Connect: Children with School and Workers with Wages in Bagladesh

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Connect: Children with Schools

Employees with Wages

in Bangladesh

Summary

Recent attempts of wage rise, problems of security at work place as well as many findings about child labor in Bangladesh were primary cause of writing this paper. But problems have deep roots: from world separation of capital and labor, profit increasing scenarios with labor inputs, human rights to work and get paid to environmental problems connected to increased production in the region. How to induce pay rise to average world level, forbid child labor, induce regional cooperation, are just a few questions that are tried to be answered in this paper.

Connect: Children with Schools

Employees with Wages

in Bangladesh

1.OVERALL

2.MODEL

2.1. CHANGE COMES FROM INSIDE THE COMPANY-SUCH AS WORK UNIONS

2.2. CHANGE COME FROM INVESTOR

2.3. CHANGE COME FROM GOVERNMENT

2.4.CHANGE COMES FROM REGION

2.5.CHANGE COME FROM ANOTHER INVESTOR

2.5.CHANGE COME FROM INTERNATIONAL ORGANISATIONS

3.STATISTICS

4.CONCLUSION

Literature

Appendix I

Statistical Analysis

Connect: Children with Schools

Employees with Wages

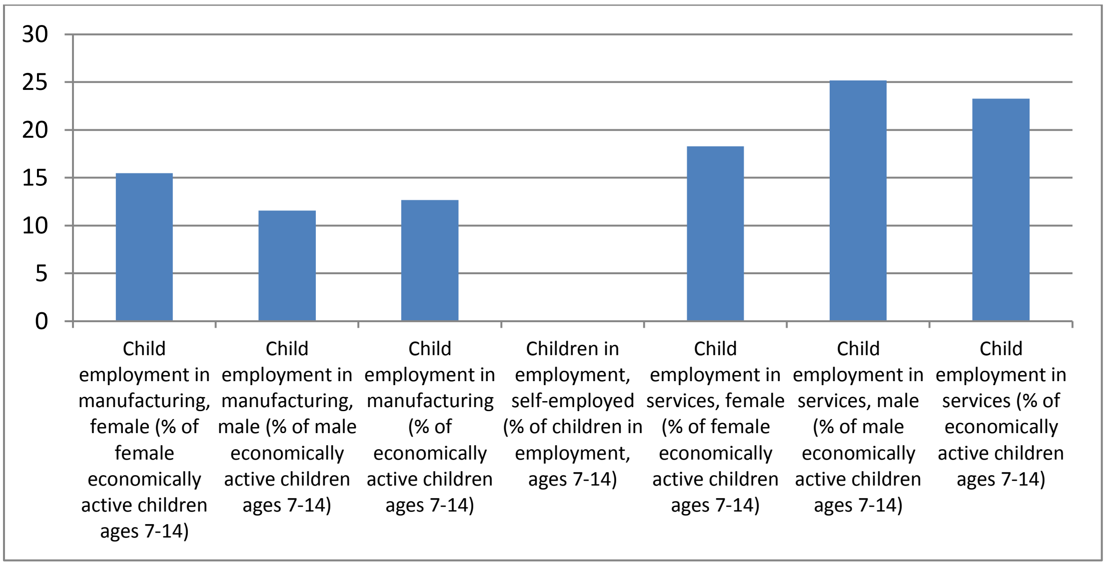
in Bangladesh

PART I : Stories of the latitudes/ longitudes

1.OVERALL

The main reason for this research about Bangladesh is the fact that high number of children works and go to school at the same time. This fact was given due to the published data from the Office of Child Labor Force Labor US Department of Labor and is recognized by UN bodies, also.

Very disturbing fact besides not be able to enjoy benefits of education and childhood is very small payment -only $10 month and dangerous working conditions filled with various hazards especially if it is a word about agricultural work-what in majority of cases it is. Country itself is fighting against that fact with improving school living conditions for people, world organizations are giving money to different monitoring programs (around 9 mill $) but this measures are too slow, weak until all participants in the country contribute to maximum in effort to abolish this state of matter (under this is meant families, local surroundings, huge number of multi corporations that obtain profits and Government of Bangladesh).



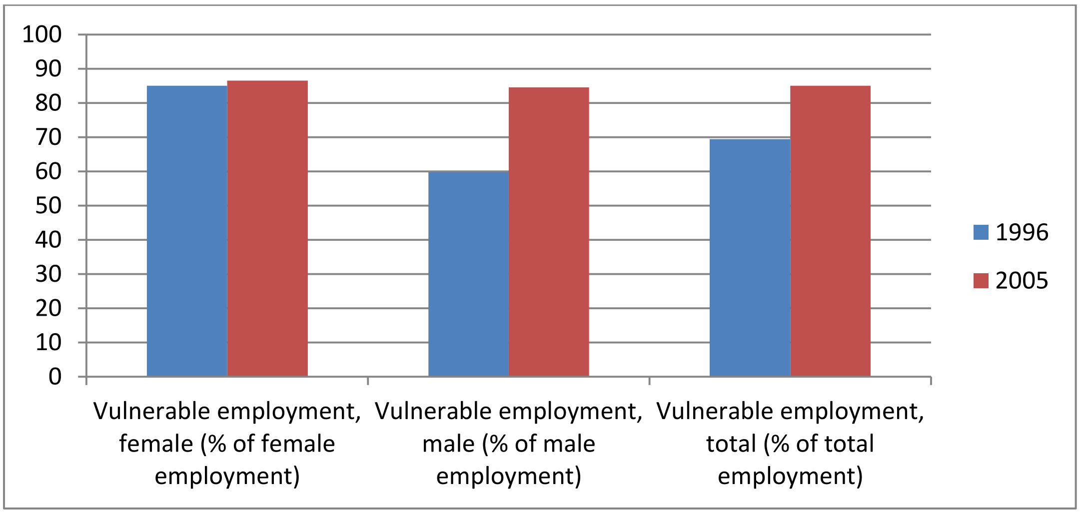
Picture 1

Country is situated on the Bengal River, established 1947 and is Parliamentary Republic. On this territory of high vulnerability due to big delta and Indian sea from one side and high mountings of Himalaya on the other country is faced with many natural problems also.

It has 56.977 sq mile and population of around 160 mil people being 8 th the most populous country with high density but due to high environmental concern questions many are in potential danger. Situated at the Tropic of Cancer often experience natural calamities such as floods, tropical cyclones, tornados, tidal change, soil degradation, erosion etc. One cyclone, for example, in 1991 killed 140 000 people . In 1998 the most severe flooding occurred where 2/3 of a country was under the water due to unusually high monsoon rains shed off an equally high amount of melting water that year. Trees that usually would have intercepted rain water had been cut down for firewood or to make space for animals.

Another danger is potential of rising sea water level that could create large number of refugees and with water contamination this number of potentially endangered people could growth. Besides danger it is one of the worlds the most beautiful places where in the mangrove forest home found many rare flora and fauna including Royal Bengal Tiger.

Islam is major religion (87% of population) but importance has Hindu (9%) Buddhism (1%) Christianity (0,5%).



Picture 2

It is a country that is recognised amonge next 11 potential economic powers, but still with low income per capita od 1,044 %, or 153 bill $ in total drastically lagging after mid income countries in the world.

Successes are achieved in manufacturing : cloth industry where the country exports is among top 3 in the world employing 3 mil of workers of which 90% are women. How huge growing business it is shows the fact that export in garment industry obtained $5 bill in 2002 while in the 2011/2012 it reached $18 bill due to extreme low cost of labour.

Onother amazing fact is that it is active in agriculture where producing: fish (5 th), rice (4 th),potato (11 th) mango (9 th) pine apple (16 th) tropical fruit (5 th) onion (16 th) banana (17 th) jute (2 nd) tea (11 th) place on the world scale.

2. MODEL

Before starting a notion about possible ways to increase current wage rate/ abolish child labor in large number of factories in Bangladesh some basic facts about Investor reasoning are presented . The main motive entering Bangladesh market for investor is a profit gain that is present due to lower overall direct production costs: labor, tax, energy etc.

Profit= -I + $\frac{(R-C)}{(1+r)}+\frac{(R-C)}{(1+r)2}$ +........$\frac{(R-C)}{(1+r)n}$ + $\frac{Scrap}{(1+d)n}$

If *Profit Bangladesh > Profit in Original Country* investor considers following steps:

A)

Investment is the sum of buying or leasing the land, paying taxes to Government, putting construction at the place and buying machines. It also includes pre-feasibility study and clear aim about future potential markets and transport routs and costs.

Investment in Bangladesh = a+ b_1*Land +b_2*Construction+b_3*Machines+b_4*Workers education +e

Land in Bangladesh is relatively cheap for big capital from the western developed countries perspective , cost of construction is also competitive since labor force in Bangladesh is undervalued compared to prices of construction workers elsewhere , tax rates are usually determined to attract investor and not to repel possible good opportunity for new jobs and markets , than a lump sum of environmental fees, facing some community challenges such as water usage or pollutions and requirement about construction of additional infrastructure to city or area are part of process that is called set up an investment.

Price paying a significant role is stressed in formula that says.

$I_{Bangladesh}$ = a+ b_1 *Land (quantity) *Price $_{Bangladesh}$ + b_2* Construction Price $_{Labor}$+b_{3*} Construction Price $_{Material}$ + b_4 * Workers education (hours)* Price $_{Bangladesh}$ +b_n*Taxes, Other +e

$I_{investor\ country}$ = a+ b_1 Land (quantity) *Price $_{investor\ country}$ + b_2* Construction (Price Labor)+b_2a Construction Price Material + b_4 Workers education (hours)* Price $_{investor\ country}$ +b_n*Taxes, Other +e

If and only largely

$NPV_{Bangladesh}$ > $NPV_{original\ country}$

Investment is started and new process of production is taken place.

To add to reasoning interest rates of a credit are obtained in the country of origin with high amount of money supplied and low interest rates. Assuming global finance availability -this notion is not separately stressed in equation.

B)

Second fact is the costs of production. They include labor costs, energy of production, material, other inputs, taxes to payments, taxes to local governments, fees, other costs.

It is important to recognize direct cost, indirect costs inside company and to allocate activities in order to follow processes as the number of worker increase or new machines is put into production. This can result in lower higher energy cost, different CO_2 emissions and cost related, or makes a fair ground to worker payment.

Total Cost= a+b*Direct costs (Product $_1$……Product $_n$) + c*Indirect Costs (To all products in company) +e

Direct Cost = a+b*Material + c*Services+ d*Energy used+ e*Labor wages+ f*Other direct costs

Indirect costs= a+b*Fees +b*Taxes+ c*Insurance+ d* Wages of management +e

Indirect cost can be allocated to certain product or service on the base of profit, revenue, quantity of effort or some other quantifiable way of measurement.

