------------|----------------------------------|-------|
| CPI (inflation)   | 3.1%                   | 12.5%**                          | ↑     |
| Exports-growth rate   | 22.2%                  | 13.0%**                          | ↓     |
| Trade deficit   | \$1.0 billion          | \$21 billion**                   | ↑     |
| Current Account Balance                                       | \$4.1 billion positive | (\$12.5 billion)**               | ↓     |
| Domestic debt   | Rs.1854 billion        | Rs.3011 billion*<br>(31.03.2008) | ↑     |
| External Debt   | \$33.3 billion         | \$44.6 billion*<br>(31.03.2008)  | ↑     |
| Foreign Exchange Reserves<br>(in weeks of imports equivalent) | 33                     | 16** (May 08)                    | ↓     |
| No. of accounts of banks                                      | 28.8 million           | 25.01 million*<br>(June 2007)    | ↓     |

<sup>13</sup> Shamshad Akhtar, Speech at Lahore, Chamber of Commerce & Industry, Lahore. Business Recorder (Karachi), April 5, 2007.



|                              |      |      |   |
|------------------------------|------|------|---|
| National Savings as % of GDP | 20.6 | 15** | ↓ |
| Budget deficit as % of GDP   | 3.6  | 8**  | ↑ |

*Sources: \* SBP Annual Report & SBP Website.*

*\*\* Author's assessment.*

It is significant to note that the current account balance was surplus in FY04 but mainly due to low interest rates and tremendous rise in the demand of consumer durables (like cars, televisions, air conditioners, and mobile telephones etc.), the current account balance has become negative since FY05. This was obviously also due to over-emphasis on consumer finance scheme by the banking system, which fuelled not only the import bill of these items but also enhanced the consumption of petrol thereby further deteriorated the current account deficit.

The imports of non-oil and non-food items accordingly recorded a rise of 20 percent in FY04 over the previous year but the growth rate of imports of these items doubled in FY05. The total outstanding loans of banks under Consumer Finance Scheme stood at Rs.256 billion in December 2006 but despite the fact that current account deficit in FY06 was highest in the history of Pakistan, banks continued to allow liberal financing for the purchase of imported consumer durables. The outstanding loans under this scheme accordingly rose to Rs.345 billion in June 2007 whereas current account deficit rose to \$6.9 billion in FY07. It is apprehended that the current account deficit may show a rise of about 80 percent in FY08 as compared to preceding year.

### 3. The Banking Business – Comparative Statistics

Some of the major banks have also been closing their branches and paying off their staff. The following is the comparative position of total number of branches and staff strength of four major banks (HBL, UBL, MCB and Allied Bank).

**Comparative Position of Number of Branches and Staff Strength of Four Major Banks<sup>14</sup>**

| Variable | FY00  | FY06  | Fall  | % Fall |
|----------|-------|-------|-------|--------|
| Branches | 6580  | 4780  | 1800  | 27     |
| Staff    | 90780 | 47340 | 43440 | 48     |

These statistics clearly indicate that the four major banks not only reduced their branches by 27 percent during these six years but also reduced their staff strength by 48 percent notwithstanding that their administrative expenses have gone up tremendously. The following statements show that the banks have closed some branches despite the fact that the number of workers per bank branch is already very high in Pakistan as compared to other countries in the region and that the financial penetration, particularly in rural areas, is also very low in Pakistan:

<sup>14</sup> Published Annual Accounts and Reports of these banks.

**Regional Comparison: Bank's Branch Penetration**

| Country     | Number of People per Branch |
|-------------|-----------------------------|
| Bangladesh  | 22,348                      |
| India       | 15,864                      |
| Indonesia   | 11,845                      |
| Malaysia    | 10,208                      |
| Pakistan    | 20,450                      |
| Philippines | 12,773                      |
| Singapore   | 10,954                      |
| Sri Lanka   | 14,551                      |
| Thailand    | 13,929                      |

*Source: World Bank and SBP calculations*

**Financial Penetration: Rural vs Urban**

| Variable   | Rural | Urban | Total |
|--|-------|-------|-------|
| Population   | 67.0  | 33.0  | 100.0 |
| Poverty incidence<br>(as estimated by government)    | 28.1  | 14.9  | 23.9  |
| Bank Branches  | 33.0  | 67.0  | 100.0 |
| Total population having bank accounts                | 6.0   | 37.0  | 17.0  |
| Adult population<br>(19 +years) having bank accounts | 14.0  | 75.0  | 37.0  |
| Deposits (number)                                    | 25.0  | 75.0  | 100.0 |
| Deposits (amount)                                    | 9.9   | 90.1  | 100.0 |
| Advances (number)                                    | 17.0  | 83.0  | 100.0 |
| Advances (amount)                                    | 7.1   | 92.9  | 100.0 |

*Source: Various SBP Reports and Economic Survey 06-07*

During last eight years instead of cash recovery of stuck-up loans, the policy of re-scheduling and write-off advances is being pursued to please the rich and the powerful. The way for this was paved by Dr. Ishrat Hussain, the then Governor SBP who was appointed by Gen. Musharraf in December 1999. He stunned the nation by saying on March 25, 2000 that willful defaulters of banks/ DFIs are only "Handful". He also advised the banks to take-up the business of the 'write-off advances'.<sup>15</sup> The statement that willful defaulters are handful was not correct as at least since 1993, it has been an established fact that bulk of defaulters are willful. This statement also contradicts the earlier contention of SBP that "Most of these are not defaults which are natural in character and fall in the category of willful defaults with collusion."<sup>16</sup>

<sup>15</sup> Ishrat Hussain, "Financial Sector in Pakistan", Speech delivered at the 49<sup>th</sup> Annual General Meeting of Institute of Bankers in Pakistan at Karachi on March 25, 2000.

<sup>16</sup> Mohammad Yaqub, "Problems of Banking Sector in Pakistan", *Major Macro-Economic Policy Issues in Pakistan*, SBP, Karachi, 1998.



During the tenure of Dr. Ishrat, SBP issued a circular,<sup>17</sup> which among other provisions stated, that in case of outstanding advances of more than Rs. 0.5 million, banks could recover only 75 percent, even if the forced sale value of security is more than the outstanding advance. If however, the forced sale value of security is less than the outstanding advance, the banks could only recover a sum equal to forced sale value of the security. The balance amount in both the cases was to be written-off by banks.

These guidelines in plain language mean that banks could not lay their hands on other assets of the defaulters not under lien to the banks including deposits, National Saving Certificates, shares, immovable properties and stock-in-trade etc. The provisions of SBP circular referred to above are against all norms of banking, professionalism, justice, and fair-play. The issuance of this circular amounts to breach of trust and intellectual corruption. The banks have also written-off advances of chronic defaulters under the umbrella of this circular, who had earlier defrauded the banks by misutilization of loans, removal of securities pledged to the banks etc., or had got their advances written-off notwithstanding that some of these defaulters have huge known assets in the country.

The beneficiaries of the SBP circular referred to above include prominent politicians, ministers, feudal, big traders, industrialists and even a sitting director of SBP itself. It is all the more painful that these concessions were allowed when General Musharraf had vowed to recover the delinquent advances in cash and had declared; "We shall chase the plunderers of the national wealth upto every corner of the world and shall get hold of them. They can flee from the country but cannot hide themselves".<sup>18</sup>

Encouraged by SBP's initiatives as contained in the said circular, many banks just jumped to condone (write-off) the advances, notwithstanding that some of these were not bad loans in the real sense but represented collusion between the bankers and the defaulters. The following comparative figures, assessed from the Annual Accounts of some big banks, indicate the position of the advances written-off by banks:

1. Advances written-off between 1984 and 1999 (15 years) Rs. 30 billion.
2. Advances written-off between 2000 and 2007 (8 years) Rs.125billion (approx.)

The slowing down of the pace of cash recovery of stuck-up loans, large scale write-off and re-scheduling thereof has been detrimental to the interests of the millions of depositors and has also been instrumental in encouraging the culture of un-professionalism and non-accountability in banks. The Governor SBP, Dr. Shamshad Akhtar, had promised to take action against those banks who, by forming cartel, were not giving a fair return to depositors. While acknowledging that it is the responsibility of SBP to safeguard the interest of depositors, she reiterated that SBP has warned large banks to increase return on deposits failing which the State Bank would intervene to get

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<sup>17</sup> BPD Circular No. 29 dated October 15, 2002 under the caption "New Guidelines on Write-Off of Irrecoverable Loans and Advance"

<sup>18</sup> Jang, (Karachi), July 14, 2000.

results. She added that SBP would take a decision in this regards possibly in January 2007.<sup>19</sup>

The banks however, continued to pay real negative rate of return to millions of depositors but SBP has backed out of the promise and could not ensure better returns to small savers. There is no indication that SBP would ensure that saving bank accounts (S.B. A/Cs) earn a positive return in real terms. The commercial banks, with the concurrence of SBP, have in fact been advising the people to transfer their savings from S.B. A/c to term deposit account of longer maturity. This is not practicable as the total number of S.B. A/Cs on June 30, 2007 was 15.71 million whereas number of accounts of term deposits was only 1.2 million. The S.B. A/c holders could not obviously be expected to come to the banks personally for completing the formalities. Most of them, in any case, would not find it feasible to block their funds for a year or so.

The banks are now paying higher rate of returns on deposits of larger amounts meaning thereby that bigger the amount of deposits – higher the rate of return. This has increased the average rate of return on deposits but the real beneficiaries have been only the big depositors whereas small depositors continue to suffer. It is unfortunately a fact that banks are discouraging small savers with the result that the total number of accounts of Rs.10,000/- or less with scheduled banks in Pakistan, which were 14.4 million on June 30, 1999, were reduced to only 9.3 million on June 30, 2004 showing a fall of 35%. This should be a matter of concern to the policy makers particularly SBP.<sup>20</sup> As no remedial measure was taken, total number of bank accounts was further reduced to 7.8 million on June 30, 2007.

The then Governor SBP about six years ago had said:

“The Government has already reduced the tax rate from 55 percent to 47 percent during the last two years and it is envisaged that the rate will be reduced gradually and brought at par with the corporate tax rate of 35 percent in the next three years. This will in turn help in reducing the spread between the deposit rate and lending rate and benefit financial savers.”<sup>21</sup>

While small depositors of banks continue to suffer, the government and SBP have been giving concessions and incentives to banks to boost their profitability. The commercial banks have enhanced their pre-tax profit from Rs.29.4 billion in CY02 to 123.4 billion in CY06, but the average rate of return passed on to depositors has been reduced from 4.41 percent in CY02 to 3.40 percent in CY06 while the spreads have not been declining. The tax rates have however been persistently reduced but instead of fulfilling

<sup>19</sup> Press Conference at Karachi. Dawn (Karachi). December 3, 2006.

<sup>20</sup> Siddiqui, Shahid Hasan, “*PAKISTAN: ECONOMIC GROWTH & STABILIZATION MYTH OR REALITY?*”, 2005, p-52.

<sup>21</sup> Isharat Hussain “Presidential address at a Seminar Organized by Management Association of Pakistan at Lahore on 31<sup>st</sup> August, 2002.



the promise of giving benefits to financial savers and reducing the spreads, the real rates of return to depositors have been further reduced and the high spreads have been allowed to continue. This is yet another example where the State functionaries, through their intended policies, have been directly or indirectly passing on benefits to the powerful segments of society at the cost of national economy and the common man including depositors of banks.

#### **4. Expansion of the Banking Sector – The Sustainability Issue**

The second SBP quarterly report released in April 2006 says that rise in banking spread is a source of concern to SBP because its widening could hurt the economic stability. The report however, says “it may be too early to warrant an immediate policy response.” The Governor SBP, about a year ago, had subsequently said that the prevailing banking spread of 7.5 percent is highest in the region and that despite record profits, the banks are not sharing profits with depositors. She warned that if banks fail to reduce the spread, SBP will intervene.<sup>22</sup>

The Governor SBP had also observed “Extraordinary banking spreads in Pakistan in recent years are an evidence of lack of competition and in-efficiency in Pakistan’s financial markets.”<sup>23</sup> It is regretted that, even after one and a half year of these observations, the banking spreads continue to remain high but SBP does not seem to take effective steps to check the spreads obviously because it would hurt the interests of some of the powerful groups.

During last six years or so, SBP has practically adopted a policy of encouraging auction of Pakistani banks to foreigners. This policy is fraught with risks as banks are very powerful institutions. It is therefore, in national interest that the share of foreign banks’ deposits in the total deposits is kept at a low level. In any case, the bulk of income of banks operating in Pakistan is in local currency but the profit of banks owned by foreigners is to be remitted in foreign currency. This, along with other factors, will have serious strain on current account deficit and on foreign exchange reserves as also on Rupee-Dollar parity in coming years. We may therefore, well see depreciation in the value of local currency. The share of foreign banks’ deposits in the total deposits of the banking sector in 1992 was only 14 percent but the share of foreign stake has now increased to over 50 percent.

The prevailing situation reminds us of the era of East India Company. We are witnessing the re-colonization of the state of Pakistan due to the policies of ‘Viceroy and financial Viceroys’. It appears that SBP is working like a minor regional office of the US Federal Reserve System”<sup>24</sup> Dr. Hasan-uz-Zaman, while observing that

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<sup>22</sup> Shamshad Akhtar, Press Conference at Karachi. Dawn (Karachi), December 3, 2006.

<sup>23</sup> Shamshad Akhtar, International Conference on “Fixed Income Market Development in Emerging Market Economies” at SBP Karachi. Dawn (Karachi) December 19, 2006.

<sup>24</sup> The News International (Karachi), April 15, 2002, Dr. Javed Ansari..

## *Performance of Banking Sector in Pakistan*

abundance of multi-national corporations is regarded as a stratagem to pave the way for economic imperialism by the industrialized nations, says:

“Dr. Shahid Hasan Siddiqui has warned the government of Pakistan to be careful in transferring the privatized industrial and financial institutions to foreign investors because they might emerge as a new East India Company.”<sup>25</sup>

It was in 1997 that we had cautioned the government by saying:

“--- it would not be prudent to sell the public sector banks to foreigners. If these banks are sold to foreigners, banks controlled by foreigners, including existing foreign banks, will emerge as most powerful tycoons”.<sup>26</sup>

It must be perceived clearly by all the stakeholders that neither the nationalization of banks was the root cause of all evils in the banking sector nor privatization alone is the cure of all diseases. It must be noted that in addition to exploitation, it is corruption, breach of trust, un-professionalism and lack of accountability of banks, SBP and Ministry of Finance which is damaging the banking sector. The solution therefore, lies in curing these diseases and not in privatization of banks at all costs. The published Annual Accounts of major banks at least of 1997 and 1998 did not show the true state of affairs as these were the product of accounting jugglery. Some of the top bankers responsible for this jugglery were amply rewarded and are now holding much higher positions in the country.

A former investment banker of Pakistani origin was recently sentenced to ten years in prison for stealing inside information and providing the same to an alleged accomplice – a banker working in Pakistan who made \$7.8 million (Rs.480 million) as illegal profit by trading in stock market in United States.<sup>27</sup> It is unfortunate that the system in Pakistan has failed to apprehend such culprits who remain involved in inside trading in stock market in collusion with some big stock brokers while serving in the banks.

The growth rate of the banking sector achieved during last few years is not sustainable. The era of low rate of returns to depositors, high banking spread and huge Loan – Loss provisions, will not last long. The bonanza of large remittances from abroad may also not continue for an indefinite period. In any case, the present rate of domestic savings is just not enough for sustaining the GDP growth rate of 6 – 8 percent. To increase the rate of savings, the policies of banking sector will have to be restructured which would significantly reduce its profitability.

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<sup>25</sup> Hasan-uz-Zaman, S. M., *Islam And Business Ethics*, London: Institute of Islamic Banking and Insurance, London, 2003.

<sup>26</sup>Siddiqui, Shahid Hasan. “*Fifty years of Commercial Banking in Pakistan*”, Pakistan Prepressives, Vol. II, No. 2, December 1997, Pakistan Study Centre, University of Karachi.

<sup>27</sup>Business Recorder (Karachi), June 1, 2008.



In case of a major external shock, the remittances from expatriates may slow down, Rupee will depreciate at a faster pace, flight of capital will re-emerge and foreign exchange reserves may evaporate in no time. In such an eventuality, the inflation rate would go up further which would enhance the cost of production. The industries would become un-competitive and many industries will close down. A larger number of banks' advances would therefore, become stuck-up. All this could pose serious risks for the banking sector. This needs immediately attention of the banks and SBP.

### **5. Islamic Banking – The Prevailing Status**

The present system of Islamic banking in Pakistan was designed in pursuance of a meeting held on September 04, 2001 under the Chairmanship of President Gen. Pervez Musharraf. This meeting was attended to among others by Governor SBP, officials of Ministries of Finance & Law and some members of the Council of Islamic Ideology. It was decided in the meeting to shift to interest-free system in gradual and phased manner. This decision was not in conformity with the judgment dated June 14, 2001 of *Shariat Appellate Bench of Supreme Court of Pakistan (SAB)* as for all practical purposes it visualizes the continuation of interest-based banking system even after June 30, 2002 – the extended dead-line given by SAB for implementing its earlier judgment. This judgment was however, subsequently set aside in review appeal on June 24, 2002.

The banks operating under the banner of Islamic banking in Pakistan have failed to eliminate the injustices of the interest-based banking system. These banks are in fact exploiting their depositors and are also not contributing to the achievement of the socio-economic objectives of Islamic economic system. The activities of these banks operating under the banner of Islamic banking are also having the same negative impact on the economy as is the case with conventional banks.

It is important to note that bulk of financing by Islamic banks is being made on the basis of second-line fixed return techniques like *Murabaha* and *Ijarah* etc., and that too on the bench-marks of conventional banking system. In these modes of financing, Islamic banks do not accept any responsibility for the operational losses of the entrepreneur as they are guaranteed a fixed return notwithstanding that the sharing of the loss is the essence of Islamic system of banking. Further, the returns guaranteed to Islamic banks on their financings are also based on the bench-marks of interest-based banks in the country.

The fact is that Islamic banks, in the present circumstances can not, even if they want to, eliminate the injustices melted out to depositors/investors by the interest-based banks. For payment of real positive rates of return to their depositors, the Islamic banks would have to enhance rates of return on their financings in addition to reducing their spreads. This enhancement would not be acceptable to many entrepreneurs availing finance from Islamic banks as alternate avenues are available to them for securing advances at lower rates of interest from conventional banks.<sup>28</sup>

<sup>28</sup> Siddiqui, Shahid Hasan. "Islamic Banking: Dream and Reality", *The News International* (Karachi), September 12, 2005.

It is therefore, crystal clear that the policy adopted by SBP to allow the conventional and Islamic banks to run parallel to each other for a long period is not justified since it is giving bad name to the Islamic system notwithstanding that the fault lies with us and not with the system. Although the *Shariah* Supervisory Committee (SSC) of SBP has not approved this parallel system of banking, the general impression amongst the people dealing with Islamic banks but ignorant of the fact is that this system has been approved by the authorities concerned. It is therefore, essential that SSC should explain this position to the public.

Maulana Maududi had observed that Islamic financial system can neither grow nor can be firmly established if interest-based transactions are not totally prohibited.<sup>29</sup> Allowing interest-based banks to continue to operate for an indefinite period, in any case, is un-Islamic. The Holy Qur'an ordains: "Enter into Islam in totality." (2:208) and while prohibiting *riba* transactions, directs Muslims to "give up what remains of your demand for *riba*." (2:278)

In the *Musharakah* mode of finance, both profit and losses are shared by the parties according to ratio of their respective capitals. *Shariah* scholars have however, allowed that in the *Musharakah*, profits can be shared in the mutually agreed ratio. This is creating serious distortions. In a large number of cases where Islamic banks provide financing on the basis of *Musharakah*, the ratio of profit to be shared is so manipulated that, in the final analysis, the profit earned by the Islamic banks is comparable with the corresponding interest income on advances earned by the conventional banks.

The SBP provides re-finance to Islamic banks on the basis of *Musharakah* but the ratio of profit sharing is so determined that the share of State Bank's income remains same as in the case of re-finance provided to interest-based banks.<sup>30</sup> Similarly in the Diminishing *Musharakah* modes of financing, the purchase of units by banks clients is not on the basis of market value of the property. Obviously, this is to keep the rate of return of Islamic banks in line with the rate of return of interest-based banks.

It is regretfully noted that Islamic banks have not opened a single branch in rural areas and have not allowed Micro-finance and agricultural loans to land-less tenants (Harees) and small farmers. The behavior of Islamic banks is not different from their counterparts. Their emphasis is on consumer finance scheme, which encourages people to live beyond their means. This scheme is not compatible with the spirit of *Shariah*. It is also having negative impact on the economy as discussed earlier.

Maulana Maududi, while recounting the evils of interest-based banking, observed that a financier who advances money at fixed rate of profit is selfish as he is not concerned with the operational result of the business. He adds that the depositors of Islamic banks

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<sup>29</sup> Maududi, S. Abul A'la. *Maashiyat-e-Islam*. Lahore: Islamic Publications (Pvt.) Ltd., 1992 p.276.

<sup>30</sup> Siddiqui, Shahid Hassan. "Instruments of Islamic Banking in Operations", *Journal of Strategic Studies*, Vol. 4, No.10, Winter 2008, Bahrain Center for Studies and Research., Manama, Bahrain.



would hope to get unspecified but unlimited profit instead of fixed rate of interest<sup>31</sup>. It is therefore, obvious that Muslim philosophers visualized large scale financing only on PLS basis and never on fixed rate of returns (like in *Murabaha* and *Ijarah* etc.), which in any case is not dependent on the operational results of the entrepreneur.

Maulana Mufti Muhammad Shafi (Late), Grand Mufti of Pakistan, while referring to conventional banks observed:

“A person whose own worth is Rs.100,000/- engages in business employing Rs. 1000,000. Of the hefty profit earned through such business, a small portion is paid to the bank by way of interest and the rest is pocketed by the businessman. The bank, in turn, distributes an even lesser amount to the depositors.”

Mufti Shafi accordingly added that interest-based banks are “the instruments meant for sucking the blood of an entire community and pumping it into the veins of few capitalist<sup>32</sup>”. It is important to note that the total number of credit accounts of all conventional banks is 20.7 percent of total deposits accounts whereas in the case of Islamic banks, the total number of financing accounts is only 9.4 percent of total deposits accounts as on June 30, 2007. The position is therefore, much worst in the case of Islamic banks as compared to interest-based banks, which were termed as blood suckers of the community.

In practice the conventional banks in Pakistan have been paying real negative rate of returns to their depositors<sup>33</sup> and Islamic banks are no exception, notwithstanding that some of these banks have been enhancing their profitability. As mentioned earlier, it was in 1993 that the then Governor, SBP had remarked “A banking system that gives a rate of returns to small savers which is negative in real terms, is exploitative one.”

It is significant to note that *Murabaha* is the most popular instrument of financing used by Islamic banks. In fact, *Murabaha* is a particular type of sale and not a mode of financing in its' original sense. The Pakistan's sales tax regulations have been specifically amended for the purpose so that sales tax is not payable on the value-added price (amount of profit earned by the bank while “selling” goods in *Murabaha* transactions). This also implies that *Murabaha* financing can in fact be termed as a manipulation (*Heela*) just to escape from the label of interest and the net result of the transaction practically remains the same in both the systems.

The International magazine “*Newsweek*” reported that a Pakistani banker Shahid Hasan Siddiqui and other Muslims would like Islamic banking to remain true to Muslim

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<sup>31</sup> Maududi, S. Abul A'la. *Sood*, Lahore: Islamic Publications (Pvt) Ltd. 1961. p.168.

<sup>32</sup> Shafi, Muhammad Mufti. *THE ISSUE OF INTEREST PART ONE*. Karachi: Darul Ishaat 1997. p37.

<sup>33</sup> Rates of returns on deposits less inflation rate in the country

values such as promotion of socio-economic justice and fair distribution of wealth.<sup>34</sup> The banking can become Islamic, in the real sense of the word, only when it fully conforms to the Islamic values such as real risk sharing, promotion of socio-economic justice and fair distribution of wealth. This would be possible only if bulk of financing by Islamic banks is made on *Musharakah* basis (Profit and loss sharing) according to the ratio of capital invested in the business.

It is important to note that Muslim economists have all along been claiming that the elimination of interest and enforcement of the Islamic banking system would encourage savings and capital formation, ensure equitable distribution of income and wealth and establishing justice between the parties. It is also believed that the Islamic banking system within the framework of Islamic economic system would lead to optimum allocation of resources and economic stability.<sup>35</sup> Now if the Islamic banks and entrepreneurs share the profit which corresponds to the prevailing interest rate, as is being presently done, these objectives are not likely to be achieved even if other financing policies of Islamic banks are properly defined to contribute to the achievement of the objectives of the Islamic economic system.

## **6. Recommendations**

The following are therefore, some recommendations for improving the quality of Pakistan's banking system:-

### **a) Conventional banks**

- i. Banks should be directed to pay a minimum rate of profit of one percent above the inflation rate to all their saving bank account holders. The banking spread should not be allowed to exceed 3.5 percent.
- ii. The banks' consumer finance scheme should be restricted to house loans only. SBP should give specific mandatory targets to banks for allowing micro-finance. A strategy should be designed by SBP for opening branches in rural areas at a faster pace. More financing at an accelerated pace should be directed to landless *haris* and for providing them loans for purchase of oxen and buffalos etc..
- iii. Foreign Direct Investment in the banking sector through privatization or merger / acquisitions should not be allowed.
- iv. At least 100 more branches of First Women Bank should be opened by the end of 2010.
- v. To reduce the power of the banks, Corporate Debt Market should be developed. The transparency must also be ensured in stock markets which is seriously lacking at present. These steps will foster competition in the financial sector.

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<sup>34</sup> *Newsweek*, Vol. CXXI, No.01, December 30, 2002.

<sup>35</sup> Siddiqui, Shahid Hasan. *Islamic Banking*, Karachi: Royal Book Company. 1994.



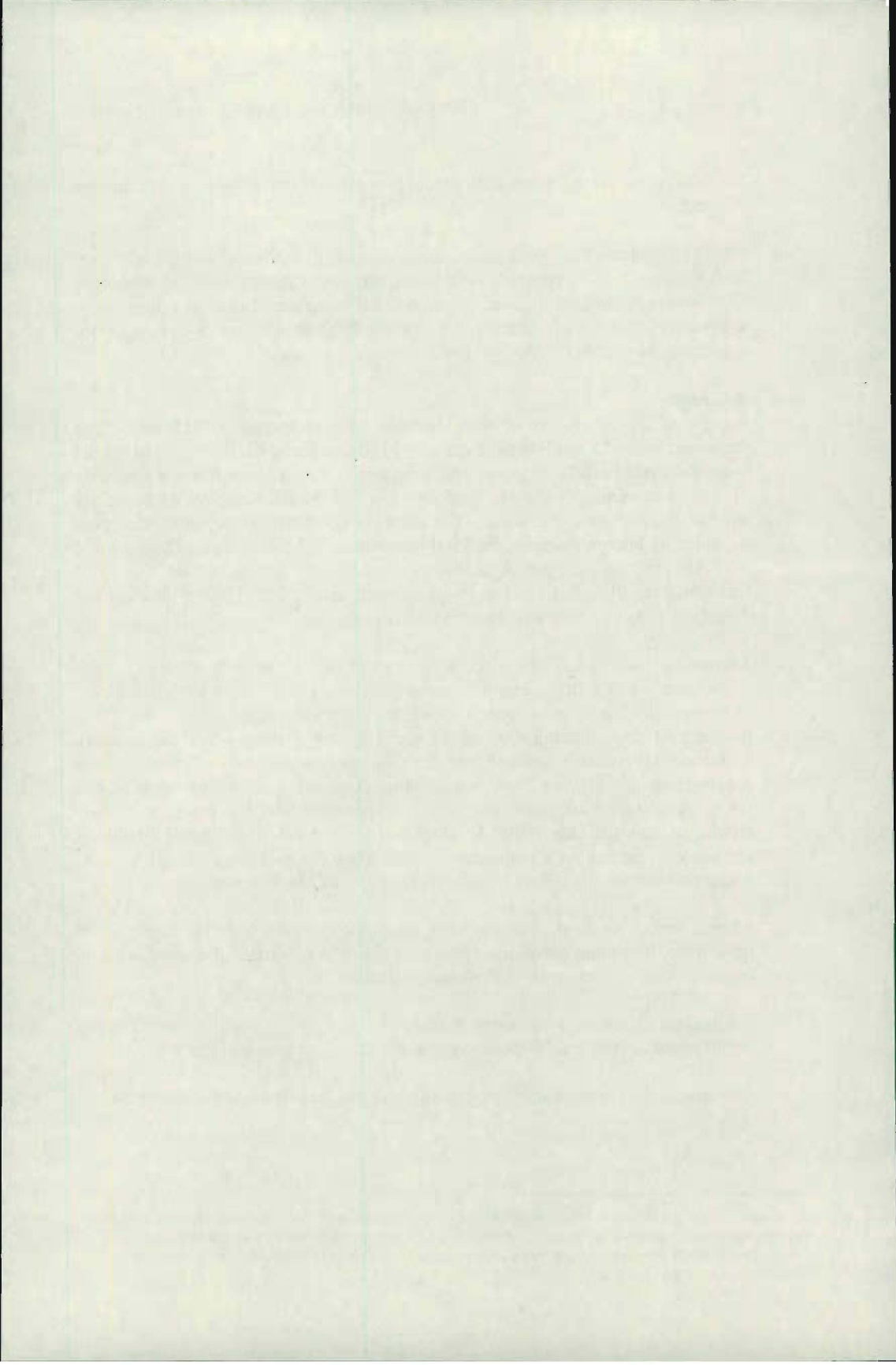
- vi. The Cash Reserves Requirements should be applicable to all types and maturities of deposits.
- vii. The list of defaulters as on June 30, 2008 along with the list of advances of over Rs.0.5 billion and above written-off during last seven years should be published. The advances written-off on unprofessional considerations including those written off under SBP circular No. 29 of 2002 should be re-examined for recovering back along with upto date mark-up.

**b) Islamic banks**

- i. In view of the difficulties in allowing large scale financing on PLS basis, it is suggested that a Model Islamic Bank should be established. The proposed Model Bank should undertake all normal banking business and allow financing only on PLS basis according to true spirit of *Shariah*. This Model Bank would hopefully pay much higher rate of returns to depositors as compared to the rates being paid by existing Islamic banks. The establishment of Model Islamic Bank would motivate other Islamic banks in Pakistan and abroad to enhance their share of financing on PLS basis. This proposal was also made before the *Shariah* Appellate Bench of Supreme Court of Pakistan (SAB)<sup>36</sup>.
- ii. *Shariah* scholars should announce in clear terms that the existing parallel system is un-Islamic and a time frame of say one year be given for complete switch over to interest-free banking system. It should be made clear that if this is not done, the support and authentication being given to the system would be publicly withdrawn. It is also suggested that the scholars concerned should accord their approval to the existing system of Islamic banking only when *Musharakah* financing is based on profit and loss sharing strictly on the basis of capitals employed and that the share of *Musharakah* in total financing is gradually enhanced according to a laid down time-frame so as to ensure that at least 50 percent of the new financing is made on the basis of *Musharakah*.
- iii. Islamic banks must re-structure their financing policies keeping in view the objectives of Islamic economic system. The emphasis should therefore, also be on micro-finance rather than on consumer finance.
- iv. Islamic banks should open more branches in rural areas to cater the financing requirements of the local population including landless peasants (harees) .
- v. The Islamic banks must share their profit with the depositors in the real sense.

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<sup>36</sup> Supreme Court judgment on *Riba*, Lahore: PLD Publishers, 2000. p.375. The judgment says "Dr. Shahid Hasan Siddiqui, an economic expert and Chairman of the Karachi-based Research Institute of Islamic Banking and Finance appeared to state that a model Islamic bank should be established in Pakistan which should operate 100 percent on PLS basis."





# Emerging Debt scenario and the Debt Burden Costs in Pakistan

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**Abstract:** *This paper finds that the public domestic and foreign borrowing and private foreign borrowing adversely affect domestic saving effort. However, foreign aid has played a positive role in economic growth of Pakistan. The major economic hurdle for Pakistan to come out of the debt crisis of the 1990s was its inability to service the outstanding debt and the drying-up of net resource inflow from abroad. The paper also asserts that the poor record of debt management in Pakistan is the outcome of weak institutions, and addressing this issue has to become a larger objective. The study concludes that establishing fiscal discipline with all its contingent requirements relating to debt and expenditure management is the key to effectively confront the multiple macroeconomic imbalances and social challenges that Pakistan is facing today.*

## 1. Introduction

After almost a decade of reprieve, Pakistan is again at the brink of facing a debt crisis. While the quantitative burden of external debt as measured by the debt to GDP ratio has registered a significant decrease from 83.8% in the year 2000-01 to 50.1% in the first quarter of the year 2008,<sup>1</sup> the country's repayment capacity in terms of foreign exchange earnings and capital inflows is quite unlikely to keep the required pace in the near future. The debt crisis that Pakistan encountered during the period of 1990s had many facets. The country experienced a sustained economic recession unprecedented in its history.<sup>2</sup> Besides, continuing pressure to balance the budget in the wake of large debt servicing obligations had squeezed the range of options available to economic managers. With about 70% of the government revenues being used in debt servicing, development expenditure in the public sector had shrunk to a bare minimum level. Public sector development expenditure on education and health had stagnated even in nominal terms despite moderate inflation, while that on social welfare had declined. Poverty that was almost a forgotten evil in 1980s returned with a vengeance and the distribution of income worsened.

If the debt crisis comes back, as is expected, the economic and social cost of debt burden on citizens would be alarming, especially on the poor segment of the society. This time it will be aggravated by food inflation, flour crises, oil price hike and the electricity power crisis. On the external front Pakistan's import bill is reaching a level almost twice as large as its export earnings. Another alarming trend in the current account balance is the sharp increase in net factor services deficit from \$0.3 billion in

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<sup>1</sup> See Government of Pakistan (2008a).

<sup>2</sup> The annual compound growth rate of real GDP during the five years period 1995-2000 has been 2.76% (almost equal to the population growth rate), which was even lower than the growth rate achieved in any five-year period in Pakistan's history.

2001-02 to \$4.4 billion in 2006-07.<sup>3</sup> The dollar-rupee parity is going through a major adjustment in the light of inflation differential between Pakistan and the USA. The much-needed inflow of private capital falls short to bridge the trade gap. With a slump in political affairs and the declining trend in economic activity, which has set in with regards to foreign exchange reserves, the risk of debt crisis and the collapse of economic growth process can no longer be ruled out.

The unfolding economic crisis is destined to lead to readjustment of socioeconomic goals and drastic changes in policy framework. For a poor country like Pakistan, the social cost of these adjustments is too large to be absorbed in the short run. The Ricardian equivalence argument does not apply for a number of reasons. First, a large segment of the population is unable to indulge in lifetime planning; they just consume what they earn. Second, capital markets are highly distorted and no proper pension schemes exist, except for the government employees. Third, economic policies are highly uncertain and are announced abruptly by the government. The announcement of annual budget has become almost a futile exercise because policies continue to change throughout the year. Many of the well-publicized policies often become the victims of public pressure and political considerations.

The debt problem can be approached from two directions. One possibility, that the donor agencies have alluded to, is to improve the resource balance in the country, while the other alternative is to enhance the country's repayment capacity by growth promotion. Broadly speaking, the first approach seeks (a) an increase in savings through supply side measures such as tax increases, cuts in government expenditure and an overall downsizing in public sector and (b) an improvement in economic and governance efficiency through micro level institutional reforms and restructuring. The second approach seeks GDP and exports growth in order to make a given volume of debt sustainable when considered in relation to size of the economy and its foreign exchange earning potential.

Measures to check the volume of debt or its growth such as tax increases or cuts in government expenditure and subsidies tend to slow down economic activity besides inflicting social and economic costs in terms of poverty and unemployment. Thus the debt may be controlled but the country's repayment capacity might shrink even further, causing the debt to become unsustainable. Pakistan's case is a witness to this proposition. During the second half of the 1990s, Pakistan struggled to maintain more or less constant tax revenue to GDP ratio of around 16 to 17 percent and withdrew subsidies from many essential items, in particular electricity and petroleum products. Pakistan was also able to avoid any major financial crisis, though not without debt rescheduling. But it had to sacrifice heavily in the form of deep recession, widespread poverty, deprivation and disillusionment among its citizens. In short the donors' prescriptions produced negative payoff as far as wellbeing of an average Pakistani is concerned, while the burden of debt kept on rising until huge inflows of foreign exchange following the 9/11 event reversed the trend.

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<sup>3</sup> See Government of Pakistan (2008b).



This paper aims to expose various dimensions of the debt problem in Pakistan, with particular emphasis on the institutional framework in which debt is managed and the economic and social costs of debt overhung. The paper is organized as follows. Section 2 is devoted to debt management issues. In section 3 a simple econometric model is presented that aims at tracing out the effects of borrowing on domestic saving effort and the allocation of government budget between development and non-development expenditures and between alternative heads within the development and non-development expenditures. Section 4 presents the results of the model, while section 5 concludes the paper.

## **2. Issues in Debt Management**

### **2.1 Debt Management Agencies**

The responsibility of debt management in Pakistan rests mainly on the Ministry of Finance. The Economic Affairs Divisions (EAD) and the Finance Division (FD) have traditionally been responsible to maintain most of the relevant information on various aspects of debt. The EAD has been monitoring and keeping track of aid inflows, debt servicing and the allocation of funds received in aid, grants and borrowings. Management of technical assistance (training and infrastructure development) necessary to implement various aid programs is also handled by this department. Policy making with regard to debt is the concern of FD. The Export Finance Wing of the FD plays a key role in designing medium- to long-term policies, keeping in view the inter-linkages between debt related variables (e.g. borrowings and debt servicing) and the current and capital accounts of the balance of payments. Thus, the EAD has performed the task of implementation, monitoring and record keeping under the policy framework designed by the FD. In addition, the State Bank of Pakistan (SBP) also maintains debt related data.<sup>4</sup> Debt management, planning and policy making at the Ministry of Finance have been coordinated with the SBP in order to look into the financial side of the matter, and with the Planning Commission of Pakistan to seek economic advice.

After the debt crisis of 1990s the Government of Pakistan constituted a *Debt Reduction and Management Committee*. The committee issued its report in the year 2001 (see Government of Pakistan, 2001). Besides providing some details on debt related data, the committee pointed out several problems in debt management. In particular, it noted that debt management was segmented into many departments with poor state of coordination and information flow and that the data management systems were mostly outdated. The committee recommended establishment of a central debt coordination office and improvement in debt management and information systems.

The Ministry of Finance constituted a separate department, called Debt Policy Coordination Office (DPCO), to monitor and maintain all the relevant data on debt. Section 7 of the Fiscal Responsibility and Debt Limitation Act (2005) binds DPCO to issue an annual policy statement on debt. The *Debt Policy Statement 2007-08* provides a fairly comprehensive picture of debt both in terms of statistics and qualitative analysis

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<sup>4</sup> The Central Directorate of National Savings records all the information on domestic public debt raised by National Savings Schemes of the Government of Pakistan.



of external and internal debt (see Government of Pakistan 2008a). With the establishment of DPCO, the problem of information segmentation has been resolved to a considerable extent and it appears that government agencies, especially the *Ministry of Finance* and the *State bank of Pakistan* now have much better coordination.

## **2.2 Pitfalls in Debt Management**

Debt management in Pakistan is lacking in many respects. While the coordination across debt management agencies has improved as discussed above, there are still problems in feasibility analysis, long-term planning and approaching the problem. Donor agencies could also be blamed for imposing unrealistic conditionalities and pursuing their agenda without full appreciation of ground realities.

Economic problems in Pakistan, including the debt issue, are often addressed only under critical situation, while project feasibility and long term planning are almost confined to file work. As a result, solution strategies often seek quick results that in most cases are not feasible. Decision-making rests mainly on whims and personal intelligence, rather than objective analysis. Political motives and vested interests stand above socioeconomic considerations. Since political factors in Pakistan are volatile, long-term plans and feasibility reports, even when they exist, are given least priority at the level of policymaking and implementation.

The case of foreign direct investment in the power sector during the early 1990s provides a notable example in this regards. The decision-makers were so much occupied with the urgent need to bridge the external resource gap and to remove power shortage bottlenecks that the full repercussions of the contractual arrangements reached between the independent power producers (IPPs) and the Water and Power Development Authority (WAPDA) were not realized. Price disputes erupted later on as WAPDA suffered losses by committing itself to buy IPPs' production at a price much higher than the average cost of production from its own units. Potential foreign investors shied away from Pakistan as the long court battle polluted the investment climate. The disputes finally ended with an out of court settlement and WAPDA could not gain any worthwhile concession in prices.

### ***Piecemeal Approach***

Another shortcoming in the debt management practices seldom highlighted in policy-making circles in Pakistan is the weak coordination between domestic and foreign debt. Again, the reason for such a piecemeal approach is the preoccupation with the most urgent task at hand. Confronted with the urge to find ways and means for servicing foreign debt and minimizing the associated default risk, the debt management agencies have tendency to relegate the domestic debt management to routine work. Even academic studies, with the exception of Ahmad (1996, 1997, 1999, 2000, 2001), and Ahmad and Ahmed (1998), tend to analyze foreign debt as an issue unrelated to domestic debt. Simulation exercises in Ahmad (2000, 2001) demonstrate how closely the two forms of debt are inter-linked.<sup>5</sup>

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<sup>5</sup> For example, a startling result found in the studies is that attempts to retire external debt through privatization sales to foreign investors are most likely to end up in retiring domestic debt, with little change in



Statistics show that the burden of domestic debt is larger than that of foreign debt, both in terms of size and debt servicing costs.<sup>6</sup> However, the foreign debt problem has turned into a crisis due to inability of the government to accumulate the foreign exchange sufficient enough to pay the interest and principal, and difficulty in rolling-over the debt. Besides, common citizens, who had to pay a high price in terms of tough IMF conditionalities for further loans, are much more informed about foreign debt than about domestic debt. Nevertheless, though the government never faced serious difficulties in rolling over domestic debt, the rising interest costs due to expected inflation have the potential of creating a debt crisis on the domestic front as well.

Recently, the State Bank of Pakistan in its second quarterly report for FY08 (See State Bank of Pakistan, 2008) has pointed out that the growth in outstanding stock of domestic debt has accelerated sharply by 10.6% in the first half of FY08, reflecting an increase in the fiscal deficit, as well as weaker than expected external financing.

### ***Donors' Responsibility***

Along with poor debt management problems within Pakistan, the donor agencies, particularly the IMF, also have their share in aggravating the crisis. Despite all the apparent emphasis of the World Bank and the IMF on poverty and the social sector, Pakistan has experienced adverse trend on both accounts. One of the reasons is that the conditionalities attached to aid packages tend to neutralize the intended outcomes. Most IMF conditionalities, particularly on energy pricing, subsidies and taxation, are based on hardcore neoclassical economics and lack social and human considerations. The primary focus of the conditionalities has been on resource generation by direct fiscal measures irrespective of their effects on capacity of the economy in sustaining the debt burden. The most visible effect of the drive to reduce budget deficit has been a sharp decline in the public sector development expenditure.<sup>7</sup>

The IPPs' example illustrates this point. During the court battle between IPPs and WAPDA, Pakistan was under continuous strain to reach an early settlement and the government opted for the out of court settlement under great pressure. To place further burden on WAPDA, the government was forced to increase prices of petroleum products disproportionately. To bring WAPDA out of financial crisis and to meet other IMF conditionalities, the price of electricity was also increased. The unprecedented increase in energy prices put great financial burden on households, especially the poor and salaried class.

The report of Debt Reduction and Management Committee (Government of Pakistan 2001) points out a number of high-spending projects, such as Motorways, Saindik

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the size of the foreign debt.

<sup>6</sup> See Government of Pakistan (2008a) for more details.

<sup>7</sup> The development expenditure as % of GDP declined steadily during the period of debt crisis from 8.8% in 1990-91 to just 2.1% in 2000-01. Later on as the debt burden eased off, it again started increasing till it reached 4.4% in 2006-07.

copper, Tamir-i-Watan, Left Bank Outfall Drain, National Drainage Program, Chashma Right Bank Canal Project and Social Action Program, that failed to produce the desired impacts. The report echoes the widespread complaints about the dominant role of foreign consultants and donor agencies in ill-conceived projects.

Surely the donor agencies stand to share the blame for the state of affairs in Pakistan, as pointed out in Hasan (1999); the capability of government agencies in putting forward viable projects and arguing against unreasonable IMF conditionalities has also been seriously lacking.

### **2.3 Debt Management Initiatives**

Since the emergence of debt crisis in the early 1990s, various initiatives have been taken to formulate debt management and reduction strategy. However, except for the recent attempt by Debt Reduction and Management Committee (Government of Pakistan 2001), the outcomes of the task forces have been disappointing. For example the famous National Debt Retirement Program launched in February 1997 could not produce any worthwhile impact, though it resulted in accumulating an additional US \$142.6 million domestic debt in the form of US dollar bonds.

The Debt Reduction and Management Committee (headed by Parvez Hasan) was assigned the task of assessing the debt situation, reviewing the existing framework of debt contracting and management, suggesting medium and long-term goals and strategies and specifying institutional reforms for debt management.

The Committee produced its report in March 2001 (Government of Pakistan 2001), which brought into focus the major weaknesses in debt management and measurement practices and proposed some reforms in the system. The report recommended a number of qualitative and quantitative measures in order to achieve the objectives. The solution strategy emphasizes on the following intermediate objectives.

- i) Improvement in saving rate in the public sector
- ii) Improvement in total factor productivity in the public sector with improved efficiency, better governance and downsizing
- iii) Improvement in productivity in the private sector, especially agriculture, manufacturing, and information technology
- iv) Improvement in the growth rate of real GDP
- v) Privatization of public assets and public services in education and health and downsizing
- vi) Confidence building and promotion of economic stability
- vii) Medium term debt rescheduling in order to avoid immediate risk of default



viii) Monitoring of debt situation and implementation of debt reduction strategy

The report also recognized that the debt problem cannot be studied in isolation from major components of the overall macroeconomic picture and emphasized internal consistency, coherence and sustainability of the policy framework. By-and-large most of the components of solution strategy made good economic sense, though it was not clear from the report as to how the debt problem is integrated with other parts of the economic picture in quantitative terms and incorporated in the policy framework.

In response to the committee's recommendations, the government agreed to set up a Debt Policy Coordination Office (DPCO) in the Ministry of Finance to coordinate debt management issues across the concerned agencies and to offer economic and financial advice. Although there were initial indications that some of the measures proposed in the report would be implemented, the proposal was later put in the cold storage due to inter-departmental tussles.

#### **2.4 Recapitulation**

Debt management in Pakistan is part and parcel of the larger problem of governance inefficiency. It was hoped that after the debt crisis of the 1990s, government would focus on the issue and change this trend. However, it appears that the quality of governance has deteriorated even further. Institutional building is still a far cry. The usual practice to address this problem is to create duplicate institutions, while leaving the existing institutions to rot and decay. Highly paid part-time consultants with little threat of accountability are in the forefront of the decision making process, while the regular employees of the prime institutions are confined to file work. It appears that new governments do not bother to learn lessons from past failures as far as general management in the public sector is concerned. The increased reliance on the project and program mode instead of building capacity for improved regular functioning of federal ministries and provincial departments has further exacerbated the inefficiencies in public sector delivery.

Within the context of debt management, Pakistan remained under severe pressure to show progress, and successive governments showed desperation for an early solution. The success of current initiative to manage Pakistan's debt hangs on the ability of debt managers to acquire autonomy and separation from the bureaucratic mindset prevalent in government departments. A number of earlier initiatives on debt management and other issues have failed after much publicized determination to break the ice. It is quite common that commissions, committees, task forces, etc. set up to fight a certain problem end up with zero outcomes. Being part of the old system and even part of the problem itself, they inflict unwarranted financial and management burden to the government. Weak background analysis, lack of political wills, moral corruption and bureaucratic inertia are the most common hurdles.

Lessons can be learnt from the improved outlook at the SBP that owes much to three indigenous factors besides ADB technical support. These are: induction of suitably qualified persons at the top level; appointments on merit from top to bottom at attractive (but not lucrative) salaries; and the ability to maintain autonomy to some



extent. But the most important factor that separates the SBP from other government institutions is the well-planned reform agenda implemented with patience and determination, which did not change drastically with the change of governors. There is no good substitute for a laid-down reform process that is allowed to take its natural course, but is followed with determination. Quick-fix remedies are often deceptive because inefficiency in government departments is deep rooted.

The question of governance inefficiency is well known and documented even in the reports of the government task forces, but the vested interests are always there to disrupt implementation of the otherwise worthy proposals. The greatest fear that has been raised in the report of the Debt Reduction and Management Committee (Government of Pakistan 2001) was that its findings and recommendations would never reach the implementation stage, and there are strong signs to confirm that fear. It is also worth noting that the donor agencies have time and again praised the policy framework of various governments, while the major source of disagreement has been on the implementation side. The point often missed is that slippage in targets occurs not as much due to shirking on part of governments as due to institutional weaknesses. The question of governance and institutional building needs to be brought under direct focus as intermediate targets with the ultimate aim to achieve the prescribed economic goals.

There is urgent need to relieve off the government from such economic activities where the private sector can perform well. The financial, especially the banking, manufacturing, energy and services sectors need to be privatized on urgent basis. Privatization is required not as much to use the proceeds for debt retirement as to improve economic efficiency and thereby to curtail the need for further borrowing. The debt problem needs to be linked to the question of sustainability rather than size. In other words the focus needs to be placed on debt management rather than debt retirement.

### **3. Models of Saving and Budget Allocation**

While the estimation of the explicit current cost of debt in terms of debt servicing is straightforward, it is not easy to determine the real cost that an indebted country or government has to bear as a result of resource reallocation necessary to service the outstanding debt. The first approach, which uses the conventional measures in terms of debt servicing cost in relation to government revenues, government expenditure and foreign exchange earnings, has been studied extensively for Pakistan.<sup>8</sup> In this paper we follow the second approach, which considers the consequences of debt servicing costs on resource allocation, in particular between consumption and savings and between development and non-development activities within the public sector.

Let us first consider savings, the inadequacy of which is the root cause of the debt problem. The national savings are defined as domestic saving plus net factor income from abroad in the national accounts. However, for the purpose of economic analysis one has to consider how national savings are generated rather than how they are

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<sup>8</sup> See, for example, Ahmad (2001).



accounted by statisticians. Since a portion of net factor income from abroad is consumed by the households, the savings from domestic income are underestimated in national accounts. The same is true in case of private and public savings. To understand the underlying saving behavior in Pakistan, we propose the following saving functions for the private and public sectors.

$$S_p = a_1 + a_2 (Y-T) + a_3 U + a_4 FRP \quad (1)$$

$$S_g = b_1 + b_2 T + b_3 FRG + b_4 DRG \quad (2)$$

where  $S_p$ ,  $S_g$ ,  $Y$ ,  $T$ ,  $U$ ,  $FRP$ ,  $FRG$  and  $DRG$  denote private and public savings, GDP, tax plus non-tax revenue/payment, private unrequited transfers from abroad, net foreign resource flows to private and public sectors and net resource flow from private to public sector respectively.

It is expected that private savings are positively related to disposable income and unrequited transfers and the marginal saving rate out of unrequited transfers is higher than the one out of domestic disposable income. Furthermore, foreign resource flow to the private sector is expected to adversely affect private savings. Likewise, savings in the public sector are most likely to be directly related to government revenue and inversely related to foreign and domestic resource flows to the public sector.

Moving now to budget allocation in the public sector, there are many ways to classify government expenditure. Based on the type of data available, we consider the allocation between current and development expenditures. The expenditure on interest payment on public debt, which is a part of current expenditure, is given as it depends on the maturity structure of debt, and the remaining balance is allocated to development and non-interest current expenditures. We denote non-interest total, current and development expenditures, government revenue, and net domestic and foreign resource flows to public sector by  $G$ ,  $CE$ ,  $DE$ ,  $T$ ,  $DRG$ , and  $FRG$  respectively, where  $DRG$  and  $FRG$  are defined as net domestic and foreign borrowing minus interest payments on the respective outstanding debts. The government budget constraint can be written as

$$G = CE + DE = T + DRG + FRG \quad (3)$$

Although (in an accounting sense) current and development expenditures met from revenue and capital receipts are specified separately, this allocation is artificial because the actual allocation is generally affected by the process with which government budget is raised. For example, borrowing may force the government to cut its development expenditure, while on paper most of the development expenditure might be financed from the borrowed funds. Furthermore, since external finance is in terms of foreign currency, it can also affect the allocation depending upon the foreign exchange requirements of current and development expenditures. In order to put a behavioral content in the government budget model, we postulate that the allocation of non-interest government expenditure to development and current expenditures depends on the composition of government resources and the burden of debt, measured by debt servicing (denoted  $DS$ ) to government revenue ratio. That is:

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$$DE/G = \alpha_1 T/G + \beta_1 DRG/G + \delta_1 FRG/G + \phi_1 DS/T + \varepsilon_1 \quad (4)$$

$$CE/G = \alpha_2 T/G + \beta_2 DRG/G + \delta_2 FRG/G + \phi_2 DS/T + \varepsilon_2 \quad (5)$$

It follows from the budget constraint (3) that the regression parameters and random error terms satisfy the conditions:

$$\alpha_1 + \alpha_2 = \beta_1 + \beta_2 = \delta_1 + \delta_2 = 1, \phi_1 + \phi_2 = 0, \varepsilon_1 + \varepsilon_2 = 0 \quad (6)$$

The budget constraint (3) also implies that the first three variables on right hand side of equations (4&5) cannot move freely. For example, an increase in the T/G ratio must be offset by appropriate changes in DRG/G, FRG/G or both. There are various ways to impose the government budget constraint on the behavioral equations, depending on the type of changes in the government resources that are to be analyzed. It is quite straightforward to see that the above relationships can be written alternatively as:

$$DE/G = \alpha_1 + (\beta_1 - \alpha_1) DRG/G + (\delta_1 - \alpha_1) FRG/G + \phi_1 DS/T + \varepsilon_1 \quad (4a)$$

$$CE/G = \alpha_2 + (\beta_2 - \alpha_2) DRG/G + (\delta_2 - \alpha_2) FRG/G + \phi_2 DS/T + \varepsilon_2 \quad (5a)$$

$$DE/G = (\alpha_1 - \beta_1) T/G + \beta_1 + (\delta_1 - \beta_1) FRG/G + \phi_1 DS/T + \varepsilon_1 \quad (4b)$$

$$CE/G = (\alpha_2 - \beta_2) T/G + \beta_2 + (\delta_2 - \beta_2) FRG/G + \phi_2 DS/T + \varepsilon_2 \quad (5b)$$

$$DE/G = (\alpha_1 - \delta_1) T/G + (\beta_1 - \delta_1) DRG/G + \delta_1 + \phi_1 DS/T + \varepsilon_1 \quad (4c)$$

$$CE/G = (\alpha_2 - \delta_2) T/G + (\beta_2 - \delta_2) DRG/G + \delta_2 + \phi_2 DS/T + \varepsilon_2 \quad (5c)$$

It follows from above that  $\alpha_1$  and  $\alpha_2$  measure the proportions of government non-interest expenditure allocated to development and current expenditures when the net domestic and foreign resource flows, and debt servicing cost are zero. This obviously means that the government budget is in balance, interest payments on debt for the current period are rescheduled, and debt volumes are constant.

The parameters  $\beta_1$  and  $\beta_2$  ( $\delta_1$  and  $\delta_2$ ) measure the proportions of government non-interest expenditure allocated to development and current expenditures when all the budget is financed by net domestic (foreign) resource flow; tax revenue, net foreign (domestic) resource flow, where debt servicing costs are zero. This is possible if all debt servicing (domestic as well as foreign) for the current period is rescheduled and net foreign (domestic) borrowing is zero.

The above scenarios are unrealistic in practice. A better interpretation is based on the differences in parameters  $\alpha_i - \beta_i$ ,  $\alpha_i - \delta_i$ ,  $\beta_i - \delta_i$ , etc. Thus, for example,  $\alpha_1 - \beta_1$  and  $\alpha_2 - \beta_2$  measure the sensitivity of budget allocation between development and non-interest current expenditures to replacement of net domestic resource flow by an equal amount of government revenue. The other combinations listed in (4b) to (5c) can be interpreted likewise.



#### **4. Empirical Results**

The data on all the variables involved in the above model are taken from Government of Pakistan (Economic Surveys) and State Bank of Pakistan (Annual Reports). The saving functions and the model of budget allocation are estimated using annual data for the period 1977-78 to 2005-06, for which consistent series are available on each variable.<sup>9</sup> All variables are measured in billion rupees at constant prices of 1990-91. For the estimation, each of the models is taken as a set of seemingly unrelated equations.<sup>10</sup>

##### ***Saving Behavior***

The estimates of saving functions are shown in Table 1. Before discussing these results, it is important to note that the data on savings in Pakistan are not much reliable. The figures given in different sources vary quite substantially.<sup>11</sup> Thus one should not be too confident about the level of statistical confidence shown by the computed statistics, and the results can at most be seen in qualitative, rather than quantitative, terms. Nevertheless some interesting results follow from the estimates.

If the marginal propensity of public consumption from tax revenue is taken into account the net impact of each additional rupee of tax on national saving comes out to be 0.4 rupee. Thus the evidence supports the proposition that an increase in taxes significantly contributes to resource mobilization, even though any additional tax does not fully translate into additional savings. It is further to be noted that Pakistan's ability to reduce resource deficiency by imposing additional taxes is also constrained by the slowing down of economic activity that is expected to result from the additional tax burden. The results also support the hypothesis that the marginal private saving rate out of unrequited transfers from abroad is higher than that out of domestic disposable income. This result is quite plausible because studies show that investment activity is much higher among households receiving remittances as compared to an average household (e.g. Parveen 1991 and Hafeez 2000). One of the reasons for this trend is that in many cases migrants have a lifetime opportunity to earn large income for a contract period overseas or they do not want to remain detached from their families (back at home) beyond a certain period of time. Therefore, they have to count their temporary large incomes in lifecycle context.

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<sup>9</sup> For time series analysis this is a small sample but the extent of multicollinearity in the budget allocation models is reduced as all the variables are measured in terms of ratios. In the saving functions also there is no strong evidence of multicollinearity.

<sup>10</sup> The parameter estimates of the budget allocation model can be obtained using any one of the three specifications [4a and 5a; 4b and 5b; or 4c and 5c] to yield identical results. Furthermore, parametric restrictions imposed by the government budget constraint imply that parameters of any one equation can be derived from the estimated parameters of the other equations. In any case the results of all the parameters of interest are presented in the results table along with their t-statistics.

<sup>11</sup> This is not true for all type of data. In particular, the debt statistics are quite reliable except that the definitions of debt could be debated. This is because the record keeping at the Economic Affairs Division, which maintains all data on debt, and the SBP is much better than at the other government departments.

**Table 1: Estimates of Saving Functions  
(1977-78 to 2005-06)**

| Variable (Parameter)                            | Private Savings     | Public Savings     |
|---|---------------------|--------------------|
| Intercept                                       | -33.105<br>(-2.20*) | -10.305<br>-0.89   |
| GDP   | 0.171<br>(10.48*)   |                    |
| Tax plus non-tax revenue/payment                | 0.171<br>(-10.48*)  | 0.57<br>(10.51*)   |
| Private unrequited transfers                    | 0.482<br>(1.70**)   |                    |
| Net foreign resource flow to private sector     | -0.445<br>(-2.73*)  |                    |
| Net foreign resource flow to public sector      |                     | -0.636<br>(-1.54)  |
| Net resource flow from private to public sector |                     | -0.815<br>(-5.03*) |
| R2  | 0.883               | 0.929              |
| DW  | 2.43                | 2.10               |
| Mean  | 117.24              | 70.94              |

*Note:* The t-statistics significant at 5% and 10% levels are marked \* and \*\* respectively.

The net foreign resource flows to the private and public sectors are found to crowd-out private and public savings respectively. Furthermore, public savings are also crowded-out by resource flow from private to public sector. This obviously means that the public domestic and foreign borrowing and private foreign borrowing adversely affect domestic saving effort and the loss in savings is quite large.

### ***Government Budget Allocation***

The parameter estimates of government budget allocation model are presented in Table 2. As can be seen, the overall fit of the model is good and there is no strong incidence of autocorrelation. The results show that if all the government expenditure is met from revenues, and there is no burden of debt servicing, the proportion of development and current expenditures in the budget will be 42.3% and 57.7% respectively. Comparing these proportions with the actual sample means, which are 31.6% and 68.4% respectively, one can see that the expenditure allocated to development purposes would be higher under the hypothetical scenario, and the difference is statistically significant.<sup>12</sup> In case all government expenditure is met from domestic resources or, in particular, foreign resource flow and debt servicing is zero, the expenditure allocated to development will be even higher. Since in all these cases debt servicing is assumed to be zero, it follows obviously that the burden of debt servicing is disproportionately

<sup>12</sup> The t-statistic for the difference between the projected proportion of development current expenditure and the corresponding mean proportion in the sample is found to be 2.36, which is significant at 5% level.



higher on development expenditure. This pattern is quite clear from the sign and significance of the coefficient of debt servicing, which indicates that, for example, an increase in debt servicing by 10% of government revenue would shrink the share of development expenditure by 3.07 percent of the total government expenditure.

**Table 2: Estimate of the Government Budget Allocation Model  
(1977-78 to 2005-06)**

| <i>Variable (Parameter)</i>  | <i>Development<br/>Expenditure</i> | <i>Current<br/>Expenditure</i> |
|--|------------------------------------|--------------------------------|
| Government revenue to government expenditure ratio ( $\alpha_i$ )        | 0.423<br>(9.31*)                   | 0.577<br>(12.69*)              |
| Net domestic resource flow to government expenditure ratio ( $\beta_i$ ) | 0.479<br>(6.81*)                   | 0.521<br>(7.40*)               |
| Net foreign resource flow to government expenditure ratio ( $\delta_i$ ) | 0.789<br>(4.60*)                   | 0.211<br>(-1.23)               |
| Debt servicing to government revenue ratio ( $\phi_i$ )                  | -0.307<br>(-3.83*)                 | 0.307<br>(3.83*)               |
| $\beta_i - \alpha_i$   | 0.056<br>(-0.51)                   | -0.056<br>(-0.51*)             |
| $\delta_i - \alpha_i$  | 0.366<br>(1.85**)                  | -0.366<br>(-1.85**)            |
| $\alpha_i - \beta_i$   | -0.056<br>(-0.51)                  | 0.056<br>(0.51)                |
| $\delta_i - \beta_i$   | 0.310<br>(2.02**)                  | -0.310<br>(-2.02**)            |
| $\alpha_i - \delta_i$  | -0.366<br>(-1.85**)                | 0.366<br>(1.85**)              |
| $\beta_i - \delta_i$   | -0.310<br>(-2.02**)                | 0.310<br>(2.02**)              |
| $R^2$  | 0.792                              | 0.987                          |
| DW statistic   | 2.05                               | 2.05                           |
| Mean dependent variable  | 0.316                              | 0.684                          |

**Note:** The t-statistics significant at 5% and 10% levels are marked \* and \*\* respectively.

Turning to the more interesting part of the analysis, the results indicate that replacing domestic or foreign resource flow by government revenue would shrink government expenditure meant for development. According to the parameter estimates if, for example, domestic or foreign resource flow (equal to 10% of non-interest expenditure) is replaced by additional government revenue, the development expenditure will decrease by 0.56% and 3.66% of non-interest expenditure respectively and the latter effect is significant at 5% level. The results further show that replacing foreign by

domestic resource flow by 10% of non-interest government expenditure will squeeze development expenditure by 3.1% of non-interest expenditure.

There are three important basic results that come out of the statistical analysis. First, the resource allocation between development and non-development activities does not depend crucially on whether government expenditure is financed by revenues or domestic borrowing. Second, the resource allocation is more towards development activity when the government expenditure is financed by foreign resource flow rather than revenue or domestic resource flow. Third, the burden of debt servicing falls disproportionately on development activity.

## **5. Conclusion**

Several conclusions follow from the above analysis. The study finds evidence that the net resource flows to the public sector both from abroad and domestic private sector tend to crowd out savings in the public sector. Likewise, private savings are crowded out by net foreign resource flows to the private sector. However, the perception that Pakistan has reached the current state because most of its borrowing is used for consumption rather than development activity, and therefore, aid funding is often misused, does not find support from the data. Although the development activity in Pakistan had shrunk sharply during the 1990s, but this was due to twin factors, namely a shrinking foreign resource flow and a rising debt servicing cost. The share of development expenditure out of the non-interest budget has declined from 44% in 1979-80 to 32.4% in 1989-90 and to 20.7% in 1999-00. The net foreign resource flows as fraction of non-interest government expenditure during the same years were 9.23%, 6.65% and 4.39%, while the debt servicing as a percentage of government revenue was 26.7%, 41% and 69.8% respectively. It may also be noted that the net foreign resource flow as a percentage of non-interest government expenditure varied in the narrow range of -0.23% and 2.23% between 1993-94 and 1997-98. The increase in the later years till 2001-02 was due to debt rescheduling, as Pakistan was unable to service its foreign debt.

Although there are many instances of misappropriation of public resources, unfortunately such instances somehow overshadow the positive side. Pakistan is a unique country that has achieved respectable economic growth despite poor social indicators such as education and health. Foreign aid has played a positive role in its economic growth as is evident from high GDP growth figures during the 1960s, early 1980s and mid 2000s. During the 1960s, Pakistan borrowed at ease since it was a newly born country, had ambitious development plans and above all, had no immediate pressure of debt servicing. The debt position in the 1980s remained mostly under control due to generous American aid as a reward for Pakistan's logistic support in the Afghan war against the then Soviet Union. The debt crisis of the 1990s got reversed because of the events that unfolded after the September 11 event, especially Pakistan's active role in the fight against terrorism.

The major economic hurdle for Pakistan to come out of the crisis was its inability to service the outstanding debt and the drying-up of net resource inflow from abroad, in



addition to shrinking of foreign investment and workers' remittances. Although the institutional weaknesses, public sector inefficiency and corruption cannot be ignored, these have to be addressed in the overall context of management in public sector rather than economic management alone, let alone debt management. The poor record of debt management in Pakistan is the outcome of weak institutions, and addressing this issue has to become a larger objective. Besides, these issues can be tied with any debt package.

Another conclusion that follows from our statistical results is that governments in Pakistan have not bothered to use domestically borrowed funds for development activity despite the fact that the volume of domestic debt is almost equal to the volume of foreign debt. A plausible explanation for this lapse is as follows. The sources of domestic borrowing in Pakistan are mostly individuals or financial institutions who lend voluntarily in return for high interest rates and who are not organized to impose preconditions for lending. On the other hand, most of foreign borrowing is directly or indirectly linked to international institutions and their motive for lending is not interest earning. In order to justify further lending, Pakistan has to satisfy the lenders that the borrowed funds are used productively.

Yet another conclusion is that the non-interest current expenditure in Pakistan is mostly inelastic, with about 45% allocated to defense and 25% to administration. While there is general reluctance to squeeze the share of defense expenditure unless armed forces voluntarily offer a cut, the administrative expenditure is by nature inelastic, keeping in view the rising needs of population. Pay and salaries of government employees and the expenditure on the agencies responsible for law and order cannot be reduced significantly unless a large-scale restructuring is done. The salaries of government employees are already considered inadequate in the light of current inflation and the law and order situation demands even further spending. Other current expenditures on subsidies and social, economic and community services are also meager. Thus governments have little option but to cut development expenditure to make room for debt servicing.

To recapitulate, the conclusions of our study give a loud and clear message to the policy makers to take all necessary steps for establishing fiscal discipline with all its contingent requirements relating to debt and expenditure management in order to effectively confront the multiple macroeconomic imbalances and social challenges that Pakistan is facing today.

## References

- Ahmad, Eatzaz (1996) "Capital flows and national debt", *Pakistan Development Review*, 35(4): 943-957
- Ahmad, Eatzaz (1997) "Dynamics of foreign and domestic borrowing and debt", *Journal of Economic Cooperation*, 18(3): p. 71-113
- Ahmad, Eatzaz and Ayaz Ahmed (1998) "A simulation analysis of debt problem in Pakistan", *Pakistan Development Review*, 37(4): 356-376
- Ahmad, Eatzaz (1999) "Retiring public debt through privatization" *Pakistan Journal of Applied Economics*, 15(1,2): 1-18
- Ahmad, E. (2000), *Getting out of the debt trap: Simulating debt retirement strategies for Pakistan*, Occasional Paper 12, Lead-Pakistan, Islamabad
- Ahmad, E. (2001) *Understanding the debt situation in Pakistan*, North-South Institute, Ottawa, Canada
- Government of Pakistan (2001) *A Debt Burden Reduction and Management Strategy: Summary Report*, Debt Reduction and Management Committee, Finance Division, Islamabad
- Government of Pakistan (2008a) *Debt Policy Statement 2007-08*, Debt Policy Coordination Office, Ministry of Finance, Islamabad
- Government of Pakistan, *Economic Survey* (various Issues), Economic Adviser's Wing, Islamabad
- Government of Pakistan (2008b) *Statistical Supplement: Economic Survey 2006-07*, Finance Division, Economic Advisor's Wing, Islamabad
- Hafeez, A. (2000), *Determinants of female labor force participation decision for educated married women: A Case Study of District Mandi Bhaudin*, M. Phil. thesis, Department of Economics, Quaid-i-Azam University Islamabad
- Hasan, P. (1999), "Pakistan's debt problem: Its changing nature and growing gravity", *Pakistan Development Review*, 38(4): 435-465
- Parveen (1991), *The effects of remittances on economic activity in Pakistan*, M. Sc. thesis, Department of Economics, Quaid-i-Azam University Islamabad
- State Bank of Pakistan *Annual Report* (Various Issues), State Bank of Pakistan, Karachi
- State Bank of Pakistan (2008) *The State of Pakistan's Economy: Second Quarterly Report for FY08*, State Bank of Pakistan, Karachi



# The Debt Problem of Pakistan: What can we do?

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**Abstract:** *Pakistan is passing through a difficult phase in its history. The nation is facing acute crises on economic and political fronts. The governments are compelled to resort to borrowing so as to finance fiscal and trade deficits. The persistence of the twin deficits have manifested in the form of large stacks of internal and external debt overtime. This piling up is now posing severe problems for the nation. The problem of fiscal imbalance needs immediate attention and calls for a reappraisal of the prevailing tax and expenditure structure. Likewise, there is need for a structural change in the foreign trade sector, which is however possible only in the long run.*

*The present study looks into the matter and attempts to explore an economically optimal and socially feasible set of fiscal measures to address the debt problem. The study is based on an earlier work when a computable general equilibrium model was specified for Pakistan economy. The data for the fiscal year 1989-90 had to serve as the benchmark. Several fiscal options had been tested in terms of the key micro and macro indicators. A proper mix of the tax and expenditure policies was pinpointed. The said model is used here for dynamic analysis of the fiscal structure and to compare the ground realities of the economy with the optimal portrait. It will be easy then to see as to where do we stand and how can we break the bands of servitude.*

## 1. Introduction

The Muslim Ummah is trapped in a very difficult situation these days. Palestine, Kashmir, Iraq and Afghanistan continue to be the burning points on the globe. Pakistan is directly involved with the issue of Kashmir since the first day of its independence and with the Afghan problem from 1980's onwards. The 9/11 event has drastically changed the global scenario. The social, economic and political impacts of this event on Pakistan are beyond measure. The nation is compelled to play the role of the so called frontline state against the imposed terrorism. The domestic law and order situation is deteriorating day by day. The government has to spend a sizeable portion of its scarce resources not only on defense but also on the internal security. There is a persistent deficit on the revenue account of the Federal budget over the past three decades. Same is the case with the revenue account of the balance of payments. The governments, whether democratic or authoritative, have to resort to money creation and excessive borrowing to finance the current expenditure even.

This prolonged practice has born thorny twigs and bitter fruits by now. Today we own large stacks of debt, both external and internal. This means excessive burden on the exchequer for debt servicing. Allocation for the social sector development has been reduced considerably, as compared to the 1980's position. The burden on the poor masses in terms of high inflation has increased overtime. The sovereignty of the country is at the verge of

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threat and future of the economy is exclusively at the mercy of donor agencies. The former Prime minister, who was also the finance manager of the country during the past Military-led regime, had once remarked:

*"Our basic problem emanates from the fact that government's revenues from tax and non-tax sources are significantly less than its expenditure. To meet excess expenditure, government resorts to borrowing. In the beginning, this was a simple process, as borrowing was limited only to meet part of development expenditure. However, gradually, as our investments failed to give good returns and our efforts to mobilize additional revenues remained dormant, this process was extended to meeting the non-development expenditure from borrowings. Today debt servicing and salaries of government servants are paid out of borrowed funds. It is common sense that such a process cannot last for long. Sooner or later, it would become unsustainable leading to adverse consequences, unless of course it is reversed. A similar story can be narrated on the side of country's balance of payments. Since our exports of goods and services are significantly less than our imports, we need funds to finance excess imports. Here, because funds are required in foreign exchange, borrowing has to be done from overseas institutions. Initially, such borrowings were restricted to investment projects, but gradually here too, neither our investments yielded good returns nor our exports rose to the desired level, and consequently we ended up borrowing to make payments for debt servicing. Unlike the case of domestic borrowing, here the debt burden impinges on our sovereignty also as lenders limit our policy options"<sup>2</sup>.*

The above statement was very clear in identifying the important factors that led to the awkward scenario in 2001-02 that is prevailing still in 2007-08. These include the instability of our political system and corruption of the elite class, the widespread tax evasion practices and inefficiency of the tax collection machinery, poor governance and inappropriate planning, and so on and so forth. However, despite recognition, the curative measures adopted by the government during the past regime seem to be impotent<sup>3</sup>. Not much can be expected from the new government to cure these ailments seriously. The stack of public debt has grown overtime to an alarming volume; it surpassed our GDP by 2001-02 and its servicing absorbed more than half of the Federal revenues.

This situation can be easily explained by referring to the basic macroeconomic identity:  $(I - S) + (G - T) = (M - X)$ . The twin domestic deficits, i.e. the investment-saving gap and the fiscal deficit collectively lead to deficit on current account of BOP. In a nutshell, the country faces two basic problems that have manifested into a third crucial issue. These are:

- i. *Persistent deficit on the revenue account of the Federal Budget.*
- ii. *Persistent deficit on the current account of the Balance of Payments.*
- iii. *Large stakes of Internal and external debt accumulated overtime.*

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2 Mr. Shaukat Aziz, Minister for Finance and Economic Affairs (later on the Prime Minister)— Budget Speech 2001-2002, Government of Pakistan, Finance Division, Islamabad.

3 The military administration started a tax survey in 2001-02 to fetch revenues from properties and wealth/assets. The initial response was encouraging, however the final outcome could not be known since the survey was stopped due to political reasons.



These problems are tightly interwoven and reinforcing one another, leading to an explosive situation. The present study is restricted to a detailed exploration of the first problem, i.e. deficit on the revenue account of the budget, which can be tackled in the medium run. In an earlier work (Yasin-2003), we attempted to search for an optimal fiscal package, using an applied general equilibrium model. We use the said model for dynamic analysis of the fiscal structure of Pakistan. The rationale is obvious, since the root cause of the prevailing odd picture is primarily an imbalance between public revenues and expenditure. The second issue, namely the trade deficit, is a matter of long run planning and needs serious efforts towards restructuring of the economy.

