Nepal-Potential Projects in a New Model of Economy

Paunić, Alida

1 October 2014

NEPAL - POTENTIAL PROJECTS

IN A NEW MODEL OF ECONOMY

NEPAL - POTENTIAL PROJECTS IN A NEW MODEL OF ECONOMY

Summary

Rising GDP level is aim of each economy in the world and in that respect Nepal doesn't differ. Difficulties in obtaining better impulse in the growth creation shows signs of short and long term weaknesses in economic or political process. Some help in achieving better standards are presented by three projects as well as offering some new insight into possible model change. Building a new model or growing from existing one is not a matter of copy/ paste data from country to country, but necessity and recognition that numerous possibilities to improve exist by cooperation with region ,world but at the same time being aware of its own standards, limitations and strengths. This process is area of constant development, error recognition and correction what is also to be recognized and to further develop in a process of finding economic and social path to go.

NEPAL - POTENTIAL PROJECTS IN A NEW MODEL OF ECONOMY

NEPAL - POTENTIAL PROJECTS IN A NEW MODEL OF ECONOMY

1. INTRODUCTION

Very unique geographical position makes Nepal not just beautiful scenery four tourist but also a place that is capable to have wider perspective in shaping economic policy worldwide. This mountain range hosts top of the world with 240 peaks above 6 000 m . This fact brings us closer to believe that Nepal is not just a cloud rich area but a place with potentials to see further in human development, shaping environmental and economic long term strategies and communicate its vision to the rest of the world. This can be possible if new model is observed and we incorporate in our economical thinking some new variables like mercy, relationship between human and nature, human and human in the spot position and not placing profit on the first and the only position in economical calculation.

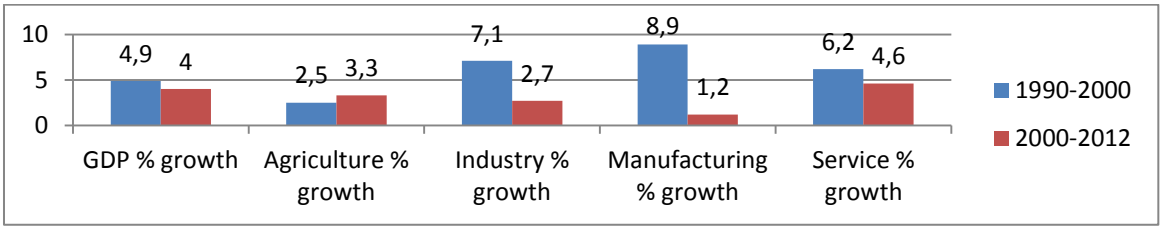
Nepal has a long and at periods not easy history which today put the country on 145 th place on the scale that measures Human Development Index. This is partly consequence of past where in periods inequality hindered progress, and late history which tells us that monarchy rule Shah Dynasty (ruled from 1768) ended in civil war. Political parties made agreement on 22 nd November 2005 to stop the violence. In 2008 Nepal put an end to the monarchy and establishes a federal multiparty representative democratic republic.

Being part of the highest world chain one would expect that high horizon would bring additional benefits in respect of environment, economy and more influential peaceful spiritual understandings of the world. Still, it is hard to win a place among many stronger military and economic powers with the system that is lagging behind, try to copy some western style types instead of develop its own type of economic beliefs in respect of currently existing systems. The progress can be made if its own values are recognized and appreciated and then fit into modern world.

The aim of paper is to offer some projects in light of possible new economics models. It is a way where each human is put into spotlight of importance and value where care in human and economic system is deeply rooted, type of model that values nature and mercy and understands that profit is important but not strongly and only followed in the high hills of Himalaya. It is a place that understands that for nature sometimes there is no bifurcation diagram for future but some actions toward nature preservation need to be done in time.

Structure of economy shows signs of GDP rise after period of crises in 2000. It is observed a strong downturn in industry growth, decline of growth in manufacturing sector and only to less extent fall in service industry. Progress is made in agricultural sector with rise of 3, 3 % in period from 2000-2012. Very strong competition of neighboring economies in respect of manufacturing (India, China, and Bangladesh) and inner power struggle contributed to this decline. Country however needs to put strong strategy toward diversification of manufacturing activities and support economy for further growth without putting a negative pressure on agricultural development.

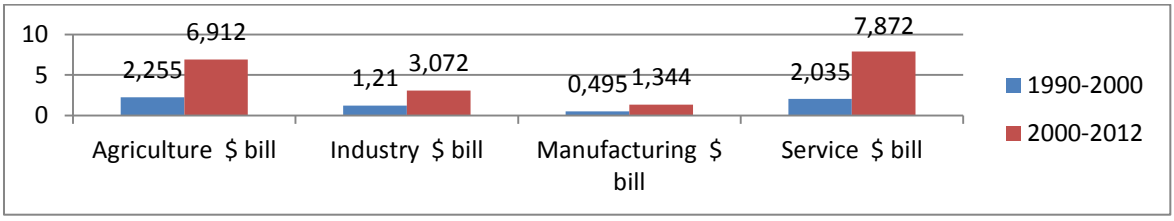
Structure of output -% growth



Picture 1

The strongest part of nominal GDP account are by far service sector with around 7,872 bill $, and agriculture with 6,912 bill $ in the 2000-2012 period.

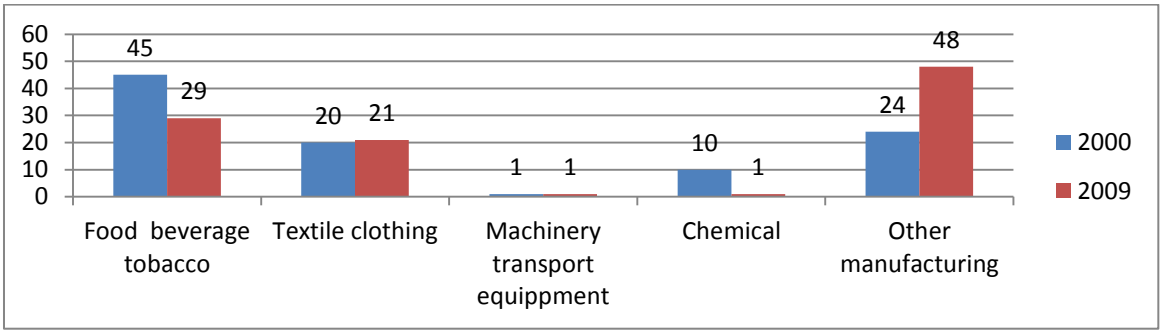
Structure of output bill $



Picture 2

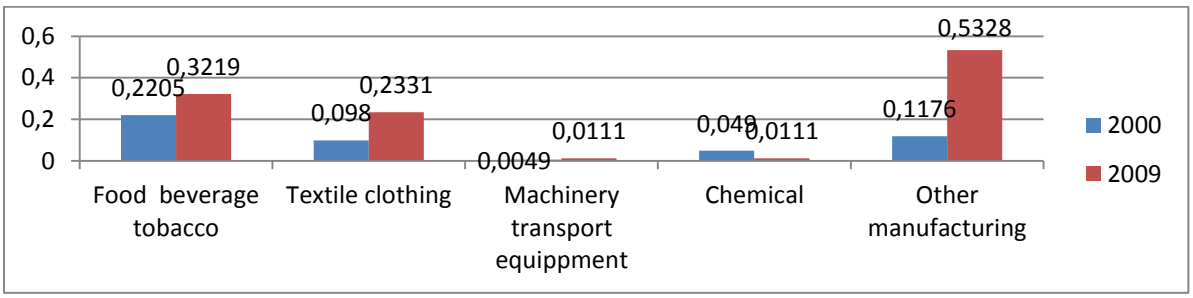
Manufacturing sector is strongly represented by food, beverage industry and clothing but stronger push can be made especially in international business- export policy.

Manufacturing structure - % of Total Manufacturing Output



Picture 3

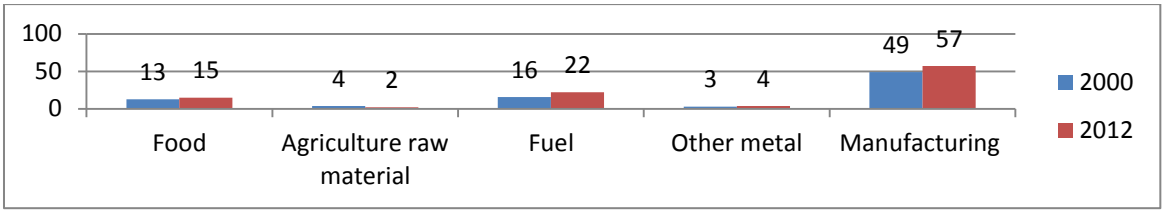
Manufacturing structure in $ bill



Picture 4

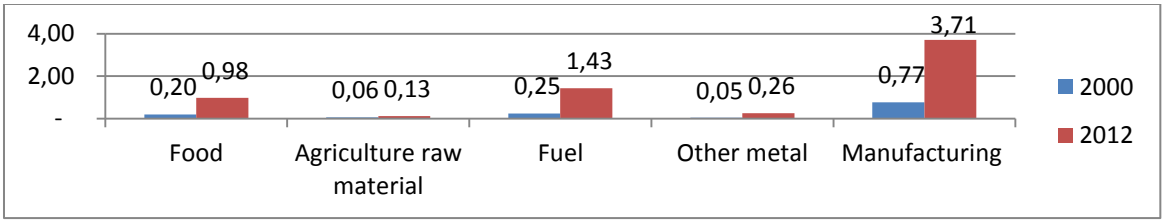
With decline of manufacturing share of imported goods rises what is disturbing fact for the future diversification and potential new projects. It can be partly explained by inner struggle as well as by growing number of immigrants who contributes with money but without creation of in country jobs import raises.

Share of merchandise import %



Picture 5

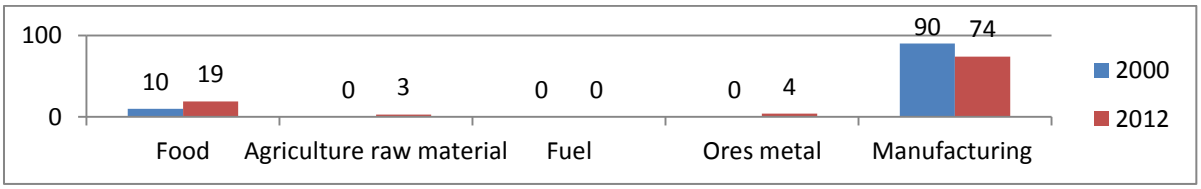
Share of merchandise import $ mill



Picture 6

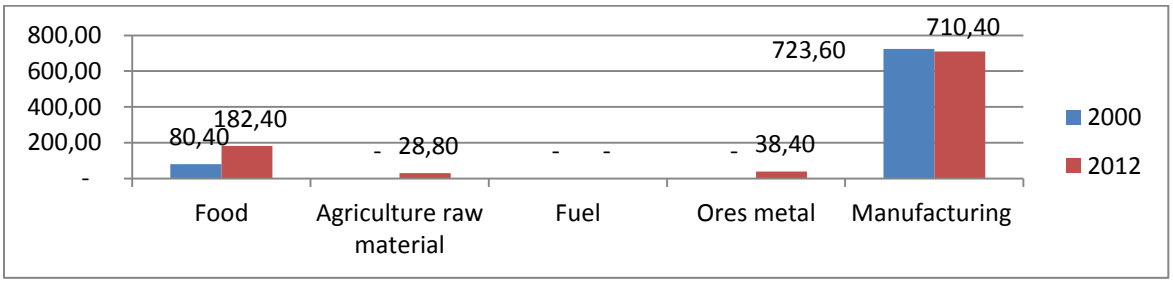
Share of merchandise export have potential to rise in the future if the right political and economic policy measures are put into place. It can be achieved in food, agriculture as well as manufacturing and reverse some of negatively trends observed.

Share of merchandise export %



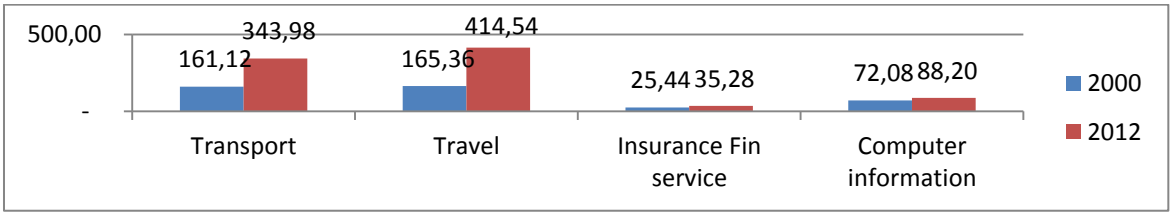
Picture 7

Share of merchandise export $ mill



Picture 8

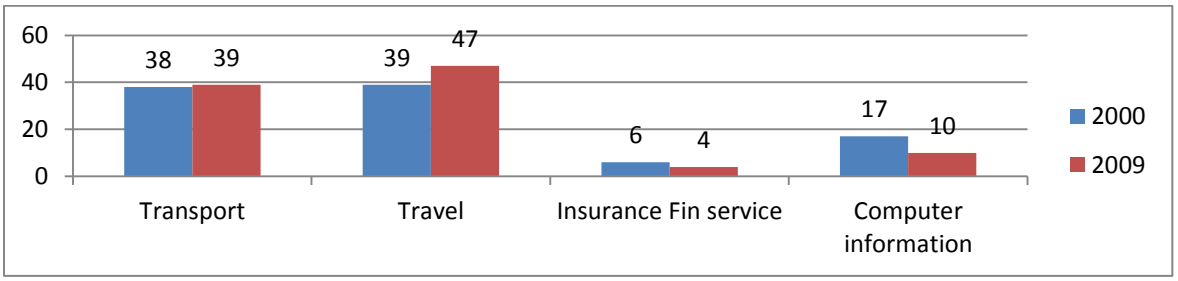
Structure of service import mill $



Picture 9

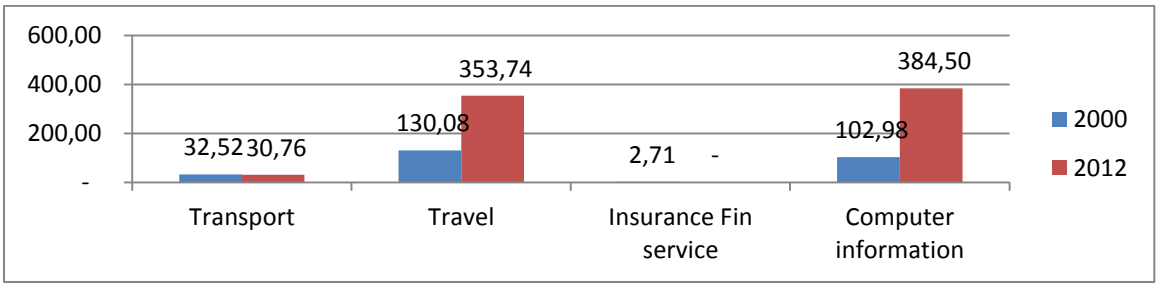
Nepal have potentials to develop its own service industry in respect of travel , computer information by adding additional value to education in this field giving scholarships, having on line studies at foreign universities or establish good high level educational system in country.

Structure of service import in % of all service import



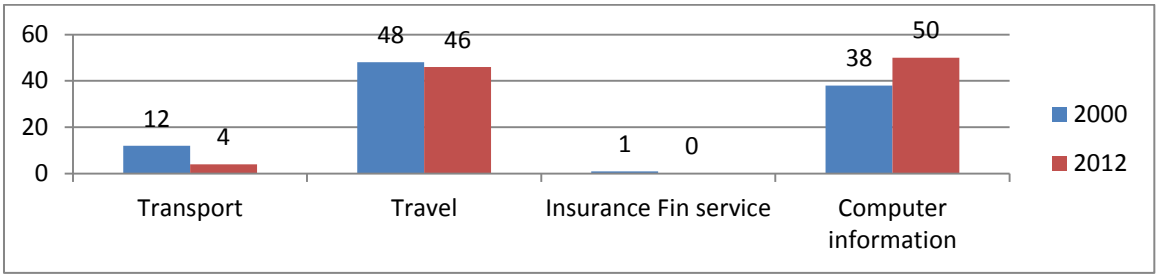
Picture 10

Structure of service export $ mill



Picture 11

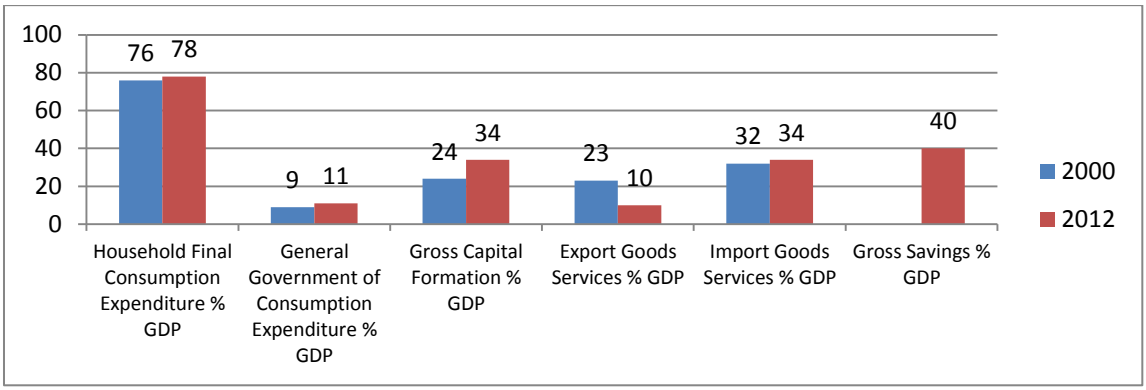
Structure of service export in % of Total Service Export



Picture 12

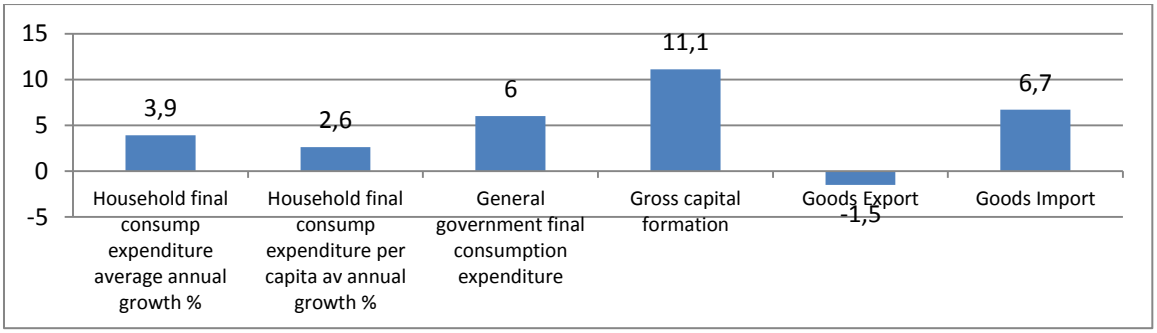
Demand structure is very similar as the structure that is observed by low to low mid-level income countries with household final expenditure by far reaching the highest levels. What can be improved is to stop declining export of goods and services, and to slow down import of goods and services what is further task of political and economic decisions put in place in country.

Structure of demand



Picture 13

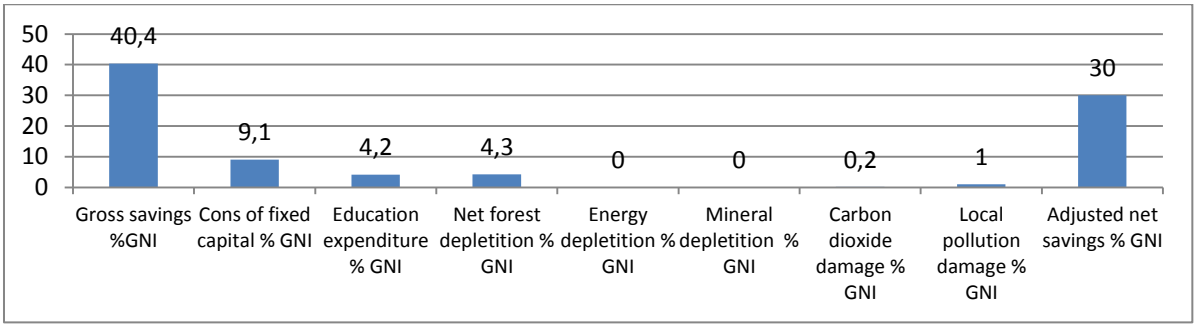
Household final consumption expenditure -Growth of consumption investment –average e annual growth % (average annual, average per capita %)



Picture 14

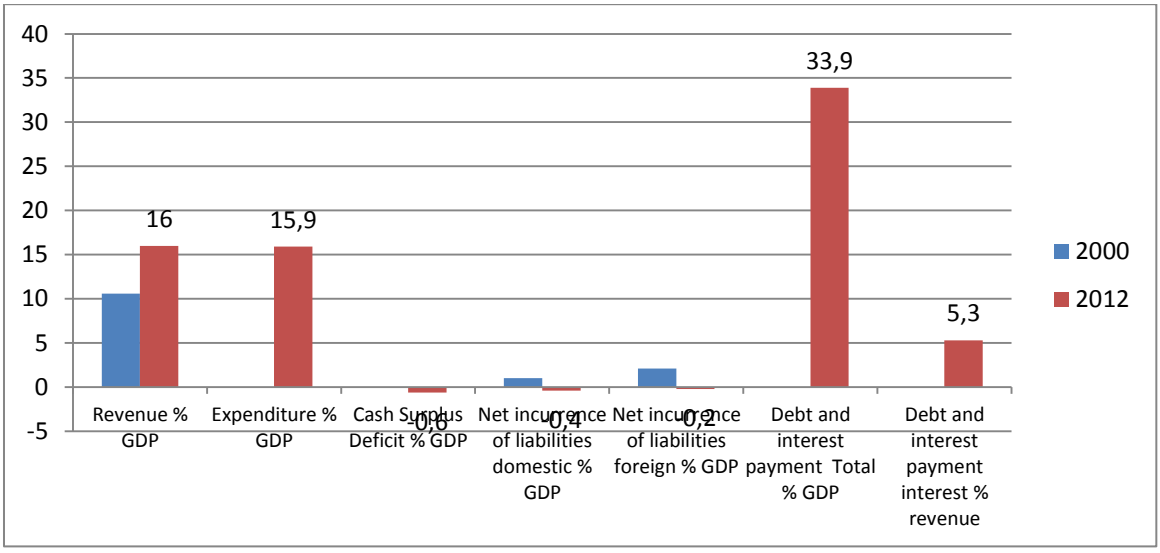
Although high debt services to some extent slowdowns Government actions it is possible with current resources to impulse economy further if savings are put into praxes to bring benefits to nature, humans and obtain further push to growth.

Toward a broader measure of saving % GNI



Picture 15

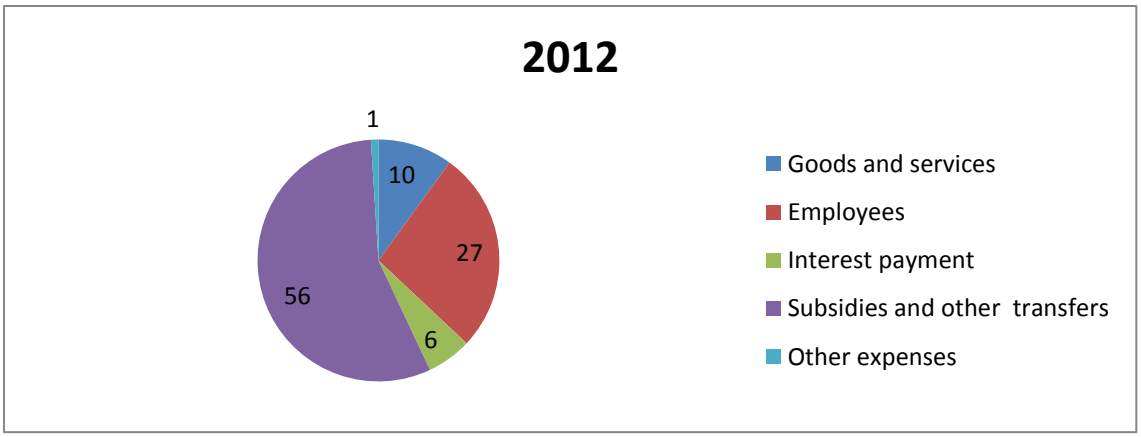
Central Government Finances % GDP



Picture 16

By far the largest part of Government expense is currently allocated to subsidies and other transfers with 56% of total expense, 27 % of expense is distributed to employees while 10% goes to goods and service purchase.

Central Government Expenditure as % of Total Expense in 2012



Picture 17

2. MODEL

Before setting some proposals for the model itself set of assumptions are laid down in order to explain motivation for the work.

Assumption 1.

Nepal has a unique geographical position with Mount Everest followed by 240 peaks over 6000 meters. This position makes the country more aware of potentials and limitations that come from geographical position. They are closer to Sun who is still 150 mil. km away, closer to Moon 42 th. km away, and stars which according to modern physicists tend to spread further from Earth as time goes by.

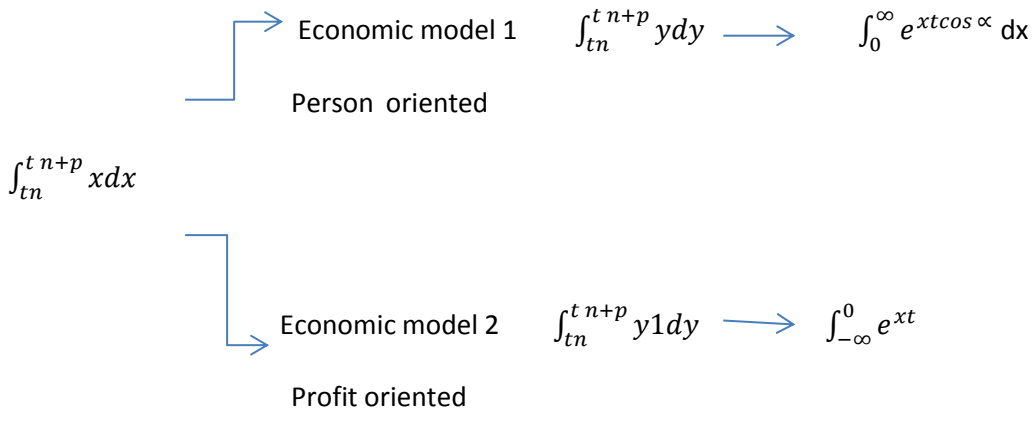
This position is a place of high geographical vulnerability and potential to understand value of each human being in respect to mercy of God.

The second reason is potential to change from certain old strictly Law oriented policy to one that is aimed at people benefit.

$\int_{tn}^{tn+p} xdx < \int_{-\infty}^{0} e^{xt}$ dx < $\int_{0}^{\infty} e^{xtcos\propto}$ dx

Assumption 2.

The second assumption is a prior calculation procedure that reasons pro and contra of solo profit oriented economies its ability to grasp attention and end people calculation of Community Service.



Y=f(person, employment, health care, human rights, social care, school, etc.)

Y1=f (profit maximization, human freedom nature protection as part of profit maximization scheme, new jobs as cost minimization policy etc.)

Assumption 3.

The third assumption is to realize that potentials can be achieved but significant effort in place of communication, explanation, community service creation have to be make. Current misbalances that exist on territory can be sometimes escaped as situation of running away from singularity potentials and calculating Schwarzschild ratio.

$d c^2 = d q^2 + \sin^2 q \; d t L$

$ds^2 = (1- 2GM/r)\; dt^2 + (1- 2\; GM\; /r\;)^{-1}\; dr^2 + r^2 dq^2$

$dw^2 + dr^2 + r^2 dt^2 = -c^2 dt^2 = (dr^2 /(1- (rs/r)) + r^2 dq^2$

y=a1+a2* economic model + a3* energy policy +a4* human policy +a5*agriculture, industry, manufacturing policy +a6 environmental policy +a7* praying

Assumption 4.

Once the model is put into consideration all market and economic participants and different population groups need to be aware of tasks, difficulties and desired results.

Y_1=a1+a2*x1+a2*x3+a3*x4+e

F (economic reality) = f(opportunities , rights basic, right to express, right to school , job opportunities ,pension fund, business opportunities, tax inequality / equally distributed , community service potentials etc.)

From one relationship potentials it further grows to more mixed and harmonious connections in society.

Y_2= a1+x1x2+x2x3+x3*x4+y1*y2+y2*y3+z1*z2+x1*y1*z3+z2*x3*y4+e

Function of relationships can be:

Employee –employer

Government -tax payer

Banks - entrepreneurs

Companies = market opportunities

Nature = best interest, pollution, fertilizer usage, usage of resources on optimal way

School= opportunities, new knowledge, way of teaching

Subvention-Government, Community Need

Assumption 5.

Too slow incorporation of ideas or prolonging certain measures can further contribute to slower GDP growth, or not enough Community Based Society.

A_1= dx/dy t +dy/dz dt activity in period time

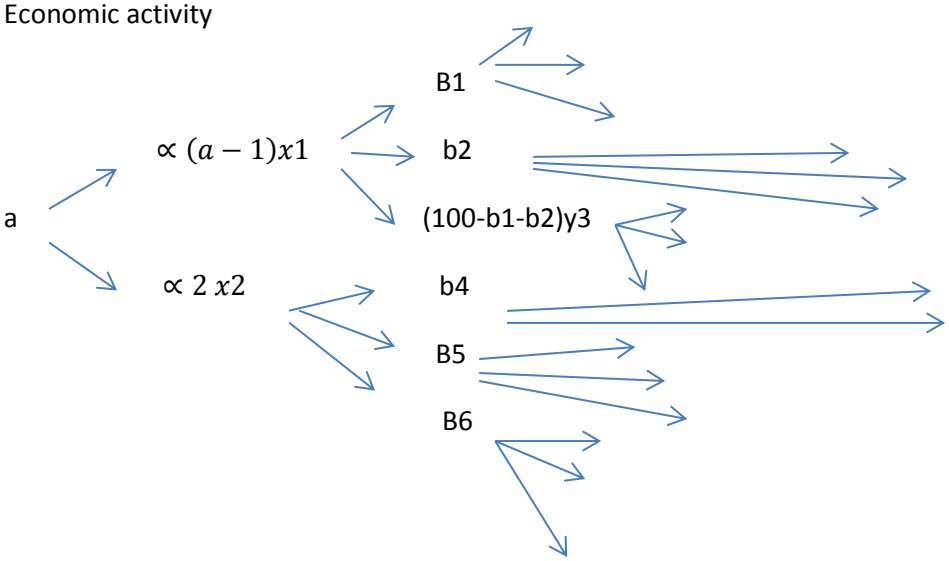
Economic activity = right time

Prospect =con+A_1* time +e ; A_2=A_1+policy in time +e

Assumption 6.

Once the model is established further acceptance of different economic paths need to be put into consideration.

Economic activity



Assumption 7.

It is needed to stress importance that two ways are possible and decide for the one that is nearer Community Progress instead of pure profit calculation without having in its calculation environmental or social issues.

$$\int_0^{t\,n+k} x\frac{dy}{dx}dt$$

Assumption 8.

Economic reality -what is possible and what will stay behind . This question asks whether this activity will stood the test of time or not in relation to:

a. Each person

b. Family

c. Local Community

d. State

e. Region

f. Continent

g. World

h. Plan that incorporates relationships and possibilities inside the current economic model with each step that pushes boundaries toward strategic goals with positive line of thinking-no harm policy

Assumption 9.

What is end aim and where the model leads :

Human Transformation

Potential Goals

Current Spiritual, Economic, Energy Activities

Past knowledge, experience, myths etc.

Past ,experience,intellectual. property, myths

Current Economic Model 1

Plans, interactions, improved Economic model 2

Transformation- Human society

1.)

The main idea of this proposed model is that in center of Economy stay relationship of man with other man, man in relation to nature and all relationships aware of enormous power of God and his mercy. This again can be put in the more simple formula linearly related main variables.

Economy of person= $m_0+a_1+a_2*x_1 *m_1+ a_3 *x_2 *m_2+a_4 *x_3 *m_4 +…+ a_n * x_{n-1} *m_n +e$

If this is calculated on Present Value

$PV= PV_1 +PV_2+PV_3$

Where PV_1 1% relationship person to person

PV_2 5% relationship person to nature

PV_3 94% relationship person to God's will and mercy

In PV_1 we have some values that are currently present but not available in any known model.

Economic Model Base = b_1+b_2 *social surrounding+b_3*love care+b_4 *security+b_5 *job activities + b_6 *schools+b_7 * pension security +e

This can be put in formula of net present values

$$PV_1= \frac{(Positive\ monetary\ relation\ man\ to\ man-Negative\ monatary\ relation\ man\ to\ man)}{(1+r1)1….n} +$$

$$\frac{(Positive\ non\ monetary\ relation\ man\ to\ man-Negative\ non\ monatary\ relation\ man\ to\ man)}{(1+r1)1….n} +$$

Error in model that is corrected in time $_{t-1}$+ Existed error but not observed in model +e other

For calculating PV_2 we need information about land that is under protection as valuable natural resource, land under different agricultural cultures, used fertilizer, number of cattle, started projects in nature, planned project that could harm or benefit nature etc.

Again it can be written in the formula

$$PV_2= \frac{(Positive\ monetary\ relation\ man\ to\ nature-Negative\ monatary\ relation\ man\ to\ nature)}{(1+r1)1….n} +$$

$$\frac{(Positive\ non\ monetary\ relation\ man\ to\ nature-Negative\ non\ monatary\ relation\ man\ to\ nature)}{(1+r1)1….n} +$$

Error in model that is corrected in time t-1+ Existed error but not observed in model +e other

$$PV_3 = \frac{(Awareness\ of\ Gods\ mercy\ in\ relation\ human\ to\ human)}{(1+r1)1....n} +$$

$$\frac{(Awarness\ of\ Gods\ mercy\ in\ relation\ humans\ to\ nature)}{(1+r1)1....n} +$$

$$\frac{(Awarness\ of\ Gods\ mercy\ in\ relation\ \ to\ person\ itself)}{(1+r1)1....n}$$

Error in model that is corrected in time t-1+ Existed error but not observed in model +e other

2.)

We are all used to different measurement and calculations when talking about economy. The most recognized and widely spread measure is in terms if profit calculation. In simplest form it states:

Profit = (Revenue-Costs) (1-Tax rate)

Although the profit is the most interesting topic at the end of conversion it still opens the way for tax calculation and sharing. Taxes in its various forms are further distributed on the way that needs to serve the public in general.

Tax Income Tax Profit+Tax VAT +Tax Luxury Goods +Tax Other =Current Expenditure +Funds +Housing+ Pension+ Health Care+ Schools +Other

Overburden of tax obligation can hinder economic growth, while to low tax can support groups that can contribute more not just in country but in the world as whole. While Nepal is a low income country it should concentrate on the distribution of wealth on the more social base and oriented firstly on social activities inside country.

It would be of benefit to closely monitor followings and publish on web pages of authorities:

Tax	Represents/Can be allocated to	Measures, Publish
Tax on Profit	Profit on revenue after all tax allowable costs are deducted/ Can be used for new Government projects in infrastructure etc.	Number of new schools, new hydroelectric facilities, new roads, lift service, hotels, etc. Place and project costs
Value Added Tax	It is added on goods service on the invoice/ While it is on all products it should serve to all population through nature protection, new housing, social programs, new schools and pension homes.	Number of new houses for poor, new families, number of new schools, number of pension funds, new protected natural sites, irrigation, etc.
Income Tax	It is part of personal income the best on progressive rate / Scholarships, government payment/payment for social service medical care	Number of personnel that work for Government, in hospitals, as social workers, institutions that help in community service, savers in different emergency cases etc.
Tax on property	Tax on property – low level-	Infrastructure – what where

	infrastructure and project for nature	
Tax on dividend	Tax on dividend- new factories open, new manufacturing facilities partly finance from this	Diversity on manufacturing in country, diversity in type of business, equal opportunity to find job
Tax on savings	Tax on savings over certain amount/ use for investment and care for older population	How many medical visits, old homes, minimum amount to pay without any income, additional amount paid to old people etc.
Tax on luxury goods	Tax on very expensive products or one that harms the nature; Divide it on social programs	What humanitarian projects is finance? How many poor families are helped in what sense?

3.)

The economy is changing constantly inside some given parameters. There is a significant advantage for the high income countries in respect of base, strength and experience in applying different tools and methods for further development. Part of this is government stimulus, taking the best scientists all over the world to work for further advances.

$Y= a+y_{t-1} + e$

$Y= a+ a_2 *Y_{t-1} +a_3 * y_{t-2} +e$

$Y= a+a_2 Y_{t-1} +b X_1 +e$

In the case that a GDP lingers at the same rate some change need to be incorporated into current model to provide stimulus. It can have different forms: increasing decreasing certain tax rates, improving political measures toward manufacturing agriculture, more meetings with international partners to improve export possibilities etc.

Additional measures can be:

Creativity =a+a1* help creative people in expressing themselves+ a2* reduce tax rate on creative industry+ a3* creativity in respecting nature man and offer growth solution +e

Innovation=b1+b2* offer young people good condition for innovative activities+ b3* offer foreigners good work condition to innovate+ b4* pray +e

Technological advances =c1+c2* open technological centers+ c3 *open software companies –no tax+ c4 *open manufacturing that create new technological advances +e

New model =d1+ d2 *consider some changes in current economic model+ d3* consider some changes in law model* d4* consider some changes peaceful in political model + e

4.)

Center of policy is a Man and human development with respect to nature, and Gods mercy.

Kindergarten = a1+a2 *number of kindergarten+ a3*number of children+a4*number of teachers + a5*activities available +e

School =b1+b2*number of childldren+b3*facilities+b4 teacher/child ratio+ b5* educational achievments+b5 artistic, technological, sport, science other achievments+a6 achievements in work (school garden) + a7*social activities +e

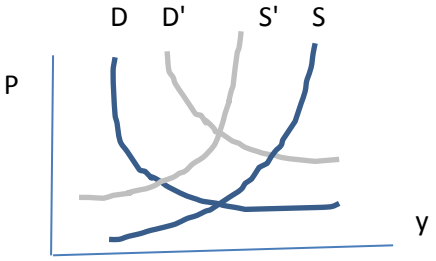
Job =c1+c2*number of working population+c3*number of unemployed person+c5* long term unemployment +c6 *short term unemployment +c7* sectors +c8 *number of job oppenings+c9 equal opportunity to open company +e

Each person =d1+d2* physical strengths+ d3* intellectual 6+d4 *technical skills +d5 innovation possibilities +e

Each economic activity is related to man but is not without profit consideration that is further directed toward all population advances.

5.)

Modern economic theory offers a large body of literature that explains relations between supply and demand sides of economy. Everything is tending to find certain equilibrium at output level and price. Some changes in policy can bring new equilibrium and set whole range of activities that work through economic multipliers.



Demand –Nepal	Supply -Nepal
Finding the equilibrium values of interest rate and output demanded by consumers , government , businesses given the price level	Supply in respect of labor supply policies (classical case complete and adjustment of P expected to Price); Keynesian case (no adjustment of P expected to Price) ; cost reasoning- average and marginal costs and productive efficiency reasoning
Changes in equilibrium variables on the demand side of the economy as a result of price changes are movements along the demanded curve. Changes in exogenous variables on the demanded side such as g-government spending an interest rate -r money supply-m or the tax schedule , shifts the saving function or the transactions demand for money shift the demanded curve	Different productive potentials, and labor union can bring additional changes in this structure
Demand shift - supply of money and its application further, shift in saving consumption habits, tendencies etc.	Supply comes from natural resources – water storage, management of water hydro potentials, labor competition in line with innovation etc.
Demand can be managed by government – what investment when, how, by issuing new bonds, influencing central interest rate etc.	Wage policy by government , industry , peer productive potentials etc.
Demand in country or for foreign projects; demand how influence private public sector; Demand influence on nature potentials and pollution, demand to much demand and too little quality on community service etc.	Supply- strong worker protection policy , supply natural resources potentials and natural degradation, expectations how they formed and what are the consequences for each sector etc.

6.)

Human activities are filled with aims, processes, procedures, relationships and measurement. Besides setting right goals it is periodically reported what is achieved and what else need to be done. Sometimes in that respect is visible that policy change drastically, or same small differences occur. To avoid errors transparent way of communication, and common decision making is wise to establish. It is especially needed in case of tax decision and way of tax usage.

Activities = $\frac{\sigma x \ \sigma y}{Corr\ xy}$

Tax f (income, profit, work, asset, gains, lux us, sales, other)

	Positive	Negative
Military	Certain allocation of resources for population to obtain minimum first aid, defense skills	Budget can be too high, not all population know basics about self-defense, first aid, is not transparent, can overstep boundaries ,etc.
Kindergarten	Number of new places, new buildings , modernization of existing, new activities inside current kindergarten, number of teacher per kind – standards , etc.	Too high cost over budget, to low interest for improving things, not enough financial capacities to carry on activities etc.
School	Type of education, teacher per pupil, illiteracy ratio low, number of computer per pupil, Internet usage, variety of education, extra program for talented, less skilled children, work with children to find the best possible solution for further education, travel from school to home is partly / fully finance by state	Only nominal measures are important, no real interest to obtain activities useful for life, improved educational system but pupils immigrate, too low rate of building new infrastructure etc.
Pension Homes, Care, Fund	Established secure, stable, center for old population where they can find medical care, have fund from population fees, government revenue and revenue from old pension homes itself (through various activities that are possible)	Care fund are not established, pension homes do not exist – everything is on family care, too high cost of pension homes, low transparency of costs and possibilities
Fund for nature	Fund for nature can be established in order to protect existing and widen its position	Do not exist, not all level of population are part of fund issues, profits and

	on broader area, manage wild life, and do engage in afforestation activities. Fund is established with lump sum of all citizen, all have one vote – right to express opinion about issues related, one share of right is given by birth in country, part of financing comes from funds /dividend yield from infrastructure projects	management of natural resources, too high costs, non-transparent way of running, do not involve population in afforestation
Expenditure	Transparent usage of tax means, change usage with the change in economic cycles in order to prevent bigger crises, protect the most vulnerable, be future oriented, etc.	Varies significantly with each new political party, is not transparent, there are no long term goals etc.
Investment	Have a long term strategy that is agreed on national level, projects ideas comes from community itself, allow population to be part of shareholders body etc.	Investment made from one occasion to another, no long term aims, no regional cooperation in building and running the investment facilities etc.

7.)

Model imp lays system of new values, monitoring, corrections and reevaluation procedures .They are all part of system and some activities can be seen in the new light once the model is accepted.

Activities =a1+a1* one big activity+ a2* many small steps (usually agriculture, small manufacturing) + a3*creative +a4*sports +a5*humanitarian activities +e

Errors=b1+b2*one significant error +b3 *many small errors +b4*cannot influence + b5 *is possible to change +b6* error of system +b7* error of calculation+ b8* error of negligence + b9* error of wrong system of beliefs + b10* history errors+ b11* error from positive relations+ b12 * error from conflicts, negative relations +e

To resolve the error potential problems and ambiguities some measures again can be established

	Positive	Negative
1.Measurement	To know how the economy and society progress different kind of measures need to be done. They should not narrow related to economy but include social, environmental , political decision ,nature protection decisions	Some non-important things are measured , while the most significant that relates to human wellbeing not taken into consideration
2.Control	Controlling the actions prevent unwanted results, ambiguities in spending decisions	Too high or low control brings additional imbalances in weak system. Can be used to overburden ones in that way avoiding the real issues that need to be solve. Some possibilities of adverse selection and moral hazard need to be recognized
3.Transparency	More transparent approach less ambiguities involved – do not omit poor population , foreigners, ill, disabled or in any way make discriminatory rules	Vague transparent reporting, not all variables taken into consideration
4.Conversation and prior conflict resolution, number of litigation cases significantly decrease	Lower level of future problems, help instead of litigation , during the process new ideas of community improvement can arise	Many people involved in problem can reduce real issues, ,there is a problem of partiality especially if opposite sides are minorities or other unfavorable group, further division, etc.
5.Community meeting	Conversation, issues seeing from many sides , real conversation is needed to be heard all members of society	Only laud are visible, communication is on the side of aggressive parties, money talks problems etc.
6. Creative skills, work on agriculture good, humanitarian work	Work brings people together and resolves many obstacles in real job activities ; new ideas, way of economic progress can significantly improve	Do not tackle real life issues , problem of financing can occur
7. Praying , different religious possibilities	Where is error , ambiguity , non-transparent picture of current or future position praying helps to improve the road this economic and social society goes	Praying is allowed only to one religious, beliefs, not enough appreciated God's mercy not incorporated respect for positive forces

8.)

Errors in system are possible and part of normal working process. It is a problem when they are overvalued or understated so right correction is not put in place. Certain possible issues can arise and are seen as follows:

Systemic error

	Systemic Error	How to avoid
Government	Frequent changes brings only cosmetic change without tackling the life related issues	Having long term strategic goals, firm economic model that is visible , clear and understandable to all, make transparent changes with political and economic change in the world without tackling the important – human oriented economic model
Tax Authority	Too high tax rates on new investment, some tax rates not incorporated, very rigid tax policy or changing to fast and rejecting investors further	Long term strategic goals visible, usage of tax means clearly defined and agreed on national scale, tax policy always need to attract new investors
Local Authorities	Do not collect proposals from population, do not communicate with population etc.	Day to day communication, incorporating programs in real life projects etc.
Fund managers	Only one profit measure, do not develop different kinds of model according to risk and ownership	Have different fund portfolios, measures are based on profit, future potentials, human satisfaction, ability to offer job, create new job etc.
Manufacturing Industry	Accept pollution industry , accept industry that is not able to adapt to world processes, not enough creative or oriented to quality products	Organize pre-feasibility study discussion for economic but also for environmental issues. Compare standards in the world, potential quality and innovation potentials.
Agriculture Policy	Rising level of fertilizers without control, spending too much water, not having long term agricultural political aims	Long term policy Closely monitor pollution Planned irrigation Wide base for skills Government supported activates are subsidized or with lower tax rates Offer supporting loans on certain mechanization facilities etc.

		Have government – people land – that everybody are accepted to work
Monetary Policy	Set to low or high interest rates, increase money supply on too high levels, do not control or try to influence main variables with economic cycles that are present in the world	Good monetary understanding of processes and acting according the need in country and out of small open economic model

Random error

	Random error	**How to avoid**
Government	Make one way popular decision that solve current problem but is not long term oriented, Some investment , tax decision based on lobby related interest etc.	System of public decision making
Tax Authority	Make constant change of tax rates , set tax rates on income profit too high for current level of GDP	Public discussed issues
Fund Managers	Investment based on vague profit promises, manage other money with low level of care, too small options, do not offer additional information for investors	Many funds available, Strongly diversify natural resource fund, pension fund with high risk profit stocks
Manufacturing Industry	Investment that is not in line with profit, human job skills, not nature friendly	Workers cooperation, community response
Agriculture Policy	Too high level of taxes, repeal subsided where are needed and improved on false base , do not support small income family farms, etc.	Control groups, social workers that protect the low income groups, Strong environmental friendly community system
Monetary Policy	Rise interest too high/low Rise money supply too high /low	Economy declines – changes need to be made- possibilities of public to influence

9.)

Although model starts from bottom of the society structure and is pointed toward community service, realization of full scale skills and potentials of each individual it is also dependent upon government decisions, their model of management and communication with regional and world economies.

Conversation= a1+a2* clear methods + a3* legal demands + a4* letters of recommendations +a5* oral skills +a6* presentation, marketing +e

Information Top Bottom/ Bottom Top = b1+b2* clear understandable +b3 vague +b4* need additional clarification +b5* requires immediate response +b6* have no priority demands +b7*informative + other

Providing right information from community to local social, humanitarian, manufacturing industry , natural reserves , community authorities, regional and country authorities and the other way round is essential for clear understanding the need, priorities, potential dangers, projects observed , etc.

To have this communication as clear and correct as possible avoiding noise in channel, miss interpretations, personal preferences and believes different channels of communication need to be put in place. It is achievable with greater number of computers, Internet connection, reliable post, fax, telephone but also community meetings and spots where ideas are possible to interchange would be good to establish.

The aim is a human welfare and recognition of all problems that can occur in labor or capital reasoning. In other word saying proper communication –not a one with spins and conversation for its own sake- but one that tackles real problems of production.

Production is in relation of capital, energy and labor and these are in this respect more thoroughly observed with additional suggestions to improve.

G=f(K,L,E)

$Y= K^{a} * L^{(a-1)}+ E$

$L= K + \frac{dK}{dL}dt + + \frac{dK}{dE}dt + \frac{dE}{dL}dt + \frac{dL}{dLeff}dt + e$

L = labor f(number of new openings, potential places to work, efficiencies, free time, utility preferences, measurement of time value , creative potentials, all life learning opportunities etc.)

$K_{t}= a+ K_{t-1} +$ Investment $_{t-1}$ + New Financing Opportunities +e

K= capital f (initial capital, additional requirement, potential projects, small scale projects, problems of capital pollution relationships etc.)

A strong input force in production and communication relations are in form of energy. To have available, low pollution, low cost energy is an aim of even by the greatest economies on Earth. Nepal can have energy from hydro power but need to invest in operative measures and establish small

scale additional projects that are in line with environmental protection. In that respect Community will growth with potentials of direct job openings but as place of additional opportunity to invest in small scale manufacturing or industry potentials.

E = f (Energy/Capital ; Energy / Liability debt Existence; Energy /GDP growth ; Energy / new manufacturing or industry projects ; Energy /direct labor opportunity ; Energy / indirect labor opportunity ; Energy /Vouchers for CO_2 free production in respect of trading with this with China or India etc.)

10.)

Different kind of economic systems are present in today's economic structures around the world. Some of them have cyclical appearance, some are transitional with more or less clear aim where they are going, and a few of them behave as others letting the market to regulate all problems. Beside a desire that each country is specific with its own goals and systems – what to some extent is true – it is observed that in crises open market oriented economies such as USA problems are solved on state level (State/ Banks in 2008), while former socialist economies behaves randomly leaving the market to establish demand/supply relations. Still some basics are possible to be marked and Nepal economy can learn from them in order to avoid same mistakes.

A) Profit Oriented

Question of :	**Formula**	**Note**
Profit	Revenue -Costs	Profit strongly demanded and put in relation to everything: -Profit calculated from past achievements -Profit in future discounted in today's picture -Profit from having or not certain natural resource -Profit from humanitarian activities as tax deductible item etc.
Capital	$Capital_t = Capital_{t-1}$ + New Financing Opportunities	Capital is important and strongly protected. Strong difference between private /state; Financing make available on all possible ways – interest reduction to their negative values, stock issue possibilities etc. Different kind of games in obtaining existing capital in one ownership structure etc.

Banks	Banks = f (Capital, Political Protection, Country of Origin, Question of Collusion between Other Banks etc.)	Smaller banks are often part of wider network, Capital is important as well as political position, Creator of potential economic policy with different kind of loan possibilities, Interest rates differ so poorer countries have a greater risk of default so are charged with high interest rates etc.
Labor	Many forms of self-employment to work for private or state ownership structure	Salary varies significantly, huge difference between a common worker and manger who has many benefits (the most of them are put in special contract and they can be rewarded according to company profit potentials)
Nature	Form of good /private or natural protection sites	Fee to enter, protected private goods,

B) Socialist Economy - Ex Yugoslavia

Question of :	**Formula**	**Note**
Labor	The majority of workers employed at state - public work places	Very small difference between a common worker and manager (1,5 -2 times max) salary. It is not possible to fire a worker- he is the most valued and protected social welfare. Labors are rewarded with state apartments ; have various benefits of low cost hotel resorts at Adriatic Sea or in winter resorts
Ownership	Everything is in hand of society state ; Small number of private entrepreneurs	Ownership of state companies is not possible to individual investor, or foreign shareholder
Profit	Calculated as Revenue Cost	In many companies profit calculated as must result
Loan	Many burdened with loan	Domestic loan and credit institutions Foreign loan credit institution No financing with stock issues
Compensation	Widely spread	Those who have help those with problems- circulation of money among companies so everybody can be able to pay salary to workers
Nature	Common good	Protected as must, have natural protected areas that are runner on same principles as western counterparts-entrance fee

C) Transition Economy

Question of :	Formula	Note
Ownership	Change of ownership	In many cases not clear what is basic principle of ownership change. It can vary from case to case.
Profit	Become important category can vary with different accountant techniques	Profit becomes important once ownership is firmly established. Until this time profit can be decreased in order for more favorable purchase of a certain facility
Labor	Labor is differentiated to Private/state In labor union /out Part of political party /not Other differentiations	Different treatment for workers at private and in state run facilities; Different treatment of worker when parties are changing place etc.
Capital	Become important in obtaining initial newly privatized good	Relation between capital/banks Capital / eligible buyer
Nature	Become a part of transition process	Partly privatized, partly run as state good

D) New Economic Model - Nepal Model

Question of :	Formula	Note
Social Protection	All citizens are paid minimum sum of money	No one is hungry or left the street or the person itself rely only to himself
Human Values	Well established	All equally valid and with equal chance for school , job .Those with less natural capabilities find their place in system
Nature	Increased value of nature and area under protection	Fees to natural goods as part of tourist sites and common good; Funds that include all citizens that own natural resources but without possibility to sell
Relationships	Relationships important and source of GDP growth	Potentials in respect of communication Community – Government-Industry Agriculture-Education etc.
Profit	Is recognized and calculated as Revenue –Costs	Profit potentials recognized in large infrastructure projects - manufacturing facilities, industry -profit from tourist and agriculture also put in picture

An individual	Guaranteed rights	Each has the right to kindergarten school job and pension fund. All minimum amount of salary. Potentials are established at school and community helps with progress

11.)

One the model is chosen the way of putting it into practice is needed. It is a project without end and with constant widening of different relationship potentials.