$C_{product}$ = f1 (c1, material) + f2 (c 2, effort) + f3 (c3 ,energy) +f4 (c4,indirect cost) +e

C)

Revenue is obtained as the formula that contains

Profit = (R-C) direct * Q + (R-C) indirect *Q + Profit Margin

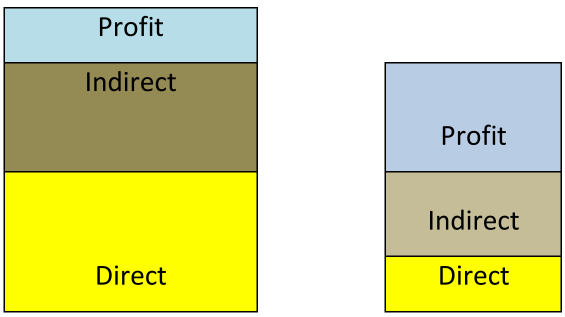
Where profit is obtained by Profit/quantity of goods sold on the market

Direct cost is: cost of production, transport costs, energy cost, and environment direct costs

Indirect costs are: marketing, fashion shows, magazines, cost of warehouse lease, cost of salaries of sellers of goods, environmental indirect costs, management costs etc.

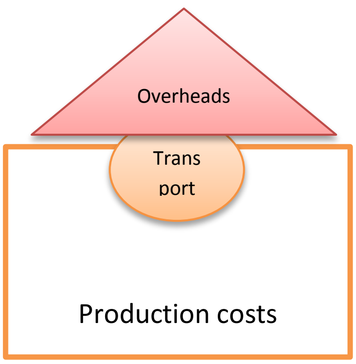
Price structure Country of Origin

Price structure Bangladesh

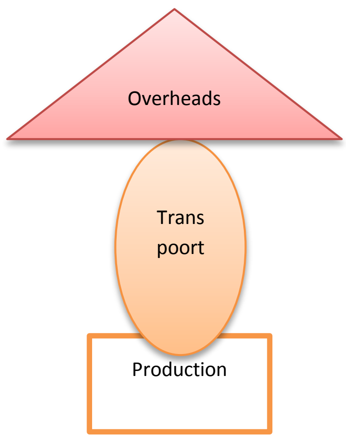


Price of product in country origin > Price of product from production in Bangladesh

Once when the market is established no price cutting is necessary to the seller – except seasonal discount offers (Christmas, Easter, End season) while the price is much competitive with production price is goods are made in western economies.



Production in western economies

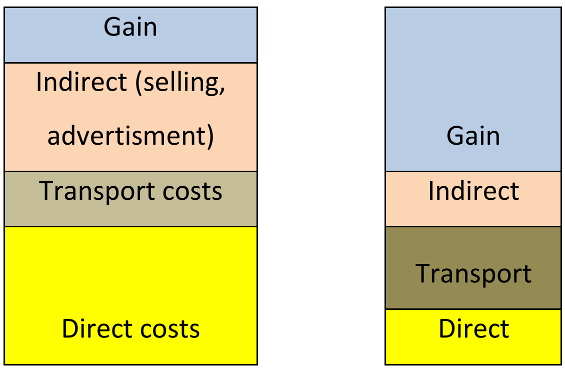


Production process in Bangladesh

This kind of new way to organize production and selling activities that are established by large international organizations is not a static process. It changes every day in respect of tax decision of local governments, cost adaptation, workers struggle to increase wages at least to world average, desire of western workers to attract some of production processes in their own countries etc.

The reasoning for the new entrants on production market is also subject to calculation and cost measurement where he needs to increased cost of labor on expense to transport, some other costs in order to attract the best workers in Bangladesh, gain some marketing advantage in production or selling process.

Than is the price in equilibrium on the market no new entrants are coming so the price has the different structure



Price structure original country   Price structure Bangladesh

2.1. CHANGE COMES FROM INSIDE THE COMPANY-SUCH AS WORK UNIONS

After foreign investor started production his aim is profit maximization and in this respect he keeps an eye on the cost of labor, energy, material and taxes as the most important. He is usually not willing to increase the salary much about national average, and with all types of behavior – especially in marketing- he blends into country picture. Additional presentation is in form of support of various humanitarian, natural organizations but no major change in negative stands in country is occurred.

Different parties, however, are facing different challenges in desire to keep or change to position.

LABOUR	MARKET	CAPITAL	Worker Union	CHILD WORK
Payment	There are more potential for further employment	Capital is forced to work with Union	Exist in current factory	It has occurred sometimes or regularly
Current Payment	At market exist workers at lower salaries	Capital can move or not easily in another region	Existence is lower in sector in country	It is common in country
Prospect of future earnings	Market is not united in requiring rights	Capital work toward union disagreements and division inside union	Country do not follow union due to high unemployment or much lower average salaries	Payment is not regulated ; monitored, at equal foot with adult labor
Earning formula	Government support workers or hinders Potential impact to macro economy/investor decisions	Capital do not allow workers to be part of any union	Union is too weak in relation to work conditions, salaries and over time work.	Child labor approved by families
Country average	Government works with investor to decrease tax and	Capital have formula for workers ; but this	Union is aggressive so capital consider	Child labor strictly forbidden but still exist –

	not impose additional burden on the worker side	formula is still far under average salary of worker in mid income countries	moving out	everybody knows but do nothing due to low economic state
Regulation in sector	Families influence decisions to low wage work child labor	Capital follows average salaries in the country	There are two or more unions in sector they weakens negotiation with capital representatives	Child labor is tolerated if the child goes to school
Worker Union exist or not	Worker unions are not strongly present on market or in particular sector	Capital induce power on local state government/ induce division among employees	Union representatives in secret deal with capital	Child labor in case of government policy, international organization rules, international standard monitoring.

Problem of low salaries of textile workers in Bangladesh can be solved inside company in following ways:

Worker wage is at first determined

As ***Wage= a1*quantity of goods produced+ a2*fixed payment +e***

Gross wage=a1* time at work + a2*minimum quantity of goods produced + a3*over average goods produced +e

Since so many international companies run operations in Bangladesh they clearly do support current work contracts. In order to change potential over abuse in relation to domestic or international standards game of negotiation has been induced on side of working population in order to:

1. Improve working conditions

2. Increase additional benefits to employees

3. Increase salary over the national average and fight for profit oriented structure of end gain

4. Do not allow child labor

To improve working condition can be relatively easy to negotiate with foreign investor due to fact that game thinking looks like:

(0,1)	Increase wage for the activities done Working condition only to certain extent improved In that case only the strongest youngest can expect improvement –but in short run- since other benefits are not achieved	Increase wage Better working conditions Lower environmental costs Lower cost of electricity Lower health problems	(**1,1)**
(0,0)	No increase in wage rise No improvement in working conditions Lose/Lose strategy for both Health, environmental problems, possibilities of fines, etc.	Improve working conditions Do not change wage Better health conditions Lower possibilities of extra cost for investor	**(1,0)**

By introducing additional salary gains production process can benefit in many aspects: bigger productivity, worker satisfaction, more just labor division of labor etc. It can be presented by workers who at best know how the production process is working or Union that can negotiate on behalf of workers.

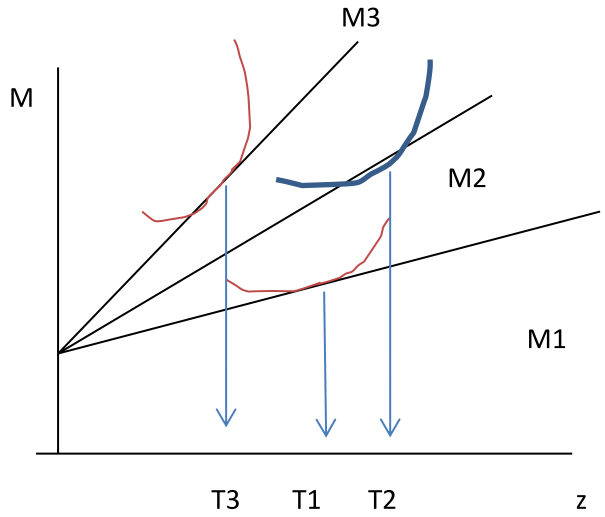
Wage= a+b (e+x+gy)

b=basic rate of salary

e= unobserved effort (based on hour worked)

x=observed effort (products produce)

y=other risk



Workers at first supply labor at time t_1 end efforts e_1. If choose to increase time spend at work they should work t_2 and obtain salary M_2. After years of work their effort decrease time preference change and they try to obtain salary M_3 with lower time t1 but with another duties such as better quality, good management of processes, education of new workers etc.

Since the wage is influenced by time, work supplied is time constrained workers do not achieve better wage on process itself and then should look at the average of country, profitability of sector in the world, success or financial results of international company they work for, or some other macroeconomic aspects (inflation, GDP growth etc) .

The first is the rate of price growth where contract should state salary increase in line with inflation in the country

W= f(w, CPI)

The second argument is the average salary in country where the current salary structure depends upon GDP growth and rise in salaries as whole.

W= f(GDP; W average)

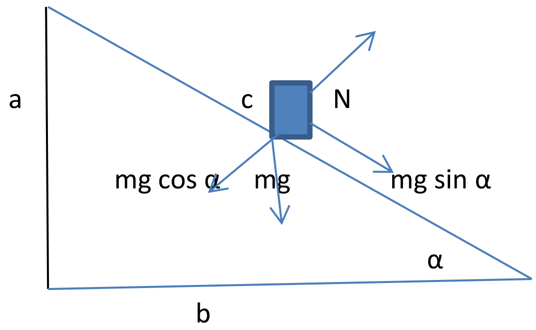
Since now reasoning was in line with current structure of thinking, and praxis that is usually present in mid to high income countries. Bangladesh have however possibility to rise salaries in sector as function of *w= f(profit; average salary world; average salary country origin)* but while sector wages are above national average international capital do not recognize the variables related to the business that are valid on corporate scene and try to keep the wages on the national average level which is far below average salaries in developing or develop world.

In that case workers alone cannot change the process of negotiation but need the help of Unions that could negotiate their stand in front of Employer and realize impacts of taxes and Government decisions about different problems.

Union Actions	Advantage	Disadvantage
Calculate production process	Have all aspects of jobs clearly and understandable presented	Cannot observe all costs benefits, are partial to some point
Demand better working condition	Have more satisfied workers, better working for all workers	Do not fight for all workers only for those in Union, do not realize danger of each working place, change come with ages but this lowers salaries
Negotiate with government to incorporate their need in the Law structure	Government can influence worker standard by Legislation , tax regulation, allowing ESOP, inducing better working condition through various tax brackets	Government has increasing demands for taxes and this is the only array that influences Investor decisions. Rising taxes means that all other institutional needs of workers are satisfied (hospitals, schools, legislation etc.)