The study is organized as follows. Section-2 portrays the severity of the problem. Here we discuss some of the conventional fiscal packages that seem to be appropriate in handling the issue. The next section presents the important features of the CGE model employed, a brief description of parameters and the data used, and ingredients of an optimal fiscal package explored. Section-4 discusses the optimal fiscal package. The model is then used for dynamic analysis and we discuss the comparative performance of the economy under various regimes in Section-5. The final section is meant for conclusions as usual.

## **2. The Problem of Deficit and Debt**

We highlight the intensity of the twin problems and the possible strategies as under:

### **2.1 The Fiscal Position overtime**

The situation is depicted below that hardly needs any comments. The deficit on revenue account is the crucial problem. Fiscal position is awkward except for 2003-04, 2004-05 and 2005-06.

**Table-2.I: Consolidated Fiscal Position (Rs. million) – Historical trend.**

| Fiscal Year | Interest Payments | Current Expend. | Dev. Expend | Total Expend. | Tax Revenues | Total Revenues | Balance Rev. Acct. | Deficit (Overall) |
|-------------|-------------------|-----------------|-------------|---------------|--------------|----------------|--------------------|-------------------|
| 1990-91     | 50017             | 195676          | 65293       | 260970        | 129640       | 171777         | - 23899            | 89193             |
| 1991-92     | 67473             | 230120          | 91354       | 321474        | 164308       | 231503         | - 1383             | 89971             |
| 1992-93     | 81947             | 272457          | 76196       | 348653        | 178391       | 241128         | - 32929            | 107525            |
| 1993-94     | 101923            | 293460          | 71453       | 364913        | 208410       | 272734         | - 22726            | 92179             |
| 1994-95     | 104128            | 345941          | 82343       | 428284        | 257892       | 322932         | - 28009            | 105352            |
| 1995-96     | 135741            | 423866          | 94233       | 518099        | 305580       | 380260         | - 55606            | 137839            |
| 1996-97     | 162146            | 455411          | 85508       | 540919        | 324641       | 384331         | - 71080            | 156588            |
| 1997-98     | 202356            | 529919          | 104095      | 634014        | 354754       | 429454         | -100465            | 204560            |
| 1998-99     | 220100            | 547279          | 100499      | 647778        | 390726       | 468601         | - 78678            | 179177            |
| 1999-00     | 273910            | 642935          | 100697      | 743632        | 405824       | 536832         | -113900            | 206800            |
| 2000-01     | 249252            | 645700          | 72200       | 717900        | 441600       | 553000         | - 92700            | 180500            |
| 2001-02     | 273894            | 700200          | 126050      | 826250        | 478100       | 624100         | - 76100            | 202150            |
| 2002-03     | 235304            | 791700          | 106500      | 898200        | 555800       | 720800         | - 70900            | 177400            |
| 2003-04     | 226256            | 775000          | 181000      | 956000        | 611000       | 794000         | + 19000            | 162000            |
| 2004-05     | 219744            | 864500          | 252481      | 1116981       | 659410       | 900014         | + 35514            | 216967            |
| 2005-06     | 260021            | 1034700         | 367200      | 1401900       | 803700       | 1076600        | + 41900            | 325300            |
| 2006-07     | 387119            | 1375345         | 424623      | 1799968       | 889685       | 1297957        | - 77388            | 502011            |

Source: Economic Surveys and Annual Reports of SBP- various issues.

## 2.2 The Current Account Balance

Pakistan faces a structural deficit on trade balance. Private transfers, particularly the remittances of overseas Pakistanis contribute significantly in covering the gap. The situation is depicted below, which shows a persistent deficit on the current account except for three years: 2001-04. During this period, some improvement was recorded in exports along with a significant increase in unrequited private transfers. The latter may be attributed to restrictive actions taken by the State Bank of Pakistan supported by the international agencies in discouraging transfers through Hundi channels.

**Table-2.2: Current Account Balance (\$ Million)- Historical trend.**

| Year    | Trade Balance<br>(Exports-Imports) | Services<br>Invisible<br>Item | Private<br>Transfers<br>(Remittances) | Current Account<br>Balance |
|---------|------------------------------------|-------------------------------|---------------------------------------|----------------------------|
| 1990-91 | - 2483 ( 5902- 8385)               | - 1790                        | 2102 (1848)                           | - 1271                     |
| 1991-92 | - 2236 ( 6762- 8998)               | - 2224                        | 3114 (1468)                           | - 1346                     |
| 1992-93 | - 3267 ( 6782-10049)               | - 2748                        | 2327 (1562)                           | - 3688                     |
| 1993-94 | - 2000 ( 6685- 8665)               | - 2355                        | 2390 (1446)                           | - 1965                     |
| 1994-95 | - 2537 ( 7759-10296)               | - 2384                        | 2437 (1866)                           | - 2484                     |
| 1995-96 | - 3704 ( 8311-12015)               | - 3249                        | 2378 (1461)                           | - 4575                     |
| 1996-97 | - 3145 ( 8096-11241)               | - 3659                        | 2958 (1409)                           | - 3846                     |
| 1997-98 | - 1867 ( 8434-10301)               | - 3264                        | 3210 (1490)                           | - 1921                     |
| 1998-99 | - 2085 ( 7528- 9613)               | - 2618                        | 2274 (1060)                           | - 2429                     |
| 1999-00 | - 1412 ( 8190- 9602)               | - 2794                        | 3063 ( 983)                           | - 1143                     |
| 2000-01 | - 1269 ( 8933-10202)               | - 3142                        | 3867 (1087)                           | - 513                      |
| 2001-02 | - 294 ( 9140- 9434)                | - 2617                        | 4249 (2389)                           | + 1338                     |
| 2002-03 | - 444 (10889-11333)                | - 2128                        | 5737 (4237)                           | + 3165                     |
| 2003-04 | - 1208 (12396-13604)               | - 3594                        | 6116 (3871)                           | + 1314                     |
| 2004-05 | - 4352 (14401-18753)               | - 5841                        | 8480 (4168)                           | - 1753                     |
| 2005-06 | - 8259 (16388-24647)               | - 7304                        | 9914 (4600)                           | - 5649                     |
| 2006-07 | - 9485 (17119-26614)               | - 7968                        | 10102 (5494)                          | - 7361                     |

*Source:* Compiled from Economic Surveys w.r.t SBP & Economic Affairs Wing of Finance Division.

## 2.3 The Outstanding Debt and Servicing

The severity of the problem can be judged from the following tables. Both domestic and external debt (outstanding) has constantly grown overtime. The severity of the problem was recognized even before the take over by the military in October 1999, when about 37% of the budget was absorbed by debt serving, however the government initiated the work on the preparation of a rule- based fiscal policy in early 2000<sup>4</sup>. The first report on the outstanding debt position was submitted by Finance Ministry along the budget estimates 2000-01 and the second report compiled by DPCO. These are reproduced below:

<sup>4</sup> In this connection, the 'Fiscal Responsibility and Debt Limitation Act (2005)' was passed by the parliament and a separate office was established in the Ministry of Finance to coordinate efforts in required direction.



**Table-2.3: Public Debt- Growing Trends Rs. Billion**

| Item                     | Mid 1980     | Mid 1990     | Mid 1996      | Mid 1999      | Mid 2000      | Mid 2005      |
|--------------------------|--------------|--------------|---------------|---------------|---------------|---------------|
| Domestic Currency Debt   | 59.8(38.5)   | 373.6(46.6)  | 903.9(47.7)   | 1389.3 (46.8) | 1573.6 (49.2) | 2250.8        |
| Foreign Currency Debt    | 95.6(61.5)   | 428.5(53.4)  | 992.0(52.3)   | 1581.9 (53.2) | 1624.5 (50.8) | 1980.3        |
| <b>Total Public Debt</b> | <b>155.4</b> | <b>802.1</b> | <b>1895.9</b> | <b>2971.2</b> | <b>3198.1</b> | <b>4231.1</b> |
| Total Revenues           | 38.3         | 170.3        | 368.3         | 475.0         | 512.6         | 998.4         |
| GDP (mp)                 | 234.2        | 855.9        | 2120.2        | 2938.4        | 3182.8        | 7500.3        |
| Public Debt as % of:     |              |              |               |               |               |               |
| 1. GDP (mp)              | 66.3         | 93.7         | 88.5          | 101.1         | 100.5         | 60.1          |
| 2. Total Revenues        | 403.5        | 470.8        | 514.6         | 625.5         | 623.9         | 395.3         |

Source: Budget estimates for 2001-02, figures in parentheses indicate the percent share in total debt. The last column for Mid-2005 is added by the author.

**Table-2.4: Public Debt- Factual Position during the past Regime Rs. Billion**

| Item                     | 2000-01     | 2001-02     | 2002-03     | 2003-04     | 2003-04     | 2004-05     | 2005-06     | 2006-07     |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Domestic Currency Debt   | 1576        | 1728        | 1715        | 1852        | 1979        | 2152        | 2322        | 2600        |
| Foreign Currency Debt    | 1442        | 1761        | 1795        | 1769        | 1808        | 1913        | 2022        | 2209        |
| <b>Total Public Debt</b> | <b>3018</b> | <b>3489</b> | <b>3510</b> | <b>3621</b> | <b>3787</b> | <b>4064</b> | <b>4343</b> | <b>4810</b> |
| Total Revenues           | 513         | 553         | 624         | 721         | 806         | 900         | 1095        | 1298        |
| GDP (mp)                 | 3826        | 4163        | 4402        | 4823        | 5641        | 6500        | 7594        | 8707        |
| Public Debt as % of:     |             |             |             |             |             |             |             |             |
| 1. GDP (mp)              | 88.9        | 83.8        | 79.7        | 75.1        | 67.1        | 62.5        | 57.2        | 55.2        |
| 2. Total Revenues        | 589         | 631         | 562         | 502         | 470         | 452         | 397         | 371         |

Source: Adopted from Debt Policy Statement 2007-08, DPCO, Ministry of Finance Islamabad (31 Jan 2008).

**Table-2.5: Stock of Debt Outstanding and Debt Servicing (details)**

| Year    | Dom. Debt   | External Debt |             | Total Debt Outstand |        | Debt Servicing (Rs. Million) |         |         |          |
|---------|-------------|---------------|-------------|---------------------|--------|------------------------------|---------|---------|----------|
|         | Rs. Billion | \$ Million    | Rs. Billion | Rs. Billion         | % GDP  | Dom.                         | Extl    | Total   | % Budget |
| 1990-91 | 448.2       | 15,471        | 346.9       | 795.1               | (78.1) | 37,017                       | 36,515  | 73,532  | (19.2)   |
| 1991-92 | 531.5       | 17,361        | 431.3       | 962.8               | (79.5) | 52,850                       | 43,585  | 96,435  | (19.4)   |
| 1992-93 | 615.3       | 19,044        | 494.4       | 1109.7              | (83.0) | 66,003                       | 45,009  | 111,012 | (22.6)   |
| 1993-94 | 711.0       | 20,322        | 613.0       | 1324.0              | (84.5) | 82,281                       | 63,440  | 145,721 | (24.9)   |
| 1994-95 | 807.7       | 22,117        | 682.3       | 1490.0              | (79.6) | 81,941                       | 82,528  | 164,469 | (22.7)   |
| 1995-96 | 920.7       | 22,292        | 748.3       | 1669.0              | (78.3) | 109,166                      | 87,740  | 196,906 | (25.6)   |
| 1996-97 | 1056.1      | 22,509        | 877.7       | 1933.8              | (80.2) | 133,623                      | 129,150 | 262,773 | (29.8)   |
| 1997-98 | 1199.7      | 22,844        | 986.7       | 2186.4              | (82.0) | 173,618                      | 112,699 | 286,317 | (31.9)   |
| 1998-99 | 1452.9      | 25,423        | 1189.5      | 2642.4              | (88.3) | 182,114                      | 160,966 | 343,080 | (34.0)   |
| 1999-00 | 1644.8      | 25,359        | 1312.8      | 2957.6              | (82.4) | 227,303                      | 143,678 | 370,981 | (37.0)   |
| 2000-01 | 1799.0      | 25,608        | 1496.5      | 3295.5              | (89.1) | 203,234                      | 147,160 | 350,394 | (34.7)   |
| 2001-02 | 1774.7      | 27,215        | 1671.7      | 3446.4              | (76.5) | 218,071                      | 125,505 | 343,576 | (33.1)   |
| 2002-03 | 1894.5      | 28,301        | 1655.6      | 3550.1              | (73.0) | 192,478                      | 113,434 | 305,912 | (26.2)   |
| 2003-04 | 2012.2      | 28,900        | 1663.9      | 3676.1              | (65.0) | 195,449                      | 111,165 | 306,614 | (23.7)   |
| 2004-05 | 2177.6      | 30,813        | 1829.0      | 4006.6              | (59.7) | 210,911                      | 95,424  | 306,335 | (19.7)   |
| 2005-06 | 2336.8      | 32,407        | 1939.7      | 4276.5              | (55.4) | 234,465                      | 127,511 | 361,976 | (18.5)   |
| 2006-07 | 2610.2      | 35,182        | 2133.1      | 4743.3              | (53.9) | 310,273                      | 115,811 | 426,084 | (21.5)   |

Source: Finance Division (Debt Management Section)-Some compilation from Economic Surveys, various issues

The detailed position is given in Table-2.5. The trend is shown to be diminishing over time by DPCO in terms of debt/GDP ratio from 2000-01 onwards, although total debt is

increasing. Same is the case with debt servicing, i.e. diminishing trend in terms of sustainability. The burden of servicing on external debt is a little bit relaxed after 2002-03 due to rescheduling.

#### **2.4      *Fiscal Reforms (suggested)***

In the context of circumstances prevailing in Pakistan, the prime objective of stabilization policies should be to fill up the budgetary gap in the short run and to deal with the trade deficit as soon as possible (on war footings). Obviously, a monetary solution is out of question when high inflation and unemployment coexist. It is only a bold and cautiously framed fiscal policy, backed by strong political will and efficient administration that may handle the problem.

As noted above, we had evaluated some conventional fiscal packages in terms of their impacts on micro and macro variables with 1989-90 as base year (when the PPP government of Ms. Bhutto had come into power). Each package was targeted at eliminating fiscal deficit on the 'Revenue Account' at the margin. The objective was to search for an optimal tax-expenditure mix that ought to fulfill the objective and to be the least harmful to the society. The following policy options were considered as the genuine candidates for the analysis<sup>5</sup>:

1. *An increase in the personal income tax.*
2. *An increase in the corporate tax.*
3. *A proportionate increase in the rates of direct taxes.*
4. *A proportionate increase in the rates of commodity taxes.*
5. *An increase in both direct and indirect taxes.*
6. *A cut in the public consumption expenditure.*
7. *A proper mix of tax and expenditure within the above options.*

All the above options have been administered by different governments from time to time in the past, albeit with negligible success. The PPP government (1993-96) introduced a generalized sales tax on commodities and tried to reduce the budget deficit. The PML(N) government (1997-99) followed a restrictive policy towards the size of public sector via privatization and down sizing. The Military-led government (2000-07) strived hard to improve the taxation structure and to get rid of the persistent deficits. However, mere increase in taxation without serious efforts for overhauling the administrative machinery to control corruption and inefficiency, have never been fruitful.

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5 Another option may be to ask the general public to join hands and help the situation. The previous ML(N) government, appealed the nation in March 1997 for donations to retire the debts. The citizen, particularly the poor and middle- income groups, surely responded with enthusiasm. Still further, it is possible to ask the 'Friends' and international agencies for help and some relaxation, to write off some loans, or to reduce the rate of interest or to relax the maturity time of repayment. All the governments, past and present, authoritative and democratic, have tested all these options.



### **3. Model, Data and Parameters**

We reproduce and briefly discuss the model specification (Yasin: 2000, 2001), the data consideration and parameter estimates in the following lines.

#### **3.1 The Model**

The computable general equilibrium (CGE) simulation model developed for the economy of Pakistan comprised 18 production sectors, 4 household/ consumption groups and a public sector. The model was fitted to the data for the fiscal year 1989-90. The parameters of the model were selected such that the model replicated the observed data for the base year. The first simulation had to work as the benchmark for subsequent analysis. The above mentioned seven alternative fiscal options were tested in terms of various micro and macro indicators. The sole objective for each option was total elimination of the deficit on the revenue account at the margin. It was easier then to choose the optimal policy package. A summary of the model and scheme of analysis is shown in the appendix<sup>6</sup>.

#### **3.2 Data and Parameters**

General Equilibrium Models require comprehensive information on all aspects of the economy. The data should be dis-aggregated and consistent. Likewise, the researcher should know the values of all parameters of the model a priori. We discuss the important points and ignore the details for want of space and time.

##### **(a) Data Considerations**

We have selected the fiscal year 1989-90 as the base due to the fact that the latest input-output tables are available for this year (in manuscript form). All the relevant information has been derived from published sources. The data has been modified and adjusted, where necessary, to ensure micro consistency.

The supply side of the economy is moderately aggregated into 18 commodity-producing sectors, out of which 17 sectors are domestic and the last sector represents transactions across the borders. The data on inter-industry transactions is taken from I/O tables and the value-added information is derived from the National Accounts.

The household's information is derived from the HIES 1990-91, showing the allocation, distribution and sources of income. The households are aggregated into four groups according to their income and expenditure levels, namely the low-income, the lower-middle income, the higher-middle income and the high-income groups. The demand side comprises 10 composite commodities meant for consumption and a single composite good meant for investment. All these final products originate from the agricultural, industrial and services sectors of the supply side. The industrial and household commodities are abridged through a transformation matrix.

##### **(b) Parameter Estimates**

As stated above, the CGE models need full information on the parameters of the behavioral equations. In this context, the elasticity of substitution parameters, both in consumption and production are crucial. Unfortunately, the information on this aspect is very scarce, particularly in the underdeveloped countries. We have assumed CES specifications for the value-added functions for sectors where the elasticity parameters were somehow available

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<sup>6</sup> For details, please see the references cited.

in the literature. In other cases, like agriculture and services, the Cobb-Douglas specifications have been used. The importance of the substitution parameter in the household's decision making, about present and future consumption, increases considerably when the rate of return to savings becomes variable. However, this parameter depends further on the interest elasticity of savings as well as on the propensity to consume. We have derived the parameters concerned, following the approach of Hasan Imam (1984) and BSWF model (1985). The remaining parameters could be easily derived from the available information.

#### **4. The Search for an Optimal Fiscal Structure - Static Analysis**

It seems appropriate at this stage to reproduce the relevant information on budget deficit and out-standing debt pertaining to the base year 1989-90 for ready reference. The figures were derived from official sources and expressed in Rs. million.

##### **4.1 Fiscal Position- Base Year: 1989-90**

| (a) | <b>Public Revenues</b> |        | <b>Public Expenditure</b> |          |
|-----|------------------------|--------|---------------------------|----------|
|     | Total revenue          | 144875 | Current Expenditure       | 165595   |
|     | Tax revenue            | 109221 | Debt servicing            | 36033    |
|     | Pers. income tax       | 3495   | Govt. Consumption         | 129562   |
|     | Corp. income tax       | 10842  | Deficit on Rev. Account   | 20720    |
|     | Property tax           | 1404   | Deficit as % of Revenues  | (14.302) |
|     | Commodity tax          | 93480  | Develop. Expenditure      | 54880    |
|     | Non tax revenue        | 35654  | Overall deficit           | 75600    |

| (b) | <b>Internal Debt</b> |        | <b>External Debt</b>    |                  |
|-----|----------------------|--------|-------------------------|------------------|
|     | Permanent            | 98703  | Disbursed & Outstanding | 323700(\$ 15094) |
|     | Floating             | 144978 | Interest paid           | 10530 (\$ 491)   |
|     | Un-funded            | 137630 | Principal Repaid        | 15890 (\$ 741)   |
|     | Total                | 381311 | Debt servicing          | 26420 (\$ 1232)  |
|     | Debt servicing       | 11523  | Increase in Debt        | 19387 (\$ 904)   |
|     | Increase in Debt     | 48101  | As % of GNP             | 36.2%            |
|     | As % of GDP          | 44.5%  |                         |                  |

| (c) | Total increase in debt during the fiscal year 1989-90 | = Rs. 67488 million  |
|-----|---|----------------------|
|     | Volume of monetary expansion during the year          | = Rs. 8112 million   |
|     | Overall deficit for the year 1989-90                  | = Rs. 75600 million  |
|     | Total servicing on internal and external debt         | = Rs. 37943 million. |
|     | Total Servicing (on internal and external debt)       | = 3.1% of GDP.       |
|     | Rate of interest on internal debt                     | = 11.675 % approx.   |
|     | Rate of interest on external debt (in real terms)     | = 3.250% approx.     |

The rate of debt retirement was nearly 5 %. However it is interesting to note that the new debt invited during the accounting period was much higher than the amount retired. We



may imagine this phenomenon from the trade deficit valuing Rs. 71327 million! Anyhow, we fitted the available information to the model and the computer package replicated the configuration for the base year with only very minor and negligible variations. The information so replicated was used as the benchmark for further analysis.

## 4.2 Fiscal Reforms-Simulation Results

It may be recalled that the prime objective of our proposed reforms was elimination of the deficit on revenue account of the federal budget at the margin. As noted above, we tested seven fiscal options in terms of their efficiency besides fulfillment of the primary objective. The impacts of the proposed models/policies were evaluated and compared in terms of different micro and macro indicators. Since all the policies were equivalent in terms of their yield, then a policy would have been superior that was feasible and the least pinching; i.e. which had the minimum welfare costs. A comparative statement of different fiscal scenarios is shown in the summary Table-4.4 annexed at the end. The important points are briefly discussed as under.

### (a) Fiscal indicators

The behavior of the key budgetary variables under different plans/fiscal models is presented to facilitate comparison at a glance. The relevant values are expressed in Rs. million while their percent deviations from the benchmark are shown in parentheses:

**Table-4.1: Fiscal Indicators – Comparative Position**

| Variable           | Bench  | Fiscal-1          | Fiscal-2          | Fiscal-3          | Fiscal-4          | Fiscal-5          | Fiscal-6           | Fiscal-7           |
|--------------------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|
| Gross Revenues     | 144872 | 166609<br>(15.00) | 166639<br>(15.02) | 166616<br>(15.01) | 167584<br>(15.67) | 166935<br>(15.23) | 147032<br>(- 4.49) | 161394<br>(11.40)  |
| Tax Revenues       | 109217 | 131071<br>(20.01) | 134652<br>(23.29) | 133393<br>(22.13) | 131816<br>(20.69) | 132762<br>(21.56) | 111088<br>(- 1.71) | 126452<br>(15.78)  |
| Total Expenditure  | 165593 | 166554<br>( 0.58) | 166587<br>( 0.60) | 166571<br>( 0.59) | 167554<br>( 1.18) | 166934<br>( 0.81) | 147028<br>(-11.21) | 161378<br>(- 2.54) |
| Public Consumption | 129560 | 129621<br>( 0.05) | 129654<br>( 0.07) | 129638<br>( 0.06) | 130621<br>( 0.82) | 130001<br>( 0.34) | 110095<br>(-15.02) | 124445<br>(- 3.95) |

From the above statement we get an indication that fiscal model-4 (that proposes a proportionate increase in commodity taxation) seems to fetch the highest revenues, although it may not be efficient and/or feasible as noted earlier. It is therefore advisable to look into other socioeconomic indicators as well in order to evaluate the desirability of the policies concerned.

### (b) Macro-economic indicators

Next we compare the alternative policy options in terms of their impacts on key macro indicators. As before, all the figures are expressed in Rs. million whereas those in parentheses represent the percent deviations of the variable from the reference/ benchmark values. The comparative position of the alternative schemes is shown in Table 4.2.

As evident from the comparison, model-6 (which proposes a drastic reduction in the public consumption expenditure) guarantees better performance. However, only about 15%

reduction in public expenditure could be effective at the most, which is accompanied by nearly 14.5% increase in gross revenues, the major part of which is contributed by an increase in personal income tax. This auxiliary increase in revenues is due to the fact that a fraction of the scarce resources previously hired by the public sector are released and efficiently utilized towards alternative ends in the private sector. This result highlights the significance of privatization and denationalization policies. However, an abrupt and massive reduction in public expenditure may not be socially advisable. This may become clear from the next section.

**Table-4.2: Macroeconomic Indicators – Comparative Position**

| Variable            | Plan-1 | Plan-2             | Plan-3             | Plan-4             | Plan-5             | Plan-6             | Plan-7            | Plan-8             |
|---------------------|--------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|--------------------|
| Private Consumption | 625713 | 623069<br>(- 0.42) | 606499<br>(- 3.07) | 622504<br>(- 0.51) | 629808<br>( 0.65)  | 625211<br>(- 0.08) | 636550<br>( 1.73) | 629211<br>( 0.56)  |
| Gross Investment    | 155048 | 158066<br>( 1.95)  | 159432<br>( 2.83)  | 158736<br>( 2.38)  | 157486<br>( 1.57)  | 158266<br>( 2.07)  | 166167<br>( 7.17) | 160384<br>( 3.44)  |
| Final Demand (GDP)  | 927257 | 927692<br>( 0.05)  | 927927<br>( 0.07)  | 927814<br>( 0.06)  | 934851<br>( 0.82)  | 930415<br>( 0.34)  | 929749<br>( 0.27) | 930976<br>( 0.40)  |
| Value Added (GVA)   | 833778 | 834052<br>( 0.03)  | 834208<br>( 0.05)  | 834134<br>( 0.04)  | 831907<br>(- 0.22) | 833298<br>(- 0.06) | 834908<br>( 0.13) | 833516<br>(- 0.03) |

### (c) Micro-economic indicators

In this section we compare the disposable income, consumption expenditure, saving and utility levels of the households under various policy options to assess the efficiency and feasibility of the policies. The comparative statement is shown in Table-4.3 below.

A superficial inspection of the table reveals that fiscal model- 6 provides better results since all the entries are positive for all groups. However, as noted before, a drastic expenditure cut to a degree of nearly 17% in the public sector may not be socially feasible and economically viable. On the other hand, all the preceding plans (from 1 to 5) are inefficient so far as their welfare effects are concerned. A careful examination of the statement however, shows that tax-expenditure mix policy (model-7), with 5% cut in public consumption, a 10% increase in commodity taxation and nearly 50% increase in direct taxes, is the second best. It not only succeeds in achieving the target of eliminating the budget deficit but is the least costly and more likely to be feasible. It promises a respectable increase in the revenues, private consumption, gross investment and final demand/ GDP. There is a tolerable reduction in public expenditure and a negligible shortfall in the value added. Further it leaves a pleasant impact on the income and consumption levels of the low-income groups, although the high-income group is hurt a bit little. It bears a moderate but positive welfare effect on the society as a whole.



**Table-4.3: Microeconomic Indicators – Comparative Position**

| Variable                    | Bench     | Fiscal-1 | Fiscal-2 | Fiscal-3 | Fiscal-4 | Fiscal-5 | Fiscal-6 | Fiscal-7 |
|-----------------------------|-----------|----------|----------|----------|----------|----------|----------|----------|
| <b>Disposable Income</b>    | Rs. (p.a) | % change | % change | % change | % change | % change | % change | % change |
| Group 1                     | 16996     | 3.75     | 3.44     | 3.28     | 0.99     | 2.42     | 3.09     | 2.37     |
| Group 2                     | 36719     | 0.97     | -0.60    | -0.17    | 0.62     | 0.12     | 1.93     | 0.72     |
| Group 3                     | 66463     | -0.64    | 0.19     | 0.05     | 0.98     | 0.39     | 3.06     | 1.25     |
| Group 4                     | 172787    | -3.98    | -2.68    | -2.89    | 0.62     | -1.59    | 1.91     | -0.21    |
| <b>Con. Demand</b>          | Rs. (p.a) |          |          |          |          |          |          |          |
| Group 1                     | 21068     | 0.00     | 0.00     | 0.00     | 0.00     | 0.00     | 0.00     | 0.00     |
| Group 2                     | 36489     | 0.97     | -0.60    | -0.17    | 0.63     | 0.12     | 1.93     | 0.72     |
| Group 3                     | 55500     | -0.64    | 0.19     | 0.05     | 1.11     | 0.44     | 3.06     | 1.30     |
| Group 4                     | 102675    | -3.98    | -2.68    | -2.89    | 1.03     | -1.44    | 1.91     | -0.06    |
| <b>Household Saving</b>     | Rs. (p.a) |          |          |          |          |          |          |          |
| Group 1                     | -4072     | 15.65    | 14.35    | 13.65    | 14.16    | 10.12    | 12.92    | 9.90     |
| Group 2                     | 230       | 0.97     | -0.60    | -0.17    | -0.01    | -0.11    | 1.93     | 0.48     |
| Group 3                     | 10963     | -0.64    | 0.19     | 0.05     | 0.36     | 0.17     | 3.06     | 1.02     |
| Group 4                     | 70112     | -3.98    | -2.68    | -2.89    | 0.00     | -1.81    | 1.91     | -0.44    |
| <b>Utility Levels (HEV)</b> | Index     |          |          |          |          |          |          |          |
| Group 1                     | 4063.5    | 0.00     | 0.00     | 0.00     | -207.64  | -76.29   | 0.00     | -76.29   |
| Group 2                     | 6582.2    | 354.87   | -221.92  | -61.63   | -227.20  | -120.85  | 709.50   | 96.16    |
| Group 3                     | 10994     | -423.66  | 126.91   | 31.71    | -188.57  | -43.94   | 2032.5   | 524.09   |
| Group 4                     | 24979     | -6877.4  | -4632.5  | -4996.5  | -1093.1  | -3426.8  | 3306.9   | -1161.3  |
| Agg. Welfare Effects        | .....     | -5525.7  | -5591.0  | -5026.4  | -4466.1  | -4849.8  | 13042.8  | 313.84   |

## 5. Dynamic Analysis

After having identified the fiscal package that is not only efficient in achieving its short run objective but also socially tolerable (least costly) as well as relatively convenient to administer, we tried to analyze the long-run implications of the model. In this connection, we resorted to the following assumptions/operating procedures:

- The structure of taxation and fiscal arrangements for the base-year 1989-90 remains intact during the planning period (10 years).
- The long-run ratio of public consumption expenditure to GDP is assumed to be 0.13 (13 %). The deficit on revenue account of the budget, if any, is financed through bank borrowing and that on capital account through external and internal borrowing. External borrowing is constrained to the extent of trade deficit at the most. Surplus on the revenue account, if any, is appropriated towards capital account i.e. financing of development expenditure.
- The effective labor force is assumed to grow at an exponential rate of 2.5% per annum, keeping in view the net growth rate of population and the rate of

unemployment. However the total number of households remains unchanged<sup>7</sup>.

- iv. The present is connected to the future through saving-investment behavior that leads to capital formation in the economy. The long-run ratio of gross investment to domestic saving is assumed to be 1.46 (derived from the secular trend).
- v. The poverty line assumed for the base year (Rs. 21068/-) may not be stationary but moving overtime with an average growth rate of 2% per annum keeping in view the growth of real GNP per capita during the past decade. Similarly the basic exemption limit (Rs. 30000/-) assumed for personal income taxation in the benchmark will grow at the same rate<sup>8</sup>.
- vi. Government has to honor its contractual obligations regarding debt. In simple words it continues to pay interest at a rate of 12% on permanent domestic debt and at 6% on outstanding foreign debt<sup>9</sup>.

### **5.1 The 1990's Decade**

The above assumptions, that set the framework for dynamic analysis, seemed appropriate and in line with the economic scenario of the country. With this raw material and the benchmark configuration at hand, we tested the model for its dynamic properties over the future 10 years (starting from 1989-90 and ending by 1999-00), in other words, during the democratic regime of PPP and PML(N). This period saw political instability, mid-term elections and finally take-over by the Military government. We got the projections on economic performance and compared the 'optimal or would be scenario' with the actual position in terms of key micro and macro indicators. Again we summarize the analysis of an earlier endeavor (Yasin: 2003) as under:

One important point must be noted at the outset. The actual statistics for the end year are available at current prices of 1999-00 or at constant prices of 1980-81 as usual. On the other hand, the model projects the relevant position at the constant prices of the base year i.e. 1989-90. The CGE models do not take into account the changes due to inflation. The comparison between the two sets is possible either by deflating the actual figures at the base year prices or by considering the percent shares of various components in the relevant scenarios and ignoring the valuation aspect. We have followed the second option in the analysis.

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<sup>7</sup> As discussed earlier, our unit of address in all relevant considerations is the household (or its head) and not the individual. As population grows, the volume of every household unit expands accordingly. However, the total number of households remains unaltered. This strategy is adopted for computational ease.

<sup>8</sup> However we do not analyze poverty and inequality in this study, rather we concentrate on debt problem.

<sup>9</sup> This manipulation can be justified since the permanent domestic debt is in the nature of a dead-weight obligation with no real assets held in parallel. Same is the case with outstanding foreign debt. The existing interest-based mechanism for public transactions may continue indefinitely.



**(a) Fiscal Position Overtime**

This is the most important part of our analysis. The base and final year position for both the actual (observed) and optimal (model) scenario is shown in Table-5.1 below.

On the revenue side, we note that fiscal administration has been more efficient in tax collection. The governments (particularly PML-N), have succeeded to enhance the proportion of direct taxes (20.9%), which is a healthy sign. There is a sizeable contribution from non-tax sources ( $100 - 75.6 = 24.4$ ) by the end year, possibly on account of privatization proceeds. However, the comparative position of commodity taxes is somewhat weak (54.6% against 61.4% optimal). The overall position of actual and projected revenues in terms of percent shares of different components for the end year is somewhat comparable.

However, the mess is there on the expenditure side, which is sub-optimal, rather dreadful. The proportion of development expenditure by the end year is merely 13% of the total as against 40% projected. In contrast, the lion share (around 86%) goes to the current/non-development expenditure. Although the actual consumption expenditure is somehow comparable to the optimal value (50.7% versus 47.6%), the heaviest burden is that of debt servicing (35.7%), which drains out a significant fraction of the scarce resources. Naturally, the loss has to be born by the development side; in particular the social sector (health and education) is badly affected. Even the relative share of development expenditure that prevailed in the base year couldn't be maintained by the end year; let alone the optimality question. It can be easily seen that development expenditure has been drastically reduced to one half of that available a decade earlier (12.8% against 24.9% of the total). On the other hand, the optimal tax-expenditure structure (if acceded to) could easily eliminate the deficit over time and generate a surplus of Rs. 59015 m on the revenue account that could be allocated to the capital account by end of the planning period.

**Table-5.1: Comparative Statement of Fiscal Positions in 1989-90 and 1999-00 (Rs. Million).**

| Item                | Base Year 1989-90 |                 | End Year 1999-00 |                   |
|---------------------|-------------------|-----------------|------------------|-------------------|
|                     | Benchmark         | Optimal Model-7 | Observed         | Optimal structure |
| Total Revenues      | 144872 (100.0)    | 162214 (100.0)  | 536832 (100.0)   | 448199 (100.0)    |
| Tax Revenues        | 109217 (75.38)    | 124899 (76.99)  | 405824 (75.60)   | 363898 (81.19)    |
| Direct Taxes        | 15741 (10.86)     | 25839 (15.93)   | 112553 (20.96)   | 88532 (19.75)     |
| Commodity Taxes     | 93476 (64.52)     | 99060 (61.07)   | 293271 (54.63)   | 275365 (61.44)    |
| Total Expenditure   | 220473 (100.0)    | 229633 (100.0)  | 743632 (100.0)   | 560635 (100.0)    |
| Current Expend.     | 165593 (75.11)    | 161774 (70.45)  | 655015 (88.08)   | 421984 (75.27)    |
| Govt. Consumption   | 129560 (58.76)    | 124802 (54.35)  | 381105 (51.25)   | 319437 (56.97)    |
| Debt Servicing      | 36033 (16.34)     | 32889 (14.32)   | 273910 (36.83)   | 102547 (18.29)    |
| Develop. Expend.    | 54880 (24.89)     | 67859 (29.55)   | 95589 (12.85)    | 138651 (24.73)    |
| Balance (Rev.Acct.) | - 20721           | + 440           | -118183          | +26215            |

**Note:** The observed figures for the end year are presented at current prices, derived from Pakistan Economic Survey (s). The figures in parentheses show the percent shares in total revenues/ expenditure. The figures along the last row indicate the deficit on the revenue account.



## (b) Macroeconomic Performance

Next we consider the macro performance of the system in the presence and absence of the proposed fiscal structure. For the reason of space limitations, we restrain from details and confine to a few indicators as depicted in the following statement (Table- 5.2).

### i. Value Added at Factor Cost

The observed position shows a greater dependence on the services sector followed by agriculture. The optimal structure on the other hand projects a better scenario for manufacturing sector. The energy and public administration sectors remain comparable in both the observed and projected scenarios.

### ii. Expenditure on GDP

The share of gross investment by the end year as projected by the model is quite handsome. The very low percentage of the trade deficit in the actual/ observed case gives a false perception, whereas the fact is much different. The entire development program of the government depends on the availability of foreign economic assistance. This source had roughly dried up due to various economic sanctions levied by the donors, mainly for political reasons, during the period under consideration. As such the foreign capital inflow remained sluggish and so the import of industrial raw material and equipment. The model projects the optimal position with a moderate level of trade deficit, although the fraction of imports has enhanced due to a significantly higher share of gross investment by the end of the planning period.

**Table-5.2: Macro Performance: Comparative Positions in 1989-90 and 1999-00**  
(Rs. Million).

| Year                      | Base Year 1989-90     |                       | End Year 1999-00       |                        |
|---------------------------|-----------------------|-----------------------|------------------------|------------------------|
|                           | Benchmark             | Optimal Model-7       | Observed               | Optimal structure      |
| <b>Value Added (f.c.)</b> | <b>833777 (100.0)</b> | <b>828858 (100.0)</b> | <b>3562020 (100.0)</b> | <b>2043117 (100.0)</b> |
| 1. Agriculture            | 214367 (25.71)        | 218566 (26.37)        | 923609 (26.93)         | 457096 (22.37)         |
| 2. Industry               | 206313 (24.74)        | 200177 (24.15)        | 830865 (23.32)         | 556318 (27.23)         |
| Manufacturing             | 125145 (15.01)        | 123099 (14.85)        | 522801 (14.67)         | 320712 (15.70)         |
| Energy                    | 28818 (03.45)         | 28712 (03.46)         | 139626 (03.92)         | 68287 (03.34)          |
| 3. Services               | 271918 (32.61)        | 274980 (33.17)        | 1807546 (50.74)        | 658960 (32.25)         |
| Pub. Admin & Def.         | 69857 (08.38)         | 67860 (08.18)         | 220291 (06.18)         | 166877 (08.17)         |
| Social Services           | 71323 (08.55)         | 67275 (08.11)         | 321555 (09.02)         | 203863 (09.98)         |
| <b>Expd. On GDP (mp)</b>  | <b>838994 (100.0)</b> | <b>838618 (100.0)</b> | <b>3826112 (100.0)</b> | <b>2055046 (100.0)</b> |
| 1. Priv. Consumption      | 625713 (74.58)        | 646157 (77.05)        | 2884021 (75.37)        | 1311806 (63.83)        |
| 2. Pub. Consumption       | 129560 (15.44)        | 124802 (14.88)        | 330691 (17.12)         | 329437 (16.03)         |
| 3. Gross Investment       | 155048 (18.48)        | 134934 (16.09)        | 659110 (17.22)         | 517666 (25.19)         |
| 4. Trade Balance          | - 71327 (08.50)       | - 67275 (08.02)       | - 47710 (01.24)        | - 103863 (05.05)       |
| Exports                   | 134082 (15.98)        | 126466 (15.08)        | 514280 (13.44)         | 383227 (18.65)         |
| Imports                   | 205409 (24.48)        | 193741 (23.10)        | 561990 (14.69)         | 487090 (23.70)         |

Note: The observed figures for the end year are given at current prices, derived from Pakistan Economic Survey (s), whereas the figures in the last column are projected by the model at constant prices of the base year (1989-90).

### (c) Outstanding Debt

It is not difficult to conceive that the position of outstanding debt will improve overtime once the root cause of raising debts (deficit on revenue account as the major source of borrowing) is controlled. The tax-expenditure structure proposed in this study tackles the



very issue. The deficit on current account is the secondary source of borrowing. However, keeping in view the investment needs of the economy, this sort of borrowing can be rationalized. The 'expected position' as projected by the model is given below along with the actual/ observed situation.

**Table-5.3: Comparative Position of Outstanding Debt for 1989-90 and 1999-00**  
(Rs. Billion).

| Year<br>Source      | Base Year 1989-90 |                 | End Year 1999-00 |                   |
|---------------------|-------------------|-----------------|------------------|-------------------|
|                     | Benchmark         | Optimal Model-7 | Observed         | Optimal structure |
| Domestic Debt       | 448.2 (56.37)     | 423.5 (56.56)   | 1644.8 (55.61)   | 702.7 (40.23)     |
| Foreign Debt        | 346.9 (43.63)     | 325.2 (43.43)   | 1312.8 (44.38)   | 919.6 (59.77)     |
| Total Outstanding   | 795.1 (100.0)     | 748.7 (100.0)   | 2957.6 (100.0)   | 1622.3 (100.0)    |
| GDP: (Debt as % of) | 927.2 (85.75 )    | 927.9 (80.68 )  | 3855.2 (76.71)   | 2318.4 (69.97)    |

*Note:* The observed figures for the end year are given at current prices, derived from Pakistan Economic Survey (s).

The comparison is straightforward. A bird-eye view of the above statement reveals that the proposed model is efficient in that it minimizes dependence on borrowing. The rate of repayment (assumed in the start to be 6%) is such that the growth of outstanding debt is very slow. Although, foreign indebtedness will increase for some time due to trade deficit, but a point of return will reach soon if the proposed structure is maintained. The model relieves the economy from bank borrowing and extra money creation at the first hand. However, all this depends on the normality of economic and political conditions of the region in general and of Pakistan in particular. The observed figures for the end year reflect a very bleak position. The stock of debt has increased by 372% (from 795.1 billion to 2957.6 billion) in ten years.

## 5.2 The Military-led Regime

Next we briefly discuss the performance of the economy during the past government. Although there was symbolic democracy with functioning parliament as well as the local governments, the very status of the parliament remained controversial throughout. The government was never believed to be free in decision making. Obviously the final authority rested with a single personality who remained in uniform till the last moment. We review the performance of the military-led regime in terms of a few economic indicators and compare it with the optimal (planned) configuration. Since the government changed the base year to 1999-2000, the values of economic variables previously reckoned with 1990-91 as the base year are not comparable with the new values. Even the figures for the base year 1999-99 at current prices, shown in the Economic Survey 2001-02, 2003-04 and 2006-07 are not comparable. Therefore we contend only on ratios.

### (a) The Budgetary Position

The military-led regime started thinking seriously in the beginning when it assumed office in October 1999. It succeeded in its mission of fetching revenues to some extent despite a strong resistance from the business community. The recoveries on account of both the direct and indirect taxes increased considerably. There was strict control on public expenditure in the beginning. This state of affairs could not be sustained, however, when the political figures started entering the play ground after the general elections of 2002. In particular, the non-developmental expenditure began to increase as more and more

ministers were inducted in the cabinet. The expenditure on maintenance of law and order increased enormously as security conditions began to deteriorate after 9/11, particularly in north western parts of the country. The comparative position is given in Table- 5.4 and Figure-1. The optimal values projected by the model for 1999-00 are included to facilitate comparison. All other values for the selected years are available at current prices.

**Table-5.4: Budgetary Position of the Past Government (Rs. Million).**

| Item                     | 1999-00<br>Optimal  | 2000-01             | 2002-03             | 2004-05              | 2006-07              |
|--------------------------|---------------------|---------------------|---------------------|----------------------|----------------------|
| <b>Total Revenues</b>    | 448199 (87.1)       | 553000 (77.0)       | 720800 (80.2)       | 900014 (80.6)        | 1297957 (72.1)       |
| <b>Tax Revenues</b>      | 363898 (64.9)       | 441600 (61.5)       | 555800 (61.8)       | 659410 (59.0)        | 889685 (49.4)        |
| <b>Direct Taxes</b>      | 88532 (15.8)        | 128556 (17.9)       | 157886 (17.6)       | 186473 (16.7)        | 337639 (18.7)        |
| <b>Commodity Taxes</b>   | 275365 (49.1)       | 313014 (43.6)       | 397914 (44.3)       | 472973 (42.3)        | 552046 (30.6)        |
| <b>Non-Tax Revenues</b>  | 84301 (15.0)        | 111400 (15.5)       | 165000 (18.4)       | 240604 (21.5)        | 408272 (22.7)        |
| <b>Total Expenditure</b> | <b>560635 (100)</b> | <b>717900 (100)</b> | <b>898200 (100)</b> | <b>1116981 (100)</b> | <b>1799968 (100)</b> |
| <b>Current Expend.</b>   | 421984 (75.3)       | 645700 (89.9)       | 791700 (88.1)       | 864500 (77.4)        | 1375345 (76.4)       |
| <b>Govt. Consumption</b> | 319437 (57.0)       | 396448 (55.2)       | 556396 (61.9)       | 644756 (57.7)        | 988226 (54.9)        |
| <b>Interest Payment</b>  | 102547 (18.3)       | 249252 (34.7)       | 235304 (26.2)       | 219744 (19.7)        | 387119 (21.5)        |
| <b>Develop. Expend.</b>  | 138651 (24.7)       | 72200 (10.0)        | 106500 (11.8)       | 227718 (20.4)        | 424623 (23.6)        |
| <b>Deficit (Overall)</b> | 112436 (20.0)       | 179700 (25.0)       | 180600 (20.1)       | 216967 (19.4)        | 377501 (20.9)        |

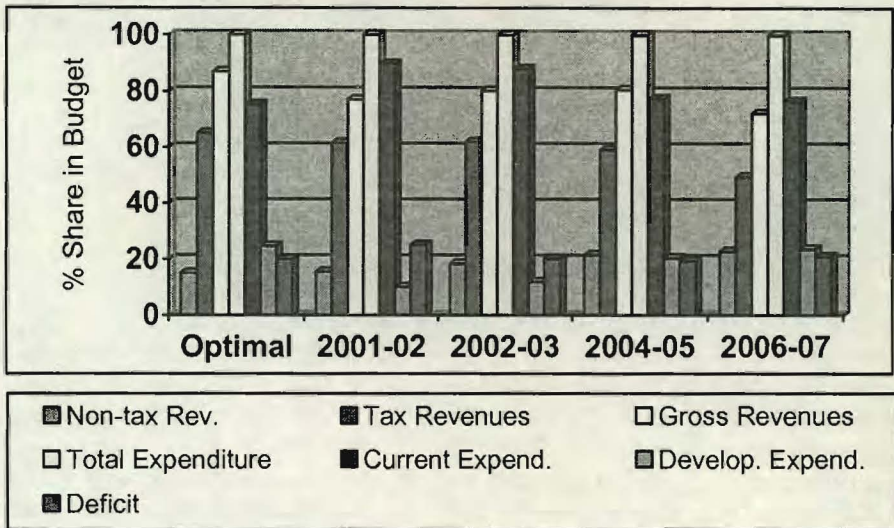
Source: Economic Surveys and Annual Reports of SBP. Figures in parenthesis show percentage share in total budget.

The comparative position is not encouraging on the revenue side. The tax revenues have shown a decline from 79.8% of the gross revenues in 2000-01 (start point) to 68.5% by 2006-07 (end point) despite the loud claims that tax efforts were most successful. However, the share of direct taxes has increased over time as well as that of the non-tax revenues. On the expenditure side, the level of government consumption has remained more or less stagnant – 55.2% of the total expenditure in 2000-01 versus 54.9% by 2006-07. The debt servicing/ interest payment has shown somewhat decline from 34.7% of the budget at the start to 21.5% by the end period. This is primarily because of re-scheduling of debt and rolling over liability to future. The allocation for development purpose has shown significant improvement, which has grown from merely 10% of the budget in 2000-01 to 23.6% by 2006-07. This was possible due to inflow of foreign assistance, partially in the form of donations for earthquake affected areas and mainly for services rendered by the 'General' in the war against terrorism<sup>10</sup>.

10 Mr. Ahsan Iqbal, MNA and Ex-Minister Education disclosed in a T.V. talk that around 80 million dollars flowed to Pakistan after the 9/11 event, however it is not clear as to how the amount was utilized.



Fig. 1: Budgetary Position during Past Government



#### (b) Mode of Financing the Deficit

We should also look at the matter from another angle, i.e. the mode of financing the deficit or the strategy adopted for filling up the budgetary gap. The routine sources of deficit financing have been external and internal borrowing as well as money creation (bank borrowing). However, the government actively pursued the policy of privatization and shares of many profit making enterprises were sold to private sector<sup>11</sup>. The point to be emphasized here is that the privatization proceeds were also used to fill up the budgetary gap, or more correctly, to support current consumption. This is some thing like selling of one's assets, whatever available, to finance consumption needs. It would have been much desirable if the proceeds could be used for retiring of the outstanding foreign debt.

The information is depicted in Table- 5.5, which shows that main thrust of financing the deficit has been on external borrowing as well as on money creation, besides utilization of the privatization proceeds. The outcome is clear; the poor masses are badly hit by intolerable inflation and widespread unemployment. Poverty is said to have increased during this period. A balanced policy is therefore needed to cope with the difficult situation.

11 An attempt was made by the government to privatize the Steel Mills in 2006/07 that led to controversy and great panic among the opposition and general masses. The Supreme Court had to intervene in the matter and to stop further processing for transparency issue. This act of the apex court, along with certain other differences with the government (particularly the case of missing individuals arrested by intelligence agencies), originated the general uprising against the military-led regime and much disturbance after 9<sup>th</sup> March 2008.

**Table-5.5: Mode of Financing the Deficit (Rs. Million).**

| Item                   | 1999-00<br>Optimal | 2000-01<br>Observed | 2002-03<br>Observed | 2004-05<br>Observed | 2006-07<br>Observed |
|------------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| Total Revenues         | 448,199            | 553,000             | 720,800             | 900,014             | 1297,957            |
| Total Expenditure      | 560,635            | 732,700             | 898,200             | 1116,981            | 1799,968            |
| Deficit (Overall)      | 112,436            | 179,700             | 180,600             | 216,988             | 377,501             |
| Financing External     | 60,700             | 120,700             | 113,000             | 120,432             | 147,150             |
| Domestic               | 51,736             | 59,000              | 67,600              | 96,556              | 230,351             |
| Non-Bank Borrowing     | 46,130             | 26,000              | 18,300              | 8,050               | 56,905              |
| Bank Borrowing         | 5,606              | 33,000              | 45,600              | 60,179              | 101,982             |
| Privatization Proceeds | -                  | -                   | 3,700               | 28,327              | 71,464              |

Source: Economic Surveys and Annual Reports of SBP- various issues.

### (c) Indebtedness & Solvency Problem

It is crystal clear from the above that our economic managers have failed to control deficit on the revenue account. Likewise, the current account balance has not shown improvement; of course there were glimpses of some healthy signs for three years but that could not be sustained (please refer to Table 2.2 above). As a result the volume of outstanding debt has been rising and the rate of debt retirement is sluggish; yet the practice of signing fresh loans is continued. Despite enormous funding by the donor agencies and rescheduling of debt, debt servicing is constantly increasing. However, the government is pretending as if the problem has been properly tackled. According to the Debt Policy Statement 2007-08 referred to above, the debt is shown to be sustainable; i.e. the debt-GDP ratio is declining over time due to satisfactory macroeconomic performance. In other words, the growth rate of our GDP has surpassed the growth of outstanding debt.

**Table 5.6: Sustainability of External Debt**

| Year    | Exch Rate<br>Rs/ Dollar | GDP Current Price |            | Outstanding Debt |        | Debt Servicing |          |       |          |
|---------|-------------------------|-------------------|------------|------------------|--------|----------------|----------|-------|----------|
|         |                         | Rs Billion        | \$ Million | \$ Million       | % GDP  | Principal      | Interest | Total | %Exports |
| 1999-00 | 51.771                  | 3826111           | 73904.52   | 25,359           | (34.3) | 884            | 506      | 1390  | 18       |
| 2000-01 | 58.438                  | 4209873           | 72040.00   | 25,608           | (35.5) | 967            | 579      | 1546  | 21       |
| 2001-02 | 61.426                  | 4452654           | 72488.10   | 27,215           | (37.5) | 739            | 451      | 1190  | 13       |
| 2002-03 | 58.499                  | 4875648           | 83345.83   | 28,301           | (33.9) | 784            | 543      | 1327  | 12       |
| 2003-04 | 57.574                  | 5640580           | 97970.96   | 28,900           | (29.5) | 2321           | 657      | 2978  | 24       |
| 2004-05 | 59.358                  | 6499782           | 109501.36  | 30,813           | (28.1) | 863            | 598      | 1461  | 10       |
| 2005-06 | 59.856                  | 7623205           | 127359.08  | 32,407           | (25.4) | 975            | 597      | 1572  | 10       |
| 2006-07 | 60.631                  | 8723215           | 143873.84  | 35,182           | (24.5) | 968            | 644      | 1612  | 10       |

Source: Compilation from Table 2.5 and Economic Surveys, various issues

This picture shown by the government is quite fascinating; however some questions need to be answered: (i) how transparent is the picture itself, (ii) will it be possible to sustain the high growth of GDP and (iii) how long the inflow of foreign capital can be expected in return to our front line services in the war against terrorism. The real problem is that of the foreign debt since its servicing is to be made in foreign currency. To see the intensity of the problem and to assess the feasibility of coping with indebtedness for long, we may reconsider the available information. The figures in terms of deficit on the current account and the debt servicing are reproduced from Table- 2.2 and 2.5 shown above, however in a slightly modified way. The picture is shown in Table-5.7 as well as Figure-2 below. This time all figures are expressed as our liability in terms of foreign currency.

An examination of the schedule reveals that there was some improvement on the external front during the initial years of the military-led regime (2001-02, 2002-03), primarily due to



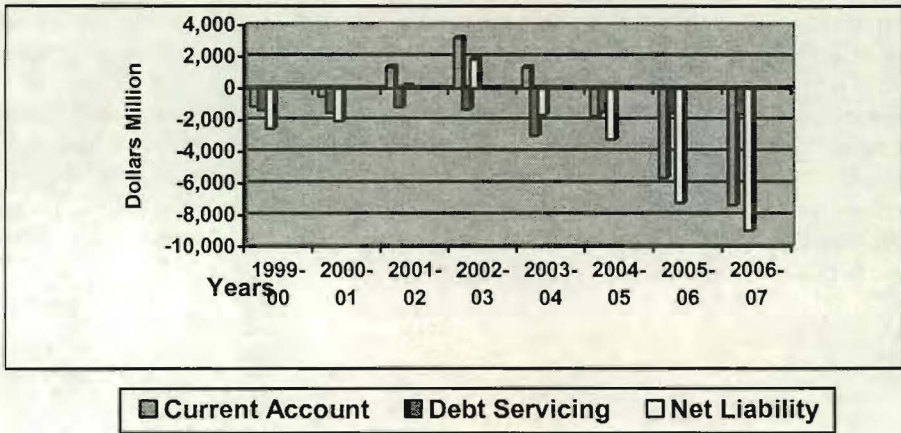
rescheduling of debts and enormous financial aid from the West. However, the situation went on deteriorating thereafter and our indebtedness is now posing solvency problem. This is a real challenge for the new government to deal with but there is no alternative except to take very bold steps for controlling the twin deficits, i.e. deficit on the revenue account of the budget to be controlled in the short run and deficit on the current account of the BOP in the medium run.

**Table-5.7: Liabilities of Pakistan (\$ Million)- Historical trend.**

| Year    | Trade Balance<br>(Exports-Imports) | Current Account<br>Balance | Debt Servicing<br>(As Liability) | Net Liability<br>Liability % GDP |
|---------|------------------------------------|----------------------------|----------------------------------|----------------------------------|
| 1999-00 | - 1412 ( 8190- 9602)               | - 1143                     | - 1390                           | - 2533 (3.43)                    |
| 2000-01 | - 1269 ( 8933-10202)               | - 513                      | - 1546                           | - 2059 (2.86)                    |
| 2001-02 | - 294 ( 9140- 9434)                | + 1338                     | - 1190                           | + 148 Surplus                    |
| 2002-03 | - 444 (10889-11333)                | + 3165                     | - 1327                           | +1838 Surplus                    |
| 2003-04 | - 1208 (12396-13604)               | + 1314                     | - 2978                           | - 1664 (1.70)                    |
| 2004-05 | - 4352 (14401-18753)               | - 1753                     | - 1461                           | - 3214 (2.93)                    |
| 2005-06 | - 8259 (16388-24647)               | - 5649                     | - 1572                           | - 7221 (5.67)                    |
| 2006-07 | - 9485 (17119-26614)               | - 7361                     | - 1612                           | - 8973 (6.23)                    |

Source: Combination of Tables 2.2 and 5.6 above

**Fig. 2: Net Liability Overtime (\$ Million)**



## 6. Concluding Remarks

Any government, whether secular in traditions or oriented to some ideology, cannot cope for long with persistent budget and trade deficits. In particular, the deficit on the revenue account of the annual budget cannot be tolerated. In developing countries, foreign assistance may be advisable to finance the development projects and to build up the infrastructure. In other words, borrowing from domestic and international sources for short or medium terms may be essential to fill the saving-investment gap. Even this exercise cannot be carried out forever. Eventually the debt burden is bound to reach a level that may not be sustainable. Sooner or later, the government will be compelled to take bold steps and to devise appropriate policies to save the nation from bankruptcy.

The foreign indebtedness of Pakistan has reached the level of red alert by now and the situation is posing sever problems for the nation. The present generation is reaping the crops of the past blunders. As such, there is urgent need for very bold and strict measures to

mend the situation. The previous governments started tackling the issue from 1995 onwards. However, the emphasis was on privatization, down sizing and resorting to commodity taxation. The PML (N) government introduced taxation on agricultural income but the outcome was not encouraging. The PPP regime of 1990's emphasized on GST and broadening the tax base. The military-led regime started thinking in the right direction soon after it came to power in October 1999. It succeeded in its mission to some extent despite a strong resistance from the business community. The share of direct taxes in the total revenues improved considerably viz-a-viz indirect taxes, which was a healthy sign. However, this momentum could not be sustained afterwards when political figures entered the game and PML (Q) agreed to share the power and support all policies of the 'General'<sup>12</sup>. The pseudo-democratic regime has ended at last but after creating much disturbance on the political and economic front. The new government will have to face the challenges and to wipe the mess created. The start of the government is encouraging when it is trying to take along other stake holders on the political front.

The fiscal models we have proposed in this document indicate the possible short-run measures needed to eliminate the deficits on the revenue account at least. The simulations highlight the common economic wisdom, which are true for individuals as well as for the society; that a balanced budget is the best economic policy, or that expenditure (at least current) should be kept within means. However, following of a balanced budget policy may not be always feasible due to the extra ordinary circumstances in which this unfortunate nation is presently trapped. So far as the matter of outstanding foreign debt is concerned, it needs passionate and effective measures in the long run like self-reliance and mobilization of domestic resources, curtailment of luxurious imports and encouragement of value-added exports. The picture of the economy in the long run may be different under different perspectives and socio-political states. A carefully framed balanced economic policy, reflecting the aspiration of masses and enjoying support of the parliament, is the need of time to pull the nation out of the prevailing crises.

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<sup>12</sup> Most of these policies could not gain the favor of general masses. In particular, the drastic measures taken against the religious faction and the judiciary were strongly resisted.



**Summary Table 4.4- Evaluation of Fiscal Policies in a Static Framework (Benchmark: 1989-90 Actual)**

| Indicators       | Fiscal-1                              | Fiscal-2                               | Fiscal-3                                   | Fiscal-4                          | Fiscal-5  | Fiscal-6                                    | Fiscal-7                     |
|------------------|---------------------------------------|--|--|-----------------------------------|---|---|------------------------------|
| Policy statement | Total Increase in personal income tax | Total Increase in corporate income tax | Proportionate increase in all direct taxes | Total increase in commodity taxes | Tax policy mix, Increase in all taxes, direct and indirect. | Total cut in public consumption expenditure | Tax-Expenditure policy mix @ |
| Incomes Gp-1     | + 3.751                               | + 3.438                                | + 3.278                                    | + 0.996                           | + 2.425   | + 3.096                                     | + 2.372                      |
| Group-2          | + 0.966                               | - 0.604                                | - 0.168                                    | + 0.622                           | + 0.125   | + 1.932                                     | + 0.718                      |
| Group-3          | - 0.637                               | + 0.191                                | + 0.048                                    | + 0.984                           | + 0.397   | + 3.058                                     | + 1.256                      |
| Group-4          | - 3.980                               | - 2.681                                | - 2.891                                    | + 0.616                           | - 1.590   | + 1.914                                     | - 0.216                      |
| HEV group-1      | 00                                    | 00                                     | 00   | - 207.642                         | - 76.295  | 00  | - 76.295                     |
| Group-2          | + 354.874                             | - 221.924                              | - 61.627                                   | - 227.201                         | - 120.850   | + 709.502                                   | + 96.164                     |
| Group-3          | - 423.658                             | + 126.908                              | + 31.713                                   | - 188.570                         | - 43.937  | + 2032.477                                  | + 524.088                    |
| Group-4          | - 6877.376                            | - 4632.556                             | - 4996.545                                 | - 1093.136                        | - 3524.105  | + 3306.947                                  | - 1161.229                   |
| Aggr. Welfare    | - 5525.714                            | - 2028.918                             | - 5026.459                                 | - 4466.149                        | - 4849.829  | +13042.825                                  | + 313.838                    |
|                  |                                       |  |  |                                   |   |   |                              |

*The Debt Problem of Pakistan: What can we do?*

|                  |                        |                        |                        |                         |                          |                            |                        |
|------------------|------------------------|------------------------|------------------------|-------------------------|--------------------------|----------------------------|------------------------|
| Total Revenue    | + 15.004               | + 15.025               | + 15.009               | + 15.677                | + 15.229                 | + 14.491                   | + 11.405               |
| Total Budget     | + 0.580                | + 0.600                | + 0.590                | + 1.184                 | + 0.810                  | - 11.211                   | - 2.545                |
| Gross Investment | + 1.947                | + 2.828                | + 2.378                | + 1.572                 | + 2.076                  | + 7.171                    | + 3.441                |
| Value added(fc)  | + 0.033                | + 0.051                | + 0.043                | - 0.224                 | - 0.057                  | + 0.135                    | - 0.031                |
| Remarks          | Difficult to implement | Difficult to implement | Difficult to implement | Inflationary and costly | Feasible but more costly | Efficient but not feasible | Feasible, least costly |

Note: All the figures are shown in terms of percent deviations from the benchmark configuration of 1989-90.

@ : Indicates an increase of about 50% in all direct taxes and 10% in commodity taxes along with an expenditure cut of 5% over the base year.



## **Appendix: The CGE Model Used in the Analysis**

### **a. Production Relations**

The supply side of the economy consists of "n" commodity producing sectors. The production function for a typical firm in sector  $j$ , may be given by:

$$Q_j = \min (A_j, VA_j), \text{ where } j=1,2,\dots,n \quad (1)$$

It states that the output  $Q_j$  by the sector concerned bears a fixed relationship with the inputs, raw material and factor services, needed in the transformation process. As such the requirements of inputs per unit output may be written in the condensed form:

$$q_j = \min( X_{ij}/Q_j, VA_j/Q_j) = \min [ a_{ij}, v_j(l_j, k_j) ] \quad (2)$$

The first argument  $A_j$ , denotes a column vector of intermediate inputs  $X$ 's, required in fixed proportions for the total output. The minimum quantity of an input from the "ith" industry required per unit output of the "jth" industry is denoted by  $a_{ij}=X_{ij}/Q_j$ . It occupies a unique position in the Technical Coefficient Matrix  $[A]$ , which is a square matrix of order  $(n \times n)$ , with rows depicting the transactions from the sector of origin "i" and the columns indicating the demand by the sector of destination "j". The Activity Analysis matrix, given by  $[I - A]$ , is derived from the technical coefficient matrix. The elements along the principal diagonal indicate the net output of the sector concerned and the off-diagonal elements with negative signs indicate the inputs. The inverse of this matrix, often called the Leontief inverse, is useful in deriving the activity levels by considering the final demand for output of the sectors concerned:

$$Q_j = [I - A]^{-1} FX_j \quad (3)$$

The second argument in the production function represents the value-added relationships of the primary inputs, capital and labour services, with output. The proportion of value added in the total output remains constant, although the factor services are variable on account of substitution possibilities and variable prices of factors. Thus the coefficient  $v_j=VA_j/Q_j$  remains constant like  $a_{ij}$ .

The value added in a particular firm/sector may be represented by various technologies depending on the availability of data on elasticity parameters. In most cases either a CES or a Cobb-Douglas function is used for their desirable properties. The sector concerned hires the services of capital and labour factors, owned by the households, from the market. A typical firm within the sector concerned may be assumed to be price taker and cost minimizer subject to a given level of output so as to meet the market demands. Constrained optimization problem may be stated as:

$$\text{Minimize} \quad C_j = P_k K_j + P_l L_j; \text{ subject to } VA_j = V (K_j, L_j) \quad (4)$$

where  $j = 1,2,\dots,n$ ; and  $P_k, P_l$ , stand for rental prices of capital and labour.

This behaviour leads to factor demands per unit of value added. The derived factor demands (compensated) depend on factor prices and the level of output/value added. The solution algorithm finds these values under competitive conditions.

$$l_j = f(P_l, VA) \text{ and } k_j = f(P_k, VA) \quad (5 a,b)$$

## b. Consumption Behaviours

The households derive their income by selling the services of labour and capital factors to ultimate users against remuneration determined by market forces. A fraction of the income may be saved for future needs and the rest may be allocated to current consumption. This behaviour leads to demand for commodities meant for consumption and/or investment. The optimization problem of a typical household (h) may be stated as under:

$$\text{Max. } U_h = U [C_0, S_0]_h \quad \text{s.t. } P_0 C_0 + P_s S_0 = Y^d \quad (6)$$

In the above relation, " $Y^d$ " is the disposable income and  $C_0, S_0$  denote composite commodities for consumption and saving respectively. The Inter-temporal preferences of the households may be specified in terms of CES/LES functions in which the elasticities of substitution between current and future consumption play important role. The resultant demand functions are obtained with incomes and prices of composite commodities as arguments:

$$C_0 = f(Y^d, P_0, P_s)_h, \quad S_0 = f(Y^d, P_0, P_s)_h \quad (7)$$

The nominal expenditure incurred on consumption and saving goods may be expressed in terms of  $P_0 C_0, P_s S_0$ . The society may include a sizeable proportion of households whose incomes might not be sufficient enough to finance their present consumption needs even. The behaviour of a typical poor household can be specified accordingly:

$$\text{Max. } U_h = [(C_0 - B_0), S_0] \quad \text{s.t. } P_0 C_0 + P_s S_0 = Y^d \quad (6a)$$

In the above relation,  $B_0$  is a sub set of  $C_0$ , denoting the value of consumption goods necessary for sustenance. The said behaviour leads to the demand functions in the usual way which may also be expressed in terms of  $P_0 Z_0 = P_0 C_0 - P_0 B_0$ . The term  $P_0 Z_0$  denotes the consumption level of the household over and above the basic needs.  $Y^d - P_0 B_0$  then shows the income available after fulfilling such needs. It is just possible that  $Y^d - P_0 B_0$  is zero or negative for some poor sections of the society; and in case of strict inequality, the concerned household may be compelled to borrow so as to finance its present consumption needs.

In the second stage of the two-nested structure, the household concerned is required to allocate further the fraction of income meant for current consumption among the commodities available to him at the market prices. The optimization problem may be written in the condensed form as:

$$\text{Max. } U_c = U(X_1, X_2, \dots, X_m)_h \quad \text{s.t. } \sum P_j X_j = M = P_0 C_0, \text{ where } P_0 C_0 = Y^d - P_s S_0 \quad (7)$$

The sub-utility function  $U_c$ , may assume specific forms; the Cobb Douglas (CRS) being the most familiar. The resultant demand functions depend on household's income and market prices.

$$X_i = f(Y_m, P_i) \quad (8)$$

The composite price index  $P_0$  for the households can be obtained by considering the expenditure function. The formal technique is to substitute the ordinary demand functions in the contemporaneous utility function. This gives the indirect utility function ( $V_h$ ) with income and prices as arguments. The Expenditure function ( $E_h$ ) and the composite price index ( $P_0$ ) can be derived from this relation. Like-wise, the composite price index for the saving/ investment commodity can be derived easily, which is a weighted function of the



market prices of various items acquired for the purpose. These commodities add to the stock of fixed capital by the end of the accounting period.

It may be noted that the government provides "public goods" to the society free of direct user charge. As such these can be treated as exogenous arguments, and although the consumers derive utility from these goods, they have not been explicitly included in the utility functions described above.

### **c. Income Generation and Distribution**

Income is generated in the economy via the contribution of factors to the process of production. In nominal terms, it corresponds to the cost of production. The accrual of income to households or more correctly, the personal distribution depends on the ownership rights enjoyed by the entities concerned as well as on the financial set up which plays an important role.

The households are assumed to own capital and labour endowments. Labour includes all human efforts offered against wage, either fixed or imputed. The labour force may be assumed to grow overtime at a constant exponential rate "n". The capital endowments include all kinds of non-human assets. The endowments of land and other natural resources are assumed to be given. The services of factors are hired by the production sector and the governments at the market rates. This mechanism gives rise to the gross income of the households:

$$Y = C = P_k K + P_l L \quad (9)$$

The savings are assumed to be transformed into investment goods valuing  $P_i I_0$  through intermediation of banking system and stock markets. Part of the current investment is consumed to replace the worn-out capital goods while the remaining is used to purchase new goods, which add to the stock of the fixed capital by the end of accounting period. Each unit of capital good is expected to yield " $\lambda$ " units of capital services and each unit of these services bears a rental price  $P_k$  on selling the same to the ultimate user<sup>13</sup>. Thus the value of services generated per unit of capital good is given by  $\lambda P_k$  and the total return on current saving/investment is given by  $\lambda P_k I_0$ . The income so generated may be utilized to finance part of future consumption.

The households investing their savings through proprietorship, partnership or by purchase of equities/stocks of business firms are entitled to the (ex-post) rate of return " $r$ ", which is variable and determined by market forces.

$$r = (\lambda P_k) / P_i \quad \text{or} \quad P_i r = \lambda P_k \quad (10)$$

All savings translated into investment during the current period should add to stock of capital and simultaneously to the index of wealth by the end of the accounting period taking care for depreciation allowance. Thus both the capital stock and wealth grow over time at the rate determined by the market forces that determine the flow of savings.

<sup>13</sup> The share of capital in nominal GDP is  $\Pi = \lambda P_k K / VA$  which reflects the distribution aspects. The economy-wide capital-output ratio reflecting the production side is given by  $v = K/Q$ , where  $Q$  denotes the total output net of taxes. Then the relation  $(\Pi/v) * (VA/Q)$  indicates the number of units of services ( $\lambda$ ) produced by each unit of capital stock during the accounting period.  $P_k$  is assumed to be unity in the benchmark equilibrium.

The gross income of the household concerned then comprises wages and returns from capital assets (rents, rentals, royalties, interests and dividends). If the income tax rate is  $t_y$ , the basic tax rebate is  $B$ , and the transfer payment/receipt is  $R$ , then the disposable income of a typical household is given by:

$$Y^d = (1 - t_y)(Y - B) \pm R \quad (11)$$

#### d. Public Revenues

The government receives its share in the form of tax and non-tax revenues. Tax revenues include taxes on personal incomes and wealth/property, corporate profits and taxes on commodities. The non-tax revenues include the share in income from property and capital stock held by the government. Besides, the government may run deficits and create additional purchasing power to finance its expenditure.

Total tax revenue is given by:

$$TR = IT + PT + ST \quad (12 a)$$

$$\text{Income tax (personal)} \quad IT = t_y \sum_h \sum_{pop} (Y_h - B) \quad (12 b)$$

$$\text{Corporate income tax} \quad PT = t_k \sum_i \lambda P_k K_i \quad (12 c)$$

$$\text{Commodity tax} \quad ST = t_c \sum_j P_j FX_j, \quad j = 1, 2, \dots, n \quad (12 d)$$

In the above relations, " $t_y$ " is the income tax rate, " $Y_h$ " is the household income falling within group " $h$ " with a given population denoted by " $pop$ ", and " $B$ " is the basic exemption limit. Likewise " $t_k$ " is the profit tax, " $\lambda P_k K$ " is the operating surplus in the " $i$ th" incorporated industry, and " $t_c$ " is commodity tax (sales, excise, customs) rate and " $P_j FX_j$ " is the value of final demand (= output of  $i$ th industry).

#### e. Indices of welfare

The welfare gain/loss due to policy change can be studied in terms of Hicksian Equivalent Variations (HEV), which estimates the rate of change of utility due to policy change, given the original level of income of the households. However, in the context of the data at our disposal, the case of poor households needs somewhat different treatment. The poor households have to resort to borrowing or transfer payments to finance their needs since the disposable incomes may not be sufficient for the purpose and they may remain under the debt. Thus a reduction in the debt burden of the household concerned following a policy change, if any, may be treated as an increase in welfare, although his consumption level remains the same. With this innovation, the welfare effects of the policy concerned for the poor households may also be measured as under:

$$HEV = \frac{U^1 - U^0}{U^0} Y^0$$

$$HEV = (-) \left( \frac{D^1 - D^0}{D^0} \right) Y^0 \quad (13 a, b)$$

(for ordinary households)

(for low-income households)

$Y^0$  is the original disposable income of the household concerned in the above relations,  $U^1$  refers to the post-policy-change utility level and  $U^0$  is the original level, both estimated as the indirect utility,  $D^0$  and  $D^1$  refer to the pre and post-policy-change debt levels.



## References

### Present Study

Aziz, Shaukat (2001-02)- Budget Speech of the Minister for Finance and Economic Affairs, Government of Pakistan, Finance Division, Islamabad.

Govt of Pakistan, DPCO Ministry of Finance, (2008)- *Debt Policy Statement 2007-08* (31 Jan 2008)

Yasin, Hafiz Mohammad (2000) - *Poverty Elimination in Islamic Perspective*: paper presented to the 4<sup>th</sup> International Conference on Islamic Economics and Banking, held at Loughborough University, U.K. (13-15 August 2000). Printed in: "Islamic Economic Institutions and the Elimination of Poverty" (Edited: Munawar Iqbal)- The Islamic Foundation, Leicester, U.K. (2002).

----- (2001) -*The Debt Crisis of Pakistan and an Optimal Fiscal Policy*- paper published in *Pakistan Economic and Social Review: Volume XXXIX No.1&2*. Lahore.

----- (2003)- *Poverty, Inequality and the Debt Crisis of Pakistan: Inter-relationships and the Way Out* (mimeographed).

### Model Development

Akhtar, Sajjad (1994)- *Economic Reforms and the Environment in Pakistan*- Research Report No. 102. AERC, Karachi University, in collaboration with the Harvard Institute for International Development, Cambridge, Massachusetts, USA.

Ali, S. Aftab (1985,1986)- Analysis of inter-industry relations in Pakistan for 1975-76. *Pakistan Development Review (PDR)* 24: 3&4 and *PDR* 26:3&4. PIDE, Islamabad.

Ali, Shaukat (1985)- Household consumption and Saving Behaviour in Pakistan- An Application of the ELES. *PDR* 24:1.

Ballard, Fullerton, Shoven & Whalley (BFSW- 1985) - *A General Equilibrium Model for (U.S.) Tax Policy Evaluation*. Chicago University Press.