Gravity model –pyramid of relations

X1

X2 x2x3 x1x3

X4 x4x3x2 x3 x2 x1 x1

X5 x5x4x3x2 x4x3x2x1 x5x1 x2x3 x3

X6 x6x5x3x4 x6x2x3x1 x6x5x4x2 x6x3x2x1 x1

Possibilities and strategies inside the Nepal Economic model:

Model	**The majority of population is agreed on Economic model**		
Fiscal Policy	Fiscal policy exists, but is oriented toward human benefits; It can be changed from top/bottom and other way round		
Tax rates	Low tax rates to low income groups , new families, smaller agricultural producers, manufacturing startups etc.	Mid to high tax rates according to profit, income , Allow new investment to start with lower than average in region tax burden Do imply tax rates in case of polluting activities	Allow tax distribution change as the priorities in country change – from poor country to mid income –different priorities to finance
Saving	Reward saving with law tax rates, Differ saving from individual and companies in tax policy	Saving brings additional potential , and security to individual, company state- offer different models to combine current future level	

		of savings with housing facilities	
Government spending	Potential for investors, individuals, transparent	Clean calculation and understanding of cost benefits in future for population	Can be done with foreign partners investors but certain ownership share (no more than 25%) should not be overstepped
Monetary policy	Have monetary policy measures. Central bank in charge of main variables but it is possible to induce influence		
Interest rates	Offer lower interest rates for new projects	Have opportunity to reduce interest rates if Community is behind the project	Offer new models of financing house, land, manufacturing facility etc.
Loans	Different kind of loan as in western economies	Collateral can be Community	Government financing of new housing facilities have favorable loan potentials
Foreign relation	Important in respect of promoting peace	Important in promoting tourism	Vivid and strong relation in promoting medical , agricultural goods, manufactured products etc.
Export	Based on high quality agricultural end products	Services- creativity, Tourism, development of software for example	Infrastructure related- water storage, potential of irrigation, hydro energy etc.
Import	High tech products, products	Agricultural product that cannot growth ; pesticide , plant protection	Machinery etc.
Custom	Differ priorities and set custom rates according to ; many products that can be produced in country are imported so should have higher custom rate		
Social policy	Strong, based on nondiscriminatory values, equal protection of all population		
Pension	Each person entitled to minimum amount of pension, it growth with labor achievements ,risks, effort etc. during work days		
Health	Basic health protection for all, children all the best possible medical protection even setting out in foreign countries, or buying medicine abroad.		

12.)

Population policy and future consumption are strongly interrelated at low level of income but as the income brackets differ consumption pattern also shows wide range of possibilities. It should be of benefit that some consumption pattern are kept in borders (*additional caution is observed by Nepali economist who establish that rising immigration brings further rising import of goods and lower manufacturing and poverty reduction measures in the country itself*).

dY= di+c'di+c'(c'di)+….

PV consumption = $\frac{(Receivables-Consumpton)}{(1+inflation)\,1}$ + $\frac{(Receivables-Consumpton)}{(1+inflation)\,2} + \frac{(Receivables-Consumpton)}{(1+inflation)\,n} + e$

PV $_{consumption}$ = f(domestically produced goods, imported products,price, income, consumption habits, savings potentials ,age, preferences, etc)

Ways to reduce the poverty are:

a)Right tax policy

Change tax rates in line with aim to reduce poverty

b) Subvention

Offer subvention on agricultural production , cooperation between sectors, new innovative manufacturing potentials, etc

c) Funds

Have many funds that are related to large profitable infrastructure projects and end up by end consumer

d) Social service

Each village street need to have social service or a person in charge to collect and try to solve problems that can arise. It can be as monthly money support, physical help, emotional support etc. Further Community Involvment can be of use. Develop medical team on voluntary basis that help in case of natural disaster, Mountain Rescue Service, etc.

f) Basic school and medical care free for everybody

g) Very strong policy toward child labor, discrimination, abuse etc.

13.)

Geographical special position points toward natural leader in many issues and topics. Country potential to peacefully resolve issues can be of benefit to others. Some international center that could have variety of impacts on world matters can be build and put into operation.

Income in that way would be as

Y *total* = Y f (*Advisory role in international matters)* + Y f(Goods, Services) = $\frac{A(L)}{B(L)}$ xt+ $\frac{C(L)}{D(L)}$ *e $_t$

Advise = f(web pages, spiritual prayer for peace and harmony in the world, prayer for all people to be healthy, international center meetings, magazines, etc.)

Who	What
Government	How to have a model that is directed toward human satisfaction and welfare strategy that is equally oriented toward all level of population
Spiritual Guidance	Pray for Peace, Pray for Harmony, Pray for Mercy
Nature	How to increase number of protected sites, achieve afforestation with work of all population
School	How to rise creativity, happiness in school, new knowledge's with cooperation among pupils themselves and teacher who can also be part of cooperation / creative process among pupils and other teachers
Social service	Rise a level of social awareness with voluntary works, door to door help, a guarantee minimum wage to everybody
Humanitarian Organization	How to resolve peacefully conflict situation –training advise praying
Industry	More cooperation between population and industry in respect of new projects, improving existing etc.

14.)

Nepali model do not imply the same wage rate for all population and do not tolerate that some good work, effort or new and innovative ideas are not rewarded. Also what is to note that work is necessary because of basic human need to create and to share its achievements with Community whether is it a word about local or global village we are placed into. In that respect tax rates are tailored as official corrector and some good deeds and sharing is implied and incorporated in educational and spiritual process of each individual.

Different jobs and occupation have demands that differ and end salary formula can observe and recognize this specificities. It is a usual in modern economic theory that salary formula is a function of some pre agreed base, incentive, observed and unobserved exogenous effect. This effect can be in form of revenue increase, new markets demands, some good and potential innovative thoughts that brings further benefits etc.

W 0=a+b*(e+x+gy) ; a= base salary ; b=incentive ; e =observed effort ; x= observed exogenous ; g=unobserved efficiency ; y = exogenous effect

Beside these widely recognized and general salary statements some specific occupational requirements and achievements can be put in work:

W1= b+b1* hours worked

W2=b+b1*hour worked+b2*articles finished +b3 *tolerated errors +e

W3=b+b1* new creative ideas + b2 *creative products+ b3 *goods finished +e

W4=b+b2* number of people to communicate +b2* potential impact on marketing +e

W5=b+b2* work with children +b3* hour worked+b4*extra curriculum offered+b5* creative social work outside school +e

This methods and lines of thinking can be found in very advance and rich societies. The expression however that is unique to Nepal model is general one:

Each individual = Same number of shares in funds for natural resources given by birth not sellable + Base amount that is guaranteed after 18 years till dead (social security small amount) + Potential to invest in funds with infrastructure projects –not sellable outside community + Work achievements w0 + Specific demand of work occupation W1 + other no specific potential secondary occupation in line with moral and spiritual standards laid down in educational process + e

For worker protection salary can incorporate some ideas of errors. It can be laid down in the first steps of working experience. What is new for this model is that errors are not subject of punishment but conversation and process of learning. Errors are limited to person ability, job opportunities and if repeated some new possibilities need to be found inside the system but educational process /experience is the base for each working place to be matched with potential employees.

$W = a+b*(e+x+gy) - errors_{\text{to agreed amount}} + e$

The potentials to expand the wage formula are different insurance policies that protect either investment or to some extent cover management mistakes. There are many insurance agreements that actually only cover construction leaving workers unprotected. This imbalance of importance in working process sometimes can lead to moral hazard problems which can be avoided if the worker and his working place are insured together and seen as important for working process. Management decision can be also insured but to some certain pre agreed job description.

$W = a+b*(e+x+gy) - errors_{\text{to agreed amount}} + Insurance_{\text{workers and working place pre agreed job description}} + e$

15.)

Model recognizes the need to be part of modern economical working and decision processes but is always aware that some specific determinant and measures need to be done in line with Nepal history and desired place in the future. What is actually creative in model is that it incorporates future economic model on today's base but not as wild balloon type economy that lives cycles on expense on people but well-tailored community model that put each individual in the spot place.

In that respect model recognizes the main drivers of modern economic thoughts such as income, savings, tax rates, consumer behavior:

1) $Y = C+I+G$
2) $Y=T+S+Ct+I$
3) $C = c_{t-1} + c_{t-2} + c_{t-3} + \ldots$
4) $C = (Y-S(I))$ Function of Tax policy

But tailors future and current model always considering the potential to improve, to go back to community and resolve issues

$C = b0+b7*Time$ Determinant

$Ci = b0+T_{t-1}+e$ Stochastic (e – determine to observe historic, possible future happenings)

16.)

Planning and analysis can be useful tool for economic thoughts. Some community decision making process, or recommendations made by experts can be further laid down to explore real life, financing, implication measures.

Communication and implementation plans; people who are in process (workers, users of services, goods, end consumer, policy etc.)	Regional planning –existing and planned potentials
Drawbacks Financing opportunities	Combination of activities :social and infrastructure, educational and agricultural for example

Each step can be divided further into many new potential jobs, opportunities, realized obstacles and historic back up processes.

Future communication between regions	Communication on the regional , world level	Current regional potentials	Future in each region
Current procedures in each place	Current communication between villages, towns, industry and population, Government and population	Certain region now	Many regions current economic structure
Current problems	Future possible problems	Where to place which activity	With whom to realize certain project ,idea
Financing opportunities	Realizing errors and ways to prevent those observed	When to introduce new measures	How to properly combine activities between different sectors

This pro and contra, different scenarios using many variables as possible can be good as a measure of learning, prevention of negative scenarios, further improvement of Nepal model, better project understanding in future etc.

17.)

Some of mistakes this ways of economic thoughts can be improved in this model as realizing that the base can be personal achievements, but without a sense that individual strength are limited and subject to enormous mercy of nature, space and God some basics can be omitted.

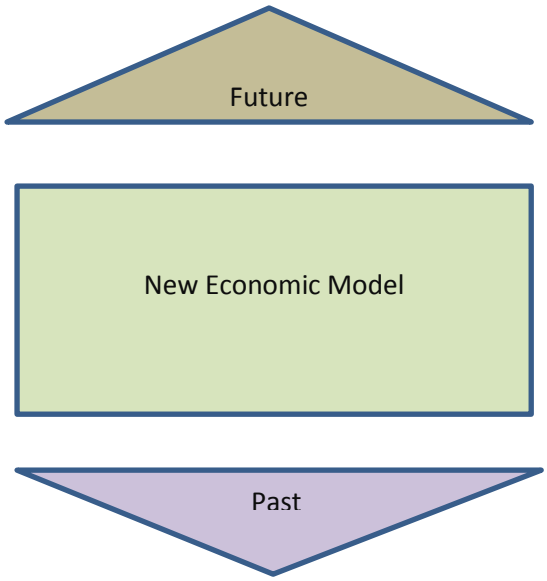
$Y = y_{t-1} + e_{systemic} + e_{individual} + e_{nature} + e_{spiritual}$

	Note 1	**Note 2**
Systemic	System follows world economy in the way only copy and not incorporating specific geographical spiritual needs of people	System is too much oriented on past ; or future benefits
Individual	Too much dependent on success and little on mercy	Put a right man on the wrong place
Nature	Do not recognize the danger of taking nature richness for granted	Pollution out of control, too much profit calculation out of nature potentials
Spiritual	Do not recognize the spiritual values of each human beings	Omit mercy and pray out of life

18.)

Model in that respect incorporates set of existing values and historic errors shaping it in the way always looking at current, historic and future goals.

Model now= Model in future / On current model + Model in past *(1+ errors) $^{1..n}$ + Model now f(history, future needs) +e



19.)

How to calculate the potential investment, secure the investors and shareholders wanted profit is examined to high potentials in profit economies. Transitional economies on the other hand enjoyed the period of selling existing facilities, making high flyers who manage to profit from newly shareholder structure and new potential of emerging markets as a profit oriented means to local and global players. Socialist economy also realizes the potentials of profit but was more readily to distribute it evenly and limit the high profit gains. In that respect some of findings in modern calculation of profit rate by means of recognized method WACC –weighted average cost of capital is presented. Basic formula starts from notion:

PPTK=r_e* (E/(E+D)) + r_d*(D/ (E+D))

and with tax rate incorporated it states followings

PPTK=r_e* (E/(E+D)) + r_d*(1- spd/100) * (D/ (E+D))

		Note/Potential issues
E / (E+D)	Equity share in Total liability structure - current or aimed	Does not take into account different equity structure or shareholder preferences
D / (E+D)	Debt share in current Total liability structure – current or aimed	Can be very quickly changed –if certain market disturbances arise, what is preferred debt structure is different between loan taker and bank for example
R_f	Risk free rate- interest on long term government bonds	Some future deterioration are not incorporated
R_M	Return on market – market index for certain period of time	To some degree correct- but maybe there are many companies small manufacturers that are not listed but present a significant economic potential
Beta industry company	Systemic risk, measure of volatility with market	Can be changed with new market potentials, dangers, cannot be right measure if not all companies are listed
$r_e = rf + b * (r_M - rf)$	Return on equity	
r_d	Interest rate - measure of debt- can be calculated as interest on some debt or risk rate added on risk free rate	It can differ from bank to bank, vary variable on different markets in rule it is higher in poor areas and lower almost negative in high income economies, these can be changed if banks for people are open inside the country, banks for small manufacturers, government

		offers certain loan arrangements etc
spd	Tax rate	Tax rate can be changed in future periods with new legislation, government decision, etc
WACC	PPTK=r_e* (E/(E+D)) + r_d*(1-spd/100) * (D/ (E+D))	WACC –general measure have limitations do not offer right rate if it is related to social project or environmentally aimed project

20.)

For Nepal Agriculture presents a place of stability , growth in times when other sectors are under strong influence either from region or inner inefficiencies and this sector need to be helped and supported further. In that respect all data need to be put into data base . In that way for example agriculture is further helped in respect to animal, plant ,vegetables and fruit production. This is the base for further manufacturing growth possibilities measures that makes all human activities (taxes, subvention, work in schools, institutes, industry) can be related to this sector as well.

Agriculture A = a1+ a2* X1 (Type of production - vegetable, fruit, husbandry, cattle, sheep, goats etc.) +a2*X2 (Yield per measure convenient for geographical structure of country) +a3*X3 weather conditions +a4*x4* (Labor force only income) +a5* x5 (Labor force second income) +a6* x7 (Labor force third income, additional activities in schools, in old homes, by factories, by Government institutions etc.) + a6 *x6 (Fertilizer consumption, production activities yields) +a7*x8 (Real emissions, pollutions directly linked) +a8* X8 (Indirect pollution through production of fertilizers, other activities) +a9* x9 (price of goods at domestic market) +a10 *x10 (Price of goods at regional market) +a11* x11 (Potential for further manufacturing sale) +a12*x12*(Potential to export –if manufactured on far markets Europe, South America, Australia, South East Asia etc.) a13*x13 (Constant education of agricultural workers) +a14*x14 (Care and tax benefits to older and weak members of societies that has agriculture as only income) + a15* x15 (All other relevant issues –prices of fuel, mechanization, weather disturbances, subvention etc.)

While this sector means broad base of activities some local centers can be put in place that have several services:

1. Peaceful resolution of conflicts
2. Very fast and just resolution of ambiguities arose in activities in village, agricultural land, town etc.
3. Fast information about potential to growth – possible lease of manufacturing equipment, type of seed, fertilizer measure etc.
4. Distribution of information to/from local to center

21.)

Community Centers are places where information's, measures, support and any help can be given for local population but also four tourists. It is a helpful to have this centers that would provide swift information and service. The stress is on fast and all –where especial role is given to the weakest members of society.

$$f'=f*\frac{1-\cos\alpha}{sqrt(1-\frac{\frac{v}{v\,fastest\,observe\,measure}}{\frac{v}{v\,fastest\,observe\,measure}})} \qquad t=t*sqrt(\frac{time\ \max poss-v\ real}{time\ \max poss+v\ real})$$

	Problems	Aims	Gains	Future
Primary school	Live far from school, not enough educational possibilities, lack of money, obligation to work at home on the farm etc.	All children free education ,equal opportunities , measure personal interest and advise for further possibilities	All population literate and available to have several options according to personal possibilities	Sound base for future achievements in any field that child is directed to, healthy base for satisfied individual
Secondary university	Lack of funds, No school in wanted field of study Problem with housing Do not know future labor market needs	Distribution of resources that can help overcome financial barriers	Right person at the right place, more educated and healthy nation	Base for further labor, capable to achieve goals of society
Labor	Not enough jobs, hard to pre-qualified, very hard to change occupation	Full employment ; each individual paid for services, worker is satisfied with job and his contribution to society ; no man is extra for company, institution or system of labor	Additional effort, some more ideas and possibilities in land and on international market, high GDP growth for society	Each aware of his potentials, can contribute with extra work and innovative ideas and have real award for achievements in respect of money and better opportunities for others in society
Pension	Lack of system, system is not functioning, system often changes what brings ambiguities	Stabile and good system where each is guarantee a minimum amount of pension whether	Stable system brings additional benefits in respect of people that decide to stay or	Development in stability , rise amount, invest in concrete on Earth projects

	for management of resources	worked in factory or staid at agriculture	contribute to country	
Unemployed	Not able to find work, not able to find work in specialized field, work is far from home , etc.	No unemployment or those who are unemployed to contribute on some other ways	Stabile country , no immigrants	Security and potentials to rise in respect of population planning , business set up etc.
Ill, not able to work, other problem –social structure	Lack of hospitals, no home care, lack of proper education etc.	Build more hospitals, modernize existing, exchange knowledge with international community	Help others and create new potentials in that way	Each member aware of his importance and value

The second arm of productive society is industry and manufacturing. While Nepal is surrounded with very competitive strong powers in that respect it faces difficulties in making his economy diversified and competitive if compared with potentials of India or China. This fact should not stop the country to develop , diversify manufacturing and industry in country while this is the sector that can bring further help to the above mentions aims.

The first step is some basic economic reasoning's:

Industry, Manufacturing =a0+ a1 * type of industry +a2* set up investment costs +a3* financing burden +a4*market for products +a6* workers educated +a7* right type of management process +a8* possibility to transfer production to other type of goods + a9* other topics

The second step is putting toward society and government :

Industry Manufacturing =a1+b1*loans possibilities +b2* Government resources help to small entrepreneurs +b3* paying a right amount of taxes (not to heavily or too low tax burden) + b4* (broaden market from products in support of government) + b5 * employs local workers +e

The third step is involvement in society:

Industry / Manufacturing =a 1+c1 *obligation to contribute to education +c2* building reparation of schools+ c3* building modernization of pension homes + c4 * involvement in social activities + c5 * measure of income allocated to local community projects+ e

22.)

To achieve a certain goal policy short, mid and long term measures must be collected, evaluated and further prioritize in order to realize.

Measures in each vulnerable sector dependent upon government help, donation, goes from tax collection or is part of community /industry cooperation.

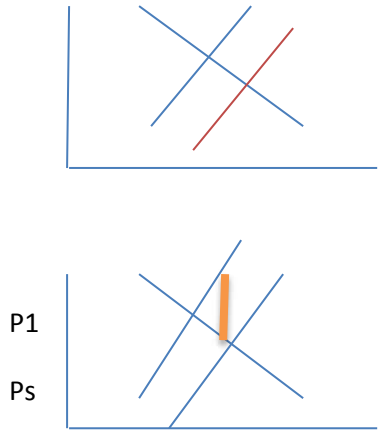
	Policy measure 1	Housing	Funds
School			
Unemployed			
Employed			
Pension			

A subsidy is a form of financial or in kind support extended to an economic system -sector institution individual business – generally with the aim of promoting economic and social policy.

The most common are those for producer /consumer. Product subsidies ensure producers are better off by either supplying market price support, payment for factors of production. Consumer subsidy commonly reduces the price of goods and services to the consumer. Government promotes welfare –housing tuition.

If it is assumed that the market is in competition equilibrium a subsidy increases the supply of the goods beyond the equilibrium competition quantity. This imbalance creates loss. The magnitude of the loss is dependent of the size of the substitution.

Some activities in former socialist or Asian countries are more subsidies than other. It can be a word that subsidies go too long for one measure and do not give results. For example if gasoline price is subsidized than there is lower incentive for people to use train , bus or investment in biofuel some other transport means does not goes as planned. To high subsidies for too long are subject of discussion among economist especially market oriented who consider they are one of causes for market distortions.



This line of reasoning can be correct if subsidies go to industries or production facilities that can easily be substituted or can increase production without additional support.

Subsidies are however very useful in creating new opportunities, goes into social sector, changes its end goals making competitive edge to all potential and existing low income groups, works toward support and creation of market in country but as well abroad etc.

23.)

What is usually measured on the market is following indicators: market capitalization, profit, and revenue and future business opportunities. Varieties of management decisions, small steps and inner politics are often unobserved.

One particular expenditure that could have a high social value and is often widely publicized lies in the field of donation. This cost can be part of tax exemption procedure what brings further benefits to company profit structure. It often lies in the hand of management who prefer one sport over other or decides about one donation among many different social needs.

For Nepal there is new approach to the subject. Donations are part of business and way of life with community; they came from community itself and region not from management preferences. They are fully tax deductible and serve as measure to improve cumulative wealth of population.

This donation end goal are later followed by Lorenz curve that shows on one axes cumulative share of income earned and on the other cumulative share of people from lowest to highest level of income. This curve that is a good representation of inequality where the lowest point measure perfect inequality can be good measure to show how step by step work in line with common goal can achieve results.

Fi=i/n si =$\sum_{j=1}^{i} yi$

L(F(x)= $\frac{\int_{-\infty}^{t} t\, f(t)dt}{\int_{-\infty}^{\infty} t\, f(t)dt} = \frac{\int_{-\infty}^{\infty} f\,(t)dt}{\mu}$

L(f) = $\frac{\int_{0}^{F} x(f1)\ dF1}{\int_{0}^{1} x(F1)dF1}$

X(F1) =inf (y: F(y)> F1')

24.)

Today's trend and necessity by many economic and market participants are collecting and presenting various Data Bases. It is possible to collect and present all sort of data – in this paper ones that are of especial interest are economic and environmental ones. It is a system that collects, compares, put some forward looking statements in order to inform, make certain benefits to organization that are involved or put in line certain policy procedures. If put on web freely serves the public interest as well.

For country it would be of benefit to establish its own system of measurement to compare its own strength weaknesses and to promote its own model successes.

Classical Data Base

	GDP	GDP/growth	Inflation	Unemployment	Sectors as % of GDP
Country 1					
Country … n					

New Types of data

	Inequality decline	Social participation	New innovative skills from community	New housing for low income groups	Number of new trees etc.
Country 1					
Country….n					

25.)

Part of process of model making as well as economy management is to deal with expectations. They are firmly incorporated in the life of each individual in all aspects. The increasing number of valuable research papers comes daily and explains different results of expectations –large number deals with price expectations. Two major lines of expectations are present:

The first one is the group that changes its expectations in line with adaptive process - the prices are changed in due course following certain rules.

$P_t = a(P_{t-1} - a * P_{t-2}) + e$

Another line of reasoning lies in the area of random process – prices are changed in the process of random jump procedure.

$P_t = a + a_1 * P_{t-y-1} + e$

In making model to work a certain goals for each period are to be established and policies and procedures put in practice.

$M_1 = step_1 + step_2 + step_3 \ldots + step_n + e$

It is important that complex structures are explained as clearly as possible, be published and agreed publicly and tried by all levels of population to put into praxes. The level of error in that case will be minimized. It is a probably the case that errors are higher at the first years and decrease in time. This type of management is partly present in today economy, management policy, political structure or even by culture such as for example new movies or music presentations. It is observable and differs in pre work, work and post work period.

$Issue = Y_2 - Y_1 - Y_3 - Y_4 + e$

Positive numbers (news) are interrelated and controlled by those who manage the process. Sometimes it is possible that some bad news that is expected tried to be compensated with series of goods news or time between these processes is controlled. These expectations management can be valid to certain extent but could also lead to further deepening of existing problem.

What is new in Nepal model is clear understanding of the importance of involvement of all population in economic model, no calculation , or strategies that puts its own burden on others usually weaker members of society, playing with good/bad news as part of tactic or strategy but real desire for better life in line with nature for all.

26.)

Errors are to be expected in the first time but as the model is implemented errors are less visible Problems or errors to speak can be managed in the way to recognize the difficulties in the process and manage weak spots. In that way insurance of accident or preventing of negative turn of events is clearly understood by population and not the subject of potential misunderstandings, dangers, under cover problems.

In that respect some cases are presented as follows:

INFORMATION	Information about potentials are clearly understood and presented publicly. No hidden agenda
ACCIDENTS	Put in operation –weather service and protection force, educate people about environmental and weather dangers, do not allow some extra high dangerous activities from domestic or tourists etc.
ENVIRONMENTAL DEGRADATION	Insurance, education, fund , expand the territory of protected area, common works
UNREGULATED ACTIVITIES	Activities do not need to be regulated carefully and monitored in the policy type of action. All activities –made freely in line with best interest of human relation, relation with nature, and relation with positive -God's intention
ACTIVITIES BETWEEN	Determine population that is long term unemployed - establish system of help; observe population between activities (school- job) center to redirect to company , government activities, or nonprofit institutions , population newly in pension –offer activities help service, population in danger from environmental problems –offer service and help etc.
COMPANIES THAT FACE BANCRUPTCY	Bankruptcy can arose due to unfavorable market conditions, some in company's difficulties or other factors that can have outer or inner source. Establish institution that help company in difficulty in order to reorganize, pay debts, prolong its obligation, etc. -Process of reorganization of company, individual -Process of paying the debt- establish causes and priorities –can be from case to case - while bankruptcy source differs, -In end case bankruptcy occurs- system of social adaptation on current procedures
OTHER PROBLEMS	Community Center in charge but also complains can be made to regional Centers

27.)

Today the product itself is not enough. The pottery need glaze and as history shows it has sometimes better or simpler picture or structure. Although at the end it is important that the glass holds the water and in other words speaking quality still matters.

The question is how can small country that is struggling as numerous other places with GDP growth and quality grow attract new customers and offer new services. Marketing is part of economic strategy that grew immensely in private sector surrounding and in that respect mostly for export of goods and services. So, Nepal should consider right strategies in that respect.

a) Product

For product or end result of any material made in industry or manufacturing quality
And innovation can immensely contribute to marketing strategy

b) Promotion

When considering promotional activities keep in mind true meaning of product, service, potentials, customer wishes and aims, long term and short term implication of strategy , likeness of product to aimed group, not to forget to stress correlation with human satisfaction while making it, nondiscriminatory policy in production and promotion, and close linked between production and nature

c) **Price**

There is huge discrepancy between prices in Nepal and Western Europe, or USA. This can further contribute to end price of product and bring additional benefits in reaching new markets. Do explore other markets, their potentials and prices and offer product that can compete and win the market. End price incorporates transport costs – so stress value of low CO_2 transport potentials. Have different prices at home and abroad.

For the service industry – small hotel especially- it is of a high importance to manage costs and prices adopt toward demand, tourist stay and other relevant factors. Some range of values can bring additional benefits and offer new tourist enquiries.

d) Place

Place is important in respect that can bring clean agricultural product , to have large markets of India and China to offer good medicine, juices , food products or service that is affordable and pleasant to western tourist as well as regional guests.

In that respect consider marketing strategy with grain of salt, make good customer focus, be aware that herd behavior is reality in modern global world and good/bed crituitiqe can be easily done , sometimes competition can bring additional problems and burdens to marketing strategies ,do not forget that basics is important but small innovative things can bring extra benefits .

28.)

Sharing the success and work effort is the one of aims that community need to solve as the potential of further progress or way to new obstacles. In classical capitalist society profit is a measure of difference between revenue and costs regarding many issues in tax and cost cut policy measures. After these issues are resolved –never fully while each group has its own preference schemes – profit for dividend or Government distribution is available.

Profit= (Revenue –Costs)(1-Tax rate)

In company that has to certain extent a clear picture of shareholder structure it is easier to base decisions about current future profit share policy. Partly it is determined by Law, or Statutes inside the Company itself.

Net profit	Dividend for shareholder
	Reserves
	Statutory reserves
	Legal reserves
	Kept profit

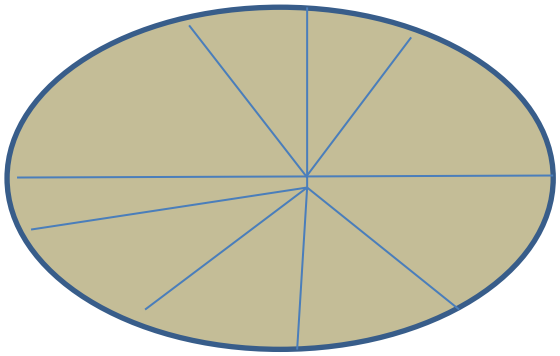
What can be further subject to debate is Fund participation, management of infrastructure projects, natural resource funds, pension fund etc.

PROJECT TYPE	CONSIDER POSSIBILITIES
Infrastructure -large	It is determined by Law dividend share to social groups that are under certain level of poverty
Infrastructure- small	It can be determined by Law dividends share to Community or involvement in small scale community projects further
Corporate -profit	If the investor is foreign origin dividend can fully go abroad. It can be agreed or determined by Law certain obligatory further investment in country, dividend share to employees, obligation to invest part of profit in land Funds etc. If the investor is domestic- same procedure but with greater obligation to participate in domestic issues
Nature Fund	Since the ownership is by population each year decide small –determined -amount to share and other invest further in keeping or widening the richness of natural resource
Pension fund	Determine level of risk for further investment Determine the right diversification strategy Determine possibility to invest abroad(under what conditions)

29.)

The aim of creating the new model is to define and follow the path of economy that benefits relationships between human, nature and God's mercy. In that respect population and measure of satisfaction, human growth should be carefully monitored.

$Population$ = Population $_{t-1}$ + Population $_{t-2}$ +Population $_{t-3}$ + …



Classical measures can be finding in following marks:

Population - measures of satisfaction = f (number, satisfaction with life, health, school years, school achievements, number of new jobs started, computer literacy, family members -number , minimum salary number, state social minimum benefits , innovation achievements, etc.)

Potential measures can additionally bring some extra knowledge in the model:

Population – measures of satisfaction = f (Relation, difference, future, job occupation, job satisfaction, number of innovative works, community service participation, etc.)

It also can tackle vulnerable groups and bring additional knowledge, awareness dangers:

Population – measures of satisfaction = f (decline in number of certain nationals, religion groups, forbidden activities, forbidden legal ways of expression, unexplained accidents , low level of satisfaction, do not enter work market , too long on social benefits, do not have a proper means to communicate, difficulty to travel, difficulty to sell products etc.)

These signs are visible in each society that wants to see. If are ignored long term negative consequences can appear to currently „strong"ones.

30.)

Each model that has its marks on Earth has its own advantages and faults. What is also to be marked is that the largely presented model does not mean that is the most efficient or good one (remember feudal or slave based societies). It can only present current way of thoughts that is the strongest, the most persuasive, and the simplest form but can also be evaluated from the time perspective. To evaluate and reevaluate models is the constant task of economists. Some difficulties and periods when main models fail in its presentation are noted in the table that follows:

Capitalist Model	Socialist Model	Nepal Model
-Did not stood the test of time : in failing to progress in East Europe Asia beginning of 20th century -Did not stood the test of time in colonial countries –additional injustices , non-natural state of order -Did not stood the time in South America- high debt, risk of country bankruptcies (Argentina) rose -Did not stood test in great financial in 2008 overvalued asset, stocks brought collapse to world finances- r in America did not felt human care and protection while ended up in tent cities -Did not stand the test of time in respect of desire to realize change- in period's aggressive communication, etc.	-Did not stand the test of time in early 1990 when the large part of system went through transition phase to capitalist economies etc. -Did not stand the test of time in respect of communication its strategies and business objectives on the world level etc. -Did not stood the test of time in competing and presenting itself on some neutral grounds such as former colonies etc.	Will stood the test of time if: -Simple -Oriented toward each individual -Work with own values in respect of relationships with nature, other humans, God's mercy -Guarantees small income –social contribution to each member of society -Do not discriminate on any rate -Be aware of time change and revalue economic policies without changing basics etc.

31.)

When considering Nepal economy and further economic progress it is important that country develop strategy toward world recognition in following ways:

-Have unique, special product or service:

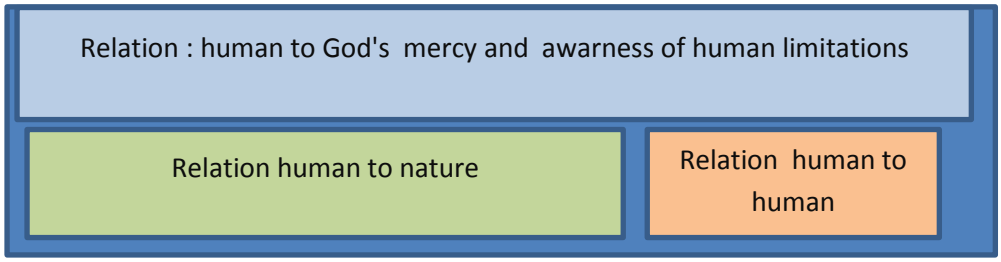
-Have 10 products that are quality products recognizable in the whole world

- Do keep your agriculture and develop medicine, cure – at least 10 excellent products recognizable in the whole world

- Promote equal human values for all people around the world –in tourism –balance between nature man and God

Secondly, once the model is made and implemented it can change, improve or deteriorate in time. Constant examination of existing aims and praxes and keeping the eye on potential future gains as well as threats is the task of that would bring the Model $_1$ to Model $_2$ in future again valid and stable in harmony with nature and humans .

$MODEL_1$ in time t to $MODEL_2$ in time t+n



3. THREE PROJECTS

3.1. Hotel resort

1. PROJECT –BUILDING A HOTEL

Rising number of tourist arrivals (1975 / 100.000 ; 2011/ 800.000 people of which foreign nationals 628.000 and Indian nationals 174.000) has contributed to Nepal's national GDP account . These further pointes to unused potentials in field what is described in many modern scientific papers of Nepal economist.

Just to mention a few excellent works in the field: Mr. Bishnu Prasad Gautam contributed in period 2008-2014 with interesting works that relates economic growth with tourism, as well as showing economic dynamics of tourism in Nepal by a VECM approach. Besides relaying on Cochrane Orcutt (C-O) iterative procedure when considering robustness of models some valuable additional literature can be found which relates tourism with economics. Mr. Wicckremansinghe Gace with ECM significant two way causal relationship from receipts to the GDP; further method that is used often is Cointegrated and Granger causality test by Kim Chen Jang: Reciprocal relationship between tourism development and economic growth; ECM Khalil, Khar Waliullah (2007) Pakistani economic expansion is necessary for tourism development; VECM Toda and Ymamamoto – causality test positive unidirectional causality on tourism expenditure Brida, Carrea, Risso (2008); Zartuk M (2009) made additional contribution about Granger causality, as well as Kreishna (2010) who explained unidirectional link from tourism earning to economic growth in the long run; Mr. Mirsha explained by VECM long run unidirectional causality from tourism activities to economic growth and no short run causalities between variables; large number of economist use Johansen's co-integrated test to prove positive relationship between tourism spending and economic growth.

Growing number of tourist point out to additional need for infrastructure projects, new ways of offering services, better promotional activities , quality of building and offering different services and extra caution to save natural resources and protect nature from further deterioration.

Very large spec tar of activities can be further added to basic tourist arrivals such as developing extra services, promoting herbal, medical tourism and growth as well as developing construction manufacturing in country.

Few results – very rough calculation -are presented as follows in order to show that there exist large discrepancies among costs of construction between countries (USA has very large construction cost, than west European countries, where cost can be lowered with lower labor costs that are available in Asia) and that these costs are dependent about type of hotel that is planned to build: from economic to luxury resorts costs vary significantly per m^2.

Table1: Hotel business in Nepal-Promotion

PROMOTION	PROMOTION	PROMOTION
Tourists from Europe/USA/other going to Australia 7 days Nepal 7 days Australia	Tourists from Europe/USA/other going to Australia 7 days Nepal 7 days Indonesia	Tourists from Europe/USA/other going to Australia 7 days Nepal 7 days India
Medical treatments with herbal medicine- Available through whole year but mostly in summer time	Visit to natural resources , biological exploration etc.	Spiritual healing with praying and walking in nature
Business trips Few days Nepal Peking	Business trips Few days Nepal Shanghai	Business trips Few days Nepal Hong Kong
Indian tourist in Nepal , from Nepal to India	Pakistani tourist in Nepal , from Nepal to Pakistani-large number of potential tourist	China tourist in Nepal , from Nepal to China –region – large number of population –growing potentials

It is of a primary importance to have not just excellent infrastructure for start- than develop further small scale apartments housing facility etc. - but to promote the country in different tourist agencies that would incorporate offerings in its yearly program.

Further to present are some possibilities directed toward calculation and building a hotel resort that suits international tourist preferences. In that respect a significant role is played by Government, Architects and Constructors.

Table 2: Role of Government, Architects, and Constructor in planning and building a Hotel Resort

Government **Local Authorities**	Tax policy Permits Environmental policy Jobs Promotion
Architects	Determine: scope of project, preliminary budget., draft list of works, create scenic design, draft floor plans, work with structural engineers, meet with planning agents, finalize drawings, incorporate all details about materials, work with project manager
Constructor	Provide services materials, hire subcontractors, suggest plans ideas to owner architect, deliver final work, have all permits for work utility installation etc.

As mentioned investment cost can vary significantly and some options that are available in east Europe are presented in table 3.

Table 3: Cost per m^2 for Facility-Investment

		EUR/m^2	EUR/m^2	EUR/m^2	EUR/m^2
	%	**1000**	**2000**	**4000**	**500**
Material	40,00	1.784.000,00	3.568.000,00	7.136.000,00	892.000,00
Labor	36,00	1.605.600,00	3.211.200,00	6.422.400,00	802.800,00
Machin cost	4,00	178.400,00	356.800,00	713.600,00	89.200,00
Sum1		***3.568.000,00***	***7.136.000,00***	***14.272.000,00***	***1.784.000,00***
Architect	6,00	267.600,00	535.200,00	1.070.400,00	133.800,00
Permits, Other costs	14,00	624.400,00	1.248.800,00	2.497.600,00	312.200,00
Total	**100**	**4.460.000,00**	**8.920.000,00**	**17.840.000,00**	**2.230.000,00**
Total m^2	*4.460,00*	*4.460.000,00*	*8.920.000,00*	*17.840.000,00*	*2.230.000,00*

With this possibilities in mind and being aware that costs in Nepal are much less than in European countries some small hotel resort of 110-115 rooms can be build based on:

With Table 4: Investment Cost for hotel of 115 rooms or 4 460 m^2- per room, per m^2 coca.

Per Room	Land	Building Improving	Soft Costs	FF E	Pre-Opening and Working Capital	Total per room	Total per m^2	115 rooms of 4460 m^2
Hotel Budget Economy	4.550	30.520,00	840	3.570	1.050,00	35.910	1.197,00	5.338.620
Midscale Hotel	6.500	43.600,00	1.200	5.100	1.500,00	51.300	1.710,00	7.626.600
Full Service/ Luxury	21.100	132.700,00	4.600	21.500	13.700,00	158.400	5.280,00	23.548.800

Further to note investment cost can be calculated per m^2.

Table 5: Investment Cost for hotel of115 rooms or 4 460 m^2- PER **m^2**

Per m^2	Land	Building Improving	Soft Costs	FF E	Pre-Opening and Working Capital	Total m^2	115 rooms per 30 m^2+lobby outside 4460 m^2
	Per m2						Total cost 4460 m2 EUR
Hotel Budget Economy	151,67	1.017,33	28,00	119,00	35,00	1.197,00	5.338.620,00
Midscale Hotel	216,67	1.453,33	40,00	170,00	50,00	1.710,00	7.626.600,00
Full Service/ Luxury	703,33	4.423,33	153,33	716,67	456,67	5.280,00	23.548.800,00

Based on this research some Pre-Feasibility calculation can be made.

Let's assume that investment costs are in *Table 6*:

Table 6: Investment costs

Land	963.360,00
Material	1.784.000,00
Labor	1.605.600,00
Machin cost	178.400,00
Sum1	3.568.000,00
Architect	267.600,00
Permits other	624.400,00
TOTAL	**8.991.360,00**

Operative costs varies significantly and are dependent upon: energy input, labor costs, labor number, potentials to builds scenery, potentials of private parks, material used, type of food used , etc. It can also vary from income and adapt according to different structure of guests.

Table 7: Operative expenditure can take following form in mid luxury hotel

	Total	**Per month**	**Per room**	**Per room per day**	**Fix**	**Vary**
Material (food, material other, transport costs)	500.000,00	41.666,67	362,32	12,08	50	50
Energy	100.000,00	8.333,33	72,46	2,42	60	40
Labor						
Student	*60.000,00*	*5.000,00*	*43,48*	*1,45*	*20*	*80*
Professional	*100.000,00*	*8.333,33*	*72,46*	*2,42*	*80*	*20*
Other fees	200.000,00	16.666,67	144,93	4,83	70	30
Other costs	150.000,00	12.500,00	108,70	3,62	40	60
Total	**1.110.000,00**	**92.500,00**	**804,35**	**26,81**		

Table 8: Revenue is assumed to be charged to foreign tourist for following number of days:

Room	**Price**	**Days**	**Revenue**
115	70	273	2.197.650,00

Than Output shows following results:

Table 9: Balance Sheet

	2015	2016	2017	2024	2031
TOTAL ASSET	**4.100.000,00**	**9.100.000,00**	**9.730.334,10**	**14.121.083,33**	**18.511.833,33**
Short term asset	36.640,00	3.676.640,00	4.429.624,10	9.678.923,33	14.928.223,33
Long term asset	4.063.360,00	5.423.360,00	5.300.710,00	4.442.160,00	3.583.610,00
TOTAL LIABILITIES	**4.100.000,00**	**9.100.000,00**	**9.730.334,10**	**14.121.083,33**	**18.511.833,33**
Short term liabilities			3.084,10	3.083,33	3.083,33
Stock capital	4.100.000,00	9.100.000,00	9.100.000,00	9.100.000,00	9.100.000,00
Reserves				4.390.750,00	8.781.500,00
Profit kept			627.250,00	627.250,00	627.250,00
Net worth	4.100.000,00	9.100.000,00	9.727.250,00	14.118.000,00	18.508.750,00
CAPITAL / Total liabilities (%)	*100*	*100*	*93,521969*	*64,442648*	*49,157746*
Net worth /Total asset (%)	*100*	*100*	*99,968304*	*99,978165*	*99,983344*
Short term assets / Short term liabilities			*1.436,28*	*3.139,11*	*4.841,59*

Table 10: Profit Loss Account

	2017	2018	2024	2013
Revenue from sale	**2.197.650,00**	**2.197.650,00**	**2.197.650,00**	**2.197.650,00**
Less variable cost	508.000,00	508.000,00	508.000,00	508.000,00
VARIABLE BORDER	1.689.650,00	1.689.650,00	1.689.650,00	1.689.650,00
% REVENUE FROM SALE	*76,884399*	*76,884399*	*76,884399*	*76,884399*
Less fixed costs	724.650,00	724.650,00	724.650,00	724.650,00
OPERATIVE BORDER	965.000,00	965.000,00	965.000,00	965.000,00
in % revenue from sale	43,910541	43,910541	43,910541	43,910541
NET PROFIT	**965.000,00**	**965.000,00**	**965.000,00**	**965.000,00**
in % revenue from sale	43,910541	43,910541	43,910541	43,910541
PROFIT BEFORE TAX	**965.000,00**	**965.000,00**	**965.000,00**	**965.000,00**
Tax on profit	*337.750,00*	*337.750,00*	*337.750,00*	*337.750,00*
NET PROFIT	**627.250,00**	**627.250,00**	**627.250,00**	**627.250,00**
in % revenue from sale	*28,541852*	*28,541852*	*28,541852*	*28,541852*
EARNINGS KEPT	**627.250,00**	**627.250,00**	**627.250,00**	**627.250,00**

Net profit /stock capital (%)	*6,892857*	*6,892857*	*6,892857*	*6,892857*
Net profit / Net worth (%)	*6,44838*	*6,057753*	*4,44291*	*3,388938*
Net profit+interest / Investment (%)	*11,546903*	*11,546901*	*11,546901*	*11,546901*

Project is under stated consumptions positive and return will be visible after 13 years in discounted form. Of course this is the best possible assumption; negative values can come from loan conditions and input, lower revenue, lower number of guests etc.

Table 11: Discounted Economic Flow with Net Present Value

	2015	2016	2017	2020	2028
RECEIVABLES			**2.197.650,00**	**2.197.650,00**	**2.197.650,00**
Business			2.197.650,00	2.197.650,00	2.197.650,00
EXPENDITURES	**4.063.360,00**	**1.360.000,00**	**1.456.582,56**	**1.447.750,00**	**1.447.750,00**
Asset increase	4.063.360,00	1.360.000,00			
Increase of net working assets			8.832,56		
Costs of production			1.110.000,00	1.110.000,00	1.110.000,00
Tax on profit			337.750,00	337.750,00	337.750,00
NET RECIVABLES	-4.063.360,00	-1.360.000,00	741.067,44	749.900,00	749.900,00
Cumulative net receivables	-4.063.360,00	-5.423.360,00	-4.682.292,56	-2.432.593,33	3.566.606,67
Net present value	-4.063.360,00	-1.271.028,04	647.277,00	534.668,34	311.181,84
Cumulative net discounted receivables	-4.063.360,00	-5.334.388,04	-4.687.111,04	-2.968.206,43	**224.457,80**
NPV	**7,00%**	**2.257.982,14**			
IRR	11,62%				
MIRR	11,62%				
Years of return	0,00%	**9.24 years**	**2024**		
Years of return discounted	7,00%	**13.28 years**	**2028**		

1.2. SECOND EXAMPLE –HOTEL WITH DIFFERENT PRICES

Having said that cost are variable and can depend upon revenue different pricing strategy is presented:

Table 12: Different Pricing Strategy

Duration of stay	Room number	Price per room per day	Revenue	Quantity Days	Quantity stay
1 year	2	20	14.600,00	365	
1/2 year	7	25	31.500,00	180	
1 month	7	30	37.800,00	30	6
2 weeks	39	40	655.200,00	14	30
1 week	40	60	672.000,00	7	40
1 day	5	80	40.000,00	100	1
	100	42,5	1.451.100,00	341,44	

With reduced revenue NPV Nep Present Value is negative and some cost decrees need to be considered.

Table 13 : Discounted Economic Flow with Net Present Value

	2015	2016	2017	2024	2031
RECEIVABLES			**1.449.250,00**	**1.449.250,00**	**1.449.250,00**
Business			1.449.250,00	1.449.250,00	1.449.250,00
EXPENDITURES	**4.063.360,00**	**1.360.000,00**	**1.194.642,56**	**1.185.810,00**	**1.185.810,00**
Asset increase	4.063.360,00	1.360.000,00			
Increase of net working assets			8.832,56		
Cost of production			1.110.000,00	1.110.000,00	1.110.000,00
Tax on profit			75.810,00	75.810,00	75.810,00
NET RECIVABLES	-4.063.360,00	-1.360.000,00	254.607,44	263.440,00	263.440,00
Cumulative net receivables	-4.063.360,00	-5.423.360,00	-5.168.752,56	-3.324.673,33	-1.480.593,33
Net present value	-4.063.360,00	-1.271.028,04	222.384,00	143.293,91	89.236,24
Cumulative net discounted receivables	-4.063.360,00	-5.334.388,04	-5.112.004,04	-3.871.936,19	-3.099.683,87
NPV	**7,00%**	**-1.882.799,02**			
IRR	2,83%				
MIRR	2,83%				
Years of return	0,00%	17.41 year	2032		
Years of return discounted	7,00%	not found			

Table 14: Profit Loss Account

	2017	2018	2024	2031
Revenue from sale	**1.449.250,00**	**1.449.250,00**	**1.449.250,00**	**1.449.250,00**
Less variable cost	508.000,00	508.000,00	508.000,00	508.000,00
VARIABLE BORDER	941.250,00	941.250,00	941.250,00	941.250,00
% REVENUE FROM SALE	64,947387	64,947387	64,947387	64,947387
Less fixed costs	724.650,00	724.650,00	724.650,00	724.650,00
OPERATIVE BORDER	216.600,00	216.600,00	216.600,00	216.600,00
in % revenue from sale	14,945662	14,945662	14,945662	14,945662
NET PROFIT	**216.600,00**	**216.600,00**	**216.600,00**	**216.600,00**
in % revenue from sale	14,945662	14,945662	14,945662	14,945662
PROFIT BEFORE TAX	216.600,00	216.600,00	216.600,00	216.600,00
Tax on profit	**75.810,00**	**75.810,00**	**75.810,00**	**75.810,00**
EARNINGS KEPT	**140.790,00**	**140.790,00**	**140.790,00**	**140.790,00**
Net profit /stock capital (%)	*1,547143*	*1,547143*	*1,547143*	*1,547143*
Net profit / Net worth (%)	*1,523571*	*1,500707*	*1,376742*	*1,255725*
Net profit+interest / Investment (%)	*2,591771*	*2,591771*	*2,591771*	*2,591771*

Table 15: Balance Sheet

	2015	2016	2017	2024	2031
TOTAL ASSET	**4.100.000,00**	**9.100.000,00**	**9.243.874,10**	**10.229.403,33**	**11.214.933,33**
Short term asset	36.640,00	3.676.640,00	3.943.164,10	5.787.243,33	7.631.323,33
Long term asset	4.063.360,00	5.423.360,00	5.300.710,00	4.442.160,00	3.583.610,00
TOTAL LIABILITIES	**4.100.000,00**	**9.100.000,00**	**9.243.874,10**	**10.229.403,33**	**11.214.933,33**
Stock capital	4.100.000,00	9.100.000,00	9.100.000,00	9.100.000,00	9.100.000,00
Reserves				985.530,00	1.971.060,00
Profit kept			140.790,00	140.790,00	140.790,00
Net worth	4.100.000,00	9.100.000,00	9.240.790,00	10.226.320,00	11.211.850,00
Capital / Total liabilities (%)	*100*	*100*	*98,443574*	*88,959245*	*81,141811*
Net worth /Total asset (%)	*100*	*100*	*99,966636*	*99,969858*	*99,972507*
Short term assets / Short term liabilities			*1.278,54*	*1.876,94*	*2.475,02*

The third example is in line with cost management system .Costs are adapted to current lower revenue potentials. Of course all is just for the sake of explaining the possibilities. Real life issues and prices are much lower in Nepal than in East Europe.

Reduced revenue with reduced costs- costs management. Costs management:

Table 16: Reduced Operative Costs in EUR

	Total	**Lower costs**
Material (food, material other, transport costs)	500.000,00	250.000,00
Energy	100.000,00	50.000,00
Labor Student	*60.000,00*	*30.000,00*
Labor Professional	*100.000,00*	*70.000,00*
Other fees, costs	200.000,00	200.000,00
Other costs	150.000,00	150.000,00
Total	**1.110.000,00**	**750.000,00**

Series of Financial reports than takes different result also what is further to be noted.

Table 17: Discounted Economic Flow with Net Present Value

	2015	**2016**	**2017**	**2020**	**2031**
RECEIVABLES			**1.449.250,00**	**1.449.250,00**	**1.449.250,00**
Business			1.449.250,00	1.449.250,00	1.449.250,00
EXPENDITURES	**4.063.360,00**	**1.360.000,00**	**957.642,95**	**951.810,00**	**951.810,00**
Asset increase	4.063.360,00	1.360.000,00			
Increase of net working assets			5.832,95		
Cost of production			750.000,00	750.000,00	750.000,00
Tax on profit			201.810,00	201.810,00	201.810,00
NET RECIVABLES	-4.063.360,00	-1.360.000,00	491.607,05	497.440,00	497.440,00
Cumulative net receivables	-4.063.360,00	-5.423.360,00	-4.931.752,95	-3.439.433,33	2.032.406,67
Net present value	-4.063.360,00	-1.271.028,04	429.388,64	354.667,85	168.500,14
Cumulative net discounted receivables	-4.063.360,00	-5.334.388,04	-4.904.999,40	-3.764.778,06	-1.105.239,39
NPV	**7,00%**	**110.629,25**			
IRR	7,24%				
MIRR	7,24%				
Years of return	0,00%	12.91 year	2027		
Years of return discounted	7,00%	17.91 year	2032		

Table 18: Profit Loss Account

	2017	2018	2019	2024
Revenue from sale	**1.449.250,00**	**1.449.250,00**	**1.449.250,00**	**1.449.250,00**
Less variable cost	333.000,00	333.000,00	333.000,00	333.000,00
VARIABLE BORDER	1.116.250,00	1.116.250,00	1.116.250,00	1.116.250,00
% REVENUE FROM SALE	77,022598	77,022598	77,022598	77,022598
Less fixed costs	539.650,00	539.650,00	539.650,00	539.650,00
OPERATIVE BORDER	576.600,00	576.600,00	576.600,00	576.600,00
in % revenue from sale	39,786096	39,786096	39,786096	39,786096
NET PROFIT	**576.600,00**	**576.600,00**	**576.600,00**	**576.600,00**
in % revenue from sale	39,786096	39,786096	39,786096	39,786096
PROFIT BEFORE TAX	576.600,00	576.600,00	576.600,00	576.600,00
Tax on profit	201.810,00	201.810,00	201.810,00	201.810,00
NET PROFIT	374.790,00	374.790,00	374.790,00	374.790,00
in % revenue from sale	25,860963	25,860963	25,860963	25,860963
EARNINGS KEPT	374.790,00	374.790,00	374.790,00	374.790,00
Net profit /stock capital (%)	4,118571	4,118571	4,118571	4,118571
Net profit / Net worth (%)	3,955655	3,805137	3,665654	3,097868
Net profit+interest / Investment (%)	6,903236	6,903235	6,903235	6,903235

Table 19: Balance Sheet

	2015	2016	2017	2024	2031
TOTAL ASSET	**4.100.000,00**	**9.100.000,00**	**9.476.873,72**	**12.100.403,33**	**14.723.933,33**
Short term asset	36.640,00	3.676.640,00	4.176.163,72	7.658.243,33	11.140.323,33
Long term asset	4.063.360,00	5.423.360,00	5.300.710,00	4.442.160,00	3.583.610,00
TOTAL LIABILITIES	**4.100.000,00**	**9.100.000,00**	**9.476.873,72**	**12.100.403,33**	**14.723.933,33**
Short term liabilities			2.083,72	2.083,33	2.083,33
Stock capital	4.100.000,00	9.100.000,00	9.100.000,00	9.100.000,00	9.100.000,00
Reserves				2.623.530,00	5.247.060,00
Profit kept			374.790,00	374.790,00	374.790,00
Net worth	4.100.000,00	9.100.000,00	9.474.790,00	12.098.320,00	14.721.850,00
Capital / Total liabilities (%)	*100*	*100*	*96,023227*	*75,204105*	*61,804137*
Net worth /Total asset (%)	*100*	*100*	*99,978013*	*99,982783*	*99,985851*
Short term assets / Short term liabilities			*2.004,19*	*3.675,96*	*5.347,36*

3.2. Greenhouse, agriculture

Greenhouse, Agriculture Calculation

With rising tourism potential for more fresh all year food raises potential for different greenhouse possibilities by or near Hotel Resort. It can be part of Hotel System or done by village population as part of primary or secondary income.