Be aware of international legislation regarding working conditions	It is of benefit to be aware of international standards that are present in the world, induce some basic measures that need to be incorporated in standard of all workers in the world	Each country have own specific facts , and some minimum standards that are presented in World legislation do not protect worker on specific type of job
Be aware of international legislation regarding environmental protection	Basic measures for environmental protection are laid down and basic structure need to be respected by all investors in the world	Some specific measures are not met; International regulation are not firmly supported by Law in country
Act united and with clear purpose	United workers and Union can achieve better results , can impose negotiating power more easily clearly	Sometimes even two unions , independent workers can show diversification and additional negotiating power, proving some democratic means in their behavior

Since it is a forbidden in western economies for child to be employed –reasoning of workers and their status is compared with playground toys. This and school need to be part of child growing up time, and not constrained work time with end result of salary of $10/month.



Workers position is to some extend similar to slide reasoning. Very steep **–b-** part of equation is the one that presents education and finding a job. Once a job activities have started a worker slides till ground until retirement on the **–c-** part. On this path his physical strength weakens- what is in Bangladesh case of food production or manufacturing of textile a hinders. **– N-** presents potential to move to another position another slide inside the same or other company. **–mg-** force that shows downturns of his activities -in a case of Bangladesh a work with low payments, no wage rises , children input in job activities. –**mg cos α** – is his activities united with Worker Union – guarantee of certain rights, lunch, pension fund, potential for worker to be involved in ownership schemes etc.

2.2. CHANGE COMES FROM INVESTOR

To rise a wage as a consequence of investor decisions is a rarely the case. Not for all and not significantly. However this possibility still exists and is present if:

A) -*Workers are not doing quality jobs at large scale*

B)-Workers do have certain rights from primary contract and profits on international markets are rising significantly

C)-New investor came and educated personnel is offered/ given bigger salary. Exist possibility to lose all /the most productive work force.

D)-Some additional health hazards are causing greater risk to employees and employer in that respect bigger salary is offered to improve performance and prevent some dangers

-etc.

A)

Consider following investor aim:

End job (quantity, quality)

Profit= Price * Product (Quantity, Quality)-Cost

dProfit = Profit-Profit $_{t-1}$ as Earnings- in form of retained earnings or dividends payouts.

when dProfit decreases over more than two to three years Price and Product must be careful examined. It is lesson from economic crises that two years after crises the majority of lands went in recession period but they bounced back. If the three years period prolonged than sources of problem must be in the way how the business is done and each factor that determines the product position on the market.

If the salary is bound to quantity workers in desire to earn more can offer lower quality works. In that case new contract with better terms can be offered.

∑ Profit Total= a+ ∑ Profit $_1$ (labor effort $_1$, quality$_1$) + ∑ Profit $_2$ (labor effort $_2$,quality$_2$) + ∑Profit $_3$ (labor effort $_3$, quality $_3$) +e

If

∑ Profit Expected < ∑Profit Realized

∑Cost of moving factory>∑Cost of rising salary, new contract

Under standard conditions of wage formula Investor is willing to start negotiating process with workers to induce better quality, more products in their production process.

B)

Some basic formula and investor willingness to cooperate and reward accomplishment in the field of quantity, quality production may produce further expansion of workers supply of end products: innovative measures in production, some design, style suggestions, profit increased and satisfaction overall increase.

Wage=a+b$_1$*quantity pieces quality pieces +b$_3$*new design+b$_4$* new ways of production+ b$_5$* savings of material+b$_5$ *savings of working process +e

This kind of relationship and good reward strategy that actually have positive impact on workers and Investor can further contribute to building a wage structure.

In this case wage formula need to be tied up with company overall performance – on international scale and then average salary in country would not be boundary force that cannot be overpassed by workers or investor.

Wage $_t$ = Wage $_{t-1}$ +f (Profit $_{t-1}$) + f (Profit $_{t-2}$) + f (Profit $_{t-3}$) + $\sum \frac{(R-C)(1-t)}{(1+r)n}$ $expected$

C)

If new company comes on the area of production and offers new wage opportunity than is the original investor in position to reconsider current wage status.

New investor: Additional conditions are changed but salary is the same Part of workers go, some stays.	Both increase wage at the same level Workers will goes to new investor but only in small rate
Old investor do not change position Workers will go to new place to find better working conditions and rise of salary	Wage is increased bit no additional standards improved-worker will stay with new potential to further negotiations

Some reasoning from both old /new investor is presented:

New investor offers a better working conditions and bigger salary in order to attract the best, the more creative, productive and already educated working force.

$W_{\text{end wage worker}} = W1_{\text{wage base}} + W2_{\text{wage new investor}} + e$

It can be done until work force do not come in quantity he needs, until he reach some average national salary or his profit margin is not in line with cost increasing.

To defend current position old investor have to follow the new conditions, and even offer some new improved measures in business or further worker participation in process.

$W_{\text{old investor}}$ = f (higher salary, improved condition, salary above national average, ESOP, bigger pension fund etc.)

D)

To prevent lower profit from increasing number of accidents that happened due to increase effort from worker and lower attention to machine, detail in work process investor may himself induce stricter working conditions.

They usually are a relation of

$W_{condition}$ = a+ b_1* imposed frequency of breaks + b_2* time of breaks in process + b_3* maximum number of hours worked in day + b_4 * maximum hours at work in week +b_5 * obligatory protection measures + b_6* different danger groups +e

As the profit is inversely related to number of injuries the additional cost of insurance need to be put in place. That why investor calculates:

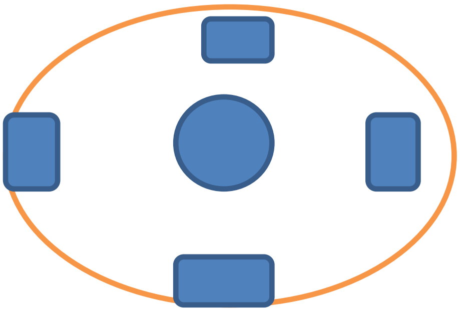
Profit 1 =f1 (wage increase, better working condition, minimum insurance contracts)

Profit 2 = f2 (wage the same, lower working conditions, maximum insurance contract)

He reasons between two processes and usually determines on the measure of

Investor decision= f (Profit $_{max}$, Number of injuries $_{\text{the lowest}}$)

Again this line of decision making process can be placed on playground.



The kindergarten facility that is the most comparable with changes inside the company structure on the benefits for workers is carrousel.

It implies necessity for work W, (physical or intellectual) once the carrousel is made.

Combines property of position of carrousel (busy place , near kindergarten, in park, on lonely place) , cost of construction, how many children manage the carrousel and how they are coordinated in one common aim to go in direction they all think is suitable :left or right.

Where

Dimension of carrousel= 2*r*PI

R = line of command from top management to last worker, clarity of process, intention, reward etc.

Once when starts it follows parts (velocity, direction, child power change etc.)

Total work of one group of children W1 =(2*r*PI)*v1+ (2*r*PI)*v2+(2*r*PI)*v3+e

Many children can play on this toy (in factory 2 sometimes 3 shifts)

Total Work= w_1+w_2+w_3 +e

2.3. CHANGE COMES FROM GOVERNMENT

Government in the country through various measures can induce growth of foreign investment, hinder further expansion of foreign capital and influence position of workers. Through tax policy it creates position of attraction or repelling for capital, and stability in whole system brings additional value to capital. In process of Government influence future perspective and plans for tax policies rate considered, as well as usage of money: is it used to improve standard in form of educational institutions, hospitals, etc. Or used for other projects. How will possibility of further tax increase policy influence position of children, workers in country.

a) Tax on profit in country is increased

Again profit is in relation with revenue and cost deduced for tax rate. If tax rate is increased profit shrinks and investor have to calculate followings:

Profit $_1$ = (Revenue$_1$ –Cost $_1$) * (1-Tax $_{base}$)

Where

Profit $_2$ = (Revenue $_1$-Cost $_1$) *(1-Tax $_{new}$)

S= Profit $_1$-Profit$_2$

Investor will consider followings

Profit $_1$= ((Revenue $_1$ –Cost $_1$) workers *+(Revenue-Cost) material +(Revenue –Cost)market domestic + (Revenue-Costs)market foreign)) (1-T$_{base}$)

Profit 2 =((Revenue $_1$ –Cost $_1$) $_{workers}$ *+(Revenue2-Cost2) material +(Revenue$_3$ –Cost$_3$ energy)(1-T new)

If Profit 2 > Profit 1 Investor may think about wage increase, improving some additional conditions to workers

If Profit 2<Profit 1 Investor Calculates further cost decrease or Cost of production in more favorable conditions.

b) Tax difference

Government can pursue one policy for Tax on profit and totally opposite policy on Tax on labor. It is important to stress that whatever conditions exist now there is a possibility to change either if Government changes or some other macroeconomic situation in country requires different tax rates.

Tax stability usually brings new investors, potentials to further development, stability, long term prospects, planning, and current level of investment potential of existing Government structure.

Instability or constant change of Laws that implies different tax systems brings uncertainties to new investors, constant vigilance of existing investors, volatility in investments inside country and vague process of future investment opportunities.

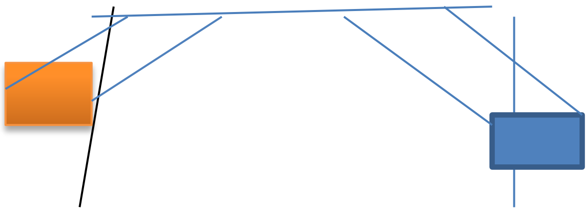
Decisions are based about Government Budget, Plans, and Prospects and also relate to:

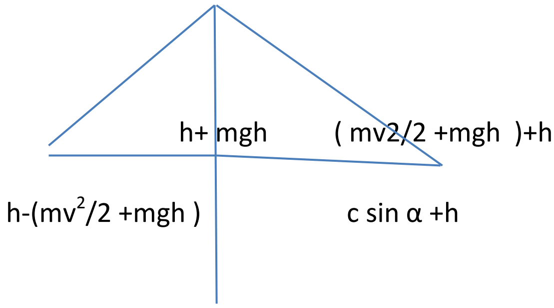
Government decision = f (tax rate, tax rates, velocity of change, usage of capital, agreement with investor about possible involvement in investment projects etc.)

Government decision 1 = f(attract investor) = f(low tax on profit, stability, low velocity of tax change, arrangements to build add infrastructure -roads, social involvement, lower tax rate on labor etc.)

Government decision 2 = f(have large number of investors) = f(increase tax on profit, stability, constant velocity of tax change, no requirements of potential to influence additional infrastructure -roads, higher tax rate on labor etc.)

Government decision 3 = f(concentrated on infrastructure project, highest amount of tax before investor moves to another country) = f(increase tax on profit, stability, constant velocity of tax change, no requirements of potential to influence additional infrastructure -roads, higher tax rate on labor etc.)





$Ek= \frac{1}{2} mv^{2}$

Tax usage Tax payment

In the still stand Potential energy is $\boldsymbol{E_{pot} = h*g*m}$

That is depends upon height that swings is put, mass of a child or government, and gravitational force of Earth.