Battese G. and S.Malik (1987)-Estimation of Elasticities of Substitution for CES production functions for selected Manufacturing Industries in Pakistan. *PDR* 26:2.

Cohen, Havinga and Saleem (1985)- *A Social Accounting Matrix (SAM) of Pakistan for 1979-80*, printed in two volumes. PIDE, Islamabad.

Imam, Hassan (1984)- The welfare costs of Interest rate ceilings in developing countries, A General Equilibrium Approach- A case study of India, in Piggot and Whalley (Ed: 1985).

Imam, Hassan and Whalley (1982)- General Equilibrium with price intervention policies. *JPE*, Vol.18, No.1, pp. 105-19.

*The Debt Problem of Pakistan: What can we do?*

- Kazi et al (1976)- Production relationships in Pakistan Manufacturing Industries. *PDR* 25:4
- Kazmi, N. et al (1981)- Substitution elasticities in the small scale and household manufacturing industries of Pakistan. PIDE Research Report Series No.109, Islamabad.
- Kemal, A.R. (1981)- Substitution elasticities in the large scale manufacturing industries of Pakistan. *PDR* 20:1
- Khan, A. H. (1989)- The two level CES production function for the manufacturing sector of Pakistan. *PDR* 28:1
- Khan, A.H. and Rafique M. (1993)- Substitution among Labour, Capital, Raw material and Bank credit in Pakistan Manufacturing Sector. *PDR* 32:4 Papers and Proceedings PP 1259-66.
- Khan and Rafique (1993)-Substitution among Labour, Capital, Imported raw material and Bank credit in Pakistan manufacturing. *PDR* 32:4.
- Liviatan, Nissan (1966) -Multiperiod Future Consumption as an Aggregate. *AER* Vol. LVI No.4
- Mahmood, Zafar (1989)- Derived Demand for Factors in Large Scale Manufacturing Sector in Pakistan. *PDR* 28: 4(II)
- Malik et al (1988)- Estimation of elasticities of substitution for CES and VES Production Functions using firm level data for Food processing industries in Pakistan. *PDR* 27: 1
- (1989)- An analysis of Production relations in large scale Textile manufacturing sector. *PDR* 28:1
- (1993)- Capital and labour substitution in the large scale Food processing industry in Pakistan: some recent evidence. *PDR* 32: 4
- Saleem, Mohammad et al (1985)- *Final PIDE Input-Output Tables of Pakistan's Economy 1975-76*. PIDE Research Report series No.144, Islamabad.
- Serra-Puche James, J. (1979)- *A Computational General Equilibrium Model for the Mexican Economy*: Ph.D. dissertation- Yale University, New Haven.
- Shafique Dhanani (1988)- A SAM Based General Equilibrium Model of Pakistan Economy (1983-84 data). *PDR* 27:4
- Shoven and Whalley(Ed:1992)-*Applying General Equilibrium*. Cambridge Univ. Press.



Yasin, Hafiz Mohammad (1999)- *Consequences and Prospects of Islamization: An Applied general equilibrium Approach – with reference to Pakistan Economy* – Ph.D. dissertation submitted to the International Islamic University, Islamabad: Unpublished.

Zahid et al (1992)- Technical change, efficiency and capital-labour substitution in large-scale manufacturing. *PDR* 31:4

#### **Data Sources**

*Annual Reports* (1987-88 to 2006-07). State Bank of Pakistan, Karachi.

*Pakistan Economic Survey* (relevant issues). Economic Adviser's Wing, Finance Division, Government of Pakistan, Islamabad.

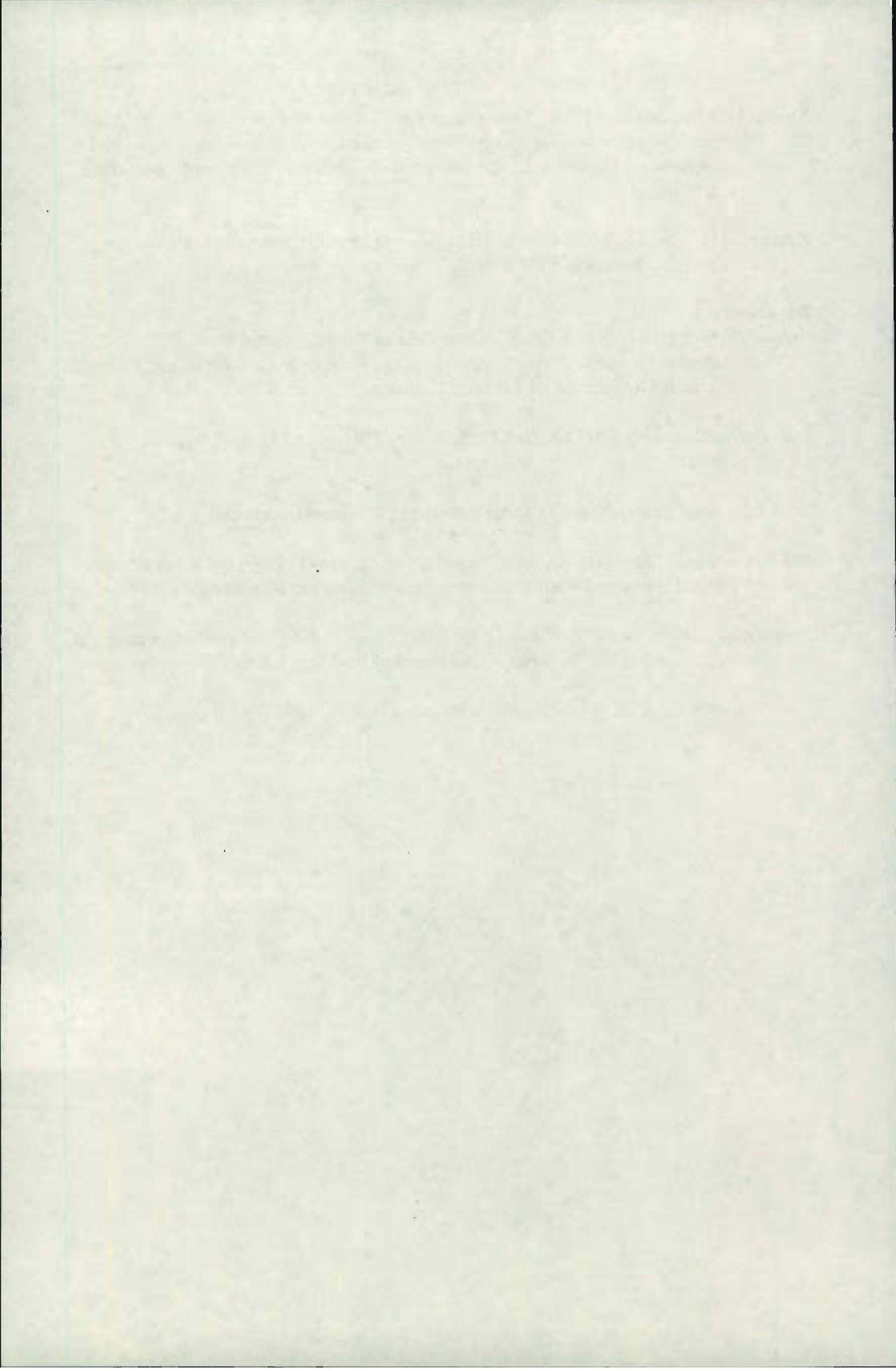
*Debt Policy Statement 2007-08, DPCO Ministry of Finance, Govt. of Pakistan (31 Jan 2008)*

*CBR Year Book* (relevant issues). Central Board of Revenues, Islamabad.

*HIES-Household Integrated (Income) Expenditure Survey- 1990-91* and other editions, Federal Bureau of Statistics, Government of Pakistan, Islamabad.

*Input-Output tables for 1989-90 and 1990-91* (published in 1995 and 2001 respectively), Federal Bureau of Statistics, Government of Pakistan, Islamabad.

*Government Finance Statistics YearBook* (relevant issues). IMF, Washington D.C.





## **Globalization and Socioeconomic Indicators in Pakistan**

*Haleema Sadia and Farooq Rasheed<sup>1</sup>*

**Abstract:** *The present study examines the impact of globalization on the socioeconomic indicators like population below poverty line, Gini Index, Human Development Index, lowest and top quintiles of population that share national income and unemployment. The analysis is carried out for two time periods 1980-2006 and 1990-2006. Volume of trade and foreign direct investment are used as proxies for openness and globalization. In both eras, the relative volume of trade is found to be significant. However, very low parametric values show very weak role played by relative volume of trade towards socioeconomic improvement. On the other hand, the foreign direct investment is found to be highly ineffective and insignificant variable to have any impact on socioeconomic factors. The impacting factors due to globalization are found to be so low that globalization on the whole has not yet produced any creditable results in Pakistan.*

### **1. Introduction**

Globalization refers to a process in which economic activities are effectively spread across the globe. The attainment of price equalization (or convergence both in input and output markets), free capital mobility and convergence in per capita income growth may also reflect the outcomes of this process. Today it is supposed to be a necessary integration of world markets and technologies. World Trade Organization (WTO) is rapidly assuming the role of a global government. WTO represents the rules-based, multilateral regime of the policies for globalization. The key system of belief of WTO is that the corporate interest should surpass all others interests. Usually, democratic processes that act on behalf of working people, labor rights, human rights, consumer rights, social justice, environmental protection and local culture etc., are the major focus of the globalization.

Some scholars view globalization as an ideology for economic liberalization across the globe that leads to make economies of the world more interrelated. However, the pace of adjustment mechanism for globalization varies a lot among nations and thereby, causes global inequality in terms of market access, particularly for the developing countries. The impacts of globalization on economies have, however, remained inadequately explained [for details see Santarelli and Figini (2004)].

Broadly speaking, the trade openness, national poverty and human development index can provide multidimensional impacts of globalization. Apart from international trade, globalization is also explained by liberalization of financial markets that

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brought forth a significant increase in capital flows represented by FDI. But there is a strong criticism on FDI that it is highly correlated with speculative capital movements, thus can draw insignificant results.

The objective of this study is to investigate a possible association between globalization process and social indicators in Pakistan. The remaining study is organized as follows. Following a review of the literature on globalization in section II, section III provides explanation of methodology and data, section IV provides results and section V provides the summary and conclusions.

## **2. Literature Review**

Historically the possible phases of globalization from 1870-2000 have been defined by O'Rourke and Williamson (2000); O'Rourke (2001); Maddison (2001); and Williamson (2002). The first phase of globalization is classified from 1870-1913, the second phase of globalization from 1950-1973 is considered as the golden age. The third phase of globalization is from 1973 and onwards. The intervening period of 1913-1950 is referred to as the period of de-globalization, mainly due to wars and the consequent recessions. Under these globalization phases, the convergence in per capita income and real wages were evident in Atlantic region. The golden age is however is appropriately explaining the impact of globalization for developed economies only.

Agenor (2003) also examined how globalization affects the poor especially in developing countries by looking at the factors like "trade openness" and "financial integration". The study uses regression analysis to relate globalization with poverty and various other macroeconomic variables. An inverted parabolic relationship between globalization and poverty was found. Our analysis is also based on the regression model.

By using trade and foreign direct investment data, Bhagwati (2000) inferred that globalization is both economically and socially important to improve human development index. The study provides helpful insights about the effects of globalization on human development index and economic growth.

Milanovic (2002) determines the effects of trade on poverty. The study show that the effects of openness on income distribution depend on the country's initial income level. At very low levels, only the rich benefit, but the situation changes as income levels rise. This proves that impact of globalization is not at all in accordance with the Pigou-Dalton principle (also known as transfer principle).<sup>2</sup>

Another study by Seshanna and Decornez (2003) substantiates that during the last 40 years the world has become richer and globally integrated with more polarized income distribution. Mahler (2001) uses three main modes of economic globalization

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<sup>2</sup> Pigou-Dalton principle states that if some income is transferred from richer to poor groups then there would be distribution of income in more egalitarianism manner [for details see Bismans *et al.* (2008)].



i.e., trade, foreign direct investment and financial openness. The study shows that these modes are related to distribution of disposable income and to earnings of the household but the relationship is not significant. This is not surprising since globalization does not seem to justify its impact on social welfare of a nation directly. Contrary to that, Pieterse (2000) argues that globalization involves a trend towards human integration, which is a long-term process with a high degree of irrationality.

Mayer (2001) finds that globalization improves access to new technologies and provides unique opportunities for poor countries to raise their incomes. The conclusion is doubtful. Nevertheless, there is evidence for an ever increasing income inequality and poverty levels in developing countries.

Attique *et al.* (2004) examine the impact of FDI on economic growth. The study concludes that FDI can stimulate economic growth under export promotion instead of import substitution policy. This conclusion might be helpful for a policy investigator to verify how exchange rate affects globalization. In this connection Aqeel and Nishat (2004) identify the determinants of growth in FDI in Pakistan. The authors find significant role of tariff rates, exchange rates and credit to private sectors and share price index as set of explanatory variables for FDI. Since we are not determining globalization, therefore these variables are not the proxies of globalization and hence are not included in our study.

We intend to examine as to how globalization has influenced Pakistan's economic and social indicators. The literature suggests that the information on trade openness and foreign direct investment represents globalization measures. Thus, objective of the present study is to analyze how the volume of trade (VOT) and foreign direct investment (FDI) respond to the socioeconomic indicators like Gini index (GI), proportion of population living below the poverty line (BPL), lowest and top population quintiles that share GDP (LQ and TQ), unemployment rate (UE), and human development index (HDI).

### **3. Data & Methodology**

The yearly data covering the period 1980-2006 are taken from various issues of *Social Policy and Development Centre* (SPDC) and *International Financial Statistics* (IFS). The dependant variables are volume of trade as ratio of gross domestic product (which is a measure of relative volume of trade: RVOT) and foreign direct investment as ratio of gross domestic product (that gives relative foreign direct investment: RFDI). The socio-economic indicators include Gini index (GI) that measures income concentration, percentage of population living below the poverty line (BPL)<sup>3</sup>, lowest and top population quintiles that share GDP (LQ and TQ), unemployment rate (UE) and human development index (HDI).

We estimate following equations to study the response of various socioeconomic indicators (SEI) to globalization represented by VOT and FDI by using OLS method. The estimation is done on the basis of one year lag in independent variables as it is

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<sup>3</sup> We followed the convention of one US\$ per day at PPP as poverty line.

expected that the globalization's bearing is not instantaneous on the social development perspective.

$$\ln(SEI_j) = \alpha_j + \beta_{1j} \ln(RVOT(-1)) + \beta_{2j} \ln(RFDI(-1))$$

where SEI is the  $j^{\text{th}}$  socioeconomic indicator and  $j$  takes values from 1 to 6. Thus we have estimated the model on the following categories of SEI.

|                      |                |                      |               |
|----------------------|----------------|----------------------|---------------|
| If $j=1 \Rightarrow$ | The SEI is BPL | If $j=2 \Rightarrow$ | The SEI is GI |
| If $j=3 \Rightarrow$ | The SEI is HDI | If $j=4 \Rightarrow$ | The SEI is LQ |
| If $j=5 \Rightarrow$ | The SEI is TQ  | If $j=6 \Rightarrow$ | The SEI is UE |

It is expected that the increasing values of RVOT and RFDI will decrease BPL that in turn increases LQ and decreases TQ. This decrease in TQ leads to a decrease in unemployment, increase in RGDP, GI and HDI. We performed the estimation on two samples. One sample uses data on Pakistan from 1980-2006 and the other from 1990-2006. The rationale behind second sub sample is to analyze as to how the increasing pace of globalization in Pakistan since 1990s is affecting the socioeconomic indicators. This is accomplished by comparing the results of both samples.

## **4. Results**

### **(a) Correlation Coefficients Analysis**

Table 4.1 shows the results of cross correlation coefficient between relative VOT and SEI, as well as between relative FDI and SEI (not their log values). All the variables show relatively very strong degree of correlations among each other and with the correct theoretical signs, with the exception of BPL-FDI pair.

### **(b) Mean and Variance Equality Tests**

Table 4.2 presents the results of the test of equality of mean and variance. The mean equality test is based on a single-factor analysis of variance. The basic idea is that if the subgroups have the same mean, then the variability between the sample means (between groups) should be the same as the variability within any subgroup (within group).

The variance equality test examines the hypothesis that the variances in all subgroups are equal against the alternative that at least one subgroup has a different variance. In only one case (the data series of TQ and UE) we find no equality exists in terms of variance. However, the single case found is not significantly casting doubts about the homogeneous nature of the data.

### **(c) Model Estimation**

In Table 4.3 we report the estimates of the model on the basis of the sample size 1980-2006 and 1990-2006. Considering first the 1980-2006 era, the two globalization proxies have shown contrasting responses. The response of RVOT is found to be significant in all cases at 1% level of significance. However, the RFDI has insignificant response on BPL and UE. The magnitude of elasticity measured in each case is less than unity, suggesting a very weak response of the globalization process in addressing social issues. Further, the weak response is not always found to be



associated with the correct theoretical sign. For instance, in the cases of BPL, LQ and UE, the signs are opposite to the expectations.

In case of 1990-2006 estimates, both the globalization representatives in our model have again shown quite contrasting results. The response of RVOT is significant in all the cases at 1% level of significance except one (UE) where the coefficient is significant at 5%. However, in the case of RFDI, none of the elasticity parameters is significant. For this sample too, the magnitudes of elasticity in each case is less than unity. Finally the issue of economic significance becomes worse as one more factor (GI) is added to the list of the parameters showing wrong theoretical sign. Results of both samples are suggesting that on the whole the globalization has not addressed socioeconomic issues even after 1990s.

## **5. Conclusion**

The impact of globalization on socio-economic development has most often remained an ignored area of research particularly in developing countries. The present study is an attempt to invite the attention of researchers towards this neglected but critical area of seeking a link between globalization and socio-economic development. Our findings suggest that policy makers need to review globalization policy. They have to set their own priorities about the extent and timing of globalization in the context of indigenous realities. Rapid globalization of 1990s has not brought any significant improvement in the socioeconomic scenario of the country. Threats of ISO certification for quality standards, labor safety and health related issues are always there for developing countries.

**Table 1: Correlation Coefficients**

|             | <b>BPL</b> | <b>GINI</b> | <b>HDI</b> | <b>LQ</b> | <b>TQ</b> | <b>UNEMP</b> |
|-------------|------------|-------------|------------|-----------|-----------|--------------|
| <b>RFDI</b> | 0.34       | 0.79        | 0.81       | -0.81     | 0.79      | 0.71         |
| <b>RVOT</b> | 0.59       | 0.94        | 0.91       | -0.90     | 0.92      | 0.83         |

**Table 2: Mean and Variance Equality Tests**

|           | Mean Equality |             | Variance Equality |               |
|-----------|---------------|-------------|-------------------|---------------|
| Variables | t-test        | Probability | F-test            | Probability   |
| BPL FDI   | 6.09          | 0.0000      | 4475              | 0.0000        |
| BPL RGDP  | 5.46          | 0.0000      | 175370            | 0.0000        |
| BPL GI    | 28.9          | 0.0000      | 28991             | 0.0000        |
| BPL HDI   | 28.8          | 0.0000      | 7833              | 0.0000        |
| BPL LQ    | 21.3          | 0.0000      | 9541              | 0.0000        |
| BPL TQ    | 22.5          | 0.0000      | 3.7               | 0.0015        |
| BPL UE    | 21.36         | 0.0000      | 4.8               | 0.0002        |
| BPL VOT   | 10.45         | 0.0000      | 3261771           | 0.0000        |
| FDI RGDP  | 4.4           | 0.0001      | 4.43              | 0.0001        |
| FDI GI    | 6.5           | 0.0000      | 1.3 E07           | 0.0000        |
| FDI HDI   | 6.5           | 0.0000      | 3.4 E6            | 0.0000        |
| FDI LQ    | 6.4           | 0.0000      | 427015            | 0.0000        |
| FDI TQ    | 5.7           | 0.0000      | 16853             | 0.0000        |
| FDI UE    | 6.4           | 0.0000      | 21822             | 0.0000        |
| FDI VOT   | 10.22         | 0.0000      | 728               | 0.0000        |
| RGDP GI   | 5.5           | 0.0000      | 5.0 E09           | 0.0000        |
| RDGP HDI  | 5.5           | 0.0000      | 1.4 E09           | 0.0000        |
| RGDP LQ   | 5.5           | 0.0000      | 1.6 E06           | 0.0000        |
| RGDP TQ   | 5.4           | 0.0000      | 660406            | 0.0000        |
| RGDP UE   | 5.5           | 0.0000      | 855156            | 0.0000        |
| RGDP VOT  | 8.9           | 0.0000      | 18.6              | 0.0000        |
| GI HDI    | 7.7           | 0.0000      | 3.7               | 0.0017        |
| GI LQ     | 73.1          | 0.0000      | 303.8             | 0.0000        |
| GI TQ     | 105.3         | 0.0000      | 7698.7            | 0.0000        |
| GI UE     | 12.08         | 0.0000      | 5945.5            | 0.0000        |
| GI VoT    | 10.47         | 0.0000      | 9.1 E10           | 0.0000        |
| HDI LQ    | 71.8          | 0.0000      | 82.1              | 0.0000        |
| HDI TQ    | 105.1         | 0.0000      | 2080.1            | 0.0000        |
| HDI UE    | 11.87         | 0.0000      | 1606.4            | 0.0000        |
| HDI VoT   | 10.47         | 0.0000      | 2.6 E10           | 0.0000        |
| LQ TQ     | 88.99         | 0.0001      | 25.33             | 0.0000        |
| LQ UE     | 4.35          | 0.0000      | 19.56             | 0.0000        |
| LQ VoT    | 10.47         | 0.0000      | 3.1 E08           | 0.0000        |
| TQ UE     | 71.1          | 0.0000      | <b>1.29</b>       | <b>0.5230</b> |
| TQ VoT    | 10.5          | 0.0000      | 1.2 E07           | 0.0000        |
| UE VoT    | 10.46         | 0.0000      | 159.5             | 0.0000        |



**Table 3: Estimation Results**

| For Sample 1980-2006 |                     |                      |                     |                | For Sample 1990-2006 |                    |                      |                    |                |
|----------------------|---------------------|----------------------|---------------------|----------------|----------------------|--------------------|----------------------|--------------------|----------------|
|                      | C                   | ln(RVoT(-1))         | ln(RFDI (-1))       | R <sup>2</sup> |                      | C                  | ln(RVoT(-1))         | ln(RFDI (-1))      | R <sup>2</sup> |
| ln(BPL)              | 1.15<br>(0.0000) *  | 0.004<br>(0.0042) *  | 0.002<br>(0.28)     | 63             | ln(BPL)              | 1.13<br>(0.0000) * | 0.008<br>(0.004) *   | -0.04<br>(0.69)    | 69             |
| ln(GI)               | 0.13<br>(0.0000) *  | 0.003<br>(0.0000) *  | 0.001<br>(0.09) *** | 89             | ln(GI)               | 0.33<br>(0.0000) * | -0.001<br>(0.0000) * | 0.03<br>(0.19)     | 79             |
| ln(HDI)              | 0.038<br>(0.0000) * | 0.009<br>(0.0000) *  | 0.007<br>(0.03) **  | 84             | ln(HDI)              | 0.42<br>(0.0000) * | 0.03<br>(0.0003) *   | 0.02<br>(0.39)     | 70             |
| ln(LQ)               | 0.41<br>(0.0000) *  | 0.006<br>(0.0000) *  | 0.004<br>(0.0004) * | 82             | ln(LQ)               | 2.20<br>(0.0000) * | 0.0016<br>(0.001) *  | -0.00002<br>(0.44) | 62             |
| ln(TQ)               | 1.37<br>(0.0000) *  | 0.0002<br>(0.0000) * | 0.0003<br>(0.09) ** | 86             | ln(TQ)               | 1.84<br>(0.0000) * | 0.0018<br>(0.0003) * | 0.0006<br>(0.57)   | 69             |
| ln(UE)               | 0.78<br>(0.002) *   | -0.12<br>(0.0005) *  | -0.008<br>(0.35)    | 68             | ln(UE)               | 0.40<br>(0.006) *  | -0.043<br>(0.02) **  | -0.011<br>(0.74)   | 53             |

\*, \*\* and \*\*\* represents significant at 1%, 5% and 10% respectively.

## References

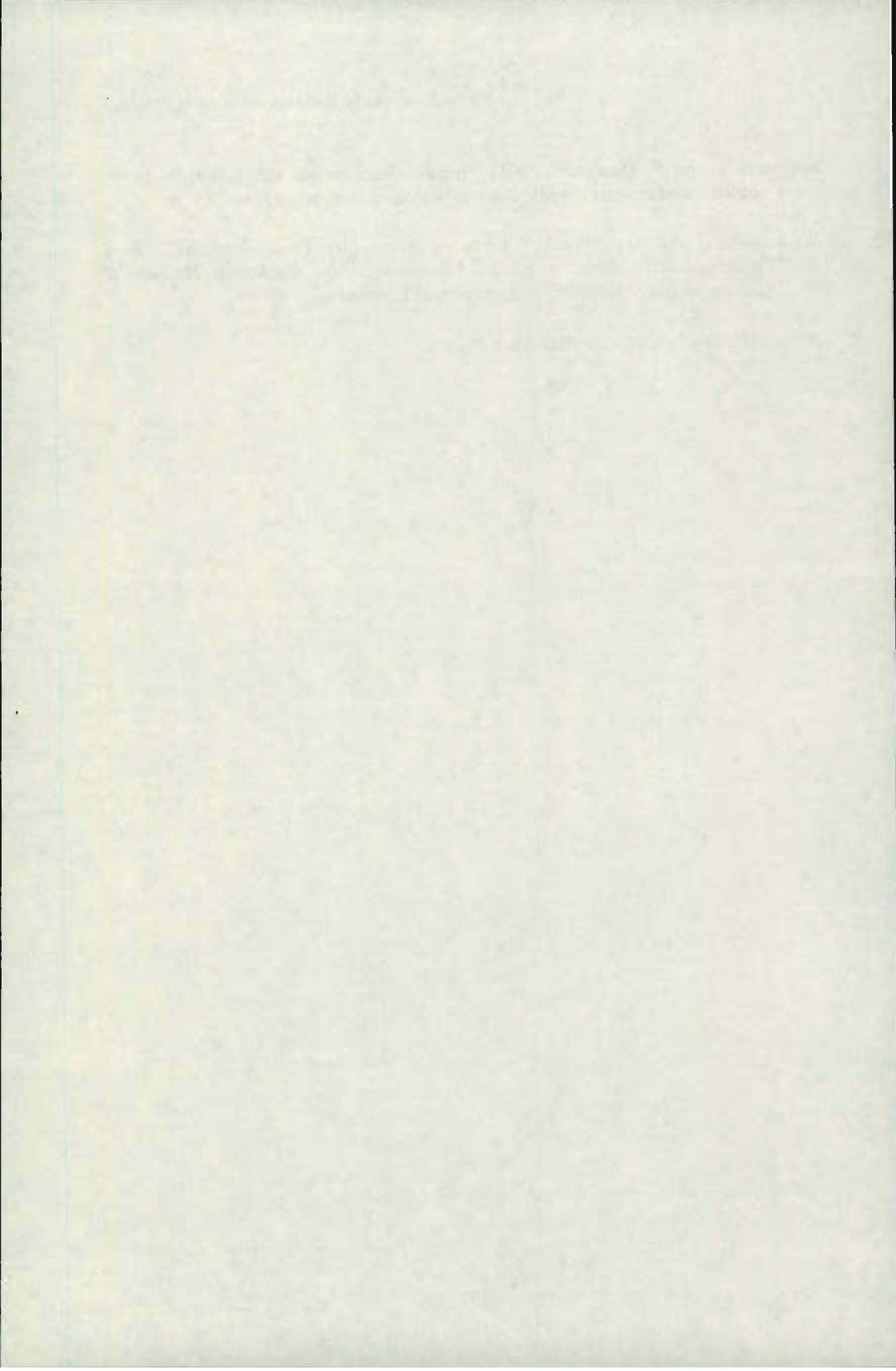
- Agenor, P. R. (2003), "Does Globalization Hurt the Poor?", *World Bank Policy Research Working Paper* 2003:2922.
- Aqeel, A and Nishat, M (2004), "The Determinants of Foreign Direct Investment in Pakistan", *Pakistan Development Review*, 43, 4, 651-662.
- Attique Z, Ahmad M. H. and Azhar, U. (2004), "The Impact of FDI on Economic Growth under Foreign Trade Regimes" *Pakistan Development Review*, 43, 4, 707-716.
- Bhagwati J. (2000), "Globalization and Appropriate Governance", *WIDER Annual Lecture 4, Helsinki*: UNU/WIDER. 32: 385-98.
- Bismans, Kristof, Lauwers, Luc, and Ooghe, Erwin (2008), "A Consistent Multidimensional Pigou-Dalton Transfer Principle" Center for Economic Studies, Discussion papers with Number ces0620
- Maddison A. (2001), "The World Economy: A Millennial Perspective", *Development Centre Studies*, Paris: OECD
- Mahler, V. A. (2001), "Economic Globalization, Domestic Politics and Income Inequality in the Developed Countries: A Cross-national Analysis", *Luxembourg Income Study Working Paper*, No. 273, Differdange, Luxembourg.
- Mayer J. (2001), "Globalization, Technology Transfer, and Skill Accumulation in Low Income, *WIDER Discussion Paper* 2001/39, Helsinki: UNU/WIDER. Mayer (2001)
- Milanovic B. (2002), "Can We Discern the Effect of Globalization on Income Distribution?", *Economic Journal* 112(476), 51-92
- O'Rourke K.H. (2001), "Globalization and Inequality: Historical Trends", *NBER Paper* 8339, Cambridge MA: NBER
- O'Rourke K.H. and J.G. Williamson (2000), "Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy, *Cambridge MA: MIT Press*
- Pieterse J.N. (2000), *Globalization and Human Integration: We Are All Migrants*. Pieterse J.N. *Futures* 32: 385-98
- Santarelli, E. and P. Figini (2004), "Does Globalization Reduce Poverty? Some Empirical Evidence for the Developing Countries", forthcoming in Lee, E. and M. Vivarelli (eds.), *Understanding Globalization, Employment and Poverty Reduction*, Geneva



Seshanna S. and S. Decornez (2003), "Income Polarization and Inequality across Countries: an Empirical Study, *Journal of Policy Modeling* 25(4): 335-58

Williamson, J. (2002), "What Washington Means by Policy Reforms", in J. Williamson (ed.), *Latin American Adjustment: How Much Has Happened?*, Washington (DC), Institute for International Economics

[www.spdc.org.pk](http://www.spdc.org.pk), [www.wto.org](http://www.wto.org), [www.imf.org](http://www.imf.org)





# **Current Food Security Situation: Challenges and Opportunities**

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## **1. Introduction**

The rising prices of food items in general and of wheat/atta in particular and shortages thereof in the last 12 months or so have highlighted the fragile situation of food security in the country. The unprecedented hike experienced in wheat prices immediately after the harvest of 2006-07 crops has cast doubts about the tall claims of the "record" crop production of 23.3 million tons, which had triggered its exports in 2007-08 wheat years. The average whole sale prices of wheat reported by the office of Agriculture and Livestock Marketing Advisor (ALMA) at Rs. 470 per 40 kg in January 2007 rose to Rs. 558 by December. The continued price escalation and recurring shortage of wheat/atta during the current year has also underlined the need for a critical look at the food production and marketing system and its statistical edifice.

To make a modest contribution in this context, I have reviewed the performance of three most important food grains of Pakistan: wheat, rice and maize from 1990-91 to 2006-07. I have had the privilege of discussing the emerging situation with some of the best crop scientists available in Islamabad. Based on these discussions and my own understanding of the issues in the food sector, I have highlighted the areas needing attention to avoid the recurrence of the situation witnessed on food security front in the recent past.

To put things in proper perspective, data on important aspects of wheat, rice and maize, from 1990-91 to 2006-07, have been analyzed and performance of these crops discussed in section 2. Estimates of per capita production of these crops, as worked out from the published data, are also reviewed in this section with their corresponding availability after incorporating relevant trade statistics on these commodities. The objective is to examine the integrity of recent crop statistics. The judicious use of fertilizers holds the key to increasing crop production and productivity and depends on the relationship between prices of fertilizer and commodities. The ratios between fertilizer and output prices for the period of 1991-2007 are reviewed in section 3 to examine the changes in the purchasing power of food grains in terms of the most important farm inputs. The commodity markets in Pakistan have experienced lot of interventions impacting on the incentives for various stake holders. Resulting distortions to the incentives in the production of food grains (wheat, rice and maize) are analyzed in section 4. Finally, opportunities and means for increasing production of food grains are discussed in the last section of the paper.

## **2. Production and Per Capita Availability of Food Grains: 1991-2007**

Annual cropped area in Pakistan hovers around 23 million hectares. Area under food grains (wheat, rice, jowar, bajra, maize, barley) in the recent past has averaged 13 million hectares. Area under three most important food grains: wheat, rice and maize

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have been reported in the recent past at 8.2, 2.59 and 1.2 million hectares, respectively. Population which in 1990-91 stood at 112.61 million has grown to 159.63 million by 2007<sup>2</sup>. Annual rate of increase in Population is estimated at 2.35 percent (Table 1). Accordingly, production of food grains must at least expand @ 2.35 percent per year. The per capita availability of crop area estimated at 0.48 hectares in 1990-91 has declined to 0.36 hectares; reflecting intensification of population pressure on farm resources.

Arable land and water, the life line of crop production in Pakistan, are facing increasing competition from non farm uses. Although substantial amount of cultivated area has been lost to housing, industrial and other non farm uses, however, the area statistics don't reflect this loss and crop area continues to be reported around 23 m hectares year after year. There is no scope for expanding crop area in the short run; and the long run expansion depends on the development of water resources. Thus the productivity of available resources devoted to crop production in general and food grains in particular must increase if food security situation is not allowed to deteriorate further.

The overall production of food grains (wheat, rice, jowar, bajra, maize, barley) in Pakistan has increased from 19.59 million tons in 1991 to 32.33 million in 2007 (an increase of 65 percent) as area under food grains expanded from 11.93 million hectares to 13.03 million (9 percent). The per capita production of food grains during 1991-07 is estimated to have increased from 174 kg to 203 kg @ 2.80 percent per year while the population grew @ 2.35 percent in this period. Area under food grains has expanded @ 0.42 percent a year. Annual growth rates in the area under food grain, production, and yield, as estimated from the data are summarized in Table 1 along with the growth rates in the use of fertilizers on these crops.

**Table -1: Annual Growth Rates: 1991- 07 (in percent)**

|                               | <i>Area</i> | <i>Production</i> | <i>Yield<br/>Kg/hector</i> | <i>Fertilizer use</i> |
|-------------------------------|-------------|-------------------|----------------------------|-----------------------|
| <b>Wheat</b>                  | 0.27        | 2.44              | 2.18                       | 4.30                  |
| <b>Rice</b>                   | 1.36        | 3.20              | 1.85                       | (-)1.95               |
| <b>Maize</b>                  | 1.06        | 5.73              | 4.68                       | (-)3.95               |
| <b>Average<br/>Food grain</b> | 0.42        | 2.80              | 2.95                       | 3.15                  |

**Note:** Growth rates calculated from time trend estimated from the equation:  
 $\ln Y = a + b t$ , based on data given at Annex I.

**Source:** Pakistan Economic Survey (Statistical Supplement) 2006-07.

The production of wheat, the staple food crop, is estimated to have increased @ 2.44 percent per annum during the reference period. A lion's share of this increase has been

<sup>2</sup> Pakistan Economic Survey (Statistical Supplement) 2006-07



contributed by increase in the yield while expansion in area has not been of much significance. It may be mentioned that wheat, the largest crop in terms of area covered, is annually cultivated over 8 million hectares. Further expansion in its area, even if otherwise feasible, will come at the expense of oilseeds and spring sown maize, etc. The rising yield during the reference period seems to have been made possible by the increasing use of fertilizer, estimated to have increased @4.30 percent per year. The wide gap between the growth rates in wheat yield and use of fertilizer nutrients may be noted. Higher rate of increase in fertilizer than that of wheat yield smacks of declining efficiency of fertilizer use in wheat production.

The production of rice, the second most important food grain and also an important export commodity, has increased at the rate of 3.20 percent per year. Both the horizontal expansion in its area, @1.36 percent per year, as well as vertical improvement in its productivity, @ 1.85 percent per year, has contributed to increase in rice production. It may be pointed out that rice is a high water delta crop. As canal water is not sufficient in many of the rice growing areas, recourse to tube well irrigation is required. In view of the rising prices of energy, tube-well irrigation has become very expensive and threatening rice farming in many regions. Given the water shortages, rising energy prices and competition from other crops as well as from non farm uses for land and water, further expansion in rice area may be neither feasible nor desirable. Another important aspect emerging from the analysis of data relating to rice production is the declining use level of chemical fertilizers on this crop. I am not sure what has caused the use rate of fertilizers to decline on rice and whether the information is reliable. The demand for fertilizers has been reported to be inversely related to prices (Ahmad, Nisar, Abdul Salam and Khaliq-ur-Rehman 2006). No doubt nominal fertilizer prices have seen substantial rise in the recent past but the real prices, during bulk of the period under review, have been rather stable. This aspect is explored in the next section of the paper. The declining use rate of fertilizer nutrients and combinations thereof needs an in depth analysis to understand the causal factors to reverse this trend so as to realize higher productivity in rice production.

Maize is a major food grain in the NWFP. Its production at the country level is estimated to have increased @ 5.74 percent per year. More than 80 percent of the increase in production seems to have been contributed by rising productivity and rest from the expansion in its area. It needs to be highlighted that cultivation of maize in some districts of the Punjab has experienced significant technological breakthrough. This breakthrough has been made possible by the widespread adoption of imported hybrid/ synthetic seeds and the related technology package yielding over 3 tons per acre. Farmers in some of the regions are raising 2-3 maize crops in a year. Declining fertilizer use rate as estimated from the available published data, however, does not seem to be compatible with the ground realities in maize farming.

The per capita domestic production of food grain (wheat, rice and maize, taken together), works out to 169, 200 and 199 kg for 1990-91, 1999-00 and 2006-07 respectively. Per capita availability of these food grains, after accounting for exports and imports, was estimated at 167 kg in 1990-91, 199 in 1999-00 and 173 in 2005-06.



During 2006-07 per capita availability of food grains comes to 181 kg (Annex II). Keeping in view this information, the per capita production of food grains as well their availability in the following consumption year was quite satisfactory. However, the rising prices of food items in general and of wheat and rice in particular cast doubts on the integrity of production data. During 2006-07 crop year, wheat production reported at 23.3 million tons reflects an increase of 10 percent over the previous crop. However, procurements of only 4.42 million tons by government agencies and the market prices rising above support price during the harvest season don't support the tall claims of record wheat production. It is worth mentioning that during 1999-00 crop year when wheat harvest touched 21 million tons, the government ended up buying 8.58 million tons and still could not protect support price of Rs. 300 per 40 kg. The extra ordinary rise in prices and recurring shortages of wheat flour experienced in 2007-08 and wheat procurements data don't support the claims of record wheat harvest in 2006-07. This calls for an overhaul of the crop reporting system to avoid a repeat of such situations in future. Manipulation of data on food grain may be more harmful than anything else.

### **3. Prices of Fertilizers and Food Grains**

Estimating the ratios between the prices paid for inputs and those received for outputs are helpful in ascertaining the economic environment, conducive or otherwise to the farmers for producing certain commodities. Fertilizer is one of the key inputs in farm production and judicious use of major fertilizer nutrients is imperative to raising productivity and overall production. The relationship between the prices of various fertilizer nutrients and output prices, *ceteris paribus*, plays a crucial role in encouraging their use level and consequently increasing crop production. The prices of principal fertilizer nutrients i.e. nitrogen, phosphorus and potash and those of wheat, rice (paddy) and maize have increased at varying rates. To examine the changes in the purchasing power of food grains in terms of fertilizers, the prices of nitrogen and phosphate, (the most commonly used nutrients in crop production in Pakistan), were divided by the prices of food grains. The resulting coefficients, which indicate the units of respective food grains required to purchase one unit of fertilizer nutrient, are set out in Tables 2 and 3 below.

$$\text{Value of Fertilizer per unit Value of Food Grain} = \frac{\text{Price of Fertilizer / Kg}}{\text{Price of food grain / Kg}}$$

#### **3.1. Commodity units needed to buy one unit of Nitrogen**

For having a better understanding of the relationship between prices of nitrogen and wheat, the reference period was divided into two sub periods: from 1990-91 to 1998-99 and from 1999-00 to 2006-07. The first sub-period (1991-99) was characterized by low purchasing power of wheat as the units of wheat required to buy one unit of nitrogen ranged from 2.51 to 2.86. But with the quantum increase of Rs. 60 per 40 kg in the support price of wheat for the 1999-00 crop situation sharply improved in favor of wheat. The units of wheat needed to buy one unit of nitrogen declined from 2.61 in 1998-99 to 2.00 in 1999-00. As the wheat price was not revised for the next 3 crop years its purchasing power went on declining vis-à-vis fertilizer until it reached to 2.44 in 2002-03. As subsequently wheat prices were revised upward, the ratio has since



ranged between 2.06 and 2.18 reflecting an improvement in purchasing power of wheat in terms of nitrogen.

For basmati growers, the period before 1999-00 crop was characterized by relatively high real prices of nitrogen as the units of basmati paddy sufficient to buy a given quantity of nitrogen ranged from 1.73 to 2.39. The subsequent period (save 2000-01) has required smaller quantities of paddy, ranging from 1.48 to 1.87 units. However, for Irri paddy and maize, even the latter period of analysis (i.e. after 1999-00 crop year) has not seen much improvement in their purchasing power in terms of nitrogen. The units of IRRI paddy which bought one unit of nitrogen from 1990-91 to 1998-99 ranged from 2.68 to 4.27 and in the years from 1999-00 to 2005-06 have varied from 2.43 to 3.68. Nevertheless the period of 2003-04 onward is characterized by improvement in purchasing power of Irri paddy. The same trend can be generated about maize as the units needed to buy a given quantity of nitrogen varying from 1.76 to 2.43 during 1991 to 1999 have ranged from 1.91 to 2.35 in the latter period.

**Table-2: Commodity Units to Buy One Unit of Nitrogen**

|         | Wheat | Basmati | IRRI | Maize |
|---------|-------|---------|------|-------|
| 1990-91 | 2.67  | 2.09    | 3.83 | 2.22  |
| 1991-92 | 2.55  | 2.00    | 3.23 | 1.94  |
| 1992-93 | 2.78  | 1.91    | 3.23 | 1.76  |
| 1993-94 | 2.62  | 2.16    | 4.27 | 2.41  |
| 1994-95 | 2.86  | 2.39    | 3.34 | 2.25  |
| 1995-96 | 2.76  | 2.07    | 2.64 | 1.90  |
| 1996-97 | 2.51  | 2.03    | 3.67 | 2.43  |
| 1997-98 | 2.57  | 2.07    | 3.00 | 2.10  |
| 1998-99 | 2.61  | 1.73    | 2.68 | 1.93  |
| 1999-00 | 2.00  | 1.66    | 2.95 | 1.91  |
| 2000-01 | 2.21  | 2.21    | 3.68 | 2.08  |
| 2001-02 | 2.36  | 1.87    | 3.43 | 2.35  |
| 2002-03 | 2.44  | 1.46    | 3.36 | 2.08  |
| 2003-04 | 2.14  | 1.48    | 2.91 | 2.25  |
| 2004-05 | 2.06  | 1.47    | 2.43 | 2.33  |
| 2005-06 | 2.16  | 1.67    | 3.09 | 2.12  |
| 2006-07 | 2.18  | 1.56    | 2.99 | 2.28  |

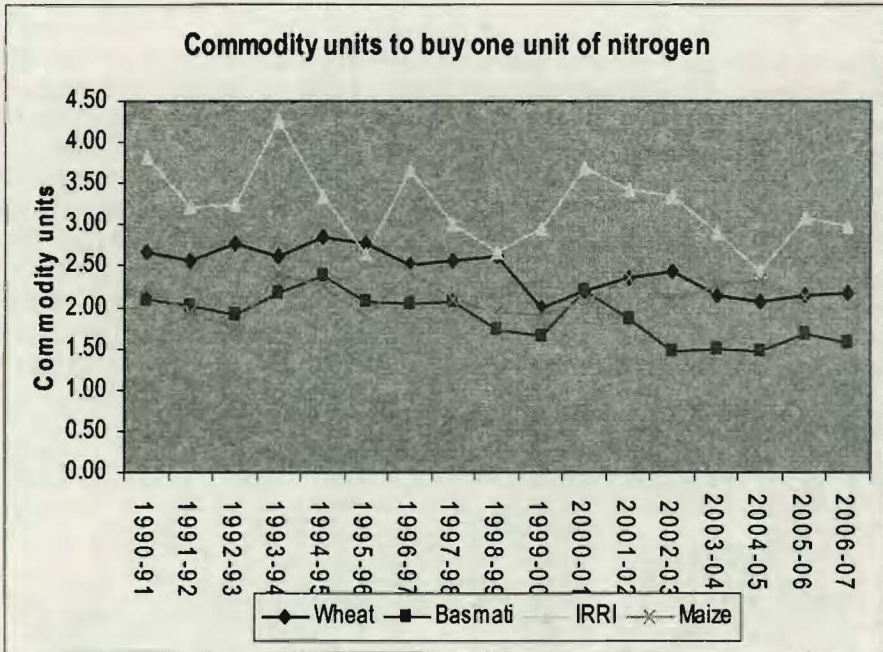


Fig. 1

### 3.2 Commodity units needed to buy one unit of phosphate

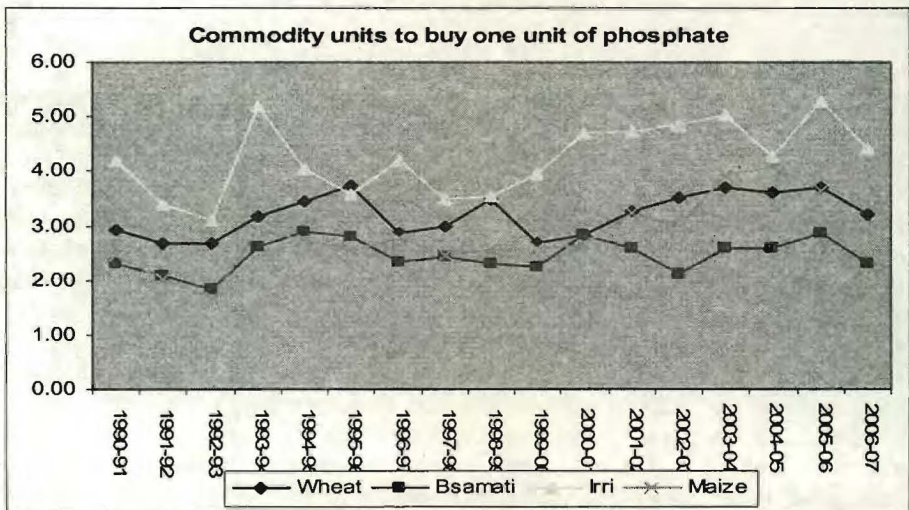
Data in Table 3 suggest that quantity of various food grains required to buy one unit of phosphate has been varying over time. However, year 1999-00 generally speaking was one of relatively lower phosphate prices and ever since higher and higher quantities of wheat, rice paddy and maize have been required to buy a given level of phosphate nutrients. In 2006-07 it required 20 percent more wheat, 41 percent more maize and 11 percent more paddy to buy a certain quantity of phosphate as compared to the corresponding quantities of respective commodities in 1999-00.



**Table- 3: Commodity Units to Buy One Unit of Phosphate**

|         | Kg    |         |      |       |
|---------|-------|---------|------|-------|
|         | Wheat | Basmati | IRRI | Maize |
|         | 2.93  | 2.30    | 4.21 | 2.44  |
| 1991-92 | 2.67  | 2.09    | 3.38 | 2.02  |
| 1992-93 | 2.68  | 1.83    | 3.11 | 1.69  |
| 1993-94 | 3.17  | 2.62    | 5.18 | 2.92  |
| 1994-95 | 3.46  | 2.89    | 4.04 | 2.72  |
| 1995-96 | 3.73  | 2.79    | 3.57 | 2.56  |
| 1996-97 | 2.87  | 2.33    | 4.20 | 2.77  |
| 1997-98 | 2.99  | 2.41    | 3.49 | 2.44  |
| 1998-99 | 3.47  | 2.30    | 3.56 | 2.56  |
| 1999-00 | 2.68  | 2.23    | 3.96 | 2.57  |
| 2000-01 | 2.82  | 2.82    | 4.70 | 2.65  |
| 2001-02 | 3.25  | 2.57    | 4.73 | 3.23  |
| 2002-03 | 3.52  | 2.13    | 4.84 | 3.00  |
| 2003-04 | 3.71  | 2.60    | 5.05 | 3.90  |
| 2004-05 | 3.60  | 2.65    | 4.26 | 4.07  |
| 2005-06 | 3.70  | 2.86    | 4.72 | 3.63  |
| 2006-07 | 3.22  | 2.30    | 4.41 | 3.50  |

**Note:** Author's calculations based on the data given at Annex II



**Fig. 2**

In the wake of rising prices of fertilizers in international market, the situation in 2004-05 became serious and untenable. Realizing the adverse consequences of rising

fertilizer prices for farm production, the Government had to reintroduce subsidy on fertilizers which had been abolished in the mid 90s. Fertilizer subsidy amounted to Rs. 8 billion in 2004-05 and it has reportedly crossed over Rs.16 billion by 2006 – 07. Fertilizer prices are reported to have escalated further in 2007-08 amid rising energy prices. This will further strain the situation in the coming crop year.

### **3.3 Need for a balanced use of Nutrients**

The reports available from the field on the use level of fertilizers and the mix of fertilizer nutrients have not been much encouraging. Agronomists recommend a judicious mix and balanced use of principal fertilizer nutrients of nitrogen, phosphorus and potash to harvest good crop yields. The use of fertilizers in Pakistan has been traditionally dominated by nitrogen, followed by a distant second place for phosphate and way behind for potash [Ahmad, Nisar, Abdul Salam and Khaliq-ur Rehman, (2006)].

According to the data reported by the National Fertilizer Development Centre (2008), of the total use of fertilizer nutrients of 1,893 thousand nutrient tons in 1990-91 nitrogen accounted for 77.7 percent, phosphate for 20.5 percent and potash for only 1.2 percent. During 2006-07 the shares of nitrogen, phosphate and potash in the overall fertilizer use of 3672 thousand nutrient tons stood at 72.1, 26.6 and 1.2 percent, respectively. In the wake of rising prices in world markets, Pakistan has experienced disproportionate increases in the prices of phosphate and potash fertilizers during 2007-08. This situation will adversely affect the cause of balanced use of fertilizers and improving productivity. In their quest for providing a favorable economic environment for sustainable fertilizer use, the policy makers may design a special package to encourage a balance in the use of various nutrients and to avoid waste in resource use.

## **4. Distortions in Producer Prices of Food Grains**

The commodity markets in Pakistan in general and food crops in particular have been subjected to many interventions such as fixation of output prices, restrictions on commodity movements, export tax /bans, import duty, restricting trade in private sector, etc. The types of interventions have been varying but their magnitude and impact is reflected in market prices of the commodities. The most common and pervasive intervention in food grains has been the establishment of support prices for wheat and rice (paddy) and restrictions on their movement across provinces and trade. Maize production and marketing, however, have not seen such direct interventions.

How Government interventions have distorted producer incentives can be ascertained by comparing the domestic prices with the corresponding world prices i. e. by calculating the nominal protection coefficients for various crops. The nominal protection coefficient is a ratio that contrasts the private commodity price with a comparable social price. This ratio indicates the impact of policy that causes a divergence between the two prices [Montek and Pearson (1989)]. As Pakistan has been a regular importer of wheat and exporter of rice, the relevant border prices are the import parity for wheat and export parity for rice (paddy). For maize, which has not



seen much international trade in Pakistan, the import parity price has been adopted as a measure of its opportunity cost.

Data on domestic producer prices of wheat, rice (paddy) and maize and their corresponding border prices are shown in Table 4. Notwithstanding many conceptual issues and practical problems and limitations of data involved in such comparisons, the results of the analysis suggest that domestic producers of these food grains have been at variance from the border price by a substantial margin. Domestic producers, by and large, have received much lower prices as compared to their counterparts in other countries.

The nominal protection coefficient (NPC) for wheat during the whole reference period 1990-91 to 2006-07 (save two years 2000-01 and 2001-02), was less than unity, ranging from 0.79 to 0.93, suggesting implicit taxation of wheat farmers and surplus producing regions in the country. The degree of taxation was on the decline in the recent past. However, the unprecedented hike in the international prices has reversed this trend.

It has been reported that imported wheat in the current year is likely to cost Rs. 1250 /40 kg. The support price for the 2007-08 crops has been set at Rs. 625 while prices in the open market during harvest season have been hovering above Rs. 750. In view of the wide gap between the support prices announced by the government (meant to provide a floor to the market prices), and the ruling market prices, farmers were naturally reluctant to sell their surplus at support price to government agencies. The press has highlighted the harsh administrative measures including the use of force and coercive power by the provincial and other agencies to procure wheat at support price of Rs 625 per 40 kg. Every ton of wheat procured at the support price has meant transferring from the farmers Rs. 3,125, if its opportunity cost is taken at domestic market price and Rs.15, 625 if opportunity cost (as should be the case) is taken at the import price. Accordingly, for each million ton of procurement, the government agencies have deprived the wheat farmers of Rs. 3.125 billion to Rs. 15.625 billion of income, depending upon the opportunity cost used in these calculations.

In case of rice, the other important food grain, the comparison of domestic and border prices of basmati and Irri paddy shows that their producers have experienced varying levels of incentive and disincentives overtime. The Nominal Protection Coefficient (NPC) ranging for basmati from 0.39 to 0.79 suggest, a very high level of implicit taxation of its growers and regions producing the commodity. Although, the degree of its implicit taxation had declined in the last few years but the current developments in the domestic and world markets may have again worsened the situation as the international prices have surged after the farmers had disposed off their paddy product.

Except for two years, 2003-04 and 2005-06, when the NPCs for IRRI exceeded unity indicating protection for the domestic producers, the rest of the period from 1990-91 to 2006-07 sows that IRRI producers have been implicitly taxed to varying extent as the NPCs ranged from 0.66 to 0.98. Here again taxation of producers which had been on



the decline seems to have increased in the wake of recent developments in domestic and world rice markets.

Maize producers have experienced a mixed bag of incentives during the reference period. In six years 1992-93, 1993-94, 1995-96, 1996-97, 1998-99, 1999-2000 the NPCs exceeded unity. Since 2000-01 the estimated NPCs for maize have been less than unity, reflecting taxation of maize farmers. Nevertheless, this taxation appeared to be on the decline in the recent past till the hike in prices of food grains triggered by the high energy prices and related developments of biofuels hit the situation.

The foregoing analysis of domestic and border prices of three most important food grains of the country has highlighted substantial resource transfers from the agriculture producers to other sectors; undermining farmers' incomes and their capacity for investments in productivity enhancing measures. This may have to do something with low farm productivity in the country. Other studies on the subject [Orden, et al.(2005), Orden, et al.(2006), Dorosh and Salam (2006) and Dorosh and Salam(2008)] have also highlighted the distortions in producer prices and their adverse implications for farm incomes, investment and rural poverty.

## **5. Opportunities for Meeting Food Security Challenges**

The review of domestic and border prices of wheat, rice and maize have indicated that domestic production of these crops have been generally subjected to implicit taxation as domestic prices have been less than the corresponding border prices. Occasionally, the crops enjoyed protection which perhaps coincided with falling prices in the world markets. Although, the degree of taxation and resource transfers from producers and surplus regions, of course, has varied from year to year, the farmer incomes and their purchasing power have been adversely affected in general. It is imperative to arrest resource transfers from agriculture and to adopt policies that improve farmers' economic environment and do not distort incentives at least so as to encourage farm investments. But this is only half of the story.

The other half relates to the development of productivity enhancing techniques and dissemination of relevant technologies. These would be adopted by the farmers, if easily available and also found economically viable in their environment. Taken together these steps i.e. reducing distortions in producer incentives, the provision of productivity enhancing inputs and access the technologies etc. constitute the necessary and sufficient conditions for addressing the supply shortages in food grains.

Although the role of public sector in trading over time has declined overtime and private sector has been more involved in the process, the current food crisis has exposed the fragile nature of government's commitments to the expanding role of private sector in food marketing. The harvesting of 2007-08 wheat crops has witnessed the revival of old policy tricks in wheat procurement drives of the provincial food departments: restrictions on the movement of wheat and atta, compulsory procurements of wheat from farmers involving huge transfer of resources. As these restrictions were not enough to deter the private sector there have been reports of impounding wheat



bought by the seed companies and the latter seeking indulgence of courts to carry their legitimate business activities [ *The Dawn* , dt. May 20, 2008]. The flour mills have also been discouraged directly as well as indirectly from purchasing wheat.

It is rather unfortunate that the same policy interventions that have discouraged investment in wheat production in the past are repeated every year at the time of wheat harvest which distorts the market and storage. We keep on paying lip service to the cause of agriculture, highlighting its role in development and reducing poverty but in practice making all the efforts pointing to the contrary. The end result of all this is inadequate market infrastructure, lot of waste in the public sector and huge resource transfers from agriculture. It ought to be recognized that unless and until we address the fundamental problems and causes of imbalance in demand and supply, these interventions are not going to help but aggravate the situation.

**Table - 4: Domestic and Border Prices of Wheat, Maize and Rice(paddy):1990-91 to 2006-07**

Prices Rs. Per Matric Ton

| Year    | Wheat          |              |      | Maize          |              |      | Rice - Basmati - Paddy |              |      | Rice - IRRI = Paddy |              |      |
|---------|----------------|--------------|------|----------------|--------------|------|------------------------|--------------|------|---------------------|--------------|------|
|         | Domestic price | Border price | NPC  | Domestic price | Border price | NPC  | Domestic price         | Border price | NPC  | Domestic price      | Border price | NPC  |
| 1990-91 | 2583           | 2829         | 0.91 | 3091           | 3657         | 0.85 | 3400                   | 8827         | 0.39 | 1650                | 2004         | 0.82 |
| 1991-92 | 2956           | 3307         | 0.89 | 3579           | 3776         | 0.95 | 3575                   | 5980         | 0.60 | 1825                | 1983         | 0.92 |
| 1992-93 | 3494           | 3993         | 0.88 | 4923           | 4070         | 1.21 | 3950                   | 5716         | 0.69 | 1950                | 2556         | 0.76 |
| 1993-94 | 3689           | 4411         | 0.84 | 4721           | 4174         | 1.13 | 4750                   | 6003         | 0.79 | 2125                | 2850         | 0.75 |
| 1994-95 | 4079           | 4806         | 0.85 | 4590           | 4745         | 0.97 | 4850                   | 6910         | 0.70 | 2250                | 2634         | 0.85 |
| 1995-96 | 4834           | 5523         | 0.88 | 5606           | 5064         | 1.11 | 4800                   | 6796         | 0.71 | 2565                | 3059         | 0.84 |
| 1996-97 | 4903           | 5735         | 0.85 | 6425           | 6023         | 1.07 | 5775                   | 7496         | 0.77 | 2800                | 4273         | 0.66 |
| 1997-98 | 6185           | 7799         | 0.79 | 6900           | 8806         | 0.78 | 7400                   | 9726         | 0.76 | 3220                | 4099         | 0.79 |
| 1998-99 | 7414           | 8352         | 0.89 | 7802           | 7639         | 1.02 | 7425                   | 11135        | 0.67 | 3825                | 4564         | 0.84 |
| 1999-00 | 7252           | 7458         | 0.97 | 7894           | 7490         | 1.05 | 9050                   | 12826        | 0.71 | 4375                | 5217         | 0.84 |
| 2000-01 | 7784           | 8134         | 0.96 | 7688           | 8229         | 0.93 | 9025                   | 15340        | 0.59 | 4625                | 5053         | 0.92 |
| 2001-02 | 8136           | 6268         | 1.30 | 7738           | 9089         | 0.85 | 7500                   | 15995        | 0.47 | 4500                | 4888         | 0.92 |
| 2002-03 | 7842           | 7395         | 1.06 | 8033           | 9565         | 0.84 | 9475                   | 16770        | 0.56 | 5150                | 5425         | 0.95 |
| 2003-04 | 8251           | 9085         | 0.91 | 8848           | 9790         | 0.90 | 12375                  | 17121        | 0.72 | 5450                | 5391         | 1.01 |
| 2004-05 | 9946           | 10457        | 0.95 | 8867           | 10034        | 0.88 | 12500                  | 17200        | 0.73 | 6425                | 6559         | 0.98 |
| 2005-06 | 11198          | 11987        | 0.93 | 9638           | 10865        | 0.89 | 13575                  | 18455        | 0.74 | 8450                | 7707         | 1.10 |
| 2006-07 | 10625          | 12000        | 0.89 |                |              |      | 13400                  | 17825        | 0.75 | 7225                | 7600         | 0.95 |

Note: Prices data from 1990-91 to 2005-06 adopted from Pakistan Agricultural Prices Distortions; World Bank Working Paper (2006).

And for 2006-07 adopted from the wheat and rice policy reports of Agricultural Prices Commission (2007).



## **6. Concluding Remarks**

Let it be known that there is a vast potential for increasing yield. The gap between yields of progressive farmers; making judicious use of crop production technology, and those of average farmers making only sporadic use of such measures for various social, economic other factors is large [Salam, Siddiqui and Zaidi, (2002)]. The gap needs to be bridged through adopting all possible measures. Let me hasten to add that new technologies from the research system have been slow in forthcoming. Linkages between the research system and the extension network and between this network and farmers are rather weak. The administrative measures in the garb of devolution plan have not been of much help in this context either.

Wheat varieties currently under cultivation were developed more than 15 years ago. These have lost their vigor and become susceptible to rust and other diseases. New varieties with higher yield potential need to be developed but progress on this front is quite slow. Wheat farming, which until recently has been free from insect attacks and did not need spraying of insecticides, is becoming vulnerable. A new challenge in wheat cultivation in the form of attack of black 'tela' (aphids) is emerging in many of the wheat growing regions of the country. God forbidding if this menace becomes wide spread this will reduce production on the one hand and raise cost of production on the other..

In addition to plant breeding and development of new varieties which is a time consuming process, addressing various agronomic aspects of food grains production like plant population, seed rate, method and time of sowing, intercultural, crop rotation, etc. offer substantial potential for increasing production in the short run. Most of the research efforts in agriculture in the past have been directed at the development of new varieties and research on agronomic issues cited above have not received the attention they deserve. With the intensive and continuous cropping, the role of judicious and balanced use of fertilizer nutrients and adequate plant protection measures has become crucial. The cultivation of cereal crops is characterized by high infestation of weeds, which directly compete for plant nutrients. Experts are of the view that these weeds cause 10-15 percent loss in production during a crop year, which the country can ill afford in this period of rising costs and food deficits.

In case of rice, the major factors responsible for low crop yields are zinc deficiency, low plant population, (50-55 thousand plants against the recommended level of 80-100 thousands per acre) cultivation of old varieties of coarse rice and unbalanced use of fertilizers besides least attention to soil amendments like gypsum[Salim, et al, (2003)].

In maize farming, a breakthrough in its production is on the cards through the use of imported hybrid and synthetic seed. Farmers have adopted the technology package and gained valuable experience in its cultivation. However, there is need for the development of domestic seed production technology to minimize dependence on imported seed and to reduce cost of its cultivation.

### *Current Food Security Situation: Challenges and Opportunities*

For sheer survival in the ever increasing competitive world and rising competition, the research and development system in support of agriculture needs to be strengthened. The neglect of the system, the paucity of resources and lack of conducive environment in the past forced many a brilliant scientists to seek green pastures elsewhere which has constrained the promotion of knowledge based farming. The country can hardly afford to rely on old technologies and methods of crop husbandry if future challenges in food security are to be met with. This will require according a high priority to the provision of resources and strengthening of research and development efforts in agriculture sector and a fair treatment to the scientists.

From the way prices of various inputs especially energy based, have gone up and continue to grow indefinitely, it seems the era of cheap foods and agricultural raw materials is left far behind. Every effort needs to be made to economize the use of inputs and fine tune the management practices at the farm level to increase efficiency and productivity. This has become all the more important since the gap between domestic and border prices has narrowed down and competition in the world markets become intense.

The system of data relating to estimation of crop area, yields and production is outdated and needs a critical evaluation for reviving the confidence and serving as a sound basis for policy formulation. For example the claims of record wheat harvest in 2006-07 were not borne out by collateral factors and other information like prices. The doubtful production statistics by encouraging exports and introducing false sense of satisfaction contributed to the aggravation of wheat crisis. Had the system of providing crop statistics been robust, the adoption of timely measures could have averted the crisis. However developing a foolproof system will require the provision of resources and commitment at the highest level.



# **Annex I. Area, Production, Yield and Fertilizer Use on Food Grains and Population: 1990-91 to 2006-07**

| Year    | Wheat   |            |       |            | Rice   |            |       |            | Maize  |            |       |                 | Population |
|---------|---------|------------|-------|------------|--------|------------|-------|------------|--------|------------|-------|-----------------|------------|
|         | Area    | Production | Yield | Fertilizer | Area   | Production | Yield | Fertilizer | Area   | Production | Yield | Fertilizer used |            |
|         | 000 ha* | 000 tons   | Kg/ha | Kg/ha      | 000 ha | 000 tons   | Kg/ha | Kg/ha      | 000 ha | 000 tons   | Kg/ha | Kg/ha           |            |
| 1990-91 | 7,911   | 14,565     | 1,841 | 112        | 2,113  | 3,261      | 1,543 | 90         | 845    | 1,185      | 1402  | 90              | 112.61     |
| 1991-92 | 7,878   | 15,684     | 1,991 | 112        | 2,097  | 3,243      | 1,546 | 90         | 848    | 1,203      | 1419  | 89              | 115.54     |
| 1992-93 | 8,300   | 16,157     | 1,947 | 122        | 1,973  | 3,116      | 1,579 | 109        | 868    | 1,184      | 1364  | 99              | 118.5      |
| 1993-94 | 8,034   | 15,213     | 1,894 | 126        | 2,187  | 3,995      | 1,827 | 98         | 879    | 1,213      | 1380  | 98              | 121.48     |
| 1994-95 | 8,170   | 17,002     | 2,081 | 126        | 2,125  | 3,447      | 1,622 | 103        | 890    | 1,318      | 1481  | 98              | 124.49     |
| 1995-96 | 8,377   | 16,907     | 2,018 | 141        | 2,162  | 3,967      | 1,835 | 116        | 939    | 1,504      | 1602  | 107             | 127.51     |
| 1996-97 | 8,109   | 16,651     | 2,053 | 133        | 2,251  | 4,305      | 1,912 | 112        | 928    | 1,491      | 1607  | 112             | 130.56     |
| 1997-98 | 8,355   | 18,694     | 2,237 | 142        | 2,317  | 4,333      | 1,870 | 120        | 933    | 1,517      | 1626  | 122             | 133.48     |
| 1998-99 | 8,230   | 17,858     | 2,170 | 142        | 2,424  | 4,674      | 1,928 | 57         | 962    | 1,665      | 1731  | 60              | 136.69     |
| 1999-00 | 8,463   | 21,079     | 2,491 | 152        | 2,515  | 5,156      | 2,050 | 61         | 962    | 1,652      | 1717  | 66              | 139.76     |
| 2000-01 | 8,181   | 19,024     | 2,325 | 164        | 2,377  | 4,803      | 2,021 | 67         | 944    | 1,643      | 1740  | 70              | 142.86     |
| 2001-02 | 8,057   | 18,226     | 2,262 | 165        | 2,114  | 3,882      | 1,836 | 75         | 942    | 1,664      | 1766  | 70              | 145.96     |
| 2002-03 | 8,034   | 19,183     | 2,388 | 171        | 2,225  | 4,479      | 2,013 | 73         | 936    | 1,737      | 1856  | 72              | 149.03     |
| 2003-04 | 8,216   | 19,500     | 2,373 | 178        | 2,461  | 4,848      | 1,970 | 70         | 947    | 1,897      | 2003  | 76              | 150.47     |
| 2004-05 | 8,358   | 21,612     | 2,586 | 221        | 2,520  | 5,025      | 1,994 | 88         | 982    | 2,797      | 2848  | 56              | 153.96     |
| 2005-06 | 8,448   | 21,277     | 2,519 | 225        | 2,621  | 5,547      | 2,116 | 87         | 1,042  | 3,110      | 2985  | 55              | 156.77     |
| 2006-07 | 8,538   | 23,295     | 2,728 | 215        | 2,581  | 5,438      | 2,107 | 85         | 1,017  | 3,088      | 3036  | 54              | 159.63     |

\*ha = hectore

National Fertilizer Development Centre for data on fertilizers.

## Current Food Security Situation: Challenges and Opportunities

**Annex II : Production and Availability of Food Grains in Pakistan : 1990-91 to 2006-07**  
(Kg/capita)

| Year    | Per Capita Domestic Production of |      |       |       | Per Capita Availability of |      |       |       |
|---------|-----------------------------------|------|-------|-------|----------------------------|------|-------|-------|
|         | Wheat                             | Rice | Maize | Total | Wheat                      | Rice | Maize | Total |
| 1990-91 | 129                               | 29   | 11    | 169   | 138                        | 18   | 11    | 167   |
| 1991-92 | 136                               | 28   | 10    | 174   | 153                        | 15   | 10    | 179   |
| 1992-93 | 136                               | 26   | 10    | 173   | 161                        | 18   | 10    | 188   |
| 1993-94 | 125                               | 33   | 10    | 168   | 141                        | 25   | 10    | 176   |
| 1994-95 | 137                               | 28   | 11    | 175   | 158                        | 13   | 11    | 181   |
| 1995-96 | 133                               | 31   | 12    | 175   | 148                        | 19   | 12    | 178   |
| 1996-97 | 128                               | 33   | 11    | 172   | 147                        | 19   | 11    | 178   |
| 1997-98 | 140                               | 32   | 11    | 184   | 171                        | 17   | 11    | 199   |
| 1998-99 | 131                               | 34   | 12    | 177   | 154                        | 21   | 12    | 188   |
| 1999-00 | 151                               | 37   | 12    | 200   | 164                        | 23   | 12    | 199   |
| 2000-01 | 133                               | 34   | 12    | 178   | 126                        | 18   | 12    | 156   |
| 2001-02 | 125                               | 27   | 11    | 163   | 115                        | 15   | 11    | 141   |
| 2002-03 | 129                               | 30   | 12    | 170   | 128                        | 18   | 12    | 158   |
| 2003-04 | 130                               | 32   | 13    | 174   | 130                        | 20   | 13    | 163   |
| 2004-05 | 140                               | 33   | 18    | 191   | 143                        | 14   | 18    | 175   |
| 2005-06 | 136                               | 35   | 20    | 191   | 141                        | 12   | 20    | 173   |
| 2006-07 | 146                               | 34   | 19    | 199   | 147                        | 14   | 19    | 181   |

**Notes:** Per capita production estimated by dividing the annual production of respective crops by the corresponding Population. Availability estimates arrived at by accounting for exports and imports for the respective crops. Data on production, exports, imports and population obtained from Economic Survey (St. Supplement) 2006-07



**Annex-III: Prices of Major Fertilizer Nutrients and Food Grains” 1990-91 to 2006-07**

| Year    | Weighted prices of fertilizer nutrients |                    |        | Producer prices ( Nominal) of various crops |                  |                         |       |
|---------|---|--------------------|--------|---|------------------|-------------------------|-------|
|         | Nitrogen                                | Phosphate<br>Rs/kg | Potash | Wheat<br>(S. Pr)                            | Basmati<br>paddy | Irri paddy<br>Rs./40 kg | Maize |
| 1990-91 | 7.47                                    | 8.21               | 5.47   | 112   | 143              | 78                      | 134   |
| 1991-92 | 7.91                                    | 8.27               | 6.2    | 124   | 158              | 98                      | 163   |
| 1992-93 | 9.05                                    | 8.71               | 7.31   | 130   | 190              | 112                     | 206   |
| 1993-94 | 10.47                                   | 12.69              | 10.79  | 160   | 194              | 98                      | 174   |
| 1994-95 | 11.45                                   | 13.85              | 12.06  | 160   | 192              | 137                     | 204   |
| 1995-96 | 11.95                                   | 16.14              | 13.22  | 173   | 231              | 181                     | 252   |
| 1996-97 | 15.05                                   | 17.21              | 16.1   | 240   | 296              | 164                     | 248   |
| 1997-98 | 15.39                                   | 17.91              | 18.48  | 240   | 297              | 205                     | 293   |
| 1998-99 | 15.68                                   | 20.81              | 17.86  | 240   | 362              | 234                     | 325   |
| 1999-00 | 14.99                                   | 20.11              | 22.68  | 300   | 361              | 203                     | 313   |
| 2000-01 | 16.55                                   | 21.15              | 18.6   | 300   | 300              | 180                     | 319   |
| 2001-02 | 17.69                                   | 24.37              | 25.35  | 300   | 379              | 206                     | 302   |
| 2002-03 | 18.31                                   | 26.37              | 25.2   | 300   | 502              | 218                     | 352   |
| 2003-04 | 18.7                                    | 32.44              | 30.68  | 350   | 505              | 257                     | 332   |
| 2004-05 | 20.56                                   | 35.96              | 30.54  | 400   | 560              | 338                     | 353   |
| 2005-06 | 22.37                                   | 38.39              | 39.77  | 415   | 537              | 290                     | 423   |
| 2006-07 | 23.17                                   | 34.18              | 36.38  | 425   | 594              | 310                     |       |

Notes and data sources: prices of fertilizers obtained from the National Fertilizer Development Centre. Prices of wheat, rice paddy obtained from the reports of Agriculture Policy Institute and those of maize from ALM

## **References**

- Agricultural Prices Commission: *Support Price Policy Reports for Wheat* (Various crop years).
- Agricultural Prices Commission: *Support Price Policy Reports for Rice (Paddy)* (Various crop years)
- Ahmad, Nisar, Abdul Salam and Khaliq-ur Rehman. (2006). *The Impact of Deregulation on the Fertilizer Sector and Crop productivity in Pakistan*. Rome: Food and Agriculture Organization and Islamabad: National Fertilizer Development Centre.
- Agriculture Livestock and Marketing Advisor, Ministry of Food and Agriculture.
- Dorosh, Paul A., and Abdul Salam. (2006). *Distortions to Agricultural Incentives in Pakistan*. World Bank Agricultural Distortions Research Project Working Paper XX.
- Dorosh, Paul A., and Abdul Salam. (2008). Wheat Markets and Price Stabilization in Pakistan: An Analysis of Policy Options. *Pakistan Development Review*. Vol.47.No.1 (Spring 2008) pp 71-87.
- Government of Pakistan. (2008). *Pakistan Economic Survey (Statistical Supplement) 2006-07*.
- Montek, Eric A. and Scott R. Pearson. (1989). *The Policy Analysis Matrix for Agricultural Development*. Ithaca and London: Cornell University Press.
- National Fertilizer Development Centre.(2008). *Pakistan Fertilizer Related Statistics*
- Orden, David, et al.( 2005). *The Impact of Global Cotton Markets on Rural poverty in Pakistan*. Pakistan Poverty assessment Update Background Paper Series, Pakistan Resident Mission Asian development Bank.
- Orden, David, et al.( 2006). The Impact of Global Cotton and Wheat Prices on Rural Poverty in Pakistan. *Pakistan Development Review*. Vol. 45, Number 4 (Winter 2006)
- Salam, Abdul, M.B. Siddiqui and Syed Wasim Raza Zaidi.(2002). *Economics of Wheat Production: Results from Field Surveys in Punjab and Sindh*. Islamabad: APCOM Series No. 202.
- Salim, M. et al. (2003). *Rice A Production Handbook*. Islamabad: Pakistan Agricultural Research Council.
- The Dawn*. May 20, 2008. Seed firms move Lahore High Court against raids.