Table 20: Greenhouse –Remarks

Excavation and preparation	Costs will vary according to the level of work necessary, but all such projects would require the leveling of the site in order to receive the concrete and the drilling of a well. This might be problematic in areas of heavy frost.
Concrete	The knee walls and flooring of the greenhouse
Materials	Greenhouse could demand a heavy steel frame, 8' walls constructed of multi-wall polycarbonate or glass, roofing vents, and electronic exhaust fans.
Heating	Greenhouses located within areas that receive freezing weather might require the addition of a heating unit.

Picture a: Under earth Greenhouse - all year round very cheap

Picture b: Modern Greenhouse – expensive

In such an environment different cultures can be considered.

Table21: Costs Investment and operating calculations based on Europe benchmark

		Paprika	Paprika	Cucumber	Cucumber	Tomato	Tomato
Engl.	Deutsch	note	EUR	note	EUR	note	EUR
Seed links	Sampling		58	220 km	44,35	250 km/0,2 €/com	50,4
Foil black	Folie Schwartz	2 kg	6	2 kg	6	2 kg	5,91
Foil transparent	Folie transparent	3 kg	6	3kg	6,5	3 kg	6,45
Mineral organic fertilizer	Mineral organisch Dungen		22,5		24,9		33,43
Plant protection product	Pflanzenschuthmittel		14		12,5		13,32
Binder	Binder	5 kg	10,75	2,5 kg	5,35	2,5kg	5,38
Setup -of binder	Abbindenden Bindemittel	3,5h	7,53	2 h	4,75	2,5h	6,72
Plastic buckles	Kunststoff-Schnallen	1440kom	19,35	880kom	11,8	100 kom	13,44
Carton	Karton	8kg/kom	70	10 kg/	80,5	8 kg	80
Irrigation pipes	Bewässerungsrohr	150m	13,1	150 m	13,1	150m	13,1
Hand pruning	Hand Beschneiden	14h	2,15	1 h	2,5	1 h	2,15
Hand tillage	Hand Bodenbearbeitung	3h	6,45	3 h	6,45		6,45
set up foil	Folie setzen	9h	19,35	7h	15,05	8h	17,2
Harvest	Ernte	25kg	143	50 kg/h	100,8	30 kg/h	167
Pruning	Beschneidung	20h	43	15h	32	25h	53
Removal of plants	Entfernen von Pflanzen	3h	6,45	3 h	6,45		6,45
Other costs	sonstige Aufwendungen		87		87	3h	87
SUM	SUM		534,63	0	460		567,4
Cost of own machinery	Kosten der Eigenen Machine		125		125		125
Price of cost			0,85		0,47		0,57
Price - revenue			1,3		0,7		0,9
Seedings			80x35 cm		60x60 cm		

one foil			12 presadnica				
Yield	Ertrag		1300 kg/100m2		1500 kg/100 m2		1500 kg/100m2
REVENUE			1.690,00		1.050,00		1.350,00
COSTS			659,63		585		692,4
PROFIT			1.030,37		465,00		657,60

If we assume that the cost of building a greenhouse is around 3000 € following results are obtained:

Table 22: Economic Flow: Discounted Cash Flow-Net Present Value

	2015	**2016**	**2017**	**2021**	**2024**
RECEIVABLES	0	4.090,00	4.090,00	4.090,00	4.090,00
Business	0	4.090,00	4.090,00	4.090,00	4.090,00
Other	0	0	0	0	0
EXPENDITURES	3.000,00	1.575,41	1.562,39	1.562,39	1.562,39
Asset increase	3.000,00	0	0	0	0
Increase of net working assets	0	13,01992	0	0	0
Cost of production	0	1.562,39	1.562,39	1.562,39	1.562,39
Costs of marketing	0	0	0	0	0
Tax on profit	0	0	0	0	0
NET RECIVABLES	-3.000,00	2.514,59	2.527,61	2.527,61	2.527,61
Cumulative net receivables	-3.000,00	-485,41	2.042,20	12.152,64	19.735,47
Net present value	-3.000,00	2.372,25	2.249,56	1.781,87	1.496,09
Cumulative net discounted receivables	-3.000,00	-627,745	1.621,82	9.416,80	14.179,74
NPV	**6,00%**	**16.268,71**			
IRR	83,94%				
MIRR	83,94%				
Years of return	**0,00%**	**2.19 years**	**2017**		
Years of return discounted	**6,00%**	**2.28 years**	**2017**		

With high costs different cash flow structure is recognized:

Table 23: Economic Cash Flow if Investment in Greenhouse 10.000€

	2015	2016	2017	2020	2024
RECEIVABLES	0	4.090,00	4.090,00	4.090,00	4.090,00
Business	0	4.090,00	4.090,00	4.090,00	4.090,00
Other	0	0	0	0	0
EXPENDITURES	10.000,00	1.575,41	1.562,39	1.562,39	1.562,39
Asset increase	10.000,00	0	0	0	0
Increase of net working assets	0	13,01992	0	0	0
Cost of production	0	1.562,39	1.562,39	1.562,39	1.562,39
Costs of marketing	0	0	0	0	0
Tax on profit	0	0	0	0	0
NET RECIVABLES	-10.000,00	2.514,59	2.527,61	2.527,61	2.527,61
Cumulative net receivables	-10.000,00	-7.485,41	-4.957,80	2.625,03	12.735,47
Net present value	-10.000,00	2.372,25	2.249,56	1.888,78	1.496,09
Cumulative net discounted receivables	-10.000,00	-7.627,75	-5.378,18	634,9299	7.179,74
NPV	**6,00%**	**12.200,28**			
IRR	24,14%				
MIRR	24,14%				
Years of return	0,00%	**4.96 years**	**2019**		
Years of return discounted	6,00%	**5.66 years**	**2020**		

Table 24: Balance Sheet Account 3000 €

	2015	2016	2017	2021	2024
TOTAL ASSET	3.000,00	5.456,95	7.909,56	17.720,00	25.077,83
Short term asset	0	2.531,95	5.059,56	15.170,00	22.752,83
Long term asset	3.000,00	2.925,00	2.850,00	2.550,00	2.325,00
TOTAL LIABILITIES	3.000,00	5.456,95	7.909,56	17.720,00	25.077,83
Short term liabilities	0	4,339972	4,339972	4,339972	4,339972
Stock capital	3.000,00	3.000,00	3.000,00	3.000,00	3.000,00
Reserves	0	0	2.452,61	12.263,05	19.620,88
Profit kept	0	2.452,61	2.452,61	2.452,61	2.452,61
Net worth	3.000,00	5.452,61	7.905,22	17.715,66	25.073,49
Capital / Total liabilities (%)	*100*	*54,97577*	*37,92879*	*16,93002*	*11,96276*
Net worth /Total asset (%)	*100*	*99,92047*	*99,94513*	*99,97551*	*99,98269*
Short term assets / Short term liabilities		*583,4023*	*1.165,80*	*3.495,41*	*5.242,62*

Table 25: Balance Sheet Account 10.000 €

	2015	2016	2017	2020	2024
TOTAL ASSET	10.000,00	12.281,95	14.559,56	21.392,39	30.502,83
Short term asset		2.531,95	5.059,56	12.642,39	22.752,83
Long term asset	10.000,00	9.750,00	9.500,00	8.750,00	7.750,00
TOTAL LIABILITIES	**10.000,00**	**12.281,95**	**14.559,56**	**21.392,39**	**30.502,83**
Short term liabilities	0	4,339972	4,339972	4,339972	4,339972
Stock capital	10.000,00	10.000,00	10.000,00	10.000,00	10.000,00
Reserves			2.277,61	9.110,44	18.220,88
Profit kept		2.277,61	2.277,61	2.277,61	2.277,61
Net worth	10.000,00	12.277,61	14.555,22	21.388,05	30.498,49
Capital / Total liabilities (%)	100	81,4203	68,68339	46,7456	32,78384
Net worth /Total asset (%)	100	99,96466	99,97019	99,97971	99,98577
Short term assets / Short term liabilities		583,4023	1.165,80	2.913,01	5.242,62

Table 26: Profit Loss Account 10.000 €

	2016	2017	2018	2021	2025
Revenue from sale	**4.090,00**	**4.090,00**	**4.090,00**	**4.090,00**	**3.040,39**
Less variable cost	1.562,39	1.562,39	1.562,39	1.562,39	1.562,39
VARIABLE BORDER	2.527,61	2.527,61	2.527,61	2.527,61	1.478,00
% REVENUE FROM SALE	61,799756	61,79976	61,79976	61,79976	48,6121
Less fixed costs	250	250	250	250	250
OPERATIVE BORDER	2.277,61	2.277,61	2.277,61	2.277,61	1.228,00
in % revenue from sale	55,687286	55,68729	55,68729	55,68729	40,38946
PROFIT BEFORE TAX	**2.277,61**	**2.277,61**	**2.277,61**	**2.277,61**	**1.228,00**

Table 27: Profit Loss Account Account 3.000 €

	2016	2017	2018	2022	2025
Revenue from sale	**4.090,00**	**4.090,00**	**4.090,00**	**4.090,00**	**3.040,39**
Less variable cost	1.562,39	1.562,39	1.562,39	1.562,39	1.562,39
VARIABLE BORDER	2.527,61	2.527,61	2.527,61	2.527,61	1.478,00
% REVENUE FROM SALE	61,79976	61,79976	61,79976	61,79976	48,6121
Less fixed costs	75	75	75	75	75
PROFIT BEFORE TAX	**2.452,61**	**2.452,61**	**2.452,61**	**2.452,61**	**1.403,00**

Hotel resort of village that is situated in climate favorable protected areas can consider some fruits to growth as part of tourist attraction and offerings. Some investment and costs based on European calculations are presented. Of course they would be much less in Nepal and for some plants growth would be only possible in protected areas.

Table 28: Investment Fruits –Euro Standards

		INVESTMENT			REVENUE		
Deutsch	***Engl.***	***Number of trees***	***Price per tree***	***Investment costs***	***Yield kg***	***Price kg***	***Revenue***
Apfel	*apple*	2700	4,79	12.933,00	40.000,00	0,27	10.800,00
Birne	*pear*	2000	4,79	9.580,00	20.000,00	0,73	14.600,00
Pfirsich	*peach*	740	5,48	4.055,20	20.000,00	1,03	20.600,00
Mandarine	*tangerine*	1125	10,96	12.330,00	25.000,00	0,41	10.250,00
Nussbaum	*walnut*	170	6,16	1.047,20	4.000,00	1,64	6.560,00
Haselnuss	*hazelnut*	600	7	4.200,00	2.000,00	1,92	3.840,00
Brombeere	*blackberry*	2800	16	44.800,00	15.000,00	1,23	18.450,00
Himbeere	*raspberry*	2800	16	44.800,00	12.000,00	1,64	19.680,00
Aprikose	*apricot*	400	5,48	2.192,00	10.000,00	1,1	11.000,00
Kirsche	*cherry*	1250	5,48	6.850,00	10.000,00	1,1	11.000,00
Kirsche	*cherry*	500	8,22	4.110,00	10.000,00	0,69	6.900,00
Pflaume	*plum*	800	4,79	3.832,00	15.000,00	0,82	12.300,00
Blaubeere	*blueberry*	3000	16,44	49.320,00	15.000,00	8,22	123.300,00
Aronia	*aronia*	2000	13,77	27.540,00	8.000,00	13,7	109.600,00
Erdbeere	*strawberry*	40000	0,25	10.000,00	24.200,00	1,8	43.560,00

Table 29: Cost of growing

Eng.	**Mineral Organic fertilizer**	**Plant protection product**	**Boxes**	**Binder**	**Harvest**	**Pruning**	**Other costs**	**SUM1**
Deutsch.	Mineral organisch Dungen	Pflanzenschutzmittel	Kiste	Binder	Ernte	Beschneidung	sonstige Aufwendungen	Summe1
apple	365,00	1.662,00	2.006,00	134,00	1.919,00	907,00	134,00	7.127,00
pear	182,00	1.365,00	1.478,00	134,00	1.343,00	1.007,00	134,00	5.643,00
peach	127,00	878,00	2.150,00	67,00	1.679,00	766,00	134,00	5.801,00
tangerine	470,00	430,00	1.079,00	1.399,00	806,00	262,00	201,00	4.647,00
walnut	54,00	430,00	64,00	33,00	671,00	201,00	67,00	1.520,00
hazelnut	182,00	430,00	13,00		767,00	241,00	134,00	1.767,00
blackberry	255,00	1.143,00	1.108,00		4.031,00	483,00	134,00	7.154,00
raspberry	255,00	1.143,00	887,00		4.031,00	483,00	201,00	7.000,00
apricot	164,00	702,00	739,00		767,00	268,00	268,00	2.908,00
cherry	200,00	702,00	1.075,00		1.343,00	503,00	268,00	4.091,00
cherry	420,00	531,00			767,00	403,00	268,00	2.389,00
plum	127,00	481,00	806,00	67,00	671,00	604,00	67,00	2.823,00
blueberry	347,00	161,00	2.925,00		12.594,00	940,00	201,00	17.168,00
aronia	310,00	134,00	1.560,00		4.479,00	940,00	268,00	7.691,00
strawberry	6.600,00	2.625,00	3.902,00		4.336,00	537,00	268,00	18.268,00

+costs of own mechanisation

Table 30 : Economic Cash Flow - NPV

	2015	2016	2017	2018	2024
RECEIVABLES		425.322,60	425.322,60	425.322,60	425.322,60
Business		425.322,60	425.322,60	425.322,60	425.322,60
EXPENDITURES	239.795,40	104.122,47	103.761,17	103.757,00	103.757,00
Asset increase	239.795,40				
Increase of net working assets		860,465733	4,172114	0,003819	
Cost of production		103.262,00	103.757,00	103.757,00	103.757,00
NET RECIVABLES	-239.795,40	321.200,13	321.561,43	321.565,60	321.565,60
Cumulative net receivables	-239.795,40	81.404,73	402.966,16	724.531,76	2.653.925,36
Net present value	-239.795,40	303.018,99	286.188,53	269.992,68	190.334,18
Cumulative net discounted receivables	-239.795,40	63.223,59	349.412,12	619.404,80	1.947.046,36
NPV	6,00%	2.260.990,22			
IRR	134,01%				
MIRR	134,01%				
Years of return	0,00%	**1.75 years**	**2016**		
Years of return discounted	6,00%	**1.79 years**	**2016**		

Table 31: Profit Loss Account –Euro

	2016	2017	2021	2024
Revenue from sale	**425.322,60**	**425.322,60**	**425.322,60**	**425.322,60**
Less variable cost	96.661,00	96.661,00	96.661,00	96.661,00
VARIABLE BORDER	328.661,60	328.661,60	328.661,60	328.661,60
% REVENUE FROM SALE	77,273486	77,273486	77,273486	77,273486
Less fixed costs	6.601,00	7.096,00	7.096,00	7.096,00
OPERATIVE BORDER	322.060,60	321.565,60	321.565,60	321.565,60
in % revenue from sale	75,721488	75,605105	75,605105	75,605105
PROFIT BEFORE TAX	322.060,60	321.565,60	321.565,60	321.565,60

Table 32 : Balance Sheet Account

	2015	2016	2021	2024
TOTAL ASSET	**240.600,00**	**562.947,49**	**2.170.776,81**	**3.135.473,61**
Short term asset	804,6	323.152,09	1.930.981,41	2.895.678,21
Long term asset	239.795,40	239.795,40	239.795,40	239.795,40
UKUPNA PASIVA	**240.600,00**	**562.947,49**	**2.170.776,81**	**3.135.473,61**
Short term liabilities		286,889823	288,213889	288,213889
Stock capital	240.600,00	240.600,00	240.600,00	240.600,00
Reserves			1.608.323,00	2.573.019,80
Profit kept		322.060,60	321.565,60	321.565,60
Net worth	240.600,00	562.660,60	2.170.488,60	3.135.185,40

For hotel is important to have domestic offering so certain type of Agreement with agricultural producers can be of benefits.

FARMING HUSBANDRY

Table 33 : Yield ,Price per kg; revenue- Potential for Nepal cost effectiveness

Engl.	Deutsch.	kg/ha	EUR/kg	Revenue EUR/ ha	Profit Eur/ ha	Price profit EUR / kg
wheat	weizen	5.500,00	0,21	1.145,21	239,21	0,04
barley	gersten	5.500,00	0,23	1.280,82	489,82	0,09
rye	rye	4.500,00	0,23	1.047,95	372,95	0,08
mais		8.000,00	0,19	1.545,21	424,95	0,09
ryps		3.500,00	0,45	1.591,78	447,21	0,06
sunflower	sonnenblumen	3.000,00	0,37	1.097,26	637,78	0,18
soy		3.000,00	0,37	1.097,26	302,26	0,10
sugar beat	zuckarrube	50.000,00	0,05	2.739,73	509,26	0,17
potato	kartoffeln	35.000,00	0,23	8.150,68	1.329,73	0,03

Table 34: Seed Investment and costs to growth EUR/ha without machinery

Engl.	Seed	Fertilizer	Org fertil	Plant protect	Other cost	Sum1 EUR/ha
wheat	137,00	351,00	201,00	156,00	61,00	906,00
barley	67,00	398,00	201,00	125,00		791,00
rye	69,00	259,00	201,00	146,00		675,00
mais	119,00	463,00	201,00	138,00	177,00	1.098,00
ryps	66,00	402,00	201,00	183,00	102,00	954,00
sunflower	73,00	240,00	201,00	202,00	79,00	795,00
soy	66,00	225,00	201,00	96,00		588,00
sugar beat	275,00	525,00	201,00	409,00		1.410,00
potato	2.068,00	410,00	403,00	530,00		3.411,00
tobacco	159,00	446,00		715,00		1.320,00
chamomile	40,00	222,00		152,00		414,00

3.3. Lift, Rope System and Water potentials

Rope Lift system, Water Management

The third project or projects are naturally connected to infrastructure and energy while this can be lucrative and secure investment to Government and population as whole. Possibilities of all population to have a share by birth in profit share are: hydro production, water storage and management and different kinds of rope systems, lifts at ski resorts or simply rope system for goods transport etc.

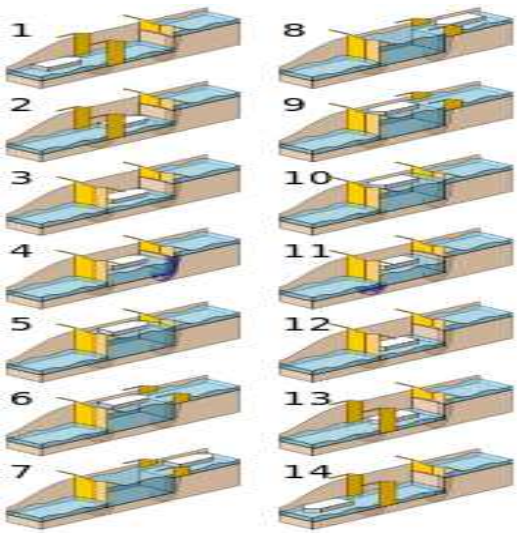
All these projects need careful planning and financing in line with long term revenue potentials and opportunities not just for individual investors but population as whole making its building everyone's gain. Besides financing costs and opportunities careful planning need to be undertaken in respect of environmental impacts. We are all aware of rising number of flooding in Pakistan, India and Bangladesh, severe weather change, periods of draughts and rain instability. Each infrastructure project need careful planning firstly in that area and then profit calculation.

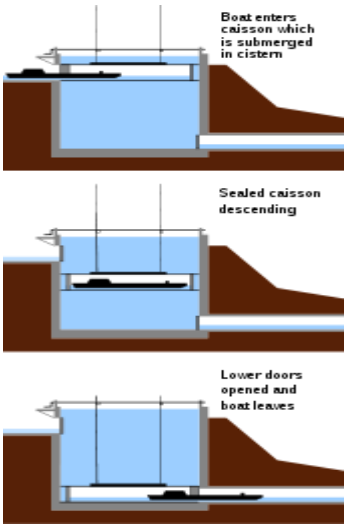
Table 35: Hydro Projects

	Positive	**Negative**
Financing	Large number of population can be part of project	Only rich investors involved in that way profit is taken and loss from environmental danger burdens population
Environment	Best technology used, best place can further improve progress in manufacturing, housing, industry	Can bring additional dangers noise, flooding etc. if not properly made
Economy	For each project small study that incorporates booth Finance and Environment; Small scale projects allowed and help by government subsidies	If studies and projects are not done in best interest of nature and economy long run negative impact can occur

Table 36: Other Water Projects

	Positive	Negative
Storage of water	Storage facilities need to be made in order to save and have water in period of draught, and for controlled irrigation purposes- it can be made in common achievements with neighboring states	Make facilities in areas that are not suitable for that activity, costs are largely overvalued, not in long term best interest of local or regional population, irrigation is not made, water management and cooperation is not clearly explained and made etc.
Transport with water	Water can be managed by different transport possibilities Large goods can be moved from one spot to another with low costs, population from rural areas benefits with selling the goods in this way,	Some river beds overrun by transport, possible pollution if ships are run with oil, river beds can be additionally polluted and some rare species put in danger etc.
Flooding prevention	System of measurement and control of water , system of information, system of risk prevention and help etc.	Lack of system, lack of water management can further endanger neighborhood countries etc.





Picture c: Source Wikipedia .org

Rope system has been used more than 2000 years ago and comes from Asian rugged countries like China, India and Japan. Economically advanced countries in western world pushed this system to high lux us goods with application mostly done for skiing resorts. These discrepancies between costs and potentials should not be the obstacle for Nepalese to consider this kind of transport either for tourist, passengers in high hills or for good movement. Rope system is used for crossing ravines, rivers, river gorges, transferring themselves by hand over cliff etc. for long time in Asia. Only in 1908 when DC motor was implemented into system in Grindlewald Switzerland this system realize some new potentials that can be explored further.

For Nepal construction was made in late 1924 linking Halchowk Lainhour to carry stones, than in 1927 between Dhorsing and Matatirha and in 1964 to transport cement Hetauda to Katmandu. In 2000 Government constructed several ropeways for hydropower stations.

This kind of transport is especially suited – if considered carefully, and done with innovative but solid constructional solution -for difficult terrain, unstable mountains regions, where some places are hard to get with roads, to put a goods to markets - where is dangerous to go with planes or there are no lines, in places where number of accidents occurs etc.

Different types of rope system can be building: from gravity ropeway to life for skiing resorts. Gravity ropeway have many positive economic effects such as: cost effectiveness, short route, energy efficiency, environmental friendly, simple technology, low value of maintenance costs, low transport costs, community involvement etc.

For ropes and lift system is of primary important security, construction solidity, good material implemented at high efficiency low costs values, and possibilities to be near inhabited placed where potential for tourists usage, good transport, other commercial opportunities can be made in one system.

If a system costs 8 mil Euro, with 5% discount rate (strong Government support and community best interest to further developed with that project), 30 years life span and usage for tourist (180 days 500 tourist tickets per 10 € ticket/365 days x 273 tourist tickets and goods transport 5 times a day 365 days x5times a day or 5 transport possibilities x100€) a positive NPV value can exist. Of course rising number of tourists, extra purpose, higher selling price for goods can further contribute to the project likeness.

Table 37 : Economic Flow Net presents Value

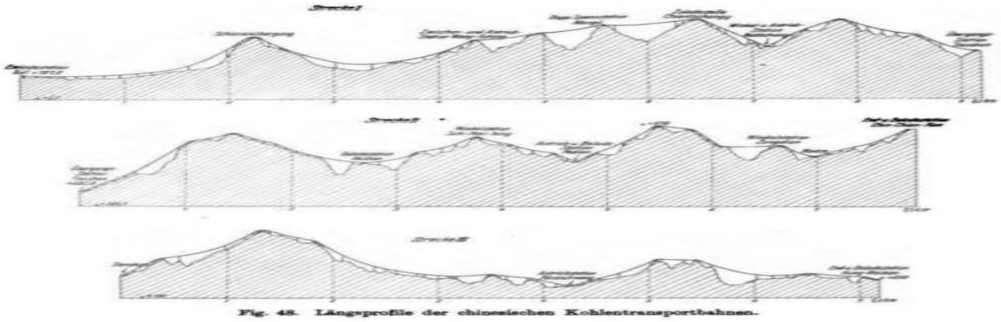
	work 2015	2016	2017	2018	2030
RECEIVABLES		1.000.500,00	1.182.500,00	1.182.500,00	1.182.500,00
Business		1.000.500,00	1.182.500,00	1.182.500,00	1.182.500,00
EXPENDITURES	**8.000.000,00**	264.799,15	344.833,64	344.250,54	434.250,00
Asset increase	8.000.000,00				
Increase of net working assets		1.749,15	583,641975	0,540123	
Cost of production		210.000,00	280.000,00	280.000,00	380.000,00
Tax on profit		53.050,00	64.250,00	64.250,00	54.250,00
NET RECIVABLES	-8.000.000,00	735.700,85	837.666,36	838.249,46	748.250,00
Cumulative net receivables	-8.000.000,00	-7.264.299,15	-6.426.632,79	-5.588.383,33	3.569.783,33
Net present value	-8.000.000,00	700.667,48	759.788,08	724.111,40	359.921,04
Cumulative net discounted receivables	-8.000.000,00	-7.299.332,52	-6.539.544,45	-5.815.433,04	**57.414,50**
NPV	**5,00%**	**3.941.417,56**			
IRR	8,98%				
MIRR	8,98%				
Years of return	0,00%	11.23 years	2026		
Years of return discounted	5,00%	15.84 years	2030		

Table 38: Balance Sheet Account

	2015	2016	2024	2044
TOTAL ASSET	8.100.000,00	8.578.034,18	12.844.505,56	23.014.505,56
Short term asset	100.000,00	838.034,18	7.184.505,56	22.104.505,56
Long term asset	8.000.000,00	7.740.000,00	5.660.000,00	910.000,00
TOTAL LIABILITIES	**8.100.000,00**	**8.578.034,18**	**12.844.505,56**	**23.014.505,56**
Short term liabilities		584,182099	1.055,56	1.055,56
Stock capital	8.100.000,00	8.100.000,00	8.100.000,00	8.100.000,00
Reserves			4.255.200,00	14.380.200,00
Profit kept		477.450,00	488.250,00	533.250,00
Net value	8.100.000,00	8.577.450,00	12.843.450,00	23.013.450,00
Capital / Total liabilities (%)	*100*	*94,427229*	*63,061984*	*35,195195*
Net worth /Total asset (%)	*100*	*99,99319*	*99,991782*	*99,995414*
Short term assets / Short term liabilities		*1.434,54*	*6.806,37*	*20.941,11*

Table 39: Profit Loss Account

	2016	2017	2024	2044
Revenue from sale	1.000.500,00	1.182.500,00	1.182.500,00	1.182.500,00
Less variable cost	210.000,00	280.000,00	380.000,00	380.000,00
VARIABLE BORDER	790.500,00	902.500,00	802.500,00	802.500,00
% REVENUE FROM SALE	79,010495	76,321353	67,864693	67,864693
Less fixed costs	260.000,00	260.000,00	260.000,00	210.000,00
OPERATIVE BORDER	530.500,00	642.500,00	542.500,00	592.500,00
in % revenue from sale	53,023488	54,334038	45,877378	50,105708
NET PROFIT FROM SALE	**530.500,00**	**642.500,00**	**542.500,00**	**592.500,00**
PROFIT BEFORE TAX	**530.500,00**	**642.500,00**	**542.500,00**	**592.500,00**



Picture d: Rope system

Picture f: Lift

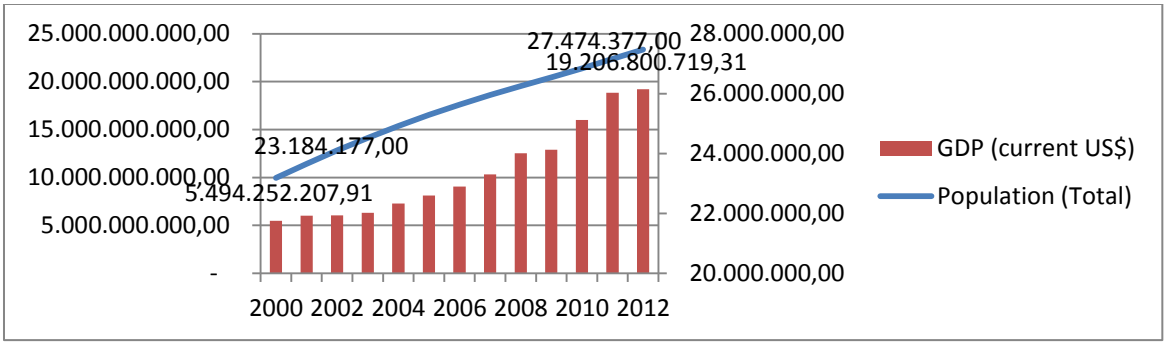
Different possibilities, shapes, end usage aims can be achieved with air lift system. Although creative thinking can form different shapes security still lies in the first place, than environmental conditions (wind, rain, snow) influence. It is not a bad idea to use wind or sun as energy resource in that respect but more security would come if small fishing boat similar to lotus shape(air bags, fishing nets, floating parts)would be manufactured for sea purposes (for low income population for example Bangladesh) than to float in air.

4. STATISTICAL ANALYSIS

4.1. Statistical analysis region

Population in Nepal rose from 23 mil in 2000 to 27, 5 mil in 21012 what presents 17% increase. In that respect GDP increase of 3,5 times over 2000 that is from 5,4 bill USD to 19,2 bill USD is significant achievements and trend that have a potentials to grow further if right political and economic measures are put in place.

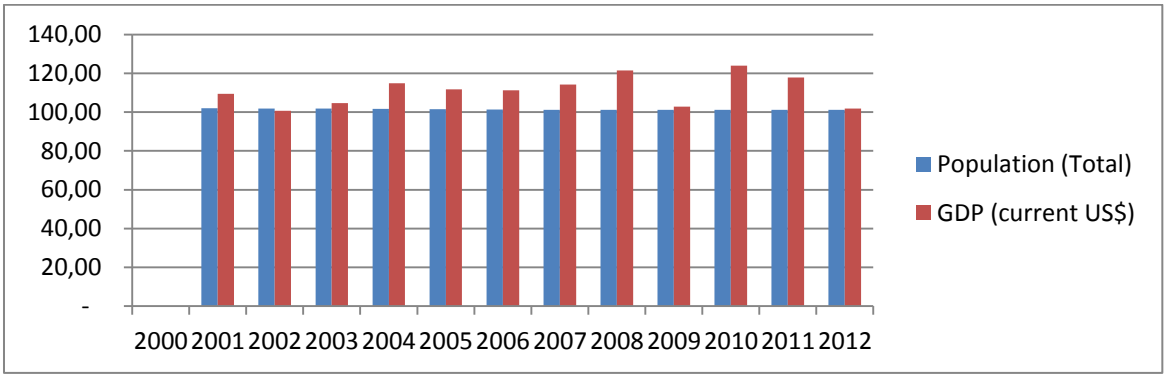
Nepal – GDP population



Picture 18

Population policy can be supported by measures that help young population, prevent growing immigration, help with housing facilities and open a new and stimulus working places. Population policy does not mean only supporting the working population but offering social care to elderlies and having the right infrastructure such as kindergarten places as measures that put the population policy in place. If this task is done than slowing GDP growth 2010-2012 can reverse trend and with new potentials turn back on growing path.

Nepal 2000=100 Index Population GDP

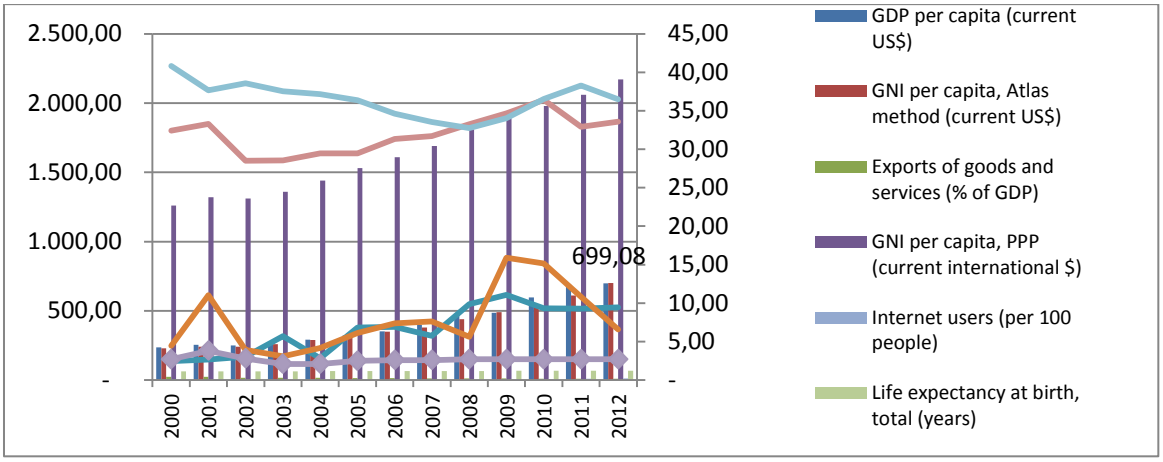


Picture 19

Model need to fit various variables that each has a short or long run implication on further economic potentials. With GDP capita slowing in 2012 Gini declined, export and import shrank to grow again, inflation somewhat lessened although Internet users grew in number. With GDP growth decline

firstly after great economic crises in 2008 when reached more than 6% it decline to 4%, and further lost the strength in 2011 with only 3, 4 % growth. In that period all main variables felt except agricultural share of total GDP.

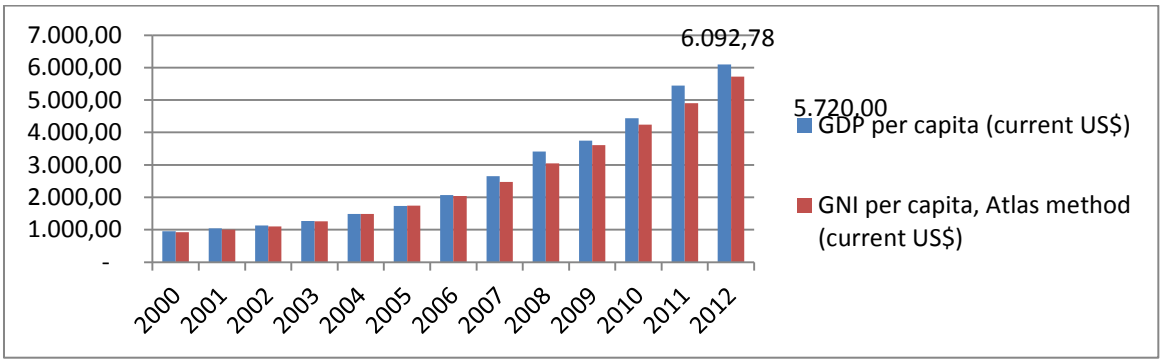
Nepal GDP / capita



Picture 20

There is a huge difference between GDP capita in China that reached the 6092 USD /capita and Nepal around 700 $/ capita what presents 8, 7 times more income in this large neighboring country. This can also presents the opportunity in tourist sector and dangers and problems when considering industrial or manufacturing production when competing with such a large economy.

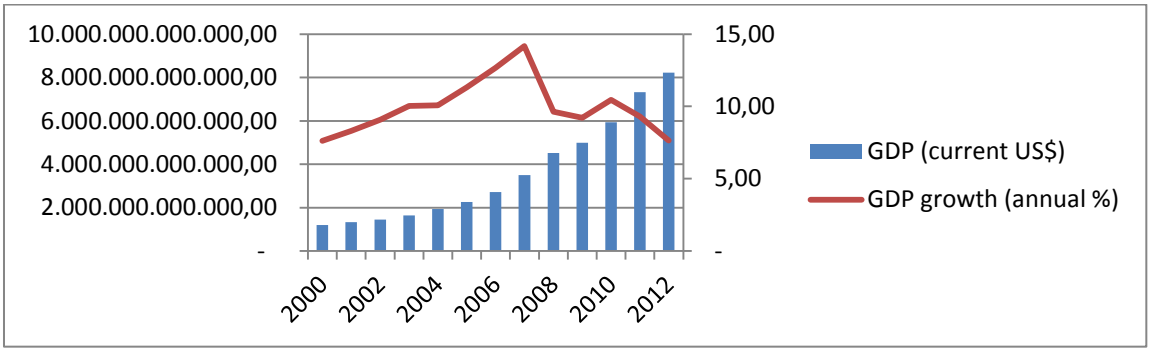
China – GDP GNI



Picture 21

Additional burden and explanation for problems in Nepalese economy can be explained by enormous competition by neighboring countries that are well established on the world market as producers of many different products. From the picture that follows is visible that China's GDP growth slows down although in absolute terms it reaches highest level ever of 8.229 bills USD. Growth decline from amazing 14 % 2007 to only 7, 6% in 2012 is partly a consequence of global economic slowdown.

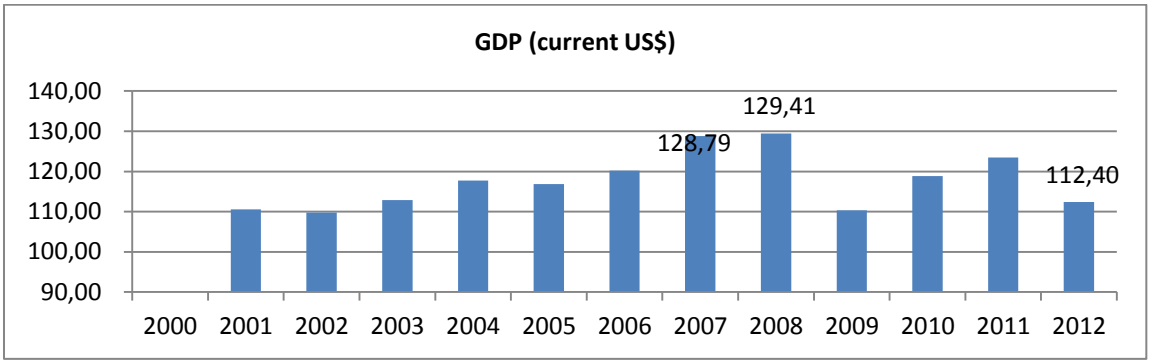
China – GDP growth



Picture 22

This situation is more vividly presented on picture that follows and where index shows sharp decline in 2009, increase and again period of slow down after 2012 in one of the fastest economies in the world.

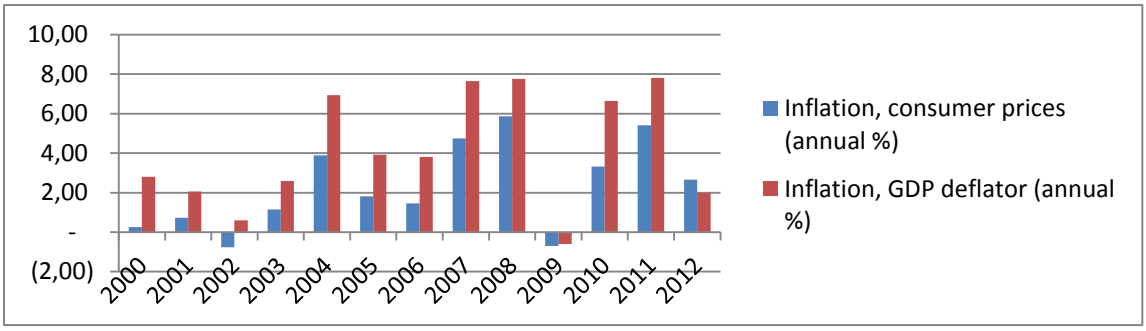
China GDP current USD 2000=100 Index



Picture 23

For China it is visible from the picture itself that strong relation between GDP growth and inflation exist where with prices decrease domestic consumption is supported.

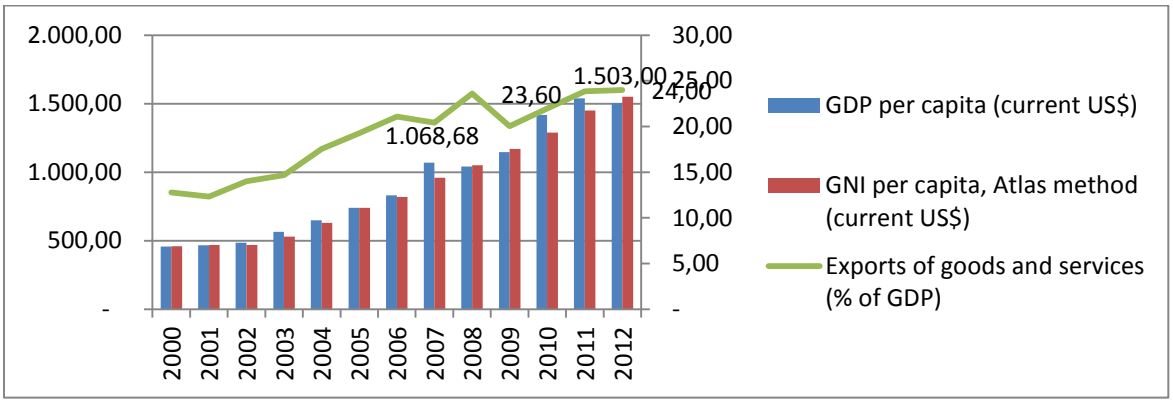
China- Inflation



Picture 24

Another important economy that is in Nepal neighborhood is India. It also felt world economic crises of 2008 where export of goods and services fell from 23, 6% (of GDP) to 20, and 05 % in 2009 and then slowly continued with rising path to have 24% share of GDP. This is significantly more than for Nepal who only manages to have its export of goods and services as 10 % of GDP. India has a four time less GDP income than China but still two times more GDP/capita than Nepal. In that respect it is more interesting economy to potential investors than China and Nepal while it have a still low cost of work and is open to sea routs while Nepal is landlocked country. This measure shows additional problems for Nepal to attract investment in industry and manufacturing and some creative and new strategies need to be implemented when having such a great economic powers by its side.

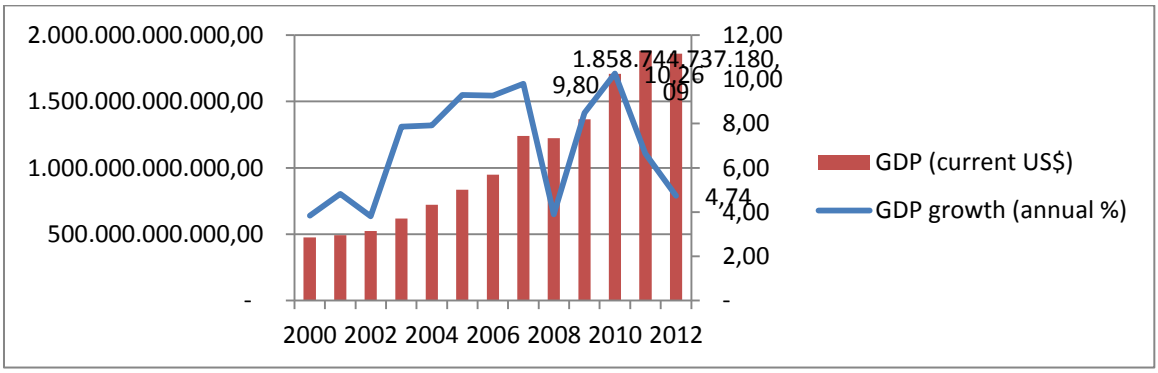
India- GDP (per capita current USD), GNI per capita (Atlas current USD), Exports of goods and services (% GDP)



Picture 25

Having said that it is good to know that much more competing and rising economies such as India have marked strong GDP growth decline from 10 % in 2010 to 4, 7 in 2012 what makes them vulnerable on the world market. This decline however need to unlock potentials of regional markets and try to bust domestic demand by whole region what is task of political and economic reasoning in region.

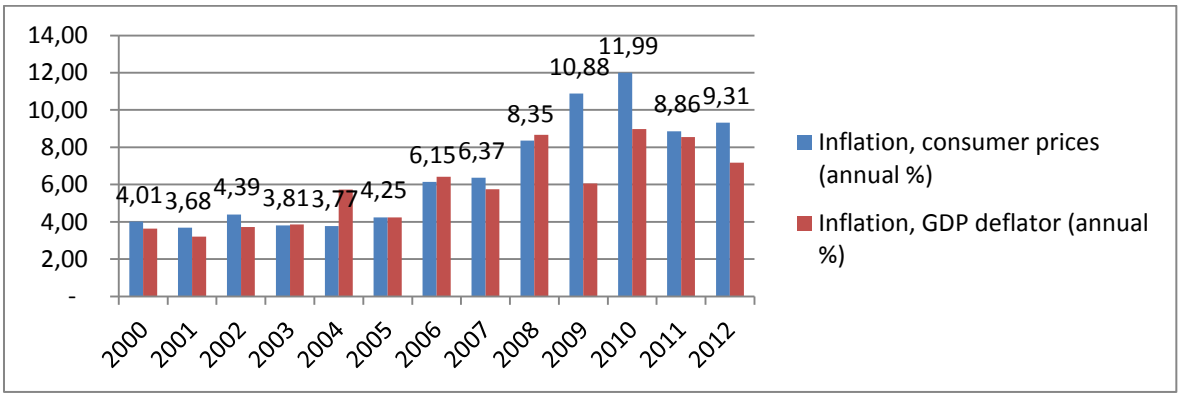
India –GDP (current USD), GDP growth (annual %)



Picture 26

India unlike its great competitor China did not create an opportunity of domestic demand with price decline in 2009 what explains much worse performance in later GDP growth and potentials. It teaches us that export oriented economies need to develop more resilient structure of domestic management of economy.

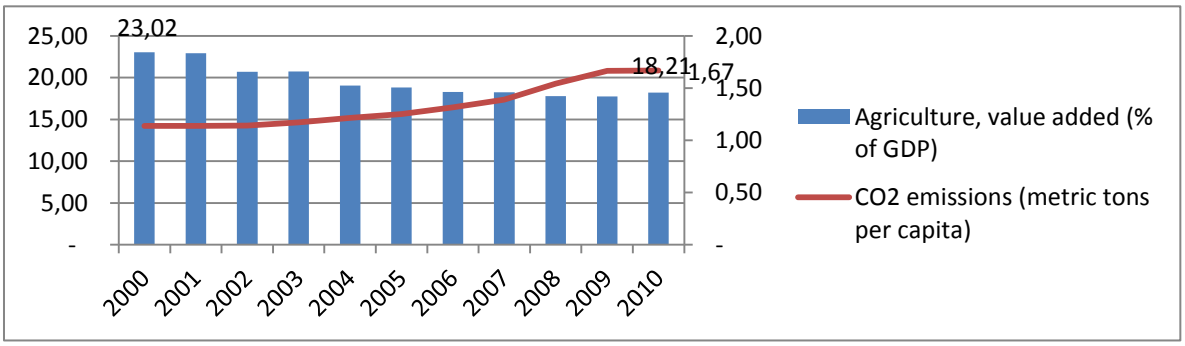
India –Inflation



Picture 27

Addition caution for the whole region need to be oriented toward harmful emissions that are a result of agriculture and industrial production. Countries with lower level of GDP /capital are less likely to have a good and secure defense toward potential weather dangers that can be related with environmental pollution.

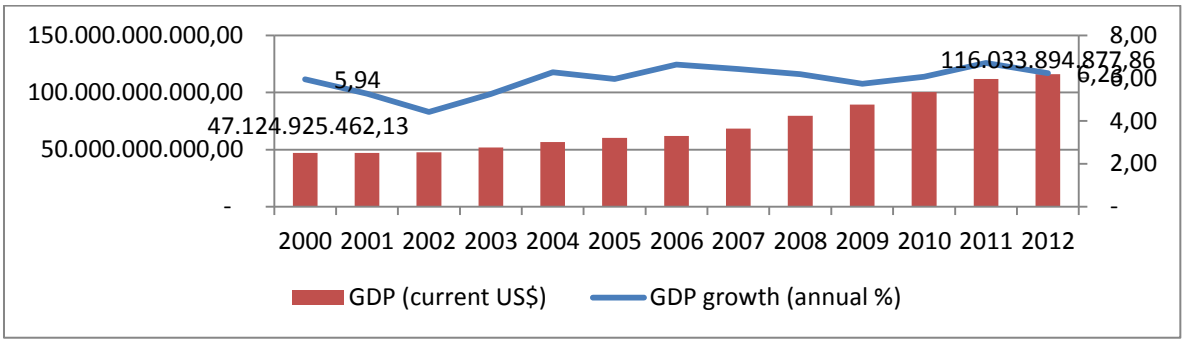
India Agricultural Value CO_2 emissions



Picture 28

Nepal has also the third neighbor-Bangladesh – that uses its sea position, has a low cost of production and in this way presents potential economic power interesting for investment. However this country has a stable GDP growth of around 6% and absolute GDP amount grew much less than Nepalese only 2, 4 times from 47 bill USD to 116 bill USD.

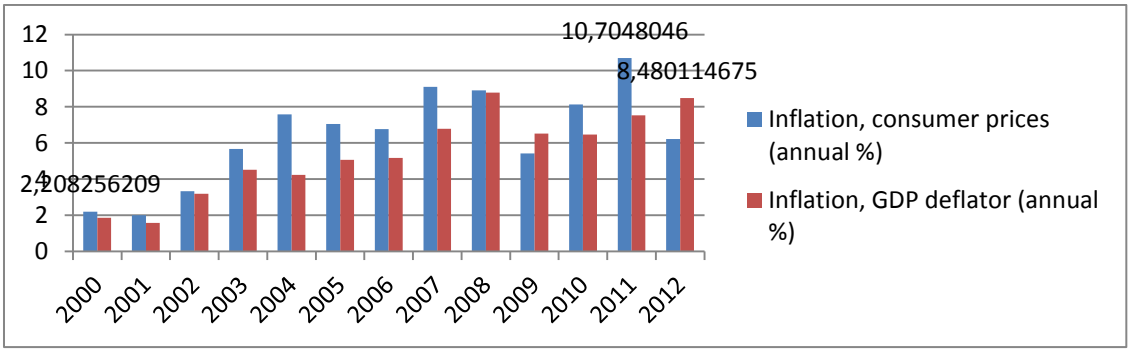
Bangladesh -GDP growth Current USD



Picture 29

Bangladesh tried to lessen the crises of 2008 with inflation slowdown in 2009 as China but this was to small effort so inflation again knocked with full strength in periods that follows.

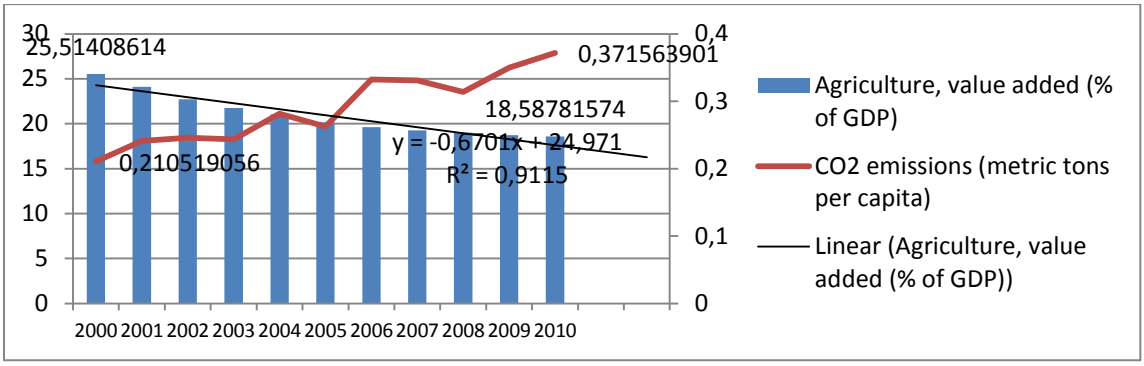
Bangladesh Inflation



Picture 30

Beside of too slow domestic development Bangladesh can face problems of agriculture decline, CO_2 rise and having its position on sea (monsoon problems,) delta of river, under high hills of Himalaya the country is placed in extremely vulnerable environmental position.