The moment energy and velocity is given to a process swings moves and reach a certain point after moves back. It can be presented as tax policy that is put in force and swing back usage of that money. To some extend the move forward is a process of collection money and back negative process of spending money. Each can be made with more strength, with wind in face or back in the process. If the swings goes faster tax policy changes with increase tax rates – as in case of Bangladesh- but usage of that money need to follow this policy equally- building schools, educational institutions, hospitals, kindergartens etc. This process is presented as negative (short run) spending of money also have long term positive impacts where

More schools $\longrightarrow$ More educated work force $\longrightarrow$ High salaries, taxes

2.4. CHANGE COMES FROM REGION

Changes in region comes from (again) main equations and economic variables which are further influenced by regional government policies toward taxation, education, working condition and willingness to cooperate, regional competitiveness, some transportation , energy advances etc.

$C_1 = k+b\,Y+ b\,F +e$

Consumption in country 1 is determined with the income in country, marginal propensity to save or invest.

It is also determined from the income of neighboring states where population can cross border and buy cheaper goods, or find employment.

$C_1 = k+ b_1 {}^* Y_{\text{income in country}}\ 1 + b_2 {}^* Y_{\text{income in countries in region}} + e$

Population will come and purchase the good if the price is lower or at competitive rate in their own countries in that way reducing consumption power of their own country.

$C_2 = k_2+b {}^* Y_{\text{income in country}} - b_2 {}^* Y_{\text{income spend in neighboring country}} +e$

On the side of employment is different process if we assume there are no legal barriers to enter. In the first country where the good is more cheaply people have lower wages and tend to find employment in neighboring countries.

$Y_1 = k+ b_2 {}^* Y_1 - b_3 {}^* Y_2$ lost due to emigration + e

$Y_2 = k+ b_2 {}^* Y_1 + b_3 {}^* Y_2$ gain due to new work force + e

This process is continued until some form of equilibrium is regained or some third factor introduced in equation.

The third factor can be in form of energy potential, import, export of energy resources which impact additionally the whole process.

Government policy adds to reasoning in the way to attract the first move from investor.

Investor at first reasons tax policy overall and make preferences over countries of investment

$(R\text{-}C)_1 * (1\text{-}T\ overall)_1 > (R\text{-}C)_2 * (1\text{-}\ Tax\ overall)_2$

With a lower tax rate and lower cost of working force investor decides for country where bigger profit is made.

If different conditions regarding the work force and tax are met calculates on this kind of process

$((R\text{-}C_{Tax\ wage}\text{-}C_{wage}\text{-}C_{energy} - C_{other})) *(1\text{-}T\ profit) > ((R\text{-}C_{Tax\ wage}\text{-}C_{wage}\text{-}C_{energy} - C\ other)) *(1\text{-}T\ profit)$

While the neighboring countries would like to attract investor rational government would decrease tax rates. In that case capital came in but workers are faced with lower wages. If other barriers exist to entrance new investor decide to invest in new country with higher tax rates for profit making savings on other costs such as advertisement transport cost and in that way position of employees can stay the same. In that case workers face the same wage and treatment and this are for them lose loose strategy and for the investors and government win- win strategy.

	Tax on wage	**Employees**	**Government**
$Country_1$	10	High cost on employees could mean lower educational effort from investor, lower other benefits, reduced. It is not determined solely on taxes (profit on the market determines also workers position)	If imposing higher than average in region tax rate should build more schools, kindergartens and invest money in socially needed institutions (hospitals, parks, animal protection) As well only higher rates do not imply end efficiency
$Country_2$	5	Lower tax rate do not guarantee better working conditions, but opens way to negotiate about bigger salaries. It further depends upon strength of Union and profit on the market overall not just in the country	Lower taxes means that Government want to attract investors, and expects from investor to bring additional benefits to country: involvement in infrastructure projects, bring growth in employment overall, educate workers etc.

	Tax on profit	Employees	Government
Country$_1$	10	Lower expectation of employees to bring additional benefits- schools, road, lunch, -by investor as part of business process in community	Higher tax on profit means that government is not so keen on attracting foreign investors
Country$_2$	5	Higher potential to employees additional way to have extra infrastructure, or poverty of great kind that no result in negotiations can be produced from investor	Great potential to new investors- but should be careful if it is a word about stable country, or hidden intention about possible tax hike in future once investment is made

Some possibilities:

Government decides about taxes (Tax on wage, Tax on profit)

(5,15) Lower tax on employees means that union is strong and has agreed to compensate workers with additional benefits. Wage increase, environmental health protection measures, education, building kindergartens etc. Tax of profit is increased while there is no ESOP in smallest degree; profit is taken outside the country.	**(10,10)** Government tries to find a golden way or a middle road. It can be of benefit if other countries have much higher rates, or it's satisfied with current investment rate. It shows that much of the burden for social infrastructure will be done by government
(**20,10)** Highest amount of tax burden to investor; Already enough of foreign investors in country; Have plans to builds infrastructure; Could not agree about other benefits to workers (health protection, wage on work effort etc.); Do not have good communication with Unions or Unions with Investor	**(15,5)** Government wants to attract new investors so keep the tax on profit lower. Would like that some part of profit stays in land for future investment. Do not impose additional burden on investor regarding work condition; Infrastructure plans inside government Jurisdiction

Employees (Tax on wage, Tax on profit)

(5,15)	Lower tax rate on employees can mean that country suffers from high unemployment rate, jobs are of low value, easily replicable, etc.	Tax on employees could mean that employees are relatively paid but not all necessary effort is taken into consideration. If further rates hikes investor could pull out without obligation to compensate workers.	(10,10)
(20,10)	Highest tax rates can means protection of workers, but do not guarantee that this tax will be used for social infrastructure in country or good in pension funds	Employees are taxed while investor is not intending to bring additional infrastructure in the land,	(15,5)

Investor (Tax on wage, Tax on profit)

(5,15)	Investor is attracted with lower tax rate on wage .If the production requires large number of employees he will seriously consider country as choice	Middle road is usually applied in countries that already have production in place. Can attract investor who with additional advantages such as transport routs, other lower costs (energy). It can hide danger of further tax increases.	(10,10)
(20,10)	Worst possible case for investor But at this stage he is not obliged to meet additional requirement for some social infrastructure	Lower tax on profit is a sign that investments are needed and workers potential requirements met by paying a higher tax on wages. In this case investor will probably try to leave profit in country but offering additional reward to employees	(15,5)

$$\begin{pmatrix} f1 \ldots\ldots\ldots\ldots f1n \\ f2 \ldots\ldots\ldots\ldots f2n \\ f3 \ldots\ldots\ldots\ldots f3n \end{pmatrix} \begin{pmatrix} a1 \\ a2 \\ a3 \end{pmatrix} = \begin{pmatrix} -(f1a1 & fna1) \\ -(f2a2 & fna1) \\ -(f3a3 & fna1) \end{pmatrix}$$

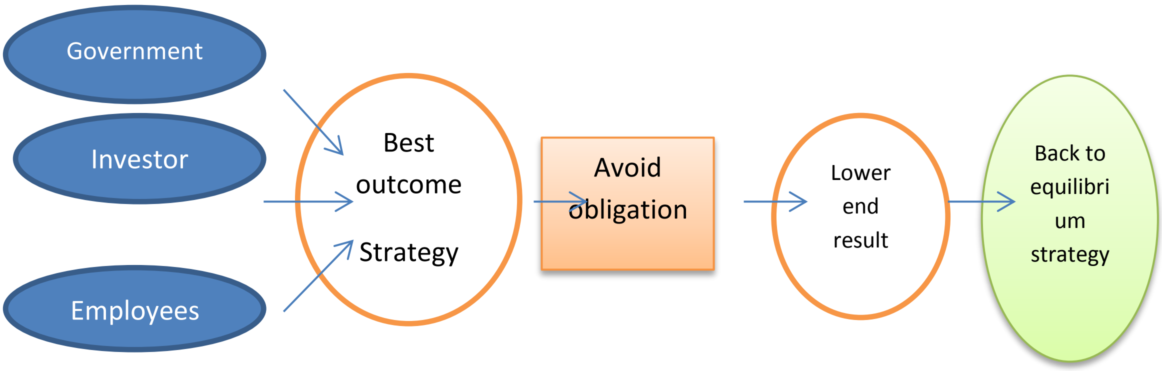
As shown end results between countries in region is a summary of many factors that are offered as input on the side of investor, employees and government as basis? Without cooperation between countries end sum is negative in al respect out of which low environmental protection is the most visible one.

Only profit and short term insight into cooperation brings only maximization of profit for the most strongest in the game.

To recognize full scale of cooperation and influence all negative aspects need to be taken into consideration: lacking the right of employees, having children as a potential work force, or not investing into environmental protection etc.

$$\begin{pmatrix} u11 & u12 & -a1 \\ u21 & u\ 22 & -a2 \\ -b1 & -b2 & 0 \end{pmatrix} \begin{pmatrix} dx1 \\ dx2 \\ dy \end{pmatrix} = \begin{pmatrix} y\ dx1 \\ ydx2 \\ bdx1+bdx2-dx3 \end{pmatrix}$$

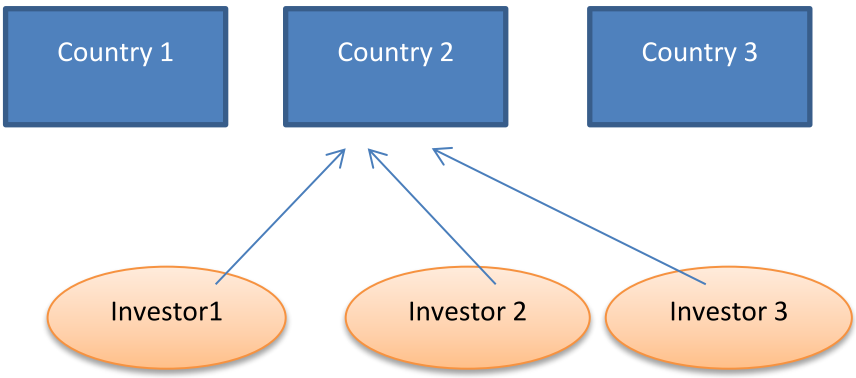
After all negative potential of old game are recognized new game starts with more favorable results for all three parties:



For the region this reasoning is following:

A) Worst case scenario

Finding a country that has the lowest rate of taxes for investor to come.