# Impact of Higher Wheat Prices on Poverty in Pakistan: Futuristic of Food Security

Abid A. Burki & Mushtaq A. Khan<sup>1</sup>

**Abstract:** *This paper examines the impact of recent wheat price boom on poverty distribution, and welfare gain/loss to wheat consumers and producers in Pakistan. We evaluate the impact of higher wheat prices on poverty by conducting simulation analysis on the basis of data from the Pakistan Integrated Household Survey 2001-02. The findings of this paper suggest that, in general, wheat price hike brings about only marginal decrease in poverty by reducing initial poverty rates in rural areas and increasing poverty in urban areas. However, if international price of wheat is passed-on to consumers, then national (overall) poverty is estimated to increase by 16% while urban poverty to increase by 66%. While higher wheat prices place additional burden on net wheat consumers, we detect that most of the wheat consumers, especially those who are below the poverty line, reside in rural areas. Failure to pass-on international price of wheat to consumers results in a deadweight loss to the tune of Rs.214 billion while urban consumers gain a hefty amount of Rs.47 billion from the policy of price freeze at Rs.625 (per 40 kilo).*

## 1. Introduction

The price of wheat has witnessed a dramatic increase in the international market over the last three years. This increase is part of a global surge in food prices attributed to soaring oil prices, rising demand for food and climate change. The World Bank estimates that doubling of food prices over the last three years could potentially push around 100 million people in low-income countries deeper into poverty. Clearly, large increases in food prices are likely to have drastic impact on real income of poor households in these countries.

Pakistan is also one of those countries where food price increases have raised widespread concerns about its impact on poor people. However, the impact on poverty of higher wheat prices would largely depend on the relative gains of price hike to net producers and net consumers of wheat. For example, if these prices are passed on to consumers, food security of urban poor may be at stake; if wheat farmers are allowed to benefit from the price boom, rural poverty levels may come down. Nonetheless, no systematic evidence is available on how higher wheat prices influence relative poverty of producer and consumer groups in Pakistan.

In this paper we try to investigate as to how wheat price increases, such as those observed in recent years, are likely to affect the poverty distribution in Pakistan? We evaluate the impact of higher wheat prices on poverty by conducting simulation

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analysis on the basis of household data drawn from the *Pakistan Integrated Household Survey 2001-02*. We consider two recently observed prices and one international price and employ the cutoffs for basic needs to evaluate the effects on overall poverty, as well as for rural and urban areas, for the four provinces and poverty by producer and consumer groups. The results suggest that wheat price hike brings about only marginal decrease in poverty by reducing initial poverty rates in rural areas and increasing in urban areas. However, if international price of wheat is passed-on to consumers in Pakistan then national poverty is estimated to increase by 16% while urban poverty is estimated to increase by 66%. In general, while higher wheat prices place additional burden on net wheat consumers, we detect that most of the wheat consumers, especially those who are below the poverty line reside in rural areas. Failure to pass-on international price of wheat to consumers results in a deadweight loss to the tune of Rs.214 billion while urban consumers gain a hefty amount of Rs.47 billion from the policy of price freeze at Rs.625 (per 40 kg).

The layout of the paper is as follows. Section outlines some salient features of Pakistan's wheat economy. Section 3 describes the methodology for simulating the effects of higher wheat prices. Section 4 analyses the estimation results and examines their implications. Section 5 presents our conclusions.

## **2. Salient Features of Pakistan's Wheat Economy**

The main task of this section is to look at the salient features of Pakistan's wheat economy. We examine trends in production, cultivated area, yields, net imports, prices and consumption over the last 40 years. Previous research suggests that these questions can be conveniently reviewed by classifying this time-frame into distinct periods [Murgai et al. (2001)]. Therefore, we divide the years from 1966 to 1994 into three distinct periods, namely (1) the green revolution period (1966–74), depicting diffusion of high yielding varieties of seeds leading to dramatic increase in production; (2) the input intensification period (1975–85), which refers to a period of rapid use of fertilizer and capital inputs; (3) the first post-green revolution period (1986–94), or the period when the use of modern inputs reached at a saturation point and (4) we add into this classification the second post-green revolution period (1995–2005), which refers to the period when Pakistan embarked on market liberalization and economic reforms.

Table 1 presents the trend in harvested area, wheat production and yield since 1960/61. We also estimate growth trends in each of the four periods defined above by a spline function given by

$$100 \times \ln(y_t) = \alpha_0 + \beta_1 w_1 + \beta_2 w_2 + \beta_3 w_3 + \beta_4 w_4,$$

where

$y_t$  = yield in year  $t$ ;

$w_1$  =  $t$ ; (for  $1966 \leq t \leq 1974$ )

$w_2$  = 0 if  $t \leq 1974$ ;

=  $t - 1974$  if  $t > 1974$ ;



$$\begin{aligned}w_3 &= 0 \text{ if } t \leq 1985; \\&= t - 1985 \text{ if } t > 1985; \\w_4 &= 0 \text{ if } t \leq 1994; \\&= t - 1994 \text{ if } t > 1994.\end{aligned}$$

The coefficients in this spline function give differences in trend growth between succeeding periods identified above. We estimate the spline functions by employing data obtained from FAOSTAT. The actual and predicted differences in trends in succeeding periods based on spline functions are displayed in Figures 1 to 3.

Wheat yield, which was stagnant prior to 1966, witnessed nearly two-fold increase in production during the green revolution. The yield increased from 760kg per hectare in 1965/66 to 1248kg in 1973/74. This is also indicated by growth in yield at the rate of 5.78% per annum during the green revolution period. It is also noteworthy that growth in wheat yield during the green revolution period is significantly higher than the trend growth for the entire period, i.e., 1965/66 to 2004/05. After a promising start up, growth in per hectare yield decreased to nearly 2% during the intensification period, and to only 1.6% during the first post-green revolution period. This decline in growth happened despite a consistent increase in input use in the study period. Byerlee and Siddiq (1994) attributed this problem to poor quality of ground water resources, inefficient use of fertilizer and increased losses on account of weeds and pest/diseases. In the second post-green revolution period, while the area under wheat cultivation remained stagnant, the production consistently grew nearly at the trend rate for the entire period. Figure 1 to 3 clearly shows that significant increase in wheat yield took place in the second post-green revolution period.

**Table 1: Trends in Harvested Area, Wheat Production and Yield in Pakistan**

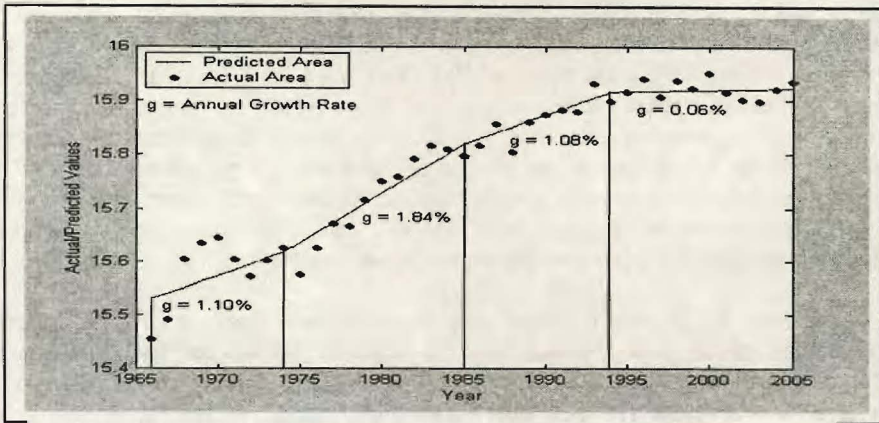
| Year/Period  | Area<br>(million ha)       | Production<br>(million MT) | Yield<br>(kg/ha)           |
|--|----------------------------|----------------------------|----------------------------|
| 1960/61  | 4.64                       | 3.81                       | 822                        |
| 1965/66  | 5.15                       | 3.92                       | 760                        |
| 1973/74  | 6.11                       | 7.63                       | 1248                       |
| 1984/85  | 7.26                       | 11.70                      | 1612                       |
| 1994/95  | 8.03                       | 17.00                      | 2081                       |
| 1995/96  | 8.38                       | 16.91                      | 2018                       |
| 1996/97  | 8.11                       | 16.65                      | 2053                       |
| 1997/98  | 8.35                       | 18.69                      | 2238                       |
| 1998/99  | 8.23                       | 17.86                      | 2170                       |
| 1999/00  | 8.46                       | 21.08                      | 2491                       |
| 2000/01  | 8.18                       | 19.02                      | 2326                       |
| 2001/02  | 8.05                       | 18.22                      | 2263                       |
| 2003/03  | 8.03                       | 19.18                      | 2389                       |
| 2003/04  | 8.22                       | 19.50                      | 2373                       |
| 2004/05  | 8.34                       | 21.59                      | 2589                       |
| Annual Growth Rates from the Spline Functions        |                            |                            |                            |
| Green Revolution:<br>1965/66 – 1973/74               | 1.10%                      | 6.87%                      | 5.78%                      |
| Intensification:<br>1973/74 – 1984/85                | 1.83%                      | 3.83%                      | 2.00%                      |
| First Post-Green<br>Revolution: 1986/87-<br>1993/94  | 1.08%                      | 3.05%                      | 1.97%                      |
| Second Post-Green<br>Revolution: 1995/96-<br>2004/05 | 0.10%                      | 2.25%                      | 2.19%                      |
| <b>Overall Growth:<br/>1965/66 – 2004/05</b>         | <b>[1.29%]<br/>(21.01)</b> | <b>[3.90%]<br/>(28.01)</b> | <b>[2.61%]<br/>(26.85)</b> |

**Note:** Overall growth rates in square brackets were not based on the spline functions. These Numbers indicate trend growth in the study period. Numbers in parentheses are *t*-values.

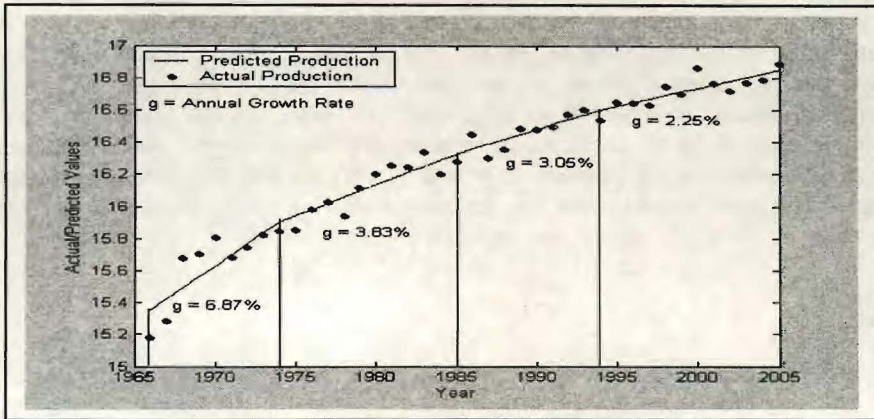
**Source:** Authors' estimations based on data from FAOSTAT, electronic data files

Table 2 shows that Pakistan has a long history of being an importer of wheat, except for a few years from 2000/01 and 2003/04. In recent years, the highest wheat import was recorded as 4.1 million tones in 1997/98 while the magnitude of Pakistan's wheat export has remained much smaller (mostly to Afghanistan) with the exception of 2001-02 and 2003-04 when 1.3 million and 1.1 million tones of wheat was exported, respectively. Even though the overall supply response of farmers depends on relative profitability of competing crops, the rising support price of wheat has always played an important role in generating incentives for enhancing wheat production. As part of commodity liberalization policies, wheat price after 1995 gradually moved closer to the border parity price, exceeding it for the first time in 2002. Procurement price of wheat increased from Rs.173 per 40kg in FY1995 to Rs.400 in FY2005 showing 131% increase.

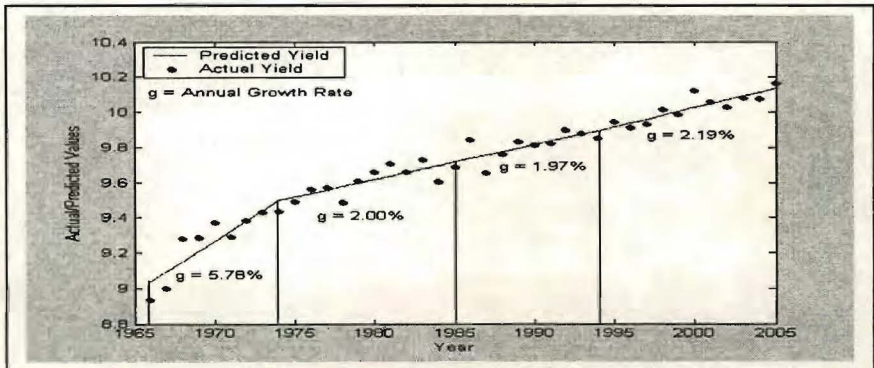




**Fig. 1: Growth in Wheat Area Harvested, 1966–2005**



**Fig. 2: Growth in Wheat Production, 1966–2005**



**Fig. 3: Growth in Wheat Yield, 1966–2005**

Table 3 presents growth rate in wheat price per 40 kg in US dollars at the official exchange rate for the four distinct periods. In the green revolution period, wheat price fell at the rate of 0.74% per annum even at the fixed exchange rate, which may be attributed to a steep fall in the value of Pak rupee vis-à-vis US dollar in 1972 and stagnant wheat prices. Wheat price increased rapidly at the rate of 4.18% per annum in the intensification period due to rising support price and fixed exchange rate regime until 1982. While wheat support price again fell at about 1% per annum in the first post-green revolution period under a managed float exchange rate regime, there was a significant increase in wheat price at 1.26% per annum in the second post-green revolution period under a freely floating exchange rate regime.

Table 4 indicates that per capita wheat production increased nearly at 23% per annum in the intensification period, which slowed down to 4% in the first post-green revolution and to only 1.1% increase in the second post-green revolution period. Population however increased from only 62 million in the green revolution period to nearly 140 million in 2002/03. It is evident that wheat production has generally failed to keep pace with the growth in per capita consumption. The average per capita wheat consumption has grown at the rate of 4.6% in the intensification period and close to 6% in the first post-green revolution period. In other words, growth in consumption per capita has far exceeded growth in population, which may be attributed to supply of subsidized wheat grain and flour until 1987. However, in the second post-green revolution period the per capita wheat consumption has increased at 1.6% per annum, which is lower than the population growth (2.7%) for the first time in Pakistan's history. This may be due to the fact that people also use other commodities as staple food besides wheat (like maize, rice, bajra etc.)



**Table 2: Trends in Procurement and Import/Export of Wheat, 1987/88 – 2003/04**

| Year    | Production<br>(million<br>tones) | Export<br>(million<br>tones) | Import<br>(million<br>tones) | Net<br>Export<br>(million<br>tones) | Procurement<br>(million<br>tones) | Procurement<br>Price<br>(Pak Rs.<br>40kg) |
|---------|----------------------------------|------------------------------|------------------------------|-------------------------------------|-----------------------------------|---|
| 1987/88 | 12.67                            | 0.006                        | 0.601                        | -0.595                              | 3.98                              | 82.50                                     |
| 1988/89 | 14.42                            | 0.002                        | 2.171                        | -2.169                              | 3.49                              | 85  |
| 1989/90 | 14.32                            | 0.002                        | 2.047                        | -2.045                              | 4.14                              | 96  |
| 1990/91 | 14.56                            | 0.002                        | 0.972                        | -0.97                               | 4.41                              | 112                                       |
| 1991/92 | 15.68                            | 0.003                        | 2.018                        | -2.015                              | 3.16                              | 124                                       |
| 1992/93 | 16.16                            | 0.004                        | 2.868                        | -2.864                              | 3.25                              | 130                                       |
| 1993/94 | 15.21                            | 0.008                        | 1.902                        | -1.894                              | 4.12                              | 160                                       |
| 1994/95 | 17.00                            | 0.004                        | 2.717                        | -2.713                              | 3.64                              | 160                                       |
| 1995/96 | 16.91                            | 0.008                        | 1.968                        | -1.96                               | 3.74                              | 173                                       |
| 1996/97 | 16.65                            | 0.005                        | 2.500                        | -2.495                              | 3.45                              | 240                                       |
| 1997/98 | 18.69                            | 0.009                        | 4.088                        | -4.079                              | 2.73                              | 240                                       |
| 1998/99 | 17.86                            | 0.009                        | 3.240                        | -3.231                              | 3.98                              | 240                                       |
| 1999/00 | 21.01                            | 0.061                        | 1.048                        | -0.987                              | 4.07                              | 300                                       |
| 2000/01 | 19.02                            | 0.835                        | 0.149                        | 0.686                               | 8.58                              | 300                                       |
| 2001/02 | 18.23                            | 1.280                        | 0.267                        | 1.013                               | 4.08                              | 300                                       |
| 2002/03 | 19.18                            | 0.64                         | 0.267                        | 0.373                               | 4.04                              | 300                                       |
| 2003/04 | 19.50                            | 1.14                         | 0.148                        | 0.992                               | 3.51                              | 350                                       |
| 2004/05 | 21.11                            | 0.006*                       | 1.50*                        | -1.494                              | 4.73                              | 400                                       |

Sources: GoP (2005) and Food Balance Sheets, FAOSTAT, electronic data files.

\* indicates data was obtained from USDA Electronic Data Base.

Because the average per capita consumption of wheat has increased (from 121 kg to 123 kg) and the average share of wheat in total calories of consumption has gone down (from 44% in the post-green revolution period to nearly 41% in the post-reform period), it clearly implies that total per capita consumption of food or calorie intake has actually gone up despite the rising wheat prices. Therefore, any food security concerns that are usually attributed to the rising market prices of wheat are largely absent from the wheat market in Pakistan. In sum, market liberalization and economic policy reforms initiated in 1995 have resulted in significant improvement in wheat production and have changed the incentive structures for wheat producers who appear to have responded to pricing policies in the product and factor markets.

**Table 3: Annual Growth in Price of Wheat from Spline Function**

| Period                                     | Growth of Procurement Price<br>(per 40 kg) |
|--|--|
| Green Revolution (1965 – 74)               | - 0.74%                                    |
| Intensification (1975 – 85)                | 4.18%                                      |
| First Post-Green Revolution (1986 – 94)    | -0.99%                                     |
| Second Post-Green Revolution (1995 – 2004) | 1.26%                                      |

*Source:* Authors' estimations based on data taken from Government of Pakistan (2005).

**Table 4: Changes in Imports, Government Stocks  
and Consumption of Wheat in Pakistan**

| Average value of                   | Green<br>Revolution<br>period:<br>1965/66 –<br>1973/74 | Intensificatio<br>n period:<br>1974/75 –<br>1984/85 | First Post-<br>Green<br>Revolution<br>period:<br>1985/86 –<br>1993/94 | Second<br>Post-<br>Green<br>Revolution<br>period:<br>1994/95 –<br>2002/03 |
|------------------------------------|--|---|---|---|
| Population (million)               | 62.02  | 81.61   | 110.56  | 139.12  |
| Wheat production ('000 MTs)        | 6335   | 10224   | 14330   | 18292   |
| Wheat production (kg/capita/year)  | 102  | 125   | 130   | 131   |
| Imports ('000 MTs)                 | 804  | 842   | 1654  | 1671  |
| Exports ('000 MTs)                 | 32   | 37  | 4   | 425   |
| Net imports ('000 MTs)             | 772  | 805   | 1650  | 1246  |
| Net imports/production (%)         | 12.19  | 7.87  | 11.51   | 6.81  |
| Govt. wheat stocks ('000 MTs)      | 283  | -635  | -1121   | -603  |
| Govt. wheat stocks/production (%)  | 4.47   | -6.21   | -7.82   | -3.30   |
| Wheat consumption (kg/capita/year) | 109.30   | 114.40  | 121.00  | 122.90  |
| Calorie share (%)                  | 42.45  | 43.37   | 43.63   | 40.68   |

*Source:* FAOSTAT, electronic data files.



### 3. Methodology

While it is generally realized that high wheat prices lead to diverse impact on poverty, no systematic evidence is available on how higher wheat prices influence relative poverty of consumer and producer groups. A key determinant in this regards is the distribution of net consumers and producers of wheat. This information is usually obtained from nationally representative household surveys.

The empirical framework used in this paper for simulation analysis was first introduced by Minot and Daniels (2005) to study the impact of low cotton prices on poverty in Benin. This approach has been used to assess the effects of prices on poverty in various other settings, including the impact of global cotton markets on rural poverty in Pakistan [e.g., Orden et al. (2005)].

Following Minot and Daniels (2005), and Orden et al. (2005), let the change in per capita income/expenditure for households and growers due to a change in wheat price be calculated from

$$\Delta y_i = \frac{1}{N_i} (q_{wi} \Delta p_w)$$

where  $\Delta y_i$  is the change in per capita income/expenditure of the  $i$ th household on account of change in the price of wheat;  $q_{wi}$  is the quantity of wheat produced, or received in the form of in-kind transfers in lieu of wages (or gifts) by the  $i$ th household (family);  $\Delta p_w$  is the change in price of wheat; and  $N_i$  depicts the number of members in the  $i$ th household. We note that  $q_{wi} = 0$  for households who do not grow wheat, or receive in-kind transfers. In effect, the direct impact of a change in wheat price on income/expenditure of this group is zero. On the contrary,  $q_{wi} > 0$  for households who do grow wheat or receive in-kind transfers. For such households, a higher wheat price implies higher income/expenditure, or  $\Delta y_i > 0$ .

The same formula is used for the consumers to calculate change in their expenditures, and, therefore,  $\Delta y_i < 0$ <sup>2</sup>. However, the change in wheat price will not affect income of the consumers. In this manner, income/expenditure changes are calculated for each sample household with higher wheat prices. Increase in wheat price will affect the expenditure needed to come out of poverty and therefore the poverty line would be adjusted for changes in wheat price weighted by the share of wheat expenditures in the poverty line.

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<sup>2</sup> If wheat price increases, the per capita expenditure must also increase ( $\Delta y_i > 0$ ) for the consumers.

For simulation purposes, we use the head count ratio of poverty, which gives us the relative incidence of the poor, or the number of people below the poverty line. If we denote expenditure (income) by  $y_i$ , where the subscript  $i$  refers to  $i$ th individual, the poverty line by  $p$  and the number of individuals below the poverty line by  $H$ , then the head count ratio ( $r$ ) is given by

$$r = \frac{H}{n} \times 100$$

where  $n$  is the total population in the reference group. Distributional sensitivities in poverty measures are addressed in the class of poverty measures proposed by Foster, Greer and Thorbecke (1984). To illustrate, for any power ( $\alpha$ ), the Foster-Greer-Thorbecke measure is defined as

$$r_\alpha = \frac{1}{n} \sum_{y < p_i} \left[ \frac{p - y_i}{p} \right]^\alpha$$

where the measure is just the head count ratio when  $\alpha = 0$ ; the measure is the poverty gap ratio when  $\alpha = 1$ ; and the measure takes into account the degree of inequality and severity of poverty among the poor households when  $\alpha = 2$ . For the present application, we just take the assumption of  $\alpha = 0$ .

#### **4. Simulating the Effects of Higher Wheat Prices on Poverty**

We evaluate the impact of higher wheat prices on poverty by carrying out simulation analysis on the basis of household level data obtained from the *Pakistan Integrated Household Survey* (PIHS) 2001-02. More specifically, we consider the impact of recently observed increase in wheat price on overall poverty in Pakistan as well as on poverty differentials of the relevant groups. We may take 2001-02 as the base year, since it depicts a period of low price (Rs. 300/= per 40 kg). Next we carry out the simulation exercise by considering two recently observed domestic prices, and one international price. The domestic prices incorporated in the analysis are Rs.425/= and Rs.625/= per 40 Kg of wheat observed in FY2007 and FY2008, respectively. The international price selected for the analysis is the price of imported wheat, as the cost-insurance-freight (cif) price, which depicts the opportunity cost of producing wheat in Pakistan. The cif price of wheat is calculated on the basis of actual price (average) of imported wheat paid by Pakistan, which comes out to be Rs.1329/= per 40 kg during FY2008 [FBS (2008)].<sup>3</sup>

We use the cutoff level of Rs.723.4 for basic needs as reported in *Pakistan Economic Survey*, indicating the income/expenditure required to achieve the minimum calories of

<sup>3</sup> The cif price quoted here does not include in-land transportation cost and handling and storage costs incurred by the government. The dollar value of wheat imports are converted into Pak rupees by using the dollar-rupee conversion rate of Rs.68.5.



2350 per adult equivalent [GoP (2007)].<sup>4</sup> In the base year, the share of expenditure on wheat flour in the poverty line comes to be Rs.58.59 (8.099%) per person per month considering the procurement price of wheat as Rs.300/= per 40kg. The wheat prices of Rs.425/=, Rs.625/= and Rs.1329/= are used to inflate the basic poverty line of Rs.723.4 per person per month to get new poverty lines of Rs.732.2, Rs.763.83 and Rs.875.24, respectively.<sup>5</sup> When poverty line is inflated this way to accommodate rising wheat prices, it increases poverty of the households concerned whose incomes remain unchanged. We assume that additional income accruing to wheat growing households from higher wheat prices will be utilized to finance the increased household consumption expenditure.

The simulated effects of higher wheat prices on poverty based on PIHS 2001-02 micro data are reported in Table 5 to Table 7. Poverty is also estimated for rural and urban areas of Pakistan and for the four provinces. The baseline headcount poverty in Pakistan is 34.6%, which is consistent with the poverty estimates reported by GoP (2007). The impact of wheat price hike in Pakistan, as observed in recent years, on the poverty distribution is reported in Table 5. This shows that while an increase in wheat price from Rs.300/= to Rs.425/= is estimated to reduce national poverty by 1.3 percentage points, the distributional effects of this change are trivial to be noticed across rural and urban divide as well as for the four provinces. However, when wheat price is increased from Rs.300/= to Rs.625/= per 40 kg (or 108% rise), it is estimated to reduce the initial poverty rates from 40.4% in rural areas (wheat producers and consumers) to 37.1% (representing 8.2% reduction in poverty) and increase the initial poverty rates from 20.5% in urban areas (wheat consumers only) to 23.8% (representing 16% increase in poverty). Taken together, this price increase significantly reduces poverty in Punjab and Sindh (two major wheat producing provinces) while marginally increases poverty levels in NWFP and Balochistan, which are the wheat deficit provinces.

When we conduct simulation analysis by incorporating the international price of wheat (averaged at Rs.1329/= per 40kg), the national and regional poverty levels are estimated to increase significantly. This price hike is estimated to increase poverty from 33.3% to 40% (or 20.1% increase in national poverty). Urban consumers are estimated to bear most of the brunt of this price change as indicated by 14 percentage point increase in the number of people below poverty line (or 66.34% increase in poverty). This price change is also estimated to bring about major increase in poverty in NWFP and Balochistan to the tune of 38.7% and 41%, respectively.

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<sup>4</sup> This approach assumes that the households whose food expenditures are equal to the food poverty line would also be able to satisfy their basic needs.

<sup>5</sup> By inflating the cutoffs in this way enables us to keep the absolute poverty line constant overtime after adjusting for increase in wheat price only.

**Table 5: Simulated Effects of Higher Wheat Prices on Poverty by Regions**

| Regions     | Baseline poverty at wheat price of Rs.300 | Poverty at wheat price of Rs.425 | Poverty at wheat price of Rs.625 | Poverty at wheat price of Rs.1329 |
|-------------|---|----------------------------------|----------------------------------|-----------------------------------|
| Pakistan    | 34.6%                                     | 33.3%                            | 33.2%                            | 40.0%                             |
| Rural       | 40.4%                                     | 38.2%                            | 37.1%                            | 42.4%                             |
| Urban       | 20.5%                                     | 21.2%                            | 23.8%                            | 34.1%                             |
| Punjab      | 35.4%                                     | 33.2%                            | 33.7%                            | 40.0%                             |
| Sindh       | 34.6%                                     | 33.7%                            | 31.0%                            | 36.3%                             |
| NWFP        | 33.6%                                     | 34.3%                            | 36.8%                            | 46.6%                             |
| Balochistan | 28.3%                                     | 27.8%                            | 28.9%                            | 39.9%                             |

Note: These estimates are obtained by applying relevant population weights to the primary sampling units. All estimates are adjusted to the adult equivalent scale.

**Table 6: Simulated Effects of Higher Wheat Prices on Poverty of Consumers**

| Regions     | Baseline poverty at wheat price of Rs.300 | Poverty at wheat price of Rs.425 | Poverty at wheat price of Rs.625 | Poverty at wheat price of Rs.1329 |
|-------------|---|----------------------------------|----------------------------------|-----------------------------------|
| Pakistan    | 34.6%                                     | 35.7%                            | 39.7%                            | 51.7%                             |
| Rural       | 43.9%                                     | 45.2%                            | 49.8%                            | 62.5%                             |
| Urban       | 20.3%                                     | 21.1%                            | 24.1%                            | 35.1%                             |
| Punjab      | 37.2%                                     | 38.3%                            | 42.2%                            | 53.5%                             |
| Sindh       | 29.2%                                     | 30.4%                            | 34.2%                            | 45.9%                             |
| NWFP        | 36.2%                                     | 37.2%                            | 41.7%                            | 56.4%                             |
| Balochistan | 30.6%                                     | 31.9%                            | 36.6%                            | 51.2%                             |

Note: These estimates are obtained by applying relevant population weights to the primary sampling units. All estimates are adjusted to the adult equivalent scale.

**Table 7: Simulated Effects of Higher Wheat Prices on Poverty of Producers**

| Regions     | Baseline poverty at wheat price of Rs.300 | Poverty at wheat price of Rs.425 | Poverty at wheat price of Rs.625 | Poverty at wheat price of Rs.1329. 43 |
|-------------|---|----------------------------------|----------------------------------|---------------------------------------|
| Pakistan    | 34.7%                                     | 27.3%                            | 17.6%                            | 11.8%                                 |
| Rural       | 27.3%                                     | 27.5%                            | 15.8%                            | 10.5%                                 |
| Urban       | 35.0%                                     | 23.2%                            | 17.7%                            | 11.9%                                 |
| Punjab      | 31.3%                                     | 21.5%                            | 14.1%                            | 9.0%                                  |
| Sindh       | 50.6%                                     | 43.6%                            | 21.5%                            | 8.2%                                  |
| NWFP        | 28.8%                                     | 28.9%                            | 27.6%                            | 28.6%                                 |
| Balochistan | 20.6%                                     | 14.0%                            | 3.0%                             | 1.6%                                  |

Note: These estimates are obtained by applying relevant population weights to the primary sampling units. All estimates are adjusted to the adult equivalent scale.

The impact of higher wheat prices on poverty differs considerably by consumer and producer groups. Higher wheat prices do raise the incomes of wheat producers but hurt the net consumers. The simulated effects of increased prices on consumer groups are reported in Table 6, which shows that headcount poverty is strongly affected. Higher wheat prices hurt all consumer groups, irrespective of the geographical regions. As one



would expect, producer groups are estimated to gain from price increases. The national poverty is estimated to reduce from initial levels of 34.7% to 27.3%, 17.6% and 11.8% due to price increases from Rs. 300/= to Rs.425/=, Rs.625/= and Rs.1329/= respectively. If wheat farmers are allowed to benefit from wheat price boom by passing on international price to domestic market, poverty of producer groups is estimated to fall by about 66%. In general, poverty levels of wheat producers are estimated to fall by 71% in Punjab, 84% in Sindh and 92% in Balochistan. However, poverty levels of wheat producers in NWFP are estimated to remain unchanged.

Table 8 reports changes in consumption expenditure of net wheat consumers on account of higher prices. The enhanced prices place additional burden on consumers to the tune of Rs.15.3 billion, Rs.59.5 billion, and Rs.215.4 billion at price levels of Rs.425/=, Rs.625/= and Rs.1329/=, respectively due to increased expenditures. In other words, an average wheat consumer pays an additional amount of Rs.172/=, Rs.673/= and Rs.2436/= per annum for this price hike. Decomposition of estimated consumption expenditure by poverty status of households indicates that the burden of higher prices on poor consumers is relatively much more than on non-poor wheat consumers, however this differential tends to narrow down at higher prices. For example, when wheat price is increased from Rs.300/= to Rs.425/=, per capita expenditure of an average poor consumers rises by 25% while in case of a price increase to Rs.625/= and Rs.1329/=, this differential falls to 5.1% and 2.5% respectively. This behavior may be explained by the relative budgetary shares of wheat consumption by poor and non-poor households.

It is generally expected that most of the burden of higher food prices is borne by the urban consumers. However, this is not true at least in the case of higher wheat prices in Pakistan. We find convincing evidence from our estimates that the relative share of rural consumers in additional consumption expenditure due to higher wheat prices is higher than that of urban consumers. This should not be surprising if seen in the light of the relative population shares of rural vs. urban consumers reported in Table 8. Roughly about 75% of net wheat consumers who are also poor live in rural areas and this fact has important implications for policy makers. The government needs to be very careful in allocating targeted subsidies in rural versus urban areas. This is particularly alarming because most utility stores and fair price shops meant to disburse subsidized commodities are located in urban areas and thereby benefiting urban consumers. A further break-up of wheat consumers in our sample shows that about 59% of net consumers in Pakistan are based in Punjab, 23% in Sindh, 13% in NWFP and 5% in Balochistan. This distribution should also serve as another important guide for the policy makers in allocation of targeted food subsidies.

**Table 8: Simulated Effects of Higher Wheat Prices on Change in Consumption Expenditure of Net Wheat Consumers**

*(Rs. million)*

| Regions     | All net consumers          |                            |                             | Consumers below poverty line |                            |                             | Consumers above poverty line |                            |                             |
|-------------|----------------------------|----------------------------|-----------------------------|------------------------------|----------------------------|-----------------------------|------------------------------|----------------------------|-----------------------------|
|             | With wheat price of Rs.425 | With wheat price of Rs.625 | With wheat price of Rs.1329 | With wheat price of Rs.425   | With wheat price of Rs.625 | With wheat price of Rs.1329 | With wheat price of Rs.425   | With wheat price of Rs.625 | With wheat price of Rs.1329 |
| Pakistan    | 15,262<br>(88.42)          | 59,513<br>(88.42)          | 215,364<br>(88.42)          | 6,260<br>(31.54)             | 24,318<br>(35.07)          | 112,574<br>(45.67)          | 9,002<br>(56.88)             | 35,195<br>(53.35)          | 102,790<br>(42.75)          |
| Rural       | 11,722<br>(53.65)          | 41,670<br>(53.65)          | 147,150<br>(53.65)          | 5,304<br>(24.24)             | 19,729<br>(26.73)          | 87,792<br>(33.51)           | 6,417<br>(29.42)             | 21,941<br>(26.92)          | 59,358<br>(20.14)           |
| Urban       | 35,41<br>(34.77)           | 17,843<br>(34.77)          | 68,214<br>(34.77)           | 955<br>(7.31)                | 4,588<br>(8.34)            | 24,783<br>(12.16)           | 2,585<br>(27.46)             | 13,254<br>(26.43)          | 43,432<br>(22.61)           |
| Punjab      | 12,732<br>(48.99)          | 38,838<br>(48.99)          | 130,784<br>(48.99)          | 5,307<br>(18.73)             | 16,635<br>(20.63)          | 70,057<br>(26.16)           | 7,424<br>(30.26)             | 22,203<br>(28.35)          | 60,727<br>(22.82)           |
| Sindh       | 673<br>(23.83)             | 10,029<br>(23.83)          | 42,981<br>(23.83)           | 295<br>(7.24)                | 3,643<br>(8.15)            | 20,822<br>(10.93)           | 377<br>(16.59)               | 6,386<br>(15.68)           | 22,159<br>(12.90)           |
| NWFP        | 1,539<br>(11.33)           | 7,929<br>(11.33)           | 30,435<br>(11.33)           | 518<br>(4.22)                | 3,079<br>(4.73)            | 16,280<br>(6.39)            | 1,021<br>(7.12)              | 4,850<br>(6.61)            | 14,156<br>(4.95)            |
| Balochistan | 319<br>(4.27)              | 2,717<br>(4.27)            | 11,163<br>(4.27)            | 140<br>(1.36)                | 961<br>(1.56)              | 5,415<br>(2.19)             | 179<br>(2.91)                | 1,757<br>(2.71)            | 5,748<br>(2.09)             |

Note: Population (in millions) is in parenthesis.



As expected, real incomes of wheat producers have to go up with higher wheat prices. However, the distributional effects of higher wheat prices on producers are not clearly understood. Therefore, we have attempted to simulate the effects of higher prices on the incomes of wheat producers. An important message from Table 9 is that wheat price increase mostly benefits those producers who are in the category of non-poor. For example, when wheat price is increased from Rs.300/= to Rs.425/=-, farmers concerned earn additional income of Rs.44.95 billion, out of which only 8.58% goes to the poor wheat producers and the remaining to well-to-do landlords. Similarly, when wheat price is increased to Rs. 625/= and Rs.1329/=-, the share of poor farmers further goes down to merely 4.47% and 1.62%, respectively.

The rural areas get most of the income transfers that take place on account of higher wheat prices, ranging from 94% to 96% of total additional income of wheat production. Punjab has a lion's share in additional income due to its sheer size followed by shares accruing to Sindh and NWFP provinces in total wheat production.

We also analyze the distribution of welfare gain/loss of higher wheat prices on producers and consumers. Table 10, reports the income gains to wheat producers, and also the additional consumption expenditure incurred by all groups against three wheat prices considered in the simulation exercise, and finally shows the welfare gain/loss. To arrive at the last three columns, we subtract the corresponding columns reporting additional consumption expenditures from income gains to producers for respective wheat prices.

Our results suggest that higher wheat prices lead to substantial gains for wheat producers ranging from Rs.18.6 billion to Rs.60.3 billion. Table 10 also shows that failure to pass-on international price to wheat consumers and producers results in a deadweight loss to the tune of Rs.214 billion, which has been worked out at the fixed wheat supply of 2001-02. The negative signs in the last three columns of the Table indicate welfare loss to different regions. Obviously, higher wheat prices hurt urban consumers as suggested by welfare loss ranging from Rs.2 billion to Rs.11 billion. Moreover, urban consumers are the major beneficiaries of the policy of freezing wheat price at Rs.625 (despite increase in international price of wheat), leading to significant welfare gains of Rs.47.5 billion for the consumers concerned. Likewise, higher wheat prices bring about considerable benefits to Punjab and Sindh provinces, while consumers in NWFP experience welfare loss.

**Table 9: Simulated Effects of Increased Wheat Prices on Change in Nominal Income of Net Wheat Producers**  
(Rs. million)

| Regions     | All Producers              |                            |                             | Producers below poverty line |                            |                             | Producers above poverty line |                            |                             |
|-------------|----------------------------|----------------------------|-----------------------------|------------------------------|----------------------------|-----------------------------|------------------------------|----------------------------|-----------------------------|
|             | With wheat price of Rs.425 | With wheat price of Rs.625 | With wheat price of Rs.1329 | With wheat price of Rs.425   | With wheat price of Rs.625 | With wheat price of Rs.1329 | With wheat price of Rs.425   | With wheat price of Rs.625 | With wheat price of Rs.1329 |
| Pakistan    | 44,952<br>(36.27)          | 153,812<br>(36.64)         | 471,923<br>(36.64)          | 3,857<br>(10.02)             | 6,872<br>(6.45)            | 7,644<br>(4.33)             | 41,095<br>(26.25)            | 146,940<br>(30.19)         | 464,278<br>(32.21)          |
| Rural       | 43,047<br>(34.87)          | 145,726<br>(35.24)         | 447,299<br>(35.24)          | 3,739<br>(9.69)              | 6,614<br>(6.23)            | 7,321<br>(4.19)             | 39,308<br>(25.18)            | 139,112<br>(29.01)         | 439,978<br>(31.06)          |
| Urban       | 1,905<br>(1.40)            | 8,086<br>(1.40)            | 24,624<br>(1.40)            | 118<br>(0.33)                | 258<br>(0.22)              | 323<br>(0.15)               | 1,787<br>(1.07)              | 7,828<br>(1.18)            | 24,301<br>(1.27)            |
| Punjab      | 37,217<br>(21.13)          | 104,516<br>(21.15)         | 318,706<br>(21.15)          | 2,620<br>(4.54)              | 3,355<br>(2.98)            | 3,824<br>(1.90)             | 34,597<br>(16.59)            | 101,161<br>(18.17)         | 314,882<br>(19.26)          |
| Sindh       | 5,448<br>(7.75)            | 36,655<br>(8.10)           | 111,796<br>(8.10)           | 949<br>(3.53)                | 2,703<br>(1.74)            | 1,879<br>(0.66)             | 4,499<br>(4.21)              | 33,952<br>(6.36)           | 109,917<br>(7.44)           |
| NWFP        | 1,149<br>(6.13)            | 4,803<br>(6.13)            | 16,981<br>(6.13)            | 232<br>(1.78)                | 758<br>(1.69)              | 1,927<br>(1.75)             | 916<br>(4.36)                | 4,045<br>(4.44)            | 15,053<br>(4.37)            |
| Balochistan | 1,137<br>(1.26)            | 7,838<br>(1.26)            | 24,440<br>(1.26)            | 55<br>(0.18)                 | 55<br>(0.04)               | 14<br>(0.02)                | 1,083<br>(1.09)              | 7,782<br>(1.23)            | 24,426<br>(1.24)            |

Note: Population (in millions) is in parenthesis.



**Table 10: Distribution of Welfare Gain/Loss of Higher Wheat Prices on Producers and Consumers of Wheat by Regions**  
(Rs.million)

| Regions     | Income gains to wheat producers      |                                      |                                       | Additional consumption expenditure   |                                      |                                       | Welfare gain/loss of higher wheat prices |                                      |                                       |
|-------------|--------------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|--|--------------------------------------|---------------------------------------|
|             | When wheat price increased to Rs.425 | When wheat price increased to Rs.625 | When wheat price increased to Rs.1329 | When wheat price increased to Rs.425 | When wheat price increased to Rs.625 | When wheat price increased to Rs.1329 | When wheat price increased to Rs.425     | When wheat price increased to Rs.625 | When wheat price increased to Rs.1329 |
| Pakistan    | 44,952<br>(36.27)                    | 153,812<br>(36.64)                   | 471,923<br>(36.64)                    | 26,396<br>(125.05)                   | 93,488<br>(125.05)                   | 329,788<br>(125.05)                   | 18,556                                   | 60,324                               | 214,281                               |
| Rural       | 43,047<br>(34.87)                    | 145,726<br>(35.24)                   | 447,299<br>(35.24)                    | 22,512<br>(88.88)                    | 74,509<br>(88.88)                    | 257,642<br>(88.88)                    | 20,535                                   | 71,217                               | 189,657                               |
| Urban       | 1,905<br>(1.40)                      | 8,086<br>(1.40)                      | 24,624<br>(1.40)                      | 3,884<br>(36.17)                     | 18,979<br>(36.17)                    | 72,146<br>(36.17)                     | -1,979                                   | -10,893                              | -47,522                               |
| Punjab      | 37,217<br>(21.13)                    | 104,516<br>(21.15)                   | 318,706<br>(21.15)                    | 21,517<br>(70.13)                    | 61,872<br>(70.13)                    | 204,004<br>(70.13)                    | 15,700                                   | 42,644                               | 114,702                               |
| Sindh       | 5,448<br>(7.75)                      | 36,655<br>(8.10)                     | 111,796<br>(8.10)                     | 1,798<br>(31.93)                     | 15,271<br>(31.93)                    | 62,719<br>(31.93)                     | 3,650                                    | 21,384                               | 49,077                                |
| NWFP        | 1,149<br>(6.13)                      | 4,803<br>(6.13)                      | 16,981<br>(6.13)                      | 2,636<br>(17.46)                     | 12,670<br>(17.46)                    | 48,009<br>(17.46)                     | -1,487                                   | -7,867                               | -31,028                               |
| Balochistan | 1,137<br>(1.26)                      | 7,838<br>(1.26)                      | 24,440<br>(1.26)                      | 444<br>(5.54)                        | 3,676<br>(5.54)                      | 15,056<br>(5.54)                      | 693                                      | 4,162                                | 9,384                                 |

Note: Population (in millions) is in parenthesis.

## **5. Conclusions**

This paper studies the impact of recent wheat price boom witnessed in Pakistan on poverty distribution and welfare gain/loss to wheat consumers and growers in Pakistan on the basis of simulation analysis with household data drawn from PIHS 2001-02. For simulation purposes, we use the head count ratio of poverty and consider the impact of recently observed increases in wheat price on overall poverty distribution and welfare of the consumer and producer groups. The domestic prices incorporated in the simulation analysis are Rs.425/= and Rs.625/= while the international price used in this exercise is the cif price of Rs.1329/=: depicting the opportunity cost of producing wheat in Pakistan. These prices are also used to inflate the base year poverty line to get new poverty cutoffs corresponding to the new wheat prices. Here we assume that additional income accruing to wheat growers due to higher prices is utilized toward financing the enhanced household expenditure.

The results show that when wheat price increases from the base year figure of Rs.300/= to Rs.425/=: it reduces overall poverty in Pakistan by 1.3 percentage points. The initial poverty rates are reduced in rural areas from 40% to 38%, but got increased in urban areas from 20.5% to 21.2%. When wheat price increases to Rs.625/=: rural poverty is further reduced to 37.1% while urban poverty goes up to 23.8%. Higher wheat prices significantly reduce poverty in Punjab and Sindh, but poverty in NWFP and Balochistan is increased. Our results predict that if international wheat price is passed-on to consumers, then national poverty is estimated to increase by 16% (from 34.6% to 40%); and urban poverty is predicted to increase by 66.34% (from 20.5% to 34.1%). Likewise, it will increase poverty by 38.7% in NWFP and by 41% in Balochistan.

As one would expect, higher wheat prices hurt net consumers but benefit net producers'. We find that pushing up wheat price to Rs.425/= raises headcount poverty of consumer groups by 3.2%. Further push in wheat price to Rs.625 augments consumer poverty by 15%. If international wheat price is passed on to consumers, the headcount poverty is expected to increase by 50%. Wheat producers surely benefit from higher prices; an increase in wheat price to Rs.425/=: Rs.625/= and Rs.1329/= is estimated to reduce poverty of wheat producers to 27.3%, 17.6% and 11.8%, respectively starting from their initial poverty level of 34.7%.

Higher wheat prices place additional burden on net consumers. This burden is estimated to the tune of Rs.15 billion, Rs.60 billion and Rs.215 billion at wheat prices of Rs.425, Rs.625 and Rs.1329, respectively. It is generally expected that most of the burden due to higher wheat prices falls on urban consumers, which is not true at least in the case of Pakistan. This is due to the fact that about 75% of net wheat consumers, who are also poor live in rural areas. Hence the policy makers need to take care of this fact while targeting subsidies to the consumers.

We find that wheat price increases mostly benefit the well-off farmers or land lords and only less than 10% of the share of additional income due to price hike goes to poor farmers. Further, over 90% of the income transfers due to higher wheat prices go to the rural areas, of which Punjab has the lion's share. The simulation analysis further suggests that failure to pass-on international wheat prices to consumers and producers



results in a deadweight loss to the tune of Rs.214 billion at fixed wheat supply levels of 2001-02. The urban consumers gain a hefty amount of Rs.47 billion from the policy of freezing wheat prices at Rs.625/= per 40kg.

## References

- Byerlee, D., and A. Siddiq (1994). Has the Green Revolution Been Sustained? The Quantitative Impact of the Seed-Fertilizer Revolution in Pakistan Revisited. *World Development*, 22(9), 1345-1361.
- Foster, J., J. Greer, E. Thorbecke (1984). A Class of Decomposable Poverty Measures. *Econometrica*, 52(3), 76-166.
- Government of Pakistan (2005). *Pakistan Statistical Yearbook 2005*. Islamabad: Federal Bureau of Statistics.
- GoP (Government of Pakistan) (2007). *Pakistan Economic Survey, 2006-07*. Islamabad: Economic Adviser's Wing, Finance Division.
- Minot, N., L. Daniels (2005). Impact of Global Cotton Markets on Rural Poverty in Benin. *Agricultural Economics*, 33, 453-466.
- Murgai, R., M. Ali, and D. Byerlee (2001). Productivity Growth and Sustainability in Post-Green Revolution Agriculture: The Case of the Indian and Pakistan Punjab. *World Bank Research Observer*, 16(2), 199 - 218.
- Orden, D., A. Salam, R. Dewina, H. Nazli, N. Minot (2005). *The Impact of Global Cotton Markets on Rural Poverty in Pakistan*, Pakistan Poverty Assessment Update, Background Paper Series, Asian Development Bank, Pakistan Resident Mission, Islamabad.
- FBS (Federal Bureau of Statistics) (2008). Monthly Review of External Trade Statistics of April 2008. Accessed on May 25, 2008.  
[http://www.statpak.gov.pk/depts/fbs/statistics/external\\_trade/monthly\\_external\\_trade/met4/met.html](http://www.statpak.gov.pk/depts/fbs/statistics/external_trade/monthly_external_trade/met4/met.html)



## **Producers and Consumers Subsidy Equivalents of Wheat Crop in Pakistan**

Saima Ayaz<sup>1</sup>, Zakir Hussain<sup>2</sup>, Sofia Anwer<sup>3</sup> and Waqar Akram<sup>4</sup>

**Abstract:** *The paper measures the effects of government intervention in wheat crop in Pakistan through producer and consumer subsidy equivalents (PSE and CSE) for the period of 1987 to 2007. The producers of wheat are facing implicit taxation throughout the period of analysis. The main factors resulting in negative transfers to producers are the price support and state trading followed by implicit taxation through exchange rate overvaluation. The positive support through assistance on input and investment on infrastructure are not able to mitigate the negative effects of above mentioned policies to any significant level. The consumers of wheat crop are the consistent beneficiaries of government intervention. The analysis depicts Pakistan's stronger position toward WTO trade liberalization, so there is no need to change its policies.*

### **1. Introduction**

Wheat contributes 14.4 percent to the value added in agriculture and 3 percent to GDP. The production of wheat (23.5 million tons) was the highest ever in the country's history, which registered an increase of 10.5 percent over last year (GOP (2007). The per capita wheat consumption of the country, at 120 kg a year is among the highest in the world (PARC 1989).

Wheat is the staple food of our teeming millions. This crop occupies a major area in Rabi season and grown on more than 20 million acres of land. The average production increased by 2.5 percent in the decade of 1961-70 and showed a quantum jump of 68.5 percent in the next decade due to introduction of high yielding varieties and other Green Revolution technologies. In the decade of eighties, the average production increased by 50 percent. The increase was both in area and yield. In the decade of 2000-07, the average productivity increased by 23 percent mainly due to vertical increase in production. The annual compound growth rate of production in the last two decades (1980-99) was 3.32 percent. Despite major increases in average productivity, the existing potential of wheat varieties is 60 to 70 percent, which remains to be exploited. The yield per hectare was around two tons.

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**Wheat Production in Pakistan (1961-07)**

| Year    | Average Production<br>(Mil. Tons) | Percent Increase |
|---------|-----------------------------------|------------------|
| 1961-70 | 4.934                             | 2.5              |
| 1971-80 | 8.312                             | 68.45            |
| 1981-90 | 12.513                            | 50.54            |
| 1991-99 | 16.525                            | 32.07            |
| 2000-07 | 20.335                            | 23.06            |

Annual compound growth rate (1980-99) 3.32 percent

Until the mid-1980s, the government used to follow a strongly interventionist economic policy and applied various direct or indirect instruments. There were various objectives of government intervention in agricultural sector, the most common were: to raise tax revenue, support producer's income, reduce consumer's food cost and attain self-sufficiency. Where direct protection instruments affect commodities at import/export stage as they enter the international trade, the indirect instruments tend to support producers and focus on domestic production rather than trade. These included exchange rate management, commodity programs, input subsidies, tax exemptions and long-term investment assistance.

In a seminal work, Schiff and Valdes (1992) studied agricultural policy distortions in 18 developing countries over the period 1960-1985. Their findings, based on a partial equilibrium framework, discovered that developing countries had imposed significant implicit taxation on their agricultural sectors through their restrictive trade, pricing and exchange rate policies. The implication of these policies for developing countries showed stunted growth rates of agriculture. The impact of removing these distortions was estimated to be considerable.

Since the mid 1980s, much of the developing world has undertaken major policy reforms affecting agricultural pricing and exchange rates. Moreover, Uruguay Round Agreement on Agriculture (URAOA) has enforced several disciplines on agricultural trade policies in the developing countries. With rising membership of the developing countries in the WTO, it is becoming increasingly important to know the structure of farm support programs and taxation in these countries.

The 1980's was a decade of agriculture sector liberalization and reforms, in compliance with the country's structural adjustment programme, the reforms brought agriculture input/output prices closer to the world prices, thus reducing state intervention and increasing the role of private sector. These policies resulted in a number of drastic changes in the agriculture sector; most of the subsidies (on pesticides, seeds and mechanization) were immediately withdrawn while a program for segmented removal of fertilizer subsidies was set up.



Pakistan's product specific price support (through procurement of wheat crop) has been negative whereas non-product specific support for the inputs (as fertilizer, electricity, seeds, pesticides and credit) was positive. The Trade Policy Review (WTO, 2001) reported a 44 percent decline in Pakistan's domestic support to agriculture, and a 30 percent decline in federal and provincial product-specific subsidies for wheat and sugar for the same period.

In order to quantify government intervention in agriculture and monitor its reduction under liberalization, several aggregate measures are adopted. The Producer Subsidy Equivalent (PSE) is one such measure, developed by the Organization for Economic Cooperation and Development (OECD). Another one for measuring the overall monetary value of a set of policy interventions by the government is called the Consumer Subsidy Equivalent (CSE).

Among various protection measures, the PSE's is the most commonly used. For the OECD countries other transition economics, the PSE's has been used regularly and updated annually. However, less empirical research exists in developing countries. This was partly because of the danger of measuring inaccurate PSE's due to high transaction costs or quality differences in many developing countries. Both PSE's and CSE's significantly showed the effect of various policies adopted in important agricultural producing and exporting nations like Pakistan.

The PSE's and CSE's were estimated in the early 1990s using data from 1981-82 through 1986-87. Since the WTO regimes became operational from January 1995, it seems imperative to revisit the PSE/CSE to evaluate the protection to agriculture and its implication for development of the agriculture sector.

In this study, PSE and CSE methodology is applied to wheat crop for the period 1988-2007. In the context of Pakistan, the issue often raised is that whether agriculture is taxed or subsidized sector. Thus, it is useful to provide the quantitative measure of agricultural protection through PSE's to evaluate the current level of protection (or dis-protection) that exists for major agricultural commodities. Such measures, subject to limitations, provide parameters that how to continue with agricultural reforms from a domestic policymaking perspective coupled with trade negotiations currently ongoing in the WTO Doha Development Round. The objective of this paper is to measure the degree of subsidization wheat and evaluate the past and current levels of protection for this staple food crop.

## **2. Methodology and Data**

The study describes the PSE's and CSE's measurement issues and their implications for policy making. The (PSE's and CSE's) analysis is used to evaluate government intervention in Pakistan's wheat sector for the harvesting years 1987-88 to 2006-07. The time series data on cost of production is taken from various publications of the Agricultural Prices Commission of Pakistan. The secondary data on exchange rate, prices, consumption, population etc is obtained from various issues of Pakistan Economic surveys, Agricultural Statistics and other government publication.

The OECD defined the PSE as a measure of the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers that results from government

### *Producers and Consumers Subsidy Equivalents of Wheat Crop in Pakistan*

domestic and trade policies. It is characterized as a nominal protection indicator, which measures the nominal assistance and does not take into account the protection of tradable inputs (OECD, 1999 and 2002). PSE "total" is useful to quantify the policy effects of particular scale of activity. CSE is an indicator of the value of transfers from domestic consumer to producers, due to agricultural policies.

PSE's measures are calculated for wheat and aggregated to derive the total PSE's for the country's agriculture sector. PSE's shows not only the rate of assistance but also the quantity of agriculture production. PSE's is interpreted in three different ways

- (i) Total PSE
- (ii) Unit PSE
- (iii) Percentage PSE.

The Market Price Support (MPS) and PSEs for a specific commodity, expressed in monetary terms are given by the relations:

$$MPS = (P_d - P_w) Q_p \quad (1)$$

Where:  $Q_p$  = the level of production,  $P_d$  = domestic price and  $P_w$  = the world price.

$$TPSE = MPS + BP \quad (2)$$

Where: BP = budgetary payments to producers of the commodity.

Per unit PSE =  $TPSE/Q_p$ , and Percentage PSE =  $100(TPSE)/[Q_p(P_d) + BP]$  (at domestic prices)

Similarly, the CSEs are also expressed in three ways:

- (i) Total CSE
- (ii) Unit CSE
- (iii) Percentage CSE.

$$TCSE = Q_c (P_d - P_w) + G \quad (3)$$

Where:  $Q_c$  is the level of consumption and G stands for government subsidies to consumers

Per unit CSE =  $TCSE/Q_c$  and Percentage CSE =  $100(TCSE)/[Q_c(P_d)]$  (at domestic prices)

These calculations are based on the difference between the domestic prices and world prices of a particular commodity.

Th percentage PSE's and CSE's could be used to compare: 1) Across countries with different sized agricultural sectors and budgets, 2) Comparative taxation or subsidy to different commodities, and 3) the relative effect of different policies. Per unit PSE's and CSE's illustrate the relative intervention for a given commodity, but cannot be used to evaluate across commodities. (Ender (1991)



### **Choice of variables**

The estimation variables are support price and state trading, input subsidies, general taxes, import duties, investment in infrastructure and overvaluation of exchange rate. Infrastructure covers expenditure on extension and investment in irrigation where inputs include fertilizer, credit, irrigation (O&M) and electricity.

#### **(a) Fertilizer subsidy**

Fertilizer subsidies were given to assist growers, in order to promote self-sufficiency. These subsidies have been withdrawn gradually – nitrogenous fertilizers in 1984-85 and phosphate and potash in 1989-90. However, government is providing indirect subsidy on gas to fertilizer producers around \$0.2 billion/year (Agricultural Perspective and Policy: 2004). In this study, fertilizer subsidy by crop is taken from the data of Public Sector Development Programmes (PSDP), Planning and Development division. The subsidy that was granted on local production could be estimated through price wedge but due to non-availability of import prices on all locally produced fertilizer, the budgetary subsidy can be considered as best alternative.

#### **(b) Subsidy on Irrigation Water**

Irrigation water witnessed an implicit subsidy by the Government and shared about 60 per cent of the total implicit subsidies in various years. (Agricultural Perspective and Policy: 2004). In order to estimate the subsidy on irrigation water, the approach followed by the National Commission on Agriculture (NCA) (1988) is used. Following this approach, operational and maintenance cost is apportioned to various crops by their weighted crop area share.

#### **(c) Electricity Subsidy**

Electricity occupied an important place in the implicit subsidies and ranked almost third in the total volume of subsidies under this category. To calculate the subsidy, the rate differential to agriculture and the estimated crop share can be used. The crop share is estimated through the use of irrigation water pumps which are the primary source of consumption of electricity.

#### **(d) Credit subsidy**

The institutional credit is mainly disbursed by the Zarai Taraqati Bank Limited (ZTBL) and considered second by its volume in the total amount of implicit subsidies extended by the Government over time. The mark up rate for Commodity Operation Financing (COF) was 11 percent per annum. (Agricultural Perspective and Policy: 2004)

The subsidy on production loans is estimated by multiplying the loan volume with the differential of marketed interest rate and agricultural interest rate.

#### **(e) Commodity Price Policies**

In order to estimate the policies which directly affect the market prices, the wedge between domestic prices and import parity prices has been taken. As the parity prices are higher than the domestic prices, PSEs may be negative and the CSEs show positive trend.

**(f) Over-valuation of Exchange Rate**

In case of developed countries, over-valuation of exchange rate was generally not an issue in the estimation of PSE, because the effects were not particular to agricultural sector. In developing countries such as Pakistan, exchange rate distortions affect mostly agricultural producers and consumers because over half of all exports were agriculture based.

Different approaches have been adopted in various countries for such measurement. In the present analysis, the following formula is used - Appleyard (1987):

$$100 \left\{ \frac{(M + Tm) + (X - Tx)}{M + X} - 1 \right\}$$

Where:

- M = Value of Imports
- Tm = Import Duties and Custom, Minus Import Rebates
- X = Value of Exports
- TX = Export Subsidies Minus Export Duties

The PSE/CSE concept offers a rational framework to examine, in a planned and regular way, all of the policies affecting agricultural production, consumption and trade. In calculating the monetary transfers that result from agricultural policies, it has enabled a more précised and controlled assessment of those policies than would be supplied by an entirely qualitative measurement (Cahill and Legg 1990).

**3. Results and Discussion**

Until recently, domestic wheat production was catering 80 percent of the food security needs and the remaining 20 percent gap was met through imports at a huge foreign exchange cost. Thus, import substitution through increase productivity per unit of resource is imperative. The goal of the government for wheat autarchy was self-reliance, productivity increase and food security. Self-reliance is important in the changing global scenarios. The major thrust is to increase wheat production and ensure food security to cater for the needs of increasing population.

The causes of low wheat production include absence of proper price incentive, adoption of inadequate technology to achieve genetic potential, inadequate and improper farm inputs, and scarcity of irrigation water, weeds, timely sowing, and continuous use of wheat cotton rotation.

The support price of wheat has been increased from Rs. 124 per 40 Kg in 1992-93 to Rs. 425 in the year 2006-07. The import parity price at farm gate worked out to be Rs. 484 in 1998-99 showing a nominal protection coefficient of minus 29.3 percent. With the recent increase, border price differential has been narrowed down to a difference of transaction cost. Otherwise the support price was at par with the international prices, perhaps higher in the near term.



**(a) *Producer Subsidy Equivalent of Wheat***

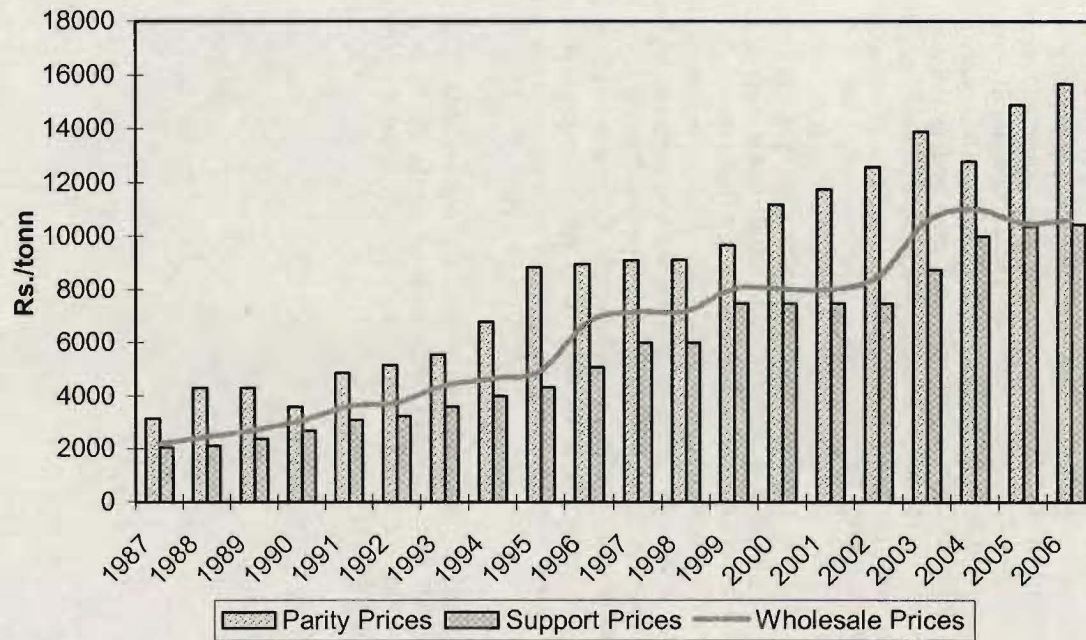
Wheat is the most commonly used staple food grain and plays a central role in Pakistan's food economy, both in terms of production and consumption. Due to its significance, the governments have intervened heavily in wheat markets since independence.

The effects of government policies on the producers of wheat (measured through Producer Subsidy Equivalents) are demonstrated in Annex.1. The negative values of PSE's point out that the overall transfers flow from producer to consumer and taxpayer with some positive value of subsidies. The results, show that wheat crop is heavily taxed. The extent of burden has reached as high as 51 percent in the 2000-01. The results highlight the sources of transfers which include support price and state trading followed by over-valuation of exchange rate as major government policies are causing negative Producer Subsidy Equivalents (PSE's). Import parity prices are used here as reference prices to estimate the market price support (MPS) for wheat.

In order to increase wheat production, the government generally announces the guaranteed minimum support price before the planting season and it is set on the recommendations of Agricultural Prices Commission (APCom). Fig. 1 shows the trends of different prices faced by producers of wheat crop in Pakistan, which shows an increasing trend through the entire period of analysis. It is manifested that world prices remained higher than producer prices and support prices throughout the analyzed period. This clearly justifies the results that support prices and state trading policies are the major cause of negative PSE's. It is revealed that the producer of wheat crop receive much less than world prices and governments are not supporting the producer as support prices are even less than the producer prices.

These findings are consistent with Thomas and Orden (2004). The aggregate PSEs show that the Market Price Support (MPS) estimates are the dominant components of the PSE especially noticeable for the year 1999 through 2003, when the MPS estimates are positive and account for 91-98 percent of the PSE.

**Fig 1**  
Trends of wholesale, support and import parity prices of wheat crop in Pakistan





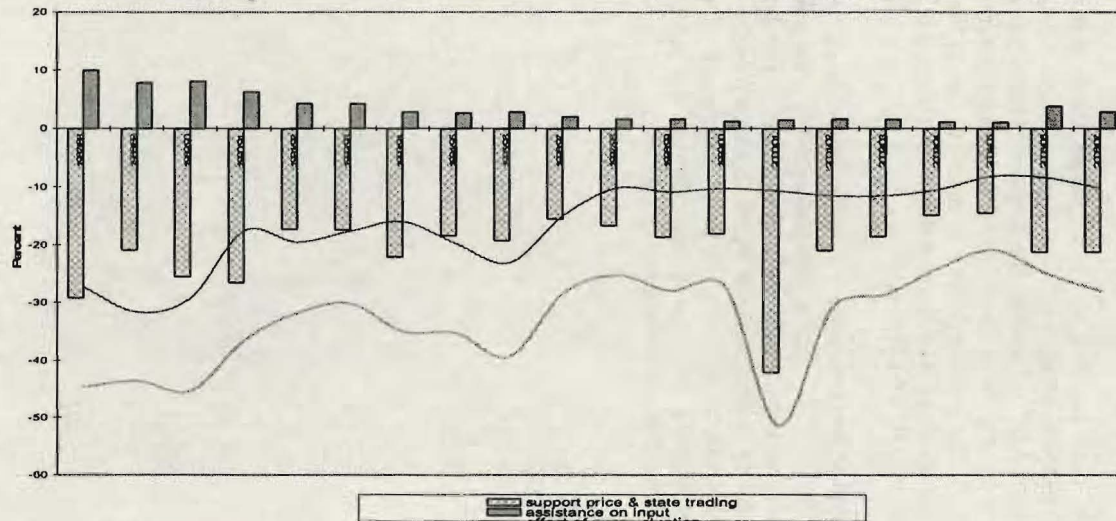
The government is providing input assistance and infrastructural support, but these policies have not been able to mitigate the negative effect of the price and macro economic policies. The input subsidies show declining trend from 10 percent in 1987-88 to 1 percent in 2004-05, indicating a general policy of withdrawing subsidies overtime. However, during last two years of analysis (2005-06 and 2006-07) assistance on inputs increased but it would not overcome the overall negative effect.

A negative effect of over-valuation of exchange rate shows that producers were bearing losses. This over-valuation strengthens the negative values of total transfers. Currency exchange rate significantly influences the competitiveness of agriculture sector. The domestic producers benefit from devaluation since their returns in national currency increase (Shick 2001). The producers have to bear loss due to the policies of overvalued exchange rate. In case of wheat crop, the producers were bearing burden from 32 percent in 1988-89 to 8 percent in 2005-06 (Annex-1).

Fig. 2 shows the trend of percentage share of different measured policies affecting the total values and percentage PSE. The figure demonstrates that price policy and total PSE have same propensity and both are at maximum level in 2000-01. The declining trend of positive input assistance is clearly evident from the figure. It also shows the effect of over-valuation of exchange rate, which is the second major policy affecting PSE's. The transfers through infrastructural support and general taxes and subsidies are not shown here because no significant transfers are observed under these categories.

**Fig 2**

**The Percentage share of total PSE and different sources of transfers for wheat in Pakistan**





The infrastructural support is also decreased and does not constitute significant share to the total agricultural support. The assistance in infrastructure varied between 2 percent and 1 percent through out the analysis period. The category under general taxes and subsidies show negative values and a minor effect on total producer subsidy. The magnitude of the general taxes and subsidies is -0.71 percent in 2006-07. The value of total producer subsidy equivalents (TPSE) without including the effect of over-valuation of exchange rate during 1987-88 to 2006-07 ranged between(-)17 percent and (-)18 percent respectively except in 2000-01 where it was (-)41 percent. It showed that in the year 2000-01, the wheat producers were heavily taxed. The results are consistent with Khan (2002) and Ali (1992).

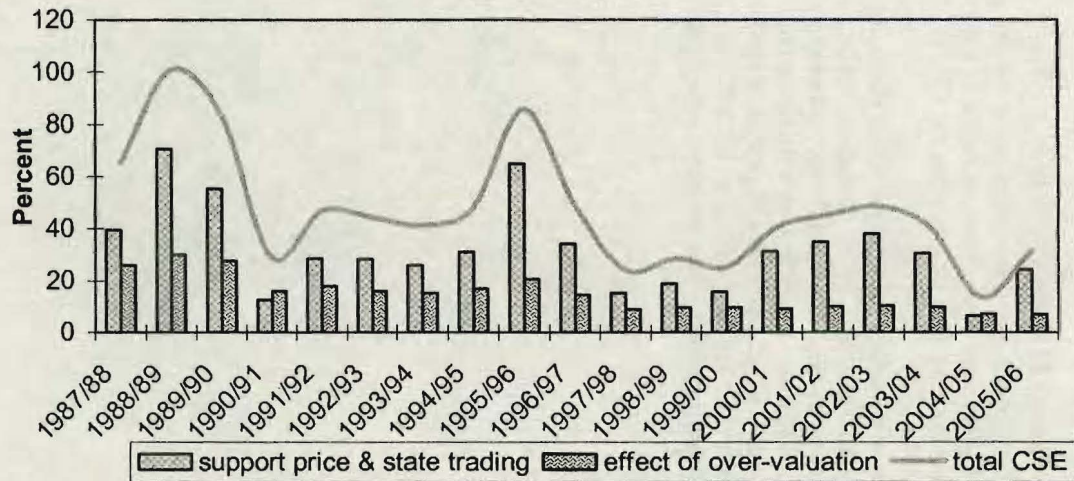
#### ***(b) Consumers Subsidy Equivalent for Wheat***

The main policies providing positive or negative support to consumers are output price policy and macro-economic policy (over-valuation of exchange rate). The effects of these policies on consumers are traced by estimating the CSE's.

Wheat CSE's are summarized in Annex-2, which shows that consumers of wheat received significant transfers (positive CSE's) throughout the period of study (from 1987-88 to 2005-06). Fig. 3 shows the trends of different measured policies included in CSE's. The figure illustrates that level of transfers were declining but remained positive. The level of transfers from price support policy was 71 percent in 1988-89 and 6 percent in 2004-05. It shows that support price and state trading policy and total CSE have same tendency, which clearly indicates that output price was the major policy affecting total value of CSE.

**Fig 3**

**The Percentage share of different sources of transfers and total CSE of wheat in Pakistan**





The over-valuation of exchange rate also contributed toward implicit subsidy to consumers, from 7 percent to 30 percent during the whole analysis period. Fig. 3 demonstrates the positive values of transfers through over-valuation of exchange rate.

Another direct subsidy to consumers of wheat had been the rationing system. However, this subsidy was withdrawn in 1987 and thus it is not discussed here. In general, the consumers of wheat were heavily subsidized, which explains the phenomenon of total transfers from producers to consumers.

#### **IV. Pakistan's position toward WTO Agricultural Trade Liberalization**

Free trade was advocated by the principle of comparative advantage. Two nations can benefit from mutual trade if each nation specializes in the production of a commodity for which it has lower opportunity costs. Agricultural trade liberalization under WTO was a major step toward free trade. However, the effects of trade liberalization varied from country to country depending on their competitiveness, taxation and protection patterns, commercial and macroeconomic policies.

Pakistan has taken considerable steps to open its economy to global markets although relatively weak infrastructure is a major constraint towards this end. The country's stronger position toward WTO agricultural trade liberalization is illustrated through PSE calculation. Pakistan perhaps may not need to change national support price policies because its aggregate PSE is negative. Pakistan would benefit more than average under uniform and full implementation of WTO trade reforms.

The study calculates the impact of government intervention in agriculture and draw policy implications for agricultural sector in response to the current demand of WTO of liberalization. The PSE and CSE indicate the direction of change for input and output prices under liberalization. Domestic prices of outputs that were taxed significantly would rise, while prices of inputs that were subsidized significantly, would fall.

If the government followed through with the liberalization on the consumer side, the effects on consumer prices would be resultant in similar way from the CSEs. Domestic prices of subsidized commodities would rise, and those that had been taxed would fall.

According to WTO requirements Pakistan would not need to change any of its agricultural policies because its aggregate PSE is negative which means that government is not protecting the agriculture sector. However as the results of the study show that agricultural sector is implicitly taxed, the government should make policy to reduce the level of burden on agricultural producers so that they could enhance production efficiently. The producer could be supported under the umbrella of Green Box, so the infrastructural support should be given to strengthen the growers.

#### **V. Summary and Recommendations**

The study presented the calculation of PSE and CSE of wheat crop in Pakistan, for the period of 1987 to 2007. The government was providing input assistance and infrastructural support, but these measures have been unable to mitigate the negative effect of the price and macro economic policies. The input subsidies showed declining trend from 12 percent in 1987-88 to one percent in 2004-05, indicating a general policy of withdrawing subsidies by the government. The level of transfers from price support policy was 71 percent in

### *Producers and Consumers Subsidy Equivalents of Wheat Crop in Pakistan*

1988-89 and 6 percent in 2004-05. The support price, the state trading policy and total CSE have the same tendency, which clearly show that output price policy is the major component affecting total value of CSE. The conclusion of the study is at best tentative due to data limitations; however, it provides useful insights for policy prescription. This argument is also supported by the study of Stokov and Meyers (1996) for Russia, stating that results of PSE may not be always accurate where domestic markets are undeveloped and poorly linked with rest of the world.

The overall results show that assistance on inputs and meager infrastructural supports were the total positive transfers available to producers. However, the support provided under these categories showed declining trend throughout the period concerned. This evidently reflects that the level of government's expenditure on agriculture and particularly on wheat sector has been practically very small.