Bangladesh - Agricultural Value CO2 emissions

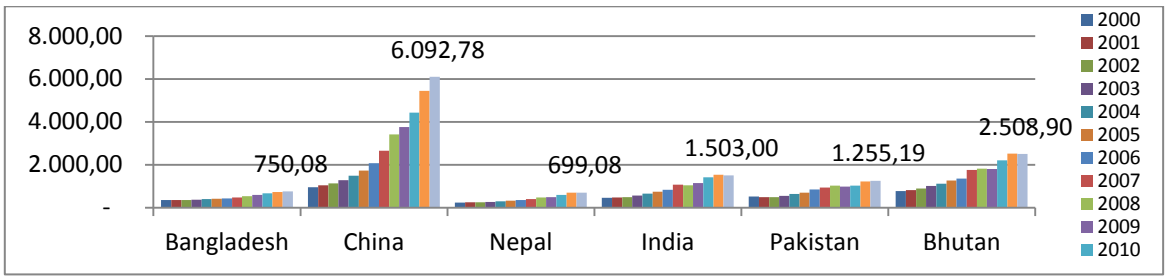


Picture 31

4.2. Region statistical analysis -comparison

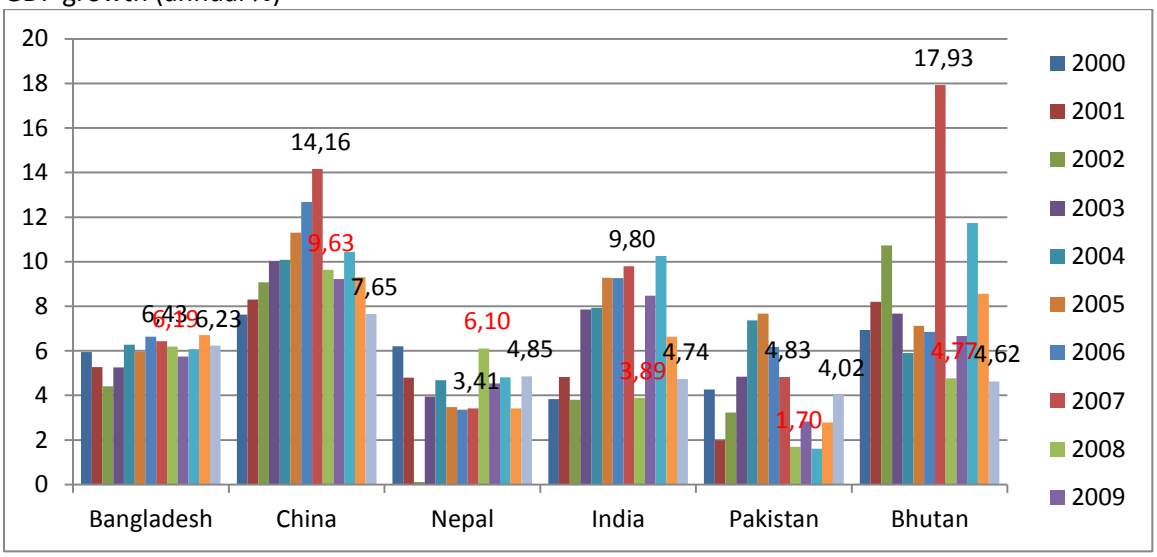
When comparing together all regional countries it is visible that China managed to boost its effort and strongly pushed toward GDP growth in period from 2000 -2012. Strong production, human capital and positioning on the world markets put strong advantage of this economy. But 2008 crises had warned China to develop domestic demand what is partly successfully done. The second thing that is partly successful for the richest economy in region is regional development of all neighbors. It doesn't mean helping the competition but growing together in having the stable and prosperous South East Asia Community. In that respect Nepal can offer regional tourist potentials and smaller specialized manufacturing facilities that can be over Bangladesh export to region and world.

GDP per capita (current US$)



Picture 32

GDP growth (annual %)

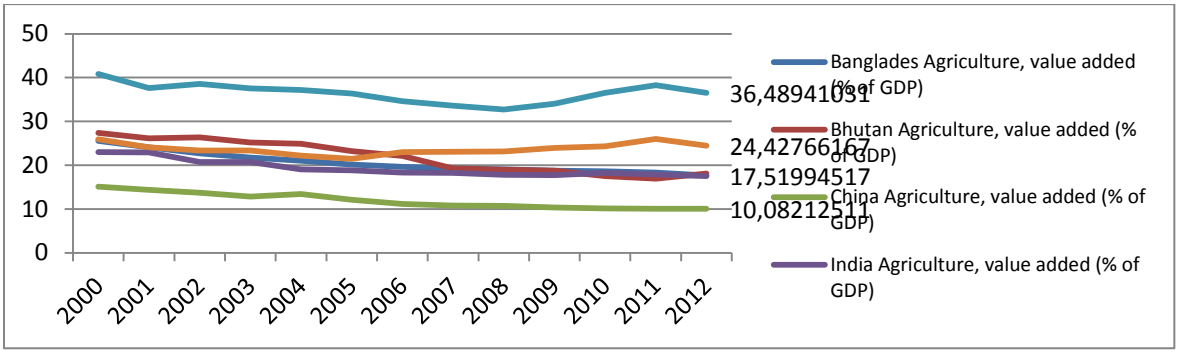


Picture 33

As seen in picture above GDP growth decreased significantly after 2008 what is clear mark for country to boost domestic demand and develop regionally more vivid and aggressive growth cooperation? Only in this way further GDP will continue undisturbed from the world cycles that can be influenced by these economies. While this is largely still poor region agriculture plays significant role in shaping GDP picture. Unfortunately this is not recognized enough so agriculture has declining trend almost in all countries. It can be further developed by government subsidies, promoting

healthy food production, by informative activities, more supportive loan policy, carefully observation and strong decline/stop of child labor, organizing land that is supportive to all unemployed population etc.

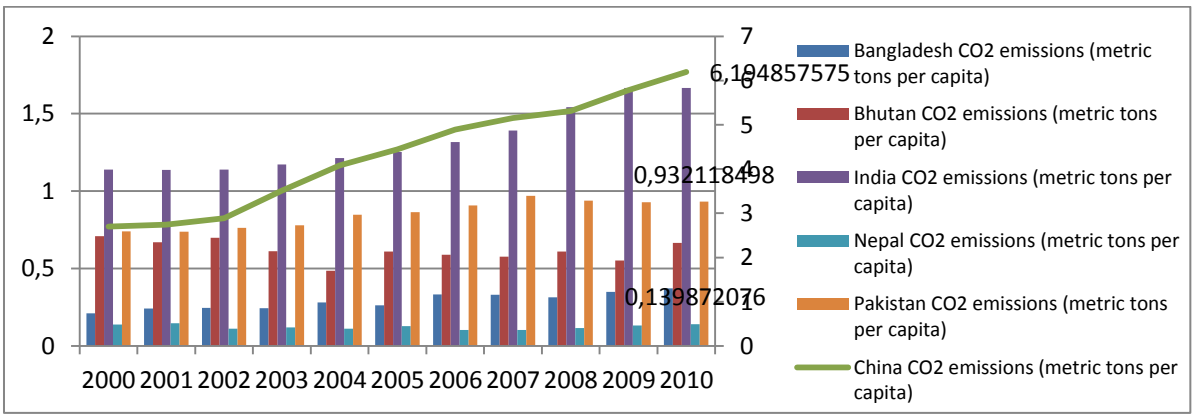
Agriculture Value Added



Picture 34

Strong industrial production in China led to rise in CO_2 emissions in absolute and relative terms. This negative consequence of growth can be felt in the region where more vulnerable countries such as Bangladesh and Nepal can pay a high price. This incorporation of negative externalities needs to be recognized by China and allocation of resources to these economies made (in form of manufacturing potentials, payment, or some other contribution acceptable to vulnerable economies).

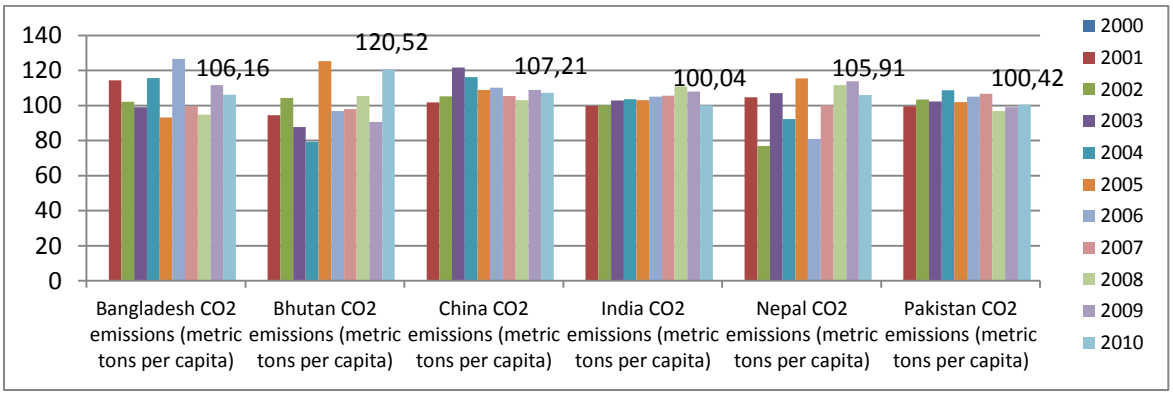
CO_2 emissions



Picture 35

CO_2 index is clearly important so it would be valuable that is roughly approximated by emission that arose due to industry, agriculture, transport and housing potentials. Only in that respect wright measures can be made and burdens more justly divided.

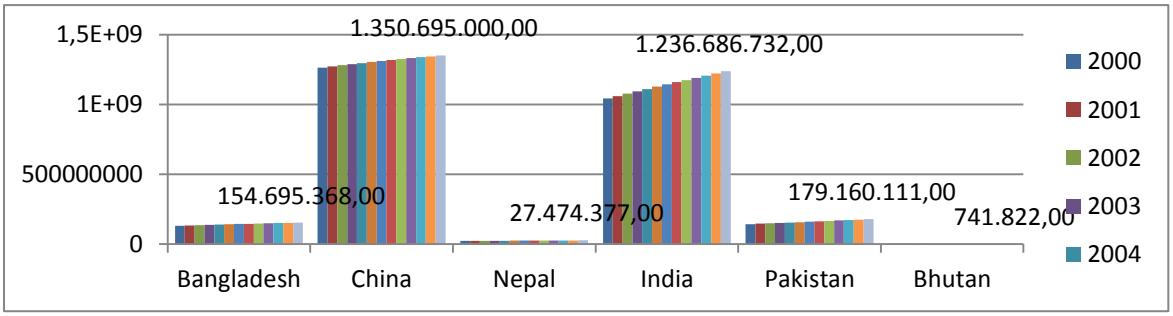
CO_2 emissions index



Picture 36

From the pictures 35, 36 it is clear that emissions are by far the largest in China, than India in absolute terms. Type of emission, source and quality solution to this problem can be one of activities that Nepal can engage into.

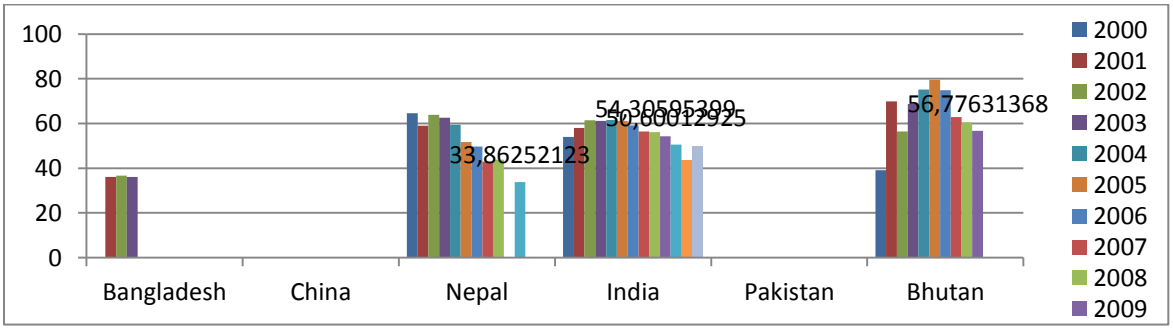
Population



Picture 37

Too high debt can mean the cycles of negative relationships which can further deteriorate potentials to growth. This is why debt policy need to be carefully considered and other mean such as supporting the manufacturing, industrial or agricultural development need to be made with tax , funds investor potentials possibilities.

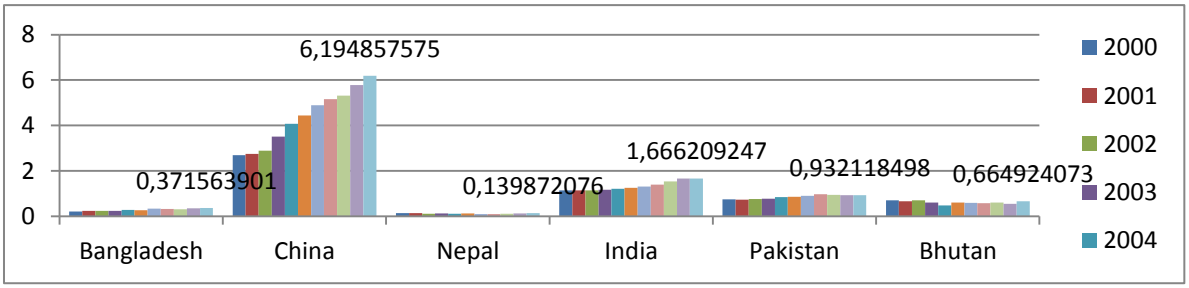
Central Government Debt, Total (% of GDP)



Picture 37

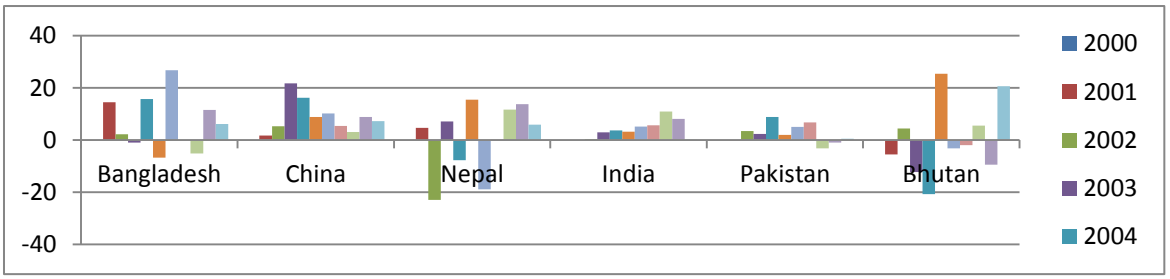
Although Nepal has by far the lowest CO_2 emission per capital it still can burden consequences of neighbor's standard (respect to industry transport housing heating etc.). Country can face dangers of strong weather change, decline in agricultural production what is one of the main source of GDP and this damage further slow down its growth potentials. Right measurement, regional talks and willingness to take into account negative consequences of growth to others in region can be one of many tasks region and Nepal are facing. Software development, instruments manufactured, fees shared and talks on regular bases in that respect need to be part of normal and regular business activity in region.

CO_2 metric ton Per Capita



Picture 38

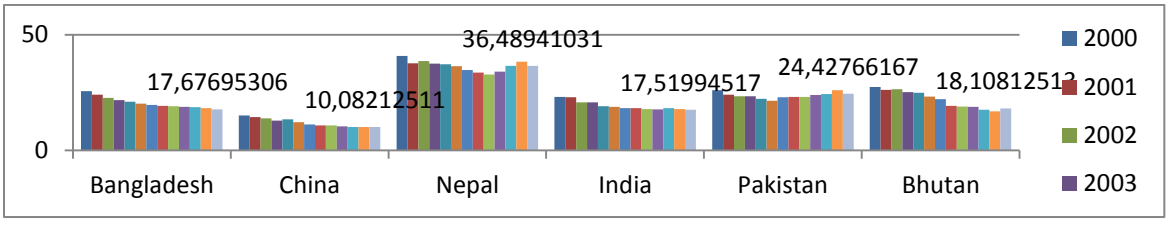
CO_2 per Capital Index



Picture 39

Nepal's agricultural activities can be reduced significantly if level of harmful emissions continues in region with that phase. Also shows some potential of clean production, specialized medical goods and services if proper economic measures are taken.

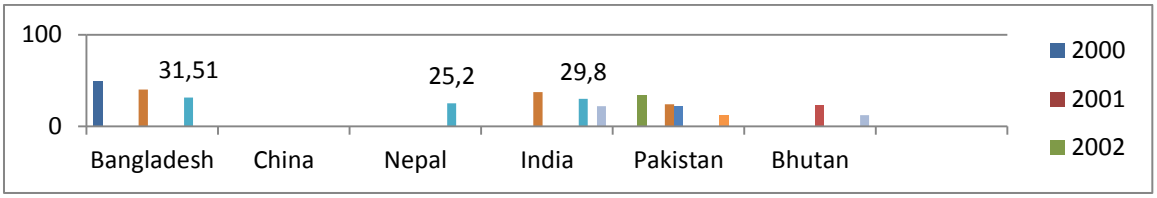
Agriculture, Value Added (% of GDP)



Picture 40

Facing high rate of poverty index as large number of population struggles with basics South East Asia can develop more economic and regional cooperation, helping each other with providing manufacturing, transport opportunities and develop model that is flexible to world crises.

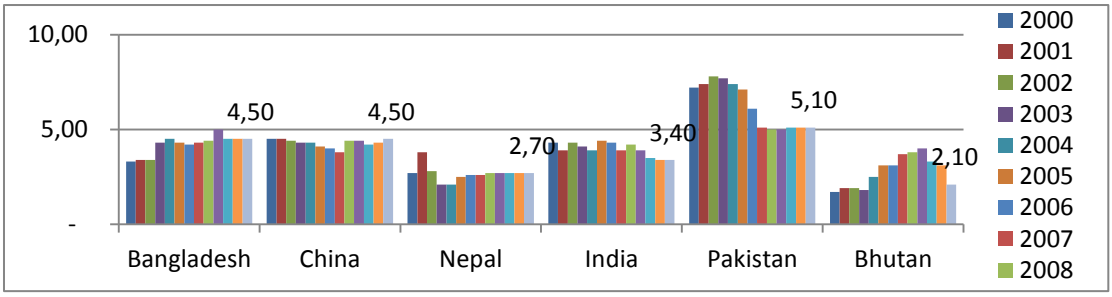
Poverty headcount ratio at national poverty line (% of population)



Picture 41

Strong world economic growth contributed to employment potentials in this region but if crises continue some negative consequences can be felt in terms of employment. It is good to carefully watch on long term and short term unemployment structure and dangers.

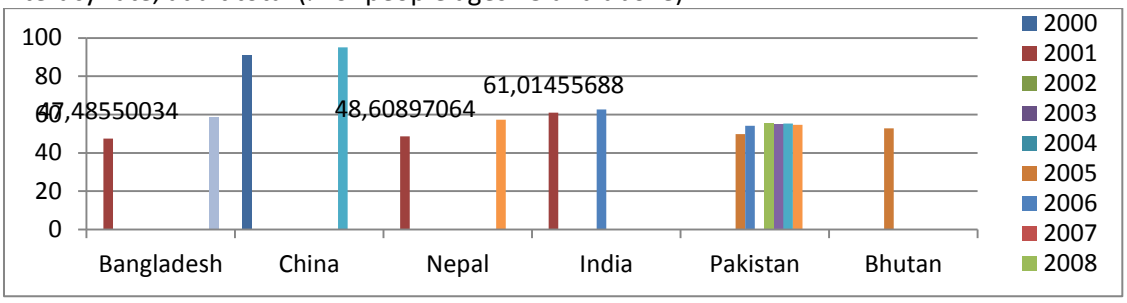
Unemployment, total (% of total labor force) (modeled ILO estimate)



Picture 42

The good start is education and right job adaptation to crises: large government agricultural facilities that can accommodates workers, better education providing new types of job occupation, more quality service etc.

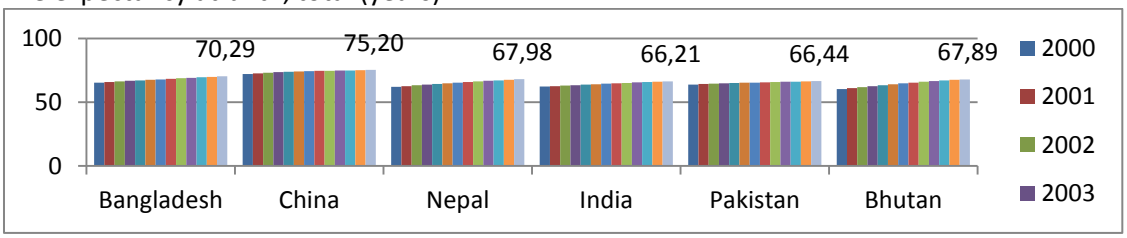
Literacy rate, adult total (% of people ages 15 and above)



Picture 43

One of potentials is care for elderly population and right social service to these age groups.

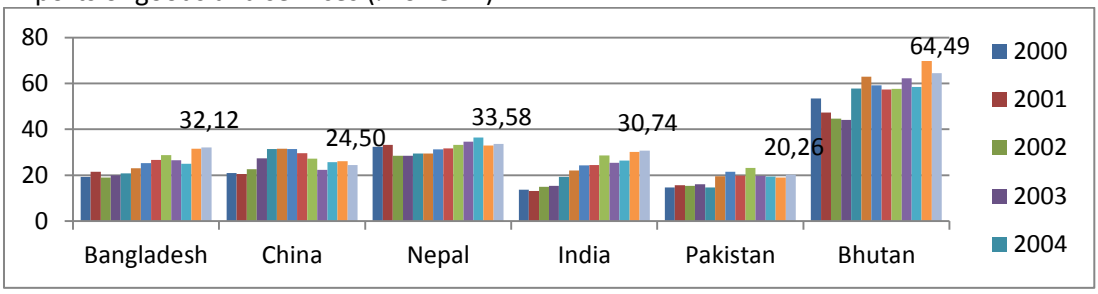
Life expectancy at birth, total (years)



Picture 44

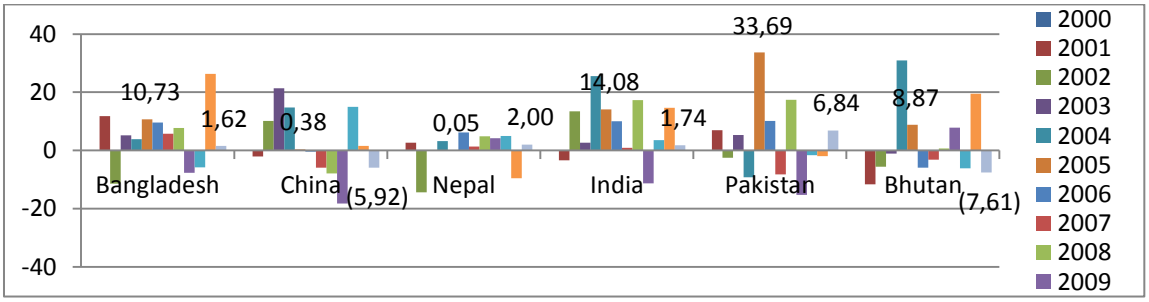
Import is strongly correlated to GDP growth and potentials. It can be managed with regional import of goods and services and some job sharing done in that respect reducing import costs.

Imports of goods and services (% of GDP)



Picture 45

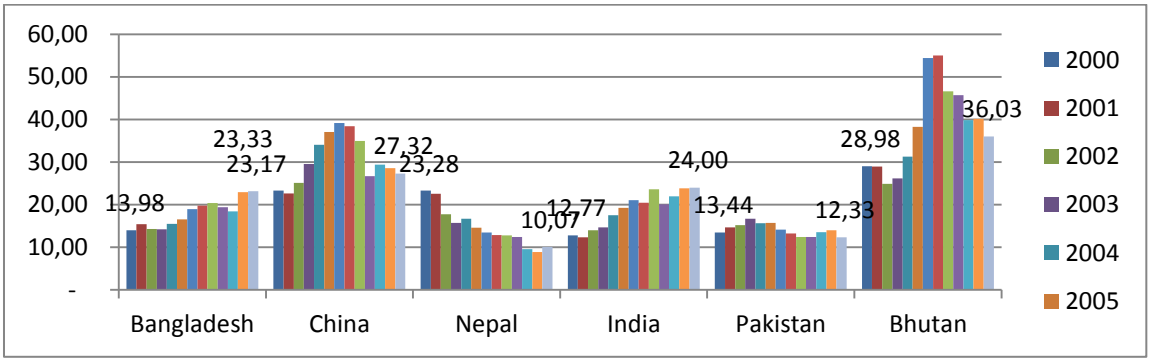
Imports of goods and services (% of GDP) index 2000=100



Picture 46

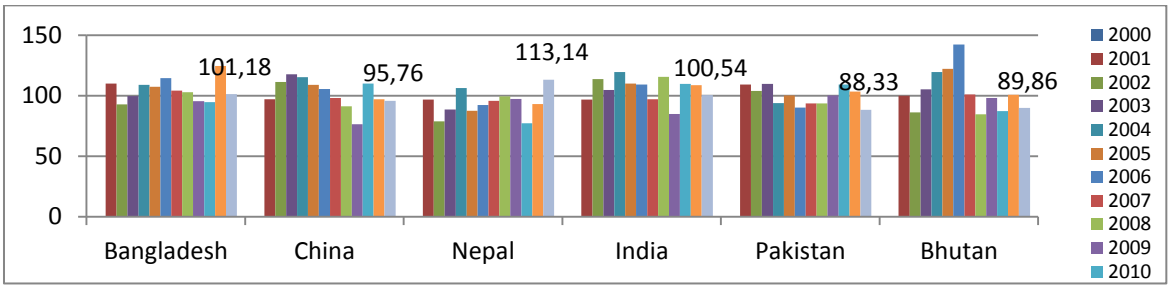
It was to be expected that export potential will slow down after 2008, but a problem continue to appear for longer period of time in Nepal economy. Stability, promotion, building new infrastructure as well as regional cooperation can reverse this trend. Also it would be good for high income economies who contribute significantly with CO_2 emissions to compensate the environmental pollution with some kind of economic support - tourist arrival, small manufacturing non pollution possibilities, market for agricultural goods and medicine etc.

Exports of goods and services (% of GDP)



Picture 47

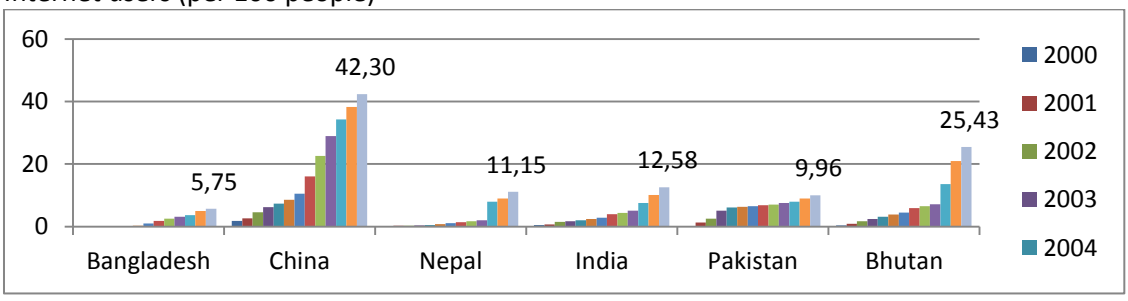
Exports of goods and services (% of GDP) Index 2000=100



Picture 48

Although rising number of Internet users is growing in region there is a still large unexplored potential of this resource. Internet can be used for communion, promotion, obtaining knowledge and as source of new business potentials.

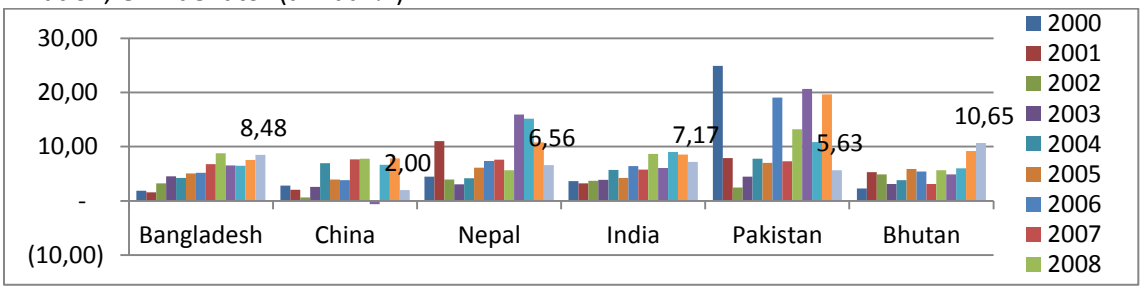
Internet users (per 100 people)



Picture 49

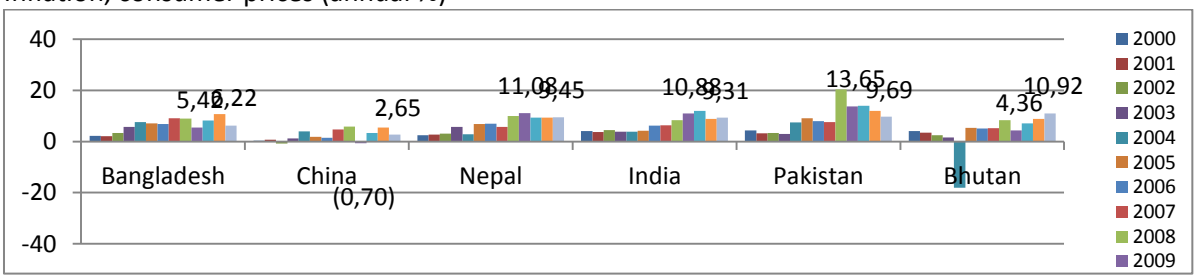
How to manage prices and domestic demand is the lesson of region that can be copied from China. More flexible approach in economic decision, some new innovative solutions, quick reaction in times of market disturbances and more cooperative game approach to regional economic base is the way out of future negative economic cycle.

Inflation, GDP deflator (annual %)



Picture 50

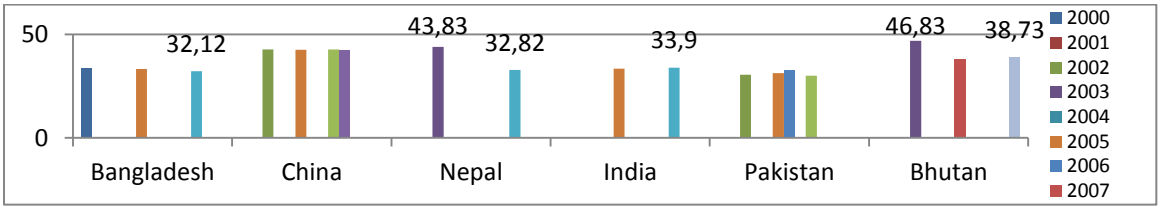
Inflation, consumer prices (annual %)



Picture 51

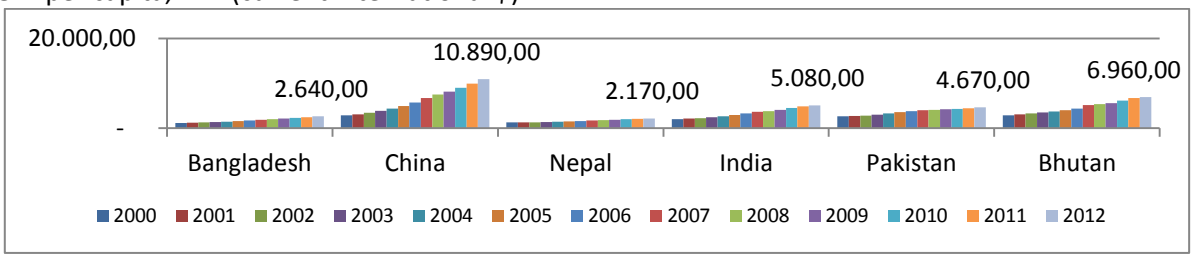
Having tackled some new model opportunities in paper human welfare GINI index is having a special significance. Although it rises with GDP, some additional measures as GINI in housing facility potentials, quality, future plans, and equal chances for school, medical care can be observed etc. Further rise in inequality in region cannot bring long term good news even for the richest in region while it reduces potential market in the case of future world market instabilities. Also what is to note that direct foreign investment can induce growth, but real quality grows comes from inside and cooperation in region and that is the task that South East Asia will probably pursue more vividly in the future.

GINI index



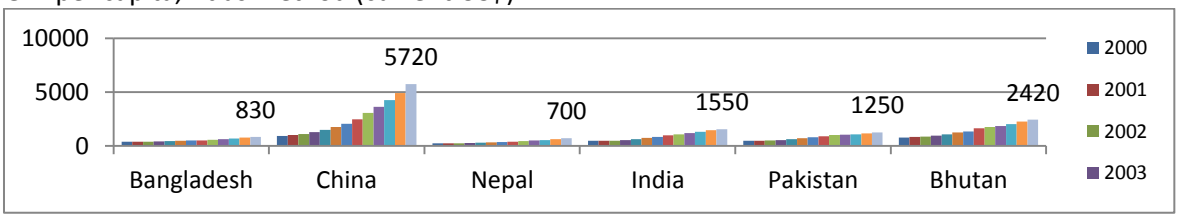
Picture 52

GNI per capita, PPP (current international $)



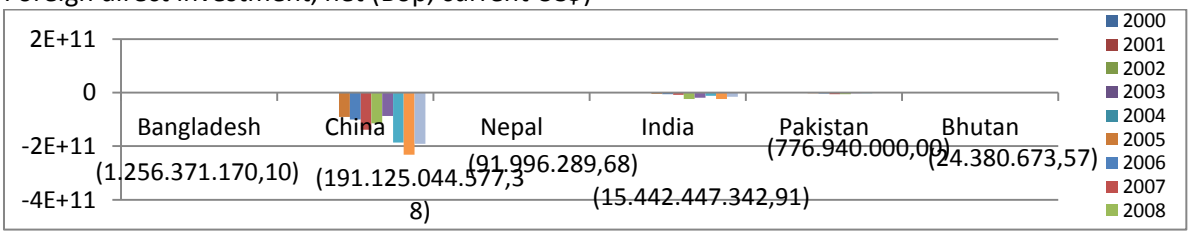
Picture 53

GNI per capita, Atlas method (current US$)



Picture 54

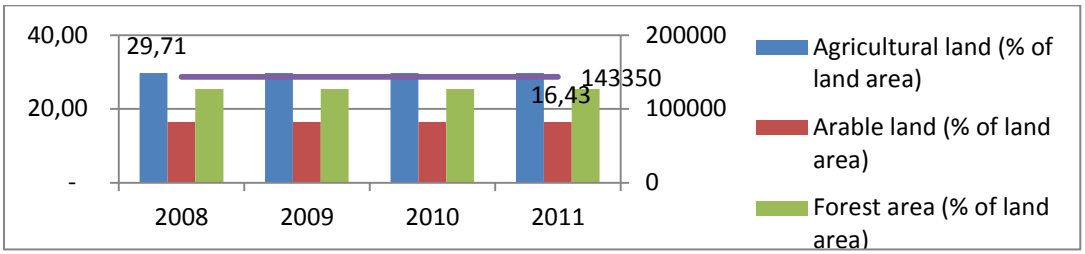
Foreign direct investment, net (Bop, current US$)



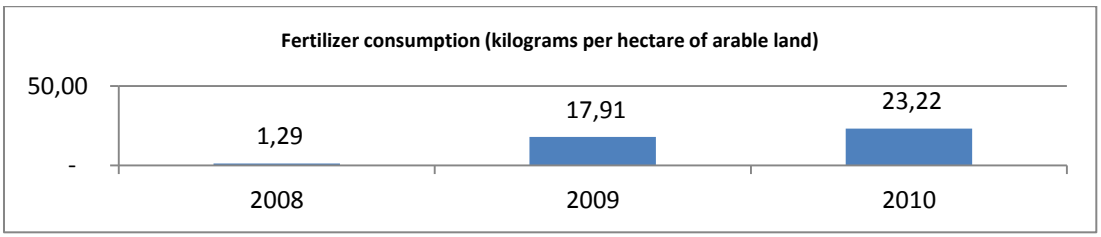
Picture 55

4.3. Nepal statistics

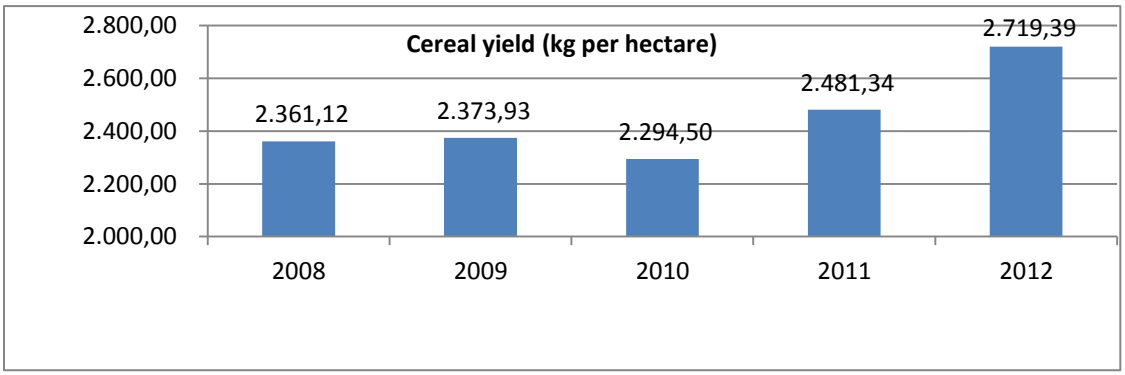
High mountain region means touristic beauty but limited space for agricultural production. Still Nepal is using its natural resources to obtain the maximum from domestic production, have increased fertilizer consumption and yield per hectare that is half of those on the most fertile lands in the world. Yield can be improved with different ways of irrigation, optimal plant protection and fertilization.



Picture 56



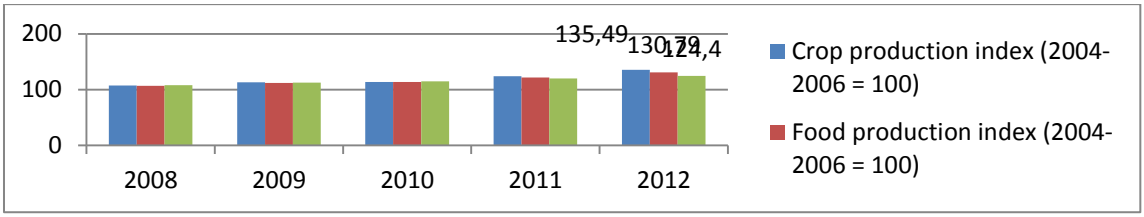
Picture 57



Picture 58

Agriculture production proved to be important source of income and area that should be further cherished and production maximized with as smallest number of negative environmental implications as possible.

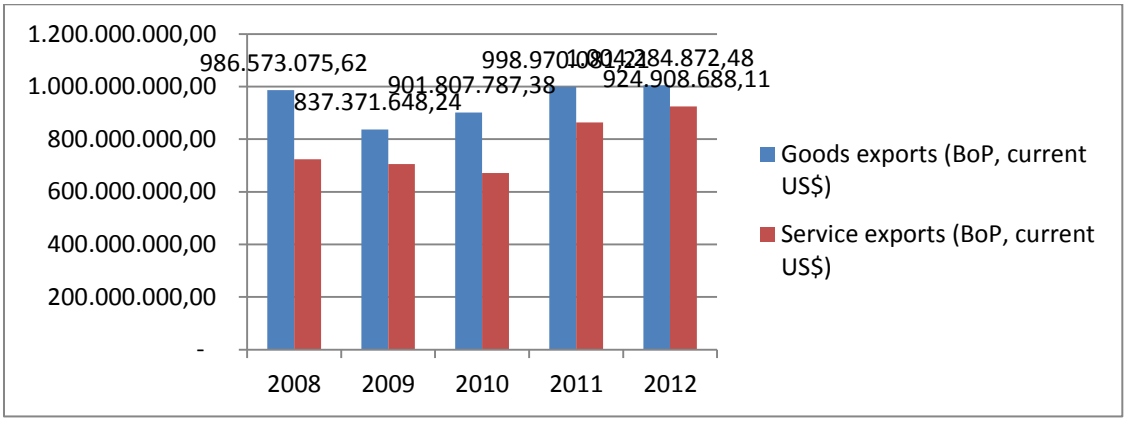
Production Agriculture -Index



Picture 59

Although service export declined rapidly in the last years with 2012 showing some marks of recover it is to be expected more aggressive policy toward this area of income in respect of promotion, possibilities and variety of opportunity that country can recognize in its position and capabilities.

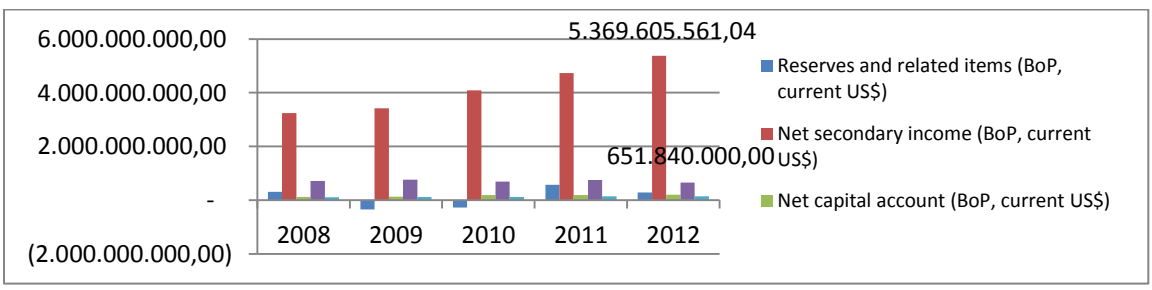
Export-goods/service



Picture 60

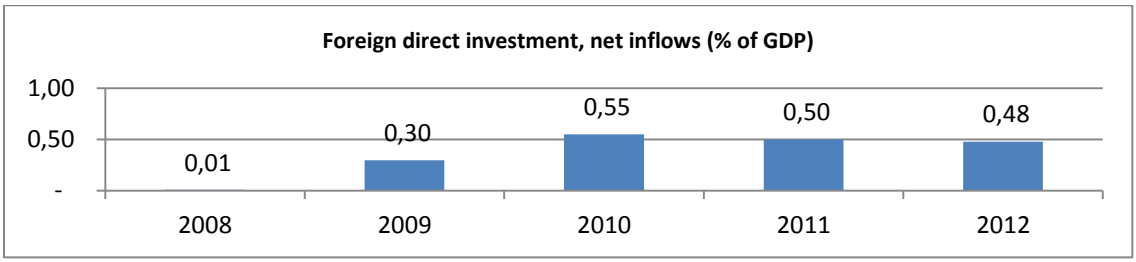
Rising secondary impact shows potentials but and low GDP/capita structure. More aggressive approach toward capital formation that brings high income tourist, reach export markets with high quality goods are to be explored further.

Reserves, Net secondary income, Net capital account (Bop current US$)



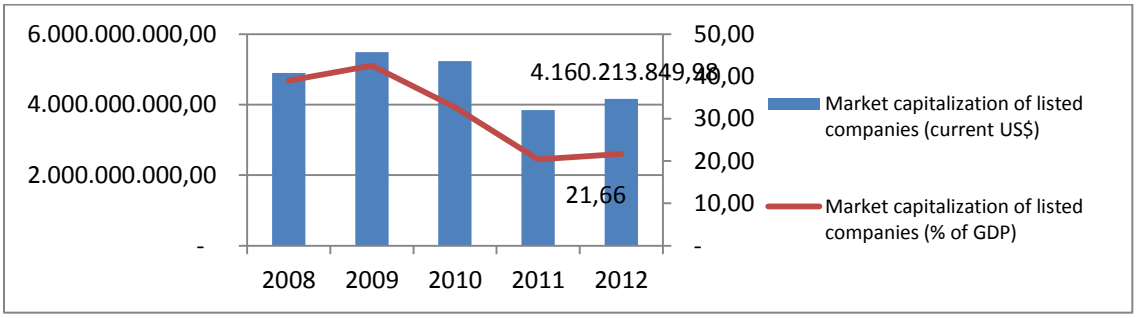
Picture 61

Although foreign investment should not be the only measure that grows, relay to, its slowdown could point to some government inefficiency, rigidities in sectors that need impetuous and not further problems, to high taxation policy in times when is not appropriate etc.

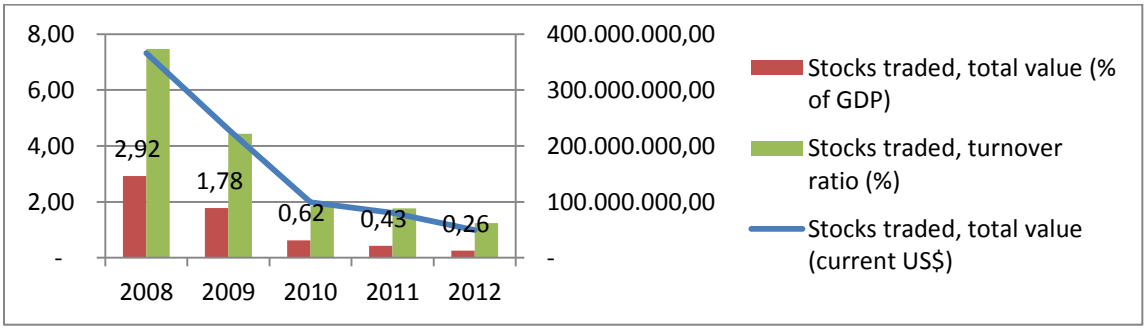


Picture 62

Declining market capitalization can point toward weakness in industrial manufacturing sector, too high taxes, too low efficiency, smaller than possible export opportunities. Some boost can be made by different fund structure and possibilities.

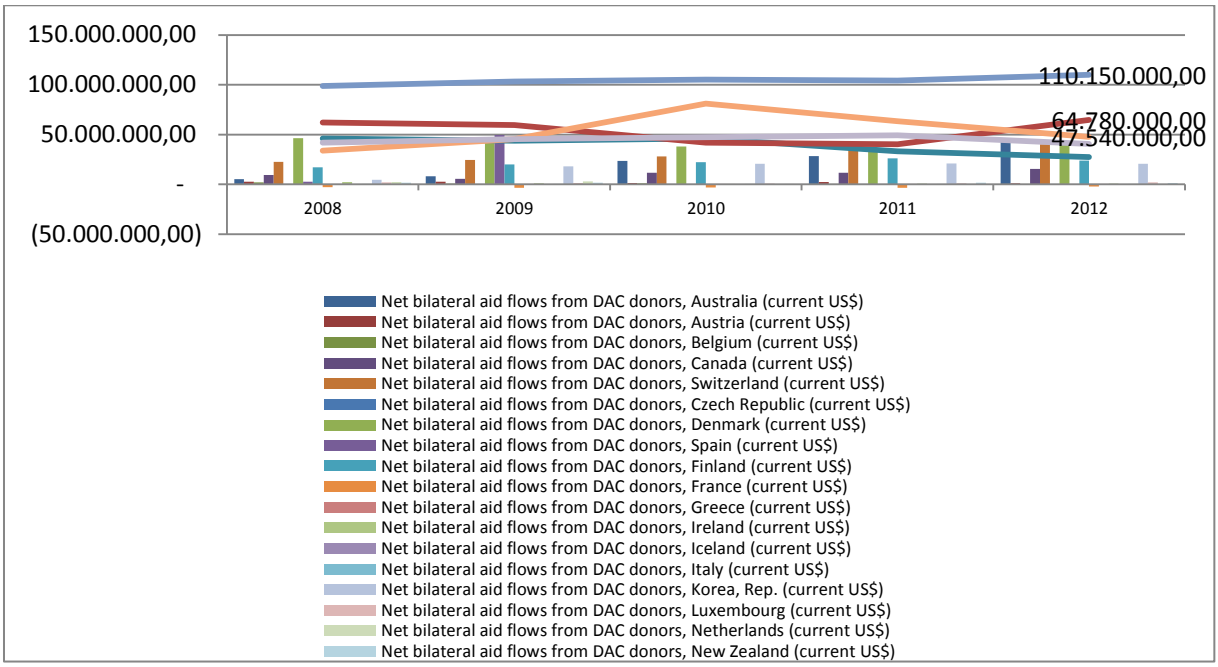


Picture 63



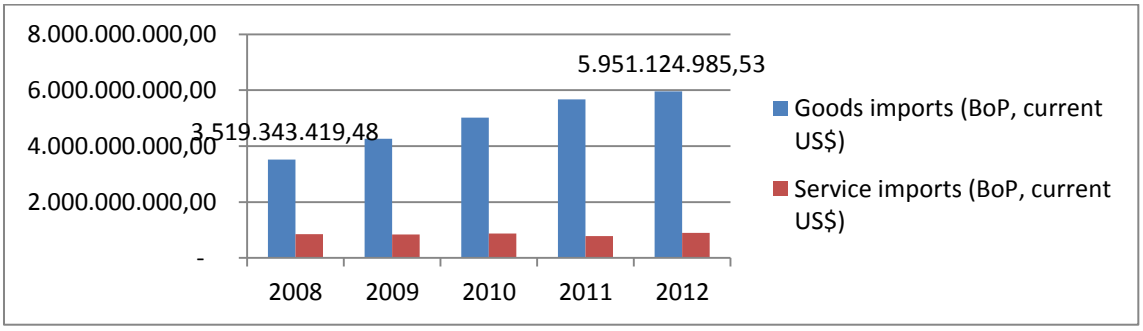
Picture 64

Nepal is still dependent upon donor help. Large amount comes from UK, Germany, Australia and USA. Although it seems as help some arrangements upon investment tourist arrivals etc. That could further boost economy are better to achieve. Donor help means dependency in its worst case.



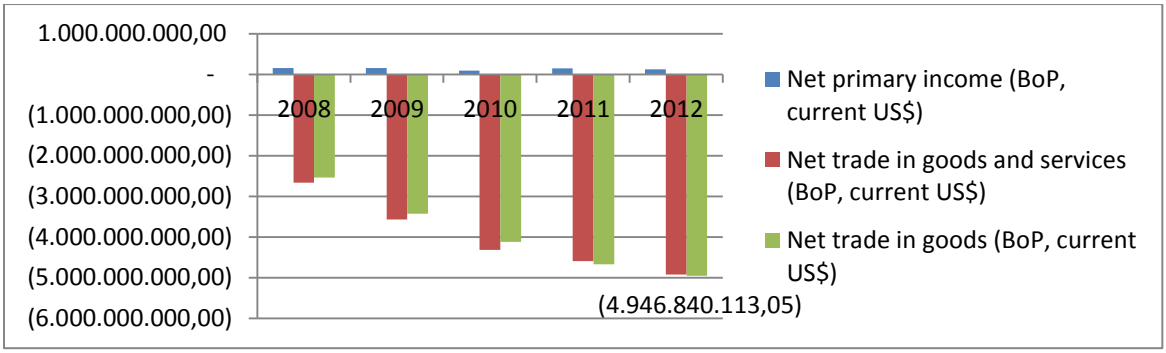
Picture 65

In addition to declining export another bad news in Nepal economy comes from strong rise in good import. Service import would mean potential for transport facilities but this lingers at the same level for the last five years that are observed.



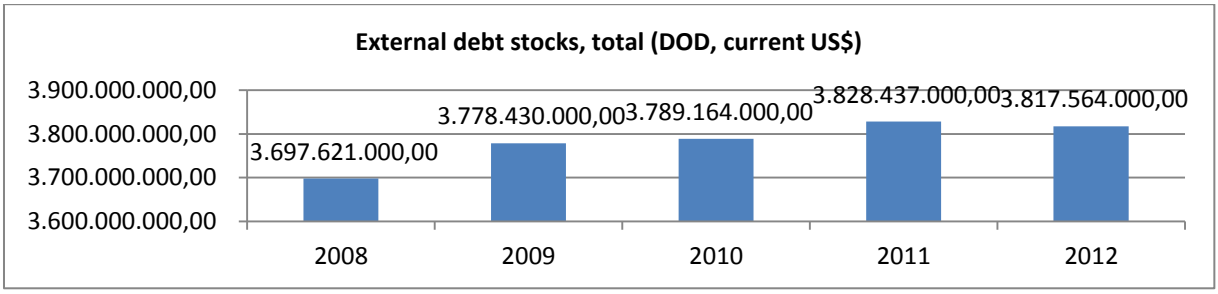
Picture 66

With these negative inputs it is to be expected negative results in net trade in goods whose rise almost double.

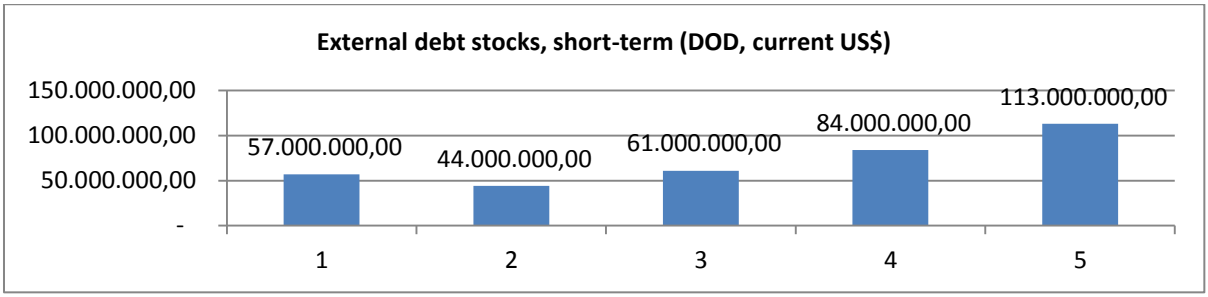


Picture 67

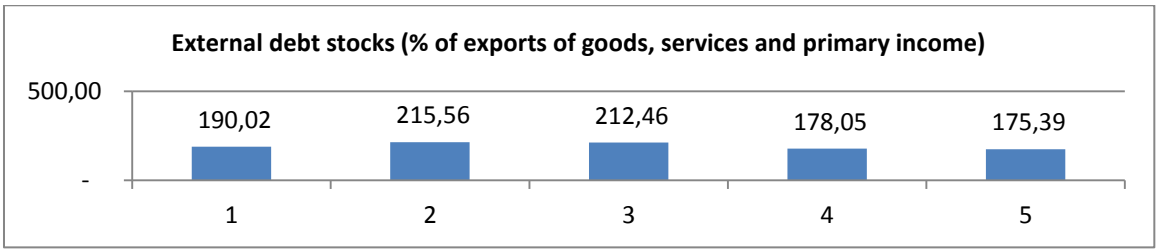
Further to point is external debt level that can be reduced by more aggressive export approach manufacturing specialized products, software innovative potentials and greater tourist arrival.