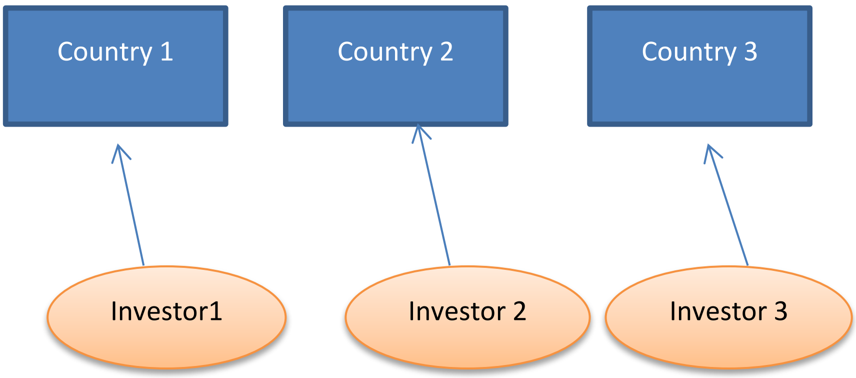
Low end price attracts costumers from region but low working conditions with current low tax and low wage do not promise better employment opportunities. With low tax rates investor stays in country offering the same average under average salaries and the whole region plunges further into poverty.

b) Region with similar conditions

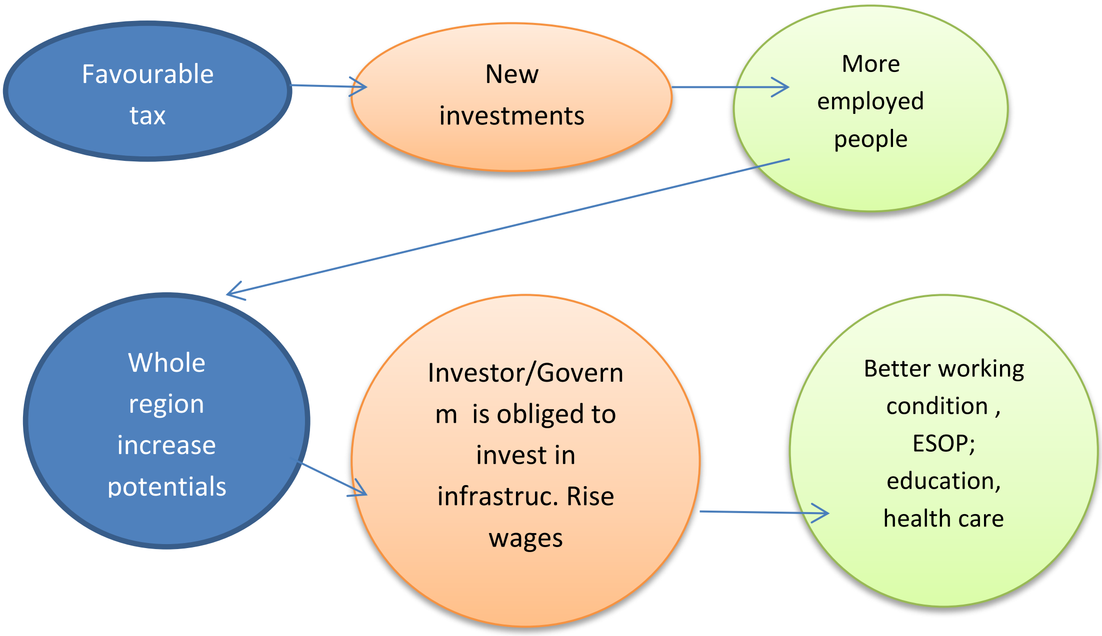
Each country in region has similar conditions regarding the labor tax policy and equal opportunities to transport goods in other parts of the world. Investors equally share opportunity and invest proportionally in each country. Positive fact is that investment rises employment rate but end result is also invisible and result of game theory.

If each investor tries to keep advantage on end market undercutting cost in country of production whole region is again put pressure to keep wages low.

But if one investor in country 1 rises wages a little, consumption power of population rises, employment starts to be of prospect and country 1 country 2 workers tend to increase their potential either through renegotiating in their countries or moving to country 1. For investor and government in countries 2 and 3 this is a problem and they can decide either to lower taxes or to increase wages. In this case good positive results on work force are made.



c) Best case scenario



The best scenario depends from country to country, but each have favorable end results: increased wages, improved working conditions, low rate of accidents at work, no child labor, involvement of employees in ownership structure etc.

It is a common work of workers, union, investor, government and social community that should clearly state preferences and aims of further development and rise of society.

This process is not straight forward linear line- but is a process of analysis, construction, further negotiation, constant alert to all changes in the region and world.

2.5. CHANGE COMES FROM ANOTHER INVESTOR

Good production results, excellent profits and experienced workers in the field can be the fact to attract new investor to come to Bangladesh and open the factory. Again he calculates again and again process of production, transport end market to reach the final aim: selling the good and increasing market share.

His calculation can be than based on reasoning of some other comparative advantage that in in end formula for prices.

Price*Quantity= Good Produced (labor, materials, energy)+Transport (km, costs)+Market overhead +e

In other words

A= B+C+D

For the new investor to come in land of already established producer is a game changing strategy where he needs to put some advantages over competitor.

In the second investor entrance B is usually higher while offering bigger wages to workers wanting to attract experienced and good workers in his production process, market overhead depends upon market it sells and are changeable – if it is a new investor than this D is the same as the original investor and C transport cost have to decrease in order for him to reach competitive advantage non the market

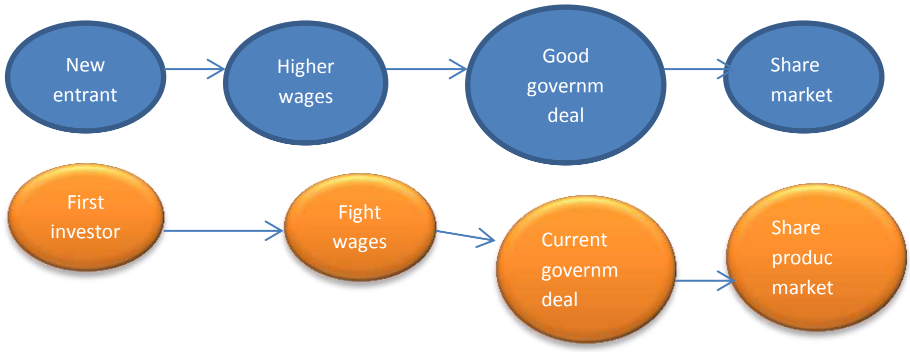
For this kind of reasoning new investor will chose markets on domestic ground-Asia, Australia, China, India, or nearby Saudi Arabia and Russia.

In that respect new investor will have price of end good competitive with western counterparts and after conquering domestic markets in Asia Russia may even want to open subsidiaries in traditionally first investor markets.

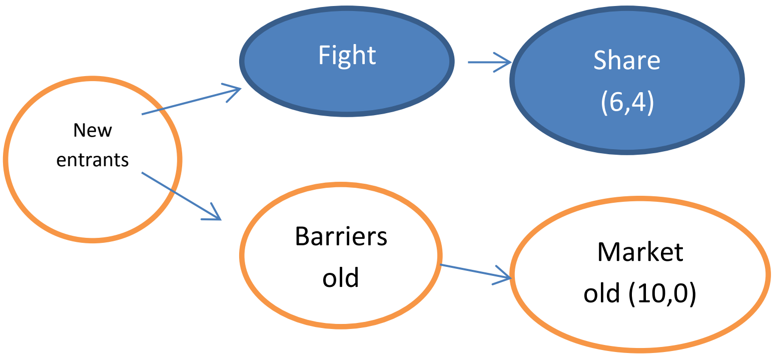
Having established large production facilities the first investor would try to keep an eye on the all relevant facts that means market price and sources of production and try to hinder entrance of the second investor in much way.

The first is to give a counter offer: he also raises salaries to workers giving them additional benefits in order to keep doing a job as it is done since moment of the first signal of new entrants.

In that respect



In classical economy case is usually presented in number of end profit and market share potentials.

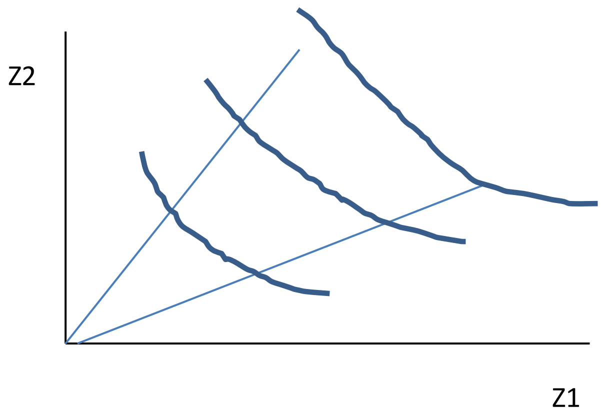


This game is not so simple as it looks while involves many other factors such as:

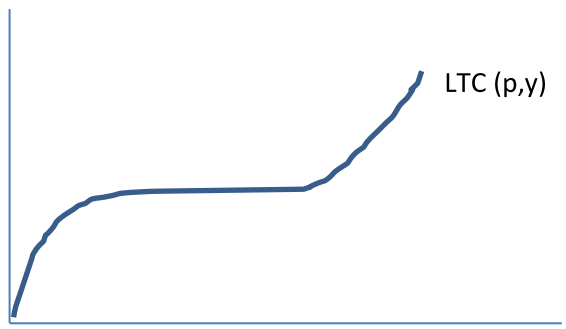
-Potential of first investor to expand production facilities, much reduced cost from production due to economies of scale, current knowledge and infrastructure about production sites, material purchase, possibilities of workers experience

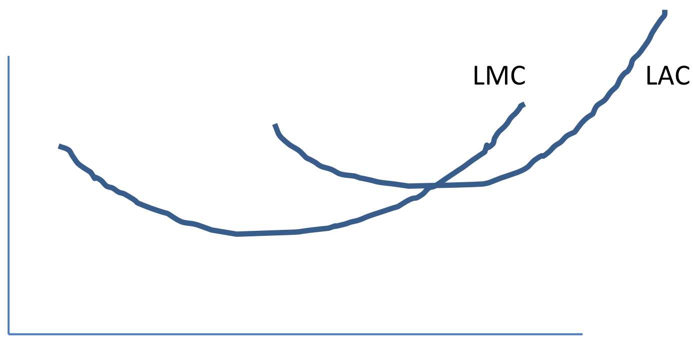
These additional advantages however do have boundaries in classical economics and in new market reasoning.

Classical economics says that the best advantage is at the point off lowest long term marginal curve



Picture –Variation in scale





$LMC= (p_k+a K)(r+y)/ f k(K,L) =w/fi (K, L)$

$\partial F/\partial L= (p fc-w)/(1+r)^t=0$

$\partial F/\partial K= p_f k/ (1+r)^t – a_t + a_{t+1} (1-y) =0$

$\partial F/\partial I= - (p_k+ a I_t) / (1+r)^t + a_{t+1}$

New entrants can try to improve his position on the production market deter barrier of entrance by having additional advantage over competitors:

-Offer price of energy (electricity, gas, oil) at lower than market cost

-Have investment in special machine's that saves energy, have a lower emissions, production clothes of better quality

-Offer better wages and education to people -but these educational advances can be used only in company on particular machines

- Build additional infrastructure project – ship port, airport, ship yard for transporting goods on end place

-Involved in building infrastructure project in place of production-schools, kindergartens etc.