The impact of exchange rate disequilibrium has been observed to be significant. Currency rates influence greatly the competitiveness of agricultural production. The overvaluation of the exchange rate resulted in an additional tax on producers. The consumers of agricultural commodities have been the consistent beneficiaries of support prices for agricultural output, state trading and over-valuation of exchange rate. It could be concluded from estimation that the actual level of support to the producers is very low but for consumers the case was reversed.

### **Recommendations**

- The market forces should be allowed to work freely and government intervention minimized.
- The government should not implicitly tax the farmers.
- The government should not adopt the exchange rate overvaluation policy.
- All the policies should be made consistent with the economic prices of the crops so as to provide the level playing field to domestic producers.
- The concept of market economy should be implemented in both resource and product markets.



## **References**

- Ali, S. (1992) "Producer and Consumer Subsidy Equivalents of Agricultural Policies in Pakistan: Concept Measurement and Implication." *Pakistan Jour. of Agri. Economics* vol. 1, No. 1(1992) pp: 1-23.
- Cahill, C. and Legg, W. (1990) "Estimation of Agricultural Assistance Using Producer and Consumer Subsidy Equivalents: Theory and Practice", *OECD Economic Studies*, No.13
- Ender, G. (1991) "The Use of Producer and Consumer Subsidy Equivalents to Measure Government Intervention in Agriculture: The Case of Pakistan" *Agricultural Project Analysis Project II*
- Government of Pakistan, *Agricultural Statistics of Pakistan* (Various issues), Ministry of Food, Agriculture and Livestock (MINFAL), Islamabad
- Government of Pakistan, "Economic survey of Pakistan (Various Issues)", Finance Division, Islamabad
- Hanif, M. Ahmad, S. and Fayyaz, A. (2004) "Agricultural Perspective and Policy" Ministry of Food, Agriculture and Livestock (MINFAL), Islamabad
- Khan N. (2002) "Government Intervention in Pakistan's Wheat and Cotton Sectors: Concepts, Policies and Implications." *Asian Journal of Plant Sciences* Vol. 1, No. 4: 492-494
- Organization for Economic Cooperation and Development (2002) *Agricultural Policies in OECD Countries*, Monitoring and Evaluation. OECD, Paris
- Shick O. (2001) "Adjustment of Conventional PSE's Methodology for Economy in Transition" *Analytical Centre on Agri-Food Economics*, Moscow, Russia
- Strokov, S. and Meyers, W. (November 1996) "Producer Subsidy Equivalents and Evaluation of Support to Russian Agricultural Producers", *Working Paper 96-WP 168*, Iowa State University Ames, Iowa 50011
- Thomas, M. and Orden. D. (2004) "Agricultural Policies in Indonesia: Producer Support Estimates 1985-2003." *Markets, Trade and Institutions Discussion Paper No. 78*, International Food Policy Research Institute, Washington, DC.

### ANNEX- 1: Producer Subsidy Equivalents (PSE's) for Wheat Crop in Pakistan

[illegible]



| Item                                  | Unit     | 1987/<br>88 | 1988/<br>89 | 1989/<br>90 | 1990/<br>91 | 1991/<br>92 | 1992/<br>93 | 1993/<br>94 | 1994/<br>95 | 1995/<br>96 | 1996/<br>97 |
|---------------------------------------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 5. Total Policy Transfer To Producers |          |             |             |             |             |             |             |             |             |             |             |
| a. Total                              | Mil. Rs. | -4849       | -4271       | -6296       | -8542       | -6946       | -7609       | -12738      | -12266      | -13648      | -15222      |
| Percent of Producer Value             | Percent  | -17         | -12         | -16         | -19         | -12         | -13         | -19         | -15         | -16         | -13         |
| Transfers per Ton                     | Mil. Rs. | -383        | -296        | -440        | -586        | -443        | -471        | -837        | -721        | -807        | -914        |
| E. Overvaluation of Exchange Rate     | percent  | 19          | 18          | 18          | 15          | 14          | 13          | 13          | 14          | 13          | 11          |
| F. Effect of Overvaluation            | Mil. Rs. | -7623       | -11230      | -11357      | -7902       | -11041      | -10710      | -10756      | -15706      | -19355      | -16914      |
| Percent of Producer Value             | Percent  | -27         | -32         | -29         | -18         | -20         | -18         | -16         | -20         | -23         | -15         |
| G. PSE Including Overvaluation        | Mil. Rs. | -12472      | -15502      | -17653      | -16444      | -17987      | -18319      | -23494      | -27972      | -33003      | -32136      |
| Percent of Producer Value             | Percent  | -45         | -44         | -45         | -37         | -32         | -30         | -35         | -35         | -39         | -28         |

**Annex-1 Cont't .....**

[illegible]



| Item                                  | Unit     | 1997/<br>98 | 1998/<br>99 | 1999/<br>00 | 2000/<br>01 | 2001/<br>02 | 2002/<br>03 | 2003/<br>04 | 2004/<br>05 | 2005/<br>06 | 2006/<br>07 |
|---------------------------------------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 5. Total Policy Transfer To Producers |          |             |             |             |             |             |             |             |             |             |             |
| a. Total                              | Mil. Rs. | -20122      | -21893      | -28444      | -62134      | -28147      | -27786      | -27858      | -30263      | -36423      | -44245      |
| Percent of Producer Value             | Percent  | -15         | -17         | -17         | -41         | -19         | -17         | -14         | -13         | -16         | -18         |
| Transfers per Ton                     | Mil. Rs. | -1076       | -1226       | -1349       | -3266       | -1544       | -1448       | -1429       | -1400       | -1712       | -1881       |
| E. Overvaluation of Exchange Rate     | percent  | 8           | 9           | 9           | 8           | 8           | 8           | 8           | 7           | 6           | 7           |
| F. Effect of Overvaluation            | Mil. Rs. | -13767      | -13969      | -17446      | -16411      | -16867      | -18810      | -21503      | -19545      | -18702      | -25742      |
| Percent of Producer Value             | Percent  | -10         | -11         | -10         | -11         | -12         | -12         | -10         | -8          | -8          | -10         |
| G. PSE Including Overvaluation        | Mil. Rs. | -33889      | -35862      | -45890      | -78545      | -45013      | -46597      | -49361      | -49808      | -55125      | -69986      |
| Percent of Producer Value             | Percent  | -25         | -28         | -27         | -51         | -31         | -29         | -24         | -21         | -25         | -28         |

**ANNEX-2: Consumer Subsidy Equivalents (CSE's) for Wheat in Pakistan**

| Item                                    | Unit            | 1987-8 | 1988-9 | 1989-0 | 1990-1 | 1991/<br>92 | 1992/<br>93 | 1993/<br>94 | 1994/<br>95 | 1995/<br>96 | 1996<br>/97 |
|---|-----------------|--------|--------|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>A. Consumption</b>                   | <b>Thou. T.</b> | 13210  | 13919  | 13825  | 14155  | 15417       | 16109       | 16310       | 16483       | 17302       | 17862       |
| <b>B. Consumer Price</b>                | <b>Rs./ T.</b>  | 2313   | 2587   | 2856   | 3365   | 3910        | 4145        | 4605        | 5425        | 5520        | 6955        |
| <b>C. Consumer Cost</b>                 | <b>Mil. Rs.</b> | 30553  | 36006  | 39486  | 47632  | 60280       | 66772       | 75108       | 89420       | 95507       | 124230      |
| <b>D. Policy transfers to consumers</b> |                 |        |        |        |        |             |             |             |             |             |             |
| 1. Support price and state trading      | <b>Mil. Rs.</b> | 12081  | 25464  | 21892  | 6058   | 17341       | 19054       | 19503       | 27719       | 62039       | 42495       |
| 2. Percent of Consumer Cost             | <b>Percent</b>  | 40     | 71     | 55     | 13     | 29          | 29          | 26          | 31          | 65          | 34          |
| 3. Transfer per Ton                     | <b>Rs./ T.</b>  | 915    | 1829   | 1584   | 428    | 1125        | 1183        | 1196        | 1682        | 3586        | 2379        |
| <b>E. Effect of Overvaluation</b>       | <b>Mil. Rs.</b> | 7944   | 10840  | 10968  | 7679   | 10853       | 10679       | 11532       | 15226       | 19806       | 18144       |
| Percent of consumer cost                | <b>Percent</b>  | 26     | 30     | 28     | 16     | 18          | 16          | 15          | 17          | 21          | 15          |
| <b>F. CSE including Overvaluation</b>   | <b>Mil. Rs.</b> | 20025  | 36304  | 32860  | 13738  | 28194       | 29733       | 31035       | 42945       | 81846       | 60639       |
| Percent of Consumer Cost                | <b>Percent</b>  | 66     | 101    | 83     | 29     | 47          | 45          | 41          | 48          | 86          | 49          |



## Annex-2 Continue -----

| Item                                    | Unit            | 1997/98 | 1998/99 | 1999/00 | 2000/01 | 2001/02 | 2002/03 | 2003/04 | 2004/05 | 2005/06 |
|---|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| <b>A. Consumption</b>                   | <b>Thou. T.</b> | 18717   | 18963   | 19033   | 16086   | 16319   | 17712   | 18233   | 17620   | 18252   |
| <b>B. Consumer Price</b>                | <b>Rs./ T.</b>  | 8300    | 8035    | 8555    | 9235    | 8980    | 9435    | 10980   | 12480   | 12370   |
| <b>C. Consumer Cost</b>                 | <b>Mil. Rs.</b> | 155351  | 152368  | 162827  | 148554  | 146545  | 167113  | 200198  | 219898  | 225777  |
| <b>D. Policy transfers to consumers</b> |                 |         |         |         |         |         |         |         |         |         |
| 1. Support price and state trading      | <b>Mil. Rs.</b> | 23661   | 28874   | 25526   | 46420   | 51278   | 63762   | 61040   | 14213   | 55000   |
| 2. Percent of Consumer Cost             | <b>Percent</b>  | 15      | 19      | 16      | 31      | 35      | 38      | 30      | 6       | 24      |
| 3. Transfer per Ton                     | <b>Rs./ T.</b>  | 1264    | 1523    | 1341    | 2886    | 3142    | 3600    | 3348    | 807     | 3013    |
| <b>E. Effect of Overvaluation</b>       | <b>Mil. Rs.</b> | 13784   | 14834   | 15753   | 13877   | 15101   | 17368   | 20106   | 15934   | 16043   |
| Percent of consumer cost                | <b>Percent</b>  | 9       | 10      | 10      | 9       | 10      | 10      | 10      | 7       | 7       |
| <b>F. CSE including Overvaluation</b>   | <b>Mil. Rs.</b> | 37445   | 43708   | 41279   | 60297   | 66379   | 81130   | 81146   | 30148   | 71043   |
| Percent of Consumer Cost                | <b>Percent</b>  | 24      | 29      | 25      | 41      | 45      | 49      | 41      | 14      | 31      |





# Strategy for Generating Employment in Pakistan: Some Short and Medium Term Measures

*Dr. Sabur Ghayur<sup>1</sup>*

## 1. Introduction

The 100 Days program of the new Government announced by the Prime Minister on 29<sup>th</sup> March 2008 in the National Assembly, among others, include: (i) setting up of an Employment Commission to create and/or facilitate creation of jobs in the public and private sectors, (ii) a National Employment Scheme to provide employment to one member of every poor family from 50 percent of the Districts in the country, (iii) construction of one million housing units a year together with (a) five Marla scheme for homeless in rural areas, (b) schemes for provision of residential facilities to Government employees, and c) policy to regularize *Katchi Abadies* (urban slums), (iv) measures to enhance income from livestock sector, (v) improved and coordinated system regarding supply of milk from rural to urban areas, (vi) doubling of lady health workers to cover *Katchi Abadies* and small towns, (vii) raising the minimum wage of an unskilled worker from Rs. 4,600 to Rs. 6,000, (viii) raising the pension of the workers, (ix) change of rules facilitating access of pensionary benefits to Government employees having less than ten years of experience and unable to continue work due to illness/accident, and (x) restoration of trade unionism.

Indeed, these measures demonstrate recognition at the highest level in creating conditions for "decent work". There is also an implicit recognition of the crucial link between availability of decent work/productive employment to the able and willing to work adults and sustainability of socio-economic development. These realizations do point towards the need that the economic and social progress plans, and policies are determined by the considerations on levels of productive employment generation. In this regard, economic activities that carry employment and development potential are to be carefully looked into so that possible outcomes of the macro and sectoral policies in terms of decent employment and poverty reduction could be worked out. Indeed, centrality of employment in economic and social policy making has to be ensured together with a focus on raising productivity as well as technical/vocational education and training (TVET) competence of the workforce and future flows into the labor market.

Raising productivity and TVET of the workforce are the key targeted variables in generating and sustaining decent and productive employment opportunities through fairly diversified and dispersed economic growth. The Medium Term Development Framework (MTDF) and Poverty Reduction Strategy (PRS) would need to be dovetailed / tied together with these considerations. Such a realization notwithstanding, all efforts would be sub-optimal if a framework is not laid down in terms of policy and strategy with regard to employment, TVET and human resource development (HRD).

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\*The views expressed in this study are personal and in no case reflect the official policy on the issues concerned. (Author)

Such a focus would naturally help in: (i) identifying industries, sectors and economic activities that carry growth and employment potential, (ii) identifying and tapping the potential that exists for expatriates in the major labor importing countries in the Gulf region and surging demand in the South East and East Asian Countries as well as in the industrialized countries (iii) identifying and tapping the potential of export oriented industries, (iv) linking employment potential with occupations and skill required, (v) developing programs for TVET and entrepreneurship, and (vi) linking training with availability of credit.

The aim of this paper is to provide further inputs to the Government's efforts in tackling the issue of unemployment in the country. This has been done by looking into three areas, namely: employment generation, human resource development (HRD) with a focus on raising TVET competence, and promoting overseas migration. An attempt has also been made to indicate actions needed for the proposed strategy. The strategy proposed, however, is preceded by a brief look at the issues confronting labor market; this is done in section-2. An employment strategy with action plan is discussed in section-3, while strategy for promoting overseas migration appears in section-4. Measures needed for enhancing TVET competence are dealt with in section-5. The need for development in a labor market information system (LMIS) is discussed together with suggested measures in section-6. The paper ends by offering some concluding remarks in section-7.

## **2. Issues Confronting the Labor Market**

### **2.1 Nature and Characteristics of the Unemployed**

Currently, over 3.1 out of 50.05 million workforce in the country is unemployed; with 2.16 mn and 0.97 mn being males and females respectively. While, 0.83mn of the unemployed have matriculation and higher level of education; 0.91mn are below matric and 1.36 mn are illiterate. The number of educated males unemployed are higher than females by over four times for matriculates, over 3 times for intermediates and over two times for general degree holders. However, illiteracy is the major cause of unemployment of females. The unemployed illiterate are further bifurcated as 0.75 mn to be male and 0.61 mn to be female. The unemployed not able to find job for over a year are 39.5 percent; 38.5 percent and 44.2 percent of males and females unemployed respectively<sup>2</sup>, Table-1 and Annex Tables I-IV.

Looking into the age structure of the unemployed, it is found that 12.2 percent are senior citizens – over 60 years of age – and 7.8 percent are children between 10-14 years. While the former points toward the need for developing a social security mechanism and a pension system for all, the latter is pointer towards access to education for the children.

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<sup>2</sup> For all the discussion in this section, please refer to the data provided in Table-1 for consolidated position and to Annexure Tables I-XVI for details.



## **2.2 Nature and Characteristics of the Employed**

### **(a) *Weekly Hours of Work***

It is not only these unemployed that raise concerns; equally disturbing is the fact that as many as 15.3 percent of the employed are working less than the normal hours i.e. less than 35 hours per week - about 4 percent have work for 1-20 hours, 8 percent for 21-30 hours and 3 percent for 31-34 hours per week. This under-employment is more widespread in agriculture sector followed by services and manufacturing sectors where 23.9, 13.1 and 11.3 percent of the employed respectively are working for less than 35 hours a week.

### **(b) *Employment Pattern and Income of Employees***

Although, the employment situation has been improving since 2001-02 when the unemployment rate peaked at 8.3 percent, the quality of employment generated has deteriorated in recent years. The employed working for over 48 hours a week are 34.5 percent; 39.4 percent in urban and 34.2 percent in rural area. The employees drawing income over Rs. 4,000 in 2005-06 were only 46.3 percent; 49.7 percent males and only 24 percent females. In fact, as high as 55.2 percent female employees were getting income of less than Rs 1,500 a month and 23.8 percent Rs. 1,501 – 2,500. Over the years, the proportion of self employed declined from 42.2 percent in 1996-97 to 34.9 percent in 2005-06. During the same period, the proportion of unpaid family helpers increased from 20.3 percent to 27 percent; many of the unpaid family helpers are females.

The agriculture sector continues to be the main source of employment; absorbing 44.1 percent of the employed. However, livestock sub-sector is steadily expanding so far as employment generation is concerned.

Trade and social services each absorb over 14 percent of the employed, while manufacturing accounts for 13.7 percent of the employed. The other important sources of employment are construction and communication absorbing 6.2 percent and 5.7 percent of the employed respectively.

**Table – 1: Key Employment and Labor Market Indicators**

| Sr. No. | Indicators                                       | Year 2005-06                          |
|---------|--|---------------------------------------|
| 01      | Population                                       | 155.37 Million                        |
| 02      | Labor Force                                      | 50.05 Million (32.21 %)               |
| 03      | Education and Literacy of Working Age Population | 53.1 %                                |
|         | Literate   | 29.0 %                                |
|         | Under-matric                                     | 17.9 %                                |
|         | Matric and Above                                 |                                       |
| 04      | Unemployed                                       | 3.1 Million (6.19 % of labor force)   |
|         | Total  | 2.16 Million (69.67 %)                |
|         | Male   | 0.97 Million (30.33 %)                |
|         | Female   |                                       |
| 05      | Unemployed by Education and Literacy             | 1.36 Million (43.87 %)                |
|         | Illiterate                                       | 0.91 Million (29.36%)                 |
|         | Under-matric                                     | 0.83 Million (26.77%)                 |
|         | Matric and Above                                 |                                       |
| 06      | Unemployed for More than a year                  | 39.5 %                                |
| 07      | Unemployed by Age                                | 0.24 Million (7.74 %)                 |
|         | 10-14 (Children)                                 | 2.48 Million (80.00 %)                |
|         | 15-60 (working group)                            | 0.38 Million (12.26 %)                |
|         | 60+ (senior citizens)                            |                                       |
| 08      | Employment by Monthly Income                     | 14.4 %                                |
|         | up to 1500                                       | 17.6 %                                |
|         | 1500-2500  | 21.7 %                                |
|         | 2501 – 3900                                      | 46.3 %                                |
|         | 4000 and above                                   |                                       |
| 09      | Employment by Industry                           | 44.1 %                                |
|         | Agriculture                                      | 0.1 %                                 |
|         | Mining & Quarrying                               | 13.7 %                                |
|         | Manufacturing                                    | 6.2 %                                 |
|         | Construction                                     | 0.7 %                                 |
|         | Electricity & Gas                                | 5.7 %                                 |
|         | Communication                                    | 14.3 %                                |
|         | Trade  | 1.1 %                                 |
|         | Financial Institutions                           | 14.1 %                                |
|         | Social Sector Services                           |                                       |
| 10      | Hours of Work                                    |                                       |
|         | (Less than 35)                                   | 8.7 %                                 |
|         | Male   | 42.7 %                                |
|         | Female   | 15.3 %                                |
|         | Total  |                                       |
|         | (More than 45)                                   | 49.6 %                                |
|         | Male   | 11.8 %                                |
|         | Female   | 42.3 %                                |
|         | Total  |                                       |
| 11      | Number of Pakistani Workers Overseas             | 4.16 Million (8.31 %) of labour force |
|         | Total  | 0.29 Million (0.58 % of labour force) |
|         | No of Emigrants in 2007                          |                                       |



**(c) Education and Literacy of the Labor Force**

A large proportion of the current labor force does not possess skills measurable in terms of higher education. Literacy level is as low as 51.6 percent. The educational distribution of literates shows that 33.7 percent are under matric, 10 percent are matriculates, 3.9 percent have higher secondary certificate, and the degree holders' account for only a small (3.8%) proportion. Educational attainment of females is lower than males in all categories which is a major factor of lesser opportunities for employment for females.

**2.3 State of Technical Education and Vocational Training (TEVT)**

**(a) Technical Education**

Currently, 107 Polytechnic Institutions with enrolment capacity of 35,945 are offering a three-year post matric course leading to the Diploma of Associate Engineers (DAE) in 61 technologies. In order to provide avenues of further education, the DAEs are eligible for enrolment in Technical Colleges to earn B. Tech or B. Tech (Hons.). The products of the polytechnics, in principle, should be equipped with: (i) skills in industrial processes, (ii) an understanding of the principles underlying these processes, and (iii) experience in handling the industrial workers, however, these traits are largely lacking in graduates of Polytechnic Institutions.

**(b) Vocational Training**

The overall capacity of the existing vocational training institutions to cater the need of the growing skill demand is low. The total capacity of the existing 951 institutions is 158,067 – 53,624 are in the public vocational training technical and commercial education centers, and 104,439 are in private vocational training centers that also include the Skills Development Councils. These institutions offer training in 142 trades. Though, the capacity of the on-the-job training by the Apprenticeship Training Centers is 10,000, the number of trades offered nevertheless is 123. More than 100,000 places were added by a recent initiative of the National Vocational Education Training Commission (NAVETC).

**(c) Issues Confronting TVET System**

The state of education and TEVT is certainly not encouraging. Education and training system indeed is not properly responding to the market demand for educated and trained labor. Besides raising the quality and quantity of trained workers, it is imperative to enhance the TVET competence of the workforce to successfully respond to the challenges of globalization, sustaining economic growth, competitiveness and standardization.

The numerous issues confronting in the delivery of TVET, among others, are: (i) lacking demand-driven, (ii) overlapping, (iii) duplication i.e. many training providers even in the public sector, (iv) lack of coordination as well as standardization, (v) quality of instructions, (vi) focus on quantity instead of quality, (vii) by-passing informal sector, (viii) lack of autonomy and flexibility of

TVET system, (ix) improper locations of training institutions especially in rural areas, (x) irrelevant, outdated and obsolete curriculum/course outlines, (xi) under utilization of apprenticeship programs, (xii) inadequate attention to needs of rural areas like cottage industry, agriculture and even domestic commerce, (xiii) absence of national policy and strategy on TVET. (xiv) absence of a truly umbrella organization, and (xv) insufficient provision - a large number of Tehsils - 163 out of 477 are without a TVET institution.

#### **2.4 Overseas Migration**

Overseas migration of the workforce has been an important dimension in addressing employment and development issues. As many as 4.16 mn Pakistani workers went abroad for work during 1971-2007. In 2007, the number of workers going abroad was 287,033. While many doctors, engineers and other professionals have been going abroad, their number nevertheless remains small. Overseas migrants are largely production workers; semi-skilled and skilled. Wages of such workers are disproportionally low when compared to technical and professional workers. The need for preparing suitably trained, qualified and professional workers is clearly warranted. Further, over 50 countries of destination notwithstanding, Saudi Arabia and UAE remain the two most important countries for Pakistani migrant workers out of around 50 countries of destination. The overseas Pakistanis have been remitting US\$ 4-6 Billion in recent years.

### **3. Employment Strategy with Action Plan**

#### **3.1 Self Employment and Small Scale Businesses**

Numerous self employment and other small activities that can be picked up rather easily for targeted programs are: (i) mobile phones, wireless loop, (ii) PCOs, (iii) internet and broad band service providers, (iv) cable services, (v) private educational institutions, (vi) medical stores and laboratories, (vii) agriculture farm machinery sales and workshops, (viii) fruits and vegetables processing, preservation and storage, (ix) fertilizer, pesticides, seeds and agro-chemical distribution, (x) milk collection, processing packaging and marketing, (xi) advertising, marketing and creative services, (xii) CNG filling stations, (xiii) small hotels and especially restaurants, (xiv) IT & internet related activities including call centers, (xv) accountancy and management consultancy, (xvi) housing and construction related services, such as: real estate agents, plumbers, electricians, steel fixers, carpenters and masons, (xvii) tourism and traveling agencies. In the short-run, targeted programs are important for generating direct employment opportunities in different areas for targeted groups, (xviii) repair and maintenance of domestic electrical and gas equipment, (xix), small departmental stores like pan, naswar, cigarettes and cold drinks and mobile utility stores (xx) auto spare parts.



**Action Plan/Employment through Micro-Finance**

The action plan suggested is as under:

- The NBP to lead a consortium of the Banks for establishment of 200 self employment and small scale activities in each Tehsil annually for five years – half of the beneficiaries are educated having at least secondary school certificate or equivalent vocational training with women forming not less than 10 percent,
- Micro-credit schemes through Rural Support Programs (RSPs), Pakistan Poverty Alleviation Fund (PPAF), Khushali Bank and NGOs benefit at least 200 in each Tehsil annually - half of the beneficiaries are educated having at least secondary school certificate or equivalent vocational training with women forming not less than 10 percent.
- The SME Bank to support establishment of at least 100 small business/trades in each Tehsil annually for five years. A quarter of beneficiaries are women.
- The Zarai Taraqiati Bank Ltd. to support the establishment of small agro-related businesses and processes in all major towns of the agriculture belt with targets for fisheries, poultry, small dairy and livestock farms – net beneficiaries in different towns across the country annually are not less than 5,000.
- Cab scheme to be introduced in the federal and provincial capitals with provisions for import of second hand cars and also arrangements through the local assembly/manufacturing lines – target 1,500 – 2,000 cars a year for five years.
- State of art centers with all IT related services like high speed internet services, telephony, solutions and cable (TV) to be established in private sector at different locations in cities and in each Union Council.

**3.2 Targeting Educated and Trained Youth Employment**

The educated and trained are disproportionately small amongst the working age population of the country. Hence, unemployment of such manpower, in particular having done graduation and professional education is a colossal waste. While suggestions made in 3.1 above would also address youth and educated unemployed, here the focus is largely on high level human capital.

**Action Plan/Employment of Educated Youth**

The action plan suggested is as under:

**Immediate**

1. Expanding the coverage of National Internship Program (NIP) to public and private sector organizations. Expanding the coverage in phases by targeting different disciplines, such as:
  - Science and technology graduates.
  - IT graduates.
  - Engineers.
  - Agricultural graduates.
  - Business and commerce graduates.
  - Social science graduates.
2. Filling all the Federal and Provincial Government vacant posts but with due consideration on merit-based selection.
  - Each ministry/department and public sector organization to take recourse to ad-hoc appointment if there occurs procedural delays in advertisement and recruitment.
3. Improving teaching at Primary Schools
  - Every primary school to adopt 1 teacher 1 class criterion; the Government schools to take the lead.
  - The policy to be implemented in phases but starting in selected villages in each Tehsil.

**Medium Term**

4. The private sector to be motivated to increase its employment size.
  - Corporate tax/income tax rebates have to be worked out.
5. The private sector to be encouraged to offer on-the-job training.
  - Incentives, such as: tax exemptions and concessions in income/corporate tax have to be worked out.

**3.2 Housing and Construction as the Driver of Growth and Employment Generation**

The housing and construction sector has the largest scope for expansion and generating employment. Further, the focus on this sector would also help in reducing the severe shortage of housing units currently estimated to be about 6mn. The industrial linkages include bricks, cement, steel, paints and varnishes, electricity cables and fittings, sanitary ware, tiles, mining (construction stones,



crush, sand, marbles and other ceramic materials), electronics, household appliances and other construction material industries.

**Action Plan/Employment through Construction and Infrastructure Program**

The action plan suggested is as under:

**Immediate**

1. Residential flats for general public.
  - Construction of 300,000 - 400,000 flats to be initiated and the scheme continued on annual basis if feasible; number of flats in metropolitan cities to be worked out but not less than 2,000 flats in a District.
  - Flats to be constructed in clusters, each cluster comprising 20-25 blocks.
  - One-fifth of the flats have to be small i.e. consisting of only two rooms with a lounge and allotment made on the basis of balloting (on the pattern of low cost flats constructed by the Federal Government Employees Housing Authority for low paid employees).
  - Sites to be identified and provided on concessional payment by the District Administration.
  - Each cluster should also contain a commercial center.
2. Small infrastructural (public works) projects
  - Such projects, mostly under the Public Sector Development Programs (PSDPs) have to be designed and implementation monitored by the Citizens Community Boards (CCBs)/local communities.
  - The existing CCBs to be strengthened and promoted.
  - Special focus on strengthening of existing program of brick lining of canals/irrigation channels.
  - Local contractors and work force from the local areas to be preferred.

**Medium Term**

3. Development of new cities especially along motorways and national highways and close proximity to the new industrial estates.
  - Sites to be identified by the District Administration on the basis of list of new industrial estates provided by the concerned Provincial Government institutions.

- Private sector to participate in land development.
- One-fifth of plots comprise of 3-5 marlas and allotment made through balloting,
- Building codes to be ensured.
- Expatriate Pakistanis to be involved in land development.
- One window operation suggested with regard to provision of electricity, gas and telephone.

#### **4. Strategy for Promoting Overseas Migration**

Managing overseas migration relates to maintaining our share in the traditional markets in Gulf countries and also responding to the changing pattern in demand taking place over there. It also relates to exploring new avenues in the non-traditional countries in East and South East Asia, namely: Malaysia, Singapore, Hong Kong, Taiwan, Korea and Japan. Other countries may be added to this list like - Australia, New Zealand, United Kingdom, etc - that have introduced point system for "immigration".

Disciplined, trained and motivated workforce is the key factor to keep the size of Pakistani share in the traditional markets in tact and to penetrate in the non-traditional markets. The term "sufficiently trained" is emerging as a determining factor in the non-traditional markets. Timeliness in processing overseas demand with ensuring relevance and quality of the workforce is a critical factor in facing new markets, such as: Korea, Malaysia, Singapore, etc.

#### **Action Plan/Overseas Employment Generation**

The action plan suggested is as under:

- Aggressive marketing overseas
  - Overseas migration appears high on the diplomacy and therefore to be placed as important agenda item during the foreign visits of the VVIPs.
  - The memorandum of understanding (MoUs) already signed with labor importing countries ought to be renegotiated with a focus on seeking demand for educated, trained and professionals and new MOUs signed with other countries.
  - Seminars to be organized in important labor receiving countries on the quality and type of educated, trained and professional men and women power available in Pakistan,
  - Information to be disseminated on the existing HRD and especially TVET institutions.



- A roster of educated, trained and professional manpower to be maintained, regularly updated and put on the web-sites of Overseas Employment Corporation (OEC) and Bureau of Emigration and Overseas employment (BE&OE). The Overseas Employment Promoters (OEPs) to be encouraged to use the roster for their marketing and recruitment activities.
- Foreign Language Training
  - Centers of Excellence to be established and coordinated for imparting training to build competence in working knowledge of English, Korean, Arabic and Chinese.
  - Private sector to be encouraged to act as language training providers.
- Pre-departure Briefing/Orientation
  - Proper and effective pre-departure briefing/orientation manuals to be prepared by the BE&OE and widely disseminated.
  - NGOs to be encouraged to undertake briefing/orientation.
- Timeliness in Visa Processing/Recruitment
  - Necessary formalities to be completed within 30 days or less if demanded by the overseas employer.
  - The OEC to act as the role model.
- Strengthening and Rationalizing the Role of Private OEPs
  - Pakistani missions in major labor importing countries to be instructed to provide all the necessary support to OEPs in their work including facilitating meetings with important contractors/employers.
  - Security money to be enhanced substantially thereby acting as deterrence for mal-practices.
  - The legal fee for the services of OEPs to be reviewed and revised upward.
  - Code of conduct to be prepared by the apex body of the OEPs and enforced.

## **5. Enhancing Technical and Vocational Competence**

Employability and productivity of the workforce is crucially linked with the level of Technical Education and Vocational Training (TEVT) competence one possesses. The demand for trained and skilled workforce increases with every step towards promotion of industrialization and modernization of production process. The fast technological changes and ever increasing global competition has made the knowledgeable, skilled and adaptable workforce indispensable to any country.

Indeed, these developments require a TVET system that is fully responsive to the challenges of a rapidly globalizing economy. Such a system requires flexibility so as to respond efficiently to the emerging market requirements. The system grows and contributes if instructions are "demand-led". The need for greater and effective participation of the private sector in design and delivery of TVET is clearly manifested.

A disproportionately smaller enrolment in the TVET institutions notwithstanding, the challenge for appropriate skill is daunting. A huge number of students enrolled in the school education drop out even before completing primary, middle and secondary education. A larger proportion of this population is residing in rural areas where agriculture continues to be the main source of livelihood that is supported by rural non-farm activities. In the urban setting, again school drop outs, those not enrolled in schools and adult illiterates would form the major part of the targeted population. Numerous informal sector activities in the sphere of services, trade, transport and manufacturing are the important source of livelihood of such people.

The manufacturing, banking, insurance, small and medium enterprises, light engineering, construction, micro enterprises, export oriented industries, transport, urban informal sector, etc. are important so far as the demand for skilled workforce is concerned. There is also demand for skilled labour from overseas, such as: welders, carpenters, masons, electricians, cooks, plumbers, mechanics, technicians, engineers, nurses, paramedical personnel, machine operators, radiology technicians, and ICT and computer professionals.

An accurate account of skill needs – national and overseas - has yet to be worked out. A rough switch of skill requirements for different trades and occupations – largely based on the type of activities indicated above for generating employment - has been worked out separately for rural and urban areas under seven broad categories of activities. These categories are: (i) SMEs by activities, (ii) domestic commerce, (iii) services, (iv) agriculture, (v) non-farm sector, (vi) agro-related, and (vii) construction related. Additional, training providers in the public and private sectors have also been broadly indicated, Table – 2 below.

### **Action Plan/Employment through Technical Education**

The following plans are suggested:

#### **Immediate Measures**

- Short-duration skills development and up gradation programs to be launched in each Tehsil and Town.
  - Existing institutions, if available, to be used.
  - In areas where no TVET institutions exist, premises of Middle and Secondary Schools can be used.



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- District Administration to be made responsible for identification of such premises.
- Private sector to be involved in the delivery of training.
- Fostering Public Private Partnership (PPP) to mobilize resources and comparative advantage of each other for making the system effective, efficient and sustainable.
  - Centre/Institutes Management Committees (C/IMCs) under the Chairmanship of local employer to be strengthened by giving meaningful role and responsibility.
  - The Skills Development Councils (SDCs) to be strengthened further in terms of integration of the private sector in design and delivery of TVET particularly short-duration courses.
- Private sector and industry encouraged to establish training institutions.
  - TVET Centers established in the private sector especially in rural areas and by the industry to be given matching grants or other incentives.
- TVET institutions can adapt to market needs especially by organizing evening shifts
  - TVET institutes to be provided financial and administrative autonomy to be able to incorporate needed changes with changing requirements.
- The Apprenticeship Training Program (ATP) under the 1962 Ordinance to be re-invigorated and expanded.
  - The ATP re-oriented into in-plant Advisory Service to provide advice and guidance to the employers/industry in developing and implementing training programs within the industry for improving knowledge and skill of workers and supervisors. Employers to be given incentives either to arrange training of apprentices within their plant or collaborate with any other organization/institutes in the public/private sector at their own cost or to contribute to their respective Provincial Training Boards as donations.
- Curriculum should include basic core skills like communications, problem solving & diagnosis, interpersonal skills, behavior and attitude as well entrepreneurship which would enhance the employability of the trainees.
- Addressing financial constraints.
  - The institutions empowered through CMCs /IMCs to: a) offer cost recovery programs, b) work as production cum training centre, and c)

establish production service units in which senior students and faculty with experience persons from the market work on contracts from industry including maintenance contracts. This will not only facilitate to generate funds but better hand on practice to the trainees.

*Medium Term*

- Developing and establishing National Vocational Qualification System (NVQS) for setting competency standards, testing & certification and accreditation of training institutions.
- An assessment of training needs of the country by industry, agriculture and services has to be undertaken. Skill mapping by Tehsil to be prepared.
- Increasing the Outreach, Level and TVET Competence
  - Reaching the “no TVET” Tehsils – over 160,
  - A Task Force has to be established and entrusted with the responsibility of identifying duplication in the TVET delivery especially in the public sector and to develop a mechanism of better coordination.
- A well-designed “Matric-Tech” stream in secondary school – to be introduced together with post primary education to have gradual orientation on skills – vocational and business – as part of general education.



**Table – 2**  
**Skills Requirements by Areas and Activities**

| Sr. No. | Activities  | Areas   |  |
|---------|---|---|--|
|         |   | Urban   | Rural  |
| 1.      | Skills development for the SMEs by activities                 | <ul style="list-style-type: none"> <li>• Light engineering: Tools, dies and moulds.</li> <li>• Metal industry related: Welding; gas &amp; electric.</li> <li>• Diesel fuel skill.</li> <li>• CAD/CAM: Mobile phone repair, LAN, networks and network security.</li> <li>• Garment making.</li> <li>• Printing process.</li> <li>• Wooden Furniture.</li> <li>• Marble finishing and processing.</li> <li>• Gems &amp; jewelry.</li> <li>• Ceramics and Cutlery.</li> <li>• Leather products/ technology.</li> <li>• Sports goods and Surgical goods.</li> </ul> | <ul style="list-style-type: none"> <li>• Welding; gas &amp; electric.</li> <li>• Diesel fuel skill.</li> <li>• Mining &amp; quarry.</li> <li>• Mobile phone repair.</li> <li>• Garment making.</li> <li>• Wooden furniture.</li> <li>• Blue pottery.</li> </ul>  |
| 2.      | Skills/entrepreneurship development for the domestic commerce | <ul style="list-style-type: none"> <li>▪ Entrepreneurship development.</li> <li>▪ Starting and managing small business.</li> <li>▪ Running stores, shops, and departmental stores.</li> <li>▪ Book keeping and accounts.</li> <li>▪ Spoken English.</li> <li>▪ Distribution.</li> <li>▪ Cold Stores</li> <li>▪ (Organized) street vending.</li> <li>▪ Pattern drafting and machine sewing/ embroidery.</li> <li>▪ Repair and maintenance of auto mobiles, domestic appliances.</li> </ul>   | <ul style="list-style-type: none"> <li><input type="checkbox"/> Entrepreneurship development.</li> <li><input type="checkbox"/> Starting and managing small business.</li> <li><input type="checkbox"/> Running stores, shops, and departmental stores.</li> <li><input type="checkbox"/> Book keeping and accounts.</li> <li><input type="checkbox"/> Distribution.</li> <li><input type="checkbox"/> Pattern drafting and machine sewing/embroidery.</li> <li><input type="checkbox"/> Repair and maintenance of auto mobiles, domestic appliances.</li> </ul> |
| 3.      | Skills development for the services                           | <ul style="list-style-type: none"> <li>▪ Hospitality industry – hotels, restaurants, caterers, chefs, tourist guides, butlers.</li> <li>▪ Leisure industry/activities, such as: beauty salons, barbers, health clinics, indoor swimming pools, and savanna/Jacuzzi.</li> <li>▪ Health related, such as: x-ray and laboratory technicians, nurses, dispensers, midwives, pharmacists, dental care.</li> <li>▪ Internet service providers (ISPs), cable services.</li> <li>▪ Event management.</li> <li>▪ Security personnel and guards.</li> </ul>               | <ul style="list-style-type: none"> <li><input type="checkbox"/> Health related, such as: x-ray and laboratory technicians, nurses, dispensers, midwives, pharmacists, dental care.</li> <li><input type="checkbox"/> Internet service providers (ISPs), cable services.</li> <li><input type="checkbox"/> Teachers</li> </ul>  |

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| Sr. No. | Activities                                      | Areas  |   |
|---------|---|--|---|
|         |   | Urban  | Rural   |
|         |   | ▪ Teachers   |   |
| 4.      | Skills development for the agriculture sector   | <input type="checkbox"/> Seed technology.<br><input type="checkbox"/> Food processing, frozen fruit.<br><input type="checkbox"/> High value crops-fruits and vegetables (seasonal and off season through tunnel farming).<br><input type="checkbox"/> Certified fruit and vegetable nurseries.<br><input type="checkbox"/> Floriculture (cut-flower).  | <input type="checkbox"/> Seed technology.<br><input type="checkbox"/> Food processing, frozen fruit.<br><input type="checkbox"/> Crop planning and production.<br><input type="checkbox"/> Land reclamation and farming.<br><input type="checkbox"/> Pressured irrigation systems, tube wells and ponds.<br><input type="checkbox"/> Farm forestry.<br><input type="checkbox"/> High value crops-fruits and vegetables (seasonal and off season through tunnel farming).<br><input type="checkbox"/> Certified fruit and vegetable nurseries. |
| 5.      | Skills development for the non-farm sector      | <input type="checkbox"/> Fisheries (processing and preservation of fish and shrimps).<br><input type="checkbox"/> Forestry and agro-forestry products.   | <input type="checkbox"/> Livestock development (dairy farming, animal fattening, breeding through artificial insemination and meat processing).<br><input type="checkbox"/> Fisheries (processing and preservation of fish and shrimps).<br><input type="checkbox"/> Forestry and agro-forestry products.   |
| 6.      | Skills development for the agro-related         | <input type="checkbox"/> Farm machinery.<br><input type="checkbox"/> Processing industry (fruits, vegetables, oilseeds, pulp).<br><input type="checkbox"/> Storage and ware houses.<br><input type="checkbox"/> Inedible oil extraction from rice bran (important raw material in manufacturing of soap, washing power, etc).<br><input type="checkbox"/> Ginning.<br><input type="checkbox"/> Grading, packing, processing and waxing of fruits – mango, orange, dates, etc.<br><input type="checkbox"/> Refrigerated transportation. | <input type="checkbox"/> Farm machinery.<br><input type="checkbox"/> Processing industry (fruits, vegetables, oilseeds, pulp).<br><input type="checkbox"/> Storage and ware houses.   |
| 7.      | Skills development for the construction related | <input type="checkbox"/> Masons, carpenters, plumbers, steel fixers, painters, wood<br><input type="checkbox"/> Other skills needed for construction industry  | <input type="checkbox"/> Masons, carpenters, plumbers, steel fixers, painters, wood<br><input type="checkbox"/> Other skills needed for construction industry   |



| Sr.<br>No. | Activities  | Suggested Training Providers  |
|------------|---|---|
| 1.         | Skills development for the SMEs by activities                 | <b>Public Sector</b> = Provincial TEVTAs and relevant line Ministries<br><b>Private Sector</b> = Skill Development Councils (SDCs), Rural Support Programs (RSPs), NGOs & Entrepreneurs/ Chambers of Commerce and Industries. |
| 2.         | Skills/entrepreneurship development for the domestic commerce | <b>Public Sector</b> = Provincial TEVTAs and relevant line Ministries<br><b>Private Sector</b> = Skill Development Councils (SDCs), Rural Support Programs (RSPs), NGOs & Entrepreneurs/ Chambers of Commerce and Industries. |
| 3.         | Skills development for the services                           | <b>Public Sector</b> = Provincial TEVTAs and relevant line Ministries<br><b>Private Sector</b> = Skill Development Councils (SDCs), Rural Support Programs (RSPs), NGOs & Entrepreneurs/ Chambers of Commerce and Industries. |
| 4.         | Skills development for the agriculture sector                 | <b>Public Sector</b> = Provincial TEVTAs and relevant line Ministries<br><b>Private Sector</b> = Skill Development Councils (SDCs), Rural Support Programs (RSPs), NGOs & Entrepreneurs/ Chambers of Commerce and Industries. |
| 5.         | Skills development for the non-farm sector                    | <b>Public Sector</b> = Provincial TEVTAs and relevant line Ministries<br><b>Private Sector</b> = Skill Development Councils (SDCs), Rural Support Programs (RSPs), NGOs & Entrepreneurs/ Chambers of Commerce and Industries. |
| 6.         | Skills development for the agro-related                       | <b>Public Sector</b> = Provincial TEVTAs and relevant line Ministries<br><b>Private Sector</b> = Skill Development Councils (SDCs), Rural Support Programs (RSPs), NGOs & Entrepreneurs/ Chambers of Commerce and Industries. |
| 7.         | Skills development for the construction related               | <b>Public Sector</b> = Provincial TEVTAs and relevant line Ministries<br><b>Private Sector</b> = Skill Development Councils (SDCs), Rural Support Programs (RSPs) NGOs  |

## **6. Labor Market Information System (LMIS)**

Effectiveness of an employment policy, TVET and HRD programs are crucially linked with sufficiently available, reliable and disaggregated labor market information - on the nature and extent of unemployment, the opportunities of employment - and analysis thereof. Such an information is also needed for undertaking employment counseling and vocational guidance as well as providing feedback to the education and training institutions on the adequacy and responsiveness of their graduates to the needs of the economy and labor market. A comprehensive labor market information system (LMIS) – well integrated horizontally and vertically – with Districts as focal points needs to be developed for the purpose. A four-tier LMIS has been suggested by the National Employment Policy (NEP).

Placement Bureaus, Employment Counseling and Vocational Guidance Centers are established as part of the LMIS. Only then such institutions would be able to undertake their functions properly and also to monitor changes taking place in the labor market.

### **Action Plan**

The action plan suggested is as under:

1. Employment Exchanges (EEs) have to be strengthened and established in each District by reorganizing the Provincial Directorates of Manpower and District Employment Officers.
2. Legal provisions to be made for compulsory notification of vacancies by the public and private sector employers to the concerned EEs by skills/occupations
3. Registration of the unemployed to be completed and maintained by the EEs.
4. Placement bureaus to be established as an integral part of EEs for job-matching
5. Vocational guidance centers to be established as part of EEs
6. The EEs to be vertically integrated at the Provincial and Federal level.

## **7. Conclusion**

The 100 Days program of the new Government announced by the Prime Minister on 29<sup>th</sup> March 2008 in the National Assembly that inter alia stresses on generating employment through a number of schemes and programs is a clear demonstration of the importance attached in creating conditions for “decent work” in country. In this regard, economic activities that carry employment and development potential are to be carefully looked into and decent employment and poverty reduction outcomes of the macro and sectoral policies to be worked out.

This paper is intended to provide inputs to the Government’s efforts in tackling the issue of unemployment in the country. This has been done by looking into three areas, namely: employment generation, human resource development (HRD) with a focus on raising TVET competence, and promoting overseas migration. An attempt has also



been made to indicate actions needed for the proposed strategy. The paper also emphasizes development of a comprehensive labor market information system (LMIS) for better informed policy decisions and undertaking exercises of employment counseling, vocational guidance and vocational training.

Indeed, significant productive employment opportunities exist in the country. There also exist significant employment opportunities overseas. An appropriate policy mix - education, skills development and up gradation, human resource development (HRD), effective integration of the private sector and a LMIS - are the important building blocks in turning this huge potential into a reality.

The most important fundamental right is none else than the availability of a productive work opportunity to the able and willing to work citizen of a country. This paper has made an attempt to point out numerous productive employment opportunities that can be generated in the immediate and medium term time horizon within the country and the measures that would increase overseas migration.

**Annex Table - I**  
**Population, Labor Force and Labor Force Participation Rates (LFPRs)**

| Year    | Population |             |                  | Labor Force |               | LFPR (%) |
|---------|------------|-------------|------------------|-------------|---------------|----------|
|         | Total (Mn) | Growth Rate | Working age* (%) | Total (Mn)  | Increase (Mn) |          |
| 1996-97 | 126.72     | 2.61        | 84.65            | 36.30       | 1.57          | 28.6     |
| 1997-98 | 129.97     | 2.41        | 88.52            | 38.20       | 1.90          | 29.3     |
| 1999-00 | 136.01     | 2.23        | 92.05            | 39.4        | 1.20          | 29.4     |
| 2001-02 | 145.80     | 2.06        | 99.60            | 42.39       | 2.99          | 29.6     |
| 2003-04 | 148.72     | 1.90        | 103.40           | 45.23       | 2.84          | 30.4     |
| 2005-06 | 155.37     | 1.90        | 108.78           | 50.05       | 4.82          | 32.2     |

Labor Force Survey; various issues

\* Population 10 years and above is considered as working age population.

**Annex Table - II: Unemployment Rates by Area**

(%)

| Year    | Unemployment Rate |       |       |
|---------|-------------------|-------|-------|
|         | Pakistan          | Urban | Rural |
| 1996-97 | 6.1               | 6.1   | 5.7   |
| 1997-98 | 5.9               | 6.3   | 5.0   |
| 1999-00 | 7.8               | 8.2   | 6.9   |
| 2001-02 | 8.3               | 9.8   | 7.6   |
| 2003-04 | 7.7               | 9.7   | 6.7   |
| 2005-06 | 6.2               | 8.0   | 5.4   |

Source: Labor Force Survey, various issues

**Annex Table – III: Unemployed by Literacy, Education and Gender**

| <b>Education/Literacy</b> | <b>Male</b>                | <b>Female</b>             | <b>Total</b>               |
|---------------------------|----------------------------|---------------------------|----------------------------|
| Illiterate                | 751972<br>(34.7)           | 605839<br>(64.6)          | 1357811<br>(43.8)          |
| No Formal Education       | 7461<br>(0.3)              | 2749<br>(0.3)             | 10210<br>(0.3)             |
| KG Nursery                | 3815<br>(0.2)              | -                         | 3815<br>(0.1)              |
| KG But Below Primary      | 82094<br>(3.8)             | 17914<br>(1.9)            | 100008<br>(3.2)            |
| Primary But below Middle  | 388921<br>(18.0)           | 90340<br>(9.6)            | 479261<br>(15.4)           |
| Middle But below Matric   | 281048<br>(13.0)           | 35143<br>(3.7)            | 316191<br>(10.2)           |
| Matric but below Inter    | 376369<br>(17.4)           | 82453<br>(8.8)            | 458822<br>(14.8)           |
| Inter but below Degree    | 137745<br>(6.4)            | 44629<br>(4.8)            | 182374<br>(5.9)            |
| Degree in Engineering     | 8607<br>(0.4)              | -                         | 8607<br>(0.3)              |
| Degree in Medicine        | 2572<br>(0.1)              | 1086<br>(0.1)             | 3658<br>(0.1)              |
| Degree in Computer        | 746<br>(0.0)               | 947<br>(0.1)              | 1393<br>(0.1)              |
| Degree in Agriculture     | 2549<br>(0.1)              | 215<br>(0.0)              | 2754<br>(0.1)              |
| Degree in other Subject   | 94212<br>(4.4)             | 44091<br>(4.7)            | 138303<br>(4.5)            |
| MA/MSc                    | 27574<br>(1.3)             | 11913<br>(1.3)            | 39487<br>(1.3)             |
| <b>Total</b>              | <b>2165675<br/>(100.0)</b> | <b>977319<br/>(100.0)</b> | <b>3102994<br/>(100.0)</b> |

Source: Labor Force Survey 2005-06



**Annex Table – IV: Duration of Unemployment by Gender**

| Duration          | Gender            |                   | Total             |
|-------------------|-------------------|-------------------|-------------------|
|                   | Male              | Female            |                   |
| Less than a Month | 80201<br>(13.2)   | 8625<br>(6.7)     | 88826<br>(12.1)   |
| 1-2 Months        | 98179<br>(16.2)   | 17099<br>(13.3)   | 115278<br>(15.7)  |
| 3-6 Months        | 113458<br>(18.7)  | 27521<br>(21.3)   | 140979<br>(19.2)  |
| 7-12 Months       | 80430<br>(13.3)   | 18807<br>(14.6)   | 99237<br>(13.5)   |
| More Than a Year  | 233340<br>(38.5)  | 56976<br>(44.2)   | 290316<br>(39.5)  |
| Total             | 605608<br>(100.0) | 129028<br>(100.0) | 734636<br>(100.0) |

Source: Labor Force Survey 2005-06

**Annex Table –V: Unemployed by Age and Gender**

| Age Group       | Male              | Female           | Total             |
|-----------------|-------------------|------------------|-------------------|
| <b>Pakistan</b> |                   |                  |                   |
| 10-14           | 190755<br>(6.1)   | 50110<br>(1.6)   | 240865<br>(7.8)   |
| 15-60           | 1734401<br>(55.9) | 746647<br>(24.1) | 2481048<br>(80.0) |
| 61+             | 240520<br>(7.8)   | 140562<br>(4.4)  | 381082<br>(12.2)  |
| Total           | 2165676<br>(69.8) | 937319<br>(30.2) | 3102995<br>(100)  |

Source: Labor Force Survey 2005-06

**Annex Table – VI: Hours of Work by Area and Gender (%)**

| Hours | Pakistan |      |        | Urban |      |        | Rural |      |        |
|-------|----------|------|--------|-------|------|--------|-------|------|--------|
|       | Total    | Male | Female | Total | Male | Female | Total | Male | Female |
| 1-10  | 0.7      | 0.4  | 1.9    | 0.4   | 0.2  | 2.1    | 0.8   | 0.5  | 1.8    |
| 11-20 | 3.6      | 1.8  | 11.1   | 1.6   | 0.7  | 8.7    | 4.5   | 2.4  | 11.6   |
| 21-30 | 7.9      | 4.1  | 23.7   | 3.8   | 2.1  | 17.6   | 9.7   | 5.2  | 25.1   |
| 31-34 | 3.1      | 2.4  | 6.0    | 2.0   | 1.4  | 6.7    | 3.6   | 3.0  | 5.8    |
| 35-48 | 42.3     | 41.6 | 45.5   | 43.1  | 42.1 | 50.3   | 42.0  | 41.3 | 44.5   |
| 48+   | 42.3     | 49.6 | 11.8   | 49.1  | 53.5 | 14.6   | 39.3  | 47.6 | 11.2   |

Source: Labor Force Survey 2005-06

**Annex Table – VII: Hours of Work by Industry, Region and Gender**  
(%)

| Hours                | Pakistan |      |        | Urban |      |        | Rural |      |        |
|----------------------|----------|------|--------|-------|------|--------|-------|------|--------|
|                      | Total    | Male | Female | Total | Male | Female | Total | Male | Female |
| <b>Agriculture</b>   |          |      |        |       |      |        |       |      |        |
| 1-10                 | 1.0      | 0.7  | 1.8    | 0.6   | 0.5  | 1.0    | 1.1   | 0.7  | 1.9    |
| 11-20                | 6.3      | 3.7  | 12.2   | 6.3   | 3.7  | 14.9   | 6.3   | 3.7  | 12.1   |
| 21-30                | 12.9     | 7.1  | 26.1   | 10.5  | 6.9  | 22.7   | 13.1  | 7.1  | 26.2   |
| 31-34                | 3.7      | 3.0  | 5.4    | 4.2   | 3.1  | 7.7    | 3.7   | 3.0  | 5.3    |
| 35-48                | 41.5     | 40.4 | 43.9   | 39.0  | 37.9 | 42.6   | 41.6  | 40.5 | 44.0   |
| 48+                  | 34.5     | 45.1 | 10.5   | 39.4  | 47.8 | 11.0   | 34.2  | 45.0 | 10.5   |
| <b>Mining</b>        |          |      |        |       |      |        |       |      |        |
| 1-10                 | 0.0      | 0.0  | 0.0    | 0.0   | 0.0  | 0.0    | 0.0   | 0.0  | 0.0    |
| 11-20                | 0.0      | 0.0  | 0.0    | 0.0   | 0.0  | 0.0    | 0.0   | 0.0  | 0.0    |
| 21-30                | 0.0      | 0.0  | 0.0    | 0.0   | 0.0  | 0.0    | 0.0   | 0.0  | 0.0    |
| 31-34                | 0.0      | 0.0  | 0.0    | 0.0   | 0.0  | 0.0    | 0.0   | 0.0  | 0.0    |
| 35-48                | 35.7     | 34.0 | 100    | 67.6  | 65.1 | 100    | 32.9  | 31.4 | 100    |
| 48+                  | 64.3     | 66.0 | 0.0    | 32.4  | 34.9 | 0.0    | 67.1  | 68.6 | 0.0    |
| <b>Manufacturing</b> |          |      |        |       |      |        |       |      |        |
| 1-10                 | 0.8      | 0.2  | 3.1    | 0.7   | 0.1  | 3.7    | 1.0   | 0.4  | 2.6    |
| 11-20                | 2.8      | 0.7  | 11.3   | 2.1   | 0.3  | 11.3   | 3.8   | 1.1  | 11.3   |
| 21-30                | 5.9      | 1.3  | 23.6   | 4.2   | 0.8  | 21.5   | 8.0   | 2.0  | 25.3   |
| 31-34                | 1.8      | 1.0  | 5.2    | 1.1   | 0.5  | 3.9    | 2.8   | 1.5  | 6.3    |
| 35-48                | 47.9     | 48.4 | 46.1   | 48.9  | 49.0 | 48.3   | 46.8  | 47.6 | 44.4   |
| 48+                  | 40.7     | 48.4 | 10.6   | 43.1  | 49.3 | 11.3   | 37.7  | 47.3 | 10.0   |
| <b>Electricity</b>   |          |      |        |       |      |        |       |      |        |
| 1-10                 | 0.1      | 0.1  | 0.0    | 0.2   | 0.2  | 0.0    | 0.0   | 0.0  | 0.0    |
| 11-20                | 0.0      | 0.0  | 0.0    | 0.0   | 0.0  | 0.0    | 0.0   | 0.0  | 0.0    |
| 21-30                | 3.3      | 3.3  | 0.0    | 5.7   | 5.7  | 0.0    | 0.0   | 0.0  | 0.0    |
| 31-34                | 0.4      | 0.4  | 0.0    | 0.0   | 0.0  | 0.0    | 0.9   | 0.9  | 0.0    |
| 35-48                | 77.2     | 77.1 | 100    | 82.3  | 82.3 | 100    | 69.9  | 69.6 | 100    |
| 48+                  | 19.0     | 19.1 | 0.0    | 11.8  | 11.8 | 0.0    | 29.2  | 29.4 | 0.0    |
| <b>Construction</b>  |          |      |        |       |      |        |       |      |        |
| 1-10                 | 0.4      | 0.4  | 0.0    | 0.3   | 0.3  | 0.0    | 0.4   | 0.4  | 0.0    |
| 11-20                | 0.8      | 0.8  | 0.0    | 0.5   | 0.5  | 0.0    | 0.9   | 0.9  | 0.0    |
| 21-30                | 3.3      | 3.2  | 12.5   | 2.8   | 2.9  | 0.0    | 3.5   | 3.3  | 18.1   |
| 31-34                | 5.0      | 5.0  | 2.2    | 3.6   | 3.6  | 7.1    | 5.5   | 5.6  | 0.0    |
| 35-48                | 63.6     | 63.6 | 59.3   | 62.7  | 62.8 | 50.7   | 64.0  | 64.0 | 63.1   |
| 48+                  | 27.0     | 27.0 | 26.0   | 30.1  | 29.9 | 42.2   | 25.7  | 25.8 | 18.8   |
| <b>Trade</b>         |          |      |        |       |      |        |       |      |        |
| 1-10                 | 0.0      | 0.0  | 0.0    | 0.2   | 0.2  | 0.9    | 0.1   | 0.1  | 1.0    |
| 11-20                | 0.9      | 0.7  | 7.2    | 0.6   | 0.5  | 4.5    | 1.3   | 1.0  | 9.2    |
| 21-30                | 2.4      | 2.2  | 9.6    | 1.6   | 1.5  | 9.0    | 3.3   | 3.1  | 10.1   |



*Socio-Economic Challenges Faced by Pakistan*

|                  |      |      |      |      |      |      |      |      |      |
|------------------|------|------|------|------|------|------|------|------|------|
| 31-34            | 1.1  | 1.0  | 3.1  | 0.8  | 0.7  | 2.4  | 1.6  | 1.5  | 3.6  |
| 35-48            | 25.9 | 25.6 | 37.2 | 26.2 | 26.1 | 30.7 | 25.6 | 25.0 | 41.9 |
| 48+              | 69.5 | 70.3 | 41.9 | 70.6 | 70.9 | 52.6 | 68.1 | 69.4 | 34.1 |
| <b>Transport</b> |      |      |      |      |      |      |      |      |      |
| 1-10             | 0.3  | 0.3  | 0.0  | 0.1  | 0.1  | 0.0  | 0.4  | 0.4  | 0.0  |
| 11-20            | 0.6  | 0.6  | 2.4  | 0.5  | 0.4  | 4.4  | 0.7  | 0.7  | 0.0  |
| 21-30            | 1.2  | 1.2  | 5.2  | 1.3  | 1.2  | 9.7  | 1.1  | 1.1  | 0.0  |
| 31-34            | 0.5  | 0.5  | 1.3  | 0.5  | 0.4  | 2.5  | 0.6  | 0.6  | 0.0  |
| 35-48            | 27.9 | 27.8 | 39.6 | 30.9 | 30.6 | 53.7 | 25.5 | 25.5 | 23.0 |
| 48+              | 69.4 | 69.6 | 51.4 | 66.7 | 67.2 | 29.7 | 71.6 | 71.6 | 77.0 |
| <b>Finance</b>   |      |      |      |      |      |      |      |      |      |
| 1-10             | 0.5  | 0.5  | 0.0  | 0.7  | 0.7  | 0.0  | 0.0  | 0.0  | 0.0  |
| 11-20            | 0.2  | 0.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.9  | 0.9  | 0.0  |
| 21-30            | 1.0  | 0.9  | 2.8  | 0.5  | 0.4  | 3.2  | 2.9  | 2.9  | 0.0  |
| 31-34            | 0.6  | 0.7  | 0.0  | 0.6  | 0.6  | 0.0  | 0.8  | 0.8  | 0.0  |
| 35-48            | 54.9 | 54.0 | 81.2 | 55.6 | 54.8 | 78.5 | 52.1 | 51.2 | 100  |
| 48+              | 42.8 | 43.7 | 16.0 | 42.7 | 43.6 | 18.3 | 43.4 | 44.2 | 0.0  |
| <b>Services</b>  |      |      |      |      |      |      |      |      |      |
| 1-10             | 0.4  | 0.3  | 1.1  | 0.5  | 0.3  | 1.4  | 0.4  | 0.4  | 0.5  |
| 11-20            | 1.8  | 0.9  | 6.2  | 2.0  | 1.0  | 5.8  | 1.7  | 0.8  | 6.9  |
| 21-30            | 5.7  | 3.8  | 14.5 | 5.5  | 3.2  | 14.6 | 5.8  | 4.4  | 14.3 |
| 31-34            | 5.2  | 4.0  | 10.8 | 4.0  | 2.6  | 9.5  | 6.5  | 5.4  | 13.0 |
| 35-48            | 50.7 | 50.0 | 54.0 | 52.9 | 52.2 | 55.7 | 48.3 | 47.9 | 51.3 |
| 48+              | 36.1 | 40.9 | 13.4 | 34.9 | 40.7 | 13.0 | 37.3 | 41.2 | 13.9 |

Source: Labor Force Survey

**Annex Table – VIII: Average Monthly Income of Employees by Area and Gender**

| Income Group   | Pakistan |       |        | Urban |       |        | Rural |       |        |
|----------------|----------|-------|--------|-------|-------|--------|-------|-------|--------|
|                | Total    | Male  | Female | Total | Male  | Female | Total | Male  | Female |
| < 1500         | 14.4     | 9.5   | 46.2   | 10.8  | 7.5   | 34.0   | 17.5  | 11.2  | 55.2   |
| 1501-2500      | 17.6     | 17.0  | 21.5   | 13.7  | 13.0  | 18.5   | 20.9  | 20.5  | 23.8   |
| 2501-3900      | 21.7     | 23.8  | 8.3    | 19.9  | 21.4  | 9.8    | 23.3  | 26.0  | 7.1    |
| 4000 and above | 46.3     | 49.7  | 24.0   | 55.6  | 58.1  | 37.7   | 38.3  | 42.3  | 13.9   |
| <b>Total</b>   | 100.0    | 100.0 | 100.0  | 100.0 | 100.0 | 100.0  | 100.0 | 100.0 | 100.0  |

Source: Labor Force Survey, 2005-06

**Annex Table – IX**  
**Employment Status by Area**

(**%**)

| Year    | Employer |       |       | Self-employed |       |       | Unpaid family Helper |       |       | Employees |       |       |
|---------|----------|-------|-------|---------------|-------|-------|----------------------|-------|-------|-----------|-------|-------|
|         | Pakistan | Urban | Rural | Pakistan      | Urban | Rural | Pakistan             | Urban | Rural | Pakistan  | Urban | Rural |
| 1996-97 | 1.1      | 2.6   | 0.4   | 42.2          | 33.1  | 46.1  | 20.3                 | 9.3   | 25.1  | 36.4      | 55.0  | 28.4  |
| 1997-98 | 0.9      | 2.3   | 0.3   | 41.5          | 33.4  | 45.0  | 22.4                 | 9.3   | 28.0  | 35.3      | 55.1  | 26.7  |
| 1999-00 | 0.8      | 2.3   | 0.2   | 42.2          | 33.9  | 45.6  | 21.4                 | 10.0  | 26.1  | 35.6      | 53.9  | 28.1  |
| 2001-02 | 0.8      | 1.9   | 0.3   | 38.5          | 30.5  | 42.2  | 20.8                 | 9.7   | 25.9  | 39.9      | 57.9  | 31.6  |
| 2003-04 | 0.9      | 2.3   | 0.2   | 37.1          | 31.6  | 39.6  | 24.1                 | 10.8  | 30.3  | 37.9      | 55.3  | 29.9  |
| 2005-06 | 0.9      | 2.1   | 0.36  | 34.9          | 31.3  | 36.6  | 27.0                 | 11.2  | 33.9  | 37.3      | 55.4  | 29.2  |

Source: Labor Force Survey, various issues



**Annex Table – X: Employed by Major Industry**

(**%**)

| <b>Year</b> | <b>Agri.</b> | <b>Mining,<br/>Quar.</b> | <b>Manuf.</b> | <b>Constr.</b> | <b>Electric.<br/>Gas</b> | <b>Trade</b> | <b>Comm.</b> | <b>Finan.<br/>Insit.</b> | <b>Social</b> | <b>Not Defined</b> |
|-------------|--------------|--------------------------|---------------|----------------|--------------------------|--------------|--------------|--------------------------|---------------|--------------------|
| 1996-97     | 44.2         | 0.1                      | 11.1          | 6.8            | 1.0                      | 14.6         | 5.7          | 1.0                      | 15.6          | 0.04               |
| 1997-98     | 47.3         | 0.2                      | 10.0          | 6.3            | 0.7                      | 13.9         | 5.5          | 0.9                      | 15.4          | 0.1                |
| 1999-00     | 48.4         | 0.1                      | 11.5          | 5.8            | 0.7                      | 13.5         | 5.0          | 0.8                      | 14.2          | -                  |
| 2001-02     | 42.1         | 0.1                      | 13.8          | 6.1            | 0.8                      | 14.8         | 5.9          | 0.9                      | 15.5          | -                  |
| 2003-04     | 43.1         | 0.1                      | 13.7          | 5.8            | 0.7                      | 14.8         | 5.7          | 1.1                      | 15.0          | 0.1                |
| 2005-06     | 44.1         | 0.1                      | 13.7          | 6.2            | 0.7                      | 14.3         | 5.7          | 1.1                      | 14.1          | -                  |

Source: Labor Force Survey, various issues

**Annex Table - XI**  
**Education and Literacy by Gender of Working Age Population**                      (%)

| Education and Literacy            | 2003-04 |       |        | 2005-06 |       |        |
|-----------------------------------|---------|-------|--------|---------|-------|--------|
|                                   | Total   | Male  | Female | Total   | Male  | Female |
| No formal Education               | 0.6     | 0.7   | 0.5    | 0.3     | 0.3   | 0.2    |
| Below Matric                      | 33.7    | 41.1  | 26.0   | 35.0    | 42.6  | 27.0   |
| Matric But Less than Intermediate | 9.7     | 12.3  | 7.0    | 10.0    | 12.4  | 7.5    |
| Intermediate But less than Degree | 3.9     | 4.7   | 3.1    | 4.1     | 4.9   | 3.2    |
| Degree and Above                  | 3.8     | 4.9   | 2.6    | 3.8     | 4.8   | 2.7    |
| Literate                          | 51.6    | 63.7  | 39.2   | 53.1    | 65.0  | 40.6   |
| Illiterate                        | 48.4    | 36.3  | 60.8   | 46.9    | 35.0  | 59.4   |
| Total                             | 100.0   | 100.0 | 100.0  | 100.0   | 100.0 | 100.0  |

Source: Labor Force Survey 2005-06



**Annex Table – XII: Capacity and Number of Trades Offered by  
Polytechnic Institutes by Provinces**

| Province    | No of<br>Polytechnics | No. of Trades<br>Offered | Training<br>Capacity |
|-------------|-----------------------|--------------------------|----------------------|
| PUNJAB      | 24                    | 61                       | 20322                |
| SINDH       | 29                    | 26                       | 9293                 |
| NWFP        | 15                    | 16                       | 5890                 |
| BALUCHISTAN | 02                    | 9                        | 440                  |
| Total       | 107                   |                          | 35,945               |

**Annex Table – XIII: Capacity and Number of Trades Offered by  
Vocational and Polytechnic Institutes by Provinces**

| <b>Public Sector</b>                  |                     |                  |                |
|---------------------------------------|---------------------|------------------|----------------|
| Province                              | No. of<br>Institute | No. of<br>Trades | Capacity       |
| Punjab                                | 262                 | 142              | 30862          |
| Sindh                                 | 33                  | 34               | 4242           |
| NWFP                                  | 36                  | 38               | 4456           |
| Balochistan                           | 11                  | 23               | 1649           |
| AJ & K                                | 57                  | 24               | 2415           |
| Apprenticeship Training               |                     | 123              | 10,000         |
| <b>Sub-Total</b>                      | <b>399</b>          |                  | <b>53,624</b>  |
| <b>Private Sector</b>                 |                     |                  |                |
| Punjab                                | 220                 | -                | 41000          |
| Sindh                                 | 71                  | -                | 15000          |
| NWFP                                  | 90                  | -                | 3780           |
| Baluchistan                           | 32                  | -                | 1500           |
| Punjab Vocational Training<br>Council | 139                 | 38               | 18159          |
| Skill Development Councils<br>(SDCs)* | 5                   | 137              | 25000          |
| <b>Sub-total</b>                      | <b>552</b>          |                  | <b>104,439</b> |
| <b>Grand Total</b>                    | <b>951</b>          |                  | <b>158,067</b> |

- The SDCs – an employer led public-private partnership - in five numbers – one each in provincial capitals and Islamabad - organize training courses largely through registering private sector training providers.