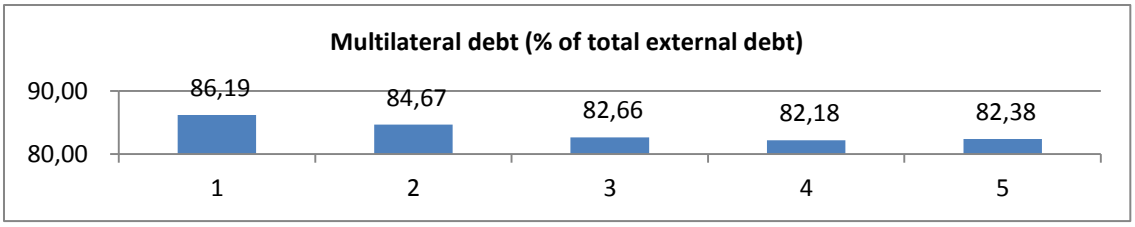
Picture 68



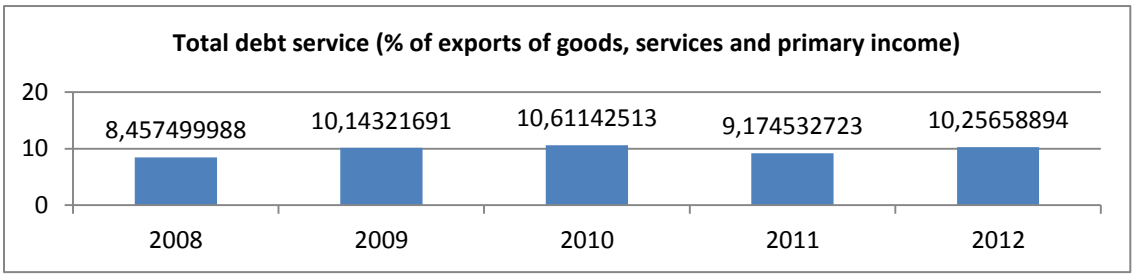
Picture 69



Picture 70

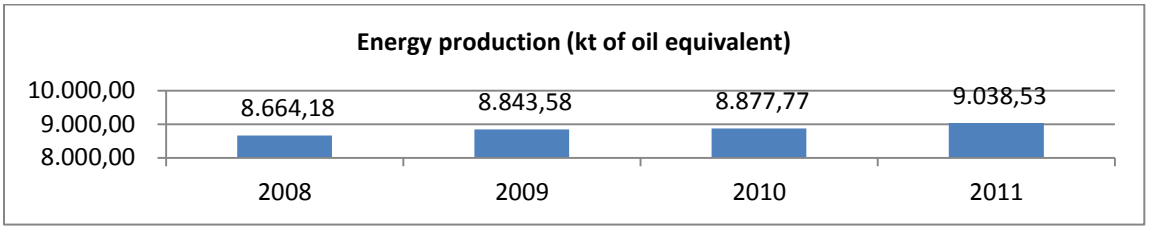


Picture 71

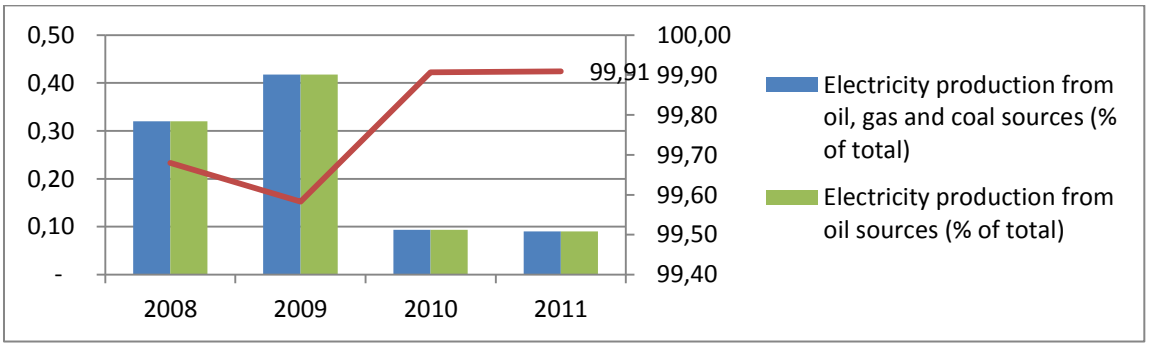


Picture 72

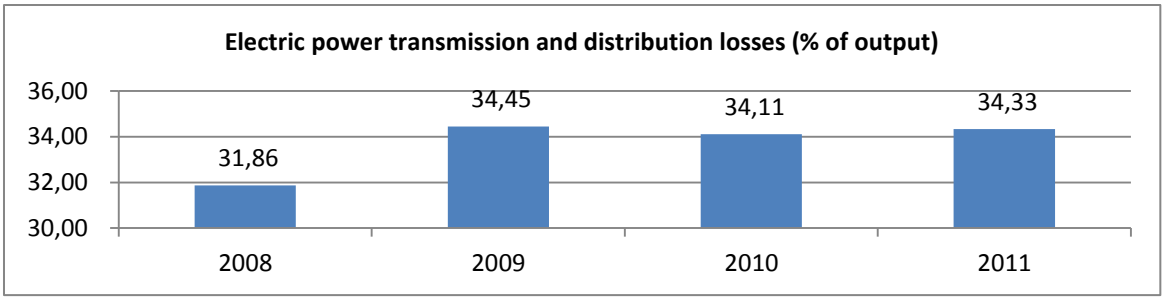
Potentials in water management, production of hydroelectricity and export to China India, Pakistan can further boost economy. There is a potential to attract foreign investors but should keep in mind that ownership can to be transferred to fund that is owned by population and foreign investor share is better to be kept under 25 %.



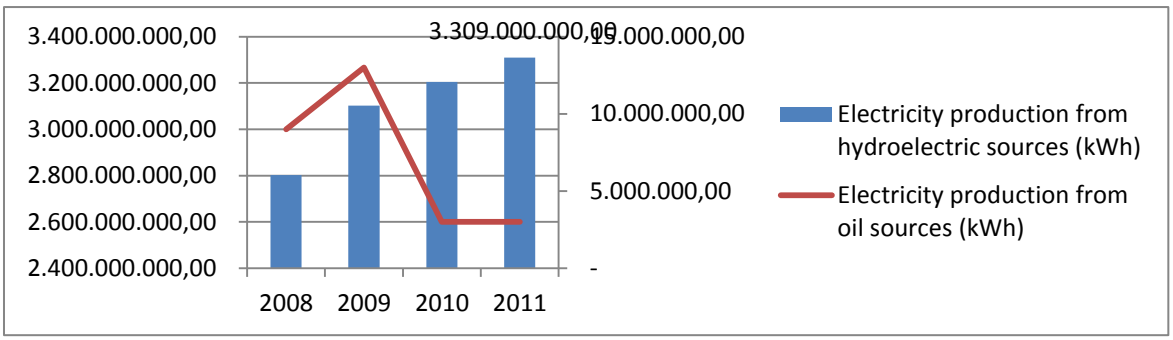
Picture 73



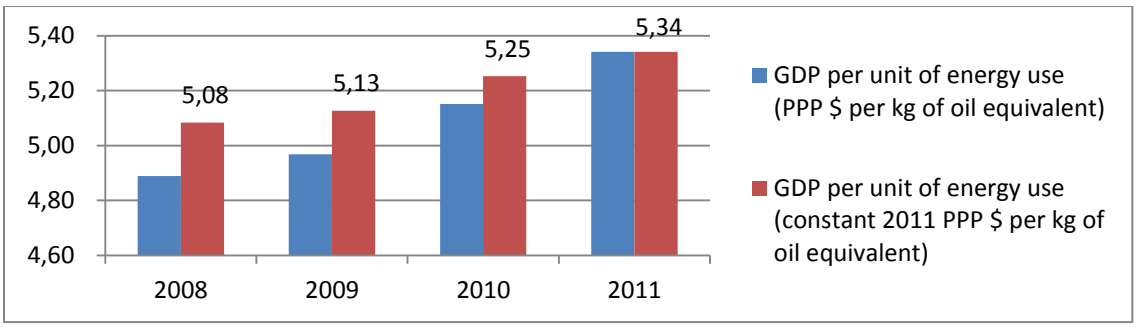
Picture 74



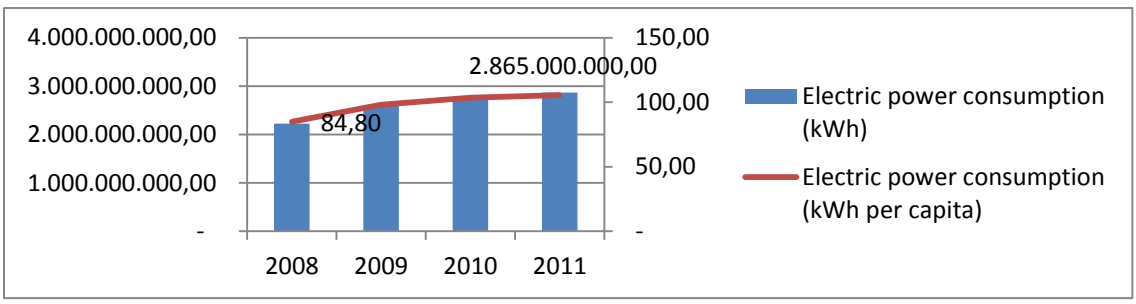
Picture 75



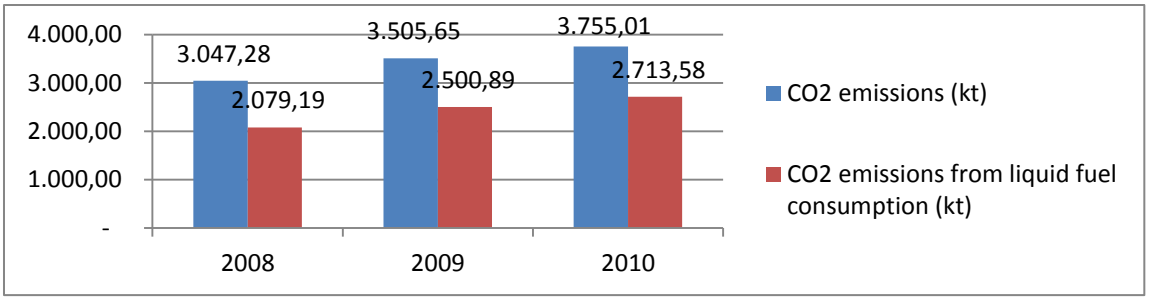
Picture 76



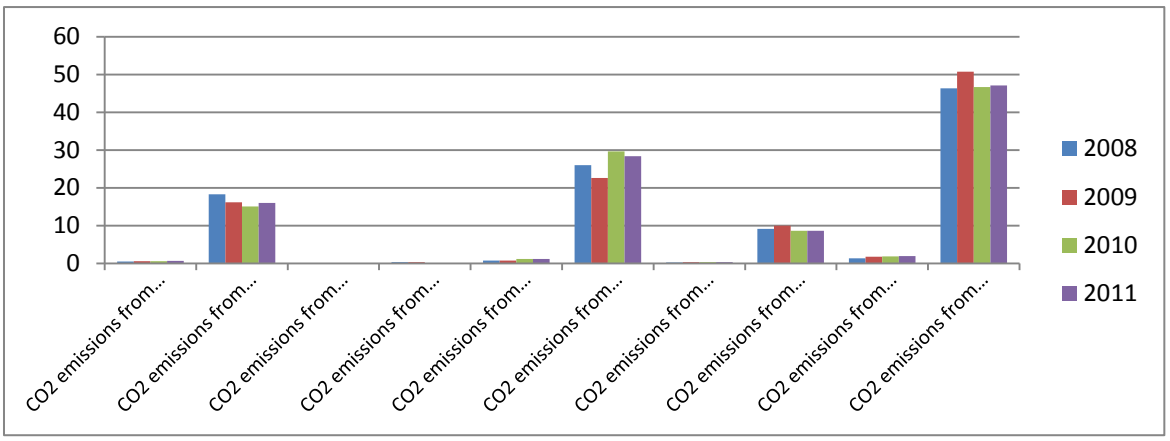
Picture 77



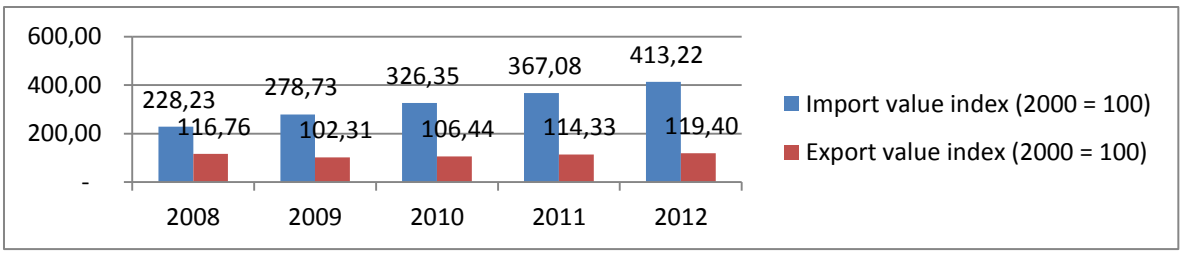
Picture 78



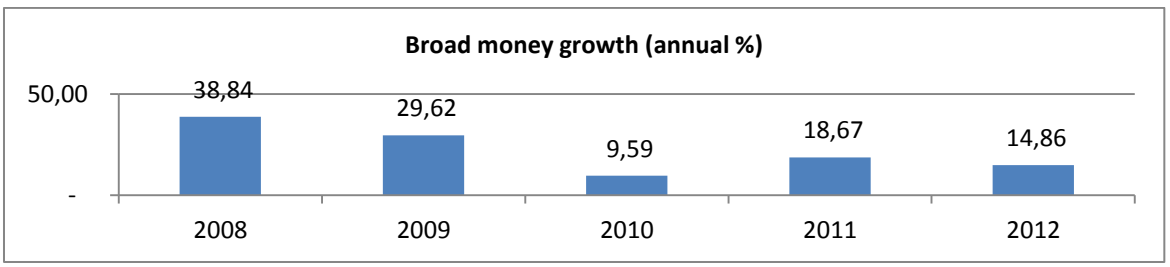
Picture 79



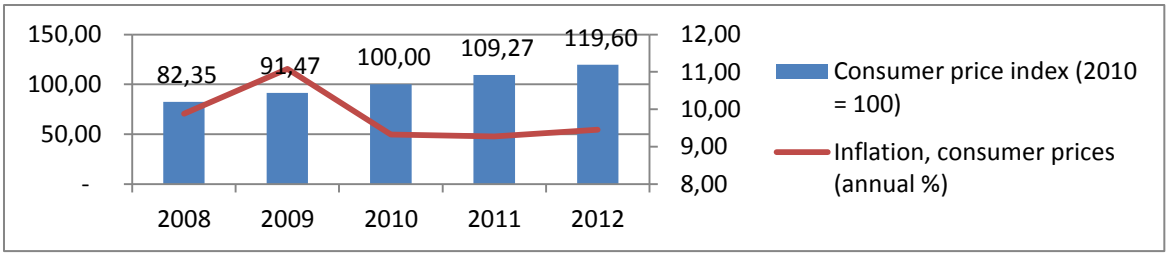
Picture 80



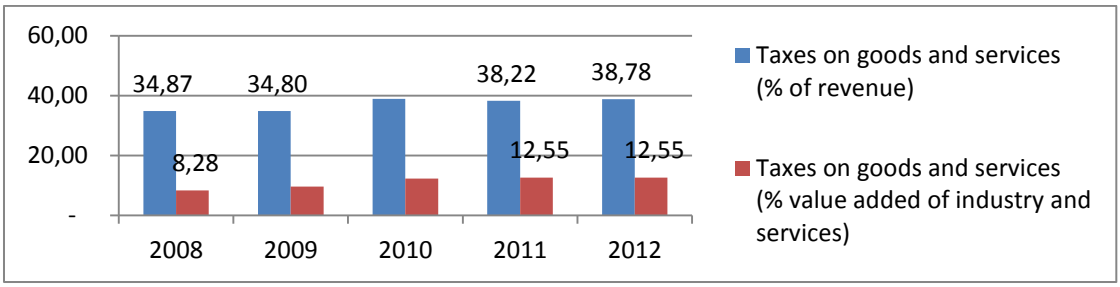
Picture 81



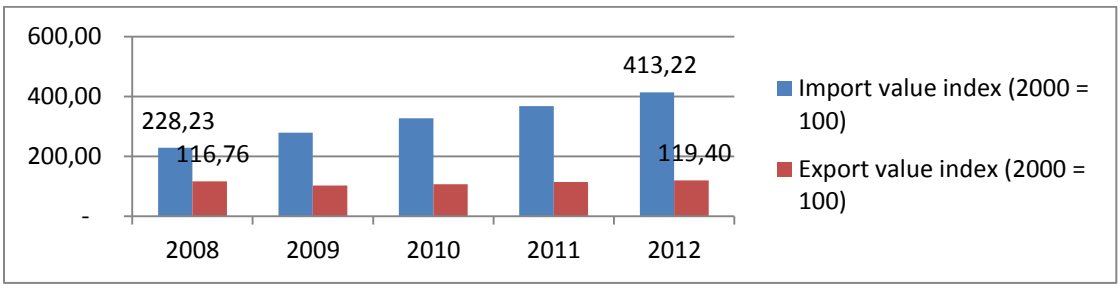
Picture 82



Picture 83



Picture 84



Picture 85

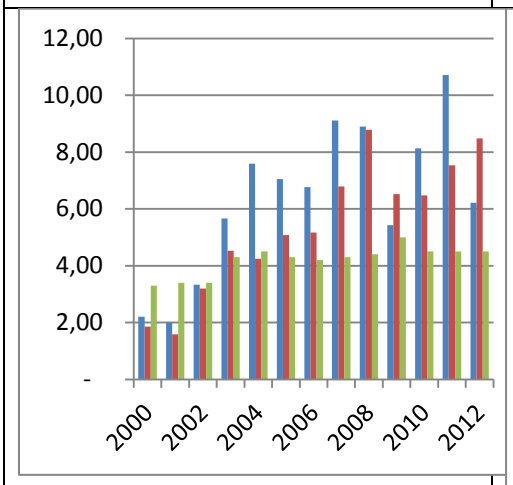
4.4. Analysis

After all basic statistical data are presented in the form of graphs relation between main variables is explored further.

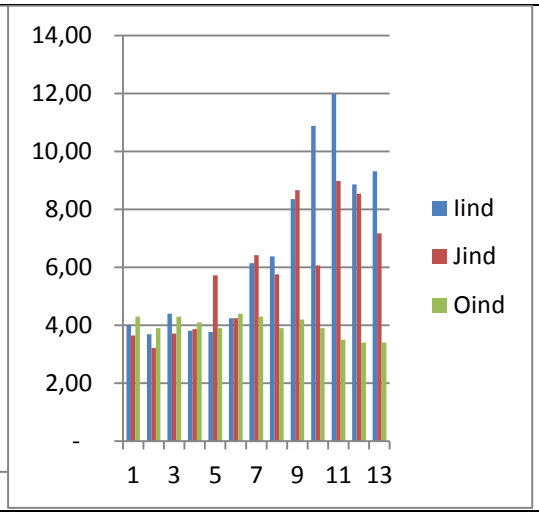
The first relationship is between inflation and unemployment (*where O is unemployment and I inflation consumer prices (% annual) J inflation GDP deflator - annual %).*

Relation inflation unemployment:

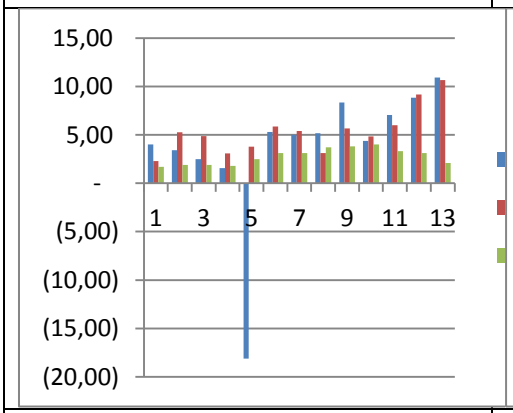
BANGLADESH



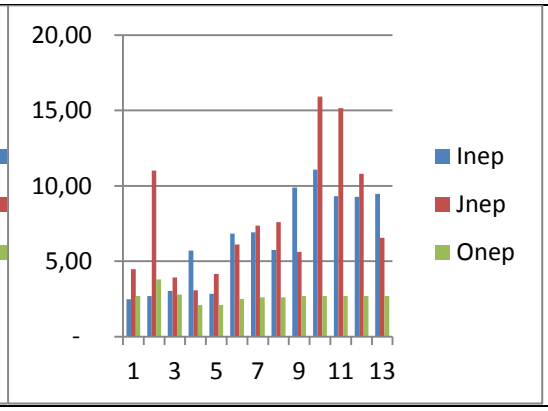
INDIA

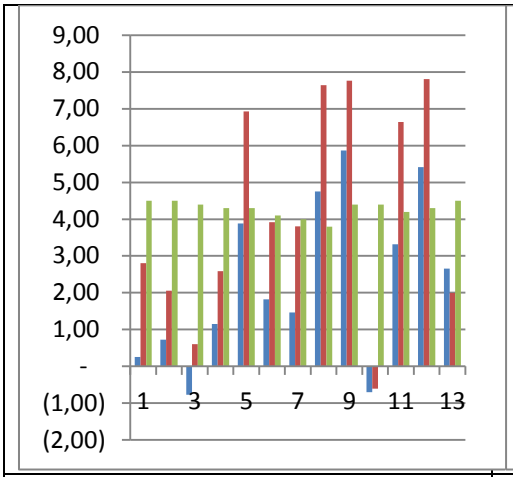


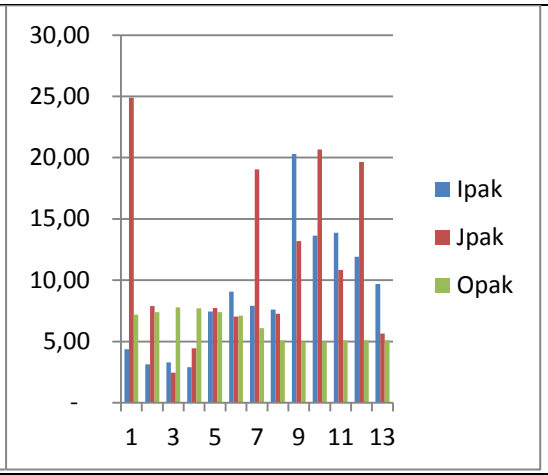
BHUTAN



NEPAL







CHINA	PAKISTAN

Picture 86

Country markings are : pak -Pakistan, nep –Nepal, Ind india, CHi China, Bhu Butan.

Negative relation between unemployment and inflation is observed by majority in region. There is lower positive relation between variables in Bhutan and Bangladesh.

UNEMPLOYMENT INFLATION
2000-2012

	coeffic.	se	t	prob
OPAK				
CON	7,2108	0,3800	18,7000	0,0000
IPAK	-0,1450	0,0400	-3,6400	0,0040
IPAK				
CON	30,8070	6,2500	4,9200	0,0000
OPAK	-3,7500	1,0290	-3,6400	0,0040
INEP				
CON	15,0000	6,6500	2,2500	0,0460
ONEP	-4,3300	3,1700	-1,3600	0,2000
ONEP				
CON	2,2700	0,1640	13,8400	0,0000
INEP	-0,0330	0,2440	-1,3600	0,2000
IIND				
CON	14,0700	5,2300	2,6800	0,0210
OIND	-2,3090	1,4900	-1,5400	0,1510
OIND				
CON	3,9200	0,3300	11,8100	0,0000

IIND	-0,0760	0,0490	-1,5400	0,1510
IICHI				
CON	10,7500	7,6300	1,4080	0,1870
OCHI	-2,2500	1,9400	-1,1500	0,2700
OCHI				
CON	4,0160	0,1100	36,3600	0,0000
ICHI	-0,0480	0,0417	-1,1500	0,2700
IBHU				
CON	-6,7400	4,8900	-0,1370	0,8900
OBHU	1,7540	1,9490	0,9020	0,3800
OBHU				
CON	2,1700	0,3230	6,7200	0,0000
IBHU	0,0390	0,0430	0,9020	0,3860
IBAN				
CON	-4,4160	4,3400	-1,0150	0,3300
OBAN	2,7080	1,1190	2,4180	0,0340
OBAN				
CON	3,0769	0,3430	8,9500	0,0000
IBAN	0,1280	0,0530	2,4100	0,0340

Different results are obtained if intercept is not put in measurement.

UNEMPLYMENT INFLATION

	coeffic.	se	t	prob
IBAN				
OBAN	1,5816	0,1540	10,2700	
OBAN				
IBAN	0,5670	0,0550	10,2700	
OBAN				
JBAN	0,6790	0,0680	9,9290	
JBAN				
OBAN	1,3112	0,1332	9,9290	

IBHU				
OBHU	1,5122	0,7370	2,0518	0,0630
OBHU				
IBHU	0,1718	0,0830	2,0518	
OBHU				
JBHU	0,4119	0,0660	6,2250	
JBHU				
OBHU	1,8530	0,2970	6,2500	
ICHI				
OCHI	0,4776	0,1360	3,4900	
OCHI				
ICHI	1,0550	0,3000	3,4900	
IIND				
OIND	1,6730	0,2630	6,3600	
OIND				
IIND	0,4610	0,0724	6,3600	
INEP				
ONEP	2,7720	0,4680	5,9180	
ONEP				
INEP	0,2680	0,0450	5,9180	
IPAK				
OPAK	1,2560	0,2790	4,5000	
OPAK				
IPAK	0,5000	0,1111	4,5000	

Further findings are directed toward additional macroeconomic variables that are explained in table that follows:

Findings are presented in absolute, logarithmic and index forms:

Mark	Meaning
A	GDP growth (annual %)
B	GDP (current US$)
C	GDP per capita (current US $)
D	GNI per capita Atlas (current US$)
E	Export of goods and services (% GDP)
F	Foreign direct investment net (current US $)
G	GNI per capita PPP (current international $)
H	GINI index
I	Inflation, consumer prices (annual %)
J	Inflation GDP deflator (annual %)
K	Internet users (per 100 people)
L	Imports of goods and services (% GDP)
M	Life expectancy at birth ,total years
N	Literacy rate adult total (% of people ag 15 above)
O	Unemployment total (% total labor force)
P	Poverty headcount rat at net poverty line (%population)
R	Agriculture, Value Added (% GDP)
S	CO_2 emissions (metric ton per capita)
T	central government debt ,total (% GDP)
V	Population (Total)

APSOLUT	coeffic.	se	t(se)	prob
BNEP				
CON	8,38+0,9	4,1+09	2,0195	0,0687
ANEP	5,44+0,8	9,4+0,8	0,5750	0,5770
CNEP				
CON	329,0000	142,0000	2,3100	0,0410
ANEP	19,0000	32,0000	0,5900	0,5600
DNEP				
CON	20,8200	16,9600	1,2270	0,2450
CNEP	0,9100	0,0380	23,4900	0,0000
ANEP				
CON	3,6600	1,4800	2,4600	0,0320
ENEP	0,3300	0,1010	0,3300	0,7500
CNEP				
CON	842,0000	89,0000	9,4000	0,0000
ENEP	-30,8200	6,0000	-5,0700	0,0000
ANEP				
CON	-7,1200	4,9000	-1,4400	0,1760
LNEP	0,3500	0,1500	2,2900	0,0430
DNEP				
CON	-801,0000	479,0000	-1,6700	0,1230
LNEP	37,9100	15,0000	2,4900	0,0300
ANEP				
CON	7,1900	7,4000	0,9700	0,3500
RNEP	-0,0850	0,2100	-0,4100	0,6800
DNEP				
CON	1.093,0000	716,8300	1,5200	0,1500
RNEP	-19,5000	19,8700	-0,9800	0,3400
INEP				
CON	9,0800	6,1190	1,4800	0,1600
ONEP	-0,9400	2,2600	-0,4200	0,6800
ONEP				
CON	2,7700	0,2800	9,7700	0,0000

INEP	-0,0160	0,0390	-0,4200	0,6810
SNEP				
CON	0,0050	0,0720	0,0720	0,9400
RNEP	0,0030	0,0020	1,6600	0,1250

LOG	coeffic.	se	t	prob
BNEP				
CON	22,8400	0,1900	116,7800	0,0000
ANEP	0,1200	0,1200	0,9900	0,3400
CNEP				
CON	5,8000	0,1700	33,5500	0,0000
ANEP	0,1100	0,1100	1,0000	0,3390
DNEP				
CON	0,2400	0,1800	1,3300	0,2100
CNEP	0,9500	0,0300	31,1000	0,0700
ANEP				
CON	2,4300	2,5200	0,9600	0,3500
ENEP	-0,4700	0,9600	-0,4900	0,6300
CNEP				
CON	8,9500	0,3700	23,8300	0,0000
ENEP	-1,1600	0,1400	-8,0700	0,0000
ANEP				
CON	-21,8600	11,7200	-1,8600	0,0890
LNEP	6,6900	3,4000	1,9600	0,0750
DNEP				
CON	-4,3100	4,0150	-1,0700	0,3060
LNEP	2,9600	1,1600	2,5400	0,0207
ANEP				
CON	14,8900	17,0600	0,8700	0,4000

RNEP	-3,8200	4,7000	-0,8030	0,4390
DNEP				
CON	14,3000	6,0050	2,3800	0,0360
RNEP	-2,3400	1,6700	-1,3900	0,1890
INEP				
CON	2,2300	1,1300	1,9700	0,0740
ONEP	-0,4900	1,1500	-0,4300	0,6700
ONEP				
CON	1,0300	0,1400	7,2600	0,0000
INEP	-0,0330	0,0770	-0,4300	0,6700
SNEP				
CON	-5,5900	2,0900	-2,6600	0,0200
RNEP	0,9700	0,5800	1,6700	0,1200

INDEX	coeffic.	se	t	prob
BNEP				
CON	103,0000	4,0400	25,5500	0,0000
ANEP	0,0800	0,0400	2,0200	0,0700
CNEP				
CON	101,5000	4,0700	24,9200	0,0000
ANEP	0,0880	0,0400	2,1500	0,0570
DNEP				
CON	83,7300	16,1500	5,1800	0,0000
CNEP	0,2300	0,1400	1,5800	0,1400
ANEP				
CON	-186,9200	114,8000	-1,6200	0,1300
ENEP	2,9300	1,2200	2,3900	0,0370
CNEP				
CON	118,3400	22,4300	5,2700	0,0000
ENEP	-0,0980	0,2300	-0,4110	0,6900

ANEP				
CON	-394,0000	202,1600	-1,9400	0,0800
LNEP	4,8000	2,0140	2,3800	0,0380
DNEP				
CON	75,6800	17,8200	4,2400	0,0020
LNEP	0,3350	0,1700	1,8900	0,0880
ANEP				
CON	292,9000	348,8500	0,8300	0,4200
RNEP	-2,0800	3,5300	-0,5900	0,5600
DNEP				
CON	104,1200	29,0700	3,5800	0,0050
RNEP	0,0500	0,2900	0,1700	0,8600
INEP				
CON	108,9800	98,5600	1,1050	0,2900
ONEP	0,1150	0,9600	0,1200	0,9070
ONEP				
CON	99,6600	13,5900	7,3300	0,0000
INEP	0,0120	0,1030	0,1200	0,9070
SNEP				
CON	98,8000	85,3800	1,1570	0,2700
RNEP	0,0155	0,8600	0,0170	0,9800

5.CONCLUSION

Nepal is observing GDP slow down after 2008 crises as many other areas of the world. What is specific for the country is lower than average performance in GDP structure compared to neighbors, slower policy of adaptation to economic cycles in the world and declining growth in manufacturing industry sector. Potentials in infrastructure, tourist projects and quality based agriculture, medical production and service are not tackled as should and present a strong possibility to future economic development.

Statistical data points toward reasoning that more adaptive, closer to country standards economic measures need to be implemented and develop to further boost optimism, growth, social structure that is oriented toward equal rights of each individual. Spirit of help, social adaptability, awareness of limited human, nature potentials are incorporated in the model. With this line of thinking Community Groups can be additionally helped to develop structure oriented toward relationships: human to human, human to nature, and act in further preservation of nature and society by building strong infrastructure/nature/manufacturing people owned funds, stronger relationships between community- government and industries/manufacturers, help educational opportunities and have solid social base that allow minimum fee to each member of society.

Building a new model or growing from existing one is not a matter of copy/ paste data from country to country, but necessity and recognition that numerous possibilities to improve exist by cooperation with region ,world but at the same time being aware of its own standards, limitations and strengths. This process is area of constant development, error recognition and correction what is also to be recognized and to further develop in a process of finding economic and social path to go.

Literature:

- www Wikipedia org

- www world bank .org

- www imf .org

- www fao.org

- www un.org

- wwwagroclub.com;agroburza.com

- (2008, March) Ben Crow and Nivikar Singh
  The management of inter state rivers as demand grow and supplies tighten: India,China,Nepal,Pakistan ,Bangladesh

- (2008,December) Sridhar Thapa
  Gender differentials in agricultural productivity evidence from Nepalese household data

- (2008,) Issa Sanogo
  Spatial integration of the rice market ,empirical evidence from mid market and fat west Nepal and the Nepalese Indian border

- (2009, August) Keshav Lall Maharjan, Nniraj Prakash Joshi

  Relationship between income poverty and food insecurity in rural far western mid hills of Nepal

-(2011,March)Niraj Prakash Joshi,Keshav Lall Maharjan,Luni Piya
Effect of climate variables on yield of major food crops in Nepal –A time series analysis

-(2007) Niraj Prakash Joshi, Keshav Lall Maharjay

Assessment of Food SelfSufficiency and Food Security Situation in Nepal

-(2010) Niraj Prakash Joshi,Keshav Lall Maharjan,Luni Piya
Poverty and Food Insecurity in Nepal a Review

-(2011,November) Ronald R. Kumar
Rope of Financial and Technology Inclusion,Remittances and Export vis-à-vis growth –A study of Nepal

-(2012,November) Prabin Khazal
Trends and Scenario of Poverty in Nepal

-(2012,December) Birendra Budha
A multivariate analysis of savings ,investment and growth in Nepal

-(2009) Sanjib Pohit
Overview of Indian Nepal Trade :Trends,Trade Logistics and Impediments

-(2009,May) Bishnu Prasad Gautam
Financial Practices of Banks and Financial Institutions in Nepal

-(2012) Shambhu Dev baral
Gravity Rope in Nepal

-(2013,January) Guna Ray Bhatta
Remittance and Trade Deficit Nexus in Nepal :A VECM Approach

-(2013) JN A
Hotel Cost Estimate

APPENDIX I

Marks :

Mark	Meaning
A	GDP growth (annual %)
B	GDP (current US$)
C	GDP per capita (current US $)
D	GNI per capita Atlas (curent US$)
E	Export of goods and services (% GDP)
F	Foreign direct investment net (current US $)
G	GNI per capita PPP (current international $)
H	GINI index
I	Inflation, consumer prices (annual %)
J	Inflation GDP deflator (annual %)
K	Internet users (per 100 people)
L	Imports of goods and services (% GDP)
M	Life expectancy at birth ,total years
N	Literacy rate adult total (% of people ag 15 above)
O	Unemployment total (% total labor force)
P	Poverty headcount rat at net poverty line (%population)
R	Agriculture, Value Added (% GDP)
S	CO_2 emissions (metric ton per capita)
T	central government debt ,total (% GDP)
V	Population (Total)

NEPAL APSOLUT VALUES -STATISTICS

Ordinary Least Squares Estimation

****

Dependent variable is BNEP

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	8.38E+09	4.15E+09	2.0195[.068]
ANEP	5.44E+08	9.46E+08	.57503[.577]

****

R-Squared .029182 R-Bar-Squared -.059074

S.E. of Regression 5.02E+09 F-stat. F(1, 11) .33065[.577]

Mean of Dependent Variable 1.06E+10 S.D. of Dependent Variable 4.88E+09

Residual Sum of Squares 2.78E+20 Equation Log-likelihood -307.7491

Akaike Info. Criterion -309.7491 Schwarz Bayesian Criterion -310.3141

DW-statistic .14623

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*

****

*	*	*	*
* A:Serial Correlation*	CHSQ(1)= 10.4978[.001]*	F(1, 10)= 41.9541[.000]*	
*	*	*	*
* B:Functional Form *	CHSQ(1)= .96972[.325]*	F(1, 10)= .80606[.390]*	
*	*	*	*

```
* C:Normality        *CHSQ(   2)=   1.1594[.560]*      Not applicable      *
*                *                  *                   *
* D:Heteroscedasticity*CHSQ(   1)=   .47973[.489]*F(   1,  11)=   .42148[.530]*
********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


                Ordinary Least Squares Estimation
********************************************************************************
 Dependent variable is CNEP
 13 observations used for estimation from 2000 to 2012
********************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON                329.0054         142.3833           2.3107[.041]
 ANEP                19.2094         32.4548           .59188[.566]
********************************************************************************
 R-Squared                .030865   R-Bar-Squared             -.057239
 S.E. of Regression       172.4142   F-stat.    F(  1,  11)    .35032[.566]
 Mean of Dependent Variable  408.3846   S.D. of Dependent Variable    167.6820
 Residual Sum of Squares     326993.1   Equation Log-likelihood      -84.3090
 Akaike Info. Criterion      -86.3090   Schwarz Bayesian Criterion    -86.8740
 DW-statistic               .15238
********************************************************************************


                    Diagnostic Tests
********************************************************************************
```

```
*   Test Statistics  *       LM Version       *       F Version        *
*********************************************************************************
*                    *                    *                    *
* A:Serial Correlation*CHSQ(   1)=  10.4202[.001]*F(   1,  10)=  40.3921[.000]*
*                    *                    *                    *
* B:Functional Form   *CHSQ(   1)=   .92318[.337]*F(   1,  10)=   .76443[.402]*
*                    *                    *                    *
* C:Normality         *CHSQ(   2)=   1.1880[.552]*      Not applicable      *
*                    *                    *                    *
* D:Heteroscedasticity*CHSQ(   1)=   .43891[.508]*F(   1,  11)=   .38436[.548]*
*********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


                Ordinary Least Squares Estimation
*********************************************************************************
 Dependent variable is DNEP
 13 observations used for estimation from 2000 to 2012
*********************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON                20.8261          16.9621           1.2278[.245]
 CNEP                .90775          .038637          23.4945[.000]
*********************************************************************************
 R-Squared                .98046   R-Bar-Squared              .97869
 S.E. of Regression         22.4429   F-stat.    F(  1,  11)  551.9900[.000]
 Mean of Dependent Variable  391.5385   S.D. of Dependent Variable    153.7230
 Residual Sum of Squares      5540.5   Equation Log-likelihood      -57.8030
```

Akaike Info. Criterion -59.8030 Schwarz Bayesian Criterion -60.3680

DW-statistic 2.2592

****

Diagnostic Tests

****

Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1)= 2.3298[.127]	F(1, 10)= 2.1835[.170]
B:Functional Form	CHSQ(1)= .12599[.723]	F(1, 10)= .097866[.761]
C:Normality	CHSQ(2)= .21959[.896]	Not applicable
D:Heteroscedasticity	CHSQ(1)= 10.6920[.001]	F(1, 11)= 50.9593[.000]

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is ANEP

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	3.6642	1.4893	2.4604[.032]
ENEP	.033254	.10103	.32916[.748]

****

R-Squared .0097536 R-Bar-Squared -.080269

S.E. of Regression 1.5939 F-stat. F(1, 11) .10835[.748]

Mean of Dependent Variable 4.1323 S.D. of Dependent Variable 1.5336

Residual Sum of Squares 27.9468 Equation Log-likelihood -23.4210

Akaike Info. Criterion -25.4210 Schwarz Bayesian Criterion -25.9859

DW-statistic 1.8889

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*

****

*	*	*	*
* A:Serial Correlation*	CHSQ(1)= .0024822[.960]*	F(1, 10)= .0019097[.966]*	
*	*	*	*
* B:Functional Form *	CHSQ(1)= 2.1117[.146]*	F(1, 10)= 1.9394[.194]*	
*	*	*	*
* C:Normality *	CHSQ(2)= 6.5905[.037]*	Not applicable	*
*	*	*	*
* D:Heteroscedasticity*	CHSQ(1)= .72156[.396]*	F(1, 11)= .64643[.438]*	

```
********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


            Ordinary Least Squares Estimation
********************************************************************************
 Dependent variable is CNEP
 13 observations used for estimation from 2000 to 2012
********************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON                842.2679         89.4975           9.4111[.000]
 ENEP               -30.8223         6.0712           -5.0768[.000]
********************************************************************************
 R-Squared                .70088   R-Bar-Squared              .67368
 S.E. of Regression       95.7869  F-stat.   F(  1,  11)   25.7741[.000]
 Mean of Dependent Variable  408.3846  S.D. of Dependent Variable   167.6820
 Residual Sum of Squares    100926.4  Equation Log-likelihood     -76.6680
 Akaike Info. Criterion     -78.6680  Schwarz Bayesian Criterion   -79.2329
 DW-statistic             .48238
********************************************************************************


                  Diagnostic Tests
********************************************************************************
*   Test Statistics *      LM Version      *       F Version       *
********************************************************************************
*             *                *                *
* A:Serial Correlation*CHSQ(   1)=   6.0979[.014]*F(   1,  10)=   8.8349[.014]*
```

```
*            *               *                *
* B:Functional Form   *CHSQ(   1)=  9.1100[.003]*F(   1,  10)=  23.4187[.001]*
*            *               *                *
* C:Normality       *CHSQ(   2)=  1.0176[.601]*      Not applicable      *
*            *               *                *
* D:Heteroscedasticity*CHSQ(   1)=  .033951[.854]*F(   1,  11)=  .028803[.868]*
********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


            Ordinary Least Squares Estimation
********************************************************************************
 Dependent variable is ANEP
 13 observations used for estimation from 2000 to 2012
********************************************************************************
 Regressor          Coefficient     Standard Error       T-Ratio[Prob]
 CON                -7.1245         4.9261          -1.4463[.176]
 LNEP               .35780          .15614          2.2915[.043]
********************************************************************************
 R-Squared               .32311   R-Bar-Squared              .26158
 S.E. of Regression         1.3178   F-stat.    F(  1,  11)    5.2508[.043]
 Mean of Dependent Variable    4.1323   S.D. of Dependent Variable     1.5336
 Residual Sum of Squares     19.1032   Equation Log-likelihood      -20.9481
 Akaike Info. Criterion     -22.9481   Schwarz Bayesian Criterion    -23.5130
 DW-statistic               1.9548
********************************************************************************
```

Diagnostic Tests

****

* Test Statistics * LM Version * F Version *

****

* * * *

* A:Serial Correlation*CHSQ(1)= .065098[.799]*F(1, 10)= .050327[.827]*

* * * *

* B:Functional Form *CHSQ(1)= 1.2702[.260]*F(1, 10)= 1.0829[.323]*

* * * *

* C:Normality *CHSQ(2)= .39611[.820]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= 1.9006[.168]*F(1, 11)= 1.8836[.197]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is DNEP

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	-801.3499	479.7209	-1.6705[.123]
LNEP	37.9158	15.2058	2.4935[.030]

****

R-Squared .36112 R-Bar-Squared .30304

S.E. of Regression 128.3346 F-stat. F(1, 11) 6.2176[.030]

Mean of Dependent Variable 391.5385 S.D. of Dependent Variable 153.7230

Residual Sum of Squares 181167.5 Equation Log-likelihood -80.4707

Akaike Info. Criterion -82.4707 Schwarz Bayesian Criterion -83.0356

DW-statistic .51882

****

Diagnostic Tests

****

Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1)= 5.1310[.024]	F(1, 10)= 6.5206[.029]
B:Functional Form	CHSQ(1)= .050436[.822]	F(1, 10)= .038948[.848]
C:Normality	CHSQ(2)= .38378[.825]	Not applicable
D:Heteroscedasticity	CHSQ(1)= .84929[.357]	F(1, 11)= .76886[.399]

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is ANEP

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	7.1923	7.4001	.97193[.352]
RNEP	-.085000	.20519	-.41425[.687]

****

R-Squared .015360 R-Bar-Squared -.074152

S.E. of Regression 1.5894 F-stat. F(1, 11) .17160[.687]

Mean of Dependent Variable 4.1323 S.D. of Dependent Variable 1.5336

Residual Sum of Squares 27.7885 Equation Log-likelihood -23.3841

Akaike Info. Criterion -25.3841 Schwarz Bayesian Criterion -25.9490

DW-statistic 1.8787

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*
* A:Serial Correlation*	CHSQ(1)= .038011[.845]*	F(1, 10)= .029325[.867]*	
* B:Functional Form *	CHSQ(1)= 1.6836[.194]*	F(1, 10)= 1.4877[.251]*	
* C:Normality *	CHSQ(2)= 3.0908[.213]*	Not applicable	*
* D:Heteroscedasticity*	CHSQ(1)= 1.5431[.214]*	F(1, 11)= 1.4815[.249]*	

```
********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


            Ordinary Least Squares Estimation
********************************************************************************
 Dependent variable is DNEP
 13 observations used for estimation from 2000 to 2012
********************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON                 1093.5          716.8333           1.5255[.155]
 RNEP               -19.5000          19.8767           -.98105[.348]
********************************************************************************
 R-Squared                .080457   R-Bar-Squared            -.0031383
 S.E. of Regression       153.9641  F-stat.   F(  1,  11)    .96246[.348]
 Mean of Dependent Variable  391.5385  S.D. of Dependent Variable   153.7230
 Residual Sum of Squares    260754.2  Equation Log-likelihood     -82.8377
 Akaike Info. Criterion     -84.8377  Schwarz Bayesian Criterion   -85.4026
 DW-statistic               .13767
********************************************************************************


                Diagnostic Tests
********************************************************************************
*  Test Statistics *      LM Version      *       F Version       *
********************************************************************************
*              *                *                 *
```

```
* A:Serial Correlation*CHSQ(   1)=  11.8305[.001]*F(   1,  10)= 101.1590[.000]*
*              *                 *                  *
* B:Functional Form   *CHSQ(   1)=   .68805[.407]*F(   1,  10)=   .55884[.472]*
*              *                 *                  *
* C:Normality        *CHSQ(   2)=   2.8696[.238]*      Not applicable      *
*              *                 *                  *
* D:Heteroscedasticity*CHSQ(   1)=   .89095[.345]*F(   1,  11)=   .80935[.388]*
*******************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


  Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is INEP
 13 observations used for estimation from 2000 to 2012
*******************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON                9.0826           6.1193           1.4843[.166]
 ONEP               -.94563          2.2683           -.41689[.685]
*******************************************************************************
 R-Squared                .015554   R-Bar-Squared             -.073941
 S.E. of Regression       3.1980   F-stat.    F(  1,  11)    .17379[.685]
 Mean of Dependent Variable    6.5585   S.D. of Dependent Variable     3.0859
 Residual Sum of Squares     112.4984   Equation Log-likelihood      -32.4731
 Akaike Info. Criterion      -34.4731   Schwarz Bayesian Criterion    -35.0381
 DW-statistic             .50869
*******************************************************************************
```

Diagnostic Tests

****

* Test Statistics * LM Version * F Version *

****

* * * *

* A:Serial Correlation*CHSQ(1)= 5.7419[.017]*F(1, 10)= 7.9110[.018]*

* * * *

* B:Functional Form *CHSQ(1)= 3.5727[.059]*F(1, 10)= 3.7897[.080]*

* * * *

* C:Normality *CHSQ(2)= 1.0879[.580]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= .016599[.897]*F(1, 11)= .014063[.908]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is ONEP

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	2.7771	.28397	9.7794[.000]
INEP	-.016448	.039455	-.41689[.685]

****

R-Squared .015554 R-Bar-Squared -.073941

S.E. of Regression .42177 F-stat. F(1, 11) .17379[.685]

Mean of Dependent Variable 2.6692 S.D. of Dependent Variable .40699

Residual Sum of Squares 1.9568 Equation Log-likelihood -6.1375

Akaike Info. Criterion -8.1375 Schwarz Bayesian Criterion -8.7024

DW-statistic 1.4800

****

Diagnostic Tests

****

* Test Statistics * LM Version * F Version *

****

* * * *

* A:Serial Correlation*CHSQ(1)= .87205[.350]*F(1, 10)= .71904[.416]*

* * * *

* B:Functional Form *CHSQ(1)= 1.6970[.193]*F(1, 10)= 1.5014[.249]*

* * * *

* C:Normality *CHSQ(2)= 5.1526[.076]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= 3.2962[.069]*F(1, 11)= 3.7365[.079]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is SNEP

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	.0053846	.072352	.074423[.942]
RNEP	.0033333	.0020062	1.6615[.125]

****

R-Squared .20062 R-Bar-Squared .12795

S.E. of Regression .015540 F-stat. F(1, 11) 2.7606[.125]

Mean of Dependent Variable .12538 S.D. of Dependent Variable .016641

Residual Sum of Squares .0026564 Equation Log-likelihood 36.7760

Akaike Info. Criterion 34.7760 Schwarz Bayesian Criterion 34.2111

DW-statistic 1.6229

****

Diagnostic Tests

****

* Test Statistics *	LM Version *	F Version *
* A:Serial Correlation*	CHSQ(1)= .35641[.551]*	F(1, 10)= .28189[.607]*
* B:Functional Form *	CHSQ(1)= .090437[.764]*	F(1, 10)= .070054[.797]*
* C:Normality *	CHSQ(2)= 1.2140[.545]*	Not applicable *
* D:Heteroscedasticity*	CHSQ(1)= .9942E-4[.992]*	F(1, 11)= .8412E-4[.993]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

OLS estimation of a single equation in the Unrestricted VAR

****

Dependent variable is ANEP

11 observations used for estimation from 2002 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ANEP(-1)	-.28208	.29748	-.94824[.387]
ANEP(-2)	-.65519	.26511	-2.4714[.056]
BNEP(-1)	-.4268E-8	.1420E-8	-3.0051[.030]
BNEP(-2)	.9804E-9	.8170E-9	1.2000[.284]
CNEP	.010700	.011805	.90638[.406]
CNEP(-1)	.095789	.042390	2.2597[.073]

****

R-Squared .66510 R-Bar-Squared .33020

S.E. of Regression 1.2363 F-stat. F(5, 5) 1.9860[.235]

Mean of Dependent Variable 3.8836 S.D. of Dependent Variable 1.5107

Residual Sum of Squares 7.6427 Equation Log-likelihood -13.6055

Akaike Info. Criterion -19.6055 Schwarz Bayesian Criterion -20.7992

DW-statistic 1.9736 System Log-likelihood -209.7235

****

Diagnostic Tests

****

* Test Statistics *	LM Version	*	F Version	*

```
*****************************************************************************
*             *               *               *
* A:Serial Correlation*CHSQ(   1)=   .10717[.743]*F(   1,   4)=  .039353[.852]*
*             *               *               *
* B:Functional Form   *CHSQ(   1)=   4.1551[.042]*F(   1,   4)=   2.4282[.194]*
*             *               *               *
* C:Normality       *CHSQ(   2)=   .85284[.653]*      Not applicable      *
*             *               *               *
* D:Heteroscedasticity*CHSQ(   1)=   .22956[.632]*F(   1,   9)=   .19183[.672]*
*****************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


      OLS estimation of a single equation in the Unrestricted VAR
*****************************************************************************
Dependent variable is BNEP
11 observations used for estimation from 2002 to 2012
*****************************************************************************
Regressor          Coefficient      Standard Error       T-Ratio[Prob]
BNEP(-1)             .59680          .49800          1.1984[.270]
BNEP(-2)             .58087          .62483          .92964[.383]
VNEP               122.0978        216.2473           .56462[.590]
RNEP              -8.67E+07        1.39E+08         -.62192[.554]
*****************************************************************************
R-Squared               .96431   R-Bar-Squared              .94902
S.E. of Regression        1.08E+09   F-stat.    F(  3,   7)   63.0494[.000]
Mean of Dependent Variable  1.15E+10   S.D. of Dependent Variable    4.79E+09
```

Residual Sum of Squares 8.20E+18 Equation Log-likelihood -241.9471

Akaike Info. Criterion -245.9471 Schwarz Bayesian Criterion -246.7429

DW-statistic 2.3119 System Log-likelihood -241.9471

****

Diagnostic Tests

****

Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1)= 8.5539[.003]	F(1, 6)= 20.9816[.004]
B:Functional Form	CHSQ(1)= 5.5056[.019]	F(1, 6)= 6.0123[.050]
C:Normality	CHSQ(2)= .16244[.922]	Not applicable
D:Heteroscedasticity	CHSQ(1)= 8.1708[.004]	F(1, 9)= 25.9927[.001]

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

OLS estimation of a single equation in the Unrestricted VAR

****

Dependent variable is ANEP

11 observations used for estimation from 2002 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ANEP(-1)	-.33695	.18840	-1.7885[.134]
ANEP(-2)	-.41003	.24175	-1.6961[.151]
ENEP	-.065852	.25725	-.25598[.808]
ENEP(-1)	-.046606	.20633	-.22588[.830]
LNEP	.46408	.11101	4.1804[.009]
LNEP(-1)	-.19716	.12171	-1.6199[.166]

****

R-Squared .89508 R-Bar-Squared .79016

S.E. of Regression .69201 F-stat. F(5, 5) 8.5310[.017]

Mean of Dependent Variable 3.8836 S.D. of Dependent Variable 1.5107

Residual Sum of Squares 2.3944 Equation Log-likelihood -7.2221

Akaike Info. Criterion -13.2221 Schwarz Bayesian Criterion -14.4157

DW-statistic 2.4704 System Log-likelihood -7.2221

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*

****

* * * *

* A:Serial Correlation*CHSQ(1)= .83291[.361]*F(1, 4)= .32769[.598]*

* * * *

```
* B:Functional Form   *CHSQ(   1)=   .12805[.720]*F(   1,   4)=  .047112[.839]*
*              *                *                  *
* C:Normality       *CHSQ(   2)=   .26707[.875]*      Not applicable      *
*              *                *                  *
* D:Heteroscedasticity*CHSQ(   1)=   .39129[.532]*F(   1,   9)=   .33195[.579]*
*********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


       OLS estimation of a single equation in the Unrestricted VAR
*********************************************************************************
 Dependent variable is JNEP
 11 observations used for estimation from 2002 to 2012
*********************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 JNEP(-1)             .45443          .34355          1.3227[.227]
 JNEP(-2)           -.081255          .30481          -.26657[.797]
 ONEP                6.3728          3.4062          1.8709[.104]
 ONEP(-1)            -4.3556          3.1932          -1.3640[.215]
*********************************************************************************
 R-Squared                .41631   R-Bar-Squared              .16615
 S.E. of Regression          3.9667   F-stat.    F(  3,   7)    1.6642[.260]
 Mean of Dependent Variable    7.8455   S.D. of Dependent Variable     4.3440
 Residual Sum of Squares     110.1454   Equation Log-likelihood      -28.2798
 Akaike Info. Criterion      -32.2798   Schwarz Bayesian Criterion    -33.0756
 DW-statistic              1.8762   System Log-likelihood        -28.2798
*********************************************************************************
```