In these respect barriers of enter lowers, price and quantity games with current producer start to change:

$\text{Po } f(x)+\sum pi\ qi\ (x) < \text{Po } f(x)+\sum pi\ qi\ (x) < \text{Po } f(x) + \sum pi\ qi\ (x)$

Where end game is demand on local and world markets.

In respect of entrant that comes from Russia demand is determined as demand at local markets South East Asia, Demand at home market , and at the current investor demand at local market and North America, Europe as markets

$L(x_1 \dots x_n)= f(x_i \dots x_n) – y (a_1 *x_1+a_2*x_2-b)$

In that respect new investor is fighting for the market at home, production facilities, potential new markets and security of future jobs in selling market.

So current Investment is relationship of.

NPV = - I capital – I labor – I infrastructure project + I new technologies + $\sum_{1}^{t} \frac{(R-C) direct\ investment}{(1+r)n}$ +

+ $\sum_{1}^{n} \frac{(R-C) market\ domestic}{(1+v)n}$ + $\sum_{1}^{s} \frac{(R-C) potential\ market}{(1+h)s}$ +e

Investor from Russia can have additional motive while having a child labor in neighborhood what hinders growth and creativity in his country also. If he continues with game of low wages, and low support to positive change no additional benefit would bring to Bangladesh, region or even his country although at first it may look like good investment opportunity. Only balanced game with first investor that constantly worked on improving conditions for worker in country of production can bring future benefits in production and seller markets.

	First investor	The Second Investor	Result
Startegy1: Both keep wages under country average Both collude	Initial investment, already established conditions with workers govern Collude with second investor	Collude with first investor; Keep the wages down;	The worst case scenario for region and country of production. In long run for investor country itself
Strategy2: The second investor rises opportunity only to point where first investor loses workers, domestic market,	Keep the initial condition, have secure selling market at current profit margin	Have a little bit more cost of production- but have potential to increase market share .defend domestic market ;	A little bit better conditions at first for workers in new company. Not good in the long run –if all other things the same-for anybody
Strategy3: Both rises wages in line with profit inflation potentials, respect of workers	Improve worker conditions , rise wages on world scale	Improve workers conditions,	Win win situation for workers investor and government .World is in new balance

2.6. CHANGE COMES FROM INTERNATIONAL ORGANISATIONS

International organization measure, monitor and report in various statistical reports situation that is related to work, work conditions and especially children involved in business activities. Although sums of money are allocated to monitoring process this is not enough and more serious campaign against abuse of children need to be overtaken.

Although international organization do have a fund that would bring actions against child labor and child trafficking still a large number of children are involved in labor with minimum pay. The reason for their activities is poverty, illiteracy in family, break ups, lack of knowledge by guardians or parents etc. Although Bangladesh ratified Minimum Age Convention (C138) ILO (World Forms of Child Labor Convention (182) result are far from good in Bangladesh.

Work of children can be reduced to lower or non-rate with a help of international organization on following types of reasoning's:

-Marketing

-Taxes

-Fines

-Export veto

Etc.

Marketing is done at the side of overhead costs, where promotion of goods do stresses importance of children, obligation of adult to provide means for school whether children comes from families or do not have enough resources to support all the members and stress the fact that this garment is not produced by children.

This action can be part of every season fashion shows, incorporated in logos of companies, be as placate on the markets and is no additional extra cost besides current structure of overheads. If some additional market advantages desires to be obtained and some previous connection with worker abuse experienced than additional advertisement can support current and future company orientation.

$(R\text{-}C)\, q = (R\text{-}C \text{ adult workers})\, q + (R\text{-}C \text{ other direct})\, q + (R\text{-}C \text{ transport})q + (R\text{-}C \text{ overhead})\, q$

$(R\text{-}C \text{ overhead})\, q = R - ($ cost of managers, cost of selling the product direct, cost of marketing classical – Cost of marketing stress on worker position and policy of no child labor)

This is the case where work of international organization through monitoring obtained results and company actually realize how big damage to future businesses can have.

In the case that agreement is done but no actually improvement is made on the field possibilities of extra fines and taxes need to be incorporate in international law and signed by countries most vulnerable to this can of work child exploitation.

In that case revenue would fall drastically for company in direct but also in indirect was leading to following equation:

$$(R_{new}\text{-}C\ n_{ew})\,(1\text{-}T) = (R_{old} - C_{old})\,(1\text{-}T_{regular}) - R_{decreased\ competition} - (1\text{-}Fines)$$

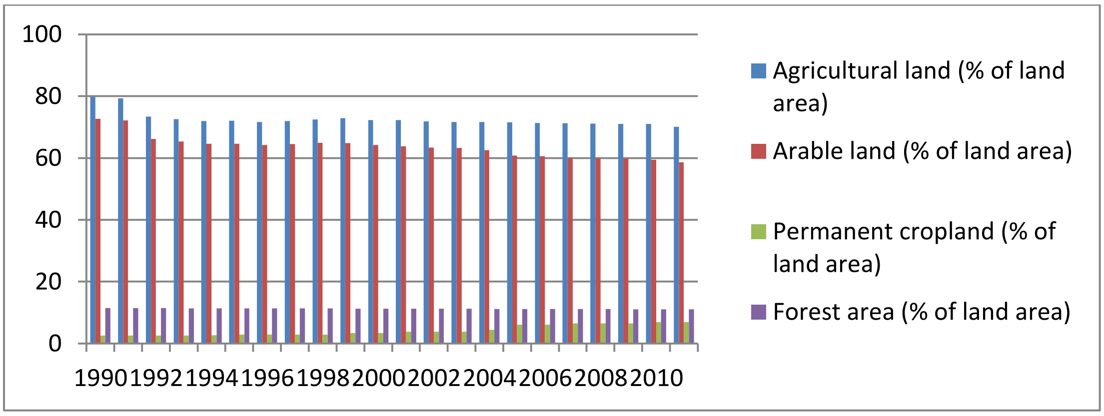
Export veto hasn't occurred since now and only governments in market countries can have a certain authorities to start measures in that direction. It could be made only if production in local economies is supported but since internationalization of business is widely present it is more probable that measures such as work with international organization will be more supported than drastically measures for import ban.

In that case revenue side of equation would decrease drastically and company would have to change the child labor policy because it proves to be too expensive. Although it can search for new markets having revenue from selling the products in local markets in Asia, some opening a new markets in South America or countries of eastern Europe Russia, even Africa- but at this point revenue will be smaller due to not only lower end price of product , but due to higher transport costs, and opening a brand new selling places .In the long run process of this kind would stabilize.

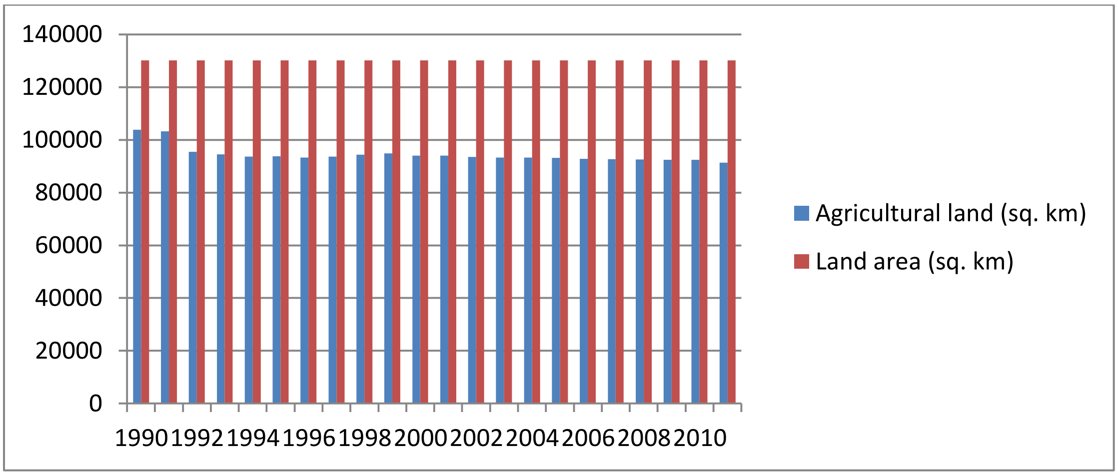
3. BANGLADESH STATISTICS

On the land of 130.000 sq km almost 70 % is agricultural property and around 60 % arable. Forest area is around 10% of total land. Food production rises significantly each year around 2490 kg/ha what brings the country good revenue expectations from rice ,jute, sugar crops, fruit ,potato, garlic ,etc. production.