**Annex Table – XIV**  
**Number of Tehsils with and without Vocational and Polytechnic Institutes by Provinces**

| Province/Region | Total Number of Tehsils | Number of Tehsils without a TVET Institute |
|-----------------|-------------------------|--|
| Punjab          | 145                     | 21   |
| Sindh           | 121                     | 19   |
| NWFP            | 54                      | 37   |
| AJK             | 22                      | 12   |
| Balochistan     | 78                      | 47   |
| Northern Areas  | 14                      | 7  |
| Islamabad       | 1                       | -  |
| FATA            | 23                      | 20   |
| <b>TOTAL</b>    | <b>477</b>              | <b>163</b>                                 |

Source: National Vocational Training Education Commission



**Annex Table – XV: Number of Pakistani Workers Overseas by Categories During 1971-2007**

| Sr. No. | Categories                 | 1971-2000 | 2001  | 2002  | 2003  | 2004  | 2005 | 2006  | 2007  | Total  |
|---------|----------------------------|-----------|-------|-------|-------|-------|------|-------|-------|--------|
| 1       | Engineer                   | 18338     | 1227  | 861   | 821   | 880   | 951  | 1355  | 2171  | 26604  |
| 2       | Doctor                     | 4469      | 616   | 506   | 402   | 431   | 534  | 509   | 463   | 7930   |
| 3       | Nurse                      | 4037      | 341   | 406   | 350   | 342   | 310  | 128   | 99    | 6013   |
| 4       | Teacher                    | 4650      | 206   | 254   | 255   | 289   | 166  | 421   | 558   | 6799   |
| 5       | Accountant                 | 11468     | 372   | 341   | 443   | 613   | 694  | 961   | 1238  | 16130  |
| 6       | Manager                    | 6134      | 734   | 656   | 798   | 1078  | 1392 | 2462  | 2802  | 16056  |
| 7       | Welder                     | 31103     | 1237  | 1545  | 3263  | 1770  | 1435 | 3098  | 4429  | 47880  |
| 8       | Secretary/<br>Stenographer | 2193      | 50    | 68    | 91    | 92    | 102  | 151   | 88    | 2835   |
| 9       | Storekeeper                | 5152      | 190   | 309   | 475   | 287   | 329  | 774   | 485   | 8001   |
| 10      | Agriculturist              | 94888     | 5988  | 5096  | 9536  | 7453  | 7728 | 10780 | 12809 | 154278 |
| 11      | Clerk/Typist               | 52065     | 369   | 627   | 1160  | 1095  | 1090 | 1676  | 1639  | 59721  |
| 12      | Foreman/<br>Supervisor     | 31528     | 884   | 1147  | 1964  | 1544  | 1522 | 1871  | 2896  | 43356  |
| 13      | Mason                      | 218229    | 11083 | 11312 | 16415 | 13645 | 9685 | 9700  | 16213 | 306282 |
| 14      | Carpenter                  | 151112    | 7304  | 9954  | 13355 | 11231 | 8027 | 8861  | 12787 | 222631 |
| 15      | Electrician                | 97623     | 4718  | 6570  | 8614  | 6024  | 4201 | 5688  | 8560  | 141998 |
| 16      | Cook                       | 58147     | 1976  | 2236  | 3240  | 3153  | 2314 | 2787  | 2526  | 76379  |
| 17      | Plumber                    | 42067     | 2412  | 3517  | 4760  | 2944  | 1581 | 2877  | 4510  | 64668  |
| 18      | Waiter/Bearer              | 18770     | 792   | 1000  | 1361  | 687   | 361  | 588   | 717   | 24276  |

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| Sr. No. | Categories                 | 1971-2000 | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2007   | Total   |
|---------|----------------------------|-----------|-------|-------|-------|-------|-------|-------|--------|---------|
| 19      | Steel Fixer                | 84786     | 4674  | 6273  | 8760  | 6680  | 4935  | 6318  | 9860   | 132286  |
| 20      | Painter                    | 58327     | 3032  | 3146  | 4995  | 3233  | 2516  | 3307  | 4978   | 83534   |
| 21      | Laborer                    | 1104353   | 41074 | 46726 | 73318 | 66650 | 54735 | 75098 | 130890 | 1592844 |
| 22      | Technician                 | 95569     | 6229  | 9366  | 12719 | 10250 | 8651  | 8301  | 11055  | 162140  |
| 23      | Mechanic                   | 81820     | 3169  | 4142  | 6358  | 4406  | 3705  | 4304  | 6771   | 114675  |
| 24      | Cable Jointer              | 2932      | 35    | 96    | 50    | 70    | 78    | 131   | 73     | 3465    |
| 25      | Driver                     | 267078    | 18467 | 17984 | 21182 | 14830 | 11626 | 14114 | 26501  | 391782  |
| 26      | Operator                   | 32966     | 1504  | 2433  | 3707  | 1829  | 3709  | 3846  | 5006   | 55000   |
| 27      | Tailor                     | 146858    | 3141  | 3860  | 4334  | 3917  | 2293  | 2748  | 4067   | 171218  |
| 28      | Surveyor                   | 5769      | 163   | 183   | 237   | 185   | 128   | 288   | 501    | 7454    |
| 29      | Fitter                     | 13737     | 884   | 974   | 1475  | 1141  | 1547  | 2926  | 3764   | 26448   |
| 30      | Denter                     | 20176     | 1009  | 1185  | 2199  | 1110  | 441   | 613   | 906    | 27639   |
| 31      | Computer/<br>Prog. Analyst | 1523      | 583   | 404   | 354   | 371   | 443   | 672   | 934    | 5284    |
| 32      | Designer                   | 327       | 181   | 277   | 564   | 104   | 46    | 62    | 59     | 1620    |
| 33      | Goldsmith                  | 3104      | 398   | 240   | 408   | 234   | 135   | 321   | 147    | 4987    |
| 34      | Pharmacist                 | 336       | 61    | 19    | 32    | 68    | 16    | 31    | 12     | 575     |
| 35      | Rigger                     | 1144      | 277   | 74    | 97    | 156   | 118   | 718   | 1048   | 3632    |
| 36      | Salesman                   | 31506     | 1619  | 3103  | 4824  | 4195  | 3969  | 4115  | 4893   | 58224   |



*Socio-Economic Challenges Faced by Pakistan*

| Sr. No.      | Categories   | 1971-2000      | 2001          | 2002          | 2003          | 2004          | 2005          | 2006          | 2007          | Total          |
|--------------|--------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| 37           | Draftsman    | 847            | 106           | 62            | 594           | 113           | 63            | 115           | 111           | 2011           |
| 38           | Blacksmith   | 372            | 307           | 63            | 114           | 129           | 98            | 176           | 267           | 1526           |
| 39           | Photographer | 309            | 12            | 26            | 24            | 51            | 18            | 11            | 14            | 465            |
| 40           | Artist       | 395            | 505           | 381           | 391           | 544           | 443           | 289           | 186           | 3134           |
| 41           | Others.      | 75810          | 0             | 0             | 0             | 0             | 0             | 0             |               | 75810          |
| <b>Total</b> |              | <b>2882017</b> | <b>127929</b> | <b>147422</b> | <b>214039</b> | <b>173824</b> | <b>142135</b> | <b>183191</b> | <b>287033</b> | <b>4157590</b> |

*Source:* BE&OE, Labor and Manpower Division

**Annex Table XVIa: Number of Pakistanis Overseas by Countries During 1971-2007**

| S.# | Countries   | 1971-2000 | 2001  | 2002  | 2003  | 2004  | 2005  | 2006   | 2007   | Total   |
|-----|-------------|-----------|-------|-------|-------|-------|-------|--------|--------|---------|
| 1   | U.A.E.      | 626705    | 18421 | 34113 | 61329 | 65786 | 73642 | 100207 | 139405 | 1119608 |
| 2   | Algeria.    | 708       | 8     | 5     | 0     | 4     | 0     | 1      | 5      | 731     |
| 3   | Angola.     | 66        | 2     | 2     | 0     | 0     | 0     | 10     | 70     | 150     |
| 4   | Bahrain.    | 65987     | 1173  | 1022  | 809   | 855   | 1612  | 1630   | 2615   | 75703   |
| 5   | Brunei.     | 192       | 174   | 41    | 78    | 107   | 71    | 77     | 56     | 796     |
| 6   | Gabon.      | 287       | 2     | 0     | 2     | 0     | 0     | 6      | 1      | 298     |
| 7   | Gen-Island. | 195       | 0     | 0     | 0     | 0     | 0     | 0      | 0      | 195     |
| 8   | Greece.     | 428       | 0     | 2     | 8     | 6     | 30    | 36     | 6      | 516     |
| 9   | Guinea.     | 60        | 1     | 0     | 17    | 30    | 2     | 12     | 5      | 127     |
| 10  | Hong Kong.  | 97        | 10    | 7     | 13    | 6     | 12    | 16     | 16     | 177     |
| 11  | Iran.       | 12544     | 2     | 1     | 5     | 12    | 6     | 3      | 3      | 12576   |
| 12  | Iraq.       | 68132     | 1     | 0     | 0     | 0     | 0     | 0      | 0      | 68133   |
| 13  | Jordan.     | 4367      | 189   | 39    | 61    | 140   | 102   | 43     | 67     | 5008    |
| 14  | Kenya       | 33        | 0     | 0     | 2     | 7     | 1     | 7      | 0      | 50      |
| 15  | Kuwait.     | 106307    | 440   | 3204  | 12087 | 18498 | 7185  | 10545  | 14544  | 172810  |
| 16  | Libya.      | 63701     | 713   | 781   | 1374  | 375   | 261   | 67     | 450    | 67722   |
| 17  | Lebanon.    | 359       | 1     | 0     | 1     | 0     | 4     | 4      | 8      | 377     |



| S.# | Countries     | 1971-2000 | 2001  | 2002   | 2003   | 2004  | 2005  | 2006  | 2007  | Total   |
|-----|---------------|-----------|-------|--------|--------|-------|-------|-------|-------|---------|
| 18  | Malaysia.     | 1993      | 64    | 59     | 114    | 65    | 7690  | 4757  | 1190  | 15932   |
| 19  | Nigeria.      | 2019      | 16    | 21     | 66     | 14    | 25    | 55    | 57    | 2273    |
| 20  | Oman.         | 212131    | 3802  | 95     | 6911   | 8982  | 8019  | 12614 | 32474 | 285028  |
| 21  | Qatar.        | 50481     | 1633  | 480    | 367    | 2383  | 2175  | 2247  | 5006  | 64772   |
| 22  | Saudi Arabia. | 1648279   | 97262 | 104783 | 126397 | 70896 | 35177 | 45594 | 84587 | 2212975 |
| 23  | Sierra Leone  | 124       | 0     | 0      | 0      | 0     | 0     | 7     | 3     | 134     |
| 24  | Sudan.        | 668       | 37    | 128    | 27     | 93    | 360   | 140   | 128   | 1581    |
| 25  | Singapore.    | 113       | 9     | 14     | 5      | 3     | 6     | 8     | 11    | 169     |
| 26  | Somalia.      | 59        | 1     | 3      | 0      | 2     | 1     | 1     | 4     | 71      |
| 27  | Spain.        | 159       | 362   | 389    | 202    | 254   | 290   | 183   | 176   | 2015    |
| 28  | Tanzania.     | 342       | 8     | 3      | 45     | 53    | 65    | 39    | 41    | 596     |
| 29  | Tunisia.      | 25        | 0     | 0      | 0      | 0     | 0     | 0     | 3     | 28      |
| 30  | Uganda.       | 303       | 0     | 0      | 0      | 1     | 1     | 0     | 0     | 305     |
| 31  | U.K.          | 1059      | 800   | 703    | 858    | 1419  | 1611  | 1741  | 1111  | 9302    |
| 32  | U.S.A.        | 802       | 788   | 310    | 140    | 130   | 238   | 202   | 297   | 2907    |
| 33  | Yemen.        | 3796      | 25    | 73     | 85     | 157   | 81    | 127   | 163   | 4507    |
| 34  | West Africa.  | 307       | 0     | 0      | 0      | 0     | 0     | 0     | 0     | 307     |

*Strategy for Generating Employment in Pakistan: Some Short and Medium Term Measures*

| S.# | Countries     | 1971-2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | Total |
|-----|---------------|-----------|------|------|------|------|------|------|------|-------|
| 35  | South Africa. | 24        | 3    | 8    | 59   | 7    | 38   | 65   | 45   | 249   |
| 36  | Zambia.       | 834       | 5    | 2    | 1    | 0    | 5    | 1    | 4    | 852   |
| 37  | Japan.        | 91        | 24   | 10   | 12   | 12   | 22   | 53   | 33   | 257   |
| 38  | South Korea.  | 3634      | 271  | 564  | 2144 | 2474 | 1970 | 1082 | 434  | 12573 |
| 39  | Croatia.      | 44        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 44    |
| 40  | Turkmenistan. | 493       | 216  | 4    | 214  | 16   | 109  | 10   | 5    | 1067  |
| 41  | Cyprus.       | 140       | 17   | 31   | 22   | 40   | 32   | 111  | 206  | 599   |
| 42  | Turkey.       | 149       | 3    | 3    | 1    | 0    | 0    | 2    | 7    | 165   |
| 43  | China.        | 137       | 4    | 8    | 1    | 3    | 154  | 435  | 300  | 1042  |
| 44  | Cameroon.     | 41        | 1    | 2    | 0    | 0    | 0    | 0    | 1    | 45    |
| 45  | Morocco.      | 38        | 0    | 0    | 0    | 0    | 0    | 0    | 4    | 42    |
| 46  | Italy.        | 405       | 824  | 48   | 128  | 581  | 551  | 431  | 2765 | 5733  |
| 47  | Sweden.       | 46        | 2    | 0    | 0    | 8    | 15   | 3    | 3    | 77    |
| 48  | Switzerland   | 18        | 8    | 3    | 5    | 4    | 2    | 4    | 9    | 53    |
| 49  | Syria         | 217       | 20   | 2    | 6    | 5    | 4    | 80   | 1    | 335   |
| 50  | Germany       | 77        | 23   | 5    | 42   | 8    | 2    | 8    | 5    | 170   |
| 51  | Azerbaijan    | 3         | 1    | 0    | 5    | 7    | 2    | 4    | 3    | 25    |



| S.# | Countries | 1971-2000 | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   | 2007   | Total   |
|-----|-----------|-----------|--------|--------|--------|--------|--------|--------|--------|---------|
| 52  | Others    | 2798      | 563    | 454    | 396    | 381    | 562    | 523    | 706    | 6383    |
|     | Total:    | 2882017   | 127929 | 147422 | 214039 | 173824 | 142135 | 183191 | 287033 | 4157590 |

Source: BE&OE, Labor and Manpower Division

**Annex Table – XVib: Workers' Remittances**

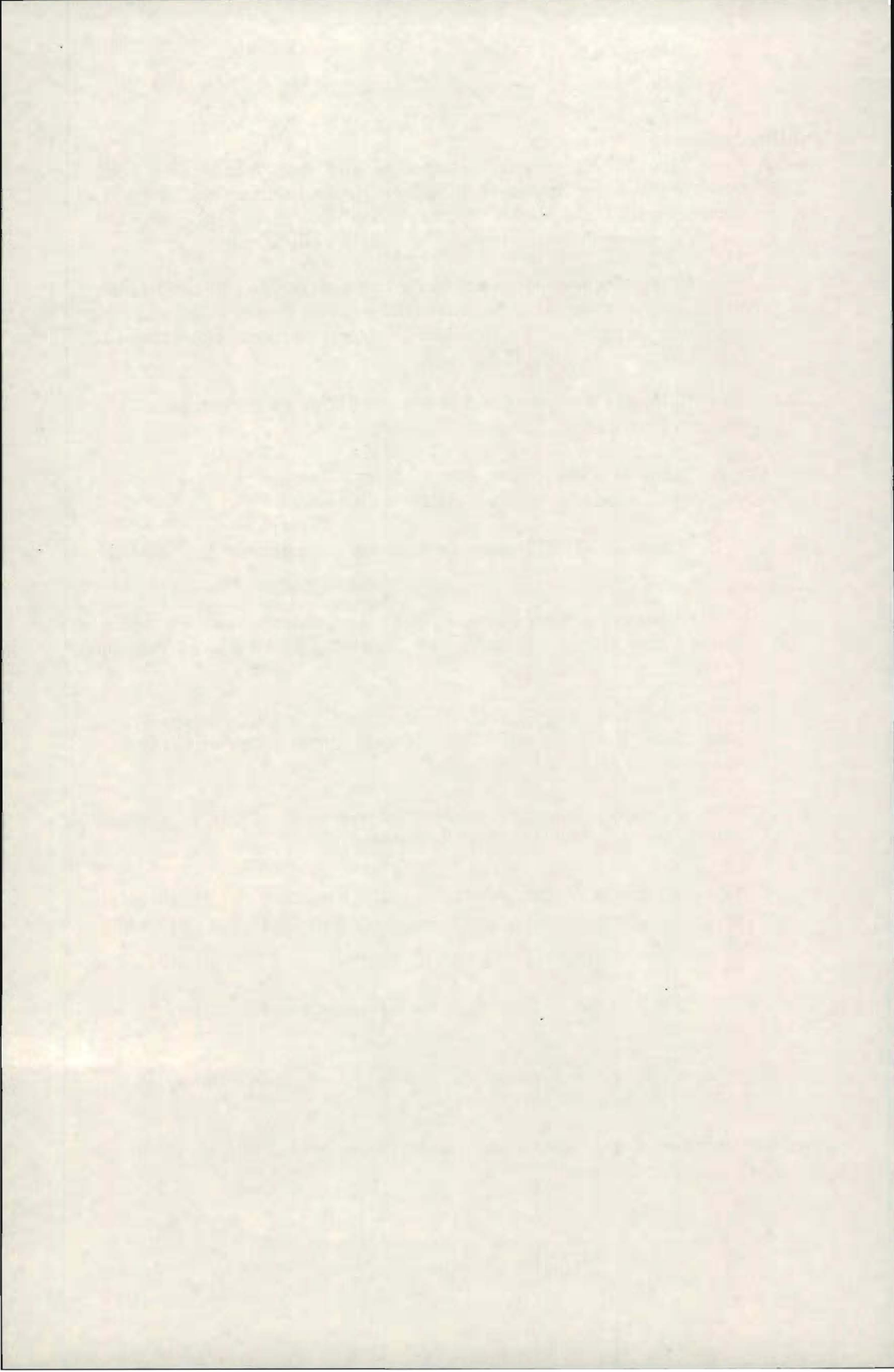
| Years                   | Remittances | % Share of GDP | Major Countries |        |               |                 |
|-------------------------|-------------|----------------|-----------------|--------|---------------|-----------------|
|                         |             |                | Middle East     | Europe | North America | Other Countries |
| 1990-91                 | 1848.29     | 4.1            | 1005.57         | 233.95 | 201.49        | 185.91          |
| 1991-92                 | 1467.48     | 3.0            | 766.45          | 186.39 | 160.2         | 139.42          |
| 1992-93                 | 1562.24     | 3.0            | 771.92          | 169.84 | 165.34        | 131.41          |
| 1993-94                 | 1445.56     | 2.8            | 720.31          | 141.92 | 128.14        | 102.88          |
| 1994-95                 | 1866.10     | 3.1            | 898.31          | 151.07 | 146           | 121.365         |
| 1995-96                 | 1461.17     | 2.3            | 822.33          | 147.52 | 147.59        | 109.84          |
| 1996-97                 | 1409.47     | 2.3            | 706.16          | 124.89 | 149.84        | 97.11           |
| 1997-98                 | 1489.55     | 2.4            | 843.41          | 122.61 | 170.43        | 101.23          |
| 1998-99                 | 1060.19     | 1.8            | 641.31          | 90.78  | 85.41         | 58.5            |
| 1999-00                 | 983.73      | 1.3            | 682.06          | 89.34  | 83.82         | 58.37           |
| 2000-01                 | 1086.57     | 1.5            | 693.14          | 96.33  | 139.71        | 92.33           |
| 2001-02                 | 2389.05     | 3.3            | 1070.57         | 171.92 | 98.418        | 299.25          |
| 2002-03                 | 4236.85     | 5.1            | 1891.95         | 309.59 | 1252.71       | 735.78          |
| 2003-04                 | 3871.58     | 3.9            | 1614.32         | 390.65 | 1247.99       | 573.21          |
| 2004-05                 | 4186.79     | 3.7            | 1851.96         | 444    | 1342.57       | 513.78          |
| 2005-06                 | 4600.12     | 2.9            | 2081.26         | 514.5  | 1324.2        | 686.13          |
| 2005-06<br>(July-April) | 3629.68     | 2.5            | 1617.81         | 406.85 | 1059.72       | 534.52          |
| 2006-07<br>(July-April) | 4450.12     | 3.1            | 2111.1          | 435.65 | 1245.74       | 655.5           |

Source: BE&OE, Labor and Manpower Division



## **Bibliography**

- Ghayur, Sabur (2008). *Labor Market Information Analysis: Relation with Policy Development*. Paper presented in the 2-Days National Seminar on: "Towards a Comprehensive Labor Market Information Analysis", 21-22 May 2008. Labor and Manpower Division. Government of Pakistan. Islamabad
- ..... (2006). *Employment and Skills Development for Decent Work: Issues and Strategies in Ghayur, S. (ed) "Pakistan: Decent Employment Generation and Skills Development"*. Labor and Manpower Division. Government of Pakistan. Islamabad. September.
- ..... (1998). *Human Resource Development and Utilization in Pakistan*. Friedrich Ebert Stiftung, Pakistan Office. Islamabad.
- GOP (2008). *National Employment Policy*. Policy Planning Cell. Labor and Manpower Division. Government of Pakistan Islamabad.
- ..... (2007). *Vision 2030*. Planning Commission. Government of Pakistan, Islamabad.
- ..... (2007a). *Pakistan Employment Trends 2007*. Labor Market Information and Analysis Unit. Labor and Manpower Division. Government of Pakistan. Islamabad.
- ..... (2007b). *Pakistan Employment Trends 2007 - Skills*. Labor Market Information and Analysis Unit. Labor and Manpower Division. Government of Pakistan. Islamabad.
- ..... (2005). *Medium Term Development Framework, 2005-10*. Planning Commission. Government of Pakistan, Islamabad.
- ..... (2005a). *Pakistan Decent Work Country Program*. Government of Pakistan, Ministry of Labor, Manpower and Overseas Pakistanis. Islamabad. September.
- ..... (2005b). *Poverty Reduction Strategy Paper*. Government of Pakistan, Islamabad.
- ..... (2005c). *Pakistan Labor Force Survey*, (Various Issues). Federal Bureau of Statistics. Islamabad
- NMC (1989). *Report of National Manpower Commission*. National Manpower Commission. Islamabad.





## **Impact of Trade Liberalization on Wages and Employment in Large Scale Manufacturing Industries of Pakistan**

*Javed Iqbal<sup>1</sup> & Misbah Nosheen<sup>2</sup>*

**Abstract:** *In this paper the impact of trade liberalization on employment and wages has been examined for manufacturing industries of Pakistan, using data from 1970-71 to 2000-01. For estimation purpose, the Generalized Method of Moment has been used. The empirical results show that when tariff rate is used as measure of liberalization it has positive effect on employment but no effect on wages on the other hand, when openness is used as measure of liberalization it has negative effect on employment but no effect on wages.*

### **1. Introduction**

Most of the developing countries have experienced trade liberalization over the last two decades. Those, who are in favor of trade liberalization, are of the view that free trade is beneficial for the workers in developing countries. It is argued that given abundant supply of labor, the countries concerned will allocate their resources towards labor-intensive goods. As a result, employment and wages are expected to increase in developing countries. Whereas, the basis of this argument is reasonably convincing, and is by and large supported by the experience of the Newly Industrialized Economies of East Asia (Hong Kong, Korea, Singapore and Taiwan). Most of the evidence supports the conventional view that the adoption of more liberalized policies is likely to increase the demand for workers with only a basic general education relative to the demand for workers with higher education and skills Wood (1997). However, recent experience of most of Latin American countries show that demand for unskilled labor has not been improved and trade liberalization has hurt this category of workers. (Feenstra and Hanson 1995; Hanson and Harrison 1995; Revenga and Montenegro, 1995. Robbins, 1996, and Wood, 1997).

It has therefore, become an important area to explore the link between trade liberalization and labor markets. A declining tendency in employment of manufacturing industries, especially that of low skilled workers and the growing wage inequality has been investigated in the context of trade liberalization. Crucial to this debate is an understanding of who bears the burden of adjustment to the changing patterns of International trade. It is important to know whether trade liberalization affects the rate of employment in developing countries or the wage rate also shows some adjustment in response.

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Till 1980s Pakistan followed policies of protection. However, the process of trade liberalization took a start when the Government of Pakistan deregulated the economy under structural adjustment program (SAP). One of the main objectives of moving towards liberalization was to remove inefficiencies in the industrial sector, created by import substitution and other protection policies.

The consequences of trade liberalization matter, especially for a developing country like Pakistan, where one-third of population still lives below poverty line (Siddique, (2001). Most of the studies focused on the consequences of trade liberalization for poverty, income distribution, employment, increased inequality, and its implication, for skilled and non skilled workers. However, there are relatively few studies, analyzing the effects of trade-induced shifts in the composition of employment and wage levels in developing countries economies in general, and in their manufacturing sectors in particular. In case of Pakistan, there is a very limited work in this area. The present study is an attempt towards exploring the impact of liberalization employment and wage structure.

The organization of the paper is as follows: Section 2 gives a brief literature review. In section 3 historical background of trade liberalization is presented. Section 4 starts with a brief discussion on theoretical background of trade liberalization. In section 5 a simple model is presented to link up changes in trade with changes in wages and employment. A description of the data set is contained in Section 6. Estimation strategy is discussed in section 7 while empirical results obtained from econometric analysis are presented and discussed in Section 8. The final sections are presented for conclusions and policy implications as usual.

## **2. Literature Review**

Research of trade liberalization, wages and employment is very and extensive. However, most of the available literature in these areas concerns the developed countries. In recent years there a number of studies having examined the trade effect on wages and employment. The conclusion of the empirical work carried on in this area can be sharply divided into two sections: (i) trade liberalization has a substantial impact on employment and wage levels in developed as well as developing countries. (e.g., Leamer, 1993; Sachs and Shatz, 1994 Grossman, 1982, Tochibanaki .et.al.1998 ,Mariano Bella et.al, 2000 and D. Kstoeas (2005) and (ii) the impact of trade liberalization is limited and that the reduced employment in the manufacturing industry and declining wages for unskilled labor in the countries concerned derive chiefly from internal factors such as the shift from manufacturing to the service sector and the rate of technological progress (e.g., Krugman and Lawrence, 1993; Lawrence and Slaughter, 1993; Krugman, 1995). Moreover, the findings are not necessarily firm, for example, results can differ greatly depending on the use of dummy variables.

To examine the trade effects for labor markets, various techniques and methodologies have been used. In the light of studies by Slaughter (1998) and Greenaway and Nelson (2001), the literature can be divided into four fold classifications:



First, simple evaluation of consistency between data and standard theory of international trade (Hecksher-Ohlin model and Stopler-Samuelson theorem); which tests trade theories using empirical models (e.g., Lawrence and Slaughter (1993), Bhagwati and Dehejia (1994) and Sachs and Shatz (1994). Second, the factor content of trade (FCT) methodology involves the calculation of the amount of skill, labor, and capital incorporated in trade flows in order to estimate the impact of trade on factor demand. (Sachs and Shatz (1994), Wood (1994). However, this approach was questioned and the Third approach of mandate wage in response of import penetration was introduced by Freeman (1995) and Deardorff and Hakura (1994). However, all these approaches were criticized on the ground that they comprised partial equilibrium analysis and based on certain specific circumstances. Therefore, the Fourth approach of General equilibrium analysis was introduced by Krugman (1995); to examine the relationship between trade liberalization and labor markets. Further evaluation of trade and labor market studies have questioned the assumption of trade theories, particularly that of Hecksher-Ohlin- Stopler-Samuelson(H-O-S) theorem. Under H-O-S theorem, the basis of trade is the intensity of factors of production and comparative advantage. Therefore, trade is expected to take place between capital intensive and labor intensive countries.

However, it has been observed recently that mostly trade takes place between same types of countries. Now the question arises as to what will be the effect on inequality when trade is between similar countries. The result shows that trade has increased inequality between skilled and unskilled even if trade takes place among similar countries. Here technological change is considered to be the main factor responsible for wage inequality between skilled and unskilled workers. Therefore, most of the studies examine the impact of technology also when examining the impact of trade on labor markets. Moreover, the studies show that wages and employment in the export intensive sectors increase relatively more than other sectors, thereby indicating a shuffling of employment within sectors rather than across sectors. In Pakistan, there has been very little empirical research in this area, and much ground remains to be covered by future studies.

### **3. Historical Back ground of Trade liberalization in Pakistan**

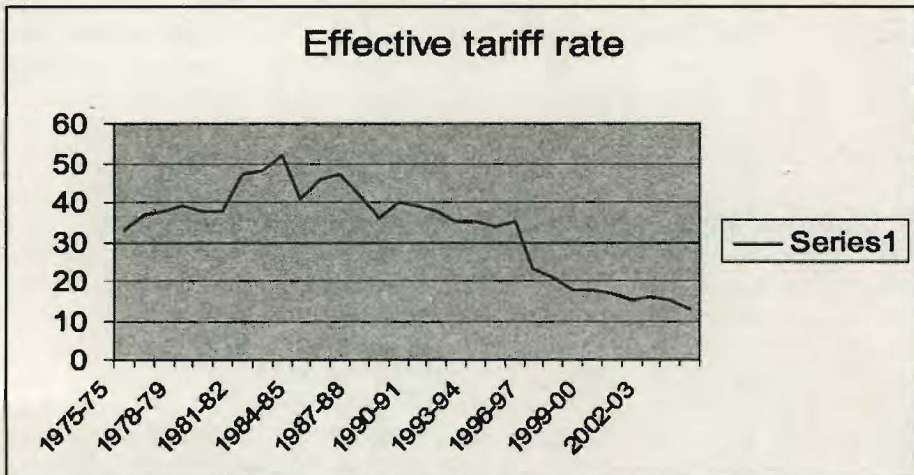
A brief overview of policies regarding trade liberalization in Pakistan is provided. Since independence, the economy of Pakistan had to face many challenges; like low industrial base low infrastructure, high influx of refugees as well as political instability etc. To increase exports earnings and to protect domestic industries, Pakistan adopted a restricted trade regime by imposing high tariff and non-tariff barriers. During 1960s, average level of protection including tariff and non-tariff barriers was as large as 271 percent which was much higher than other developing countries like Mexico, Taiwan and Brazil. To strengthen industrial base, various steps were taken by the government during 1960s like tax holidays, providing loans at low interest rates but the most significant step in this regard was the Export Bonus Scheme launched in 1959. This scheme proved effective in increasing exports of Pakistan (Yasmin and Khan, 2005, p-1072). During the 1970's decade, the government started nationalization of industrial units and banks. As a result, the performance of economic activities and industrial growth declined from 9.9% in 1960s to 5.5%, while, GDP growth slowed down from

6.6 % to 4 % in the last decade. The policies adopted in the early 1970s were to encourage exports; Pakistani rupee was devaluated by 57 % in 1972. Export Bonus Scheme and restrictive import licensing were eliminated for their misuse. The major contribution of the government during 1980s was to give a clear signal for increased private sector's participation toward industrial growth which had retarded after the policies of nationalizations. The public sector share in total industrial investment fell to less than 18 % by 1978-79.

Ten years later, the process of deregulation and liberalization began with launching of the sixth five-year plan 1983-88. Several Institutional reforms were introduced to enhance the efficiency of the industrial sector like, reduction in tariffs on imported raw materials, intermediate and capital goods, implementation of three year liberal trade policy and launching of the managed float of currency in 1982.

Since 1990s, Pakistan followed more liberal trade policies and the following steps were taken (I) Explicit imports quotas on non-capital imports were essentially removed. (ii) Banned and restricted imports were slowly liberalized (Khan, 1998). (iii) Non- tariff barriers were reduced significantly; duties on 100 commodity categories (mainly raw material and capital goods) were eliminated (iv) Tariff rates were cut down to the range of 10% - 17 %.(v) maximum tariff rates were reduced to 125% from 225%.(Yasmin and Khan,2005, Khan 1998). Figure 1 reflects the historical trend of the Effective Tariff rates in Pakistan.

**Figur-1**



Based on various issues of CBR YEAR BOOK

#### **4. Theoretical background of trade liberalization**

Employment and wage levels are determined not only by external trade but also by a host of other factors, including changes in domestic demand, technological, institutional and policy factors. Theoretically, nevertheless, the relationship with trade, that is the



subject matter of this paper, can be considered in accordance with the framework of international economics (i.e., Heckscher-Ohlin-Samuelson (H-O-S) model).

The basic results deriving from the (H-O-S) model explain the effects of free trade on income distribution among productive factors. Under H-O model countries should specialize in those commodities in which they are endowed intensively. For instance, developing countries where labor is abundant should specialize in labor intensive goods and developed countries should specialize in capital intensive goods as they have abundance of capital. The Stolper-Samuelson Theorem asserts that trade liberalization increases the relative return as well as employment of the scarce factor i.e, labor in developed countries and capital in developing countries. Hence, developing countries, which introduce programs of trade liberalization should experience a rise in the relative return to labor and increase in employment. The crucial feature of the standard theory is the correspondence between product prices and factor prices. This implies that an increase in the relative price of a good result into increase in the relative return of the factor used intensively to produce that good.

Capital, skilled and unskilled labor are the relevant factors of production. The theoretical justification for this is the assumption of complementarity of capital and skilled labor. Unskilled labor is presumed to be the abundant factor in developing countries. Hence the prediction of the theory is that the returns to unskilled labor should increase following trade liberalization.

## 5. The Model

Several studies use regression techniques to look directly at employment determination within less developed countries (LDC). Turning to our analysis of employment and wages, we have adopted a rather simple statistic and profit-maximizing model of firm behaviour. Following Milner and Wright (1998), we assume a Cobb-Douglas production function of the form:

$$Y_{it} = A^{\gamma} K_{it}^{\alpha} N_{it}^{\beta} \quad (1)$$

where  $Y$  is real output,  $K$  is capital stock and  $N$  is units of labor used in production. Here, as Edwards (1988), we assume that employment is mobile across various sectors of the economy. The  $\alpha$  and  $\beta$  represent the share coefficients of capital and labor factor input,  $\gamma$  allows for factors changing the efficiency of the production process, and  $i$  represent the industrial sectors ( $i = 1, 2, \dots, N$ ).

A profit-maximizing firm will employ labor and capital at such levels that the marginal revenue product of labor equals wage ( $W$ ) and the marginal revenue product of capital equals the user cost ( $C$ ) or rental value. Solving this system simultaneously to eliminate capital from the expression for firm output allows us to obtain the following expression:

$$Y_{it} = A^{\gamma} \left( \frac{\alpha N_{it}}{\beta} \times \frac{w_i}{c} \right)^{\alpha} N_{it}^{\beta} \quad (2)$$

Taking the logarithms and rearranging Equation (2) allows us to derive the firm's, and therefore the industry's, derived demand for labor as:

$$\ln N_{it} = \theta_0 + \theta_1 \ln W_{it} + \theta_2 \ln Y_{it} \quad (3)$$

where

$$\theta_0 = -(\gamma \ln A + \alpha \ln \alpha - \alpha \ln \beta) / (\alpha + \beta), \theta_1 = -\alpha / (\alpha + \beta) \text{ and } \theta_2 = 1 / (\alpha + \beta)$$

Just like Greenaway et al (1995), we also assume that the technical efficiency of the production process increases over time and that the rate of technology adoption and improvement in X-efficiency would be correlated with trade changes, therefore it is hypothesized that parameter A in the production function varies with time in the following manner:

$$A_{it} = e^{\delta_0 T_{it}} M_{it}^{\delta_1} X_{it}^{\delta_2}, \quad \delta_0, \delta_1, \delta_2 > 0 \quad (4)$$

where T is time trend, M is imports and X is export.

Equation (3) will form the basis of the estimation conducted in this paper. Since the data set will be used as a cross-sectional and time series element, the labor equation estimated for the panel of industries will assume the form.

$$\ln N_{it} = \theta_0 + \theta_1 \ln W_{it} + \theta_2 \ln Y_{it} + \theta_3 \ln V_{it} + u_{it} \quad (5)$$

where N is total employment, W is average real wage (determined with regard to the general price index), Y is real output in industry i in time t (t=1, 2, ..., T), and V is a vector of variables which affect the efficiency of the production.  $\theta_0$  is the overall intercept and  $\theta_1$ ,  $\theta_2$  and  $\theta_3$  are unknown parameters to be estimated.

Wages may be determined by the inverse labor supply function as well as other factors. To summarize these effects we estimate a wage equation of the following form:

$$\ln W_{it} = \beta_0 + \beta_1 \ln Y_{it} + \beta_2 \ln N_{it} + \beta_3 \ln W_{it-1} + \beta_4 \ln V_{it} + u_{it} \quad (6)$$

where W, Y, and N are defined as above, while,  $\beta_0$  is intercept and  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$  are unknown parameters to be estimated. Again V represents a vector of variables, which may either be internal or external to individual firms engaged in the wage-setting process. This time we include lagged wages as explaining variable. For the purpose of our study, the key variables are openness, average tariff rate, exports, imports, and time trend used as proxy for technology.

## 6. The Data

The data set covers a panel of 19 manufacturing firms using data from 1970-71 to 2000.<sup>3</sup> Data for some of the firms like wood, paper, printing, glass and non-metallic firms have been used in aggregate because data on import duties was available not only for wood but for wood, paper and printing as combined; and we have merged together these industries in the analysis. As continuous time series data was not

<sup>3</sup> Data of CMI for wages, employment, and output for 2000 has been taken from federal Bureau of statistics Islamabad.



available at industry level, it is therefore used with a gap of 5 years. The firms are selected according to Pakistan Standard Industrial Classification (PSIC), which is comparable at 3-digit level of ISIC.

The data on output (Y), wages (W), and employment (N), is collected from various issues of Census of Manufacturing Firms published by Federal Bureau of Statistics.<sup>4</sup> The data on exports and imports is collected from 50 years of Pakistan in Statistics (FBS). It is available according to major commodity groups which are arranged in accordance with industrial division. The data on import duties is taken from various issues of CBR Year Book published by Central Board of Revenue (CBR).

As a proxy for international integration (z), we have used two different measures: (1) the share of imports plus exports in output per industry ( $z_1$ ). (2) Average tariff rate; which is constructed as import duty divided by volume of imports ( $z_2$ ).

Table (a) provides details of variables definition and construction. All the variables are used in thousands. Value of output (Y) is converted into real values by deflating with whole sale manufacturing price index. Variable of Wages (W) is converted into real by deflating with consumer price index (CPI).

**Table (a): Variables Codes and Definitions**

| <i>Variables</i>              | <i>Definition</i>   |
|-------------------------------|---|
| Employment (N)                | Average daily persons engaged in manufacturing includes employees, working proprietors, unpaid family workers and home workers  |
| Wages/Employment Cost (W)     | It includes wages and salaries paid plus cash and non-cash benefits paid to the workers   |
| Value of production (Y)       | It consists of the value of finished products and by-products, receipts for work done for others, receipts for repairs and maintenance, value of sale of semi-finished products and by-products, wastes and used goods, value of electricity sold, value of sales of goods purchased or resale, the net increase in the value of work in the process and the value of fixed assets produced by the establishment for its own use. |
| Openness ( $z_1$ )            | This is measured as exports plus imports divided by value of output of an industry  |
| Average tariff rate ( $z_2$ ) | This is measured by value of import duties divided by volume of imports.  |

<sup>4</sup>The CMI data suffers from non-responding, undercoverage and changes in definition. Besides, conceptual changes, and changes in definitions, non response and under reporting render inter census comparison difficult. The nature, size and industrial origin of non responding firm vary from census to census. For example, within the same industry, the non responding firm vary from others in terms of share in output, value added, employment etc.

As part of data analysis, an examination of the correlation between variables is necessary to get some preliminary view regarding the types of associations that prevails between variables. Table (b) , shows the results of correlation matrix for aggregate workers employment, openness, average tariff rate, exports and imports. The results show that aggregate workers employment ,openness, exports, imports and output are positively correlated with employment.

**Table (b): Correlation Matrix**

| Variables | Employment | Wages   | Output | Tariff Rate | Openness | Exports | Imports |
|-----------|------------|---------|--------|-------------|----------|---------|---------|
| N         | 1          | 0.85478 | 0.6332 | 0.25396     | 0.43781  | 0.45078 | 0.19376 |
| W         | 0.8548     | 1       |        | 0.0767      | 0.5092   | 0.5137  | 0.4894  |

## **7. Estimation strategy**

Before estimation some issues are discussed. One is the exogeneity of the regressors in the equation (5) and (6). Some of the regressors actually may be endogenous variables because firms make their output and factor demand decisions jointly (Hamermesh, 1986). Furthermore, there may be possibility of simultaneous equation bias in employment and wage equations. Secondly, both labor demand and labor supply probably depend on wages, which raises the identification problem in estimating equations. It is therefore, not clear what combination of labor-demand and labor-supply elasticities is obtained from regressing labor quantities on labor prices. In order to overcome this problem, we make an assumption similar to that made by other studies, explicitly and implicitly (Quandt and Roser, 1989). In particular, labor supplies are assumed to be perfectly elastic. In this way, shifts in the labor supply curve, as measured by movements in wages, are able to trace out the labor-demand curve (Hamermesh, 1986).

If some regressors are endogenous, then least-squares parameter estimates will suffer endogeneity bias, the net direction of which is not clear. Because the endogenous variable is correlated with the disturbance, the least squares estimators of the coefficients of endogenous variables are inconsistent.

To account for endogeneity problems, we have used Generalized Method of Moments suggested by Arellano and Bond which is widely used in most recent dynamic panel data applications and it exploits all available linear orthogonality conditions. An instrumental variable approach is then followed to estimate equation (5) and (6), with the instruments optimally weighted by the expected variance-covariance matrix of the orthogonality conditions, as required by an optimal GMM estimator. Since, our data range is small, therefore, to economize on degrees of freedom, we have used pooled data with common intercept and slope coefficients although the assumption that the slope coefficients are identical across industries, has its own limitation.



## 8. Empirical Results

We have estimated equation (5) and (6) of the model to see the impact of trade liberalization on wages and employment with openness and tariff rate as measure of trade liberalization. We have used Generalized Method of Moments (GMM-IV) following Arellano and Bond (1991). All estimates are based upon heteroskedastic robust standard errors. Consistency of the GMM estimates requires that there is no second order correlation of the residuals of the equation.

Our results of the Hansen J-statistic test do not allow to reject the hypothesis of the validity of instruments used. Therefore, our instruments satisfy the orthogonality condition. Overall, equations of GMM are properly specified and the instrument is exogenous. Since autocorrelation in the model, the model contains lagged regressand, the ordinary DW is not appropriate to check for Here *Durbin h-statistic* has been used to check for autocorrelation in the model. Values of h-statistics indicate that there is no autocorrelation in employment equations shown in Table.1 Both of the employment equations are estimated as Eq1 and Eq2 separately<sup>5</sup> using effective tariff rate as well as openness as measure of liberalization. We are unable to reject the null hypothesis of no autocorrelation in the data. However, the values of h-statistic for Eq3 and Eq4 of the wage equations show that there is autocorrelation in the data and that some of the important variables are missing in the model.

The empirical results of employment equation reported in Table 1, which shows that results are almost in line with the theory. The value of adjusted  $R^2$  is 0.902854 which shows that 90 % of our dependant variable is explained by the regressors in the model. The negative sign of tariff rate shows positive impact of tariff reduction on employment. In our analysis we have estimated the impact of trade liberalization before and after 1990-91. To capture liberalization effect we have introduced dummy in the employment and wage equations. The results show that trade liberalization has positive and significant effect on employment, whereas the impact was negative before trade liberalization. As expected, exports have positive and significant effect on employment. Here the time trend has been used as proxy for technology. Both technology and imports have negative effect on employment which is significant at 10 percent level. However, in contrast to the theory, wage rate has positive impact on employment but the sign becomes negative when lag of the wage rate is used, which perhaps indicates rigidity in the labor markets as labor demand does not respond instantaneously to wages but with lags. Moreover, under efficiency wage theory, when productivity increases, the labor demand may not fall even if wages increase. When openness, measured by trade/ industrial output ratios, is used as proxy for liberalization, it has significantly negative effect on employment. The results are, however, very sensitive to measures of liberalization. When tariff rate is used as measure of liberalization, the signs of technology and exports are reversed. Now exports have negative effect on employment while technology has a positive effect. The negative sign of exports may be due to high correlation between openness and exports. The value of  $R^2$  is now 0.76 which is good

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<sup>5</sup> Eq1 and Eq2 of Table 1 relate to the estimation of Eq(5) of the model with alternative definition of openness. Likewise Eq3 and 4 of Table 2 represent estimation of Eq(6) of the model.



but lower than the previous specification, when average tariff rate is used as measure of liberalization.

The empirical results of wage equations are shown in Table 2. It is indicated that trade liberalization has no significant effect on wage using both measures of liberalization; (average tariff rate as well as trade GDP ratios). However, the sign of tariff rate is negative, while that of openness is positive after trade liberalization. Before 1990s average tariff rate has positive effect on wages, while, openness has negative effect on wages. The value of  $R^2$  is 0.796904 when average tariff rate is used, and it is 0.823834 when openness is used as measure of trade liberalization. If the results of Table 1 and Table 2 are compared, it is observed that when average tariff rate is used as measure of liberalization, tariff reduction as well as exports have positive effect on employment and negative impact on wages. Here adjustment is through wages and not employment. Similarly, openness and exports have negative effect on employment but positive impact on wages. Here adjustment is through employment and not wages. Imports and technology have positive and significant effect on wages with both measures of liberalization. Overall results indicate that trade liberalization has significant effect on employment, while no significant effect on wages. Our results also confirm the findings of Ghose (2000), Grossman (1982). As discussed earlier, tariff reduction is a direct measure of liberalization, which shows that industries having experienced more reduction in tariff rates, have resulted into increase of employment.

## **9. Conclusion**

In this paper the impact of trade liberalization has been examined on employment and wages for the manufacturing industries of Pakistan using data from 1970-71 to 2000-01. We have used two measures of trade liberalization; average tariff rate and openness indicated by ratio of Trade Industrial output. To account for indemnity problem, we have used Generalized Method of Moments for estimation. We have used pooled data with cross section of 16 industries and applied the dynamic panel data approach for wages and employment estimation. The empirical results show that trade liberalization has positive effect on employment when average tariff rate is used as measure of liberalization, while it has negative effect on employment when trade / industrial output is used as measure of liberalization. However, it is important to note that average tariff rate is a direct measure of liberalization than that of openness. Openness itself can be a result of different factors like better performance of a country, its geographical conditions as well as size of GDP (Banga .R, 2005). The empirical results of wages show that trade liberalization has no significant effect on wages with either measure of liberalization. However, the sign of average tariff is positive which means negative effect of tariff reduction on wages while, that of openness is positive.

## **10. Policy implications**

The impact of trade liberalization has been examined on labor markets of Pakistan. It is not the issue whether free trade is good or not but the important point is how we can achieve benefits from free trade i.e. how can we transform the benefits of trade liberalization to our labor markets. The relationship of free trade and labor markets



depends upon different domestic as well as external factors. We should move towards a more neutral trade through selective export promotion policies, especially those in which we have the comparative advantage. We should adopt trade policies based on home-grown strategy, in which the State have to play active role in mobilizing domestic investment and to remove obstacles of market failure such as mobility of factors and disparity in distributions. The benefit from the liberalization of trade requires necessary support from the right national economic and social policies and institutions. Otherwise, obstacles like barriers to entry into newly competitive activities, market failures and other limitations on factor mobility may hamper gains from trade liberalization.

**Table 1**  
**Regression results for Direct of openness and tariff reduction on employment**

| Variables              | Eq1.                |              | Eq2                  |              |
|------------------------|---------------------|--------------|----------------------|--------------|
|                        | Z1=ta r iff<br>Rate | t-statistics | Z2= I M P+ EX<br>P/Y | t-statistics |
| C                      | -2.16               | (-4.69)**    | -43.35               | (-2.38)**    |
| NL                     |                     |              |                      |              |
| W                      | 0.64                | (10.44)**    | 0.70                 | (7.55)**     |
| Y                      | 0.02                | (0.48)       | 2.64                 | (2.08)**     |
| Z                      | 0.16                | (2.50)**     | 20.10                | (2.17)**     |
| Dum_Z                  | -0.06               | (-2.45)**    | -0.83                | (-3.07)**    |
| X                      | 0.05                | (2.41)**     | -1.37                | (-2.19)**    |
| M                      | -0.04               | (-1.86)*     | -1.39                | (-2.29)**    |
| T                      | -0.01               | (-1.87)*     | 0.08                 | (1.93)**     |
| Observations           | 80                  |              | 96                   |              |
| Number of Sectors      | 16                  |              | 16                   |              |
| AdjustedR <sup>2</sup> | 0.902854            |              | 0.761073             |              |
| h-statistic            | 0.11                |              | 1.36                 |              |

\*\* Significant at 5% level. \* Significant at 10% level

Note robust t-statistics for GMM

**Table 2: Regression results for Direct of openness and tariff reduction on Wages**

| Variables         | Eq3            |              | Eq4.          |              |
|-------------------|----------------|--------------|---------------|--------------|
|                   | Z1=tariff rate | t-statistics | Z2=IMP+EX P/Y | t-statistics |
| C                 | 2.51           | (3.01)**     | 18.51         | (2.28)**     |
| WL                | -0.20          | (-1.73)*     | -0.19         | (-1.99)**    |
| N                 | 1.33           | (11.26)**    | 1.17          | (18.30)**    |
| Y                 | 0.00           | (0.02)       | -1.03         | (-1.82)*     |
| Z                 | -0.12          | (-0.95)      | -7.73         | (-1.88)*     |
| Dum Z             | 0.01           | (0.19)       | 0.09          | (1.02)       |
| X                 | -0.07          | (-3.30)**    | 0.48          | (1.69)*      |
| M                 | 0.08           | (2.39)**     | 0.62          | (2.29)**     |
| T                 | 0.04           | (1.93)*      | 0.03          | (2.31)**     |
| Observations      | 80             |              | 96            |              |
| Number of Sectors | 16             |              | 16            |              |
| AdjustedR2        | 0.796904       |              | 0.823834      |              |
| h-statistic       | 5.11           |              | 6.16          |              |

**Table-3: Description of Industries and Codes**

| <i>S.No.</i> | <i>ISIC</i> | <i>Industry Description</i>                               |
|--------------|-------------|---|
| 1            | 311/2       | Food  |
| 2            | 313         | Beverages   |
| 3            | 321         | Textiles  |
| 4            | 323 ,324    | Leather & Products +Footwear                              |
| 5            | 331,341,342 | Wood Products Paper & Products<br>Printing and Publishing |
| 6            | 353         | Drugs &Medicines  |
| 7            | 351         | Industrial Chemicals                                      |
| 8            | 352         | Other Chemicals   |
| 9            | 354         | Petroleum & Coal Products                                 |
| 10           | 355         | Rubber Products   |
| 11           | 356,369     | Glass & Products + Non-Metalic Products                   |
| 12           | 371         | Iron & Steel  |
| 13           | 381         | Metal Products  |
| 14           | 382         | Non-Electrical Machinery                                  |
| 15           | 383         | Electrical machinery                                      |
| 16           | 384         | Transport Equipment                                       |



## References

- Balla and Quitieri (2000) "The effect of trade on employment and wages in Italian Industry" LABUOR 14(2) 291-310(2000)
- Bhagwati, Jagdish N. and Vivek H. Dehejia. (1994). Ohlin Trade Theory with a Continuum of Goods," *Quarterly Journal of Economics* 95, (September), pp.
- Daniel S. Hamermesh, (1986). "The Demand for Workers and Hours and the Effects of Job Security Policies: Theory and Evidence," NBER Working Papers 2056
- Deardorff, and Hakura. (1994). "Trade and Wages: What Are the Questions? In Trade and Wages: Leveling Wages Down?, ed. by Jagdish Bhagwati and Marvin H. Kosters Washington :American enterprises Institute
- Edwards, S. (1988), 'Terms of Trade, Tariffs and Labour Market Adjustment in Developing Countries', *World Bank Economic Review*, Vol. 2, pp. 165-85.
- Feenstra, Robert, and Gordon Hanson. 1995. "Foreign Investment, Outsourcing, and Relative Wages." In Robert Feenstra, Gene Grossman, and Douglas Irwin, eds., *Political Economy of Trade Policy: Essays in Honor of Jagdish Bhagwati*. Cambridge, Mass.: MIT Press.
- Grossman, Gene M. (1982) 'The employment and wage effects of import competition in the United States,' Working Paper No. 1041, National Bureau of Economic Research — (1986) 'Imports as a cause of injury: the case of the U.S. steel industry,' *Journal of International Economics* 20, 201-23
- Globalization and Poverty by Department for International Development (DFID) UK.
- Tachibanaki.et.al. ( 1998), "Economic development in Asian countries, and the effect of trade in Asia on employment and wages in Japan" *Asian Economic Journal*,1998, vol.12, No.2
- Greenway, David & Nelson, Douglas, 2000. "The Assessment: Globalization and Labour- Market Adjustment," *Oxford Review of Economic Policy*, Oxford University Press, vol. 16(3), pages 1-11, Autumn
- Hanson, Gordon H., and Ann Harrison. 1995. "Trade, Technology, and Wage Inequality." NBER Working Paper 5110. National Bureau of Economic Research, Cambridge, Mass. Processed.
- Hine, R. C., Wright, P. W., 1998. Trade with low wage economies, employment and productivity in UK manufacturing. *The Economic Journal*, Vol. 108, 1500-1510.
- Kosteas, V. D., 2005. Manufacturing wages and low-wage country imports: evidence from the NLSY. Mimeo.

- Krugman and Lawrence, 1993. "Trade, Jobs, and Wages," NBER Working Papers 4478, National Bureau of Economic Research
- Khan, A.H. (1998) The Experience of Trade Liberalization in Pakistan. *The Pakistan Development Review* 37:4,661-685.
- Lawrence, R.Z., Slaughter, M.J. (1993), "International trade and US wages: great sucking sound or small hiccup?", *Brookings Papers on Economic Activity*
- Leamer, Edward E. 1995. "A Trade Economist's View of U.S. Wages and Globalization." In Susan Collins, ed., *Imports, Exports, and the American Worker*. Washington, D.C.: Brookings Institution.
- Matthew Slaughter (1998) International Trade and Labour-market Outcomes: Results, Questions, and Policy Options *The Economic Journal* 108 (450) , 1452-1462
- Pakistan Statistical Division, *Census of Manufacturing Industries*, (Various Years).
- Pakistan, Government of (various issues), *Monthly Statistical Bulletin*. Federal Bureau of Statistics.
- Paul Krugman, 1995. "Technology, Trade, and Factor Prices," NBER Working Papers 5355, National Bureau of Economic Research,
- Quandt-Rosen H (1989): "Endogenous Output in an Aggregate Model of the labor market". *Review of Economics and Statistics*, August 1989, 394-400
- Reventa, Ana, and Claudio Montenegro. 1995. "North American Integration and Factor Price Equalization: Is There Evidence of age Convergence between Mexico and the United States?" In Susan Collins, ed., *Imports, Exports, and the American Worker*. Washington, D.C.: Brookings Institution.
- Robbins, D. (1996). "HOS hits facts: Facts win; Evidence on trade and wages in the developing world." Development discussion paper number 57, HIID.
- Paul Krugman, 1995. "Technology, Trade, and Factor Prices," NBER Working papers 5355, National Bureau of Economic Research,
- Banga, R. (2005) ,Impact of trade liberalization on wages and employment in Indian manufacturing industries Working Paper NO. 153 Indian Council for Research on International Economic Relations
- Rizwana, S. and A. R. Kemal, (2002), "Remittances, Trade Liberalization and Poverty in Pakistan: The Role of Excluded Variables in Poverty Change Analysis".



- Wood, A. (1997). "Openness and wage inequality in developing countries: the Latin American challenge to East Asian conventional wisdom," *The World Bank Economic Review*, vol. 11, number 1.
- Yasmin and Khan (2005), "Trade liberalization and Labour Demand Elasticities: Empirical Evidence for Pakistan". *The Pakistan Development Review* 44:4 Part II (Winter 2005) pp.1067-1089





## **Infrastructure and Poverty Nexus: The Case of Rural Pakistan**

*G. M. Arif and Nasir Iqbal<sup>1</sup>*

### **1. Introduction**

There is a consensus in studies carried out during the last two decades that poverty in some regions of rural Pakistan, say *barani* Punjab<sup>2</sup> is lower than in other regions particularly cotton growing zones of Punjab and Sindh. This low-level of poverty is largely attributed to certain socio-economic characteristics of the region such as integration of rural areas with the prosperous urban centers, relatively better human capital, access to jobs in armed forces and civil departments located in Islamabad/Rawalpindi and long tradition of overseas migration. In contrast, people in poor regions of the country lag behind in human capital, depend heavily on the farm sector for their livelihood and have low access to overseas job market.

The missing component in literature regarding the differences in poverty levels across rural regions is the role of infrastructure. No empirical work exists to show the impact of rural infrastructure on regional differences in poverty levels. However, there is strong evidence from other developing countries that infrastructure investments in rural areas lead to higher farm and non-farm productivity, employment and income opportunities, and increased availability of labour intensive goods with lower prices, thereby reducing poverty by raising income and consumption (Kwon, 2000). Increased employment due to infrastructure investments directly benefit the poor more than the non-poor and this can reduce poverty even faster by improving income distribution as well (Ifzai and Pernia, 2003 and Fan et al. 2002).

The main components of the physical infrastructure in rural areas are roads, electricity and access to safe drinking water while the social infrastructure includes health, education, and rule of law. Better rural transport allows farmers to introduce improved farming practices, lowers the cost of inputs (such as fertilizer) and outputs (crops to markets), facilitates the transition from subsistence farming to cash-crop farming, and increases the non-farm income opportunities of the rural labour. In addition, linking the far flung rural areas to the economic centers ensures education and health facilities more easily available to them. To this extent, transport infrastructure is the backbone of sustainable economic growth and poverty reduction (Fan and Kang, 2005). Road infrastructure is needed to interconnect all growth generating sectors in different regions and to achieve a better and wider distribution of

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<sup>2</sup> Consisting of four northern districts of the province i.e. Rawalpindi, Chakwal, Jhelum and Attock

the economic growth benefits. Building a road network is prerequisite to the development of remote and environmentally difficult areas. Providing access for the rural population to the economic mainstream can make the poor better-off through increased agricultural income and improved living conditions.

While the role of infrastructure in economic development and poverty reduction is widely recognized, an in-depth understanding of the precise nature and empirical evidence for its extent are, as noted earlier, very limited in Pakistan. Better knowledge of how much and in what way the infrastructure influences the process of poverty reduction is essential for assessing the role of investment appropriately.

The present study fills the gap in knowledge and examines the infrastructure and poverty nexus. By using the Mouza<sup>3</sup> Statistics 2003, it first explores the differences across the regions in term of availability of infrastructure to understand the links between poverty and infrastructure. Second, by combining the village-level information on infrastructure with household-level data, as reported by the Pakistan Socio-Economics Living Standard Measurement (PSLM) Survey 2004-05, a multivariate analysis is carried out to assess the independent effect of rural infrastructure particularly roads, electricity, health centers and schools, on poverty.

A review of literature is carried out in section 2, while methodology is explained in section 3. Section 4 explains the poverty differences across the rural regions of the country. Links between poverty and rural infrastructure are explored in section 5, a multivariate regression analysis is carried out in section 6 and conclusions are drawn in the final section.

## **2. Theoretical Considerations**

Two forms of infrastructure are discussed in the literature; the hard or physical and the soft or social infrastructure. The main types of physical infrastructure are roads, railways, ports, transport and communication system, electricity transmission, schools, hospitals etc. whereas the social infrastructure includes education, health, rule of law, protection of property rights and access to justice etc. The underlying factors of rural poverty include low farm productivity as well as inadequate and insufficient sources of non-farm employment. Infrastructure investment influences these factors directly and indirectly, thus it contributes in poverty reduction. Road is one of the major component of physical infrastructure and investment in this area could increase agricultural productivity, non-farm employment and off-farm business, thereby raising the wages and incomes of the poor, and improving their economic welfare.

A number of studies point to a significant impact of road on poverty reduction through acceleration of economic growth. Kwon (2000) found for Indonesia that the impact of growth on poverty reduction was almost four times higher in provinces

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<sup>3</sup> *Mouza* is the lowest administrative unit in rural areas of Pakistan. Land record is maintained at the mouza level. Mouza boundaries are commonly used for the determination of seats in general and local bodies election.



with high levels of road provision as compared to those with poor road network. A more disaggregated analysis using district level data in Indonesia found a significant effect of road on the income of poor via growth (Balisacan and Pernia, 2002). Road density also had significant positive effect on consumption expenditure of the rural farm households (Jalan and Ravallion, 2002). Glewwe, Gragnolati and Zaman (2002) found that the poor households living in rural communes with paved roads in Vietnam had 67 percent higher probability of escaping poverty than those in communes without paved roads. Jacoby (1998) conducted a study in Nepal and found that providing extensive rural road networks results in substantial benefits, with the poor capturing an appreciable share. Similarly electricity contributes significantly to the growth of the rural non-farm sector in the People's Republic of China, leading to poverty reduction, with an estimated elasticity of 0.42 (Fan et al. 2002). An evaluation of World Bank-assisted rural electrification projects indicates that in Bangladesh and India, rural electrification raises the use of irrigation, which in turn significantly reduces poverty incidence (Songco, 2002).

Soft and hard infrastructure is closely interlinked and mutually interactive. Wanmali and Islam (1997) stated that investments in infrastructure and provision of the associated services are integral to the process of development. The key role of hard infrastructure investments in improving agriculture production and facilitating the growth of "soft" infrastructure in developing countries in particular has been emphasized by Ahmed and Donovan (1992). It is argued that limiting the infrastructure to hard component such as roads, telecommunications, electrification and irrigation is too narrow, and that the soft component or the social infrastructure is equally important (Wanmali and Islam 1995, 1997 and Stern, 1989). So investment in hard infrastructure, when complemented by investment in soft component will exert significant indirect and direct impact on the welfare of the poor (Balisacan and Pernia, 2002). Fan and Zhang (2004) note that

"rural infrastructure and education play a more important role in explaining the difference in rural non-farm productivity than agricultural productivity. Because the rural non-farm economy is a major determinant of rural income, investing more in rural infrastructure is key to an increase in overall income of the rural population and second, the lower productivity .... is explained by its lower level of rural infrastructure, education, science and technology. Therefore, improving both the level and efficiency of public capital ...is must to narrow its difference in productivity...."

The empirical significance of public investment in infrastructure within the region and internationally has been examined by Ianchovichina and Kacker (2005) in the context of developing models to forecast growth over the period 2005-14 and to identify the contribution of different elements to growth. They conclude that a significant increase in investment is required to improve growth rates. They find, for example, that improvement in public infrastructure could add 0.85 per cent per annum to economic growth over 2005-14 in China, 0.80 per cent in Indonesia, 1.32 per cent in

India, 0.45 per cent in Bangladesh and 0.30 per cent in Pakistan. A study carried out by the Asian Development Bank in four districts of Sri Lanka in 2000 to assess the perception of the poor regarding the availability of infrastructure and its impact on their poverty shows that lack of infrastructure is clearly linked to all dimensions of poverty such as lack of income and employment, access to education, health services, and communication.

In short, the infrastructure investment, particularly in rural areas, leads to higher farm and non-farm productivity, employment and income opportunities, and increased availability of wage goods with lower prices, thereby reducing poverty by raising mean income and consumption. If higher agricultural and nonagricultural productivity and increased employment directly benefit the poor more than the non poor, these investments can reduce poverty even faster by improving income distribution as well.

### **3. Methodology**

For poverty and infrastructure nexus, this study, following the work of Pickney (1989), has classified the rural area of Pakistan into nine agro-climatic or crop zones based on *Kharif* crops (cotton and rice mainly) because wheat is the predominant crop in *Rabi* season virtually in all areas of the country. These zones are named as rice/wheat Punjab, mixed Punjab, cotton/wheat Punjab, *barani* Punjab, low-intensity Punjab, cotton/wheat Sindh, rice/other Sindh, NWFP except D.I. Khan, Balochistan except Nasirabad. Distribution of districts according to these zones is available from Pickney (1989) and more recently from Irfan (2008) (reproduced in Table 1 below).

For poverty levels, this study has used the available information that is reported in the next section. Both physical and social infrastructure data have been organized at the nine agro-climatic zones, using the *Mouza Statistics 2003*.<sup>4</sup> The *mouza-level* information on seven types of infrastructure are aggregated at the zone level including percentage of *mouzas* fully electrified, *mouzas* with soling streets, and *mouzas* having the facilities of piped drinking water and drainage. Data on distance from village (*mouza*) to metal road in kilometers have also been aggregated at the zone level. Availability of boys and girls schools in *mouzas* has been included in the analysis.

Finally, the study has used the Pakistan Social and Living Standard Measurement Survey (PSLM-2004-05) micro-data to assess the independent impact of the selected infrastructure on poverty. The PSLM is representative at the national level as well as for rural and urban areas.<sup>5</sup> The present study uses the data relating to rural households only. Data on per capita consumption expenditure (natural logarithm)

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<sup>4</sup> *Mouza Statistics 2003* is the latest available source and covers all *mouzas* in the country. The next *Mouza Statistics* for 2008 is likely to be released soon by the Agricultural Census Organization.

<sup>5</sup> This is carried out by the Federal Bureau of Statistics. Of the total PSLM sample of 14706 households, 8898 were rural and remaining 5808 urban (GoP, 2006)



covering all food as well as non-food items are collected from PSLM in current prices and used as the poverty indicator.

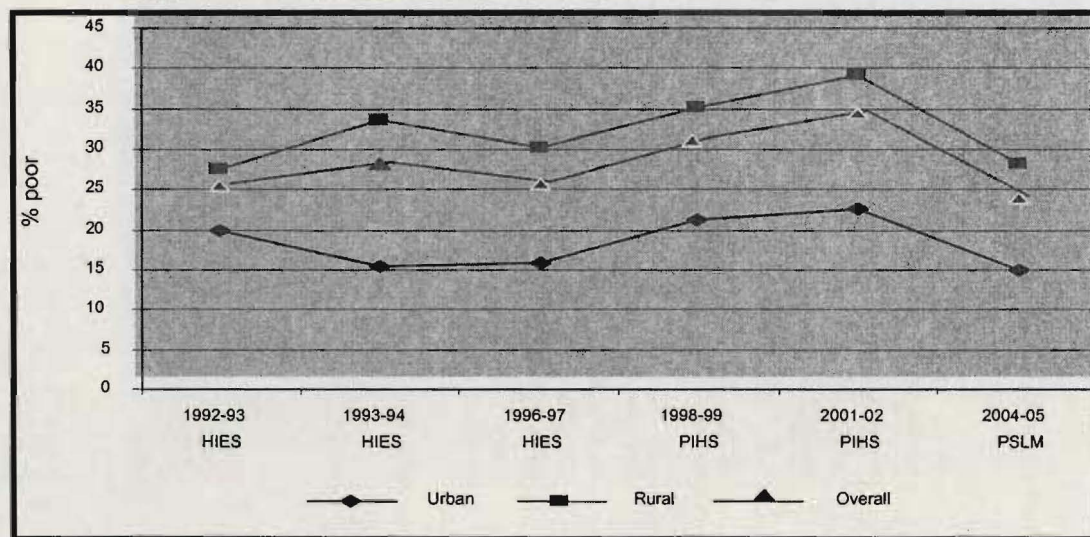
**Table 1: Agricultural Zones in Pakistan (Rural Areas only)**

|   | <b>Agro-Climatic Zones</b> | <b>Districts</b>  |
|---|----------------------------|---|
| 1 | Rice/Wheat Punjab          | Sialkot, Gujrat, Gujranwala, Sheikhupura, Lahore, Kasur, Narowal, Mandi Bahauddin, Hafizabad  |
| 2 | Mixed Punjab               | Sargodha, Khushab, Jhang, Faisalabad, Toba Tek Singh, Okara   |
| 3 | Cotton/Wheat Punjab        | Sahiwal, Bahawalnagar, Bahawalpur, Rahim Yar Khan, Multan, Vehari, Lodhran, Khanewal, Pakpattan   |
| 4 | Low Intensity Punjab       | D. G. Khan, Rajanpur, Muzaffargarh, Leiah, Mianwali, Bhakkar  |
| 5 | Barani Punjab*             | Attock, Jhelum, Rawalpindi, Islamabad, Chakwal  |
| 6 | Cotton/Wheat Sindh         | Sukkur, Khairpur, Nawabshah, Hyderabad, Tharparker, Nusheroferoz, Ghotki,   |
| 7 | Rice/other Sindh           | Jacobabad, Larkana, Dadu, Thatta, Badin, Shikarpur, Karachi   |
| 8 | NWFP                       | Swat, Dir, Chitral, Buner, Charsada, Noshera, Peshawar, Kohat, Karak, Tank, Mansehra, Abbottabad, Haripur, Batagram, Kohistan, Mardan, Swabi, Bannu, Lakkimarwat, |
| 9 | Balochistan                | Quetta Division, Sibi Division, Kalat Division, Makran Division, Zhob Division, Nasirabad, Division (Excluding  |

**Source:** Irfan, 2008

\* Dependent on natural irrigation/rain fall.

Figure 1: Poverty trends 1992/93 to 2004/05 overall, rural and urban areas



Source: GoP (2006); Cheema (2005), as reported in Haq, Arif and Iqbal (2007)



The PSLM 2004-05 has also collected the village-level information on the availability of basic physical and social infrastructure including road, electricity, drinking water, boys and girls school in both public and private sectors and health facilities (hospitals) in these sectors. Characteristics of the households relevant to poverty analysis, infrastructure variables and dummies of zones have been included in the equation. Description of all these variables is reported in Section 5.

#### 4. Poverty across Rural Regions<sup>6</sup>

The overall rural poverty trends, based on the official poverty line,<sup>7</sup> are presented in Figure 1, covering the 1992-2006 periods. The overall poverty increased by 0.32 percentage points during the period 1992-93 and 1993-94 when economic growth was modest. The urban poverty declined considerably while rural poverty witnessed an increase of more than 2 percentage points. The rise in rural poverty in the early 1990s is largely attributed to the negative agriculture growth in 1992/93 (Malik, 2005). Between 1996-97 and 2000-01, when GDP grew by only 3.3% per annum on average, the overall poverty increased sharply by 8.7 percentage points. Although the increase in poverty was witnessed both in rural and urban areas, it was sharp (9 percentage points) in the former. High economic growth during the 2001-05 period reversed the rising poverty trends, particularly those in the late 1990s; in fact, a drop of 10.6 percentage points in overall poverty between the 2001-05 periods has offset the sharp rise in poverty during the 1997-2001 periods. The net reduction in overall poverty between 1996/97 and 2004/05 period is only 1.9 percentage points, being in urban areas even less than 1 percentage point. If longer period is taken into account, say 1992/93 and 2004/05, poverty declined only in urban areas while rural poverty remained at the same level, around 28%. The more recent data from the PSLM 2005-06 shows that rural poverty has further declined to 22.3 percent (GoP, 2008).

Table 2 presents data on poverty across the nine rural zones. It shows consistently the lowest levels of poverty for *barani* Punjab. Concerning the other zones, Malik (1992) found the highest incidence of poverty in cotton/wheat Punjab, followed by Balochistan and rice/other Sindh in 1984-85. This order, however changed to low intensity Punjab followed by cotton/wheat Punjab and rice/other Sindh in 1987-88. Arif and Ahmed (2001) estimated that cotton/wheat Sindh and rice/wheat Punjab were the poorest regions in 1993-94 and 1998-99. For the 2001-02 periods, Malik (2005) found that Sindh and Southern Punjab were the poorest regions of Pakistan. According to the recent findings of Irfan (2008), based on the 2004-05 PSLM data and official poverty line, cotton/wheat zone of Punjab was the poorest region followed by NWFP and low intensity Punjab. Although poverty at zone-level varies

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<sup>6</sup> For trends in rural poverty and regional differences, this section depend heavily on Haq, Arif and Iqbal (2006) and Amjad, Arif and Mustafa (2008). Several other recent studies which have contributed in the poverty debate including Malik (2005), World Bank (2006), Anwar (2007), Irfan (2008) have also been utilized in this section.

<sup>7</sup> Official poverty line is based on 2350 calories per adult equivalent per day with the consumer price inflation during 2004-05 and 2005-06, constructing spatial price index for all food and energy items (around 89) and adjusting household expenditures to provide consistent consumption welfare measure across all 1100 primary sampling units in the country and during the year of the survey, following a cleaning protocol consistent with the one adopted for data set of 2004-05 and adopting adult equivalent measures for consumption to adjust for number of children.



across the studies and time, this very brief review shows the cotton-wheat zones of both Punjab and Sindh and low intensity zone of Punjab are the poorest zones while *barani* Punjab are the richest zones. Other areas, particularly rice/wheat and mixed zones of Punjab, are relatively better-off. Rural areas of NWFP and Balochistan are also among the poor zones.

**Table 2: Poverty head count and change in the incidence of poverty by agro climatic zone**

| Agro-climatic zones  | Poverty headcount |         |         |         |         |         |
|----------------------|-------------------|---------|---------|---------|---------|---------|
|                      | 1984-85           | 1987-88 | 1993-94 | 1998-99 | 2001-02 | 2004-05 |
| Rice/Wheat Punjab    | 14.3              | 8.2     | 33.1    | 47.7    | 36.9    | 20.4    |
| Mixed Punjab         | 22.7              | 15.9    | 21.0    | 31.4    | 45.8    | 29.6    |
| Cotton/Wheat Punjab  | 29.3              | 21.9    | 25.4    | 36.5    | 52.9    | 36.5    |
| Low Intensity Punjab | 28                | 27.1    | 2.2     | 32.6    | 50.7    | 29.5    |
| Barani Punjab        | 5.7               | 3.9     | 13.8    | 27.5    | 24.3    | 7.2     |
| Cotton/Wheat Sindh   | 20.5              | 18.9    | 34.1    | 39.4    | 53.4    | 24.4    |
| Rice/Other Sindh     | 24.3              | 20.6    | 26.9    | 36.8    | 50.6    | 23.1    |
| NWFP                 | 9.1               | 8.2     | 28.7    | 28.2    | 44.6    | 34.1    |
| Balochistan          | 28.5              | 7.9     | 21.9    | 54.4    | 36.6    | 28.8    |

**Source:** For column 1 and 2 Malik (1992); For column 3 and 4 Arif and Ahmed (2001). For column 5 Kemal (2003). For column 6 Irfan (2008)

## 5. Rural Infrastructure and Regional Poverty

Why poverty level varies across the rural zones? The earlier studies have particularly focused on consistently low-levels of poverty in *barani* Punjab and have attributed it to certain socio-economic characteristics of the *barani* areas, including relatively high levels of literacy, particularly among females; the lowest dependency ratio probably because of low fertility; and lowest number of unpaid family workers. More importantly, the rural areas of *barani* districts are well integrated with the prosperous urban centers with strong linkages to the services sector. Only 28 percent of the employed rural labour force is involved in agricultural activities. Many people of the region have opportunity to work in both armed forces and government sector. Due to the high incidence of overseas migration, remittances contribute a significant proportion of the total household income in *barani* areas of Punjab (Amjad, Arif and Mustafa, 2008).

Has there any role of rural infrastructure in poverty differential across the rural zones? The literature, as reviewed and presented in Section 2, highlights the importance of roads in reducing the poverty directly or indirectly. In terms of poverty-reducing effects, it is probably the most important infrastructure. The link between the existence of poverty in region and access to a metal-road is clear from *mouza* level data as presented in Table 3. There seems to be a negative relationship between poverty and access to road. Rural regions with low levels of poverty like *barani* Punjab, rice/wheat Punjab and mixed Punjab have better access to metal road. In contrast, regions with high poverty levels have poor access to road. Lowest



poverty is observed in *barani* Punjab, where 74 percent *mouzas* have access to a metal-road within a distance of less than one kilometer. As compared to less than 60 percent of *mouzas* in poor regions, which are located at a distance of less than one kilometer from the metalled-road, about 75 percent of *mouzas* in better-off regions are very close to the road. In rice/other Sindh zone, one of the poorest regions, only 40 percent of *mouzas* are located at a distance of less than one kilometer from the metalled-road. A close look at Table 3 shows that more than 33% of *mouzas* in the poor regions are located at a distance of 1-5 kilometers from the road. It is important to note that approximately 25% of *mouzas* in Balochistan have access to roads, however, the average distance is more than 26 kilometers and as evident, this area is poorer.

**Table 3: Number of Mouzas by Distance from Metalled Road (%age)**

| Agriculture Zone     | Distance in Kilometers |       |       |      |       |       |
|----------------------|------------------------|-------|-------|------|-------|-------|
|                      | <1                     | 1-5   | 6-10  | 11-5 | 16-25 | 26 +  |
| Barani Punjab        | 73.69                  | 21.39 | 3.21  | 0.51 | 0.77  | 0.44  |
| Mixed Punjab         | 71.23                  | 24.86 | 2.89  | 0.50 | 0.36  | 0.16  |
| NWFP                 | 66.68                  | 21.65 | 7.34  | 2.10 | 1.74  | 0.51  |
| Rice/Wheat Punjab    | 60.87                  | 35.45 | 4.89  | 0.53 | 0.49  | 0.21  |
| Cotton/Wheat         | 59.97                  | 33.30 | 4.86  | 0.91 | 0.74  | 0.22  |
| Cotton/Wheat Sindh   | 58.90                  | 28.54 | 5.79  | 1.82 | 1.16  | 3.80  |
| Low Intensity Punjab | 54.05                  | 28.66 | 8.78  | 3.27 | 2.78  | 3.20  |
| Balochistan          | 41.44                  | 22.59 | 13.18 | 8.81 | 9.38  | 22.71 |
| Rice Other Sindh     | 40.78                  | 25.90 | 9.31  | 2.93 | 3.94  | 2.13  |

Source: Mouza Statistics, 2003

Data on other physical infrastructure across the zones are presented in Table 4 including electricity, street soling, availability of piped drinking water and drainage system. The difference across the regions in term of existence of these infrastructures is well reflected. In terms of electric supply, for example, 72.4 percent *mouzas* in *barani* Punjab, 88.4 percent of rice/wheat Punjab and 70.2 percent of mixed Punjab have access to electricity and these are relatively better-off regions. Tables 2 and 4 show that the regions with medium poverty have medium level of access to electricity, while the regions with high poverty have low access to electricity. For instance, only 23.1 percent *mouzas* of 'low intensity Punjab have access to electricity.

The poor regions are even worse in the case of 'soling of streets'. Whereas more than one-third of *mouzas* in better-off regions have soling streets, the corresponding percentage in the poor regions is very small, for instance, 14 percent in cotton/wheat Punjab zone and only 4 and 2 percent respectively in 'low intensity' Punjab and cotton/wheat Sindh zones. The situation of piped drinking water and drainage across regions is not different; the poor regions are clearly at disadvantage.

**Table 4: Physical Infrastructure by Rural Zones**

| Zones                | Electricity<br>(whole village) | Soling of Street | Drinking<br>Water Piped | Drain |
|----------------------|--------------------------------|------------------|-------------------------|-------|
| Barani Punjab        | 72.4                           | 33.5             | 11.5                    | 20.5  |
| Rice/Wheat Punjab    | 88.4                           | 50.4             | 3.7                     | 47.9  |
| Mixed Punjab         | 70.2                           | 30.2             | 7.6                     | 28.0  |
| NWFP                 | 71.2                           | 14.1             | 23.3                    | 11.3  |
| Balochistan          | 21.7                           | 0.5              | 7.7                     | 0.5   |
| Rice Other Sindh     | 16.9                           | 2.1              | 3.6                     | 2.3   |
| Cotton/Wheat Punjab  | 53.7                           | 13.7             | 7.9                     | 10.0  |
| Low Intensity Punjab | 23.1                           | 4.2              | 5.0                     | 2.6   |
| Cotton/Wheat Sindh   | 32.2                           | 1.7              | 2.3                     | 3.0   |

Source: Mouza Statistics, 2003

Like the physical infrastructure, similar differences across the rural regions are found in access to social services like education and health facilities. Education is one of the important factors that contribute in poverty reduction. Literature indicates the direct as well as indirect impact of education on income level of the poor. The existence of educational institutions in rural regions shows that 47 percent of *mouzas* in the *barani* Punjab have the facility of schooling for boys and 43 percent for girls (Table 5)<sup>8</sup>. It is worth noting that in relatively better-off zone, both boys and girls have more or less equal access to educational institutions. In Punjab, low intensity zone has the lower value in term of availability of boys and girls educational institutions. Access to girls' institutions is very poor in rural areas of the country. This clearly indicates that poverty is less where more educational institutions exist, particularly for female. It has a direct influence on human capital development.