Diagnostic Tests

```
*****************************************************************************
*  Test Statistics  *       LM Version       *       F Version        *
*****************************************************************************
*                   *                        *                      *
* A:Serial Correlation*CHSQ(   1)= .0089320[.925]*F(   1,   6)= .0048760[.947]*
*                   *                        *                      *
* B:Functional Form   *CHSQ(   1)=   1.6114[.204]*F(   1,   6)=   1.0298[.349]*
*                   *                        *                      *
* C:Normality       *CHSQ(   2)=   6.9965[.030]*      Not applicable      *
*                   *                        *                      *
* D:Heteroscedasticity*CHSQ(   1)=  .024457[.876]*F(   1,   9)=  .020055[.891]*
*****************************************************************************
```

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

OLS estimation of a single equation in the Unrestricted VAR

****

Dependent variable is GNEP

11 observations used for estimation from 2002 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
GNEP(-1)	1.1246	.36616	3.0714[.018]
GNEP(-2)	-.095056	.37897	-.25082[.809]
CNEP	.22935	.27943	.82077[.439]
CNEP(-1)	-.19696	.30658	-.64243[.541]

****

R-Squared .99143 R-Bar-Squared .98776

S.E. of Regression 32.2128 F-stat. F(3, 7) 269.8975[.000]

Mean of Dependent Variable 1713.6 S.D. of Dependent Variable 291.1107

Residual Sum of Squares 7263.7 Equation Log-likelihood -51.3184

Akaike Info. Criterion -55.3184 Schwarz Bayesian Criterion -56.1142

DW-statistic 1.2724 System Log-likelihood -51.3184

****

Diagnostic Tests

****

* Test Statistics *	LM Version	*	F Version	*
* A:Serial Correlation*	CHSQ(1)= 3.0431[.081]*		F(1, 6)= 2.2946[.181]*	
* B:Functional Form *	CHSQ(1)= .9946E-4[.992]*		F(1, 6)= .5425E-4[.994]*	
* C:Normality *	CHSQ(2)= 2.5137[.285]*		Not applicable	*

* D:Heteroscedasticity*CHSQ(1)= .88489[.347]*F(1, 9)= .78734[.398]*

****

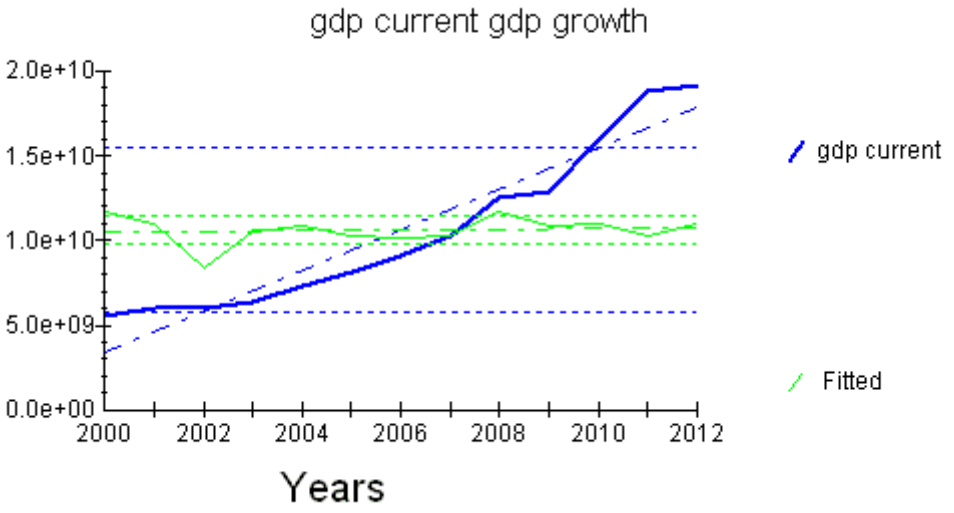
A:Lagrange multiplier test of residual serial correlation

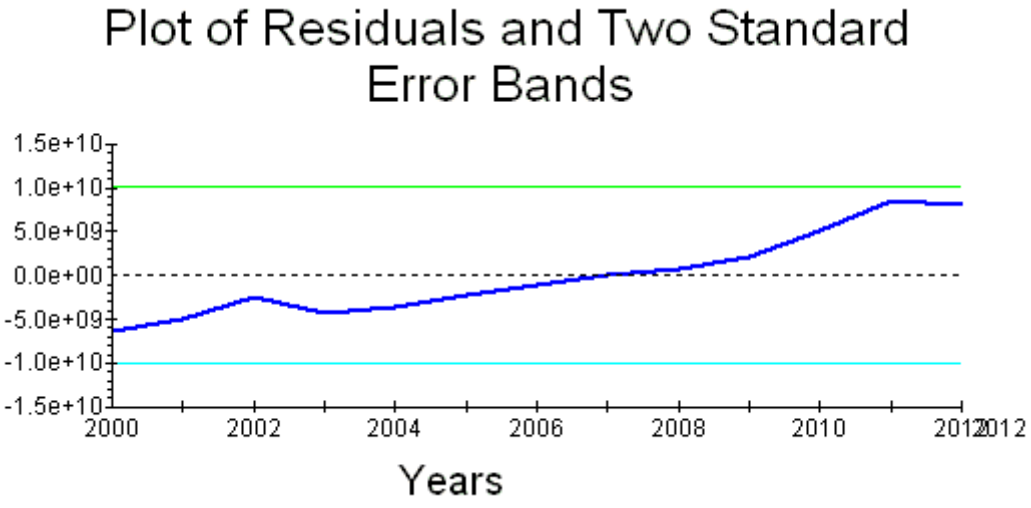
B:Ramsey's RESET test using the square of the fitted values

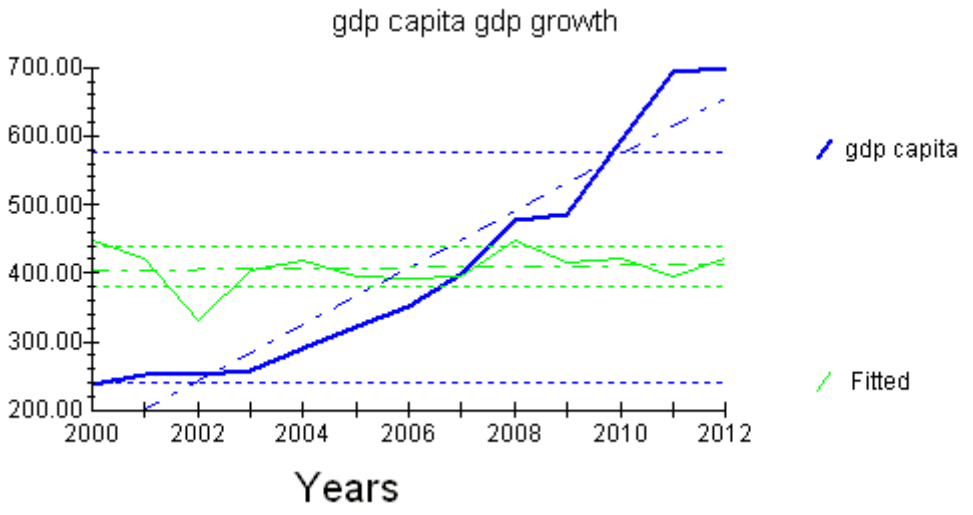
C:Based on a test of skewness and kurtosis of residuals

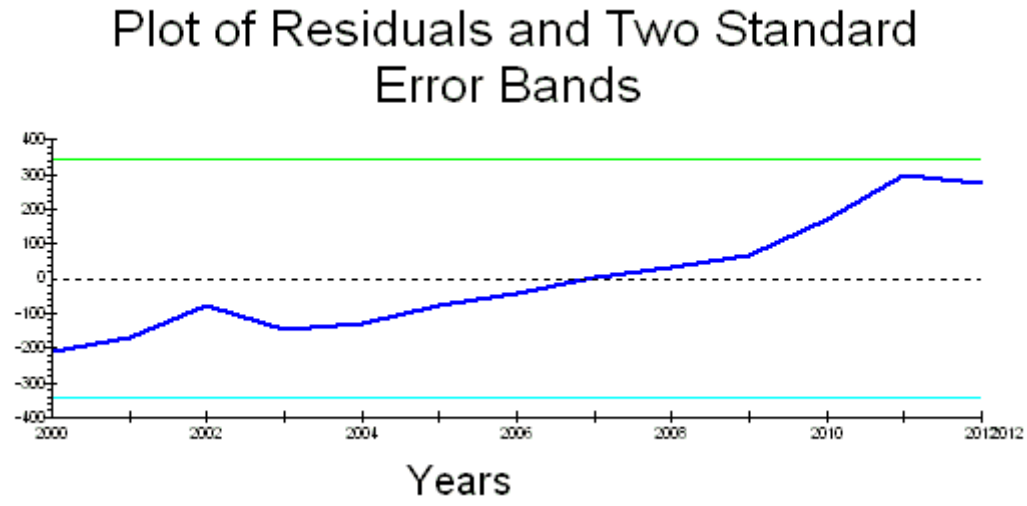
D:Based on the regression of squared residuals on squared fitted values

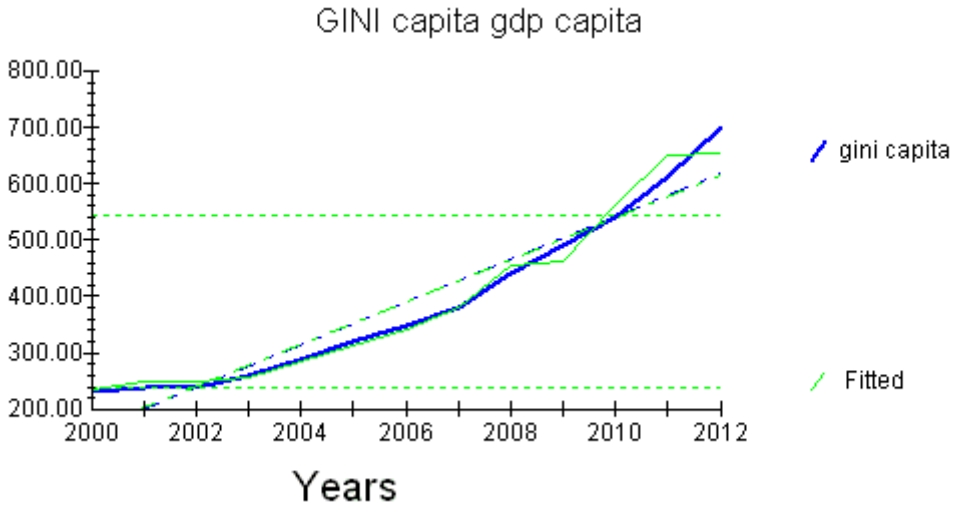
NEPAL

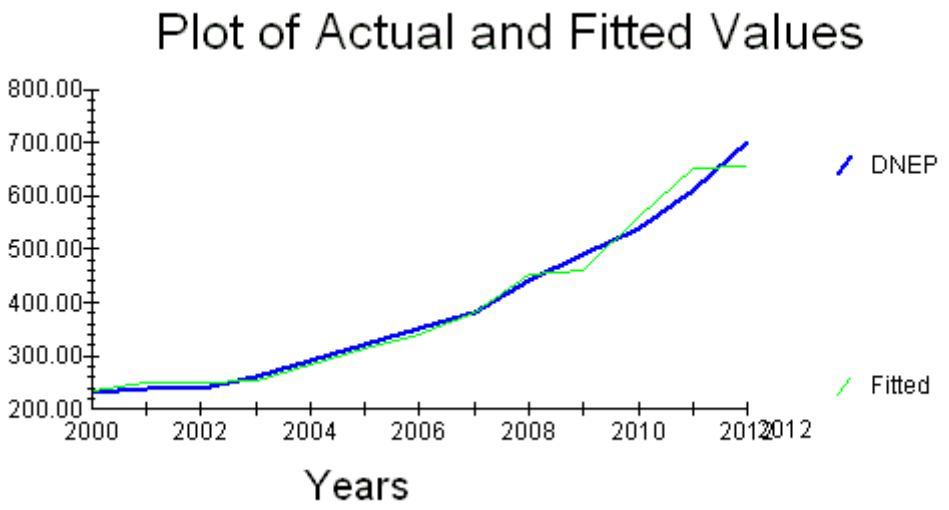

gdp current gdp growth
2.0e+10
1.5e+10
1.0e+10
5.0e+09
0.0e+00
2000
2002
2004
2006
2008
2010
2012
Years
gdp current
Fitted

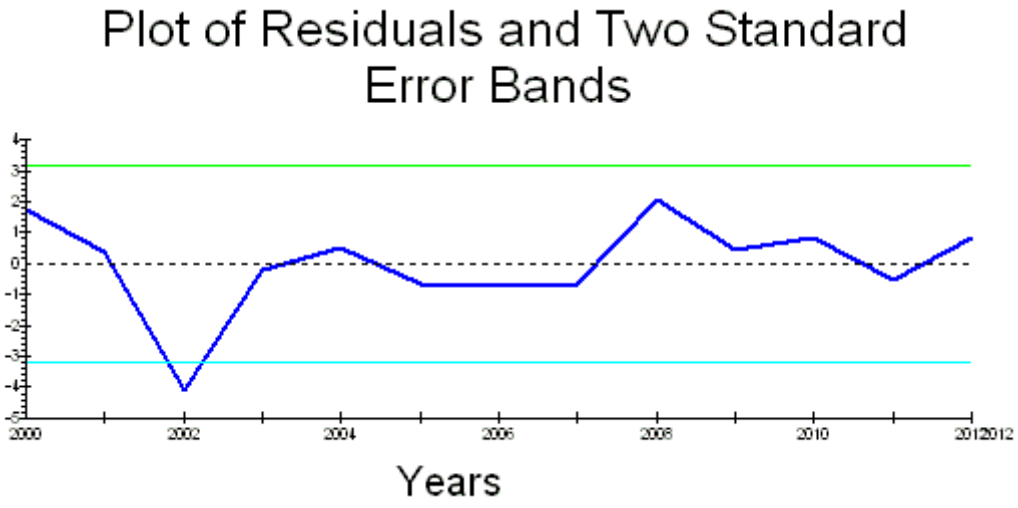

Plot of Residuals and Two Standard Error Bands
1.5e+10
1.0e+10
5.0e+09
0.0e+00
-5.0e+09
-1.0e+10
-1.5e+10
2000
2002
2004
2006
2008
2010
2012
2012
Years

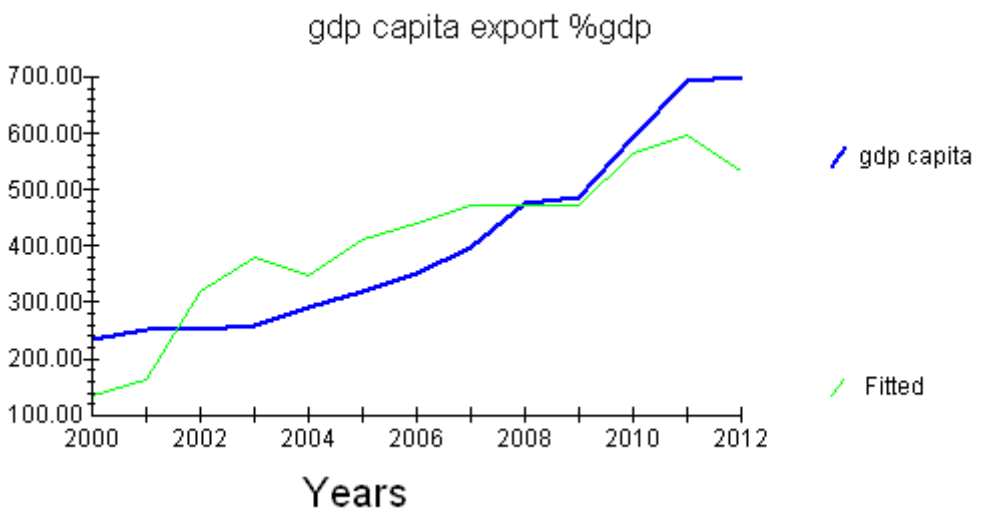

gdp capita gdp growth
700.00
600.00
500.00
400.00
300.00
200.00
2000
2002
2004
2006
2008
2010
2012
Years
gdp capita
Fitted

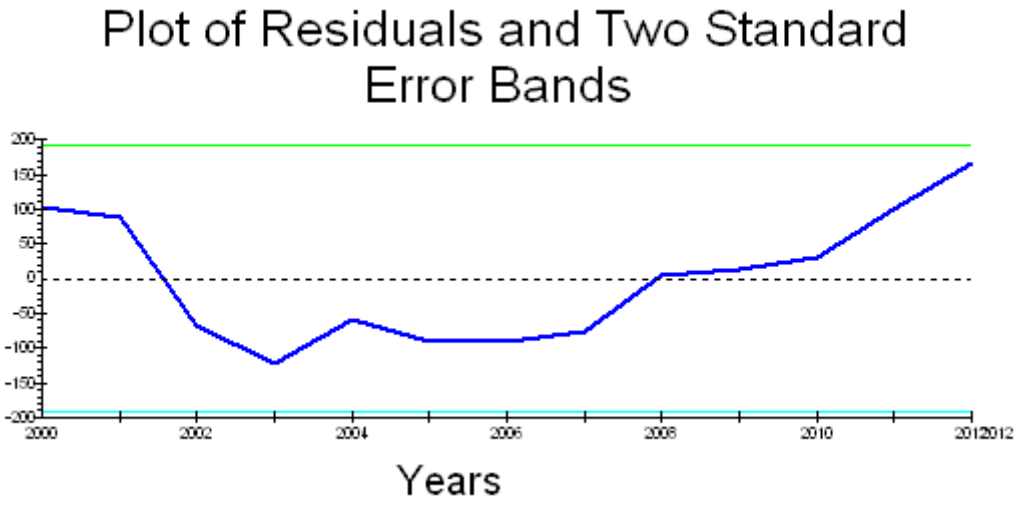

Plot of Residuals and Two Standard Error Bands
Years


GINI capita gdp capita
800.00
700.00
600.00
500.00
400.00
300.00
200.00
2000
2002
2004
2006
2008
2010
2012
Years
gini capita
Fitted

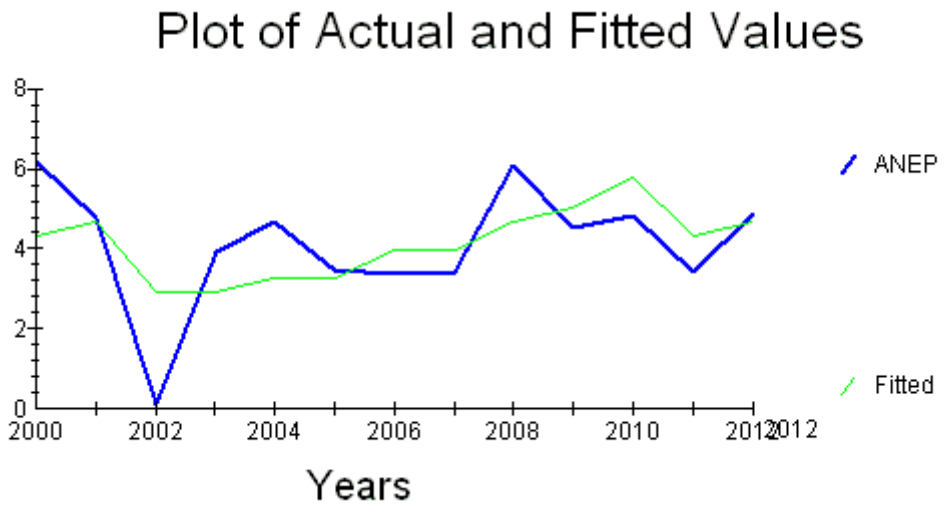

Plot of Actual and Fitted Values
800.00
700.00
600.00
500.00
400.00
300.00
200.00
2000
2002
2004
2006
2008
2010
2012
2012
DNEP
Fitted
Years

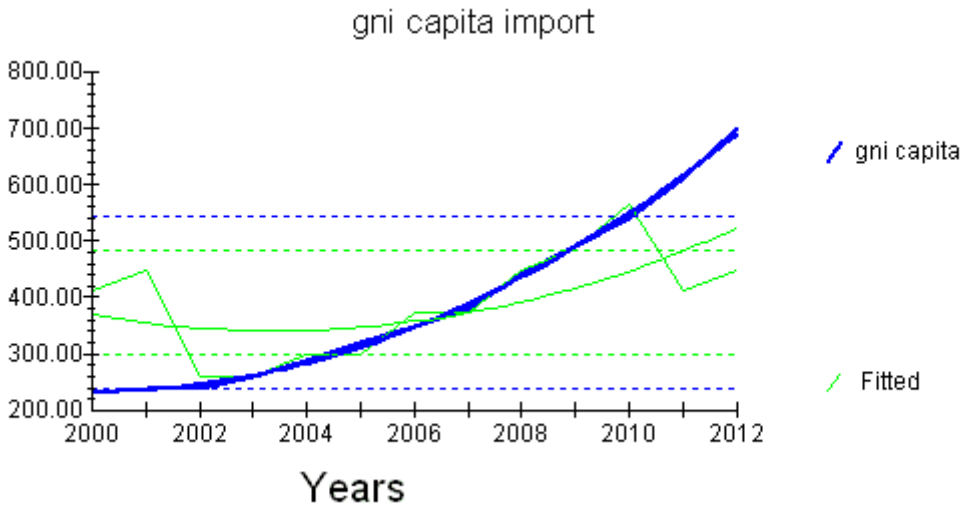

Plot of Residuals and Two Standard Error Bands
2000
2002
2004
2006
2008
2010
2012
2012
Years

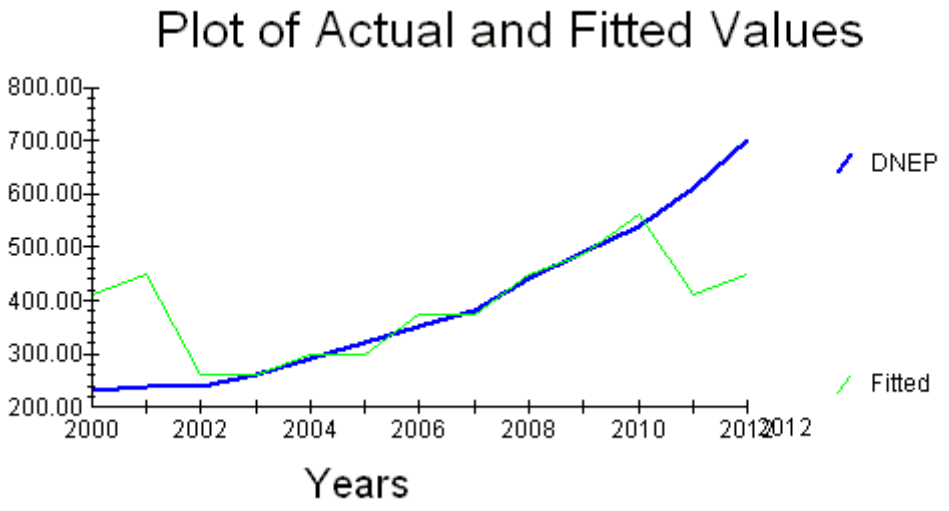

gdp capita export %gdp
700.00
600.00
500.00
400.00
300.00
200.00
100.00
2000
2002
2004
2006
2008
2010
2012
Years
gdp capita
Fitted

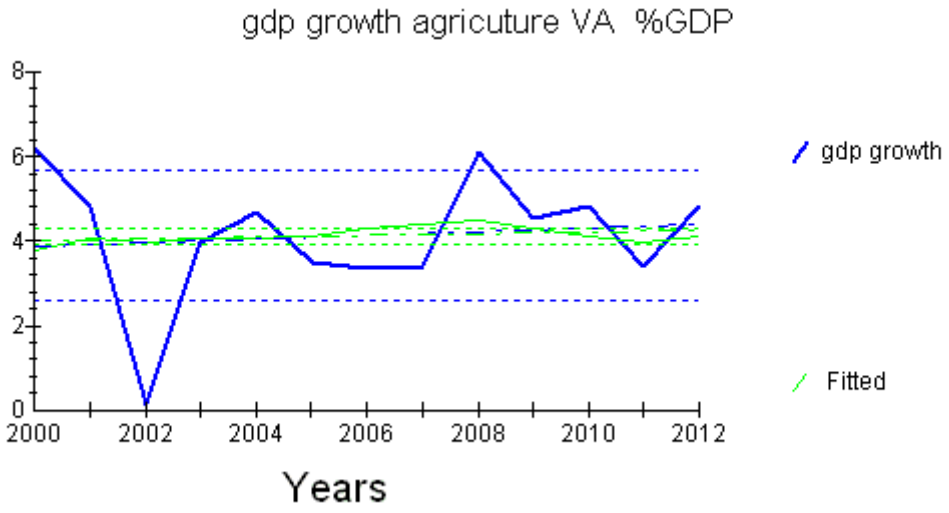

Plot of Residuals and Two Standard Error Bands
200
150
100
50
0
-50
-100
-150
-200
2000
2002
2004
2006
2008
2010
2012
Years

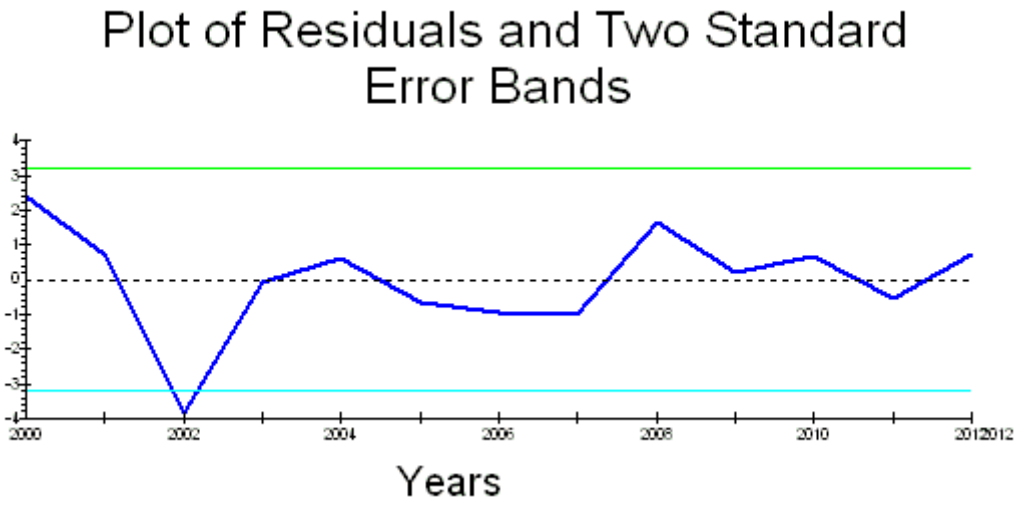

gdp growth import goods service
8
6
4
2
0
2000
2002
2004
2006
2008
2010
2012
Years
gdp growth
Fitted

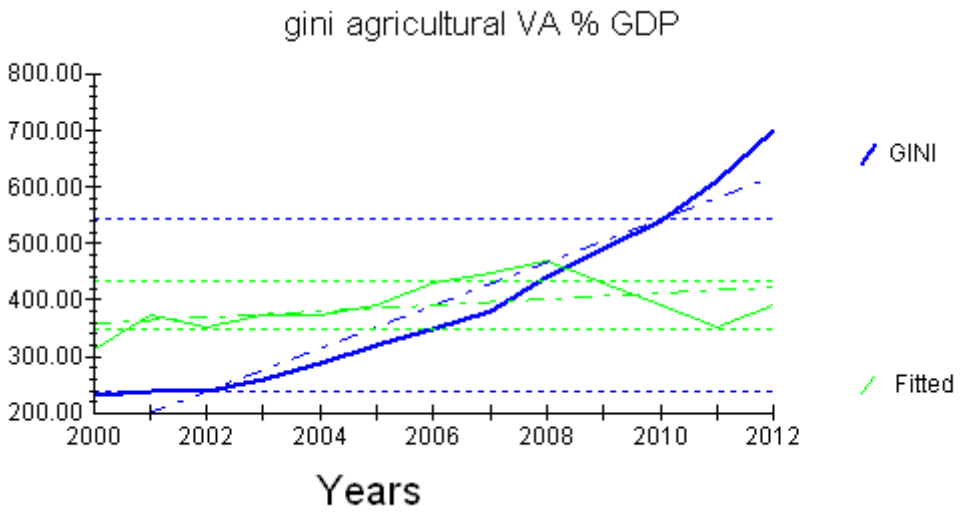

Plot of Actual and Fitted Values
8
6
4
2
0
2000
2002
2004
2006
2008
2010
2012
2012
ANEP
Fitted
Years

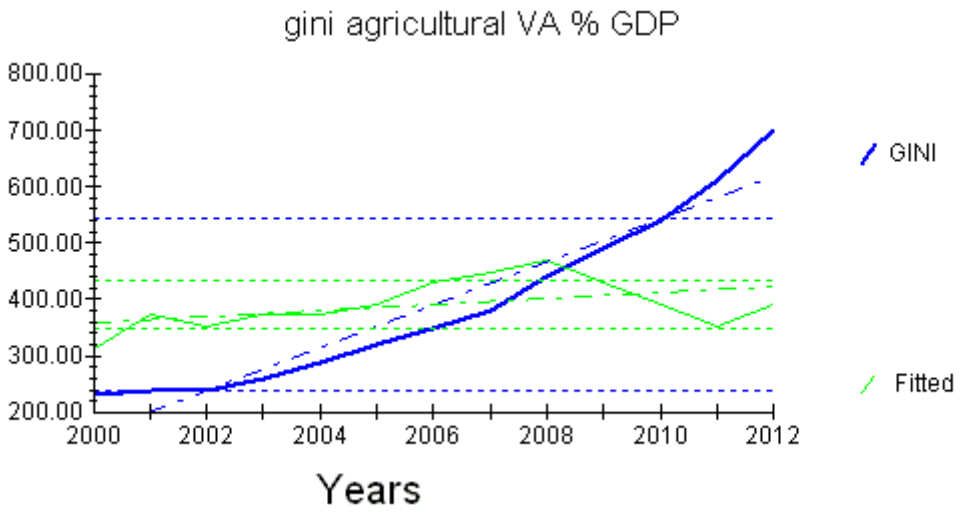

gni capita import
800.00
700.00
600.00
500.00
400.00
300.00
200.00
2000
2002
2004
2006
2008
2010
2012
gni capita
Fitted
Years

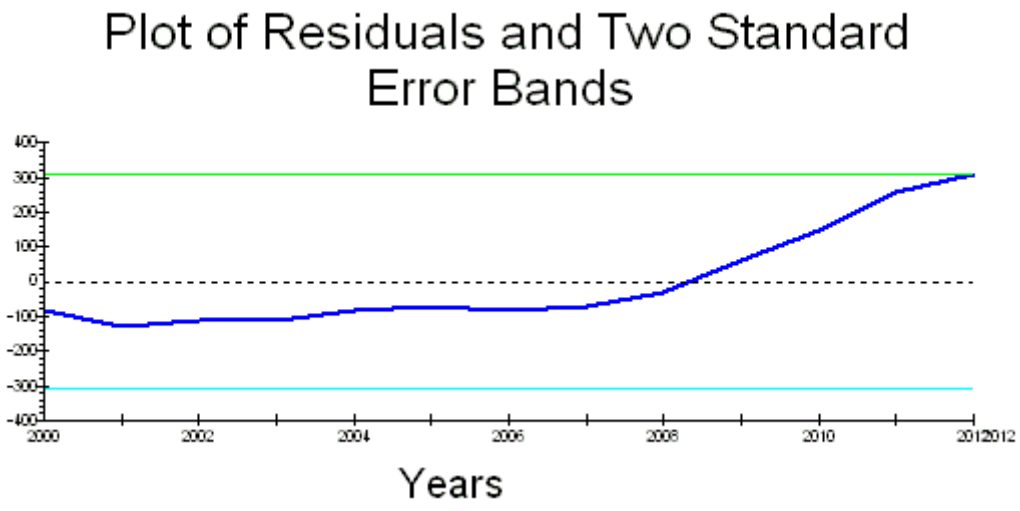

Plot of Actual and Fitted Values
800.00
700.00
600.00
500.00
400.00
300.00
200.00
2000
2002
2004
2006
2008
2010
2012
2012
DNEP
Fitted
Years


gdp growth agricuture VA %GDP
8
6
4
2
0
2000
2002
2004
2006
2008
2010
2012
gdp growth
Fitted
Years


Plot of Residuals and Two Standard Error Bands
2000
2002
2004
2006
2008
2010
2012
2012
Years

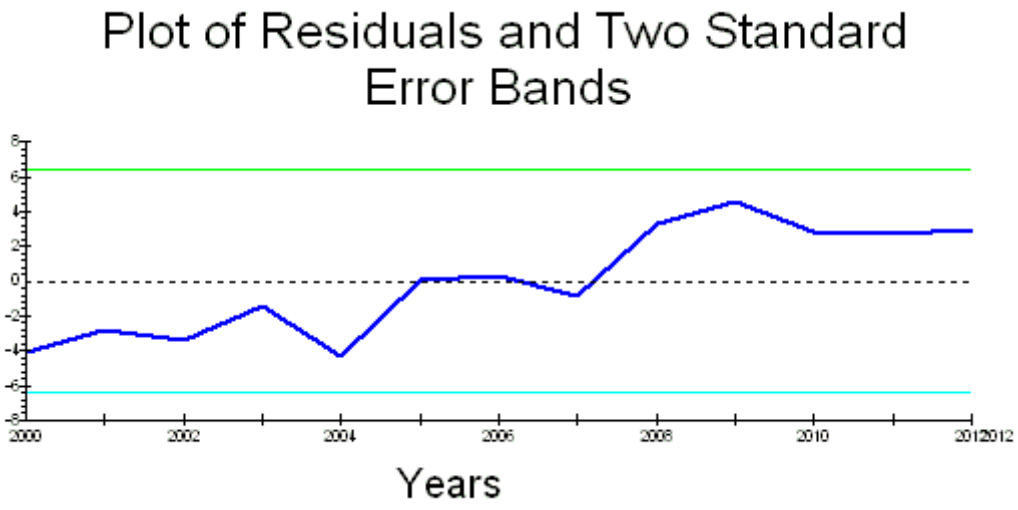

gini agricultural VA % GDP
800.00
700.00
600.00
500.00
400.00
300.00
200.00
2000
2002
2004
2006
2008
2010
2012
Years
GINI
Fitted

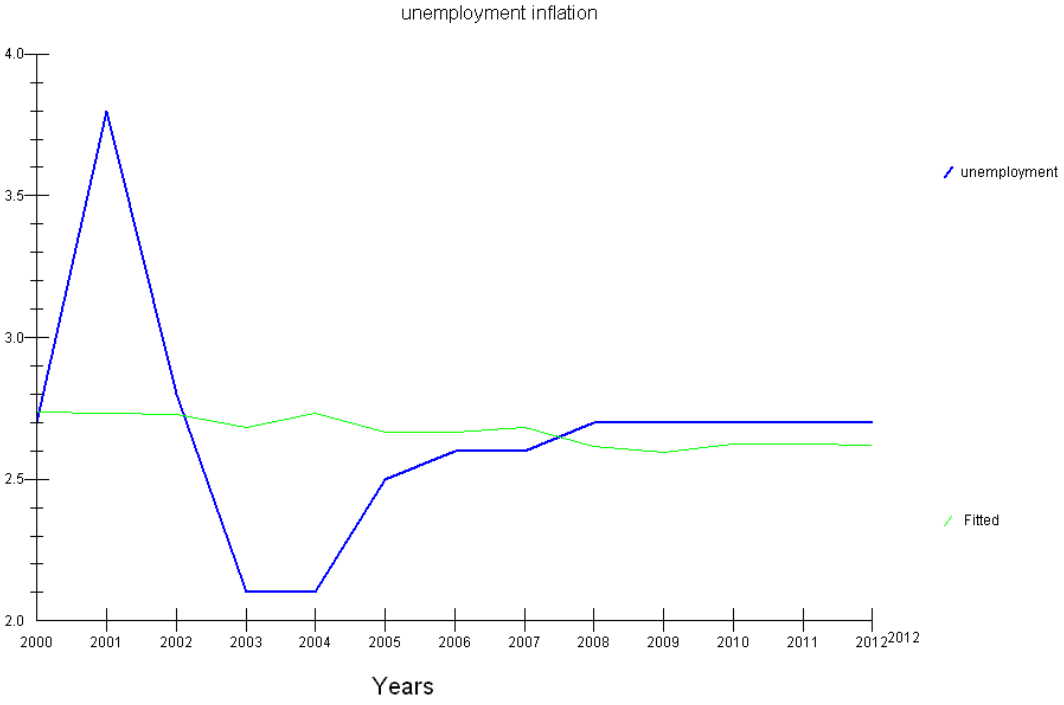

gini agricultural VA % GDP
800.00
700.00
600.00
500.00
400.00
300.00
200.00
2000
2002
2004
2006
2008
2010
2012
Years
GINI
Fitted

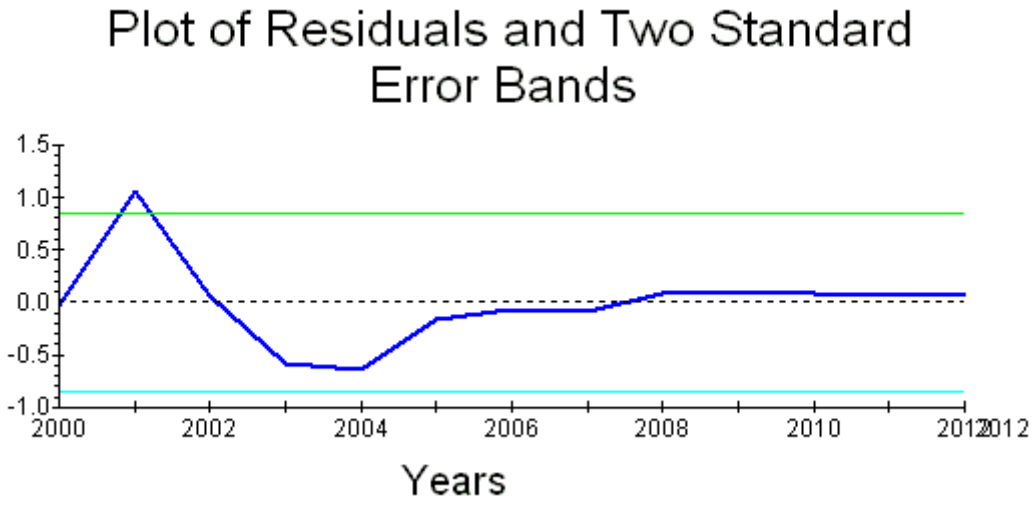

Plot of Residuals and Two Standard Error Bands
400
300
200
100
0
-100
-200
-300
-400
2000
2002
2004
2006
2008
2010
2012
2012
Years

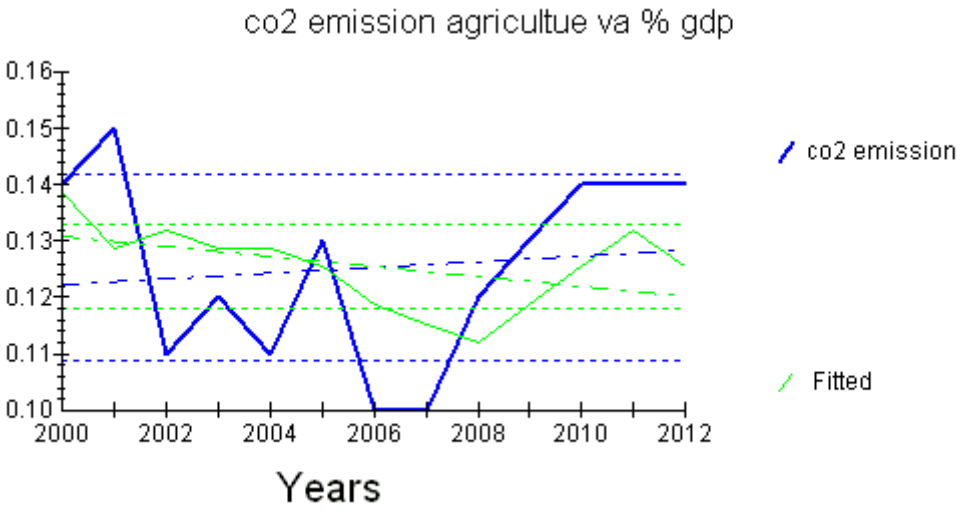

inflation unemployment
12
10
8
6
4
2
2000
2002
2004
2006
2008
2010
2012
Years
inflation
Fitted

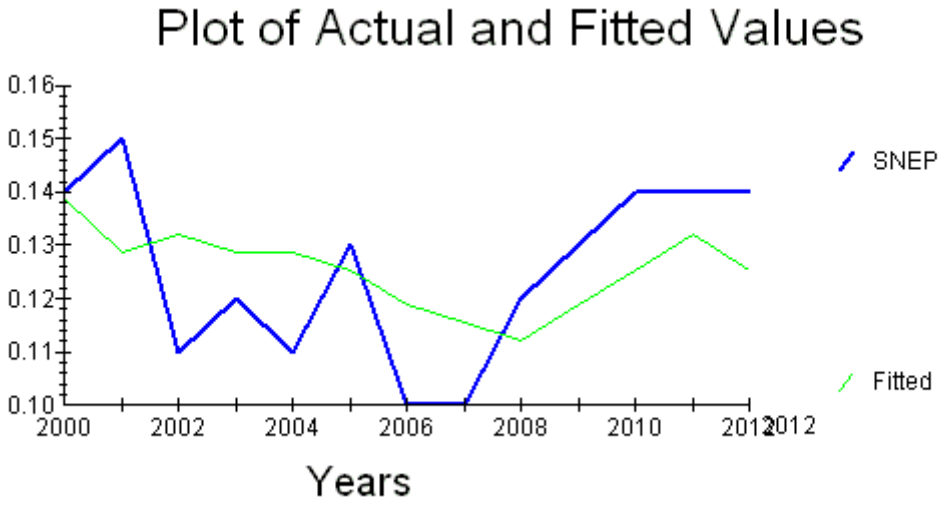

inflation unemployment
12
10
8
6
4
2
2000
2002
2004
2006
2008
2010
2012
2012
Years
inflation
Fitted

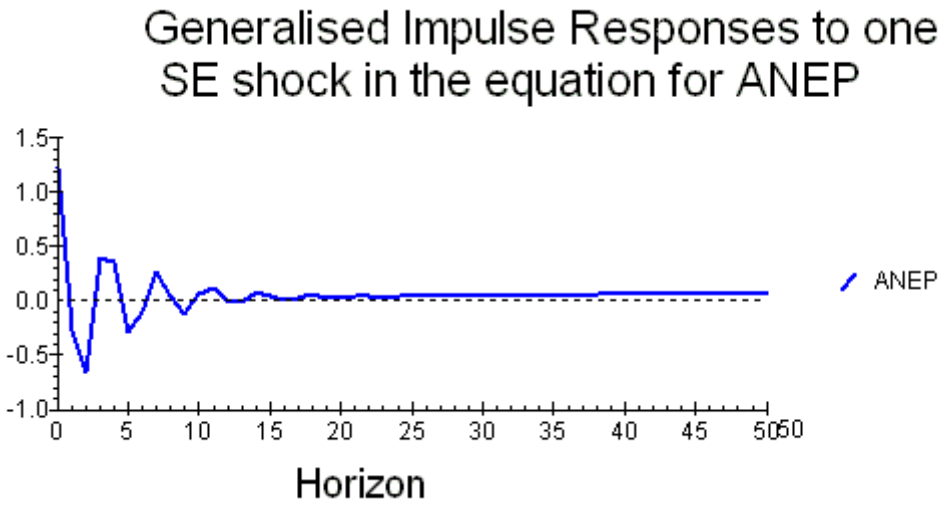

Plot of Residuals and Two Standard Error Bands
8
6
4
2
0
-2
-4
-6
-8
2000
2002
2004
2006
2008
2010
2012
2012
Years

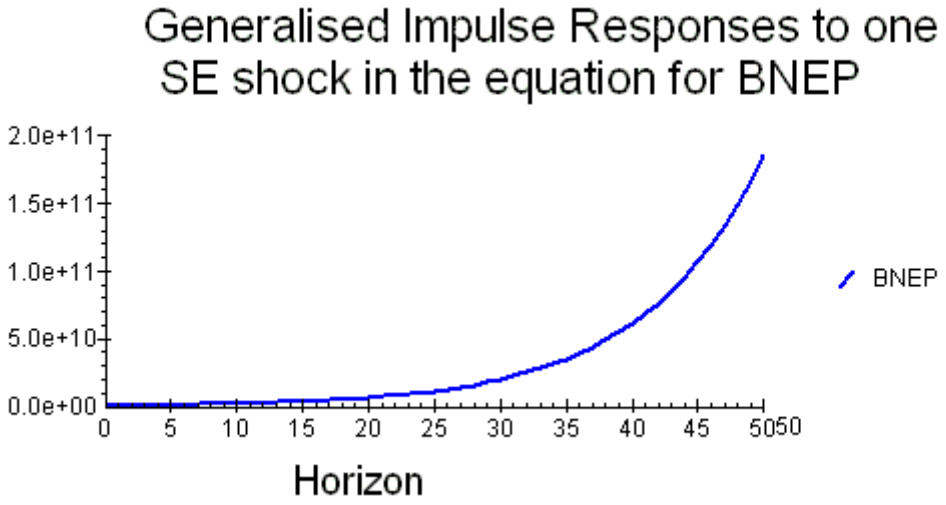

unemployment inflation
4.0
3.5
3.0
2.5
2.0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2012
Years
unemployment
Fitted

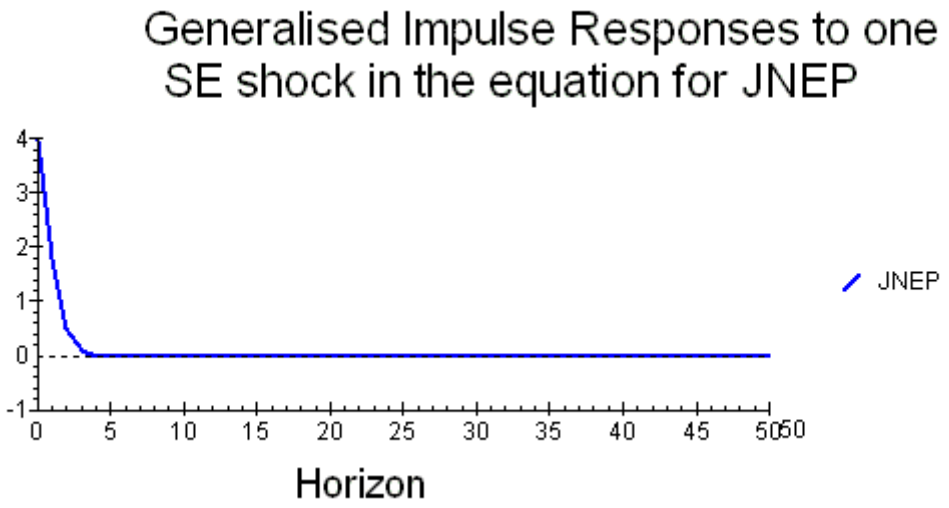

Plot of Residuals and Two Standard Error Bands
1.5
1.0
0.5
0.0
-0.5
-1.0
2000
2002
2004
2006
2008
2010
2012
Years

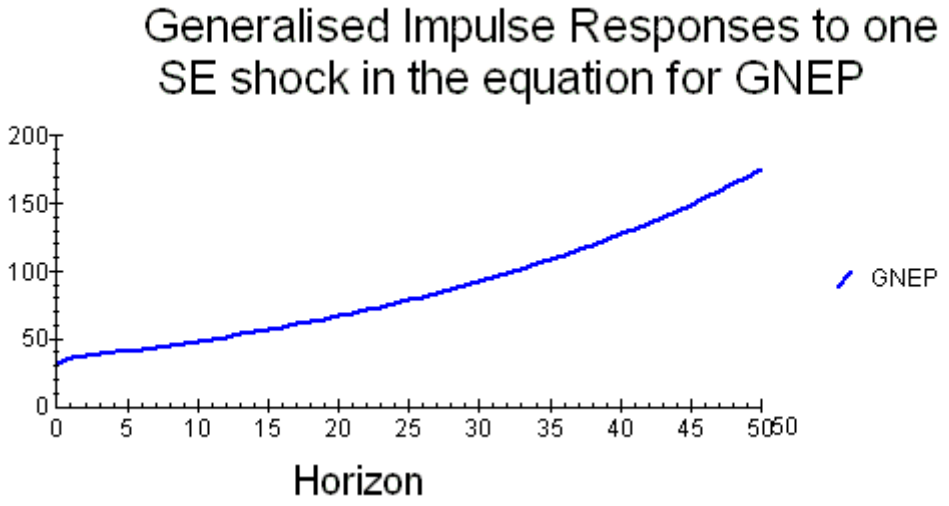

co2 emission agricultue va % gdp
0.16
0.15
0.14
0.13
0.12
0.11
0.10
2000
2002
2004
2006
2008
2010
2012
Years
co2 emission
Fitted


Plot of Actual and Fitted Values
0.16
0.15
0.14
0.13
0.12
0.11
0.10
2000
2002
2004
2006
2008
2010
2012
Years
SNEP
Fitted


Generalised Impulse Responses to one SE shock in the equation for ANEP
1.5
1.0
0.5
0.0
-0.5
-1.0
0
5
10
15
20
25
30
35
40
45
50
50
Horizon
ANEP


Generalised Impulse Responses to one SE shock in the equation for BNEP
2.0e+11
1.5e+11
1.0e+11
5.0e+10
0.0e+00
0
5
10
15
20
25
30
35
40
45
50
50
Horizon
BNEP


Generalised Impulse Responses to one SE shock in the equation for JNEP
4
3
2
1
0
-1
0
5
10
15
20
25
30
35
40
45
50
50
Horizon
JNEP


Generalised Impulse Responses to one SE shock in the equation for GNEP
200
150
100
50
0
0
5
10
15
20
25
30
35
40
45
50
50
Horizon
GNEP

APPENDIX II

NEPAL LOG STATISTICS

Ordinary Least Squares Estimation

****

Dependent variable is LNB

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	22.8426	.19559	116.7864[.000]
LNA	.12568	.12643	.99406[.342]

****

R-Squared .082428 R-Bar-Squared -.9874E-3

S.E. of Regression .44612 F-stat. F(1, 11) .98816[.342]

Mean of Dependent Variable 22.9932 S.D. of Dependent Variable .44590

Residual Sum of Squares 2.1893 Equation Log-likelihood -6.8673

Akaike Info. Criterion -8.8673 Schwarz Bayesian Criterion -9.4322

DW-statistic .25698

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*
* A:Serial Correlation	*CHSQ(1)= 8.8664[.003]	*F(1, 10)= 21.4493[.001]	*
* B:Functional Form	*CHSQ(1)= .45343[.501]	*F(1, 10)= .36140[.561]	*
* C:Normality	*CHSQ(2)= .67664[.713]	* Not applicable	*

* D:Heteroscedasticity*CHSQ(1)= 1.5742[.210]*F(1, 11)= 1.5155[.244]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is LNC

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	5.8044	.17298	33.5553[.000]
LNA	.11188	.11181	1.0006[.339]

****

R-Squared .083422 R-Bar-Squared .9623E-4

S.E. of Regression .39455 F-stat. F(1, 11) 1.0012[.339]

Mean of Dependent Variable 5.9385 S.D. of Dependent Variable .39457

Residual Sum of Squares 1.7124 Equation Log-likelihood -5.2702

Akaike Info. Criterion -7.2702 Schwarz Bayesian Criterion -7.8351

DW-statistic .26273

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*

****

*	*	*	*

```
* A:Serial Correlation*CHSQ(   1)=   8.9107[.003]*F(   1,  10)=  21.7900[.001]*
*              *                 *                 *
* B:Functional Form   *CHSQ(   1)=   .36567[.545]*F(   1,  10)=   .28943[.602]*
*              *                 *                 *
* C:Normality        *CHSQ(   2)=   .74880[.688]*      Not applicable      *
*              *                 *                 *
* D:Heteroscedasticity*CHSQ(   1)=   1.5208[.217]*F(   1,  11)=   1.4574[.253]*
*******************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


   Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is LND
 13 observations used for estimation from 2000 to 2012
*******************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON                .24281           .18233           1.3317[.210]
 LNC                .95307           .030640          31.1049[.000]
*******************************************************************************
 R-Squared                .98876   R-Bar-Squared              .98774
 S.E. of Regression       .041880  F-stat.   F(  1,  11)  967.5129[.000]
 Mean of Dependent Variable   5.9026  S.D. of Dependent Variable    .37818
 Residual Sum of Squares    .019293  Equation Log-likelihood      23.8879
 Akaike Info. Criterion     21.8879  Schwarz Bayesian Criterion   21.3230
 DW-statistic             2.1307
*******************************************************************************
```

Diagnostic Tests

****

Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1)= .58604[.444]	F(1, 10)= .47208[.508]
B:Functional Form	CHSQ(1)= .71120[.399]	F(1, 10)= .57873[.464]
C:Normality	CHSQ(2)= .65004[.723]	Not applicable
D:Heteroscedasticity	CHSQ(1)= 8.2396[.004]	F(1, 11)= 19.0395[.001]