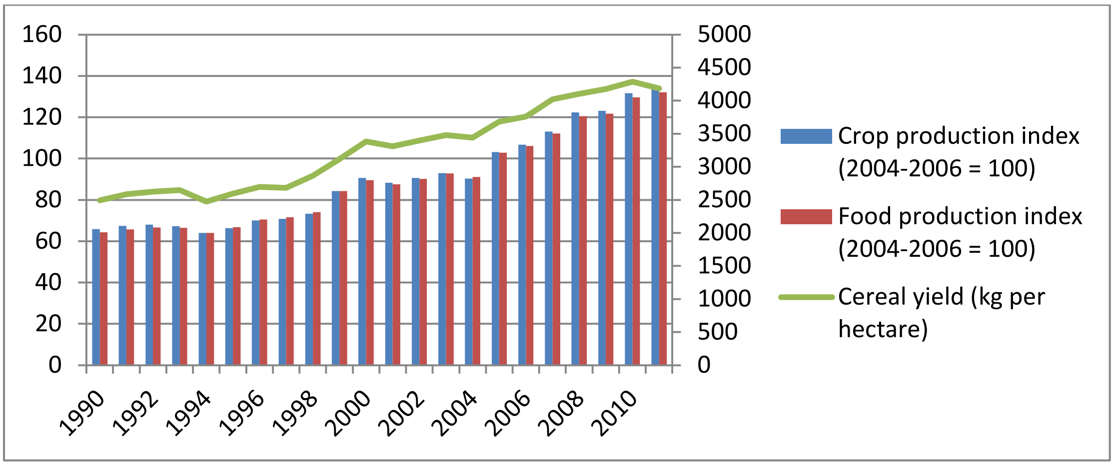
Land



Picture 3



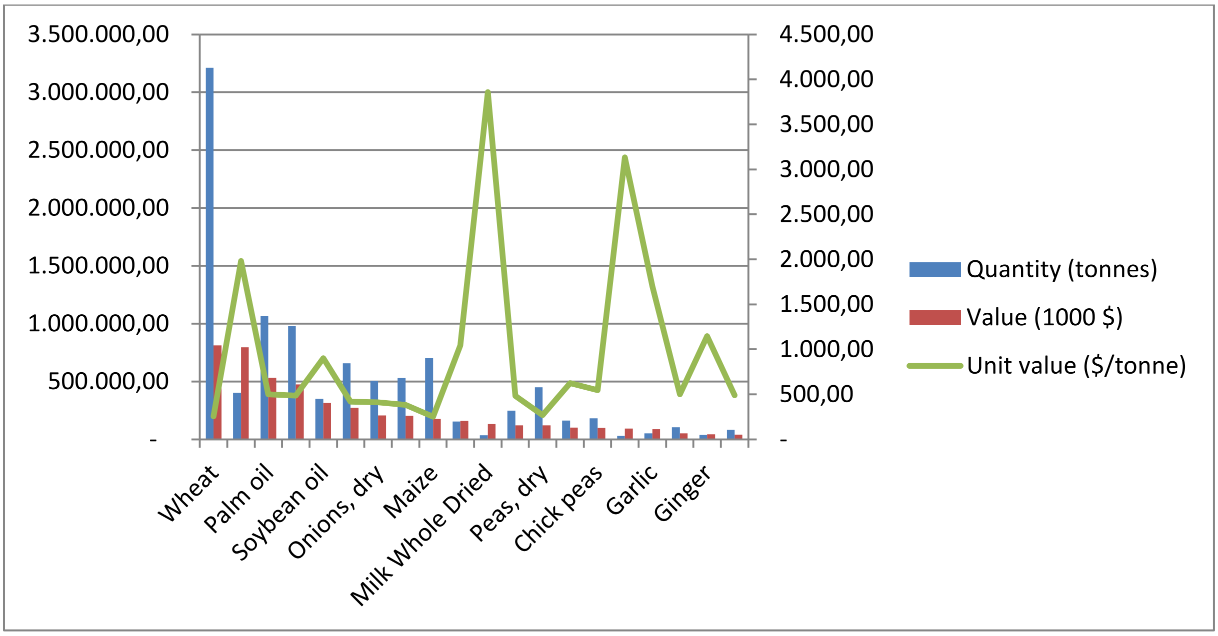
Picture 4



Picture 5

Very large import of wheat, palm oil, maize, Pease is still present making exporters of these commodities potential partners in common investment projects.

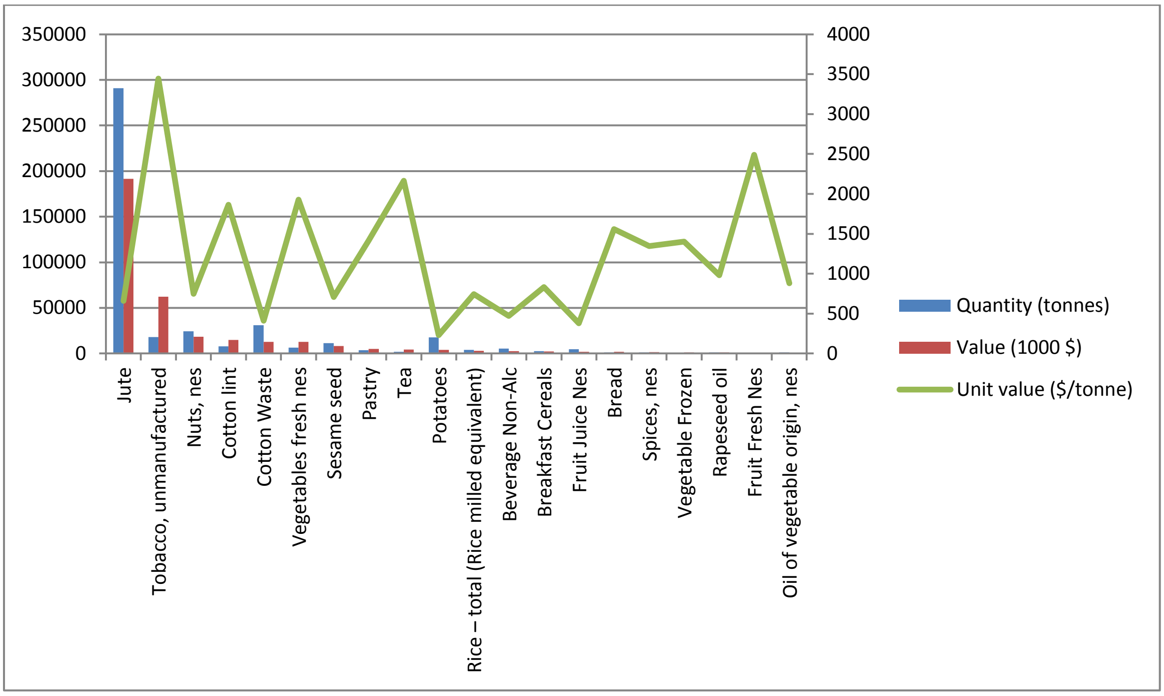
Imports 2010



Picture 6

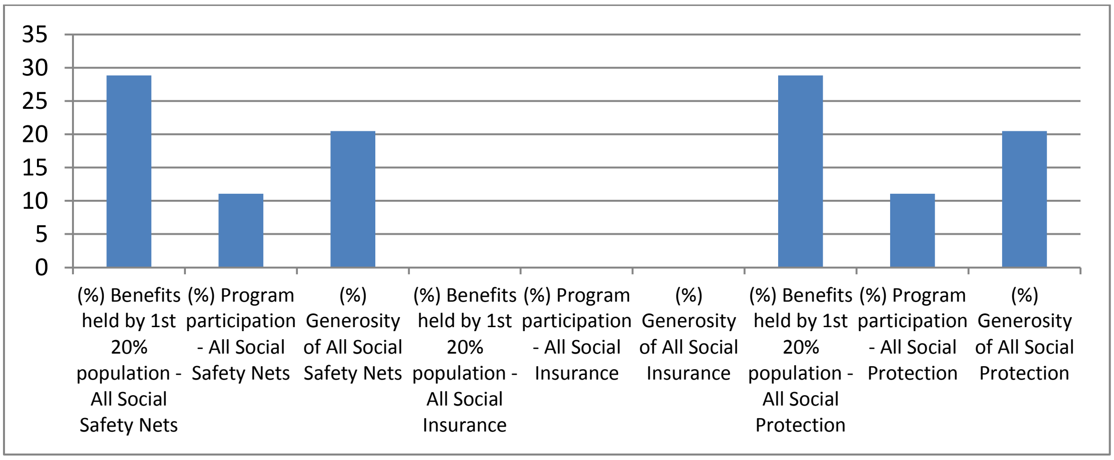
Export is strong in fruit, jute, vegetable, etc. commodities out of which tobacco have one of the highest unit value per ton.

Export 2010



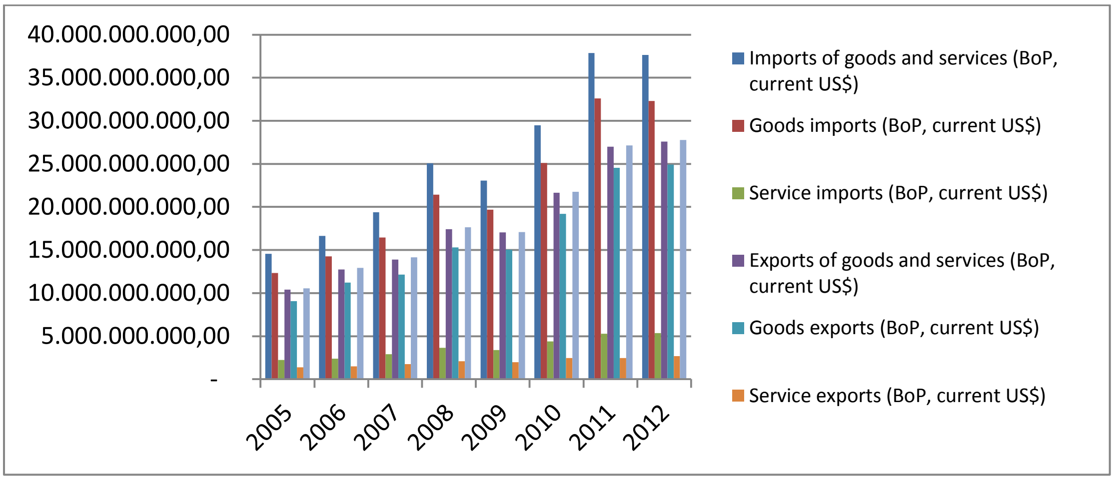
Picture 7

Although growing economy with strong results in agriculture and manufacturing Bangladesh is still very poor country with high amount of socila needs and programs.



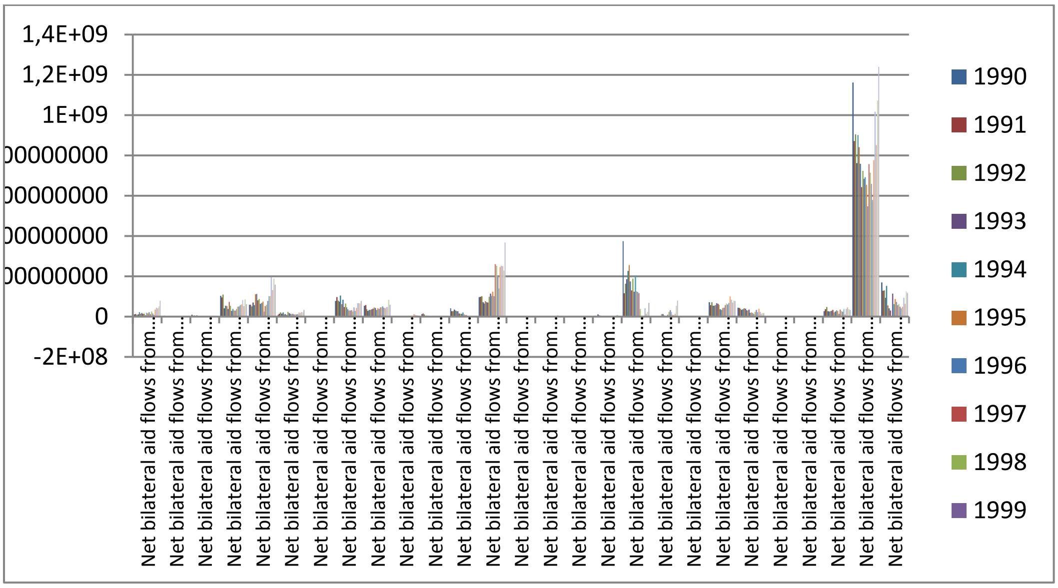
Picture 8

Imports of goods and services rose from 2005 and 14,5 bill USD to 37,66 bill USD in 2012 what is increase of 258 %. Export followed this trend but with lower starting ending point where export in 2005 were 10,6 bill USD and in 2012 27,5 bill USD what is increase of 264 %. Unfavorable conditions were noted in service sector where imports (2012/2005) rose 240 % and export only to 196% to reach 2,6 bill USD.