**Table 5: Number of Mouzas by Access to Educational Institutions (%age)**

| Agriculture Zone     | Educational Institutions for Boys | Educational Institutions for Girls |
|----------------------|-----------------------------------|------------------------------------|
| NWFP                 | 61.7                              | 45.5                               |
| Barani Punjab        | 46.9                              | 42.5                               |
| Cotton/Wheat Sindh   | 44.2                              | 29.0                               |
| Mixed Punjab         | 43.0                              | 38.6                               |
| Rice/Wheat Punjab    | 39.9                              | 37.6                               |
| Cotton/Wheat Punjab  | 38.2                              | 32.9                               |
| Low Intensity Punjab | 35.6                              | 26.2                               |
| Rice Other Sindh     | 35.1                              | 22.1                               |
| Balochistan          | 30.9                              | 12.0                               |

Source: Mouza Statistics, 2003

<sup>8</sup> Educational Institution for boys is an index, calculated by taking the percentage of primary, middle and high schools. Similar index is calculated for girls.



## **6. Infrastructure and Poverty Nexus: A Multivariate Analysis**

To see the independent impact of different infrastructures on poverty, this section carries out a multivariate analysis using the 2004-05 PSLM micro-data, as discussed in section 3. The per capita consumption expenditure (logarithm) is used as the dependent variable. Five sets of independent variables have been included in the analysis. The set of characteristics concerning the household head includes age (years), level of educational attainment, and nature of employment (paid employees, farm workers). The set of household level characteristics includes household size, number of adult members, value of livestock owned, electricity and piped water in the dwelling unit. For village-level set, variables showing access to different infrastructures include road, bank, boys and girls schools and public and private hospitals. The dummies of zone are also included in the model.

The coding scheme of all these variables and descriptive statistics are reported in Table 6. The mean per capita expenditure for rural households is Rs. 900 with a large value of Standard Deviation. Mean age of the head of households is 45 years. For the education, illiterate heads of household are used as the reference category while four dummies, primary, middle, matriculation and higher education, represent their educational levels. About 60 percent of the head of the sampled households are illiterate. This percentage seems to be plausible because their average age is 45 years. The national average of adult illiteracy is about 47 percent. For the employment of head of households, two dummies, paid employees and farm employment are entered into the model, keeping other forms of employment (including employers and self-employee) as the reference category. Sixty percent were either paid employees or were engaged in fanning.

Table 6 shows the average household size for rural areas as 7.3 while on average there are three adult members. The sampled households own livestock with an average value of Rs. 14000. About 60 percent of households are connected with electricity and safe drinking water is available to majority of the sampled households.

Regarding the village-level infrastructure, 11 percent of the sampled villages included in the 2004-05 PSLM have no access to road. These seem to be the remote villages. A similar percentage is without access to a bank. The availability of girls high school in rural areas is very poor (only 8 percent villages) when compared to boys high school (22 percent). Access to government hospitals, where poor people are relatively more likely to go, is very low. Rural households are evenly distributed across the nine zones, which are entered into models as dummies with *barani* Punjab being the reference zone.

**Table 6: Descriptive Statistics (Rural Pakistan only)**

| No. of Observations 10186   |           |                |
|-----------------------------|-----------|----------------|
| Variables                   | Mean      | Std. Deviation |
| *er Capita Expenditure (Rs) | 900.072   | 532.0874       |
| Age of Head (Years)         | 45.475    | 14.6334        |
| Age of Head Square          | 2282.124  | 1453.3276      |
| Primary (yes = 1)           | 0.168     | .3739          |
| Middle (yes = 1)            | 0.079     | .2712          |
| Matric (yes = 1)            | 0.090     | .2868          |
| Higher Education (yes= 1)   | 0.054     | .2274          |
| Paid Employees (yes = 1)    | 0.318     | .4656          |
| Farm Workers (yes = 1)      | 0.292     | .4548          |
| Adult Member (Nos.)         | 3.188     | 1.8005         |
| Household Size (Nos.)       | 7.287     | 3.6088         |
| Livestock Value (Rs.)       | 13901.487 | 30886.3816     |
| Electrics (yes =1)          | 0.591     | .4917          |
| Piped Water (yes = 1)       | 0.661     | .4733          |
| No Road Access = 1          | 0.106     | .3081          |
| Junk (yes =1)               | 0.118     | .3227          |
| Girls Primary School = 1    | 0.617     | .4862          |
| Joys Primary School = 1     | 0.841     | .3653          |
| Girl High School = 1        | 0.084     | .2782          |
| Joys High School = 1        | 0.224     | .4171          |
| 'private School = 1         | 0.0720    | .2586          |
| Govt. Hospital = 1          | 0.181     | .3853          |
| Private Hospital = 1        | 0.251     | .4339          |
| Rice/Wheat Punjab =1        | 0.088     | .2845          |
| Mixed Punjab =1             | 0.089     | .2848          |
| Cotton/Wheat Punjab =1      | 0.085     | .2797          |
| Low Intensity Punjab =1     | 0.045     | .2081          |
| Cotton/Wheat Sindh =1       | 0.119     | .3243          |
| Rice/Other Sindh =1         | 0.094     | .2918          |
| NWFP=1                      | 0.179     | .3835          |
| Balochistan =1              | 0.138     | .3447          |

Source: PSLM 2004-05

Table 7 reports the results of OLS regression. All the estimated coefficients of household head characteristics have expected signs. Age of the household head has a curvilinear relationship with the per capita expenditure. Higher the education level of the household head, the higher is the per capita expenditure. This finding is consistent with several other studies carried out in Pakistan as well as in other developing countries. Education opens the doors for better employment and earnings. Rural workers in the 'employee' or 'farm work' category are more likely to be poor than workers in self-employment. It is worth noting that agricultural paid-employee is the poorest category in rural areas, as also found in many recent studies.



All household characteristics included in the equation carry the expected signs. Adult members contribute significantly in enhancing the per capita income and expenditure in rural areas while the household size shows a negative and significant effect on expenditure. The value of livestock, as expected, contributes significantly in per capita expenditure.

The main focus of the study is however to find a relationship between infrastructure and poverty. Table 7 shows the results of our analysis. Access to road, one of the major component of physical infrastructure, increases agricultural productivity, non-farm employment, and off-farm productivity, by directly raising the wages and employment of the poor, and hence, their economic welfare. The negative and significant sign of 'no access to road' implies that it is one of the major obstacles in reducing household poverty in remote areas. The results also show that all dummies of the zones have significant and negative association with per capita expenditure. Since the reference zone is *barani* Punjab, it suggests that per capita expenditure in all other rural zones are likely to be lower than in *barani* areas, which, as has been shown in section 4, is relatively better off in most infrastructures including roads and electricity.

There is strong evidence from developing countries that electricity contributes significantly to poverty reduction e.g. in Bangladesh and India rural electrification raises the use of irrigation, thereby significantly reducing poverty incidence (Songco 2002). The present study also shows a significant and positive association between the availability of electricity and per capita expenditure, suggesting that electricity leads to well-being of households. It has been discussed earlier that proportion of *mouzas* with access to electricity is much higher in relatively better-off zones, such as *barani* Punjab, than in the poor zones.

Several village-level factors concerning the availability of primary and high schools for boys and girls in both public and private sector were included in the model. Likewise availability of public and private hospitals was also an ingredient of the model. However, the provision of two services, high schools for girls and public hospital turned out to be significant; both have a positive impact on the per capita expenditure. Urban areas have made significant progress during the last one and half decade in providing girls education at primary as well as secondary and tertiary levels, resulting into improvement in their levels of education and also narrowing the gender gap at all levels. However, the rural areas of the country are lagging behind. The significance of female education in the model indicates its importance of lagging towards the well-being of households.

There is a growing body of literature in Pakistan, which shows that poor health is one of the factors that pushes families into poverty and suggests that access to health facilities can reduce the household vulnerability. The significance of the public hospital variable in the model supports this view. Poor households are more likely to visit public hospitals in case of illness.

Significance of the zone-level dummies with the impact of roads, electricity, health and education facilities explain relatively higher poverty or lower per capita expenditure in the poor regions. Therefore, improving both the level and efficiency of public investment in these regions is utmost necessary so as to narrow their differences in poverty with other regions.

In short, the multivariate analysis indicates that in addition to individual and household-level factors, the rural infrastructure, particularly access to roads and electricity, provision of education facilities for girls and health facilities, plays an important role in explaining the difference in poverty levels across regions. Thus investing more in rural infrastructure provides the key for increase in overall income of the rural population. More specifically, investment in road and power infrastructure, when complemented by schooling and health facilities is likely to exert significant impact on the welfare of the poor.

**Table 7: Regression Results (Rural Pakistan only)**

| Variables   | Coefficients | T-Value | P-Value |
|---|--------------|---------|---------|
| [Constant]  | 6.842        | 194.070 | .000    |
| Head of Household Characteristics                 |              |         |         |
| Age of Head                                       | 0.004        | 3.017   | .003    |
| Age of Head Square                                | -0.000       | -.700   | .484    |
| primary   | 0.094        | 9.205   | .000    |
| Middle  | 0.166        | 12.035  | .000    |
| Tfatic  | 0.241        | 18.155  | .000    |
| Higher Education                                  | 0.417        | 25.079  | .000    |
| aid Employees                                     | -0.114       | -11.875 | .000    |
| Farm Worker                                       | -0.021       | -2.063  | .039    |
| Household Characteristics                         |              |         |         |
| Adult Member                                      | 0.057        | 19.848  | .000    |
| household Size                                    | -0.075       | -52.711 | .000    |
| Livestock Value                                   | 0.000        | 17.797  | .000    |
| Infrastructure Indicators                         |              |         |         |
| Electrics   | 0.077        | 8.702   | .000    |
| Piped Water                                       | 0.009        | 1.087   | .277    |
| No Road Access                                    | -0.042       | -3.335  | .001    |
| Bank  | -0.004       | -.321   | .748    |
| Girls Primary School                              | 0.010        | 1.143   | .253    |
| Joys Primary School                               | 0.014        | 1.264   | .206    |
| Girl High School                                  | 0.045        | 2.890   | .004    |
| Boys High School                                  | -0.016       | -1.438  | .151    |
| Private School                                    | 0.001        | .086    | .932    |
| Govt. Hospital                                    | 0.041        | 4.063   | .000    |
| Private Hospital                                  | 0.007        | .802    | .423    |
| Rural Zones (Barani Punjab as reference category) |              |         |         |
| Rice/Wheat Punjab                                 | -0.122       | -7.266  | .000    |



|                           |        |         |      |
|---------------------------|--------|---------|------|
| vlixed Punjab             | -0.187 | -11.322 | .000 |
| Cotton/Wheat Punjab       | -0.221 | -12.993 | .000 |
| ^ow Intensity Punjab      | -0.163 | -7.814  | .000 |
| Cotton/Wheat Sindh        | -0.170 | -10.590 | .000 |
| Rice/Other Sindh          | -0.103 | -6.102  | .000 |
| NWFP                      | -0.073 | -5.290  | .000 |
| Balochistan               | 0.035  | 2.375   | .018 |
| No of Observations =10186 |        |         |      |
| R <sup>2</sup> = 0.34     |        |         |      |

## 7. Conclusions

This paper has tried to fill up the gap in knowledge by exploring the infrastructure and poverty nexus in rural Pakistan. The paper has focused on regional differences in poverty and found that infrastructure has a significant impact on poverty reduction. To explore the regional differences in term of physical infrastructure, Mouza Statistics 2003 are used, while to evaluate regional poverty and social infrastructure, the information from PSLM 2004-05 and other relevant literature is used. The major conclusions are as follows:

Rural regions with low levels of poverty like *barani* Punjab, rice/wheat Punjab and mixed Punjab have better access to metalled road. In contrast, regions with high poverty levels have poor access to roads. So access to roads is critical for reducing gap in poverty across regions. Electricity is also equally important. Region, with low poverty like *Barani* Punjab, rice/wheat Punjab and Mixed Punjab have almost 75% access to electricity for whole *mouza*; while the regions with high poverty have low access to electricity. Social infrastructure like education is an important factor that contributes in poverty reduction. Relatively better-off zones have better access to boys and girls educational institutions. They have better access to public hospitals.

Multivariate analysis shows that rural infrastructure particularly access to roads and electricity and provision of education facilities for girls and health facilities to the general public play an important role in explaining the differences in poverty levels. Investing more in rural infrastructure and provision of education and health services is thus key to an increase in overall income of the rural population and hence to reduce the poverty.

## References

- Ahmed and Donovan (1992), "Issues of infrastructure! development: A synthesis of the literature", International Food Policy Research Institute, Washington, DC
- Amjad, Rashid, G. M. Arif and Usman Mustafa (2008), "Does the Labour Market Structure Explain Differences in Poverty in Rural Punjab?" Forthcoming in the Lahore Journal of Economics
- Anwar, Talat (2007), "Poverty, Growth, and Inequality in Pakistan", A background paper for the Pakistan Poverty Assessment Update, Asian Development Bank, Pakistan Resident Mission, Islamabad.
- Arif, G. M., and Munir Ahmad (2001), "Poverty Across the Agro-Ecological Zones in Rural Pakistan", Paper presented at the National Workshop on Pro-Poor Intervention Strategies in Irrigated Agriculture in Asia: Pakistan, International Water Management Institute, Lahore, 12 March.
- Balisacan, A. M., and E. M. Pernia, (2002), "Probing Beneath Cross National Averages: Poverty, Inequality, and Growth in the Philippines", ERD Working Paper Series No. 7, Economics and Research Department, Asian Development Bank, Manila.
- Fan, S. and Zhang, X. (2004), "Infrastructure and Regional Economic Development in Rural China" China Economic Review 15: 203-14
- Fan, S., L. X. Zhang, and X. B. Zhang (2002), "Growth, Inequality, and Poverty in Rural China: The Role of Public Investments", Research Report 125, International Food Policy Research Institute, Washington, D.C
- Fan, Shenggen and Kang, C. Chan (2005), "Road Development, Economic Growth, and Poverty Reduction in China", Research Report 138, International Food Policy Research Institute Washington, DC
- Glewwe, P.M.Gragmolati and H. Zaman (2000), "Who Gained from Vietnam's Boom in the 1990s? An Analysis of Poverty and Inequality Trends", World Bank Working Paper 2275, Washington, D.C
- Government of Pakistan (2003), National Accounts of Pakistan 2001-02, Islamabad: FBS/Statistics Division
- Government of Pakistan (2003), Pakistan 2003 Mouza Statistics (settled Areas), Ministry of Economic Affairs and Statistics/Statistics Division/Agriculture Census Organization
- Government of Pakistan (2006 and 2008), Pakistan Economic Survey (various additions), Economic Advisor's Wing, Ministry of Finance, Islamabad



- Government of Pakistan 2004-05, Pakistan Social and Living Standards Measurement Survey, Federal Bureau of Statistics, Islamabad
- Haq, Nadeem Ul, Arif G.M. and Iqbal, Nasir (2007), "Growth, Poverty and Social Outcomes in Pakistan" A Report Prepared for Department for International Development, UK, PIDE
- Ifzai Ali, Ernesto M. Pernia (2003), "Infrastructure and Poverty Reduction-What is the Connection?" EDR Policy Brief No. 13, ADB, Philippines.
- Irfan, Mohammad (2008), "Poverty and Natural Resources Management in Pakistan" Paper presented in the 23<sup>rd</sup> Annual General Meeting and Conference, Pakistan Institute of Development Economics, Islamabad, March 12-14, 2008.
- Ianchovichina, E. and Kacker, P. (2005), "Growth Trends in the Developing World: Country Forecasts and Determinants" World Bank Policy Research Working Paper No. 3775
- Jacoby, H. G., (1998), "Access to Markets and the Benefits of Rural Roads: A Nonparametric Approach", World Bank, Washington D.C. Processed.
- Jalan, J., and M. Ravallion, (2002), "Geographic Poverty Traps? A Micro Model of Consumption Growth in Rural China", Journal of Applied Econometrics 17(4):329-46.
- Kwon, E. K., (2000), "Infrastructure, Growth, and Poverty Reduction in Indonesia: A Cross sectional Analysis", Asian Development Bank, Manila. Processed
- Malik, J.Sohail (1992), "Rural Poverty in Pakistan: Some Recent Evidence", Pakistan Development Review, vol. 31, No. 4
- Malik, J.Sohail 2005, "Agricultural Growth and Rural Poverty:, A Review of the Evidence" Working Paper No.2, Pakistan Resident Mission Working Paper Series, Asian Development Bank, Islamabad.
- Pickney, Thomas C. (1989), "The Demand for Public Storage of Wheat in Pakistan", Research Report 77, IFPRI, Washington, DC
- Songco, J. (2002), "Do Rural Infrastructure Investments Benefit the Poor?", World Bank Working Paper 2796, Washington, D.C
- Stern, Nicholas, (1989), "The Economics of Development: A Survey", Economic Journal, Royal Economic Society, vol. 99(397), pages 597-685

*Infrastructure and Poverty Nexus: The Case of Rural Pakistan*

Wanmali, Sudhir and Yassir Islam (1995), "Rural Services, Rural Infrastructure and Regional Development in India", *The Geographical Journal*, Vol. 161

Wanmali, Sudhir and Yassir Islam (1997), "Rural Infrastructure and Agricultural Development in Southern Africa: A Centre-Periphery Perspective" *The Geographical Journal*, Vol. 163

World Bank (2006), "Development and the Next Generation" WDR 2007, The World Bank, Washington, DC



## Property Rights: Ensuring well being through low income housing

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**Abstract:** Pakistan, like most parts of the world, has adopted capitalism, but its own capacity to generate domestic capital remains limited. Thus persistent dependence on foreign capital is a commonality across the state and non-state actors, including businesses and development agencies. In a world which is increasingly about economics such dependency results in subservience to foreign demands in all spheres of life-be economic, social or political. To explain constraints on creation of domestic capital, we have used the well known framework developed by Hernando De Soto in 'Mystery of Capital'. He points out that the key to the mystery of capital lies in a combination of ownership of a clean and clear title and elaborated man-made processes to transform that title into capital. We have further restricted the application of this framework for proposing a policy in the housing sector for the low income household. There is a substantial unmet demand for low-cost housing in Pakistan and if addressed properly, this market is potentially worth US\$15 billion. We argue that market based mechanisms work best to solve the housing problem for the poor and relate it with current political and policy emphasis to provide housing by the state. It can be shown that the social present value of investment in such a mechanism can at least be three fold three times larger than the private present value.

### 1. Theoretical Background<sup>3</sup>

Property Rights, as Hernando De Soto has extensively argued in 'The Mystery of Capital', hold the key to capital formation and creation of surplus value for the large majority of the population. He points out that the key to the mystery of capital lies in a combination of ownership of a clean and clear title and elaborate man-made processes to convert that title into capital: collectively termed 'property rights'. We have applied the framework of De Soto to understanding the problem of access to housing, faced by the urban poor and have proposed a market-friendly policy framework to deal with it.

De Soto has maintained that capitalism is the only viable economic system in the current scenario which guarantees prosperity and well being. However, capitalism, globalization aside, has so far been successful only in the 'West' (U.S., Western Europe

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<sup>3</sup> This part of the paper is largely based on Hernando De Soto's seminal work "The Mystery of Capital".

and Japan) but has failed elsewhere. In fact, capitalism and globalization, in the wake of openness in political and economic realms has caused greater inequalities elsewhere. Thus defenders of capitalism and globalization in these countries have gone on the defensive.

De Soto defines capital as something which has an intrinsic value as well as the capacity to produce surplus value beyond the physical dimension of the asset. He argues that although the developing countries and former communist nations have embraced capitalism wholeheartedly, they have not been able to generate capital on their own. Why it has happened in the West and not elsewhere is the single most important question which has been thoroughly dissected by him.

The creation of capital, according to De Soto, is only possible when property rights are unambiguously defined and collectively enforced. He maintains that there are essentially five factors, termed as mysteries, which contribute to the failure of creating property rights, and eventually, capital. Once we understand these mysteries, it becomes possible for us to demystify the success of capitalism in the West, and its failure elsewhere. First, there is the mystery of missing information. Second, there is the mystery of capital itself. Third, there is the mystery of political awareness. Fourth, there is the problem of missing key lessons from the U.S. history. Fifth, and last, is the mystery of legal failure. A brief description follows:

### ***1.1 Mystery of Information***

'Legality [is] marginal. Extra-legality has become the norm', writes De Soto. With the help of a 100-strong team, which worked over 5000 days across continents, he has calculated that the worth of the real estate assets held, but not legally owned by the poor of the Third World is at least \$ 9.3 trillion dollars. This is equal to the valuation of all listed companies in the twenty most advanced nations; more than twenty times the total direct foreign investment into all Third World and former communist countries in the ten years after 1989; forty-six times as much as all of the World Bank's loans of the past three decades, and ninety three times as much as all development assistance from all advanced countries to the Third World in the same period.

The mystery of information is actually an ignorance of the poor people's real wealth, which leads to extensive under-capitalization. This is also known as the informal sector, black market economy or the under-ground economy in many nations. As national government statistics are blind of these ground realities, the national strategies are also blind of this hidden and enormous wealth. The result is that developing countries continue to harp fears of poverty amongst themselves and amongst the rest of the world. The mystery of missing information about the real values, which the people hold, is therefore a key in solving the main puzzle: why capitalism triumphs in the West, and fails elsewhere.

### ***1.2 Mystery of Capital***

Many thinkers have associated capital formation with entrepreneurial process of developing countries. De Soto, on the other hand, argues that the principal problem of developing countries is not the lack of entrepreneurship, as demonstrated by creation of assets worth trillions of dollars. Rather, it is in fact the lack of easy access to a property



mechanism, which could legally fix the economic potential of their assets and ultimately be used in the creation of surplus value that may be far greater than the value of the physical dimensions of their assets.

De Soto further argues that the real property right is not about the ownership: clean title is only the tip of the iceberg. The real impact of an effective system of property rights is the flow of communication between the asset and realization of its value and reduced transaction cost encouraging networking amongst people. De Soto finally suggests that the absence or lack of this phenomenon is the major reason for the failure of capitalism and macro economic reforms.

### ***1.3 Mystery of Political Awareness***

"If the written law is in conflict with the laws citizens live by, discontent, corruption, poverty and violence are sure to follow", writes De Soto. He has argued that the extralegal frameworks developed by citizens, empowered by huge inflows into urban areas, are rarely antisocial in nature. The political and legal elite need to understand the mechanisms and rules which operate the extralegal sphere and instead of always looking at these mechanisms with disdain, they should try to merge these rules with the written law of the land. The West has done it over a course of at least two hundred years, and surely there is no quick fix for other nations.

### ***1.4 Mystery of Missing Lessons from History***

De Soto has focused on the history of Western nations in general, and on the U.S. in particular, and has drawn several parallels between their past and developing countries' present. He has traced the developments of property rights structure by referring to key milestones both in the judicial and political history of the U.S. For example, 'squatting-occupying a land for a long period without a title' was illegal in England, however it became a common practice in the U.S. as the land was freely available for new settlers and immigrants. After a long and multi-pronged battle, American politicians expressed the revolutionary idea that "legal institutions can survive only if they respond to social needs."

### ***1.5 Mystery of Legal Failure***

Finally, De Soto has shared (with readers) his own experience of 'formalization' of capital. His team designed a project in Peru to bring extra legal entrepreneurs into the formal sector. New registry offices were set up, which ultimately brought 276,000 extralegal entrepreneurs into the formal economy; generating US\$ 1.2 billion in tax revenues, where none was paid earlier. The experiment was a huge success, as the company and property laws were modified to adapt to the needs of the previously extralegal entrepreneurs.

De Soto argues that people do not opt to live in extralegal sphere because of a fear to pay taxes; in fact, they may end up paying far more than the legal taxes, as the extralegal framework is not free. Therefore, what determines whether "you remain outside" is the relative cost of being legal. However understanding these relative costs, and to convince those who abide by extralegal framework to abandon it, takes very minute level decoding of the extralegal social contract. Once this is done, the legal job



is over, and potentially more challenging work of the politician begins. The politicians need to convince both the elite and the masses about the advantages of the new legal framework. In this process, they are bound to face resistance from the elite in particular, however to offset that pressure, they must develop deep bonds with the people at large. De Soto has also criticized the current focus of many governments and international development organizations on the computerization of records as a strategy to enforce property laws. He has argued that much before computers were in common use, the West had developed elaborate processes to safeguard property rights and computerization has just helped in speeding up the process of information accumulation and retrieval. The obsession with computerization stands on the false premise that property is a part of the physical world; it belongs more to the legal and economic worlds.

### ***1.6 Private Ownership and Poverty Eradication – A Critical View***

The noted intellectual, Naomi Klein, has criticized De Soto and has taken the exact opposite position. According to Klein, De Soto's thesis generates short-term solutions to the poor conditions of many people, and is based on a partial view of reality that is very ideological. In a comparative article<sup>4</sup>, it has been noted that: the big difference and opposition to the theory of De Soto is its profitless end. This fact makes a critical difference in the full conception of housing: to see housing as a human right or a commodity. Efficient poverty reduction strategies based on housing are not based on private property. Beyond "ownership", the civil society organizations that promote the right to housing work with the concept of Social Production of Habitat (SPH).

However, Klein's argument tends to be a bit superficial. Association of Property Rights with housing alone is reductionism at best. De Soto's framework about Property Rights clearly demonstrates that ownership is only the tip of the iceberg. Property rights go beyond ownership and include the complex process of formalization of capital generation—not limited to housing alone. A significant part of De Soto's argument is about the work of the extralegal entrepreneurs, who operate under their own laws. Bringing them into the formal economy leads to huge dividends for the overall population and is not directly linked with housing.

## **2. Review of the Housing Market**

### ***2.1 Historical Perspective on Housing in Pakistan***

At one point in history, *rural to urban migration* was viewed favorably by economists for a host of reasons. Fundamental to this view was that such migrations naturally shifted surplus labor from rural areas to provide much needed manpower for the urban industrial growth process. Unfortunately, as the process of urbanization moved at an unprecedented rate and urban populations began to swell, the rural to urban migration began to take a negative toll on all sectors of society, including the social, economic and political. Countries that were mainly agrarian societies in the developing world were unable to successfully deal with the population shift and the basic challenges it posed. Pakistan is no exception.

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<sup>4</sup> Habitat International Coalition- [www.hic-net.org](http://www.hic-net.org)



Alongside the traditional process of modernization and urbanization in Pakistan, there has been a disturbing trend within the housing sector. As the society became more affluent, developers began to capitalize on the opportunity. Since land is considered a safe and promising investment, there was a proliferation of housing developments catering to the upper- and upper-middle classes of society. The intent of the developments was to solely cater to the investor community. This resulted in a vicious cycle of artificial inflation of prime land that followed the pattern mentioned below.

- Developer purchases raw land
- Investors purchase at low rates and hold for 2-3 years
- Other investors see the increase and promise of the development and purchase at higher rates and hold for another 2-3 years
- An average of 15 years passes without any physical development on the land but plot prices increase fifteen-fold. Investors have bagged tremendous returns but the plot prices have inflated to a level that the lower and lower-middle class could not dream of affording.

Within the context of private sector housing schemes, the above description will suffice for the current purpose. However, in the public sector, we find a different dynamics. The public housing schemes develop infrastructure and construct dwelling units within the first two years of the project. They also successfully attract citizens to start living on site. However, a realization of the problem only occurs after some time, when it is disclosed to the public authorities that people living in the units are not actually the real owners; rather the real owners, were actually speculators who took advantage of the government subsidy on the housing unit, and subsequently sold/rented the unit at market rates. During this discovery, a new problem is brewing in the fledgling community: a large group of renters assemble as a community that holds no real roots. The results are horrific, and have been documented globally in various public housing schemes of the world. Renters of the units hold no obligations to the community at large—they are here today, and gone tomorrow—leading to various negative social and environmental impacts on the larger community. In turn, the genuine homeowners come to realize that the neighborhood will not be sustainable for their families, and they try to leave. In public housing, the long term results are consistent—a proliferation of slums and ghettos. *A case study on Urban Poor by Acumen Fund (2004)* arrives at the conclusion that *Public Housing Schemes have been inconsistent with the economics and sociology of the poor.*

With the above scenarios in the public and private sectors, the ingredients are complete for the investors/speculators to play this part. With limited regulations on development companies (which is now changing), no 'practical' restrictions on housing by-laws, and a volatile market where land is the only stable investment, the 'perfect storm' for the proliferation of housing schemes is set. The results appear to be extraordinary, with investors making 100% annual rate of return, developers and investors line up to make

money. The surge in housing developments lead to saturation points which results in a slump in the 'speculators housing market'.

In the last two decades, the housing market has sustainably met the demand of developers/investors in more ways than one—low risk and high returns—an investors dream. During this same time period, the market completely failed to address the needs of the average citizen (defined as a household income of PKR 9000/month). The risk of dealing with such a segment, as well as the reduced returns (100% vs. 20% in the low income segments), never appealed the appetite of the real estate developer—too much work, too little money.

## **2.2 The 'New' Market**

Historically, low cost housing in Pakistan has either been the realm of NGOs, the government, or the informal sector. Due to the heavy capital requirements, as well as level of skill involved in scaling up the housing sector, NGOs have not gained much ground. As mentioned, the government has been very successful in the actual building of low cost housing, but has failed in all subsequent aspects—such as effectively targeting the Bottom of Pyramid<sup>5</sup> and building healthy and sustainable communities. Traditionally government models have been based on a lottery system that is generally rigged to favor the investor community who then exploit the low income group through renting or resale of those units. With those units intended for homeowners—but occupied by renters—there is no ownership within the community. This inevitably spirals into becoming another slum where drugs, prostitution, crime, etc thrive, as mentioned above. The informal sector is riddled with its own set of problems: lack of legal tenure, crime, no master-planning, and little or no infrastructure are just a few issues.

With a slump in the mainstream housing market, we see more and more developers moving downscale to address what we shall term as the 'neglected market'. Previously the housing schemes were developed for pure investors, now we can see a trend of smaller villas being offered to the middle income groups (Rs. 25,000 – 60,000/month)—not yet targeting the 8 million households earning between Rs. 6000 – 25,000/month. This untapped market segment represents an interesting group of people that needs to be properly understood. For that end, we must put our feet in the shoes of the average citizen earning between Rs. 9,000-12,500/month.

For those living in rental units (30% of the population), their average monthly cash flow is summarized below:

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<sup>5</sup> Bottom of Pyramid refers to the poor and low income groups.



**Table-1: Monthly Income/Expenditure of Poor Households**

| Income/month                                      | Rs. 10,000       |
|---|------------------|
| <b>Expenses</b>                                   | <b>9,000</b>     |
| Rent  | 3,000            |
| Food  | 3,000            |
| Utilities (Gas/Firewood, electricity, water, etc) | 300              |
| Transportation                                    | 1,800            |
| Misc. (death in family, sickness, entertainment)  | 900              |
| <b>Monthly savings in ideal circumstances</b>     | <b>Rs. 1,000</b> |

With the average person saving Rs. 1,000/month and the average 80 square yard plot costing Rs. 420,000 (after speculators get through with it), it would take nearly 35 years before one could afford such a plot. The result is the current housing crisis faced by the poor people in Pakistan.

The average citizen lives with a level of uncertainty, and is desperately seeking solutions:

- *Will the landlord evict me this month, if renting?*
- *Will the price of the staples (flour, salt, sugar, rice, oil, etc) fluctuate this month?*
- *Will a tragedy befall me or my family—a death, a medical emergency?*
- *Will I miss any days of work due to illness?*
- *Will I have a job next month?*
- *Will I save any money at the end of the month?*

Within the cultural context of Pakistan, people are able to come up with a certain amount of money when needed—via social networks. A person is able to gather funds for medical emergencies, financial/business opportunities, etc from relatives and friends or through a common concept of informal savings and loan schemes (known as ‘committees’). When designing products for the low income groups, all ground realities must be duly considered, for instance the following:

**Table-2: General Characteristics of an Average Household**

| Characteristic       | Average Citizen  |
|----------------------|--|
| Monthly Earning      | Rs. 5,000 to 18,000  |
| Location             | Urban, Peri-urban, Slum  |
| Source of Livelihood | Government Job, Private Job, Self Employed                     |
| Family Size          | Up to six persons  |
| Other support        | A spouse/child brings secondary income which serves as savings |

### **2.2.1 Market size, analysis and forecast<sup>6</sup>**

In order to appreciate the magnitude of the low cost housing market within Pakistan one must analyze the segment on two levels: a) Actual housing backlog/deficit, and b) owned units versus rented units.

- (a) Currently, Pakistan has an **overall housing backlog exceeding 6 million units** with an annual addition of 300,000 units. Roughly 30-40% of the demand is addressed by the mainstream developers who cater to the high end market. The remaining units fall under the category of low income segment. The government has made repeated attempts to address this segment through various initiatives—seldom succeeding. Based upon conservative estimates, the current **low cost housing deficit** within Pakistan is **3 million units** with an addition of 150,000 units per annum.
- (b) It is estimated that 69% of housing units are listed as 'owned'. However, of the total sum of housing units, only 59% can be deemed proper housing according to the UN definition. Thus, the **renters' market data** indicates that there is a potential market for low cost housing of roughly **4.4 million units** within the count.

Comparing the above two approaches, a conservative estimate of the potential market is worth up to 15 billion dollars. In addition to these alarming rates, within the urban context, there is a very disturbing pattern. Of those who own homes, there is a clear pattern of construction of additional rooms as opposed to construction of new homes—leading to the increase in the density of homes—which further exacerbates the housing problem. With most homes having been constructed over 20 years ago (58%), over 50% of the population under the age of 25, and the population of the major urban centers of Pakistan expected to double in 15 years—the demand in the lower income segments is expected to explode in the next decade.

In this grave situation, the government of Pakistan has dedicated a negligible fraction (0.08%) of the public sector development budget to address this extraordinary problem of the low income groups.

### **2.2.2 Industry analysis and forecast**

The table below defines the players in the low income housing space:

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<sup>6</sup> Most of the data in this section has been taken from Government of Pakistan, National Housing Policy 2001.



**Table-3: Housing Schemes for Low Income People**

|                   | FORMAL HOUSING  | INFORMAL HOUSING   |
|-------------------|---|--|
| <b>PUBLIC</b>     | <i>-Government Housing Schemes:</i><br><br>(a) ineffective allotment system caters to investors/speculators<br><br>(b) national budget for low cost housing is .08% of PSDP | <i>-Ownership Rights granted to katchi abadis:</i><br>very limited scope/not a feasible practice   |
| <b>CHARITABLE</b> | <i>Saiban, Al Huda</i><br>Limitations to scale exist  |  |
| <b>PRIVATE</b>    | <i>- Ansaar Management Company (Social Venture)</i>   | <i>- Katchi Abadis/Slums:</i><br>(a) lack of legal tenure;<br>(b) excessive crime;<br>(c) lack of infra-planning;<br>(d) illegal squatting |

### **2.3 Overview of Low Cost Housing Market in Pakistan**

As mentioned above, the low-income housing segment remains neglected by current market players. Developers tend to pursue high-end projects where returns are exponential. The NGO sector tends to focus on specific issues (sanitation, water, solid waste, education, health, etc) as housing is quite complex. The informal sector has caused major problems within urban societies of Pakistan.

The neglected market, with its untapped potential, may seem like an enticing opportunity for investors/developers to pounce on; however the proposition is not as easy as it may sound. The market does have its inherent risks that, if not addressed properly, will lead to one of two results or a combination of both:

- the prospective development will turn into another investor heaven—which will result in a failed project due to the slump in the market (as discussed above), OR
- the prospective development will turn into a ghetto or slum due to poor management

As of July 2007, the estimated population of Pakistan was 165 million. The current household size is 6.6 and the occupancy per room is 3.3 persons. The average citizen is said to earn Rs. 9,000/month, while 81% of the population is earning below Rs. 7,000/= month. It is estimated that almost 50% of the urban population lives in slums or katchi abadis. This demand is mostly addressed by the informal sector through the development of 'katchi abadis' (slums) which, in turn, creates a host of new problems.

Because no organized segment of society is consciously trying to address this demand, the solution inevitably comes from informal housing developers. The formal private sector, in general, does not serve low-income segments. The public sector, historically,

has failed to provide sustainable large scale housing solutions for the low income groups. When the government does announce such initiatives, developments usually have cumbersome application procedures, are unaffordable to the poor, and are often grabbed by middle income households or real-estate speculators—resulting in the ghost-schemes or ghettos—as witnessed throughout the country. Thus, the market for low-income housing is dominated by informal housing developers, who operate on a localized scale through various means such as encroachment and illegal subdivisions.

**Table-4: Characteristics of Informal Housing Schemes**

| Characteristics          | Typical Informal Scheme                                  |
|--------------------------|--|
| Location                 | Periphery of city  |
| Scheme Layout            | None - narrow lanes, no space for park, and schools etc. |
| Plot Sizes               | 75 – 125 sq. yards                                       |
| Price                    | Rs. 80,000 – 120,000                                     |
| Legal Housing            | None   |
| Utilities                | Poor water supply, gas & electricity                     |
| Amenities                | Minimal  |
| Environmental Conditions | Very poor - serious sewerage and solid waste problem     |

### **3. Property Rights and Formalization of Capital**

As De Soto has passionately argued, ensuring property rights, including legal ownership and elaborate processes would ensure the formalization and creation of domestic capital. Thus, an asset would be converted into capital and unleash a process of wealth creation, prosperity and well-being. This process is usually achieved by using property as mortgage or as equity. However, in the history of financial institutions within Pakistan, very few organizations have been venturesome enough to offer mortgage products to the lower income segment. There are several reasons for this, some are mentioned below:

The lower income segments:

- o do not have verifiable income or a legally identifiable address;
- o do not understand the concept of mortgage products/time value of money;
- o tend to be unaware of banks and do not maintain bank accounts
- o may not be able to maintain the discipline of a regular monthly mortgage payment

The financial institutions:

- o do not find it financially viable to make micro loans in the housing sector, as overheads are too high
- o do not find large tracts of legally secured and sanctioned land where they can offer such products
- o do not find it possible to identify legally accountable individuals



Although the above obstacles are significantly enough to inhibit the growth of this sector, they are not entirely impossible to overcome. A conscious effort in the area of research and development for the last twenty years has recently yielded sustainable results. **Saiban**, a non profit organization, was established in 1991 by Tasneem Siddiqui, a retired senior civil servant of the Sindh Government. The purpose of the NGO was to serve as a hub of action research for shelter. Saiban's successful model has been implemented in eight schemes in two provinces providing healthy environments of community participation to over 60,000 citizens of Pakistan. Upon establishing a significant track record, the most recent housing development in Kala Shah Kaku, on the periphery of Lahore, will potentially revolutionize the housing sector for the low income groups within Pakistan.

In the Kala Shah Kaku development, known as Khuda Ki Basti-4 (KKB-4), **Saiban** was able to leverage all of their accomplishments in the two decades to engage the House Building Finance Corporation, the first housing finance institution of Pakistan, to offer mortgage loans to the low income groups for the purpose of constructing homes.

This critical paradigm shift in the culture of property rights in Pakistan can potentially serve as a catalyst in the field, as Grameen Bank has done in the field of microfinance.

### **3.1 Achievements of Saiban**

KKB-4 is located in the District of Sheikhpura, adjacent to Lahore. According to new laws under Local Government Ordinance 2001, any new housing scheme must be approved by the local Tehsil Municipal Administration, TMA. However, due to mass corruption and a lack of respect for the law within the private sector, no developer had bothered to obtain the required permits until 2008. The approval process is very similar to standard development processes worldwide, however, since KKB-4 was the first application in seven years, officials did not know how to process the application. After eighteen months of hard work, the Saiban team was able to obtain legal permits to start construction. This long and arduous procedure, along with many other requirements, indisputably established Saiban's legal ownership—a critical step in providing comfort to HBFC.

Once legal title had been established, the second major step was to initiate the process to convert legal title into capital. Again, this tedious process took a long time, concerted efforts and a supportive Board of Directors at HBFC. The task involved several items:

- getting successful buy-in from all stakeholders, while overcoming reservations from each side (the low income applicants, HBFC);
- designing a product that is affordable for the low income applicants;
- establishing a clear process of income verification for clients/applicants;
- establishing legal protection for HBFC when clients are not given sale deeds, by **Saiban**, for a period of five years.

### *Property Rights: Ensuring well being through low income housing*

- establishing a legal process of recording transactions that were acceptable to all stakeholders, including the local government;
- converting the titles into liens, to allow mortgaging for capital

Once the above obstacles were overcome, during a period of 24 months, the advent of the legal housing industry within the low income strata was launched, propelling growth in at least 40 other industries. This study has documented the costs and benefits from such an investment separately, given at Appendix.

### **3.2 Mysteries Resolved**

As the above case has clearly demonstrated, it is quite possible to resolve the mystery of capital in the context of low income housing in Pakistan—despite the numerous hurdles that currently exist. In reference to the De Soto framework, we apply the principles in the following manner:

First the mystery of information is resolved, as it becomes possible to identify a citizen with a legal address that can be verified. As the above discussion shows, the identification of legally accountable persons has been a major hindrance for banks to expand mortgage market. The Saiban process has effectively solved this information problem, although at a pilot stage. However, it has demonstrated the possibility as well as spelled out the detailed mechanism for the same.

Second, the mystery of capital is resolved as the title now owned by the poor is converted into capital through regular mortgages. Most of the capital in the shape of property in Pakistan is dead capital; it is just a piece of land. Saiban experiment has shown that it is possible to make this capital alive by following specific procedures and by taking the real stakeholders—the owners of property—on board.

Third, the mystery of political awareness is also resolved as the key stakeholders (local community, government, and financial institutions) are engaged during the entire process. In fact, the Saiban model was able to engage the government on several levels, including support on a multi-million rupee road project for several local villages and KKB-4. The Saiban experience also shows that involvement of community is an effective political tool to enhance the legitimacy, not just legality, of the project. This was specifically demonstrated by creation of a successful Citizens Community Board<sup>7</sup> in this area.

Fourth, the mystery of missing lessons from history is also resolved as the financing institutions come out of their straight jackets of rules and regulations and become willing to be active player in a new market. HBFC, for example, had fixed a minimum

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<sup>7</sup> Citizens Community Board (CCB) is a body created under Local Government Ordinance 2001. A CCB consists of a minimum of 25 non-elected citizens, who register this as an non-governmental, non-profit association. Under the law, each local government allocates 25% of its development budget for CCBs. A CCB can undertake a wide range of public interest projects as long as it can generate 20% of the project budget from its own resources. The remaining 80% is contributed by the government.



income requirement to approve mortgages, which was relaxed to accommodate the new class of customers.

Fifth, the mystery of legal awareness is resolved as Saiban traverses through a complex myriad of rules and regulations and ultimately finds a legal solution. In this process, Saiban discovers that the law cannot simply be forced onto the masses without their buy-in by educating people about the time value of money, demonstrating the benefits of a mortgage and a healthy community, etc. The end results are clear: once people are offered a reliable and socially acceptable legal system, they do respond positively.

#### **4. Conclusions and Policy Framework**

We propose a tripartite arrangement involving: private sector developers, the public sector, and financial institutions—to realize the dream of providing a sustainable and affordable housing solution for the low income strata on market friendly terms. The central piece of this arrangement will be the existence of committed and resourceful entrepreneurs, who will bridge the demand-supply gap through the mobilization of resources. A project management company and an investors' consortium would be established to purchase land at subsidized rates through the government processes—allowing investors comfort in the asset-backed arrangement. (The Saiban model is a financially sustainable model providing investors an IRR of 30%). The government, under the existing policy of the 'Area Development Schemes' would offer capital to finance project infrastructure, as well as a model residential block. The government agency would be given shares against its investment, which the project management company will be liable to return within a specified time period of five years. As the government is a non-profit enterprise, only the principal investment would be returned in that time, and the shares of the government would be swapped. Finally, the end users the low income group, would be offered housing finance via participating institutions—since the title would be of legal ownership, their properties would be mortgaged to obtain housing finance.

It can be shown with detailed arguments on how such a market friendly mechanism would be acceptable to all concerned parties. This would be a superior mechanism to the give-away facilities of the government, which end up almost always being misused, as the beneficiaries are not properly selected due to information gaps. This would also bring sizable returns on the investment in the long run. As the proposed mechanism would be solely targeted for the poor, the social return on investment would be immense and manifolds as compared to private financial return since it is creating a legally acceptable title. It can be shown that the social present value on the investment in such a scheme can be approximately three fold<sup>8</sup>. Above all, such an arrangement would conclusively demonstrate the critical nature of property rights in the creation of capital.

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<sup>8</sup> For details, please see Appendix-II.

**References**

Azfar, Asad and Rehman, Aun. 2004. "Housing the Urban Poor". Case Study by Acumen Fund.

De Soto, Hernando. 2000. *The Mystery of Capital: Why Capitalism Triumphs in the West, and Fails Everywhere Else*. Basic Books.

Government of Pakistan. 2001. National Housing Policy

-*ibid*- 2002. Local Government Ordinance 2001

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## Appendix

### Social Return on Investment on Low Income Housing

|                                     |  |  | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|-------------------------------------|--|--|--------|--------|--------|--------|--------|
| Cumulative No. of plots sold        |  |  | 200    | 400    | 1,000  | 1,500  | 2,500  |
| Cumulative No. of occupancies (80%) |  |  | 160    | 320    | 800    | 1,200  | 2,000  |

|   | Ref | Growth Rate | US\$    | US\$      | US\$      | US\$      | US\$       |
|---|-----|-------------|---------|-----------|-----------|-----------|------------|
| <b>Social, Economic and Environmental Benefits</b>                                |     |             |         |           |           |           |            |
| <b>Economic Benefits</b>  |     |             |         |           |           |           |            |
| Savings per family/household (Rent-Lease)   | 1   | 10%         | 387     | 426       | 468       | 515       | 567        |
| Additional Income due to Access to Mortgage Finance                               | 2   | 10%         | 1,935   | 2,129     | 2,341     | 2,575     | 2,833      |
| Value of New Employment Generated (Labo etc.)                                     | 3   | 10%         | 1,613   | 1,774     | 1,952     | 2,147     | 2,362      |
| Potential Gains from Income Generation Programmes                                 | 4   | 20%         | 967     | 1,160     | 1,392     | 1,671     | 2,005      |
| <b>Social Benefits</b>  |     |             |         |           |           |           |            |
| Savings on medical bills due to Sale Water proper Solid Waste/Sewerage Management | 5   | 20%         | 96      | 115       | 138       | 166       | 199        |
| <b>Environmental Benefits</b>   |     |             |         |           |           |           |            |
| Cost Saving by Waste Water Treatment  | 6   | 5%          | 20      | 21        | 22        | 23        | 24         |
| <b>Social, Economic and Environmental Benefits Per Household</b>                  |     |             | 5,018   | 5,625     | 6,314     | 7,098     | 7,990      |
| <b>Total Social and Environmental Benefits</b>                                    |     |             | 802,880 | 1,800,032 | 5,051,296 | 8,517,002 | 15,979,561 |
| <b>Operating and Capital Costs</b>  |     |             |         |           |           |           |            |
| Operating Expenses (Lease)  | 7   | 10%         | 390     | 429       | 472       | 519       | 571        |
| Capital Expenditures  | 8   | 10%         | 2,016   | 2,218     | 2,439     | 2,683     | 2,952      |
| Operating and Capital Costs Per Household   |     |             | 2,406   | 2,647     | 2,911     | 3,202     | 3,523      |
| <b>Total Operating and Capital Costs Per Household</b>                            |     |             | 384,960 | 423,456   | 1,397,405 | 1,280,954 | 2,818,100  |
| <b>Social Purpose Benefit Flow</b>  |     |             | 417,920 | 1,376,576 | 3,653,891 | 7,236,047 | 13,161,461 |
| Discount Rate   | 9   | 11%         |         |           |           |           |            |
| NPV of Social and Environmental Benefits  |     |             | 82,805  |           |           |           |            |
| NPV of Project Costs  |     |             | 35,902  |           |           |           |            |
| Benefit-Cost Ratio  |     |             | 2.31    |           |           |           |            |
| Social Purpose Value  | 10  |             | 46,903  |           |           |           |            |

**Notes to Above**

1. Savings accrued on part of rental payments which households would pay in case of not owning a house in ADG.
2. Indicates the potential income which the customer can earn by taking loan from the bank based on returns on comparative loans in micro finance sector in Pakistan (State Bank of Pakistan 2007)
3. Represents the labor costs incurred on building a house considered as labor income due to construction of a house, based on Pakistan's national average (Labor).
4. ADG incorporates staging income generation programmes within its communities especially for women at home, and the figures are based on a comparison with (Pakistan Poverty Alleviation Fund)
5. UNICEF (2005)
6. Based on estimate of reduction in water usage for tertiary purposes such as watering of plants, washing etc. (Pakistan Council on Research in Water Resources)
7. Indicates the monthly lease payments paid by the household.
8. Indicates the down payment made by the household to buy a plot.
9. Discount Rate equivalent to Discount Rate offered on six monthly Treasury Bills
10. Taken as a difference between NPVs of Benefits and Cost as calculated above.

**General Notes**

1. The data have been calculated by the authors after careful estimation and sources, where possible, have been cited.
2. All figures are described on per household per year basis.
3. Data represent consumers' perspective of costs and benefits in all indicators.
4. Appropriate growth rates have been applied by year-on-year change.



## **Energy Security and the Developing Country: Issues, Strategies and Options**

*Javed Anwar<sup>1</sup>*

**Abstract:** *Reliable and adequate energy supply at reasonable prices is a basic requirement for human and economic growth. The world has enough resources to fulfill energy demand but the extraction and delivery cost to consumer is a hurdle for developing countries. Pakistan is also facing very severe energy deficit and depends heavily on oil imports. This dependency can be reduced by exploiting domestic fossil fuel resources, developing new alternative energy resources, adopting energy efficiency and conservation measures. Pakistan should seek regional cooperation in power and energy sector, which will also help in reducing the environmental degradation besides reducing import bill.*

### **1. Introduction**

The global energy resources are sufficient to meet demand until 2030 and well beyond. However, the cost of extraction and delivery to consumers is a matter of concern. [1] By looking at market trends projections, there is serious emergence of concerns about energy security. The world's vulnerability to supply disruptions will increase as international trade expands. It also indicates that short-term risks to energy security will grow. Many of the world's poorest people will continue to be needy for modern energy services. These challenges demand for urgent and effective action by governments around the world.

Energy security is a wide and growing concept. In the 1970s and 1980s, energy security was perceived as reducing oil supplies and controlling the risks associated with such imports. Today, energy security takes into account other types of energy, besides oil and other risks such as accidents, terrorism, under-investment in infrastructure and poorly designed markets, which might restrict sufficient supplies of energy at reasonable prices.

Energy security, particularly that of oil supply, has become a key political and economic issue in recent years. From economic point of view, energy security refers to the provision of reliable and adequate supply of energy at reasonable prices in order to sustain economic growth.

From the point of view of **poor developing countries**, energy security is a very important component in their paths out of poverty. [2] Adequate and affordable supply

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of energy increases the productivity and incomes of people; light and power improves, their health and schooling, and helps them connect to the global markets.

According to IEA, energy security is defined as the availability of a regular/reliable supply of energy at a reasonable price. [3] European Commission points out that the definition of energy security has physical, economic, social and environmental dimensions as well as long and short term dimensions. [4]

A number of researchers have tried to develop a set of security indicators [3], [5], [6]. The measures of energy security can be classified into two types: dependence and vulnerability both denoted in physical and economic terms. Physical measures depict the relative level of imports or the situation of shortages and disruptions, while economic measures are related to the cost of imports or the prospects of price shocks. The physical and economic aspects of dependence and vulnerability are closely related, because shortages or disruptions in energy supply rapidly lead to price increases.

The present study highlights the potential of other resources of energy and suggests alternative options for energy security. The paper is organized as follows:

**Section-2** explains the importance of energy security.

**Section-3** shows the energy sector outlook of Pakistan which is followed by energy Security, problems and Prospects

**Section-4 and Section-5** give a brief description of alternative energy resources of Pakistan and

**Section-6** presents the regional energy security issues.

## **2. Re-emergence of Interest in Energy Security**

After the 11<sup>th</sup> September, 2001 event, the interest in energy security increased more than ever before. In the past, security of supply was the main focus of research, however, new perceptions are now entering in the area. In recent years, energy security has again become the most widely-discussed concern on the agenda of energy policy. The main reasons are:

1. Threats to energy supply security due to energy market liberalization
2. the challenge of security of demand faced by energy exporters
3. the widening dimensions of environmental security
4. Since 1973, global primary energy demand has doubled.
5. The fear of terrorism<sup>2</sup>.

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<sup>2</sup> Energy importing countries were already becoming concerned about their energy security before the 9/11, 2001 event. So the fear of terrorism since then has increased their concern.



Thus security is a crucial factor of energy policy at national and international level. Energy security is of fundamental and increasing economic importance not only to individual economies but also to future relations between economies. It has become both a political and economic issue.

The International Energy Agency, World Bank and many other bodies expect global energy demand to increase by at least 60% over the next 20 years. Two-thirds of the increase in global energy demand will come from developing countries. The dominant factors behind this rising demand are sustained population increase in developing countries, urbanization and expected improved mobility etc. [7]

It is clear from the analysis of the global challenges in energy that world will consume energy two third more than today by 2030 and developing countries will cross the industrialized world in energy consumption. Oil, coal and gas will be the dominant sources of energy accounting for more than 90% of the projected demand [1]. Four main challenges will be faced by world's energy industry in the next few decades. These are: rising oil scarcity, achieving energy security, combating environmental degradation and meeting the growing needs of the developing countries.

Explaining the importance of oil and gas in the global energy demand, IAEE expresses that as coal is more polluted fuel and nuclear power is restricted due to safety and weapons proliferation, so oil and natural gas will have to satisfy the increasing world energy demand. [7]

Table-1 shows the shares of North America, Asia Pacific and the Middle East respectively in global oil; while Table-2 indicates the global proved reserves of oil and gas in 2002. It is evident that Middle East has the largest global proved reserves of oil (65.4%) and gas (36.0%), while Russia holds 30.5% of total gas reserves. This shows that the future energy security is dependent on the Middle East. In case, the situation is deteriorated there due to economic, physical, social or military disruptions, the energy security at national and international level will face a great risk in terms of physical shortages and/or price shocks, or a direct and an indirect impact, which may be for a short medium or long term.

**Table-1 Regional Share in Oil Consumption and Production by 2002**  
(Million barrels per day)

|              | Consumption     | Production      | Shortfall (-)<br>Surplus (+) |
|--------------|-----------------|-----------------|------------------------------|
| N America    | 23.5<br>(31.0%) | 14.2<br>(18.8%) | - 9.3                        |
| Asia Pacific | 21.4<br>(28.3%) | 7.3<br>(9.6%)   | -14.1                        |
| Middle East  | 4.3<br>(5.6%)   | 21.0<br>(27.7%) | +16.7                        |

Source: Tempest (2004)

**Table-2 Global Proved Reserves of Oil and Gas at End-2002**

*Oil: Thousand million barrals, Gas: thousand cubic ft.*

| Region             | Oil           | %           | Gas           | %           |
|--------------------|---------------|-------------|---------------|-------------|
| N. America         | 49.9          | 4.8         | 252.4         | 4.6         |
| Middle East        | 685.          | 65.4        | 1979.7        | 36.0        |
| Total FSU          | 77.8          | 7.4         | 1952.6        | 35.5        |
| Other – ROW        | 236.4         | 22.4        | 1316.8        | 23.9        |
| <b>Total World</b> | <b>1047.7</b> | <b>100%</b> | <b>5501.5</b> | <b>100%</b> |

Source: Tempest (2004)

Energy supply security and environmental policy are currently not integrated in most countries, despite possible synergies. [8] Linking climatic change policy with security of energy supply could improve environmental situation at both national and international level. Most of the measures to reduce import dependency are generally synergetic with environmental policy. On an international level, linkages between energy security and environmental policy may be possible via the sectoral bottom-up approaches or technology frameworks. In addition, inclusion of a security of supply measure in international emission trading instruments may provide possible benefits.

Regional integration is increasingly being perceived as a way for individual countries suffering from structural and economic weaknesses to join the global economy. In case of regional energy integration, it increases security of supply and accessibility, improving economic efficiency, enhances environmental quality and facilitates development of renewable energy resources.

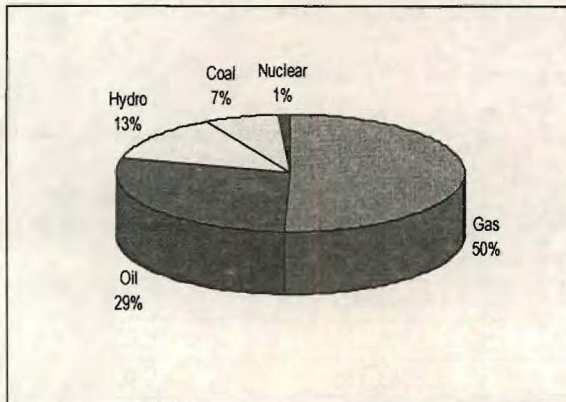
### **3. The Pakistan Energy Outlook**

#### **3.1 Energy Demand and Supply**

Pakistan energy sector consists of electricity, gas, petroleum and coal. According to Pakistan Economic Survey 2006-07, the primary commercial energy supplies for 2005-06 increased by 4.3 percent to 57.9 million tones of oil equivalent (MTOE) as compared to 55.5 (MTOE) in 2004-05. This growth in primary energy supply is quite low as compared to 9.2 percent and 8 percent in 2004-05 and 2003-04 respectively. [9], [10] The main factors behind the slower growth of primary energy supplies during 2005-06 are: (i) consumption of High Speed Diesel (HSD) in transport sector has decreased, and (ii) Pakistan Steel also reduces coal imports. Fig-1 shows that natural gas is now the leading source in primary energy supplies, which has reached to 50.4 percent in 2005-06 followed by oil (28.4 percent), hydro electricity (12.7 percent), coal (7.0 percent), and nuclear electricity (1.0 percent).



**Fig-1 Pakistan Primary Energy Supply 2005–2006**



**Source:** Hydrocarbon Development Institute of Pakistan

The level of primary consumption in Pakistan is very low. The per capita consumption of energy is 337 kilograms of oil equivalent (KGOE) in 2003–2004 which is very low as compared to the world average 1500 KGOE. In 2004–05, the primary commercial energy supply was 56.86 million tons of oil equivalent (MTOE) showing an increase of 8% as compared to 2003-04. Source wise shares of primary commercial energy supply for the year 2004–2005 are presented in Table-3.

**Table-3: Primary Energy Supply of Pakistan  
2004–2005 (MTOE)**

|         | Indigenous | Imported | Total     |
|---------|------------|----------|-----------|
| Oil     | 3.24       | 14.41    | 17.65     |
|         | (5.69%)    | (25.35%) | (31.04%)  |
| Gas     | 28.14      | 0.04     | 28.19     |
|         | (49.50%)   | (0.08%)  | (49.58%)  |
| Coal    | 2.05       | 2.18     | 4.23      |
|         | (3.61%)    | (3.83%)  | (7.44%)   |
| Hydro   | 6.13       |          | 6.13      |
|         | (10.78%)   |          | (10.78%)  |
| Nuclear | 0.67       |          | 0.67      |
|         | (1.17%)    |          | (1.17%)   |
| Total   | 40.23      | 16.63    | 56.86     |
|         | (70.75%)   | (29.25%) | (100.00%) |

**Source:** Pakistan Energy Year Book 2005

Pakistan imports about 29% of total primary commercial energy. Although Pakistan has a variety of energy resource, but Table-3 shows that 80 % of the energy supply is from oil and natural gas. The dependence on imported fuels especially on Petroleum is likely to increase, which will affect badly Pakistan's BOP. To avoid this negative impact, Pakistan should explore opportunities for regional cooperation and trade in energy to enable it fulfill the energy needs and keep up the pace of economic growth.

### **3.2 Primary Energy Supply and Per Capita Availability**

**Table-4: Primary Energy Supply and Per Capita Availability**

| <b>Year</b>    | <b>Energy Supply<br/>(MTOE)</b> | <b>Per Capita<br/>Availability (MTOE)</b> |
|----------------|---------------------------------|---|
| 1996-97        | 38.515                          | 0.295                                     |
| 1997-98        | 40.403                          | 0.305                                     |
| 1998-99        | 41.721                          | 0.313                                     |
| 1999-00        | 43.185                          | 0.317                                     |
| 2000-01        | 44.404                          | 0.319                                     |
| 2001-02        | 45.068                          | 0.315                                     |
| 2002-03        | 47.056                          | 0.324                                     |
| 2003-04        | 50.831                          | 0.341                                     |
| 2004-05        | 55.533                          | 0.363                                     |
| 2005-06        | 57.855                          | 0.372                                     |
| <b>Jul-Mar</b> |                                 |   |
| 2005-06        | 42.449                          | 0.274                                     |
| 2006-07        | 45.350                          | 0.288                                     |

Source: Hydrocarbon Development Institute of Pakistan

Table-4 displays the annual trends of primary energy supplies and their per capita availability from 1996-97 to 2006-07, which indicates that supply has increased by 50.2 percent and per capita availability by 26% in the last 10 years. The boost in primary energy supplies is primarily due to the government timely actions taken to give an investment-friendly atmosphere for the energy sector. The composition of energy supplies by various sources are presented in Table-5.



**Table-5 Composition of Energy Supplies**

| Year    | Crude Oil   |      | Gas     |      | Petroleum Products |       | Coal    |      | Electricity |     |
|---------|-------------|------|---------|------|--------------------|-------|---------|------|-------------|-----|
|         | Mil Barrels | % Δ  | (bcf)   | % Δ  | (Mln. T.)          | % Δ   | (Mln.T) | % Δ  | (000Kwh)    | % Δ |
| 1996-97 | 49.9        | -4.3 | 697.8   | 4.7  | 15.9               | -0.6  | 4.4     | -6.4 | 59.1        | 3.9 |
| 1997-98 | 50.4        | 1.2  | 700     | 0.3  | 16.9               | 6.3   | 4.1     | -6.8 | 62.1        | 5.1 |
| 1998-99 | 52.6        | 4.5  | 744.9   | 6.4  | 16.8               | -0.6  | 4.4     | 7.3  | 65.4        | 5.3 |
| 1999-00 | 53.3        | 1.3  | 818.3   | 9.9  | 17.9               | 6.5   | 4.1     | -6.8 | 65.7        | 0.5 |
| 2000-01 | 73.6        | 38   | 857.4   | 4.8  | 18.4               | 4.5   | 4.0     | -2.4 | 68.1        | 3.7 |
| 2001-02 | 75.1        | 2.0  | 923.8   | 7.7  | 18.0               | -1.6  | 4.4     | 10.0 | 72.4        | 6.3 |
| 2002-03 | 76.0        | 1.2  | 992.6   | 7.5  | 17.5               | -3.8  | 4.9     | 11.4 | 75.7        | 4.5 |
| 2003-04 | 80.3        | 5.7  | 1,202.7 | 21.2 | 14.9               | -14.9 | 6.0     | 22.4 | 80.8        | 6.8 |
| 2004-05 | 85.3        | 6.2  | 1,344.9 | 11.8 | 16.1               | 8.1   | 7.9     | 31.7 | 85.6        | 5.9 |
| 2006-07 | 87.5        | 2.6  | 1,400   | 4.1  | 16.5               | 2.5   | 7.7     | -2.5 | 93.6        | 9.3 |

Source: Hydrocarbon Development Institute of Pakistan

**Table-6 Annual Energy Consumption**

| Year          | Gas       |      | Petroleum Products |       | Coal      |       | Electricity |      |
|---------------|-----------|------|--------------------|-------|-----------|-------|-------------|------|
|               | (mmcft)   | % Δ  | (000 tones.)       | % Δ   | (000 M.T) | % Δ   | (Kwh)       | % Δ  |
| 1996-97       | 597,799   | 2.6  | 15,606             | 0.0   | 3,553     | -2.3  | 42,914      | 3.4  |
| 1997-98       | 607,890   | 1.7  | 16,624             | 6.5   | 3,159     | -11.1 | 44,572      | 3.9  |
| 1998-99       | 635,891   | 4.6  | 16,647             | 0.1   | 3,461     | 9.6   | 43,296      | -2.9 |
| 1999-00       | 712,101   | 12.0 | 17,768             | 6.7   | 3,168     | -8.5  | 45,586      | 5.3  |
| 2000-01       | 768,068   | 7.9  | 17,648             | -0.7  | 3,095     | -2.3  | 48,584      | 6.6  |
| 2001-02       | 824,604   | 7.4  | 16,960             | -3.9  | 3,492     | 12.8  | 50,622      | 4.2  |
| 2002-03       | 872,264   | 5.8  | 16,452             | -3.0  | 3,768     | 7.9   | 52,656      | 4.0  |
| 2003-04       | 1,051,418 | 20.5 | 13,421             | -18.4 | 5,284     | 40.2  | 57,491      | 9.2  |
| 2004-05       | 1,161,043 | 10.4 | 14,671             | 9.3   | 6,622     | 25.3  | 61,327      | 6.7  |
| 2006-07       | 1,223,385 | 5.4  | 14,627             | -0.3  | 7,714     | 16.5  | 67,603      | 10.2 |
| Avg. 10 years |           | 7.8  |                    | -0.4  |           | 8.8   |             | 5.1  |

**Source:** Hydrocarbon Development Institute of Pakistan



### 3.3 Energy Consumption

Table-6 shows the annual trend of energy consumption during 1996-97 to 2005-06, which indicates a structural change in consumption pattern in Pakistan. The consumption of petroleum products has decreased by an average rate of 0.4 percent per year while the consumption of gas, electricity and coal has increased by an average rate of 7.8 percent, 5.1 percent and 8.8 percent per year respectively. The decline in average consumption of petroleum products is due to a shift towards gas consumption in transport sector since 2000-01. The consumption of coal has also increased due to higher demand from bricks kilns industry.

#### 3.3.1 Oil and Petroleum Products

The annual growth in consumption of petroleum products by major sectors between 1996-97 to 2006-07 is given in Table-7, which shows that the transport sector was the largest user of petroleum products accounting for 50.7 percent of consumption on the average followed by the power sector (32.1 percent), industry (11.4 percent), other government (2.3 percent), households (2.2 percent) and agriculture (1.3 percent). [9]

Table-7 also indicates a decline of petroleum products consumption in household sector, industry, transport and other/government sector, mainly due to alternative and relatively cheaper fuels (natural gas and LPG) availability, the reduction in demand for furnace oil in industry, and low demand for JP-8 by defense. On the other hand, consumption in agriculture and power sectors increased due to higher demand coupled with non-availability of alternative cheaper source of energy.

**Table-7 Sector wise Petroleum Products Consumption (percentage)**

| Year        | House-holds | Industry | Agriculture | Transport | Power | Other Govt. |
|-------------|-------------|----------|-------------|-----------|-------|-------------|
| 1996-97     | 3.3         | 13.7     | 1.7         | 45.9      | 32.7  | 2.6         |
| 1997-98     | 3.0         | 12.5     | 1.5         | 44.3      | 36.4  | 2.3         |
| 1998-99     | 2.9         | 12.9     | 1.5         | 47.2      | 33.2  | 2.3         |
| 1999-00     | 2.7         | 11.9     | 1.6         | 46.8      | 35.0  | 1.9         |
| 2000-01     | 2.6         | 10.9     | 1.4         | 46.2      | 36.8  | 2.1         |
| 2001-02     | 2.0         | 9.5      | 1.3         | 47.3      | 37.2  | 2.7         |
| 2002-03     | 1.7         | 9.7      | 1.2         | 49.1      | 36.5  | 1.6         |
| 2003-04     | 1.7         | 11.12    | 1.4         | 63.1      | 20.4  | 2.3         |
| 2004-05     | 1.3         | 10.5     | 1.0         | 61.5      | 23.5  | 2.2         |
| 2005-06     | 0.9         | 11.5     | 0.6         | 55.8      | 28.8  | 2.5         |
| Avg10 years | 2.2         | 11.4     | 1.3         | 50.7      | 32.1  | 2.3         |

Source: Hydrocarbon Development Institute of Pakistan

#### 3.3.2 Natural Gas

Pakistan is among the few countries who have developed a good infrastructure for transporting, distributing and utilization of natural gas. Table-8 provides the annual change in the consumption of gas by various users between 1996-97—2006-07. It

shows that the Power sector is the largest consumer of gas (36.4 percent), followed by fertilizer (21.6 percent), industries (19.1 percent) households (17.8 percent), commercial (2.7 percent), cement (1.1 percent) and transport sector (1.0 percent). [9] The increase in gas demand in transport sector is due to the gradual reduction of its dependency on imported fuel as the prices of oil was increasing and cheaper fuel in the shape of CNG was available.

**Table-8 Sector wise Gas Consumption** (percentage)

| Year       | House-holds | Comm-ercial | Cement     | Ferti-lizer | Power       | Indus-trial | Transport CNG |
|------------|-------------|-------------|------------|-------------|-------------|-------------|---------------|
| 1996-97    | 19.3        | 3.1         | 1.5        | 25.2        | 32.4        | 18.4        | 0.1           |
| 1997-98    | 22.1        | 3.1         | 2.0        | 24.3        | 29.4        | 18.9        | 0.1           |
| 1998-99    | 20.7        | 3.4         | 1.3        | 26.3        | 28.9        | 19.1        | 0.3           |
| 1999-00    | 19.6        | 3.0         | 1.2        | 24.8        | 32.2        | 18.9        | 0.3           |
| 2000-01    | 18.2        | 2.7         | 0.9        | 22.6        | 37.0        | 17.8        | 0.6           |
| 2001-02    | 17.5        | 2.7         | 0.9        | 21.6        | 38.2        | 18.5        | 0.9           |
| 2002-03    | 17.6        | 2.6         | 0.4        | 20.7        | 38.5        | 18.9        | 1.3           |
| 2003-04    | 14.8        | 2.3         | 0.7        | 17.6        | 44.7        | 18.4        | 1.5           |
| 2004-05    | 14.8        | 2.3         | 1.2        | 16.4        | 43.7        | 19.5        | 2.1           |
| 2005-06    | 13.9        | 2.4         | 1.2        | 16.2        | 40.2        | 22.8        | 3.2           |
| <b>AVG</b> | <b>17.8</b> | <b>2.7</b>  | <b>1.1</b> | <b>21.6</b> | <b>36.4</b> | <b>19.1</b> | <b>1.0</b>    |
|            |             |             |            |             |             |             |               |

Source: Hydrocarbon Development Institute of Pakistan

**Table-9 Sector wise Electricity Consumption** (Percentage)

| Year       | House-Holds | Commercial | Industrial  | Agri-culture | Street Light | Other Govt. |
|------------|-------------|------------|-------------|--------------|--------------|-------------|
| 1996-97    | 41.4        | 5.2        | 27.9        | 16.5         | 0.9          | 8.0         |
| 1997-98    | 42.1        | 5.2        | 27.6        | 15.5         | 0.9          | 8.7         |
| 1998-99    | 44.8        | 5.5        | 27.9        | 12.9         | 0.5          | 8.3         |
| 1999-00    | 47.1        | 5.6        | 28.9        | 9.9          | 0.5          | 7.9         |
| 2000-01    | 46.9        | 5.7        | 29.5        | 10.1         | 0.4          | 7.3         |
| 2001-02    | 45.9        | 5.8        | 29.9        | 11.1         | 0.4          | 6.9         |
| 2002-03    | 44.9        | 6.1        | 30.7        | 11.4         | 0.5          | 6.4         |
| 2003-04    | 45.0        | 6.4        | 30.2        | 11.6         | 0.5          | 6.4         |
| 2004-05    | 45.0        | 6.0        | 31.3        | 14.4         | 0.5          | 6.1         |
| 2005-06    | 45.4        | 7.0        | 29.3        | 11.8         | 0.5          | 6.0         |
| <b>AVG</b> | <b>44.8</b> | <b>5.9</b> | <b>29.4</b> | <b>12.2</b>  | <b>0.6</b>   | <b>7.2</b>  |

Source: Hydrocarbon Development Institute of Pakistan



### **3.3.3 Electricity**

The electricity consumption in Pakistan from 1996-97 to 2005-06 is shown in Table-9, which indicates that, on average, the household sector is consuming 44.8 percent of total electricity supply followed by industry (29.4 percent), agriculture (12.2 percent), other government sector (7.2 percent), commercial sector (5.9 percent), and street lights (0.6 percent). [9] A significant increase in the consumption of electricity has been observed during the last decade due to rapid industrialization and increasing use of modern households' equipments. [11]

## **4. Energy Security**

As already noted, energy security in simple words means un-interrupted energy supply. From economic point of view, it refers to the provision of reliable and adequate supply of energy at reasonable prices in order to sustain economic growth. If energy supply is a pre-requisite for sustainable development, these two conditions should be fulfilled over the long term. The energy supply may possibly become more at risk in the near future due to the increasing global dependence on imported oil. The potential for conflict, sabotage, disruption of trade and reduction in strategic reserves are the main threats that make it essential to adopt effective measures at global, national and regional level for energy security.

There is an urgent need for energy security in Pakistan due to the increasing demand and there is substantial societal and political pressure to ensure reliable and sustainable energy supplies at reasonable prices.. [12] Energy security is an irrefutable reality for crucial economic development throughout South Asia as well as Pakistan. In this context a regional approach may support a more complete, cost-effective, and sustainable set of results to the questions of energy security.

Keeping in view the prevailing situation in Pakistan, it is appropriate to analyze the questions as to how the country will satisfy its future energy demand and to deal with its energy deficit? There are several options that need different investment requirements. Some of the options are:

1. Utilization and exploration of domestic fossil-fuel reserves
2. Energy conservation and energy efficiency
3. The use of alternative energy sources (Biomass, solar, wind etc.)

### **4.1 Pakistan Energy Resources**

Pakistan potential energy resources are shown in Table-10, which reveals that despite a huge potential in energy resources, most of these resources are not exploited so far. Statistics show that only about 2% of coal, 3% of oil, 16% of gas, and 14% of hydro have so far been proven. [12] If these alone are to meet up the total commercial energy demand of the country, they will be depleted within next 20-25 years.

Pakistan has an identified hydro-power potential of more than 46,000 MW of which 6,500 MW has by now been developed. There will be significant problems in additional generation of hydro-power due to the high construction cost of new dams at remote sites, accompanied by huge additional investment in transmission lines and associated

losses. It is therefore necessary for the future energy sector development to formulate policies that will support the earliest and steady exploitation of these resources.

**Table-10: Pakistan Energy Resource Potential**

|                    | Oil<br>(Mil bbl) | Gas <sup>3</sup><br>(Bil m ) | Coal<br>(MilTons) | Hydroelectric<br>Power (MW) |
|--------------------|------------------|------------------------------|-------------------|-----------------------------|
| Resource potential | 27,000           | 7,985                        | 185,000           | >46,000                     |
| Proven reserves    | 801              | 1,284                        | 3,300             | 6,500                       |
| Produced so far    | 511              | 488                          | ~ 200             | -                           |
| Remaining reserves | 290              | 795                          | 3,100             | -                           |
| Annual production  | 23               | 34                           | 3.3               | -                           |
| R/P ratio (years)  | 13               | 23                           | 939               | -                           |

**Source:** SARI/Energy (2005)

A better use of domestic renewable resources will facilitate Pakistan to diversify energy mix that will reduce the country's dependence on any single source, specially imported fossil fuels. This will also help to avoid supply disruptions and price fluctuation risks. National Energy Security Action Plan for energy mix projections and power sector is given in Table-11 and Table-12 respectively.