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is LND

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	.24281	.18233	1.3317[.210]
LNC	.95307	.030640	31.1049[.000]

****

R-Squared .98876 R-Bar-Squared .98774

S.E. of Regression .041880 F-stat. F(1, 11) 967.5129[.000]

Mean of Dependent Variable 5.9026 S.D. of Dependent Variable .37818

Residual Sum of Squares .019293 Equation Log-likelihood 23.8879

Akaike Info. Criterion 21.8879 Schwarz Bayesian Criterion 21.3230

DW-statistic 2.1307

****

Diagnostic Tests

****

* Test Statistics * LM Version * F Version *

****

* * * *

* A:Serial Correlation*CHSQ(1)= .58604[.444]*F(1, 10)= .47208[.508]*

* * * *

* B:Functional Form *CHSQ(1)= .71120[.399]*F(1, 10)= .57873[.464]*

* * * *

* C:Normality *CHSQ(2)= .65004[.723]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= 8.2396[.004]*F(1, 11)= 19.0395[.001]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is LNA

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	2.4376	2.5257	.96513[.355]
LNE	-.47701	.96552	-.49404[.631]

****

R-Squared .021707 R-Bar-Squared -.067228

S.E. of Regression 1.0523 F-stat. F(1, 11) .24408[.631]

Mean of Dependent Variable 1.1982 S.D. of Dependent Variable 1.0186

Residual Sum of Squares 12.1809 Equation Log-likelihood -18.0232

Akaike Info. Criterion -20.0232 Schwarz Bayesian Criterion -20.5881

DW-statistic 2.2475

****

Diagnostic Tests

****

* Test Statistics *	LM Version	*	F Version	*
* A:Serial Correlation*	CHSQ(1)= .32666[.568]*		F(1, 10)= .25775[.623]*	
* B:Functional Form *	CHSQ(1)= .44629[.504]*		F(1, 10)= .35551[.564]*	
* C:Normality *	CHSQ(2)= 37.4855[.000]*		Not applicable	*
* D:Heteroscedasticity*	CHSQ(1)= 1.0466[.306]*		F(1, 11)= .96307[.348]*	

```
*******************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


            Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is LNC
 13 observations used for estimation from 2000 to 2012
*******************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON                 8.9529          .37566          23.8327[.000]
 LNE                -1.1601          .14361          -8.0785[.000]
*******************************************************************************
 R-Squared               .85576   R-Bar-Squared              .84265
 S.E. of Regression      .15652   F-stat.    F(  1,  11)   65.2626[.000]
 Mean of Dependent Variable    5.9385   S.D. of Dependent Variable     .39457
 Residual Sum of Squares      .26947   Equation Log-likelihood        6.7495
 Akaike Info. Criterion       4.7495   Schwarz Bayesian Criterion     4.1845
 DW-statistic            1.0108
*******************************************************************************


                  Diagnostic Tests
*******************************************************************************
*   Test Statistics  *       LM Version       *       F Version        *
*******************************************************************************
*              *                 *                 *
* A:Serial Correlation*CHSQ(   1)=   1.8771[.171]*F(   1,  10)=   1.6876[.223]*
```

```
*             *               *               *
* B:Functional Form   *CHSQ(   1)=   2.9733[.085]*F(   1,  10)=   2.9654[.116]*
*             *               *               *
* C:Normality       *CHSQ(   2)=   .44304[.801]*      Not applicable      *
*             *               *               *
* D:Heteroscedasticity*CHSQ(   1)=   .33184[.565]*F(   1,  11)=   .28814[.602]*
*******************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


               Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is LNA
 13 observations used for estimation from 2000 to 2012
*******************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON               -21.8698          11.7219          -1.8657[.089]
 LNL                6.6941           3.4008           1.9684[.075]
*******************************************************************************
 R-Squared                .26048   R-Bar-Squared              .19326
 S.E. of Regression       .91492   F-stat.    F(  1,  11)    3.8746[.075]
 Mean of Dependent Variable    1.1982   S.D. of Dependent Variable     1.0186
 Residual Sum of Squares      9.2078   Equation Log-likelihood      -16.2044
 Akaike Info. Criterion     -18.2044   Schwarz Bayesian Criterion    -18.7693
 DW-statistic             2.1768
*******************************************************************************
```

Diagnostic Tests

****

Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1)= .13893[.709]	F(1, 10)= .10802[.749]
B:Functional Form	CHSQ(1)= 1.7102[.191]	F(1, 10)= 1.5148[.247]
C:Normality	CHSQ(2)= 16.0128[.000]	Not applicable
D:Heteroscedasticity	CHSQ(1)= 2.3881[.122]	F(1, 11)= 2.4755[.144]

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is LND

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	-4.3097	4.0156	-1.0733[.306]
LNL	2.9635	1.1650	2.5438[.027]

****

R-Squared	.37038	R-Bar-Squared	.31314
S.E. of Regression	.31343	F-stat. F(1, 11)	6.4707[.027]

Mean of Dependent Variable 5.9026 S.D. of Dependent Variable .37818

Residual Sum of Squares 1.0806 Equation Log-likelihood -2.2779

Akaike Info. Criterion -4.2779 Schwarz Bayesian Criterion -4.8428

DW-statistic .46737

****

Diagnostic Tests

****

* Test Statistics * LM Version * F Version *

****

* * * *

* A:Serial Correlation*CHSQ(1)= 5.4034[.020]*F(1, 10)= 7.1128[.024]*

* * * *

* B:Functional Form *CHSQ(1)= .012444[.911]*F(1, 10)= .0095814[.924]*

* * * *

* C:Normality *CHSQ(2)= .29903[.861]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= 1.2023[.273]*F(1, 11)= 1.1210[.312]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is LNA

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	14.8990	17.0614	.87326[.401]
LNR	-3.8252	4.7628	-.80315[.439]

****

R-Squared .055392 R-Bar-Squared -.030481

S.E. of Regression 1.0340 F-stat. F(1, 11) .64505[.439]

Mean of Dependent Variable 1.1982 S.D. of Dependent Variable 1.0186

Residual Sum of Squares 11.7615 Equation Log-likelihood -17.7954

Akaike Info. Criterion -19.7954 Schwarz Bayesian Criterion -20.3604

DW-statistic 2.1493

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*
* A:Serial Correlation*	CHSQ(1)= .21215[.645]*	F(1, 10)= .16590[.692]*	
* B:Functional Form *	CHSQ(1)= .073027[.787]*	F(1, 10)= .056492[.817]*	
* C:Normality *	CHSQ(2)= 32.6159[.000]*	Not applicable	*
* D:Heteroscedasticity*	CHSQ(1)= 1.3287[.249]*	F(1, 11)= 1.2523[.287]*	

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is LND

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	14.3015	6.0051	2.3815[.036]
LNR	-2.3449	1.6764	-1.3988[.189]

****

R-Squared .15102 R-Bar-Squared .073838

S.E. of Regression .36395 F-stat. F(1, 11) 1.9567[.189]

Mean of Dependent Variable 5.9026 S.D. of Dependent Variable .37818

Residual Sum of Squares 1.4571 Equation Log-likelihood -4.2208

Akaike Info. Criterion -6.2208 Schwarz Bayesian Criterion -6.7858

DW-statistic .15267

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*

****

* * * *

* A:Serial Correlation*CHSQ(1)= 11.1795[.001]*F(1, 10)= 61.4093[.000]*

* * * *

* B:Functional Form *CHSQ(1)= .79559[.372]*F(1, 10)= .65189[.438]*

* * * *

* C:Normality *CHSQ(2)= 2.3352[.311]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= 1.3299[.249]*F(1, 11)= 1.2536[.287]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is LNI

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	2.2370	1.1335	1.9736[.074]
LNO	-.49719	1.1546	-.43060[.675]

****

R-Squared .016576 R-Bar-Squared -.072826

S.E. of Regression .57420 F-stat. F(1, 11) .18541[.675]

Mean of Dependent Variable 1.7538 S.D. of Dependent Variable .55437

Residual Sum of Squares 3.6268 Equation Log-likelihood -10.1483

Akaike Info. Criterion -12.1483 Schwarz Bayesian Criterion -12.7132

DW-statistic .58388

****

Diagnostic Tests

```
*****************************************************************************
*  Test Statistics  *      LM Version      *       F Version       *
*****************************************************************************
*             *                *                *
* A:Serial Correlation*CHSQ(  1)=  4.7165[.030]*F(  1,  10)=  5.6938[.038]*
*             *                *                *
* B:Functional Form   *CHSQ(  1)=  3.6585[.056]*F(  1,  10)=  3.9164[.076]*
*             *                *                *
* C:Normality       *CHSQ(  2)=  1.3299[.514]*     Not applicable      *
*             *                *                *
* D:Heteroscedasticity*CHSQ(  1)=  .064432[.800]*F(  1,  11)=  .054791[.819]*
*****************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


   Ordinary Least Squares Estimation
*****************************************************************************
Dependent variable is LNO
13 observations used for estimation from 2000 to 2012
*****************************************************************************
Regressor          Coefficient      Standard Error       T-Ratio[Prob]
CON                 1.0304          .14192          7.2607[.000]
LNI                -.033340         .077428         -.43060[.675]
*****************************************************************************
R-Squared              .016576   R-Bar-Squared            -.072826
S.E. of Regression         .14869   F-stat.   F(  1,  11)   .18541[.675]
Mean of Dependent Variable   .97195   S.D. of Dependent Variable     .14356
Residual Sum of Squares      .24321   Equation Log-likelihood        7.4160
```

Akaike Info. Criterion 5.4160 Schwarz Bayesian Criterion 4.8510

DW-statistic 1.3459

****

Diagnostic Tests

****

Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1)= 1.3746[.241]	F(1, 10)= 1.1824[.302]
B:Functional Form	CHSQ(1)= 2.1567[.142]	F(1, 10)= 1.9890[.189]
C:Normality	CHSQ(2)= 1.2442[.537]	Not applicable
D:Heteroscedasticity	CHSQ(1)= 3.8535[.050]	F(1, 11)= 4.6345[.054]

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is LNS

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	-5.5910	2.0974	-2.6657[.022]
LNR	.97893	.58551	1.6719[.123]

****

R-Squared .20263 R-Bar-Squared .13014

S.E. of Regression .12712 F-stat. F(1, 11) 2.7953[.123]

Mean of Dependent Variable -2.0848 S.D. of Dependent Variable .13630

Residual Sum of Squares .17775 Equation Log-likelihood 9.4539

Akaike Info. Criterion 7.4539 Schwarz Bayesian Criterion 6.8889

DW-statistic 1.6151

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*

****

*	*	*	*
* A:Serial Correlation*	CHSQ(1)= .38369[.536]*	F(1, 10)= .30412[.593]*	
*	*	*	*
* B:Functional Form *	CHSQ(1)= .044776[.832]*	F(1, 10)= .034562[.856]*	
*	*	*	*
* C:Normality *	CHSQ(2)= 1.4125[.493]*	Not applicable	*
*	*	*	*
* D:Heteroscedasticity*	CHSQ(1)= .088306[.766]*	F(1, 11)= .075231[.789]*	

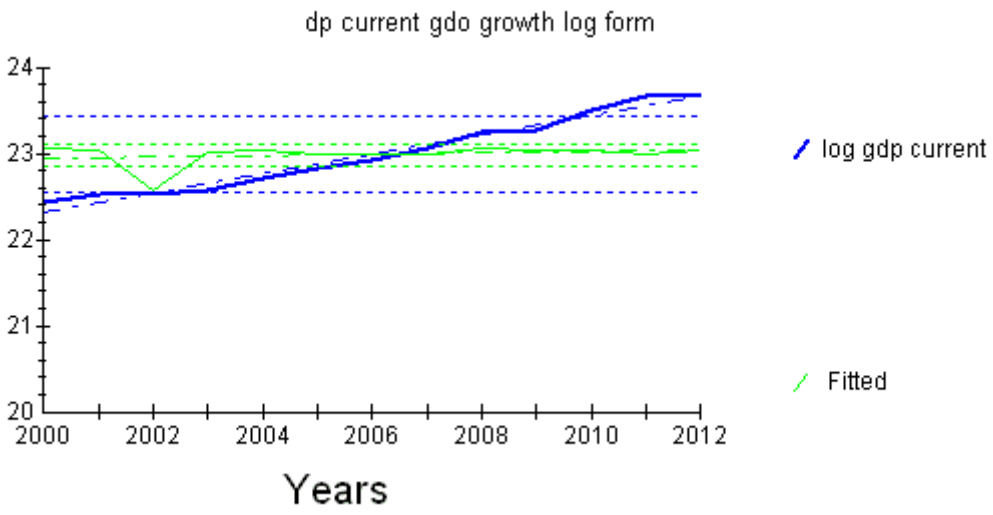
****

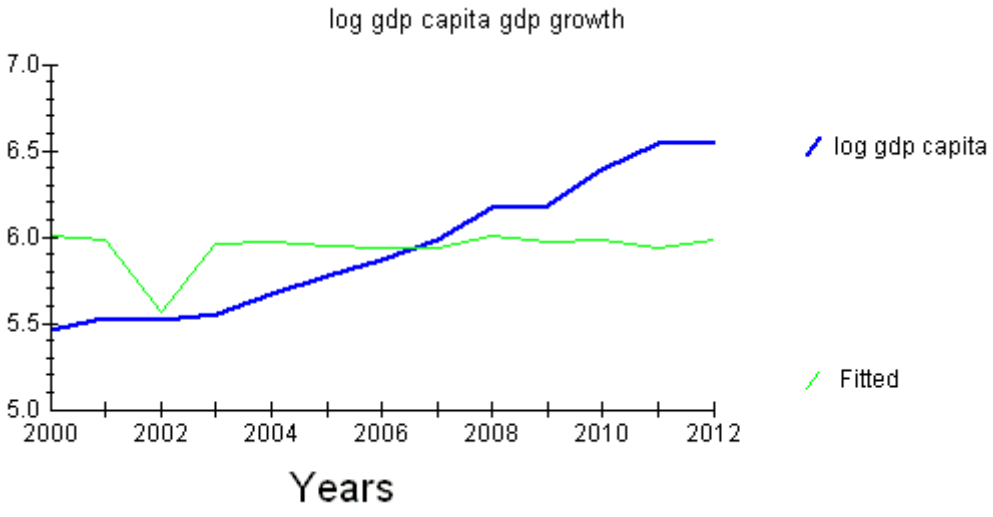
A:Lagrange multiplier test of residual serial correlation

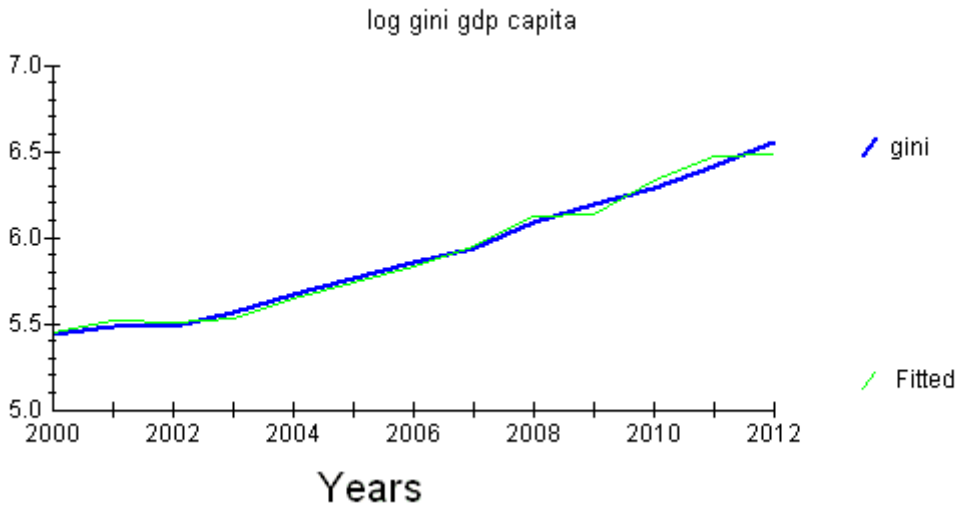
B:Ramsey's RESET test using the square of the fitted values

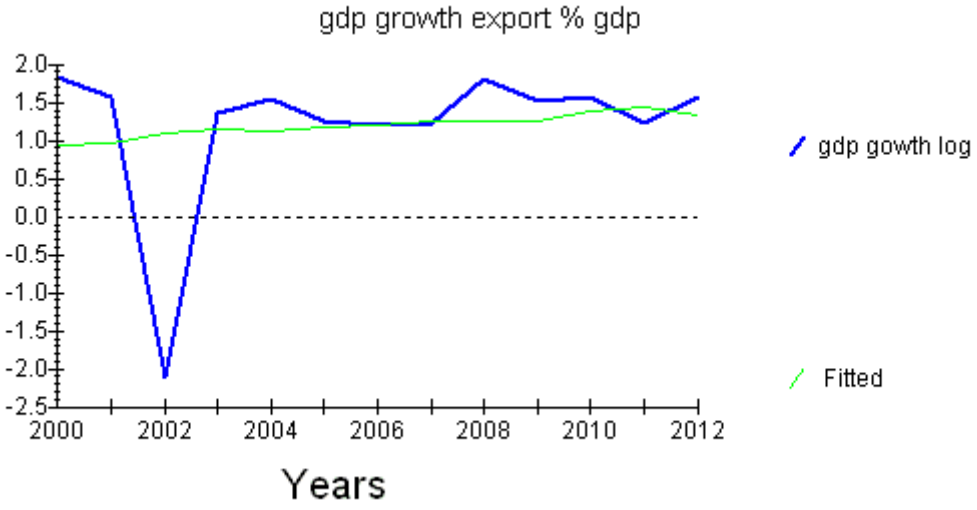
C:Based on a test of skewness and kurtosis of residuals

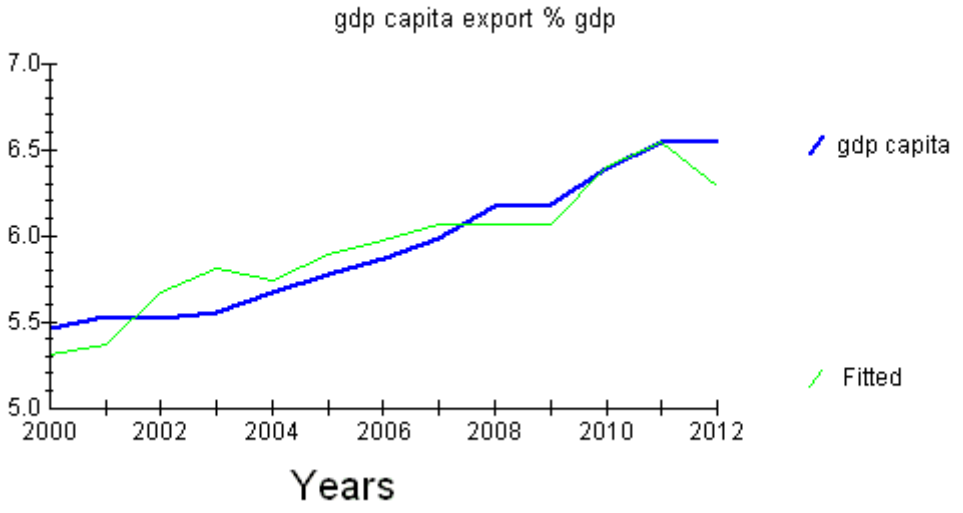
D:Based on the regression of squared residuals on squared fitted values

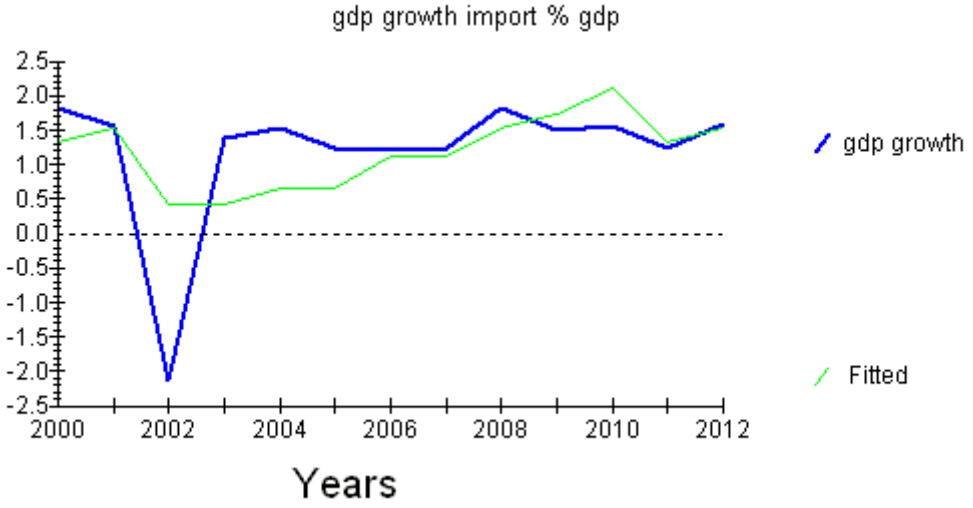

dp current gdo growth log form
24
23
22
21
20
2000
2002
2004
2006
2008
2010
2012
Years
log gdp current
Fitted

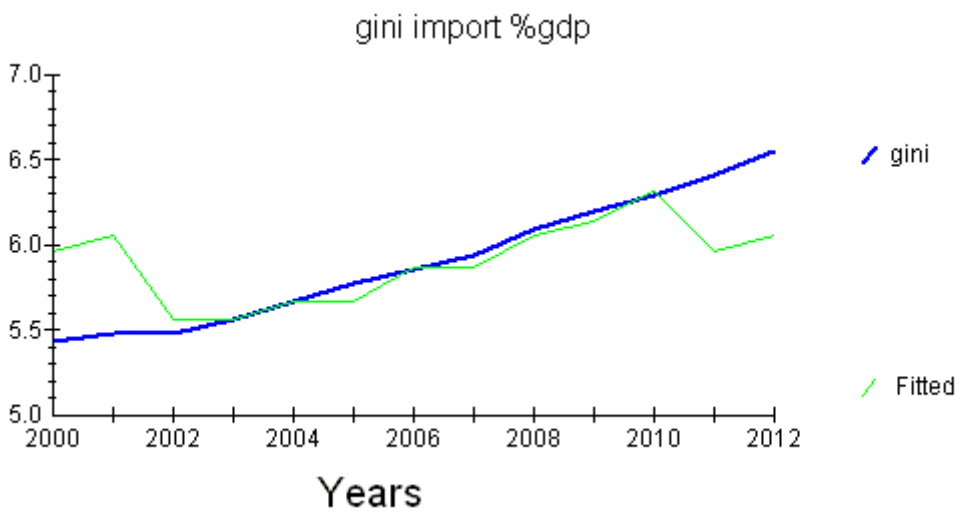

log gdp capita gdp growth
7.0
6.5
6.0
5.5
5.0
2000
2002
2004
2006
2008
2010
2012
Years
log gdp capita
Fitted

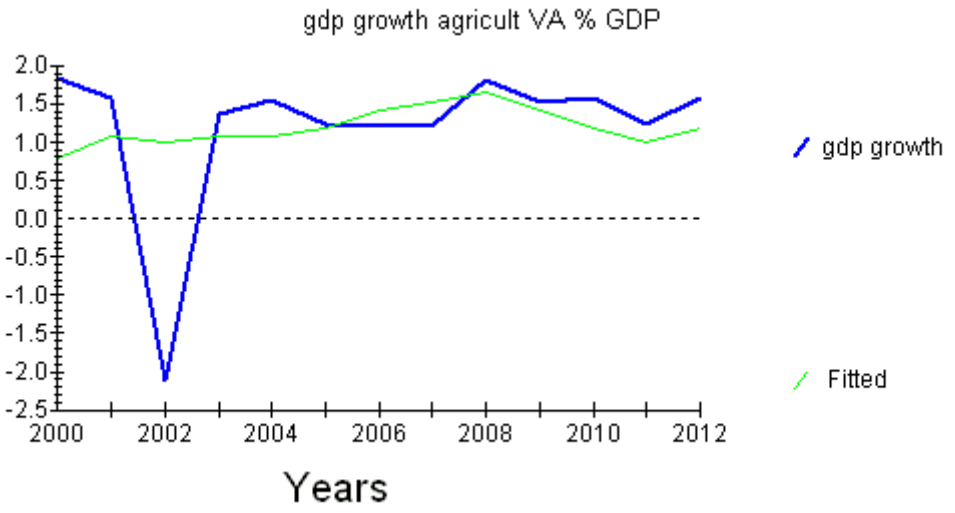

log gini gdp capita
7.0
6.5
6.0
5.5
5.0
2000
2002
2004
2006
2008
2010
2012
Years
gini
Fitted

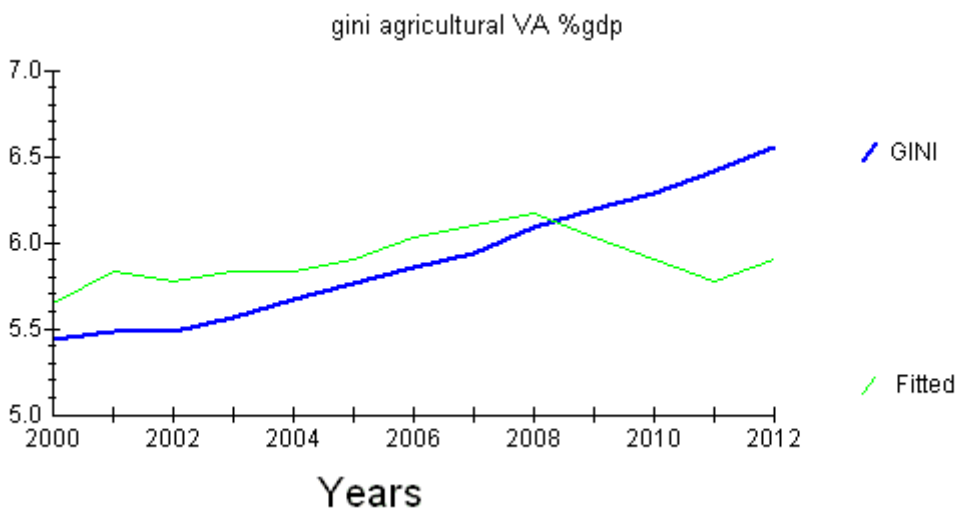

gdp growth export % gdp
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
2000
2002
2004
2006
2008
2010
2012
Years
gdp gowth log
Fitted

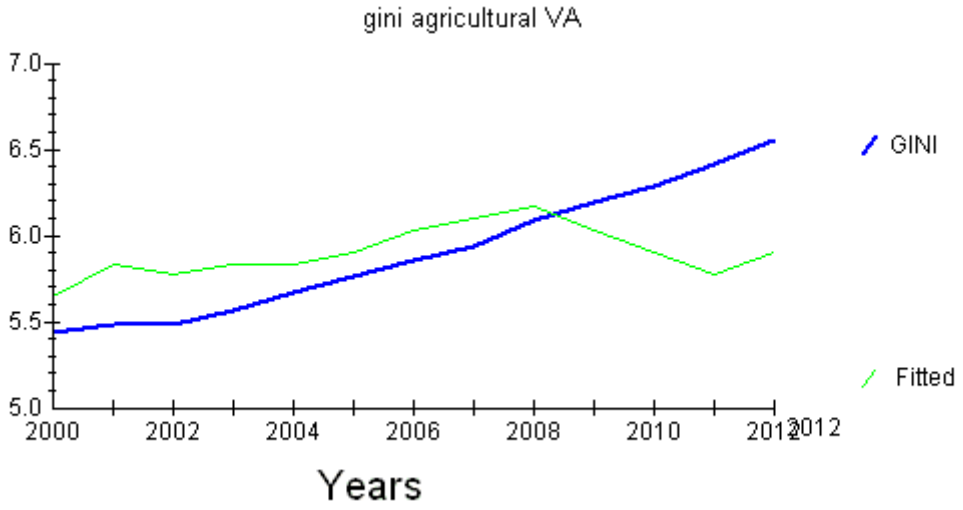

gdp capita export % gdp
7.0
6.5
6.0
5.5
5.0
2000
2002
2004
2006
2008
2010
2012
Years
gdp capita
Fitted

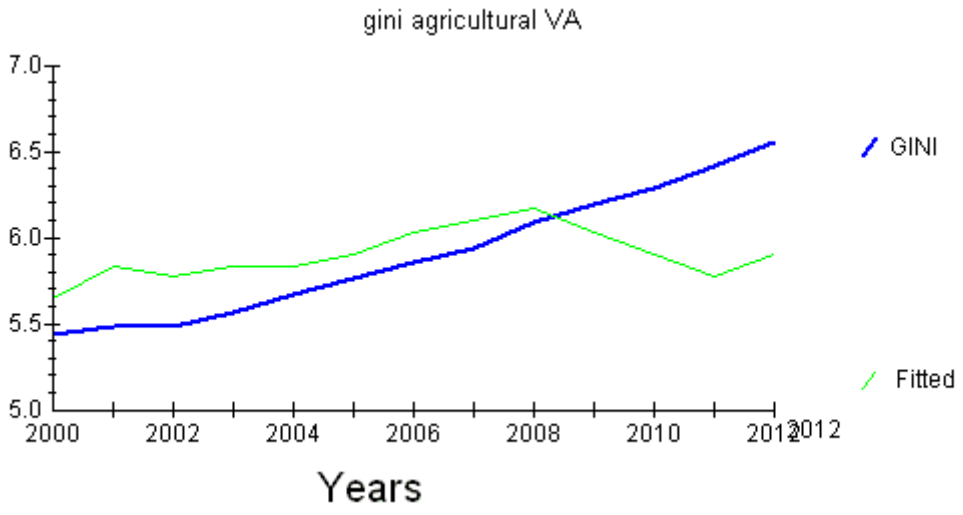

gdp growth import % gdp
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
2000
2002
2004
2006
2008
2010
2012
Years
gdp growth
Fitted

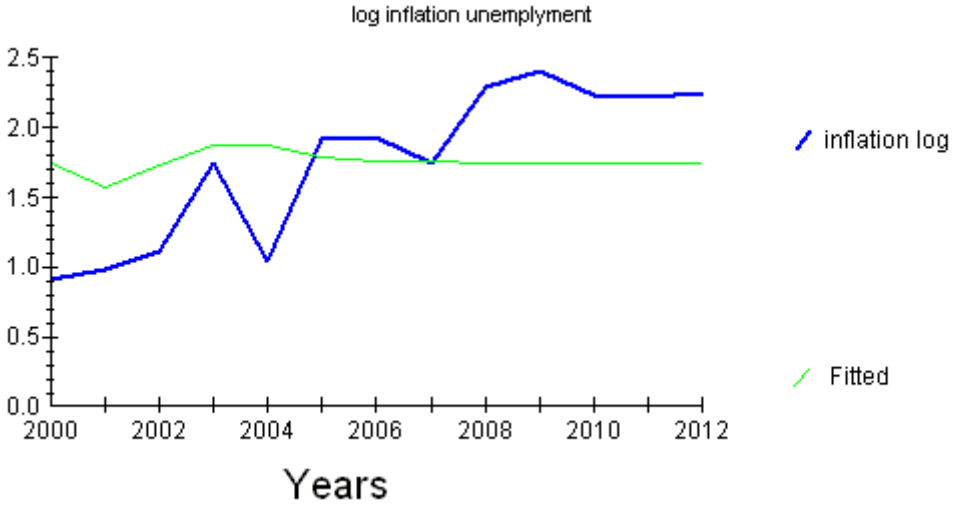

gini import %gdp
7.0
6.5
6.0
5.5
5.0
2000
2002
2004
2006
2008
2010
2012
Years
gini
Fitted

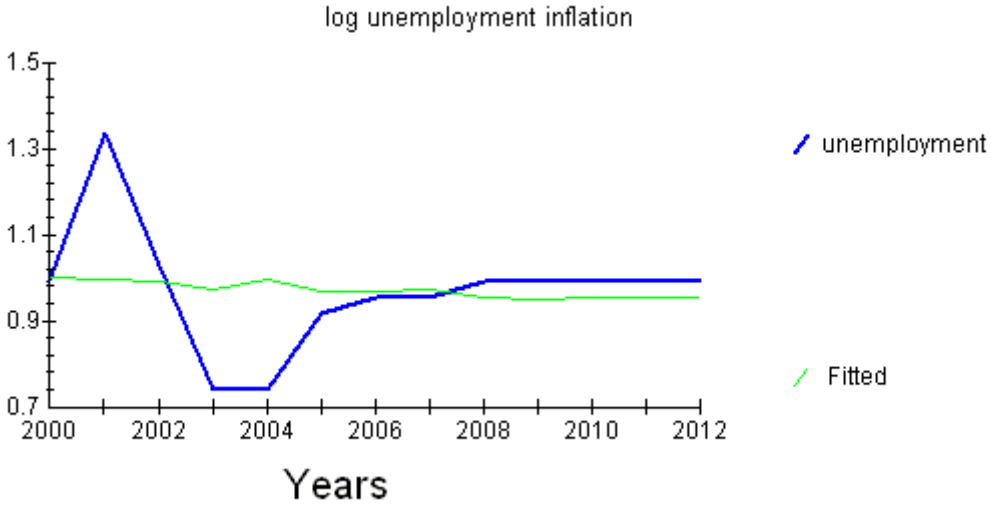

gdp growth agricult VA % GDP
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
2000
2002
2004
2006
2008
2010
2012
Years
gdp growth
Fitted

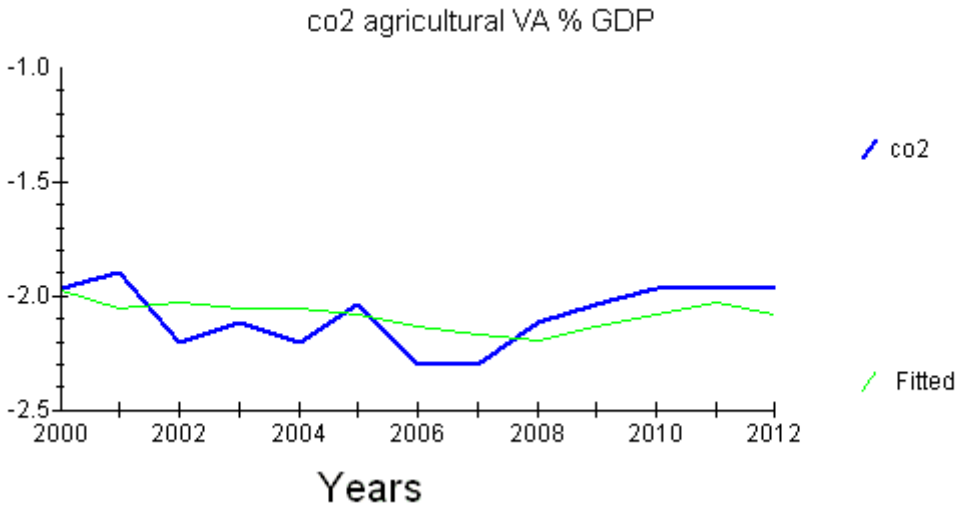

gini agricultural VA %gdp
7.0
6.5
6.0
5.5
5.0
2000
2002
2004
2006
2008
2010
2012
Years
GINI
Fitted


gini agricultural VA
7.0
6.5
6.0
5.5
5.0
2000
2002
2004
2006
2008
2010
2012
2012
Years
GINI
Fitted


gini agricultural VA
7.0
6.5
6.0
5.5
5.0
2000
2002
2004
2006
2008
2010
2012
2012
Years
GINI
Fitted


log inflation unemplyment
2.5
2.0
1.5
1.0
0.5
0.0
2000
2002
2004
2006
2008
2010
2012
Years
inflation log
Fitted


log unemployment inflation
1.5
1.3
1.1
0.9
0.7
2000
2002
2004
2006
2008
2010
2012
Years
unemployment
Fitted


co2 agricultural VA % GDP
-1.0
-1.5
-2.0
-2.5
2000
2002
2004
2006
2008
2010
2012
Years
co2
Fitted

APPENDIX III

NEPALI INDEX- STATISTICS

Ordinary Least Squares Estimation

****

Dependent variable is BNEP

12 observations used for estimation from 2001 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	103.4035	4.0455	25.5599[.000]
ANEP	.082743	.040783	2.0288[.070]

****

R-Squared .29159 R-Bar-Squared .22075

S.E. of Regression 6.7905 F-stat. F(1, 10) 4.1162[.070]

Mean of Dependent Variable 110.5833 S.D. of Dependent Variable 7.6925

Residual Sum of Squares 461.1130 Equation Log-likelihood -38.9197

Akaike Info. Criterion -40.9197 Schwarz Bayesian Criterion -41.4046

DW-statistic 2.0893

****

Diagnostic Tests

****

* Test Statistics *	LM Version	*	F Version	*

****

*	*	*	*

* A:Serial Correlation*CHSQ(1)= 1.6139[.204]*F(1, 9)= 1.3985[.267]*

```
*             *               *               *
* B:Functional Form   *CHSQ(   1)=   .27802[.598]*F(   1,   9)=   .21346[.655]*
*             *               *               *
* C:Normality       *CHSQ(   2)=   .61699[.735]*      Not applicable      *
*             *               *               *
* D:Heteroscedasticity*CHSQ(   1)=   1.2367[.266]*F(   1,  10)=   1.1490[.309]*
*******************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


            Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is CNEP
 12 observations used for estimation from 2001 to 2012
*******************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON                101.5030          4.0731          24.9203[.000]
 ANEP               .088319          .041061          2.1509[.057]
*******************************************************************************
 R-Squared               .31631   R-Bar-Squared              .24794
 S.E. of Regression         6.8368   F-stat.    F(  1,  10)    4.6264[.057]
 Mean of Dependent Variable  109.1667   S.D. of Dependent Variable     7.8836
 Residual Sum of Squares     467.4192   Equation Log-likelihood      -39.0012
 Akaike Info. Criterion     -41.0012   Schwarz Bayesian Criterion    -41.4861
 DW-statistic               2.0668
*******************************************************************************
```

Diagnostic Tests

****

* Test Statistics * LM Version * F Version *

****

* * * *

* A:Serial Correlation*CHSQ(1)= 1.3819[.240]*F(1, 9)= 1.1713[.307]*

* * * *

* B:Functional Form *CHSQ(1)= .30088[.583]*F(1, 9)= .23147[.642]*

* * * *

* C:Normality *CHSQ(2)= .36402[.834]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= 1.1765[.278]*F(1, 10)= 1.0870[.322]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is DNEP

12 observations used for estimation from 2001 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	83.7316	16.1582	5.1820[.000]
CNEP	.23452	.14766	1.5882[.143]

****

R-Squared .20144 R-Bar-Squared .12158

S.E. of Regression 3.8609 F-stat. F(1, 10) 2.5225[.143]

Mean of Dependent Variable 109.3333 S.D. of Dependent Variable 4.1194

Residual Sum of Squares 149.0653 Equation Log-likelihood -32.1441

Akaike Info. Criterion -34.1441 Schwarz Bayesian Criterion -34.6290

DW-statistic 1.0965

****

Diagnostic Tests

****

Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1)= .93995[.332]	F(1, 9)= .76488[.405]
B:Functional Form	CHSQ(1)= .4180E-4[.995]	F(1, 9)= .3135E-4[.996]
C:Normality	CHSQ(2)= .050595[.975]	Not applicable
D:Heteroscedasticity	CHSQ(1)= 4.2829[.038]	F(1, 10)= 5.5498[.040]

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is ANEP

12 observations used for estimation from 2001 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	-186.9212	114.8045	-1.6282[.135]
ENEP	2.9324	1.2232	2.3974[.037]

****

R-Squared .36498 R-Bar-Squared .30147

S.E. of Regression 41.9583 F-stat. F(1, 10) 5.7475[.037]

Mean of Dependent Variable 86.7733 S.D. of Dependent Variable 50.2027

Residual Sum of Squares 17605.0 Equation Log-likelihood -60.7735

Akaike Info. Criterion -62.7735 Schwarz Bayesian Criterion -63.2584

DW-statistic 1.9165

****

Diagnostic Tests

****

* Test Statistics *	LM Version	*	F Version	*
* A:Serial Correlation*	CHSQ(1)= .012797[.910]*		F(1, 9)= .0096082[.924]*	
* B:Functional Form *	CHSQ(1)= .15547[.693]*		F(1, 9)= .11813[.739]*	
* C:Normality *	CHSQ(2)= .46808[.791]*		Not applicable	*

```
*            *               *                *
* D:Heteroscedasticity*CHSQ(  1)=  1.3563[.244]*F(  1,  10)=  1.2743[.285]*
*******************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


               Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is CNEP
 12 observations used for estimation from 2001 to 2012
*******************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON               118.3414         22.4347          5.2749[.000]
 ENEP              -.098300         .23903         -.41125[.690]
*******************************************************************************
 R-Squared              .016631   R-Bar-Squared            -.081706
 S.E. of Regression     8.1994   F-stat.   F(  1,  10)   .16912[.690]
 Mean of Dependent Variable  109.1667   S.D. of Dependent Variable     7.8836
 Residual Sum of Squares    672.2966   Equation Log-likelihood      -41.1820
 Akaike Info. Criterion     -43.1820   Schwarz Bayesian Criterion    -43.6669
 DW-statistic              2.0149
*******************************************************************************


                    Diagnostic Tests
*******************************************************************************
*   Test Statistics  *       LM Version       *       F Version        *
*******************************************************************************
```

```
*            *               *               *
* A:Serial Correlation*CHSQ(   1)=  .035058[.851]*F(   1,   9)=  .026371[.875]*
*            *               *               *
* B:Functional Form   *CHSQ(   1)=   .34637[.556]*F(   1,   9)=   .26750[.617]*
*            *               *               *
* C:Normality       *CHSQ(   2)=   .61413[.736]*      Not applicable      *
*            *               *               *
* D:Heteroscedasticity*CHSQ(   1)=   2.0160[.156]*F(   1,  10)=   2.0193[.186]*
*************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


            Ordinary Least Squares Estimation
*************************************************************************
 Dependent variable is ANEP
 12 observations used for estimation from 2001 to 2012
*************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON              -394.0849         202.1674          -1.9493[.080]
 LNEP               4.8006          2.0147           2.3828[.038]
*************************************************************************
 R-Squared              .36216   R-Bar-Squared             .29837
 S.E. of Regression     42.0514   F-stat.   F(  1,  10)   5.6778[.038]
 Mean of Dependent Variable   86.7733   S.D. of Dependent Variable    50.2027
 Residual Sum of Squares     17683.2   Equation Log-likelihood      -60.8001
 Akaike Info. Criterion     -62.8001   Schwarz Bayesian Criterion    -63.2850
 DW-statistic            1.9154
*************************************************************************
```

Diagnostic Tests

****

* Test Statistics * LM Version * F Version *

****

* * * *

* A:Serial Correlation*CHSQ(1)= .0092293[.923]*F(1, 9)= .0069273[.935]*

* * * *

* B:Functional Form *CHSQ(1)= .034870[.852]*F(1, 9)= .026228[.875]*

* * * *

* C:Normality *CHSQ(2)= .043971[.978]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= .037961[.846]*F(1, 10)= .031734[.862]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is DNEP

12 observations used for estimation from 2001 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	75.6890	17.8282	4.2455[.002]
LNEP	.33588	.17766	1.8906[.088]

****

R-Squared .26331 R-Bar-Squared .18964

S.E. of Regression 3.7083 F-stat. F(1, 10) 3.5742[.088]

Mean of Dependent Variable 109.3333 S.D. of Dependent Variable 4.1194

Residual Sum of Squares 137.5157 Equation Log-likelihood -31.6603

Akaike Info. Criterion -33.6603 Schwarz Bayesian Criterion -34.1452

DW-statistic .96405

****

Diagnostic Tests

****

* Test Statistics * LM Version * F Version *

****

* * * *

* A:Serial Correlation*CHSQ(1)= 2.1065[.147]*F(1, 9)= 1.9162[.200]*

* * * *

* B:Functional Form *CHSQ(1)= 1.0612[.303]*F(1, 9)= .87314[.374]*

* * * *

* C:Normality *CHSQ(2)= .29305[.864]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= 2.6334[.105]*F(1, 10)= 2.8114[.125]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is ANEP

12 observations used for estimation from 2001 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	292.9009	348.8550	.83961[.421]
RNEP	-2.0891	3.5324	-.59141[.567]

****

R-Squared .033795 R-Bar-Squared -.062826

S.E. of Regression 51.7557 F-stat. F(1, 10) .34977[.567]

Mean of Dependent Variable 86.7733 S.D. of Dependent Variable 50.2027

Residual Sum of Squares 26786.5 Equation Log-likelihood -63.2917

Akaike Info. Criterion -65.2917 Schwarz Bayesian Criterion -65.7767

DW-statistic 1.5086

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*
* A:Serial Correlation*	CHSQ(1)= .53176[.466]*	F(1, 9)= .41731[.534]*	
* B:Functional Form *	CHSQ(1)= .13916[.709]*	F(1, 9)= .10559[.753]*	
* C:Normality *	CHSQ(2)= .15027[.928]*	Not applicable	*
* D:Heteroscedasticity*	CHSQ(1)= .0061255[.938]*	F(1, 10)= .0051072[.944]*	

```
*******************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


            Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is DNEP
 12 observations used for estimation from 2001 to 2012
*******************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON                104.1242         29.0752          3.5812[.005]
 RNEP               .052795          .29441           .17932[.861]
*******************************************************************************
 R-Squared              .0032054   R-Bar-Squared            -.096474
 S.E. of Regression     4.3136   F-stat.    F(  1,  10)   .032157[.861]
 Mean of Dependent Variable  109.3333   S.D. of Dependent Variable     4.1194
 Residual Sum of Squares     186.0683   Equation Log-likelihood      -33.4745
 Akaike Info. Criterion      -35.4745   Schwarz Bayesian Criterion    -35.9594
 DW-statistic               .96218
*******************************************************************************


                  Diagnostic Tests
*******************************************************************************
*   Test Statistics  *       LM Version       *       F Version        *
*******************************************************************************
*              *                 *                  *
* A:Serial Correlation*CHSQ(   1)=   2.1418[.143]*F(   1,   9)=   1.9553[.196]*
```

```
*             *               *                *
* B:Functional Form   *CHSQ(   1)=   .36231[.547]*F(   1,   9)=   .28020[.609]*
*             *               *                *
* C:Normality       *CHSQ(   2)=   1.8279[.401]*      Not applicable      *
*             *               *                *
* D:Heteroscedasticity*CHSQ(   1)= .0054616[.941]*F(   1,  10)= .0045534[.948]*
*******************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


            Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is INEP
 12 observations used for estimation from 2001 to 2012
*******************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON               108.9885          98.5626           1.1058[.295]
 ONEP               .11543           .96134           .12008[.907]
*******************************************************************************
 R-Squared              .0014398   R-Bar-Squared            -.098416
 S.E. of Regression         55.4224   F-stat.    F(  1,  10)   .014419[.907]
 Mean of Dependent Variable  120.6667   S.D. of Dependent Variable     52.8812
 Residual Sum of Squares     30716.4   Equation Log-likelihood      -64.1131
 Akaike Info. Criterion     -66.1131   Schwarz Bayesian Criterion    -66.5980
 DW-statistic               3.0259
*******************************************************************************
```

Diagnostic Tests

****

* Test Statistics * LM Version * F Version *

****

* * * *

* A:Serial Correlation*CHSQ(1)= 3.3453[.067]*F(1, 9)= 3.4787[.095]*

* * * *

* B:Functional Form *CHSQ(1)= .49751[.481]*F(1, 9)= .38927[.548]*

* * * *

* C:Normality *CHSQ(2)= 2.1062[.349]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= .30900[.578]*F(1, 10)= .26431[.618]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is ONEP

12 observations used for estimation from 2001 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	99.6616	13.5925	7.3321[.000]
INEP	.012473	.10387	.12008[.907]

****

R-Squared .0014398 R-Bar-Squared -.098416

S.E. of Regression 18.2178 F-stat. F(1, 10) .014419[.907]

Mean of Dependent Variable 101.1667 S.D. of Dependent Variable 17.3825

Residual Sum of Squares 3318.9 Equation Log-likelihood -50.7621

Akaike Info. Criterion -52.7621 Schwarz Bayesian Criterion -53.2470

DW-statistic 1.7135

****

Diagnostic Tests

****

Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1)= .089046[.765]	F(1, 9)= .067284[.801]
B:Functional Form	CHSQ(1)= .49897[.480]	F(1, 9)= .39046[.548]
C:Normality	CHSQ(2)= .67632[.713]	Not applicable
D:Heteroscedasticity	CHSQ(1)= .44225[.506]	F(1, 10)= .38265[.550]

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is SNEP

12 observations used for estimation from 2001 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	98.8012	85.3832	1.1572[.274]
RNEP	.015528	.86458	.017960[.986]

****

R-Squared .3226E-4 R-Bar-Squared -.099965

S.E. of Regression 12.6673 F-stat. F(1, 10) .3226E-3[.986]

Mean of Dependent Variable 100.3333 S.D. of Dependent Variable 12.0780

Residual Sum of Squares 1604.6 Equation Log-likelihood -46.4017

Akaike Info. Criterion -48.4017 Schwarz Bayesian Criterion -48.8866

DW-statistic 2.6443

****

Diagnostic Tests

****

* Test Statistics *	LM Version	*	F Version	*
* A:Serial Correlation*	CHSQ(1)= 1.5486[.213]*		F(1, 9)= 1.3335[.278]*	
* B:Functional Form *	CHSQ(1)= .17393[.677]*		F(1, 9)= .13237[.724]*	
* C:Normality *	CHSQ(2)= 1.4167[.492]*		Not applicable	*

```
*            *            *            *
* D:Heteroscedasticity*CHSQ(   1)=  .092527[.761]*F(   1,  10)=  .077705[.786]*
********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


      OLS estimation of a single equation in the Unrestricted VAR
********************************************************************************
 Dependent variable is ANEP
 10 observations used for estimation from 2003 to 2012
********************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 ANEP(-1)             .23534          .65075          .36164[.736]
 ANEP(-2)            .057731          .72231          .079926[.940]
 BNEP(-1)            10.3690          53.8722          .19247[.857]
 BNEP(-2)             .20519          3.5805          .057308[.957]
 CNEP                1.0030          2.4136          .41554[.699]
 CNEP(-1)           -11.0526          53.1335          -.20802[.845]
********************************************************************************
 R-Squared                .14319   R-Bar-Squared              -.92781
 S.E. of Regression       64.7078  F-stat.   F(  5,   4)    .13370[.976]
 Mean of Dependent Variable  96.2280  S.D. of Dependent Variable    46.6041
 Residual Sum of Squares    16748.4  Equation Log-likelihood      -51.3067
 Akaike Info. Criterion     -57.3067  Schwarz Bayesian Criterion   -58.2145
 DW-statistic             2.1376  System Log-likelihood       -54.4308
********************************************************************************
```

Diagnostic Tests

```
*****************************************************************************
*  Test Statistics  *       LM Version       *       F Version        *
*****************************************************************************
*                   *                        *                      *
* A:Serial Correlation*CHSQ(   1)=   7.3452[.007]*F(   1,   3)=   8.3002[.063]*
*                   *                        *                      *
* B:Functional Form   *CHSQ(   1)=   7.3100[.007]*F(   1,   3)=   8.1524[.065]*
*                   *                        *                      *
* C:Normality       *CHSQ(   2)=  .084957[.958]*      Not applicable      *
*                   *                        *                      *
* D:Heteroscedasticity*CHSQ(   1)=   .90691[.341]*F(   1,   8)=   .79789[.398]*
*****************************************************************************
```

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

OLS estimation of a single equation in the Unrestricted VAR

****

Dependent variable is CNEP

10 observations used for estimation from 2003 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CNEP(-1)	.44815	.41198	1.0878[.338]
CNEP(-2)	-.020333	.018768	-1.0834[.340]
ANEP	.0054559	.0040578	1.3446[.250]
ANEP(-1)	-.4098E-5	.0049813	-.8226E-3[1.00]
BNEP	1.0040	.019825	50.6428[.000]
BNEP(-1)	-.44299	.40930	-1.0823[.340]

****

R-Squared .99792 R-Bar-Squared .99533

S.E. of Regression .52773 F-stat. F(5, 4) 384.4840[.000]

Mean of Dependent Variable 110.5000 S.D. of Dependent Variable 7.7208

Residual Sum of Squares 1.1140 Equation Log-likelihood -3.2162

Akaike Info. Criterion -9.2162 Schwarz Bayesian Criterion -10.1239

DW-statistic 1.2160 System Log-likelihood -3.2162

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*

****

*	*	*	*
* A:Serial Correlation*	CHSQ(1)= 6.0620[.014]*	F(1, 3)= 4.6181[.121]*	
*	*	*	*
* B:Functional Form *	CHSQ(1)= .053686[.817]*	F(1, 3)= .016193[.907]*	

```
*             *               *                *
* C:Normality      *CHSQ(  2)=  3.6153[.164]*     Not applicable     *
*             *               *                *
* D:Heteroscedasticity*CHSQ(  1)= .0040887[.949]*F(  1,  8)= .0032723[.956]*
*******************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


      OLS estimation of a single equation in the Unrestricted VAR
*******************************************************************************
Dependent variable is BNEP
10 observations used for estimation from 2003 to 2012
*******************************************************************************
Regressor          Coefficient     Standard Error      T-Ratio[Prob]
BNEP(-1)            -.22005          .34674          -.63461[.549]
BNEP(-2)            -.20657          .35540          -.58123[.582]
VNEP                .83815           .82142          1.0204[.347]
RNEP                .75388           .64321          1.1721[.286]
*******************************************************************************
R-Squared               .25005   R-Bar-Squared             -.12493
S.E. of Regression      8.0744   F-stat.   F( 3,  6)   .66684[.602]
Mean of Dependent Variable  111.8000   S.D. of Dependent Variable     7.6129
Residual Sum of Squares     391.1746   Equation Log-likelihood      -32.5222
Akaike Info. Criterion      -36.5222   Schwarz Bayesian Criterion    -37.1274
DW-statistic            2.1838   System Log-likelihood       -32.5222
*******************************************************************************
```

Diagnostic Tests

****

Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1)= 1.4103[.235]	F(1, 5)= .82092[.406]
B:Functional Form	CHSQ(1)= .12719[.721]	F(1, 5)= .064415[.810]
C:Normality	CHSQ(2)= .22031[.896]	Not applicable
D:Heteroscedasticity	CHSQ(1)= .040585[.840]	F(1, 8)= .032600[.861]

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

OLS estimation of a single equation in the Unrestricted VAR

****

Dependent variable is JNEP

10 observations used for estimation from 2003 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
JNEP(-1)	-.34922	.41086	-.84998[.428]
JNEP(-2)	-.31781	.32850	-.96746[.371]
ONEP	.65749	2.1044	.31243[.765]
ONEP(-1)	1.3498	2.4333	.55472[.599]

****

R-Squared .20729 R-Bar-Squared -.18906

S.E. of Regression 71.0679 F-stat. F(3, 6) .52300[.682]

Mean of Dependent Variable 116.4000 S.D. of Dependent Variable 65.1736

Residual Sum of Squares 30303.9 Equation Log-likelihood -54.2716

Akaike Info. Criterion -58.2716 Schwarz Bayesian Criterion -58.8768

DW-statistic 1.9919 System Log-likelihood -54.2716

****

Diagnostic Tests

****

* Test Statistics * LM Version * F Version *

****

* * * *

* A:Serial Correlation*CHSQ(1)= 1.9237[.165]*F(1, 5)= 1.1909[.325]*

* * * *

* B:Functional Form *CHSQ(1)= .076887[.782]*F(1, 5)= .038741[.852]*

* * * *

* C:Normality *CHSQ(2)= 2.6032[.272]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= 2.5777[.108]*F(1, 8)= 2.7783[.134]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

OLS estimation of a single equation in the Unrestricted VAR

****

Dependent variable is GNEP

10 observations used for estimation from 2003 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
GNEP(-1)	.76191	.35013	2.1761[.072]
GNEP(-2)	.24469	.28979	.84438[.431]
CNEP	.052386	.099797	.52492[.618]
CNEP(-1)	-.053456	.11699	-.45693[.664]

****

R-Squared -1.3308 R-Bar-Squared -2.4963

S.E. of Regression 2.1681 F-stat. F(3, 6) *NONE*

Mean of Dependent Variable 104.7000 S.D. of Dependent Variable 1.1595

Residual Sum of Squares 28.2032 Equation Log-likelihood -19.3736

Akaike Info. Criterion -23.3736 Schwarz Bayesian Criterion -23.9788

DW-statistic 1.4582 System Log-likelihood -19.3736

****

Diagnostic Tests

****

* Test Statistics *	LM Version *	F Version *
* A:Serial Correlation*	CHSQ(1)= 2.2822[.131]*	F(1, 5)= 1.4785[.278]*
* B:Functional Form *	CHSQ(1)= 7.0854[.008]*	F(1, 5)= 12.1552[.018]*
* C:Normality *	CHSQ(2)= 1.2282[.541]*	Not applicable *

****

```
*            *            *            *
* D:Heteroscedasticity*CHSQ(   1)=  .075902[.783]*F(   1,   8)=  .061186[.811]*
********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


      OLS estimation of a single equation in the Unrestricted VAR
********************************************************************************
 Dependent variable is CNEP
 10 observations used for estimation from 2003 to 2012
********************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CNEP(-1)            -.61125          .47965          -1.2744[.250]
 CNEP(-2)            -.35723          .39408          -.90649[.400]
 DNEP                1.1336          .72717           1.5589[.170]
 DNEP(-1)             .83548          .95333           .87638[.415]
********************************************************************************
 R-Squared               .23852   R-Bar-Squared             -.14222
 S.E. of Regression     8.2516   F-stat.    F(  3,   6)    .62646[.624]
 Mean of Dependent Variable  110.5000   S.D. of Dependent Variable     7.7208
 Residual Sum of Squares    408.5341   Equation Log-likelihood      -32.7393
 Akaike Info. Criterion     -36.7393   Schwarz Bayesian Criterion    -37.3445
 DW-statistic               1.9262   System Log-likelihood       -32.7393
********************************************************************************


                    Diagnostic Tests
********************************************************************************
```

```
*    Test Statistics  *       LM Version       *       F Version        *
*********************************************************************************
*                *                *                *
* A:Serial Correlation*CHSQ(   1)=   .64730[.421]*F(   1,   5)=   .34605[.582]*
*                *                *                *
* B:Functional Form   *CHSQ(   1)= .0024677[.960]*F(   1,   5)= .0012342[.973]*
*                *                *                *
* C:Normality        *CHSQ(   2)=   1.0673[.586]*      Not applicable      *
*                *                *                *
* D:Heteroscedasticity*CHSQ(   1)=  .016524[.898]*F(   1,   8)=  .013241[.911]*
*********************************************************************************
```

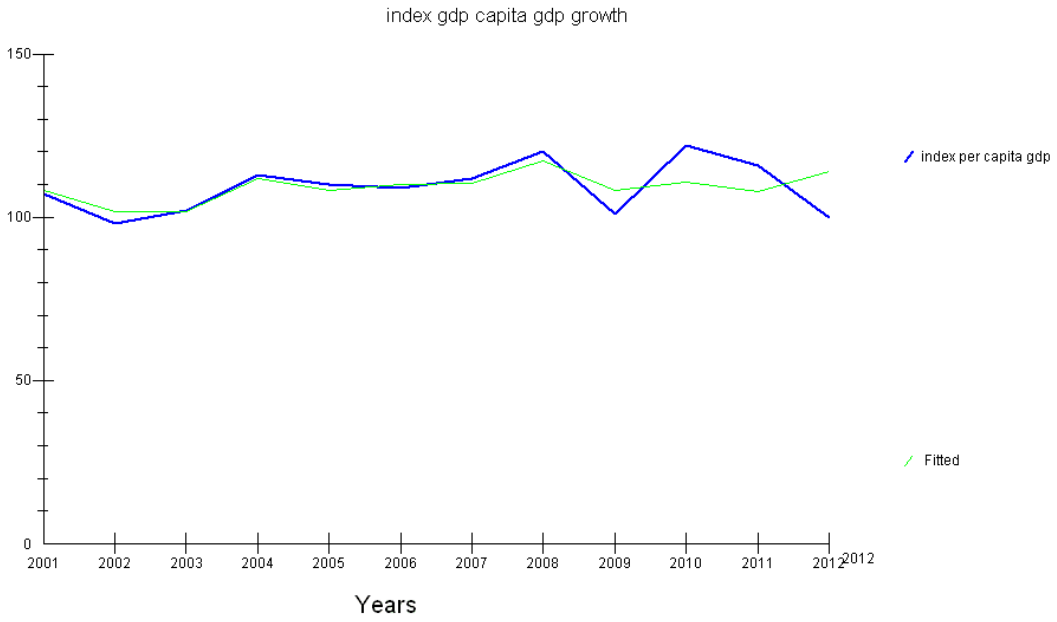
A:Lagrange multiplier test of residual serial correlation

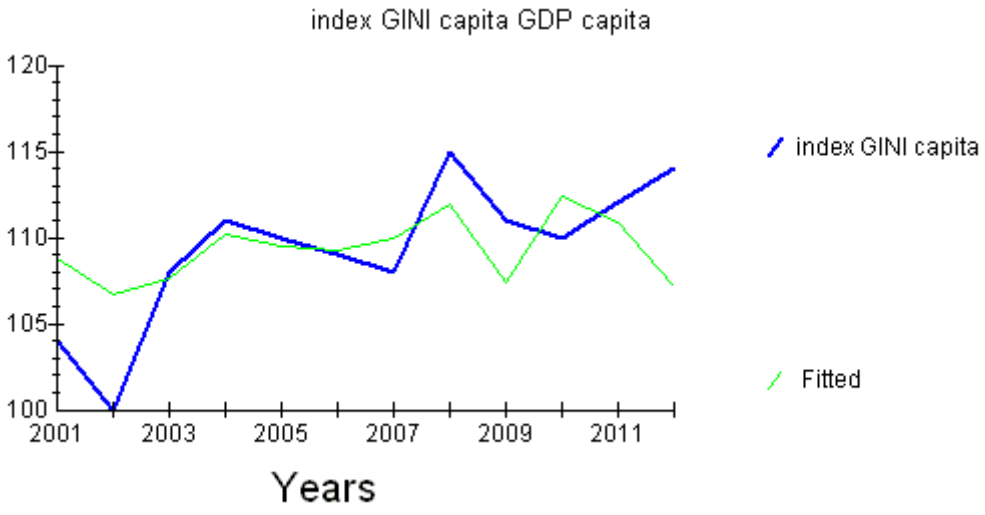
B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

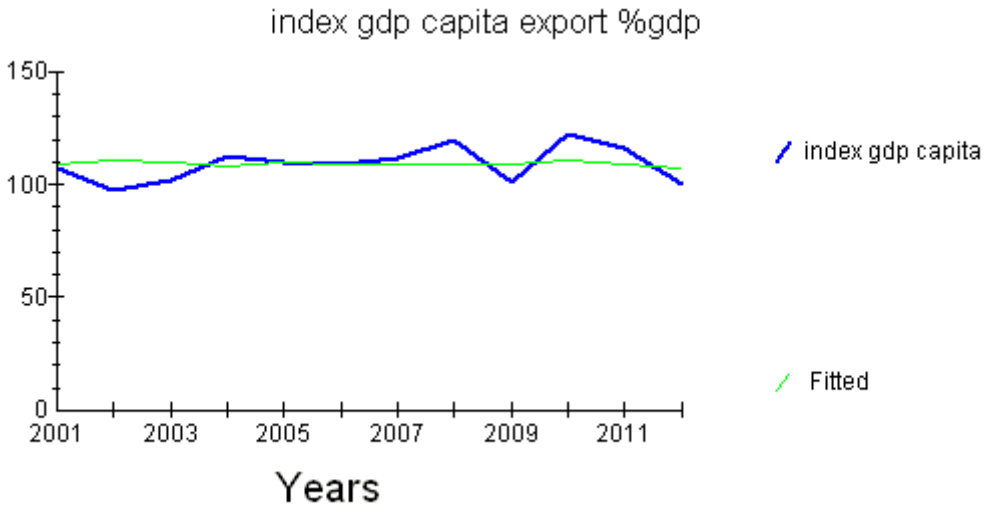
NEPAL INDEKS

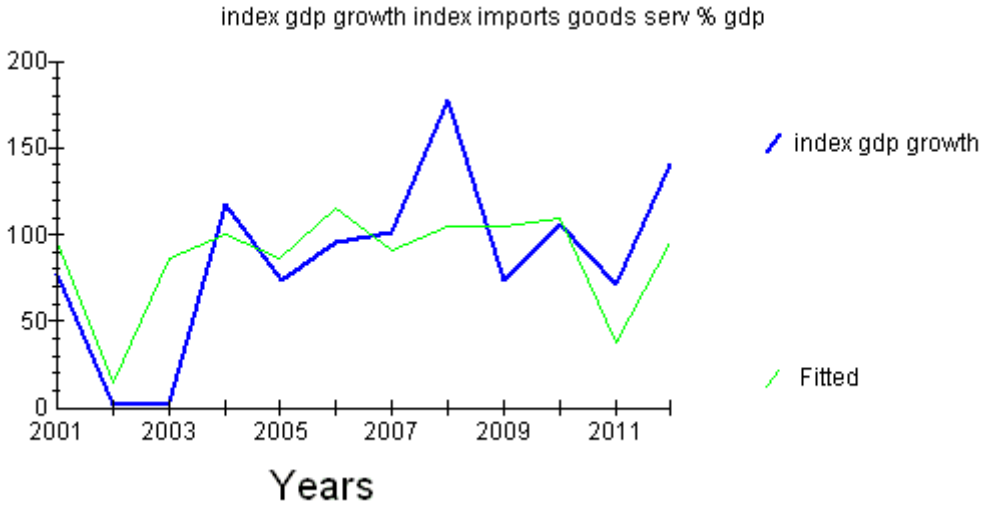



index GINI capita GDP capita
120
115
110
105
100
2001
2003
2005
2007
2009
2011
Years
index GINI capita
Fitted

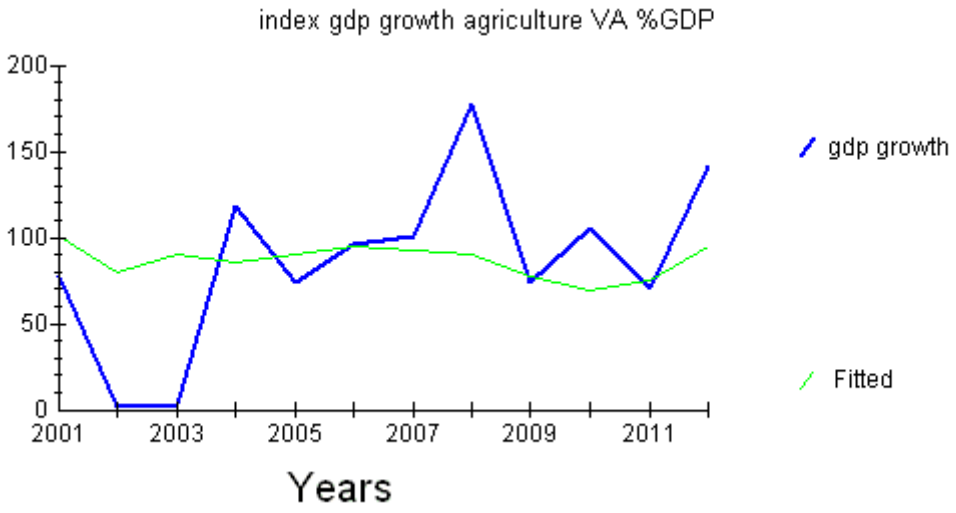

index gdp growth export % gdp
200
150
100
50
0
2001
2003
2005
2007
2009
2011
Years
index gdp growth
Fitted

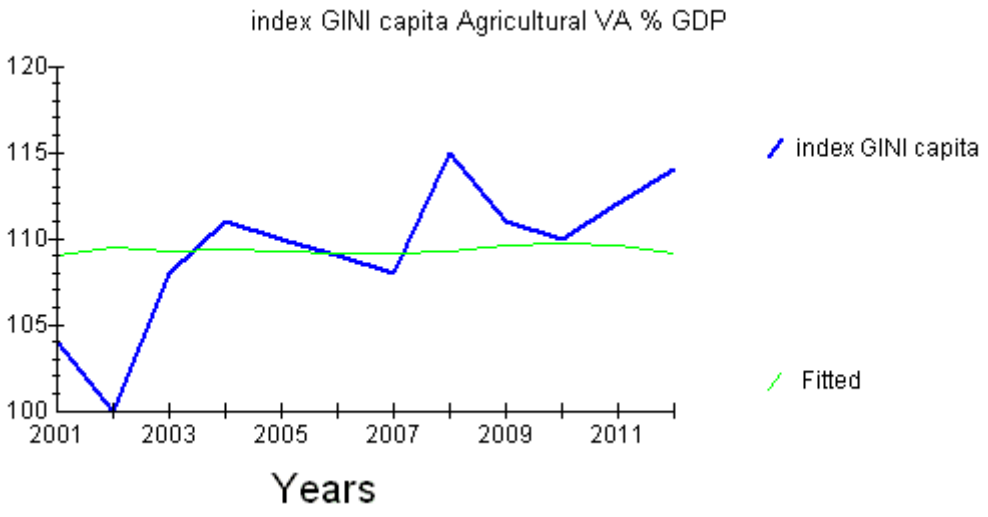

index gdp growth export % gdp
200
150
100
50
0
2001
2003
2005
2007
2009
2011
Years
index gdp growth
Fitted

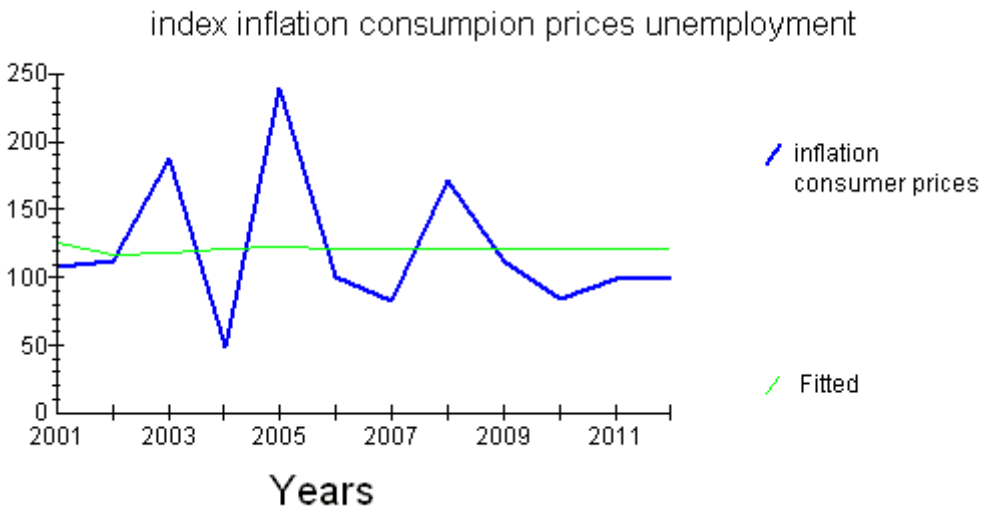

index gdp capita export %gdp
150
100
50
0
2001
2003
2005
2007
2009
2011
Years
index gdp capita
Fitted


index gdp growth index imports goods serv % gdp
200
150
100
50
0
2001
2003
2005
2007
2009
2011
Years
index gdp growth
Fitted

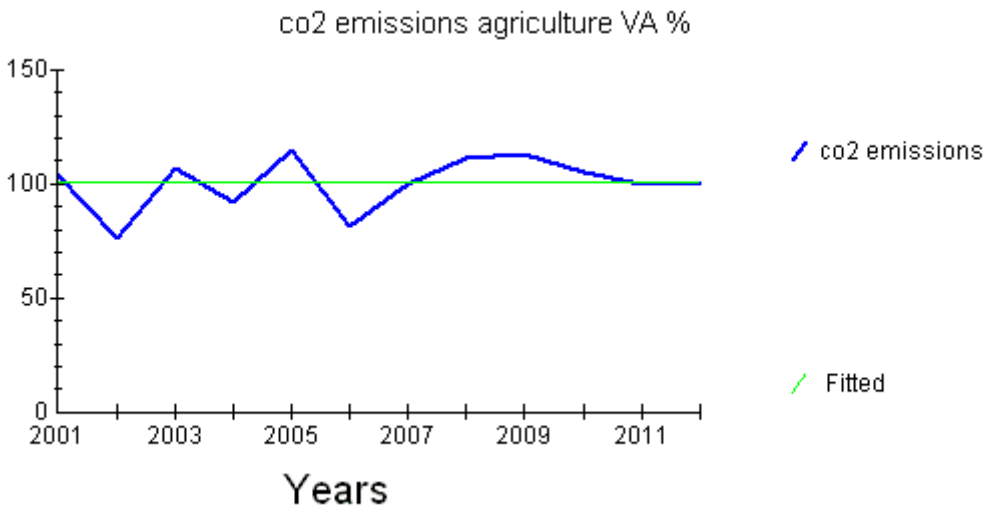

index gini capita import goods services %gdp
120
115
110
105
100
2001
2003
2005
2007
2009
2011
Years
index gini capita
Fitted


index gdp growth agriculture VA %GDP
200
150
100
50
0
2001
2003
2005
2007
2009
2011
Years
gdp growth
Fitted


index GINI capita Agricultural VA % GDP
120
115
110
105
100
2001
2003
2005
2007
2009
2011
Years
index GINI capita
Fitted


index inflation consumpion prices unemployment
250
200
150
100
50
0
2001
2003
2005
2007
2009
2011
Years
inflation consumer prices
Fitted


index unemployment inflation consumer prices
150
100
50
0
2001
2003
2005
2007
2009
2011
Years
unemployment
Fitted


co2 emissions agriculture VA %
150
100
50
0
2001
2003
2005
2007
2009
2011
Years
co2 emissions
Fitted


GINI capita GDP capita
108
106
104
102
100
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Years
GINI capita index
Fitted

APPENDIX IV

Ordinary Least Squares Estimation

****

Dependent variable is IBAN

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
OBAN	1.5816	.15388	10.2783[.000]

****

R-Squared	.28598	R-Bar-Squared	.28598
S.E. of Regression	2.1543	F-stat.	*NONE*
Mean of Dependent Variable	6.0000	S.D. of Dependent Variable	2.5495
Residual Sum of Squares	55.6939	Equation Log-likelihood	-27.9032
Akaike Info. Criterion	-28.9032	Schwarz Bayesian Criterion	-29.1857
DW-statistic	1.4033		

****

Diagnostic Tests

****

* Test Statistics *	LM Version	*	F Version	*
* A:Serial Correlation*	CHSQ(1)= .68848[.407]*		F(1, 11)= .61513[.449]*	
* B:Functional Form *	CHSQ(1)= .23042[.631]*		F(1, 11)= .19849[.665]*	
* C:Normality *	CHSQ(2)= .74701[.688]*		Not applicable	*

```
*            *               *               *
* D:Heteroscedasticity*CHSQ(   1)= .1540E-3[.990]*F(   1,  11)= .1303E-3[.991]*
*******************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


            Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is OBAN
 13 observations used for estimation from 2000 to 2012
*******************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 IBAN               .56777           .055239          10.2783[.000]
*******************************************************************************
 R-Squared               -4.4147   R-Bar-Squared             -4.4147
 S.E. of Regression       1.2908   F-stat.                  *NONE*
 Mean of Dependent Variable   3.8462   S.D. of Dependent Variable     .55470
 Residual Sum of Squares     19.9927   Equation Log-likelihood      -21.2439
 Akaike Info. Criterion     -22.2439   Schwarz Bayesian Criterion    -22.5264
 DW-statistic             1.3124
*******************************************************************************


                Diagnostic Tests
*******************************************************************************
*   Test Statistics *       LM Version      *       F Version       *
*******************************************************************************
*            *               *               *
```

* A:Serial Correlation*CHSQ(1)= .84513[.358]*F(1, 11)= .76483[.401]*

* * * *

* B:Functional Form *CHSQ(1)= 10.9911[.001]*F(1, 11)= 60.1837[.000]*

* * * *

* C:Normality *CHSQ(2)= .68625[.710]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= 1.6861[.194]*F(1, 11)= 1.6394[.227]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is OBAN

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
JBAN	.67989	.068473	9.9294[.000]

****

R-Squared	-4.7599	R-Bar-Squared	-4.7599
S.E. of Regression	1.3313	F-stat.	*NONE*
Mean of Dependent Variable	3.8462	S.D. of Dependent Variable	.55470
Residual Sum of Squares	21.2672	Equation Log-likelihood	-21.6456
Akaike Info. Criterion	-22.6456	Schwarz Bayesian Criterion	-22.9281
DW-statistic	.57451		

****

Diagnostic Tests

```
*****************************************************************************
*  Test Statistics  *       LM Version       *       F Version        *
*****************************************************************************
*                   *                        *                        *
* A:Serial Correlation*CHSQ(   1)=   4.4269[.035]*F(   1,  11)=   5.6800[.036]*
*                   *                        *                        *
* B:Functional Form   *CHSQ(   1)=   9.1130[.003]*F(   1,  11)=  25.7896[.000]*
*                   *                        *                        *
* C:Normality       *CHSQ(   2)=   .55292[.758]*      Not applicable      *
*                   *                        *                        *
* D:Heteroscedasticity*CHSQ(   1)=   2.5947[.107]*F(   1,  11)=   2.7430[.126]*
*****************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


            Ordinary Least Squares Estimation
*****************************************************************************
 Dependent variable is JBAN
 13 observations used for estimation from 2000 to 2012
*****************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 OBAN                 1.3112           .13205           9.9294[.000]
*****************************************************************************
 R-Squared                .34817   R-Bar-Squared              .34817
 S.E. of Regression       1.8488   F-stat.                  *NONE*
 Mean of Dependent Variable   4.9231   S.D. of Dependent Variable    2.2899
 Residual Sum of Squares    41.0153   Equation Log-likelihood     -25.9147
 Akaike Info. Criterion    -26.9147   Schwarz Bayesian Criterion   -27.1971
```

DW-statistic .60417

****

Diagnostic Tests

****

* Test Statistics *	LM Version	*	F Version	*
* A:Serial Correlation*	CHSQ(1)= 4.0415[.044]*		F(1, 11)= 4.9625[.048]*	
* B:Functional Form *	CHSQ(1)= 1.8936[.169]*		F(1, 11)= 1.8755[.198]*	
* C:Normality *	CHSQ(2)= .40750[.816]*		Not applicable	*
* D:Heteroscedasticity*	CHSQ(1)= 2.9558[.086]*		F(1, 11)= 3.2370[.099]*	

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is IBHU

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
OBHU	1.5122	.73701	2.0518[.063]

****

R-Squared .067337 R-Bar-Squared .067337

S.E. of Regression 6.6739 F-stat. *NONE*

Mean of Dependent Variable 3.3846 S.D. of Dependent Variable 6.9106

Residual Sum of Squares 534.4878 Equation Log-likelihood -42.6025

Akaike Info. Criterion -43.6025 Schwarz Bayesian Criterion -43.8850

DW-statistic 1.7934

****

Diagnostic Tests

****

* Test Statistics * LM Version * F Version *

****

* * * *

* A:Serial Correlation*CHSQ(1)= .039768[.842]*F(1, 11)= .033753[.858]*

* * * *

* B:Functional Form *CHSQ(1)= .087560[.767]*F(1, 11)= .074592[.790]*

* * * *

* C:Normality *CHSQ(2)= 33.4962[.000]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= .31572[.574]*F(1, 11)= .27380[.611]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is OBHU

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
IBHU	.17175	.083704	2.0518[.063]

****

R-Squared -3.7539 R-Bar-Squared -3.7539

S.E. of Regression 2.2491 F-stat. *NONE*

Mean of Dependent Variable 2.3077 S.D. of Dependent Variable 1.0316

Residual Sum of Squares 60.7036 Equation Log-likelihood -28.4630

Akaike Info. Criterion -29.4630 Schwarz Bayesian Criterion -29.7455

DW-statistic .56353

****

Diagnostic Tests

****

* Test Statistics *	LM Version	*	F Version	*
* A:Serial Correlation*	CHSQ(1)= 9.3739[.002]*		F(1, 11)= 28.4359[.000]*	
* B:Functional Form *	CHSQ(1)= 8.9246[.003]*		F(1, 11)= 24.0890[.000]*	
* C:Normality *	CHSQ(2)= 1.2950[.523]*		Not applicable	*
* D:Heteroscedasticity*	CHSQ(1)= 9.0822[.003]*		F(1, 11)= 25.4999[.000]*	

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is OBHU

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
JBHU	.41192	.066169	6.2253[.000]

****

R-Squared -.51830 R-Bar-Squared -.51830

S.E. of Regression 1.2711 F-stat. *NONE*

Mean of Dependent Variable 2.3077 S.D. of Dependent Variable 1.0316

Residual Sum of Squares 19.3875 Equation Log-likelihood -21.0441

Akaike Info. Criterion -22.0441 Schwarz Bayesian Criterion -22.3266

DW-statistic .66798

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*

****

*	*	*	*
* A:Serial Correlation*	CHSQ(1)= 6.1946[.013]*	F(1, 11)= 10.0127[.009]*	
*	*	*	*
* B:Functional Form *	CHSQ(1)= 6.1756[.013]*	F(1, 11)= 9.9541[.009]*	

```
*             *               *                *
* C:Normality       *CHSQ(   2)=   .48759[.784]*      Not applicable      *
*             *               *                *
* D:Heteroscedasticity*CHSQ(   1)=   1.2133[.271]*F(   1,  11)=   1.1323[.310]*
*******************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


    Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is JBHU
 13 observations used for estimation from 2000 to 2012
*******************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 OBHU                 1.8537          .29776          6.2253[.000]
*******************************************************************************
 R-Squared              -.36977   R-Bar-Squared             -.36977
 S.E. of Regression      2.6964   F-stat.                  *NONE*
 Mean of Dependent Variable    4.8462   S.D. of Dependent Variable     2.3038
 Residual Sum of Squares     87.2439   Equation Log-likelihood      -30.8206
 Akaike Info. Criterion     -31.8206   Schwarz Bayesian Criterion    -32.1031
 DW-statistic             .72082
*******************************************************************************


                    Diagnostic Tests
*******************************************************************************
*   Test Statistics  *       LM Version       *       F Version        *
*******************************************************************************
```

```
*            *               *               *
* A:Serial Correlation*CHSQ(   1)=   4.2263[.040]*F(   1,  11)=   5.2987[.042]*
*            *               *               *
* B:Functional Form   *CHSQ(   1)=   5.3792[.020]*F(   1,  11)=   7.7644[.018]*
*            *               *               *
* C:Normality       *CHSQ(   2)=   .77298[.679]*      Not applicable      *
*            *               *               *
* D:Heteroscedasticity*CHSQ(   1)= .0040257[.949]*F(   1,  11)= .0034074[.954]*
**************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values

            Ordinary Least Squares Estimation
**************************************************************************
Dependent variable is ICHI
13 observations used for estimation from 2000 to 2012
**************************************************************************
Regressor          Coefficient      Standard Error       T-Ratio[Prob]
OCHI               .47761           .13682           3.4909[.004]
**************************************************************************
R-Squared              -.051864   R-Bar-Squared            -.051864
S.E. of Regression          1.9397   F-stat.                  *NONE*
Mean of Dependent Variable    1.9231   S.D. of Dependent Variable     1.8913
Residual Sum of Squares     45.1493   Equation Log-likelihood      -26.5389
Akaike Info. Criterion     -27.5389   Schwarz Bayesian Criterion    -27.8213
DW-statistic               1.5142
**************************************************************************
```

Diagnostic Tests

****

* Test Statistics * LM Version * F Version *

****

* * * *

* A:Serial Correlation*CHSQ(1)= .53308[.465]*F(1, 11)= .47036[.507]*

* * * *

* B:Functional Form *CHSQ(1)= 1.9865[.159]*F(1, 11)= 1.9841[.187]*

* * * *

* C:Normality *CHSQ(2)= 1.2978[.523]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= 1.0774[.299]*F(1, 11)= .99408[.340]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is OCHI

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ICHI	1.0549	.30220	3.4909[.004]

****

R-Squared -107.0357 R-Bar-Squared -107.0357

S.E. of Regression 2.8828 F-stat. *NONE*

Mean of Dependent Variable 3.9231 S.D. of Dependent Variable .27735

Residual Sum of Squares 99.7253 Equation Log-likelihood -31.6898

Akaike Info. Criterion -32.6898 Schwarz Bayesian Criterion -32.9722

```
DW-statistic            .79891
********************************************************************************


                    Diagnostic Tests
********************************************************************************
*   Test Statistics  *      LM Version      *       F Version       *
********************************************************************************
*                    *                      *                      *
* A:Serial Correlation*CHSQ(   1)=   3.9921[.046]*F(   1,  11)=   4.8750[.049]*
*                    *                      *                      *
* B:Functional Form   *CHSQ(   1)=   3.2260[.072]*F(   1,  11)=   3.6306[.083]*
*                    *                      *                      *
* C:Normality         *CHSQ(   2)=   2.5013[.286]*      Not applicable      *
*                    *                      *                      *
* D:Heteroscedasticity*CHSQ(   1)=   7.1406[.008]*F(   1,  11)=  13.4051[.004]*
********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values
```

Ordinary Least Squares Estimation

****

Dependent variable is IIND

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
OIND	1.6730	.26302	6.3606[.000]

****

R-Squared -.36184 R-Bar-Squared -.36184

S.E. of Regression 3.3165 F-stat. *NONE*

Mean of Dependent Variable 6.0769 S.D. of Dependent Variable 2.8420

Residual Sum of Squares 131.9937 Equation Log-likelihood -33.5119

Akaike Info. Criterion -34.5119 Schwarz Bayesian Criterion -34.7944

DW-statistic .27694

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*
* A:Serial Correlation*	CHSQ(1)= 8.8929[.003]*	F(1, 11)= 23.8174[.000]*	
* B:Functional Form *	CHSQ(1)= 5.1513[.023]*	F(1, 11)= 7.2196[.021]*	
* C:Normality *	CHSQ(2)= 1.0525[.591]*	Not applicable	*
* D:Heteroscedasticity*	CHSQ(1)= 1.7349[.188]*	F(1, 11)= 1.6940[.220]*	

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is OIND

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
IIND	.46101	.072478	6.3606[.000]

****

R-Squared	-10.2582	R-Bar-Squared	-10.2582
S.E. of Regression	1.7410	F-stat.	*NONE*
Mean of Dependent Variable	3.4615	S.D. of Dependent Variable	.51887
Residual Sum of Squares	36.3726	Equation Log-likelihood	-25.1338
Akaike Info. Criterion	-26.1338	Schwarz Bayesian Criterion	-26.4163
DW-statistic	.27417		

****

Diagnostic Tests

****

* Test Statistics *	LM Version	*	F Version	*
* A:Serial Correlation*	CHSQ(1)= 8.3683[.004]*		F(1, 11)= 19.8741[.001]*	
* B:Functional Form *	CHSQ(1)= 11.2469[.001]*		F(1, 11)= 70.5705[.000]*	
* C:Normality *	CHSQ(2)= 1.6619[.436]*		Not applicable	*

```
*            *                *                *
* D:Heteroscedasticity*CHSQ(   1)=   1.3033[.254]*F(   1,  11)=   1.2257[.292]*
********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values

               Ordinary Least Squares Estimation
********************************************************************************
 Dependent variable is INEP
 13 observations used for estimation from 2000 to 2012
********************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 ONEP                2.7719          .46835          5.9185[.000]
********************************************************************************
 R-Squared              -.25029   R-Bar-Squared             -.25029
 S.E. of Regression      3.5359   F-stat.                  *NONE*
 Mean of Dependent Variable    6.0000   S.D. of Dependent Variable     3.1623
 Residual Sum of Squares     150.0351   Equation Log-likelihood      -34.3447
 Akaike Info. Criterion      -35.3447   Schwarz Bayesian Criterion    -35.6272
 DW-statistic              .50596
********************************************************************************

                    Diagnostic Tests
********************************************************************************
*   Test Statistics  *       LM Version       *       F Version        *
********************************************************************************
*            *                *                *
* A:Serial Correlation*CHSQ(   1)=   6.2667[.012]*F(   1,  11)=  10.2376[.008]*
```

```
*            *               *               *
* B:Functional Form   *CHSQ(   1)=   4.1043[.043]*F(   1,  11)=   5.0752[.046]*
*            *               *               *
* C:Normality       *CHSQ(   2)=   .74009[.691]*      Not applicable      *
*            *               *               *
* D:Heteroscedasticity*CHSQ(   1)=   6.7603[.009]*F(   1,  11)=  11.9179[.005]*
*********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values

               Ordinary Least Squares Estimation
*********************************************************************************
 Dependent variable is ONEP
 13 observations used for estimation from 2000 to 2012
*********************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 INEP               .26871           .045401          5.9185[.000]
*********************************************************************************
 R-Squared              -14.7562   R-Bar-Squared            -14.7562
 S.E. of Regression       1.1009   F-stat.                  *NONE*
 Mean of Dependent Variable    2.0769   S.D. of Dependent Variable     .27735
 Residual Sum of Squares     14.5442   Equation Log-likelihood      -19.1758
 Akaike Info. Criterion     -20.1758   Schwarz Bayesian Criterion    -20.4583
 DW-statistic             .44751
*********************************************************************************

                    Diagnostic Tests
*********************************************************************************
```

```
*   Test Statistics  *       LM Version       *       F Version        *
*******************************************************************************
*                    *                    *                    *
* A:Serial Correlation*CHSQ(   1)=   6.5815[.010]*F(   1,  11)=  11.2792[.006]*
*                    *                    *                    *
* B:Functional Form   *CHSQ(   1)=   8.3480[.004]*F(   1,  11)=  19.7393[.001]*
*                    *                    *                    *
* C:Normality         *CHSQ(   2)=  .042249[.979]*      Not applicable      *
*                    *                    *                    *
* D:Heteroscedasticity*CHSQ(   1)=   3.5151[.061]*F(   1,  11)=   4.0766[.069]*
*******************************************************************************
  A:Lagrange multiplier test of residual serial correlation


                Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is IPAK
 13 observations used for estimation from 2000 to 2012
*******************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 OPAK                1.2563           .27904           4.5021[.001]
*******************************************************************************
 R-Squared               -.45248   R-Bar-Squared             -.45248
 S.E. of Regression       6.1134   F-stat.                   *NONE*
 Mean of Dependent Variable  8.3077   S.D. of Dependent Variable   5.0726
 Residual Sum of Squares   448.4813   Equation Log-likelihood     -41.4622
 Akaike Info. Criterion    -42.4622   Schwarz Bayesian Criterion  -42.7446
 DW-statistic             .57780
*******************************************************************************


                    Diagnostic Tests
```

```
*****************************************************************************
*  Test Statistics  *      LM Version      *       F Version       *
*****************************************************************************
*                   *                      *                      *
* A:Serial Correlation*CHSQ(   1)=   6.0675[.014]*F(   1,  11)=   9.6274[.010]*
*                   *                      *                      *
* B:Functional Form   *CHSQ(   1)=   8.8544[.003]*F(   1,  11)=  23.4944[.001]*
*                   *                      *                      *
* C:Normality       *CHSQ(   2)=   .66959[.715]*      Not applicable      *
*                   *                      *                      *
* D:Heteroscedasticity*CHSQ(   1)=   1.0149[.314]*F(   1,  11)=   .93150[.355]*
*****************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values

            Ordinary Least Squares Estimation
*****************************************************************************
Dependent variable is OPAK
13 observations used for estimation from 2000 to 2012
*****************************************************************************
Regressor          Coefficient      Standard Error       T-Ratio[Prob]
IPAK               .50000           .11106           4.5021[.001]
*****************************************************************************
R-Squared              -13.8750   R-Bar-Squared            -13.8750
S.E. of Regression       3.8568   F-stat.                  *NONE*
Mean of Dependent Variable   6.0000   S.D. of Dependent Variable    1.0000
Residual Sum of Squares    178.5000   Equation Log-likelihood     -35.4739
Akaike Info. Criterion    -36.4739   Schwarz Bayesian Criterion   -36.7563
DW-statistic             .36555
```

```
********************************************************************************


                    Diagnostic Tests
********************************************************************************
*   Test Statistics  *       LM Version       *       F Version        *
********************************************************************************
*                    *                        *                        *
* A:Serial Correlation*CHSQ(   1)=   7.4521[.006]*F(   1,  11)=  14.7757[.003]*
*                    *                        *                        *
* B:Functional Form   *CHSQ(   1)=   7.1844[.007]*F(   1,  11)=  13.5892[.004]*
*                    *                        *                        *
* C:Normality         *CHSQ(   2)=   1.3484[.510]*      Not applicable      *
*                    *                        *                        *
* D:Heteroscedasticity*CHSQ(   1)=   .41938[.517]*F(   1,  11)=   .36669[.557]*
********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values
```

Ordinary Least Squares Estimation

****

Dependent variable is OPAK

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	7.2108	.38553	18.7036[.000]
IPAK	-.14574	.040027	-3.6410[.004]

****

R-Squared .54652 R-Bar-Squared .50530

S.E. of Regression .70335 F-stat. F(1, 11) 13.2571[.004]

Mean of Dependent Variable 6.0000 S.D. of Dependent Variable 1.0000

Residual Sum of Squares 5.4417 Equation Log-likelihood -12.7856

Akaike Info. Criterion -14.7856 Schwarz Bayesian Criterion -15.3506

DW-statistic 1.4934

****

Diagnostic Tests

****

* Test Statistics *	LM Version	*	F Version	*
* A:Serial Correlation*	CHSQ(1)= .56920[.451]*		F(1, 10)= .45790[.514]*	
* B:Functional Form *	CHSQ(1)= 2.1058[.147]*		F(1, 10)= 1.9330[.195]*	
* C:Normality *	CHSQ(2)= .38617[.824]*		Not applicable	*
* D:Heteroscedasticity*	CHSQ(1)= .55628[.456]*		F(1, 11)= .49174[.498]*	

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is IPAK

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	30.8077	6.2583	4.9227[.000]
OPAK	-3.7500	1.0299	-3.6410[.004]

****

R-Squared .54652 R-Bar-Squared .50530

S.E. of Regression 3.5678 F-stat. F(1, 11) 13.2571[.004]

Mean of Dependent Variable 8.3077 S.D. of Dependent Variable 5.0726

Residual Sum of Squares 140.0192 Equation Log-likelihood -33.8956

Akaike Info. Criterion -35.8956 Schwarz Bayesian Criterion -36.4605

DW-statistic 2.1720

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*
* A:Serial Correlation*	CHSQ(1)= .20855[.648]*	F(1, 10)= .16304[.695]*	
* B:Functional Form *	CHSQ(1)= .17200[.678]*	F(1, 10)= .13408[.722]*	

```
*             *               *                *
* C:Normality      *CHSQ(  2)=  1.9126[.384]*     Not applicable     *
*             *               *                *
* D:Heteroscedasticity*CHSQ(  1)=  1.2536[.263]*F(  1,  11)=  1.1739[.302]*
********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


            Ordinary Least Squares Estimation
********************************************************************************
 Dependent variable is INEP
 13 observations used for estimation from 2000 to 2012
********************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON                15.0000          6.6583           2.2528[.046]
 ONEP               -4.3333          3.1798          -1.3628[.200]
********************************************************************************
 R-Squared                .14444   R-Bar-Squared             .066667
 S.E. of Regression         3.0551   F-stat.    F(  1,  11)    1.8571[.200]
 Mean of Dependent Variable    6.0000   S.D. of Dependent Variable     3.1623
 Residual Sum of Squares     102.6667   Equation Log-likelihood      -31.8787
 Akaike Info. Criterion     -33.8787   Schwarz Bayesian Criterion    -34.4436
 DW-statistic               .81710
********************************************************************************


                  Diagnostic Tests
********************************************************************************
```

```
*    Test Statistics  *       LM Version       *       F Version        *
*************************************************************************
*                     *                        *                       *
* A:Serial Correlation*CHSQ(   1)=   3.7761[.052]*F(   1,  10)=   4.0938[.071]*
*                     *                        *                       *
* B:Functional Form   *CHSQ(   1)=    .0000[1.00]*F(   1,  10)=    .0000[1.00]*
*                     *                        *                       *
* C:Normality         *CHSQ(   2)=   .71782[.698]*      Not applicable      *
*                     *                        *                       *
* D:Heteroscedasticity*CHSQ(   1)=   1.2535[.263]*F(   1,  11)=   1.1738[.302]*
*************************************************************************
```

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is ONEP

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	2.2769	.16450	13.8412[.000]
INEP	-.033333	.024460	-1.3628[.200]

****

R-Squared .14444 R-Bar-Squared .066667

S.E. of Regression .26795 F-stat. F(1, 11) 1.8571[.200]

Mean of Dependent Variable 2.0769 S.D. of Dependent Variable .27735

Residual Sum of Squares .78974 Equation Log-likelihood -.23972

Akaike Info. Criterion -2.2397 Schwarz Bayesian Criterion -2.8047

DW-statistic 2.5254

****

Diagnostic Tests

****

* Test Statistics *	LM Version *	F Version *
* A:Serial Correlation*	CHSQ(1)= 1.1068[.293]*	F(1, 10)= .93059[.357]*
* B:Functional Form *	CHSQ(1)= 1.2242[.269]*	F(1, 10)= 1.0396[.332]*
* C:Normality *	CHSQ(2)= 27.1507[.000]*	Not applicable *
* D:Heteroscedasticity*	CHSQ(1)= 2.7387[.098]*	F(1, 11)= 2.9359[.115]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is IIND

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	14.0714	5.2370	2.6869[.021]
OIND	-2.3095	1.4975	-1.5423[.151]

****

R-Squared .17780 R-Bar-Squared .10305

S.E. of Regression 2.6916 F-stat. F(1, 11) 2.3787[.151]

Mean of Dependent Variable 6.0769 S.D. of Dependent Variable 2.8420

Residual Sum of Squares 79.6905 Equation Log-likelihood -30.2320

Akaike Info. Criterion -32.2320 Schwarz Bayesian Criterion -32.7970

DW-statistic .98123

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*

****

* * * *

* A:Serial Correlation*CHSQ(1)= 5.5607[.018]*F(1, 10)= 7.4748[.021]*

* * * *

```
* B:Functional Form   *CHSQ(   1)=   *NONE*     *F(   1,  10)=   *NONE*     *
*              *                 *                 *
* C:Normality       *CHSQ(   2)=   .53022[.767]*      Not applicable      *
*              *                 *                 *
* D:Heteroscedasticity*CHSQ(   1)=   3.0912[.079]*F(   1,  11)=   3.4316[.091]*
*******************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values


            Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is OIND
 13 observations used for estimation from 2000 to 2012
*******************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON                 3.9294          .33254          11.8161[.000]
 IIND               -.076984         .049915          -1.5423[.151]
*******************************************************************************
 R-Squared               .17780   R-Bar-Squared              .10305
 S.E. of Regression      .49141   F-stat.    F(  1,  11)    2.3787[.151]
 Mean of Dependent Variable    3.4615   S.D. of Dependent Variable     .51887
 Residual Sum of Squares       2.6563   Equation Log-likelihood       -8.1242
 Akaike Info. Criterion      -10.1242   Schwarz Bayesian Criterion    -10.6892
 DW-statistic                2.8693
*******************************************************************************


                  Diagnostic Tests
```

```
*****************************************************************************
*  Test Statistics  *      LM Version      *       F Version       *
*****************************************************************************
*             *                *                *
* A:Serial Correlation*CHSQ(   1)=   2.9683[.085]*F(   1,  10)=   2.9590[.116]*
*             *                *                *
* B:Functional Form   *CHSQ(   1)=   1.3205[.250]*F(   1,  10)=   1.1306[.313]*
*             *                *                *
* C:Normality       *CHSQ(   2)=   .99210[.609]*     Not applicable      *
*             *                *                *
* D:Heteroscedasticity*CHSQ(   1)=   2.8703[.090]*F(   1,  11)=   3.1169[.105]*
*****************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values

            Ordinary Least Squares Estimation
*****************************************************************************
 Dependent variable is ICHI
 13 observations used for estimation from 2000 to 2012
*****************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON                10.7500          7.6318           1.4086[.187]
 OCHI               -2.2500          1.9409          -1.1593[.271]
*****************************************************************************
 R-Squared                .10887   R-Bar-Squared             .027859
 S.E. of Regression         1.8647   F-stat.    F(  1,  11)    1.3439[.271]
 Mean of Dependent Variable    1.9231   S.D. of Dependent Variable     1.8913
 Residual Sum of Squares     38.2500   Equation Log-likelihood      -25.4610
 Akaike Info. Criterion     -27.4610   Schwarz Bayesian Criterion    -28.0259
```

DW-statistic 1.7549

****

Diagnostic Tests

****

Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1)= .088262[.766]	F(1, 10)= .068358[.799]
B:Functional Form	CHSQ(1)= *NONE*	F(1, 10)= *NONE*
C:Normality	CHSQ(2)= 1.4685[.480]	Not applicable
D:Heteroscedasticity	CHSQ(1)= .79200[.373]	F(1, 11)= .71363[.416]

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is OCHI

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	4.0161	.11043	36.3673[.000]
ICHI	-.048387	.041740	-1.1593[.271]

****

R-Squared .10887 R-Bar-Squared .027859

S.E. of Regression .27346 F-stat. F(1, 11) 1.3439[.271]

Mean of Dependent Variable 3.9231 S.D. of Dependent Variable .27735

Residual Sum of Squares .82258 Equation Log-likelihood -.50452

Akaike Info. Criterion -2.5045 Schwarz Bayesian Criterion -3.0695

DW-statistic 2.3839

****

Diagnostic Tests

****

* Test Statistics *	LM Version *	F Version *
* A:Serial Correlation*	CHSQ(1)= .61782[.432]*	F(1, 10)= .49896[.496]*
* B:Functional Form *	CHSQ(1)= .14902[.699]*	F(1, 10)= .11596[.741]*
* C:Normality *	CHSQ(2)= 33.0482[.000]*	Not applicable *
* D:Heteroscedasticity*	CHSQ(1)= 2.2608[.133]*	F(1, 11)= 2.3157[.156]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values

Ordinary Least Squares Estimation

****

Dependent variable is IBHU

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	-.67470	4.8950	-.13783[.893]
OBHU	1.7590	1.9490	.90253[.386]

****

R-Squared .068945 R-Bar-Squared -.015697

S.E. of Regression 6.9646 F-stat. F(1, 11) .81455[.386]

Mean of Dependent Variable 3.3846 S.D. of Dependent Variable 6.9106

Residual Sum of Squares 533.5663 Equation Log-likelihood -42.5913

Akaike Info. Criterion -44.5913 Schwarz Bayesian Criterion -45.1563

DW-statistic 1.8087

****

Diagnostic Tests

****

* Test Statistics *	LM Version	* F Version	*

****

*	*	*	*
* A:Serial Correlation*	CHSQ(1)= .023885[.877]*	F(1, 10)= .018407[.895]*	
*	*	*	*
* B:Functional Form *	CHSQ(1)= .12666[.722]*	F(1, 10)= .098387[.760]*	

```
*             *               *                *
* C:Normality      *CHSQ(  2)= 31.5961[.000]*     Not applicable     *
*             *               *                *
* D:Heteroscedasticity*CHSQ(  1)=  .38277[.536]*F(  1,  11)=  .33371[.575]*
********************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values

            Ordinary Least Squares Estimation
********************************************************************************
 Dependent variable is OBHU
 13 observations used for estimation from 2000 to 2012
********************************************************************************
 Regressor         Coefficient     Standard Error      T-Ratio[Prob]
 CON               2.1750          .32364          6.7205[.000]
 IBHU              .039195         .043428         .90253[.386]
********************************************************************************
 R-Squared              .068945   R-Bar-Squared           -.015697
 S.E. of Regression     1.0396   F-stat.   F(  1,  11)   .81455[.386]
 Mean of Dependent Variable   2.3077   S.D. of Dependent Variable    1.0316
 Residual Sum of Squares    11.8889   Equation Log-likelihood     -17.8654
 Akaike Info. Criterion    -19.8654   Schwarz Bayesian Criterion   -20.4304
 DW-statistic             .57396
********************************************************************************

                  Diagnostic Tests
********************************************************************************
*   Test Statistics  *      LM Version      *       F Version       *
```

```
*****************************************************************************
*             *               *                *
* A:Serial Correlation*CHSQ(   1)=   8.2698[.004]*F(   1,  10)=  17.4828[.002]*
*             *               *                *
* B:Functional Form   *CHSQ(   1)=   1.7056[.192]*F(   1,  10)=   1.5101[.247]*
*             *               *                *
* C:Normality       *CHSQ(   2)=   .92839[.629]*      Not applicable      *
*             *               *                *
* D:Heteroscedasticity*CHSQ(   1)=  .089497[.765]*F(   1,  11)=  .076253[.788]*
*****************************************************************************
  A:Lagrange multiplier test of residual serial correlation
  B:Ramsey's RESET test using the square of the fitted values
  C:Based on a test of skewness and kurtosis of residuals
  D:Based on the regression of squared residuals on squared fitted values

            Ordinary Least Squares Estimation
*****************************************************************************
 Dependent variable is IBAN
 13 observations used for estimation from 2000 to 2012
*****************************************************************************
 Regressor          Coefficient      Standard Error       T-Ratio[Prob]
 CON                -4.4167          4.3475          -1.0159[.331]
 OBAN                2.7083          1.1197           2.4189[.034]
*****************************************************************************
 R-Squared                .34722   R-Bar-Squared              .28788
 S.E. of Regression         2.1515   F-stat.    F(  1,  11)    5.8511[.034]
 Mean of Dependent Variable    6.0000   S.D. of Dependent Variable     2.5495
 Residual Sum of Squares     50.9167   Equation Log-likelihood      -27.3203
 Akaike Info. Criterion     -29.3203   Schwarz Bayesian Criterion    -29.8852
 DW-statistic             1.9968
*****************************************************************************
```

Diagnostic Tests

****

* Test Statistics * LM Version * F Version *

****

* * * *

* A:Serial Correlation*CHSQ(1)= .012520[.911]*F(1, 10)= .0096401[.924]*

* * * *

* B:Functional Form *CHSQ(1)= 7.7234[.005]*F(1, 10)= 14.6371[.003]*

* * * *

* C:Normality *CHSQ(2)= .088122[.957]* Not applicable *

* * * *

* D:Heteroscedasticity*CHSQ(1)= 4.8869[.027]*F(1, 11)= 6.6259[.026]*

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

Ordinary Least Squares Estimation

****

Dependent variable is OBAN

13 observations used for estimation from 2000 to 2012

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	3.0769	.34349	8.9579[.000]
IBAN	.12821	.053001	2.4189[.034]

****

R-Squared .34722 R-Bar-Squared .28788

S.E. of Regression .46810 F-stat. F(1, 11) 5.8511[.034]

Mean of Dependent Variable 3.8462 S.D. of Dependent Variable .55470

Residual Sum of Squares 2.4103 Equation Log-likelihood -7.4923

Akaike Info. Criterion -9.4923 Schwarz Bayesian Criterion -10.0572

DW-statistic 2.0657

****

Diagnostic Tests

****

Test Statistics	LM Version	F Version
A:Serial Correlation	CHSQ(1)= .057493[.811]	F(1, 10)= .044422[.837]
B:Functional Form	CHSQ(1)= 5.4949[.019]	F(1, 10)= 7.3214[.022]
C:Normality	CHSQ(2)= 13.0593[.001]	Not applicable
D:Heteroscedasticity	CHSQ(1)= .49190[.483]	F(1, 11)= .43259[.524]

****

A:Lagrange multiplier test of residual serial correlation

B:Ramsey's RESET test using the square of the fitted values

C:Based on a test of skewness and kurtosis of residuals

D:Based on the regression of squared residuals on squared fitted values