**Table-11: National Energy Security Action Plan: Energy Mix Projections**

|                     | 2004        |       | Short Term<br>2010 |       | Medium Term   |       |               |       | Long Term     |       |               |        |
|---------------------|-------------|-------|--------------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|--------|
|                     |             |       |                    |       | 2015          |       | 2020          |       | 2025          |       | 2030          |        |
| <b>Total (mtoe)</b> | <b>50.8</b> |       | <b>79.39</b>       |       | <b>120.18</b> |       | <b>177.35</b> |       | <b>255.37</b> |       | <b>361.31</b> |        |
| Oil                 | 15.20       | 30.0% | 20.69              | 26.0% | 32.51         | 27.0% | 45.47         | 25.7% | 57.93         | 22.7% | 66.84         | 18.5%  |
| Natural Gas         | 25.45       | 50.0% | 38.99              | 49.0% | 52.98         | 44.0% | 77.85         | 44.0% | 114.84        | 45.0% | 162.58        | 45.0%  |
| Coal                | 3.30        | 6.50% | 7.16               | 9.00% | 14.45         | 12.0% | 24.77         | 14.0% | 38.28         | 15.0% | 68.65         | 19.0%  |
| Hydro               | 6.43        | 12.7% | 11.03              | 13.9% | 16.40         | 13.6% | 21.44         | 12.1% | 30.50         | 12.0% | 38.93         | 10.8%  |
| Renewables          | 0           | 0.00% | 0.84               | 1.10% | 1.60          | 1.30% | 3.00          | 1.70% | 5.58          | 2.20% | 9.20          | 2.5.0% |
| Nuclear             | 0.42        | 0.80% | 0.69               | 0.90% | 2.23          | 1.90% | 4.81          | 2.70% | 8.24          | 3.20% | 15.11         | 4.20%  |

Source: Planning Commission, Govt. of Pakistan

**Table-12: National Energy Security Action Plan for Power Sector (MW)**

|        | Nuclear | Hydel | Coal  | Renewable | Oil  | Gas   | Total  | Cumulative |
|--------|---------|-------|-------|-----------|------|-------|--------|------------|
| (2005) | 400     | 6460  | 160   | 180       | 6400 | 5940  | 19540  |            |
| 2010   | -       | 1260  | 900   | 700       | 160  | 4860  | 7880   | 27420      |
| 2015   | 900     | 7570  | 3000  | 800       | 300  | 7550  | 20120  | 47540      |
| 2020   | 1500    | 4700  | 4200  | 1470      | 300  | 12560 | 24730  | 72270      |
| 2025   | 2000    | 5600  | 5400  | 2700      | 300  | 22490 | 38490  | 110760     |
| 2030   | 4000    | 7070  | 6250  | 3850      | 300  | 30360 | 51830  | 162590     |
| Total  | 8800    | 32660 | 19910 | 9700      | 7760 | 83760 | 162590 |            |

Source: Planning Commission, Govt. of Pakistan

#### **4.1.1 Oil and Gas**

The resource potential of oil and gas in Pakistan, based on volumetric yield method, has been estimated as 3,622 MTOE (27000 million barrels) and 6,850 MTOE (7985 billion m<sup>3</sup>) respectively. This oil and gas resource potential is 0.75 percent and 1.79 percent respectively of the world resource potential. Table-10 also shows that 3 percent of the estimated oil and 15 percent of gas potential resources have been discovered so far in Pakistan. There is a need for more exploration of oil and gas resources in Pakistan. Despite the potential, most of the oil needs will be met from imports in the years to come and the domestic natural gas supplies may not be sufficient to meet the rising demand.

#### **4.1.2 Coal**

The coal resources of Pakistan are estimated at 185,000 million tons (82,7000 MTOE, 2 percent of the world coal resources). Table-10 shows that coal in Pakistan is of lignite rank, having high moisture content and low heating value.

Pakistan has sufficient coal resources and if it produces 100,000 MWs of power from coal for the next 100 years, the amount of coal consumed for this production will be only about a quarter of deposits in the country. If only this source is exploited properly, it would guarantee energy security for the country which no other option can. The raw material is available and the technology is simple. It is economical, flexible, non-controversial and a vital source for power generation in Pakistan. [13], [14]

#### **4.1.3 Nuclear Power**

Pakistan has another important source of energy in the form of Nuclear power. The Energy Security Plan expects that 8,800 MW of power will be generated by 2030 from this source. Table-12 indicates that at 85 percent capacity factor, the demand for natural uranium will be 1,600 tones per year in 2030.

#### **4.1.4 Hydropower**

Pakistan's identified hydro power potential is 46,000 MW (MTDF 2005-10), out of which only 14 per cent (6,500 MW) has been proven so far Table-10. As hydro power



is one of the major energy supply options in Pakistan for ensuring the energy security of the country, therefore, the development of hydro resources on a large scale through storage and run -of-the-river projects are already in process. [15]

Small hydro projects have a significant contribution to the national energy supply. Some 300 micro and mini hydroelectric plants are supplying electricity to areas that are not connected with the national grid. The potential for further development of such hydro projects would be fully utilized by 2030.

**Table-13 Hydro Power Projects**

| Project         | Location | Live Storage (MAF) | Capacity (Mw) | Energy (Gwh) | Year of Completion |
|-----------------|----------|--------------------|---------------|--------------|--------------------|
| DiamerBasha Dam | NWFP/NA  | 6.3                | 4500          | 16700        | 2015-16            |
| Kala Bagh       | Punjab   | 6.1                | 3600          | 14400        | 2015-16            |
| Munda           | NWFP     | 0.7                | 660           | 2699         | 2012-13            |
| Akhori          | Punjab   | 7.0                | 600           | 2189         | 2016-17            |
| Kurram Tangi    | NWFP     | 0.6                | 83            | 383          | 2010-11            |
| <b>Total</b>    |          | <b>20.7</b>        | <b>9443</b>   | <b>36371</b> | <b>2016-17</b>     |

Source: The Water and Power Development Authority (WAPDA)

### **5. Alternative Energy Resources**

The share of alternative resources in the overall energy mix in Pakistan is so far insignificant; however, the first wind farms are in the implementation phase. At least 5 per cent of the total electricity generating capacity of the country (i.e. 9,700 MW) is the target of the Alternate Energy Development Board to be based on these sources by the year 2030. We discuss these sources briefly.

#### **5.1 Wind Energy**

There are some excellent sites in Pakistan where wind energy can be exploited. These sites contain a section of the coastal area of Sindh that has been identified as having potential of 50,000 MW. The annual average wind speed, at 50m height, at Gharo, Mirpursakro and Talhar sites in Sindh is 6.5 m/s and the capacity factors for wind turbines at these sites are estimated to be in the range of 23-28 per cent. [16]

#### **5.2 Solar Energy**

Up to now, Pakistan did not exploit its solar potential to save its conventional energy inspite of the fact that its central and southern parts can be used for solar thermal power plants, which can be utilized for water / home heating in the north where gas is currently used for the purpose. The solar potential can be gauged from Jacobabad in

southern Pakistan, which is an excellent location for solar energy. It receives 2,142 kWh of solar radiation /m<sup>2</sup>/year, which works out at 230KWh /m<sup>2</sup>/year. [16], [17]

### **5.3 Bio Fuels**

Pakistan has a huge potential for bio fuels and has already started work on bio-ethanol (sugar-ethanol) and the cellulose biomass – bacteria route. The cellulose biomass will be materialized in the long run as a large amount of marginalized and degraded 'salinised' land can be used to grow grasses which can provide cellulose for conversion. [16]

### **5.4 Alternative Options for Energy Security**

Besides the increased exploration of fossil fuels in Pakistan, other options are also available. Pakistan will also require working on alternative way to improve stability of supplies and pricing in the region.

- Diversification of the energy mix, by expanding the share of coal, nuclear and renewable energy.
- Increase in the strategic reserves from 29 days of demand or less to close to the United States' 60-day supply by 2015 and Europe's 90 days by 2030. This will give safety against price volatility caused by supply disruption
- Improved and expanded oil-gas distribution networks, both within the country and internationally.

## **6. Regional Energy Security**

Co-operation in the field of energy among countries can go a long way towards improving access to energy, contributing to economic growth and balancing the regional demand and supply in various energy sources. Regional integration is increasingly being perceived as a way for individual countries suffering from structural and economic weaknesses to join the global economy. In case of regional energy integration, it increases security of supply and accessibility, improving economic efficiency, enhances environmental quality and facilitates development of renewable energy resources. [18]

Pakistan aims to develop regional cooperation to increase its own energy security as well as that of other South Asian countries. Pakistan has a unique geographic and strategic location in Asia. Owing to its strategic location and the strength of its well-developed energy sector, Pakistan can serve as an important transit country for regional energy cooperation. [19] In addition, it can also benefit from mutually rewarding bilateral energy cooperation with neighboring countries that may cover trading, technology transfer, and project development.

Some elements of regional cooperation in the energy sector in South Asia could include:

- Cooperation in power sector
- Cooperation in fuel sector



- Trans boundary Natural Gas trade
- Trade in refined petroleum products
- Cooperation in oil and gas exploration and development
- Cooperation in natural gas vehicle (NGV) developments
- Cooperation in coal development
- Cooperation in renewable energy sector

Short & medium and long run options and strategies for a developing country in terms of cross-sectoral impact of energy conservation and efficiency and policy interventions to improve energy security are given in Table-14, and Table 15 respectively [20]

**Table-14: Cross-Sectoral Impact of Energy Conservation and Efficiency**

| Sector                         | Energy Conservation and Efficiency  |
|--------------------------------|---|
| <b>Poverty Alleviation</b>     | (a) Through Energy Conservation rural energy needs can be fulfilled and also help in poverty alleviation.<br>(b) Energy Conservation can help in managing rural energy transitions.<br>(c) Energy efficiency can increase energy technology absorption capabilities and ensure sustainability of existing resources.                                  |
| <b>Sustainable Development</b> | (a) Energy conservation measures can increase resource productivity.<br>(b) Energy conservation can meet the challenge of rising level of consumption without putting additional burden on the conventional sources of energy, and contribute to sustainable development.   |
| <b>Environment</b>             | a. Conservation of convention energy resources lead to local and global emission abatement.<br>a. Energy Efficient practices provide principal inputs to clean production.<br>a. Energy Conservation projects provides a major avenue to attract climate control and CDM finding.<br>a. Energy efficiency pursuits contribute to meeting MDG's goals. |
| <b>Economic Self Reliance</b>  | (a) The introduction of Energy Conservation as a cost-effective energy supply option is simple economic sense.<br>(b) Energy Conservation will save foreign exchange and a means to achieve energy autarky.<br>(c) Energy Conservation is a way to increase the life of fast-depleting oil and gas reserves.  |

**Source:** The National Energy Conservation Policy (ENERCON)

**Table-15: Policy Interventions**

| Short and Medium Term  | Long-term   |
|--|---|
| (a) Legislation and Regulatory Framework.<br>(b) Public Awareness, Training and Education.<br>(c) Institutional Strengthening/Capacity Building.<br>(d) Public-Private-Civil Society Partnership<br>(e) Promoting recognizing energy conservation as an 'Industry'.<br>(f) Energy conservation plans by large energy consuming entities. | (a) Integrating Energy Conservation into National Energy Policies.<br>(b) Financial and Fiscal Incentives.<br>(c) Energy Services Companies |

**Source:** The National Energy Conservation Policy (ENERCON)

## **7. Conclusion**

The energy resources are sufficient to meet the world demand for next 20-to 25 years, however the cost of extraction and delivery to consumers is a matter of real concern. So many of the world's poorest people will still be needy for modern energy services. That's why energy security, particularly that of oil supply, has become a key political and economic issue in recent years. Energy security for a developing country is a medium to reduce poverty, increase productivity and incomes; improve public health and enable masses to get higher education, and help them connect to the global market.

Pakistan is a energy deficient country heavily dependent on import of fossil fuels and this trend is likely to continue for long. In view of the present energy situation and projected demands for energy, it is unlikely that there will be any significant change in the commercial energy supply situation. By using energy-efficiency and conservation measures, energy security could also be improved. Without alternative energy sources and proper conservation measures, Pakistan will become more and more dependent on the import of fossil fuels.

Regional integration is increasingly being perceived as a ray of hope for individual countries suffering from structural and economic weaknesses to join the global economy. Pakistan has a unique geographic and strategic location in Asia. Owing to its strategic and well-developed energy sector, Pakistan can serve as an important transit country for regional energy cooperation. In case some integration materializes, it will increase security of supply and accessibility. It will improve economic efficiency, enhance environmental quality and facilitate development of renewable energy resources.



## References

IEA, 2004. World Energy Outlook 2004. IEA/OECD, Paris.

Saghir, Jamal (2006), World Bank Perspective on Global Energy Security, G8 Energy Ministerial Meeting, March 16, 2006 Moscow.

IEA (2001), Oil Supply Security: The Emergency Response of IEA Countries in 2000. International Energy Agency, Paris.

European Commission (2001), Green Paper: Towards a European Strategy for the Security of Energy Supply.  
[http://europa.eu.int/comm/energy\\_transport/en/lpi\\_en.html](http://europa.eu.int/comm/energy_transport/en/lpi_en.html)

Kendell J.M. (1998), Measures of Oil Import Dependence, EIA-DOE.

von Hirschhausen C., Neumann A. (2003), Security of 'Gas' Supply: Conceptual Issues, Contractual Arrangements, and the Current EU Situation, paper at INDES Workshop on Insuring against Disruptions of Energy Supply, Amsterdam 6-7 May, 2003.

Tempest, P. (2004), Energy Security in an Insecure World, IAEE News Letter 1<sup>st</sup> Quarter 2004, pp. 19-20.

Egging, R. and F. van Oostvoorn (2004): Energy security and climate change. In: *Beyond Climate. Options for Broadening Climate Policy*. RIVM report 500019001/2004.

Pakistan Energy Yearbook 1995 to 2005, Hydrocarbon Development Institute of Pakistan, Islamabad.

Pakistan Economic Survey 2006-07, Ministry of Finance, Government of Pakistan, Islamabad.

Muneer, T. and M. Asif (2007), Prospects for secure and sustainable electricity supply for Pakistan, Renewable and Sustainable Energy Reviews 11 (4): 654-671.

Raza, H. A. (2005a), Energy Security for South Asia- *Pakistan-Country Report*, South Asia Initiative for Energy (SARI/Energy).

Shah, Syed Mohibullah (2006) "Search for energy security", The DAWN (Lahore)-Opinion; May 12, 2006.

IEA (2004), The Potential of Coal Use in Pakistan, April 2004, IEA Clean Coal Centre, London.

Pakistan Hydro Potential, 2004, PPiB, Ministry of Water and Power, Government of Pakistan, Islamabad.

Planning Commission (2007), "Pakistan in the 21st Century: Vision 2030", Government of Pakistan, August 2007.

*Energy Security and the Developing Country: Issues, Strategies and Options*

Mirza, U. K., M. M. Maroto-Valer and Nasir Ahmad (2003), Status and outlook of solar energy use in Pakistan, *Renewable and Sustainable Energy Reviews* 7 : 501–514.

Raza, H. A. (2005b), Co-Operation Fuels Development, *The World Energy Book* (1):18-19.

Pakistan Country Study on Regional Cooperation in the Energy Sector in South Asia, June 2003, CPD-CASAC Research Program, Dhaka.

National Energy Conservation Center, 'The National Energy Conservation Policy 2006', Govt. of Pakistan.



## **Services-led Growth and Industrial Policy: Lessons for Pakistan**

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**Abstract:** *The emphasis on industry-led economic growth and development policy under both mercantilist and export-oriented approach has earned little success in developing countries like Pakistan. This is due to the lack of R&D base and capital. The approach is highly intensive in both of these factors. Services sector today contributes more than 50 percent and 44 percent respectively towards Pakistan's GDP and employment. The inter-sectoral linkages of services with industry imply strong existing and potential spillover effects for value added activities in these sectors. This paper examines the potential of services-led industrial, trade and growth policy for Pakistan. This may help Pakistan to achieve the objectives of value addition and diversification of production, competitiveness, employment, poverty alleviation, sustainable economic growth and development, and stability of external accounts.*

### **1. Introduction**

The recent structural shift of global economy from manufacturing to services sector, coupled with the pressure on economies to liberalize their services trade under General Agreement on Trade in Services (GATS), has brought the theorist and policy makers to suggest theoretical models and devise appropriate policies to align their services-dominated economies with their industry, trade, and economic growth objectives. The issue is more distinct for such services-dominated developing countries. The emphasis on industry-led growth and development policy under both mercantilist and export-oriented approach has earned little success in developing countries since the approach is highly intensive in R&D base and capital stock. This approach has also failed to contribute significantly towards employment, value-added exports growth, and poverty alleviation. Services today contribute more than 50 percent towards Pakistan's GDP and 44 percent towards employment.

The inter-sectoral linkages of services with agriculture and industry imply strong existing and potential spillover effects for value added activities in these sectors. The absence of appropriate policy for competitiveness and growth of this huge sector also poses serious threats to economic growth, employment, and external account balances in the wake of GATS-led liberalization.

In this paper, we have examined the potential of services-led industrial, trade and growth policy in the Pakistan's context. In order to achieve the objectives of value

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addition and diversification in production, competitiveness, employment, stability of external accounts, poverty alleviation, sustainable economic growth and development etc., a reconsideration of pros and cons of every policy is essential. The study seeks to elaborate the implications of services-led policies in Pakistan for achieving the above mentioned objectives while simultaneously maintaining the focus on value added activities in manufacturing. The proposed alignments in the overall economic growth and policies (i.e. development, industrial, and trade etc...) in line with global trends towards services and its structural dynamics have been reviewed.

The paper is composed as follows: section-II explains global trends towards services growth: evidences from Pakistan's economy; section-III reviews the Pakistan's economic growth and industrial policies; section IV discusses services-led industrial, trade and growth policy in domestic potential capitalisation context; section-V describes the conclusion followed by limitations and future directions.

## **2. Global Trends Towards Services Growth – Evidences from Pakistan's Economy**

### ***2.1 Services Sector: Distinct Character and Global Trends***

The last two decades have witnessed services sector as the largest and fastly growing component in the global economy. It has provided more than 60 percent of the global output and, in many countries, even larger share of employment (Banga, 2005). The top 50 Multinational Enterprises (MNEs) ranked by Fortune 500 during 2006 were in financial services sector. A decade ago, the manufacturing MNEs were placed at the same place. The declining share of manufacturing paralleled with rising contribution of services in the developed economies has transformed them into what is termed as 'post-industrial economies'.

According to World Investment Report 2004, the flows of Foreign Direct Investment (FDI) into services sector are much higher than in manufacturing sector pushing the stock of FDI in services. The significance of services in MNEs activities is also evident by the expression of MNEs as the exporters of knowledge-intensive intangible assets (Markusen, 2004). The picture for the developing countries varies across the group. ASEAN 4 and China today have manufacturing as the largest portion of the economy, however, the other developing countries in Asia like Singapore, India, Sri Lanka, Bangladesh and Pakistan have more than 50 percent of their output contributed by services sector (Sudha, 2007; Roach, 2004).

Services are distinct from the commodity producing sector in a number of ways: heterogeneity of output; inseparability of production and consumption; lack of ownership; and intangibility etc. The detailed characteristics and differentiating features of services and their implications for business strategies are frequently discussed in the marketing literature (Shostack, 1987; Berry, 1980; Cowell, 1984; Rathmell, 1966; Kotler, 2005). The economic differences between the two sectors exist in terms of skilled-labor intensity; high knowledge-intensity; and high employment elasticity of economic growth. Another differentiating feature is asset specificity of



services, which requires the movement of some factors of production during trade activities as against trade in goods. Aiming at employment and economic growth with lack of capital and R&D facilities, which are the key for manufacturing value added; these features of services make this sector suitable for developing economies.

The key to value addition in services is knowledge management, which implies investment in human capital like education, health, training and development. Another issue in services versus goods is the line of demarcation between them. Very few products can be classified as pure goods and very few services are without goods component. In reality services consume a lot of manufactured goods for their successful execution<sup>1</sup>. The Molecular Model (Shostack, 1977) is considered classic in differentiating the services entities from manufacturing ones. Services are classified by WTO under the GATS into 12 areas with 161 sub-sectors according to four modes of service delivery: cross border supply; consumption abroad; commercial presence; and presence of natural persons. The United Nations' International Standard Industrial Classification (ISIC) has defined well elaborated classification for the services as well.

## **2.2 Services Sector in Pakistan**

The pattern of Pakistan's economic growth and structural transformation is somewhat controversial in the light of the conventional logic of economic development which explains growth in sequence from agriculture to manufacturing to services. This sequence is observed by the development evidence of countries like USA, EU. These countries, after transformation from primary sectors to manufacturing, are now experiencing a rise in services sector parallel with the declining share of manufacturing. On the other hand, Pakistan has witnessed the declining share of agriculture from over 50 percent in 1950s to less than a quarter in 2007, being eroded by a buoyant services sector with contribution to the national accounts at around 54 percent in 2006-07. This pattern is also shared by a number of developing economies such as India, Sri Lanka, Bangladesh, Singapore, Indonesia and many Latin American and African economies. It is in sharp contrast to other developing countries in Asia like ASEAN 4 and China, which maintain largest contribution of industrial sectors to their national output and economic growth. These contrasting scenarios of countries like Pakistan demand a different approach towards their economic management policies in order to capitalize over their varied economic structure.

India has done quite well in this direction by aligning her growth and industrialization policies with the services sector (Kojima, 2007; Sing, 2006; Banga, 2005; Banga, 2004; Nath, 2007). In Pakistan, the services sector is still unable to get the deserved space in economic decision making as there is no well planned policy available for this sector. *The rapidly changing boundaries between services and industry, and out-dated, ambiguous services classification* is another confusion found in the literature while collecting and analyzing data related to services sector (Burki and Hussain, 2007).

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<sup>1</sup> Like equipments, tools, furnishings etc. and manufacturing goods also accompany a lot of services in their final form to the customers like advertising, warehousing, transportation, retailing etc.

On the theoretical side, with the exception of India, again the industry and agriculture sectors have been the focus of research of various policy-research institutions. Only few studies which emphasize the role of services in economic growth, industrialization and competitiveness are available to researchers in developing countries including Pakistan (Haque, 2006). In contrast, the Indian researchers observing the phenomenon of services growth and its contribution in the economy have made it the topic of their research and policy suggestions at very early stages of accelerated growth in 1990s (Kojima, 2007; Sing, 2006; Banga, 2005; Banga, 2004). It is partly because of the output structures of the ASEAN 4 and China that are characterized by huge growth of industrial sector. In case of India, Pakistan, Singapore, Sirilanka, the services sector took the lead in growth process in 1990s (Venu Menon, 2007).

The services sector, which contributes 53.3 percent to GDP in 2006-07, has recorded the highest growth in the last two decades because of rapid expansion in the financial sector, wholesale and retail trade, and telecom services. Table 1 below identifies the major services sub-sectors with their contribution to the national output over the last seven years in comparison with 1969-70 position.



**Table 1: Sectoral Composition of GDP in Pakistan**

*(At constant factor cost (% of GDP))*

|                                   | 1969-70 | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 |
|-----------------------------------|---------|---------|---------|---------|---------|---------|---------|
| Commodity Producing Sector        | 61.6    | 47.9    | 47.6    | 48.4    | 48.7    | 47.2    | 46.7    |
| 1. Agriculture                    | 38.9    | 24.1    | 24      | 22.9    | 22.4    | 21.3    | 20.9    |
| - Major crops                     | 23.4    | 8       | 8.2     | 7.8     | 8.4     | 7.5     | 7.6     |
| - Minor Crops                     | 4.2     | 3.1     | 3       | 2.9     | 2.7     | 2.6     | 2.4     |
| - Livestock                       | 10.6    | 12      | 11.7    | 11.2    | 10.6    | 10.6    | 10.4    |
| - Fishing                         | 0.5     | 0.3     | 0.3     | 0.3     | 0.3     | 0.3     | 0.3     |
| - Forestry                        | 0.1     | 0.7     | 0.7     | 0.6     | 0.4     | 0.2     | 0.2     |
| 2. Mining & Quarrying             | 0.5     | 2.4     | 2.5     | 2.6     | 2.7     | 2.6     | 2.6     |
| 3. Manufacturing                  | 16      | 15.9    | 16.3    | 17.3    | 18.3    | 18.9    | 19.1    |
| - Large Scale                     | 12.5    | 10.4    | 10.6    | 11.7    | 12.9    | 13.4    | 13.6    |
| - Small Scale                     | 3.5     | 5.6     | 5.6     | 5.6     | 5.4     | 5.5     | 5.6     |
| 4. Construction                   | 4.2     | 2.4     | 2.4     | 2       | 2.1     | 2.1     | 2.3     |
| 5. Electricity & Gas Distribution | 2       | 3       | 2.5     | 3.7     | 3.2     | 2.3     | 1.8     |
| Services sector                   | 38.4    | 52.1    | 52.3    | 51.5    | 51.4    | 52.8    | 53.3    |
| 6. Transport Storage and          | 6.3     | 11.4    | 11.4    | 10.9    | 10.4    | 10.4    | 10.3    |
| 7. Wholesale and Retail Trade     | 13.8    | 17.8    | 18      | 18.2    | 18.7    | 19.1    | 19.1    |
| 8. Finance and in                 | 1.8     | 3.5     | 3.3     | 3.4     | 4       | 5       | 5.6     |
| 9. Ownership of Dwellings         | 3.4     | 3.2     | 3.1     | 3       | 2.9     | 2.8     | 2.7     |
| 10. Public Admn. & Defence        | 6.4     | 6.4     | 6.6     | 6.3     | 5.9     | 6       | 6       |
| 11. Other Services                | 6.7     | 9.8     | 9.9     | 9.7     | 9.5     | 9.5     | 9.6     |
| 12. GDP (Constant Factor Cost)    | 100.0   | 100.0   | 100.0   | 100.0   | 100.0   | 100.0   | 100.0   |

*Source: Economic Affairs Wing, Finance Division*

The role of services sector during last decade expresses its existing and potential contribution in the economic growth and development process (Table 2). Services sector continues to be the major driving force in its contribution to economic growth. The commodity producing sectors (i.e. agriculture and industry) have contributed two-fifth and the service sector contributed the remaining three-fifth to the real GDP growth during 2006-07. The CPS contributed 30.2 percent to GDP or 2.9 percentage points to growth rate of GDP this year while the remaining 59.8 percent or 4.2 percentage point contribution came from services sector.

**Table 2: Sectoral Contribution to the GDP Growth (In % points)**

| Sector           | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 |
|------------------|---------|---------|---------|---------|---------|
| Agriculture      | 1.0     | 0.6     | 1.5     | 0.4     | 1.1     |
| Industry Overall | 1.0     | 3.8     | 3.1     | 1.3     | 1.8     |
| Manufacturing    | 1.1     | 2.3     | 2.7     | 1.8     | 1.6     |
| Services         | 2.7     | 3.1     | 4.4     | 4.9     | 4.2     |
| Real GDP (FC)    | 4.7     | 7.5     | 9.0     | 5.8     | 6.8     |

*Source: Economic Survey of Pakistan 2006-07*

## **2.2 Inter-Sectoral Linkages of the Services sector**

The report of the working group on services for Medium Term Development Framework (MTDF 2005-10) developed by the Planning Commission of Pakistan classifies the services sub-sectors into 11 categories. It documents information related to the inter-sectoral linkages between services and other sectors of the economy. The services sector has strong linkages with other major sectors of the economy, in particular with sale and purchase of primary commodities and manufactured goods.

According to MTDF 2005-10, the salient features of inter-sectoral backward and forward linkages are:

- i. Of the non-factor input, used by the services sectors, 61.1 percent were purchased from commodity producing sectors, suggesting strong backward linkages of services with commodity producing sectors.
- ii. Of the total purchases from the commodity sectors, 73.9 percent were purchased from manufacturing sector, followed by 14.6 percent from construction, 7.7 percent from electricity and gas sectors and 3.3 percent from agriculture sector.
- iii. The shares of individual service sectors in total purchases by commodity producing sectors are agriculture 28.1 percent, mining and manufacturing 70.2 percent, electricity and gas distribution 1.0 percent, and construction 0.7 percent. This suggests strong forward linkages of services sector.

The said report mentions the key requisites for an economically vibrant service sector as good infrastructure (ICT, transport, shipping) ability to plan and prepare the complete logistics chain, mobilization of human resources and entrepreneurial capacity, good language and communication skills, and a clear understanding of how these tools can be harnessed. But what the report fails to identify is the understanding of how these tools and competences can achieve and maintain the competitive advantage in services i.e. by linking services with industry and agriculture policies to capitalize over the inter-sectoral linkages.



**Table 3: Inter-Sectoral Linkages between Services and Commodity Sectors (Agriculture and Manufacturing)**  
(In Rs. Million)

| Sectors                           | Sale to Commodity Sectors | Purchases from Commodity Sectors | Balance        | Remarks                                      |
|-----------------------------------|---------------------------|----------------------------------|----------------|--|
| Wholesale and Retail Trade        | 162,428                   | 5,791                            | 156,637        | Strong forward linkages                      |
| Hotels and Restaurants            | 760                       | 7,061                            | -6,301         | Strong backward linkages                     |
| Transport, Storage Communications | 51,039                    | 48,107                           | 2,932          | Both forward and backward linkages           |
| Banking and Insurance             | 6,762                     | 1,545                            | 5,217          | Forward Linkages                             |
| Real Estate Services              | 2,345                     | 2,998                            | -653           | Both forward and backward linkages           |
| Business Services                 | 12,940                    | 1,851                            | 11,086         | Strong forward Linkages                      |
| Public Admn. And Defence          | 1,078                     | 54,396                           | -53,318        | Strong backward linkages                     |
| Education Services                | 235                       | 1,668                            | -1,433         | Backward linkages                            |
| Healthcare Services               | 50                        | 2,895                            | -2,484         | Backward linkages                            |
| Social and Cultural Services      | 79                        | 3,616                            | -3,537         | Backward linkages                            |
| Personal and Household Services   | 0                         | 4,190                            | -4,190         | Backward linkages                            |
| <b>Total</b>                      | <b>237,716</b>            | <b>134,121</b>                   | <b>103,595</b> | Forward strong relative to backward linkages |

*Source: Report of Working Group on Services for MTDF, 2005-10; September 2004*

### 3. Growth and Industrial Policy of Pakistan

#### 3.1 *Structural Transformation in Pakistan (1980-2007)*

After the failure of mercantilist and import substitution policy since 1950s resulting into inefficient industrial sector with low productivity and least international competitiveness, Pakistan, like many other developing economies, shifted the policy focus to a liberal and export-led economic growth in late 1980s under structural adjustment program (SAP) envisaged jointly by World Bank and IMF. Over the course of last thirty years, the economy has undergone a number of structural transformations, namely export-oriented industrialization, liberalization, privatization, deregulation and market-orientation, with an implied emphasis on industrial sector as a catalyst for this transformation. While the same policy produced miraculous results for East Asian economies, transforming them into modern and highly competitive tigers with high productivity, skill-intensive and technology oriented industrial sector, the outcome for Pakistan was not even satisfactory (Hussain, 2000; Burki, 2006; Dutta and Ahmed, 2006). As per the economic classification in Table 4, the exports of Pakistan are structurally transformed from primary commodities to manufactured goods as the share of manufacturing exports has increased from 44 percent in 1970s to 78 percent in 2005-6. Apparently this is a healthy sign. However, the picture looks quite dismal if the exports are classified according to the level of technology used, as per the Asian Development Bank Institute's classification (2004). The study by Lall (2005) under ADBI report (2004) indicates that over the period of structural transformation, the export growth is concentrated in low-technology goods and the value of medium and high technology exports has been quite low in total exports and its growth is also stagnant

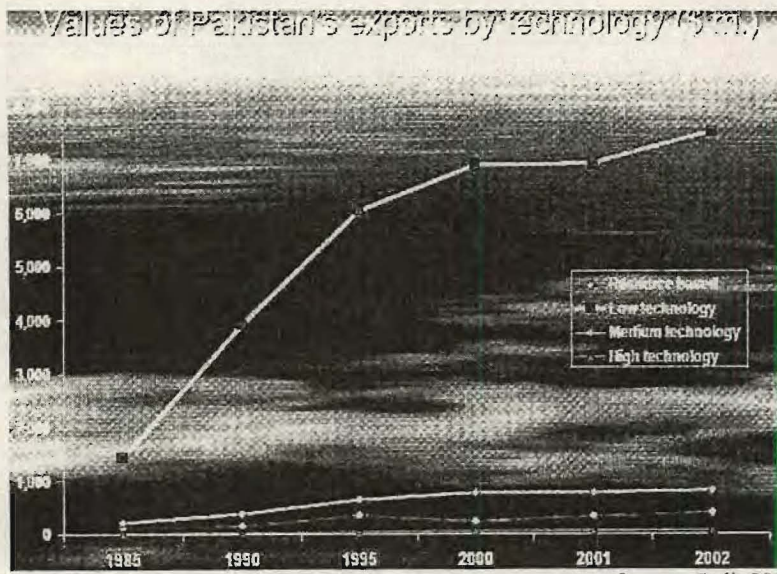


**Table 4: Structural Transformation of Manufacturing Exports as per Economic Classification**

| Year    | <u>Primary Commodities</u> |                  | <u>Semi-Manufactures</u> |                  | <u>Manufactures Goods</u> |                  |
|---------|----------------------------|------------------|--------------------------|------------------|---------------------------|------------------|
|         | Value                      | Percentage Share | Value                    | Percentage Share | Value                     | Percentage Share |
| 1970-71 | 850                        | 33               | 472                      | 24               | 878                       | 44               |
| 1971-72 | 1,510                      | 45               | 914                      | 27               | 847                       | 28               |
| 1972-73 | 3,366                      | 38               | 2,583                    | 30               | 2,502                     | 30               |
| 1973-74 | 4,007                      | 30               | 2,284                    | 23               | 3,860                     | 38               |
| 1974-75 | 4,933                      | 48               | 1,308                    | 13               | 4,047                     | 39               |
| 1975-76 | 4,902                      | 44               | 2,058                    | 18               | 4,283                     | 38               |
| 1976-77 | 4,822                      | 41               | 1,888                    | 17               | 4,783                     | 42               |
| 1977-78 | 4,633                      | 38               | 1,912                    | 15               | 6,435                     | 50               |
| 1978-79 | 6,475                      | 32               | 3,489                    | 21               | 7,663                     | 47               |
| 1979-80 | 9,818                      | 42               | 3,519                    | 15               | 10,053                    | 43               |
| 1980-81 | 12,624                     | 44               | 3,320                    | 11               | 13,138                    | 45               |
| 1981-82 | 9,112                      | 35               | 3,507                    | 13               | 13,651                    | 52               |
| 1982-83 | 10,326                     | 30               | 4,818                    | 13               | 19,498                    | 57               |
| 1983-84 | 10,789                     | 20               | 5,172                    | 14               | 21,378                    | 57               |
| 1984-85 | 10,981                     | 20               | 6,664                    | 17               | 20,334                    | 54               |
| 1985-86 | 17,119                     | 35               | 7,882                    | 15               | 24,561                    | 49               |
| 1986-87 | 18,788                     | 28               | 13,214                   | 21               | 33,245                    | 53               |
| 1987-88 | 22,103                     | 28               | 15,268                   | 20               | 41,012                    | 52               |
| 1988-89 | 22,507                     | 33               | 16,937                   | 19               | 43,679                    | 48               |
| 1989-90 | 21,511                     | 20               | 25,157                   | 24               | 50,661                    | 50               |
| 1990-91 | 25,820                     | 10               | 33,799                   | 24               | 78,663                    | 57               |
| 1991-92 | 32,545                     | 18               | 36,731                   | 21               | 102,352                   | 60               |
| 1992-93 | 20,133                     | 18               | 36,537                   | 21               | 114,383                   | 64               |
| 1993-94 | 21,321                     | 10               | 49,748                   | 24               | 195,430                   | 68               |
| 1994-95 | 28,113                     | 11               | 62,624                   | 25               | 100,438                   | 64               |
| 1995-96 | 47,652                     | 10               | 63,832                   | 22               | 182,087                   | 62               |
| 1996-97 | 30,452                     | 11               | 66,838                   | 21               | 225,972                   | 68               |
| 1997-98 | 47,357                     | 13               | 64,633                   | 17               | 281,120                   | 70               |
| 1998-99 | 45,143                     | 13               | 70,288                   | 18               | 274,911                   | 70               |
| 1999-00 | 53,813                     | 12               | 68,238                   | 15               | 321,637                   | 73               |
| 2000-01 | 67,783                     | 13               | 81,288                   | 15               | 380,999                   | 72               |
| 2001-02 | 63,346                     | 14               | 80,438                   | 14               | 420,163                   | 75               |
| 2002-03 | 71,104                     | 11               | 71,323                   | 11               | 500,777                   | 78               |
| 2003-04 | 70,718                     | 10               | 83,991                   | 12               | 554,995                   | 78               |
| 2004-05 | 92,018                     | 11               | 85,433                   | 10               | 675,586                   | 70               |
| 2005-06 | 112,268                    | 11               | 100,029                  | 11               | 700,543                   | 78               |

*Source: Economic Survey of Pakistan (2005-06)*

Figure 1: Structure of Pakistan's exports according to ADBI classification



Source: Lall, 2005

These facts indicate the weakness of the export-led growth policies pursued under SAP regime, which took industrial sector as the catalyst of economic growth, development and poverty reduction. Obviously the underlying factor is lack of complementary support policies to develop a competitive and viable industrial structure. The lack of competitiveness, concentration of manufacturing production in few industries and concentration of exports in limited international markets are other issues faced by industrial sector in the globalized market place (Ali, 2000; ADB Technical Assistance Report, 2008). Out of total 18 billion dollars increase in textile exports by 12 textile exporting countries in the region, China grabbed 14 billion dollars, India 2 billion dollars while remaining two billion dollars were shared among the rest of 10 countries (Pasha, 2006).

The performance of the major export industry, textile and other core categories related to manufacturing, has been poor. The concentration of exports into textiles and clothing, which are declining sectors in global trade and investment activities, indicates the vulnerability of the export earnings (See Table 5). This leads to the conclusion that the existing industrial and trade policy, which is not complemented with the composition of services sector and concentrated around the laggard sectors in the global markets, is irrelevant to sustain long run economic growth and overcome current account imbalances.



**Table 5: Share of Major Exports and their Trend 1996-97 to 2006-07**

*( Percentage Share)*

| <b>Commodity</b>     | <b>96-97</b> | <b>98-99</b> | <b>99-00</b> | <b>00-01</b> | <b>01-02</b> | <b>02-03</b> | <b>03-04</b> | <b>04-05</b> | <b>05-06</b> | <b>06-07*</b> |
|----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Cotton Manufacturers | 61.3         | 59.1         | 61           | 58.9         | 59.4         | 62.3         | 62.3         | 57.4         | 59.4         | 61.5          |
| Leather              | 7.7          | 6.9          | 6.3          | 7.5          | 6.8          | 6.2          | 5.4          | 5.8          | 6.9          | 4.5           |
| Rice                 | 5.6          | 6.9          | 6.3          | 5.7          | 4.9          | 5            | 5.2          | 6.5          | 7            | 6.6           |
| Synthetic Textiles   | 6.1          | 5.1          | 5.3          | 5.9          | 4.5          | 5.1          | 3.8          | 2.1          | 1.2          | 3             |
| Sports Goods         | 3.7          | 3.3          | 3.3          | 2.9          | 3.3          | 3            | 2.6          | 2.1          | 2.1          | 1.6           |
| Sub-Total            | 84.4         | 81.3         | 82.2         | 80.9         | 78.9         | 82.6         | 79.3         | 73.9         | 76.6         | 77.2          |
| Others               | 15.6         | 18.7         | 17.8         | 19.1         | 21.1         | 17.4         | 20.7         | 26.1         | 23.4         | 22.8          |
| Total                | 100          | 100          | 100          | 100          | 100          | 100          | 100          | 100          | 100          | 100           |

\*July, March (Provisional)

*Source: Ministry of Commerce & Federal Bureau of Statistics*

## 4. Services-led Growth, Trade and Industrial Policy

### 4.1 *Implications for Employment and Development in Pakistan*

The results of industry-led economic growth in terms of employment generation is again disappointing when we consider the policy focus extended to this sector over the period of structural transition (Table 6). The data indicates the growing importance of services sector in employment generation over the transition period as the share of services in employment has increased from around 23 percent to 28 percent in contrast to a declining share of agriculture in employment and negligible employment growth in industry. The increase in the share of services in employment is highest relative to the in other sectors. This indicates the higher employment elasticity of growth and confirms the hypothesis of high labor intensity of services sector implying the socioeconomic potential of this sector for more and better jobs. The stagnancy of employment growth in industry despite impressive growth of this sector implies a much lower employment elasticity of growth and explains its inability to bring any socioeconomic change and reduce poverty.

Paci (2007) has quantified the inability of economic growth rates in South Asia and Sub-Saharan Africa to absorb the growing labor force. The high employment elasticity of services sector around 0.67% in Pakistan (MTDF, 2004) relative to manufacturing and agriculture is another feature of this sector which makes it attractive for an employment oriented growth strategy. Keeping in view the employment dynamics of services sector, one can expect that economic growth would produce relatively more jobs if growth is contributed by services sector and, thereby, Pakistan can get out of the unemployment trap. Such employment friendly growth has strong potential for improvement in the socio-economic indicators due to its inclusive character.



**Table 6: Sectoral Composition and Trend of Employment in Pakistan**

(Percentage)

| Year | Agriculture | Mining &<br>Manufacturing | Construction | Electricity<br>& Gas |  | Transport | Trade | Others |
|------|-------------|---------------------------|--------------|----------------------|--|-----------|-------|--------|
|      |             |                           |              | Distribution         |  |           |       |        |
| 1990 | 51.15       | 12.84                     | 6.38         | 0.59                 |  | 4.89      | 11.93 | 12.22  |
| 1991 | 47.45       | 12.33                     | 6.82         | 0.83                 |  | 5.24      | 13.24 | 14.22  |
| 1992 | 48.27       | 12.53                     | 6.33         | 0.79                 |  | 5.51      | 13.10 | 13.48  |
| 1993 | 47.55       | 11.00                     | 6.93         | 0.84                 |  | 5.52      | 13.32 | 14.84  |
| 1994 | 50.04       | 10.12                     | 6.50         | 0.87                 |  | 4.95      | 12.78 | 14.75  |
| 1995 | 46.79       | 10.50                     | 7.21         | 0.82                 |  | 5.07      | 14.50 | 15.12  |
| 1996 | 46.79       | 10.50                     | 7.21         | 0.82                 |  | 5.07      | 14.50 | 15.12  |
| 1997 | 44.15       | 11.20                     | 6.75         | 0.93                 |  | 5.71      | 14.62 | 16.60  |
| 1998 | 47.25       | 10.15                     | 6.26         | 0.70                 |  | 5.48      | 13.87 | 16.28  |
| 1999 | 47.25       | 11.15                     | 6.26         | 0.70                 |  | 5.48      | 13.87 | 16.28  |
| 2000 | 48.42       | 11.55                     | 6.26         | 0.70                 |  | 5.03      | 13.50 | 15.02  |
| 2001 | 48.42       | 13.81                     | 5.78         | 0.70                 |  | 5.03      | 13.50 | 15.02  |
| 2002 | 42.09       | 13.91                     | 5.78         | 0.81                 |  | 5.90      | 14.85 | 16.39  |
| 2003 | 43.05       | 13.80                     | 6.05         | 0.81                 |  | 5.90      | 14.85 | 16.39  |
| 2004 | 43.05       | 13.80                     | 5.83         | 0.87                 |  | 5.73      | 14.80 | 16.12  |
| 2005 | 43.05       | 13.80                     | 5.83         | 0.67                 |  | 5.73      | 14.80 | 16.12  |
| 2006 | 43.37       | 13.83                     | 6.13         | 0.66                 |  | 5.74      | 14.87 | 15.49  |

*Sources: Federal Bureau of Statistics, Pakistan*

Box 1 below further strengthens the hypotheses of services-led growth and industrialization as the source of employment, economic development and poverty reduction in Pakistan. The leading sub-sectors in job creation are identified by the Ministry of Labor and the most of which belong to the services sector. The poverty reducing role of services sector is well elaborated in the literature and has empirical evidence from Pakistan's experience. While studying the nature of poverty and its prospects in Pakistan, Herani; Waseem; Rajar and Sheikh (2008) have mentioned that poverty reduced in 1980s and then in 2003 onward by growth in services, construction and public spending in social services along with other factors such as provision of micro credit facilities. The high labor intensity of services also supports the hypothesis

### Box 1:

#### Emerging Employment Scenario in Pakistan: Leading sub-sectors in job creation

|   |   |
|---|---|
| Many new areas have recently emerged as sources of employment leading to outsourcing of Pakistan' wealth of miss professionals to the rest of the world. The telecom, auto service stations, show rooms, hotels and restaurants, livestock and dairy sectors dominate in jobs creation. The leading industries/sectors include: |   |
| <b>Telecom and IT Sector</b>  | Mobile phone, wireless loop and LDI companies, public call offices internet service providers, broad band service providers cable services, electronic media companies, information technology and internet related companies and call centres. |
| <b>Health and Education Sector</b>  | Private and philanthropic hospitals and clinics, biomedical sciences and biomedical and genetic engineering private and non governmental educational institutions, and scientific research and development                                      |
| <b>Allied Agricultures Sectors</b>  | Dairy and milk processing packaging and marketing, livestock, fruits and vegetable industry, fisheries and feed mills   |
| <b>Financial Services</b>   | Islamic banking services, new private banks including micro financing institution risk managers in the financial sectors, leasing and insurance   |
| <b>Transport Sector</b>   | Intercity and intra city coach, bus and transport services, and private airline companies.  |
| <b>Construction</b>   | Construction services particularly plumbers, electricians and masons.   |
| <b>Others Services</b>  | Advertising, marketing, creative, services, accountancy and management consultancy and electronic and print media.  |
| <b>Chemical</b>   | Fertilizer, pesticide, Seeds and agro-chemical distribution   |
| <b>Oil and Gas</b>  | Oil and Gas exploration and drilling, petrol and CNG filling stations.  |

*Source: Ministry of Labour & Manpower*



## **4.2 Challenges of WTO-led Trade Liberalization**

Under GATS, the Federal Bureau of Standards (FBS) and The State Bank of Pakistan (SBP) are the two focal institutions responsible for collecting most of the data related to GATS. SBP has started compiling Balance of Payments (BOP) statistics from November 2003 onwards on the basis of the Fifth IMF Balance of Payments Manual. But the problems of well defined classification of services and the absence of data related to services sector hinder the capability of theorists and policy makers to incorporate appropriate policy response in the trade policy. This has also handicapped the Pakistani officials during GATS negotiations at WTO to develop a viable and effective services liberalization plan to avoid adverse impacts on the domestic economy (Burki and Hussain, 2007).

The lack of institutional foundation and commitment for services sector is evident from the fact that the commerce ministry had not established a specialized wing in the Trade Development Authority of Pakistan (TDAP) until 2005 to provide a platform for identifying potential markets for the export of services sector. There is still no coherent policy for the services sector and the trade policy is silent about it. The WTO-led trade liberalization has much more to do with the services sector than industry and agriculture sector. While the primary challenge of trade liberalization to industry and agriculture is that of export growth, it is the challenge of output and employment survival to the services. The absence of a competitive services sector means that 54 percent of domestic income and 40 percent of employment can be eroded by international competition after GATS, which in turn can produce a spiral of socio-economic crisis. Thus the globalization poses more threats to the domestic economy via services sector as against industry or agriculture.

The hypothesis can be confirmed through the analysis of the composition of current account imbalance in Pakistan in recent years. Much of the current account deficit is contributed by services trade component. The analysis of the current accounts deficit depicts services as the largest contributor of this imbalance (Table 7). The poor performance of services exports coupled with a surge in the services imports has added to the problems of exchange rate instability, burden of payments and domestic economic volatility. Trade statistics for FY 07 indicate that telecom imports are responsible for 13 percent increase in import bill thereby, crucial after petroleum and machinery imports.

**Table 7: The Growing Share of Services Deficit in Current Account Balance**

| Items                 | 97-98   | 98-99   | 99-00   | 00-01   | 01-02   | 02-03   | 03-04   | 04-05   | 05-06   |
|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. Trade Balance      | -1,867  | -2,085  | -1,412  | 1,269   | -294    | -444    | -1,208  | -4,352  | -8,259  |
| Exports (f.o.b)       | 8,434   | 7,528   | 8,190   | 8,933   | 9,140   | 10,889  | 12,396  | 14,401  | 16,388  |
| Imports (f.o.b)       | -10,301 | -9,613  | -9,602  | -10,202 | -9,434  | -11,333 | -13,604 | -18,753 | -24,647 |
| 2. Services (Net)     | -3,264  | -2,618  | -2,794  | -3,142  | -2,617  | -2,128  | -3,594  | -5,841  | -7,304  |
| Receipts              | 1,708   | 1,409   | 1,501   | 1,464   | 2,027   | 2,967   | 2,894   | 3,837   | 4,718   |
| Payments              | -4,972  | -4,027  | -4,295  | -4,606  | -4,644  | -5,095  | -5,488  | -9,678  | -12,022 |
| Shipment              | {921}   | {844}   | {602}   | {877}   | {809}   | {951}   | {1,253} | {1,713} | {2,203} |
| Investment            |         |         |         |         |         |         |         |         |         |
| Income                | {2,454} | {1,903} | {2,135} | {2,274} | {2,43}  | {2,381} | {2,394} | {2,823} | {3,451} |
| Others                | {1,597} | {1,280} | {1,358} | {1,455} | {1,406} | {1,763} | {2,641} | {5,142} | {6,368} |
| 3. Private unrequited |         |         |         |         |         |         |         |         |         |
| Transfers (Net)       | 3,210   | 2,274   | 3,063   | 3,898   | 4,249   | 5,737   | 6,116   | 8,440   | 9,914   |
| (Workers              |         |         |         |         |         |         |         |         |         |
| Remittances)          | {1,49}  | {1,060} | {983}   | {1,087} | {2,389} | {4,237} | 3,871   | 4,168   | 4,600   |
| 4. Current Account    |         |         |         |         |         |         |         |         |         |
| Balance               | -1,921  | -2,429  | -1,143  | -513    | 1,338   | 3,165   | 1,314   | -1,753  | -5,649  |

*Source: Economic Survey of Pakistan, 2006-07*

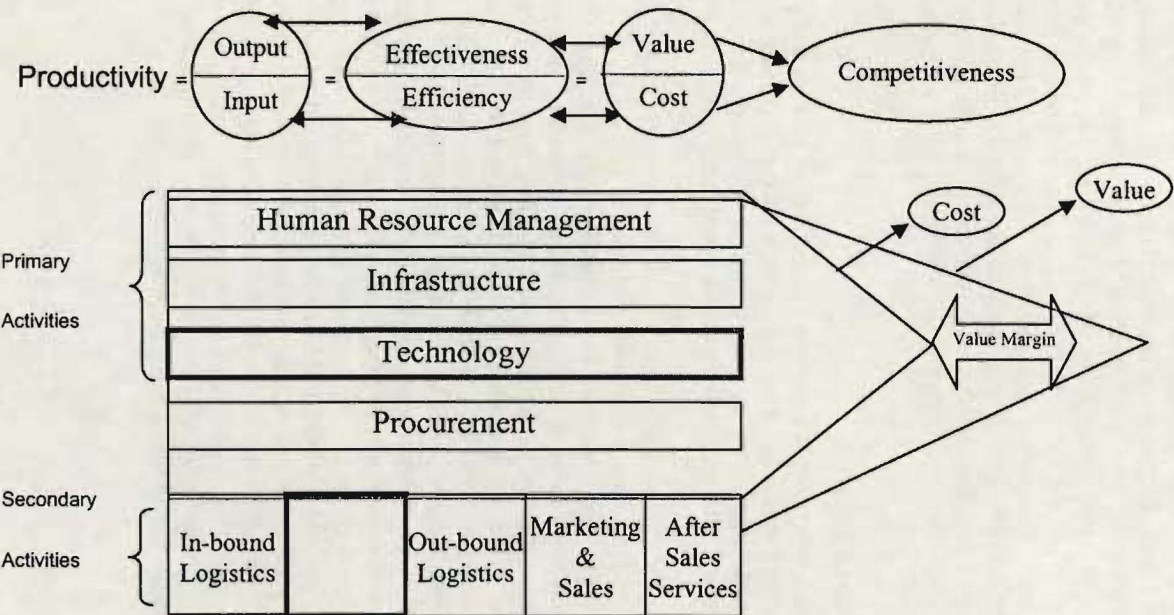


The SBP quarterly report 2007-08 indicates the dominance of services sector in FDI inflows which remained over 60 percent of the total FDI despite the decline in FDI inflows in the last nine months. The country received FDI to the tune of \$2.905 billion (without privatization proceeds) during July-March 2008. The services sector contribution was about \$1.743 billion. In this sector, communications (especially telecommunications) and financial services remained the major recipients of FDI inflows [Khan and Kim (1999)]. There is a growing debate over this phenomenon and some theorists are of the view that domination of services sector in foreign inflows means less-productive activities and higher outflows through profit repatriation by foreign service providers.

#### **4.3 Services-led Industrial Policy**

In Pakistan, the services sector is not just important in terms of its existing and potential contribution in the national output but it is also strategic due to its potential role in industrial competitiveness, international business activities of domestic firms, poverty alleviation, employment and overcoming the current account imbalances in the wake of GATS implementation.

At micro level, the role of services in productivity and competitiveness at the firm level is also significant. Porter (1999) suggests that competitiveness of firms should be defined in terms of productivity gains. A firm maybe defined as a set of value activities which are chained together and are the basis of cost and value creation. This line of argument is known as value chain model and was developed in the context of manufacturing firms. Siddiqui (2008) has elaborated the linkage between value margin, productivity and competitiveness of firm. Value margin is the difference between cost of activities and value of output resulting from the business operations of manufacturing firms and is another way to represents the productivity i.e. output/input ratio. It is the basis of firm's competitiveness and strategy against its rivals (Figure 2). A closer look on the value chain model identifies that although the technology and physical capital critically affect the productivity and competitiveness of manufacturing firms, the impact of services activities during the value delivery process is also vital. The services oriented activities, either primary or secondary, create an enabling environment within the manufacturing firms whereby the physical capital and technology can carry out the transformation process effectively.



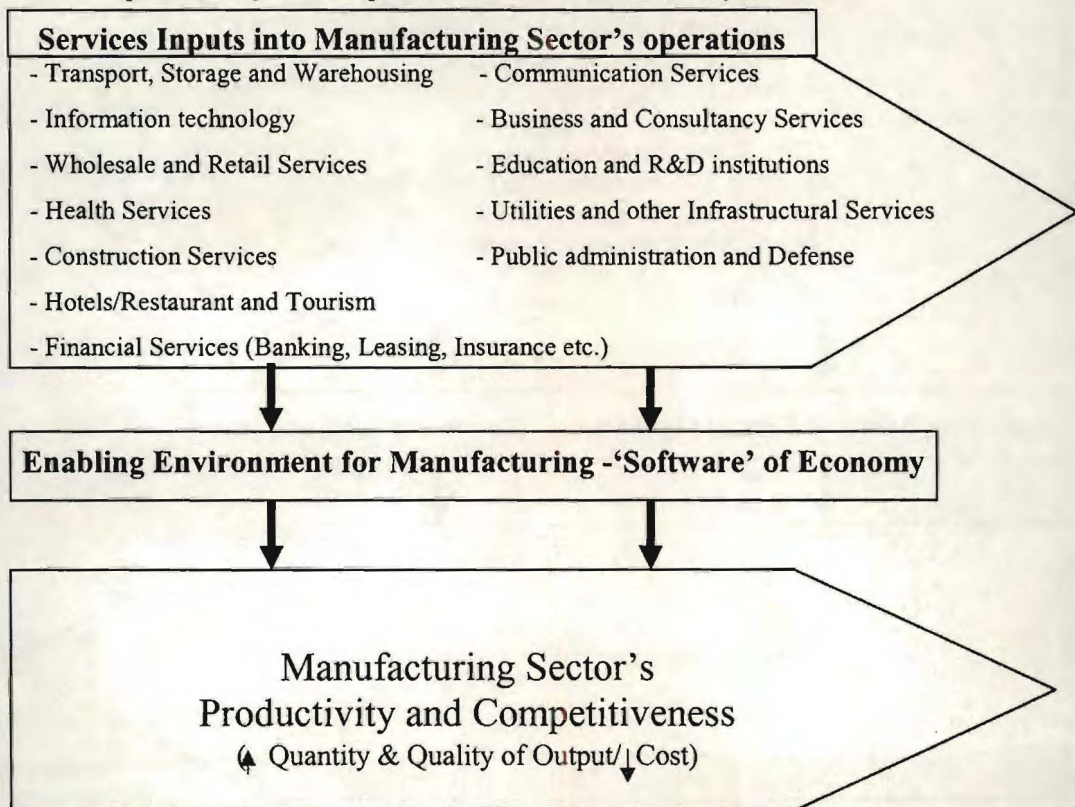
(Source; Siddiqui, 2008)

**Figure 2:** Dominance of services in the value chain activities of manufacturing firm



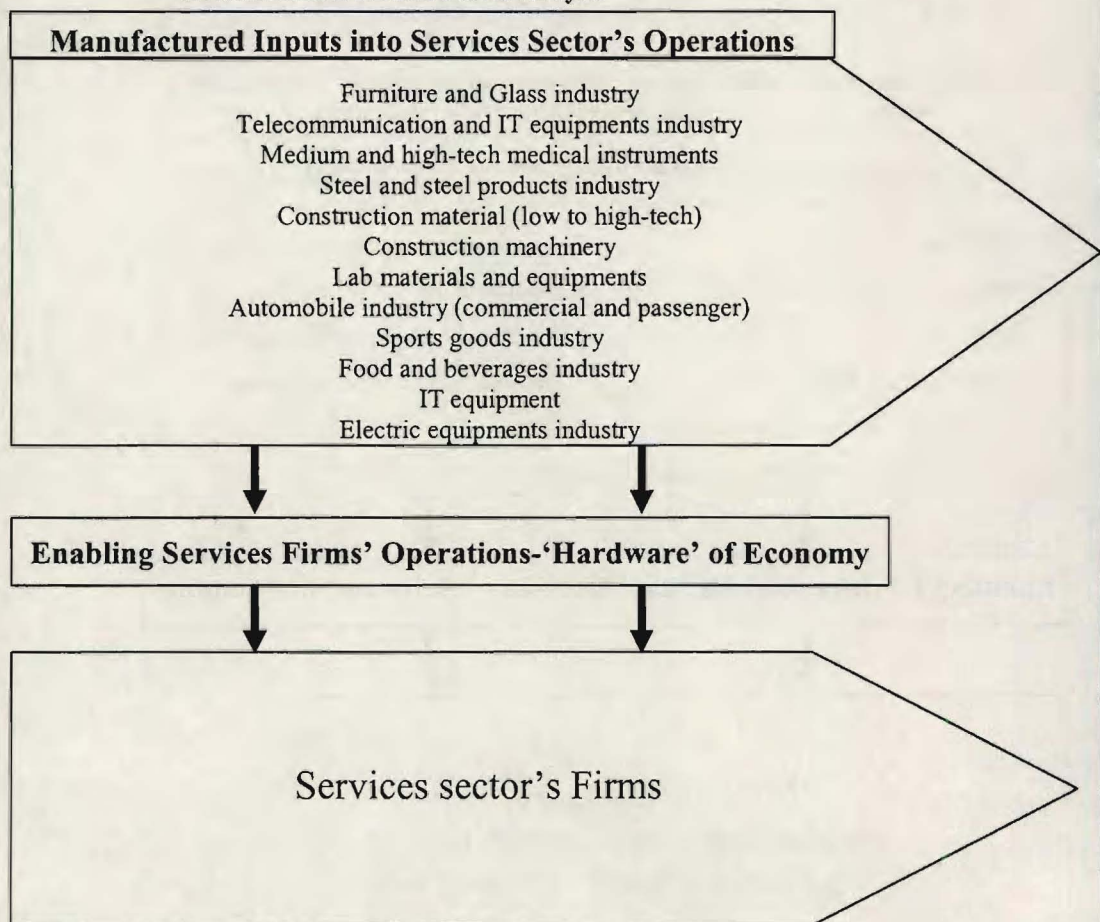
At macro level, also, the strong financial sector, world class transportation and supply chains, dynamic communication services and information technology are the key success factors for productivity and competitiveness of manufacturing firms. The supply of human capital, which includes healthy and skilled workers, can also be ensured through dynamic health, education and management consultancy services (Figure 3). The services sector, on the other hand, through its intangible output represents the 'software' of the economy to make run the industrial and agriculture sector i.e. 'hardware' of the economy. Findlay (2001) has highlighted the importance of interaction between industrial and services sector policies as part of the services sector reforms for development. This interaction is also important due to increased services embedded nature of manufactured goods in their final form to the customers. The automobile industry, for example, is driven by the marketing and after sales services to retain the customer relationships and loyalty. Same is the case with computer manufacturing industry where firms are deriving competitive advantage on the basis of downstream services like software support and other customer services.

**Figure 3: Services sector's inputs into manufacturing sector and its impact on productivity and competitiveness: A macro level analysis**



The role of services sector as the provider of inputs to the commodity producing sector is not uni-directional. The increased use of manufactured inputs during the effective and efficient delivery of services is also important (Figure 4). The manufactured inputs to services sector in the economy constitute the necessary 'hardware', which enable services firms' to deliver their intangible output and affect the quality of output in many ways. The manufacturing intensity of services is on a rise and many high-end services consume a lot of manufactured inputs during their delivery process. All the services sub-sectors require a diverse set of the manufacturing output. Though the productivity and competitiveness of services sector depends mostly on the quality and quantity of human capital, the manufactured inputs serve as a necessary conditions or threshold requirement for the services firms' operations. The industrial sub-sectors, thus, should be viewed as integral part of services firms' value chain networks.

**Figure 4: Potential of services-led industrialization for value added and diversification: A macro level analysis**





This analysis highlights the need to develop an industrial policy, which aims at aligning the industrial structure and output with the requirements of the services sector that would in turn facilitate the diversification of industrial output. The diversity of manufactured inputs required by services firms offers potential for value addition and diversification in industrial sector. Such diversification will also reduce the dependence of domestic services sector on foreign manufactured inputs and thereby help curbing the trade imbalance resulting from trade liberalization. The development of an incentive structure, under a well elaborated services policy, is also mandatory for the success of services-led industrial policy. Such a well designed policy will attract investment and create a conducive environment for the growth of services sub-sectors, which are complementary to the productivity and competitiveness of industrial sector.

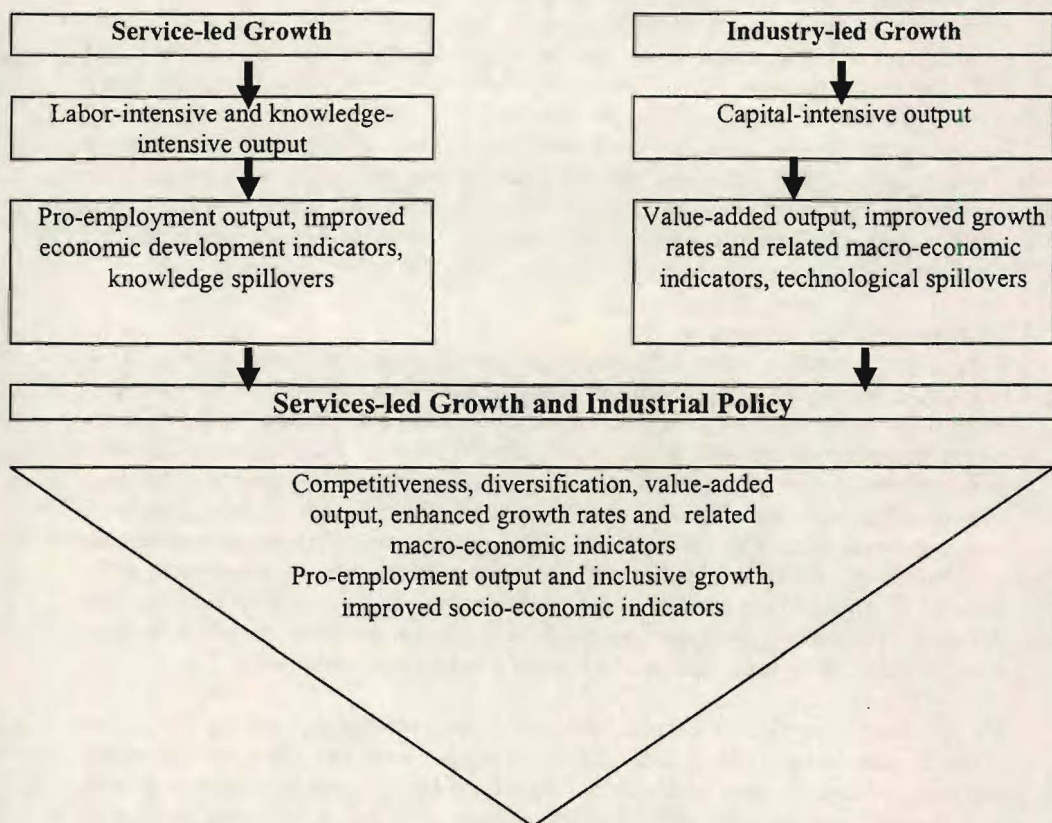
#### ***4.4 Scope of Policy Proposals***

The point to be made is not to develop services sector at the cost of other sectors of the economy, rather to align the growth and industrial policies with the structure of services sector in Pakistan. Such alignment will enhance the competitiveness of both sectors by capitalizing over the forward and backward linkages between the two and thereby help these withstand the international competition in a post-WTO regime. The high manufacturing intensity of services in Pakistan, as evident from its input purchases from industrial sector (MTDF 2005-10, 2004) reveals the policy space required for complementing the industrial policy with the services sector. The value networks of the economy consist of both services and CPS firms and require complete harmony and integration between them to generate and deliver competitive value. A failure to do so would deprive the industrial sector of a very large market for its output.

The lion share of services in Pakistan offers unlimited potential, as mentioned in section I, due to its strong forward and backward linkages with the other sectors of the economy. These linkages can only be capitalized by integrating economic growth, industrial and trade policies with the services sector. The industrial sector of Pakistan is overwhelmingly dependent on the imported capital equipment as evident from the dominance of machinery and equipment purchases in the import statistics over last 60 years. The dependence of services sector, with around 54% share in national output and 44% in employment, on imported manufactured inputs can spiral up the economic volatility. The impact of such policy integration is not just limited to employment and economic development but the above discussion implies significant potential gains for economic growth, value addition, diversification and competitiveness (Figure 5).

While the industry-led growth strategy leads, manufacturing value added and technological spillovers to the rest of economy, such growth, due to its high capital intensity, fails to generate enough jobs and improvement in socio-economic indicators. The services-led growth, on the other hand, results in employment generation, and improvement in socio-economic indicators i.e. poverty alleviation, education, health, R&D, infrastructure etc. due to high labor and skill intensity of services output. Such a strategy implies investments in education, skills and health services which in turn have knowledge spillovers to enhance productivity of economy as a whole.

**Figure 5: Implications of Services-led Growth and Industrial Policy.**



The services-led growth and industrial policy can not only achieve both sets of results simultaneously but, due to its synergy effect, also contributes to competitiveness and diversification of commodity producing sector's output. Siddiqui (2008) has mentioned technology, skills and organizational development as the major determinants of the productivity and thereby competitiveness. The impact on all sectors of the economy comes from simultaneous technological and knowledge spillovers from manufacturing and services sectors respectively. The competitiveness and diversification of national output enhances the domestic firms' participation in the global markets and thereby contributes to external account balance as well.

Though the discussion here revolves around the complementarities between services and manufacturing sector, yet the results of the policy integration can be fairly generalized to overall commodity producing sectors. In other words, both agriculture and industrial sectors will benefit from such growth and commercial policy that is intervened around the structure of services sector. As already discussed, the services and commodity producing sectors should be seen as the 'software' and 'hardware' of the economy respectively and a coherent growth and commercial policy aligning both can enable the economy produce the results of growth, employment, value-added, diversification and competitiveness.



India's successful experience in services, especially in information technology and telecommunication, has not only supported the overall economic growth and contributed to services trade surplus but also has contributed to the competitiveness of their industry and its growth rates. (Singh, 2005) has identified the complementarities between the output structures of India and China and suggests the possibility of the greatest global economic power if the services-oriented Indian giant is integrated with the manufacturing giant China. At global level, the hypotheses can be confirmed by drawing empirical evidence from OECD economies, which have specialized in the high end value activities and integrated their services sector with the outsourced manufacturing activities in East Asian economies including China.

## **5. Conclusions, Limitations and Future Directions**

The study has presented the implications of services sector growth and its dominant contribution in national output in many Asian economies including Pakistan. The paper analyzes the sectoral composition of output and growth in Pakistan to chalk out the structural transition from an agrarian to the services economy. The paper has also analyzed the structural transition from import substitution to an export oriented industry under SAP regime from 1990 to 2007 and shown its negligible impact on competitiveness, diversification and employment contribution. An alternate model of services-led growth and industrial policy has been advocated for Pakistan by highlighting elaborate linkages between services and industrial sectors. The commodity producing sector and services sector are regarded as 'hardware' and 'software' of the economy respectively, complementary for each other's performance. The model suggests enormous potential for pro-employment growth along with competitiveness, diversification and valued added in industrial sector as a result of proposed policy integration. The balanced growth contributed by capital-intensive manufacturing sector and human-capital intensive services sector is expected to boost growth rates and reduce unemployment simultaneously. The limitations of services sector data at disaggregate level are discussed along with directions for future research. The study concludes that failure to integrate the huge services sector in Pakistan with the commodity producing sectors may pose serious threats to sustained economic growth, employment and external imbalances.

The present study identifies the potential for integrating growth and industrial policies with the services sector of Pakistan. The study is, however, not in a position to present the measured intensity and significance of inter-sectoral linkages since it has utilized the aggregate data sets about industry and services sector. However a detailed effort at disaggregated level taking into account the growth rates, gross domestic fixed investment both public and private, and FDI inflows into services sub-sectors to explain the growth of services in Pakistan, may be required to suggest the precise components of policy interventions under the proposed services-led growth and industrial policy. The study nevertheless presents a well advocated argument for sustainable growth in Pakistan, which can simultaneously help achieve objectives of employment, value added output, diversification and competitiveness of economy.

## **References:**

- ADB Institute (2004), "Industrial Competitiveness: The Challenge for Pakistan" Asian Development Bank, Resident Mission, Pakistan, Publication Stock No. 060604, October 2004.
- ADB Technical Assistance Report (2008), "Islamic Republic of Pakistan: competitiveness and structural transformation in Pakistan" Asian Development Bank, Project number: 41661, January 2008.
- Ali, Shaikat M. (2000) "Trade and industrial policy in Pakistan: post Uruguay round challenges" Paper prepared for World Bank's WTO-2000 Project
- Ansari, Muhammad I. (1995) "Explaining the services sector growth: an empirical study of India, Pakistan and Sri Lanka", *Journal of Asian Economics*, Volume 6, No. 2, 1995, 233-246.
- Banga, Rashi and B. N Goldar (2004) "Contribution of services to output growth productivity in Indian manufacturing: pre and post reform", Indian Council for Research on International Economic Relations, working paper no. 139, August, 2004
- Banga, Rashmi (2005) "Critical issues in India's services-led growth" Indian Council for Research on International Economic Relations, working paper no. 171, October, 2005.
- Berry, L. L. (1980), "Services marketing is different", *Business* (May-June): 24-29
- Burki, Abid A.; Hussain, Turab S.M (2007) "Opportunities and risks of liberalizing trade in services in Pakistan"
- Burki, Shahid Javed (2007) "Growth, inequality and poverty" *Changing Perceptions and Altered Reality: Pakistan's Economy Under Musharraf, 1999-2006*, Oxford University Press 2007.
- Dutta, Dilip and Ahmed, Nasiruddin (2006) "Trade Liberalization and Industrial Growth in Pakistan: A Co-integration Analysis", Center for South Asian Studies, School of Economics and Political Science, The University of Sydney, NSW 2006, Australia. Email: [dilpd@econ.usyd.edu.au](mailto:dilpd@econ.usyd.edu.au)
- Findlay, Christopher (2001) "Services Sector Reforms and Development Strategies: Issues and Research Priorities", Policy issues in International Trade and Commodities, United Nations Conference on Trade and Development, Study Series no. 8.



- Haque, Nadeem ul (2006) "Awake the sleeper within: Releasing the energy of stifled domestic commerce", MPRA Paper no. 2141, posted 07 November, 2007.
- Herani, Gobind M.; Wasim, Pervez; Rajar, Allah Wasayo; Shaikh, Riaz Ahmad (2008) "The nature of poverty and its prospects: Pakistan Evidence" MPRA Paper no 8318, posted 18 April, 2008.
- Hussain, Ishrat (2000) "Growth and structural change in the Pakistan economy", Pakistan: The Economy of an Elitist State, Oxford University Press, 2000.
- Khan Ashfaq H. and Yun-Hwan Kim (1999) "Foreign Direct Investment in Pakistan: Policy issues and Operational Implications" EDRC Report Series, Economics and Development Resource Center, Asian Development Bank, EDRC Report No. 66, 1999.
- Kojima, Makoto (2007) "Prospects and conditions for long-run economic growth in India", JEF-Chatham House Roundtable Meeting, March 2007.
- Lall, Sanjay (2005) "Benchmarking Pakistan's competitive performance" presentation made on Asian Development Bank Institute, working paper, 2005.
- MTDF 2005-10 (2004) "Medium term development framework 2005-10" Report of Working Group on Services for MTDF, 2005-10, Planning Commission of Pakistan, September, 2004.
- Nath, Shri Kamal (2007) "Address by Minister of Commerce and Industry, Government of India" at the release of the annual supplement to the foreign trade policy 2004-2009, New Delhi, April 19, 2007.
- Paci, Pierella (2007) "Does Employment Really Matter for Shared Growth", Employment and Gender in the Shared-Growth Agenda, April, 2007, World Bank.
- Porter, Michael E., 1990, The Competitive Strategy, Harvard Business Press, 1990.
- Rathmell, J. M. (1966) "What is meant by services?" Journal of Marketing, volume 30, October, 32-36, 1966.
- Shostack, G.L (1977) "Breaking free from product marketing" Journal of Marketing, volume 41, 73-80, April 1977

- Siddiqui, Sulaman H.; Waheed Asghar (2008) "Linking Training with Productivity and Competitive Strategy: Implications of Value Chain Model for Strategically Effective Training Programs", *International Review of Business Research Papers*, Volume 4, No. 1, January 2008.
- Singh, Nirvikar (2006) "Services-led industrialization in India: Assessment and Lessons", MPRA paper no. 1276, posted 07 November, 2007.
- Sudha, Menon (2007) "Asia's economic growth: trends and patterns", Munich Personal RePEc Archive, MPRA paper no. 2464, posted 07 November, 2007.