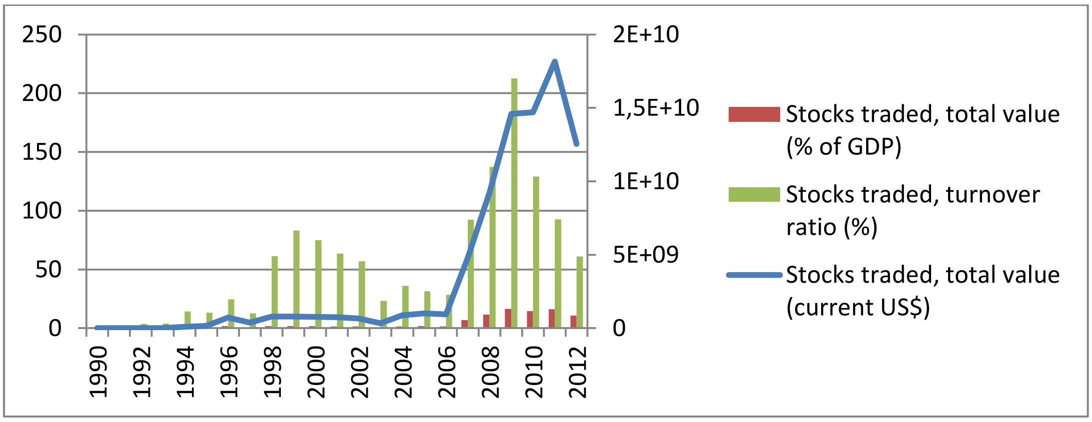
Picture 9

Net bilateral aid flows is the largest from Canada 102 mil USD in 1990 to decrease to 61 mil USD in 2011; than from UK that in 1990 gave 97 mil USD to increase amount to 368 mil USD, Japan decrease help from 373 mil USD in 1990 to 67 mil USD in 2011; EU increase aid from 58 mil USD in 1990 to 159 mil USD in 2011 etc.



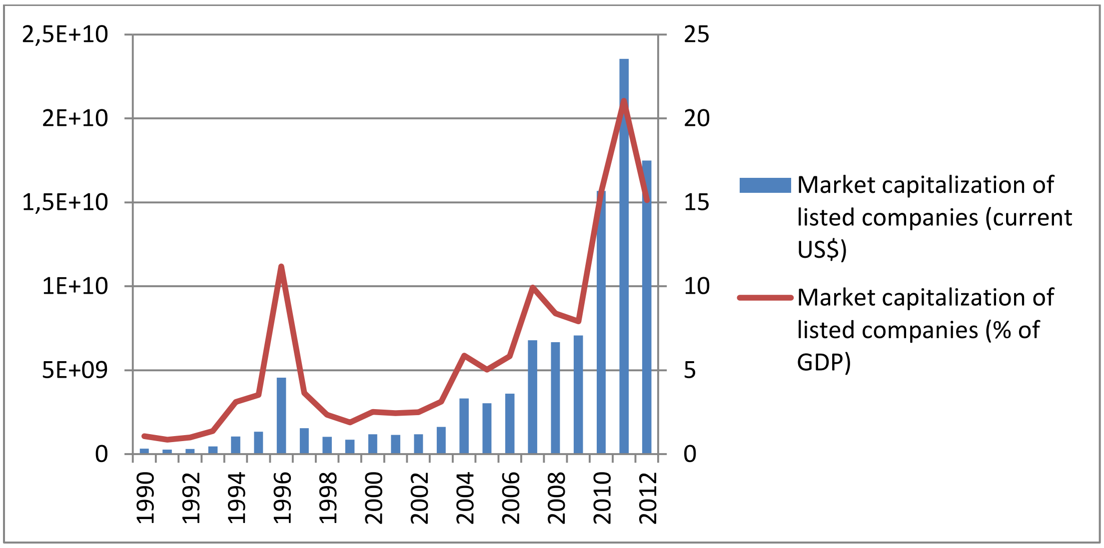
Picture 10

Large exponential increase of Stock Trading was marked in period after 1998 where in 2007 stock traded were in value of 4,8 bill USD, in 2008 9,2 bill USD, while in 2012 12,5 bill USD what is significant rise in that sector. Total value of stock traded in 1990 was 0,02 % of GDP to be around 10 % of GDP in 2008 and 2012 with even higher amounts in 2009-2011.



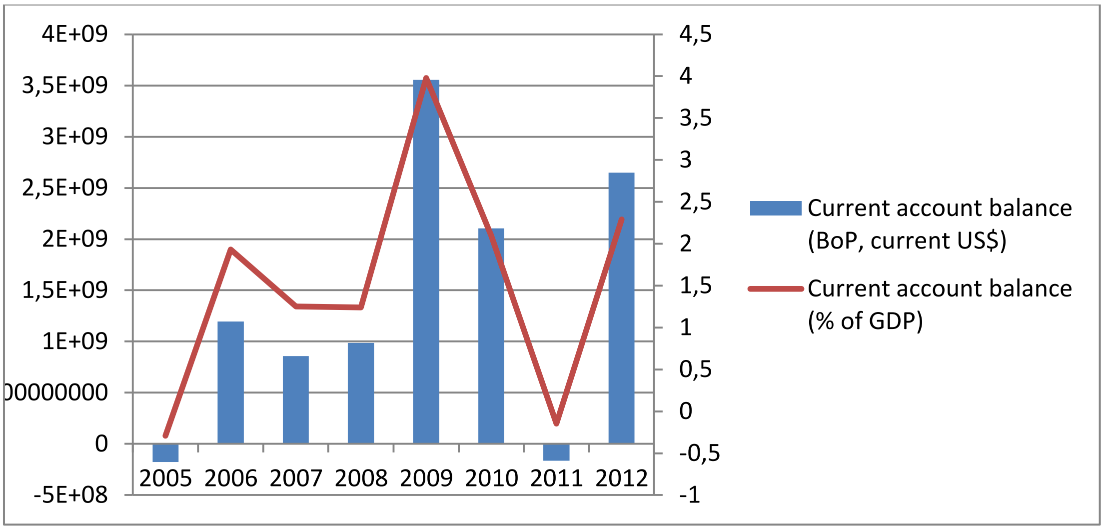
Picture 11

Market capitalization strongly grew after 1990 is but with one strong declining period in 2012/2011 where shrunk from 23,5 bill USD to 17,5 bil USD.



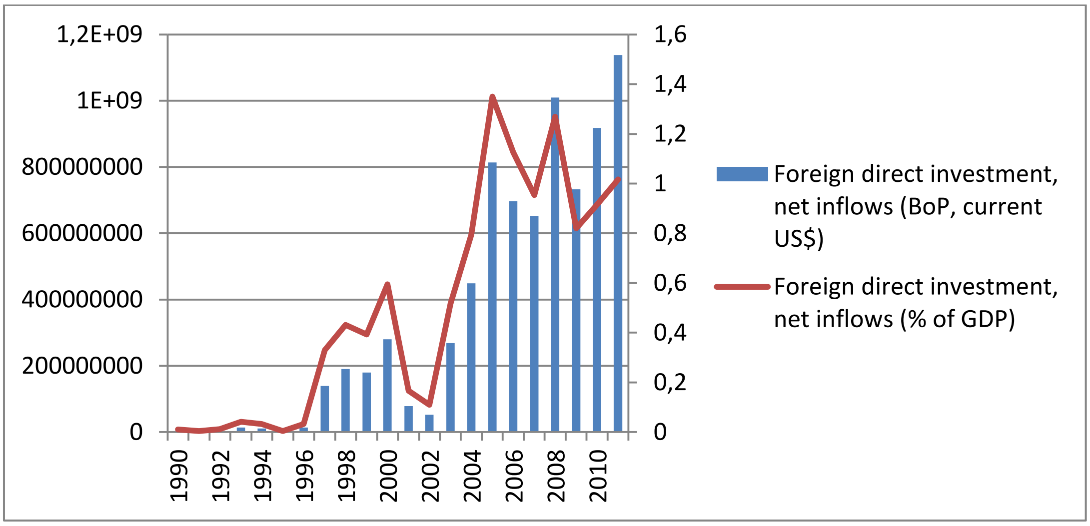
Picture 12

Opposite trend is marked in current account balance where 2011 had negative measure od -0,14 % of GDP and in 2012 current account balance grew to 2,29 % of GDP.

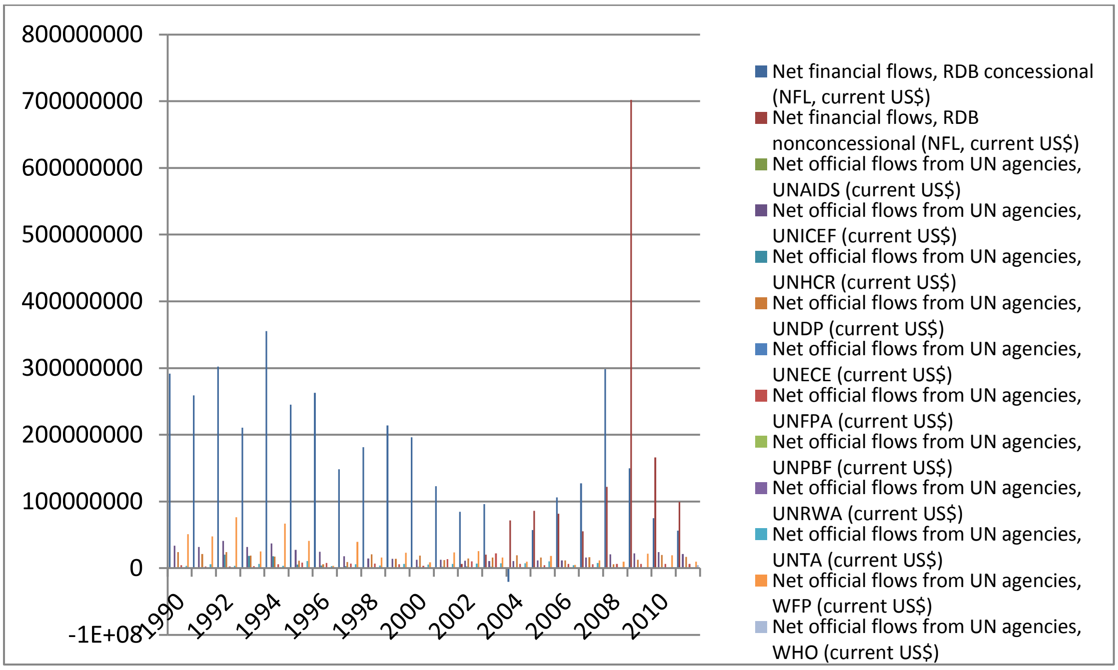


Picture 13

Foreign direct investment grew from 3 mil USD in 1990 to over 1 bill USD in 2008 and 2011 what is 1% of GDP.

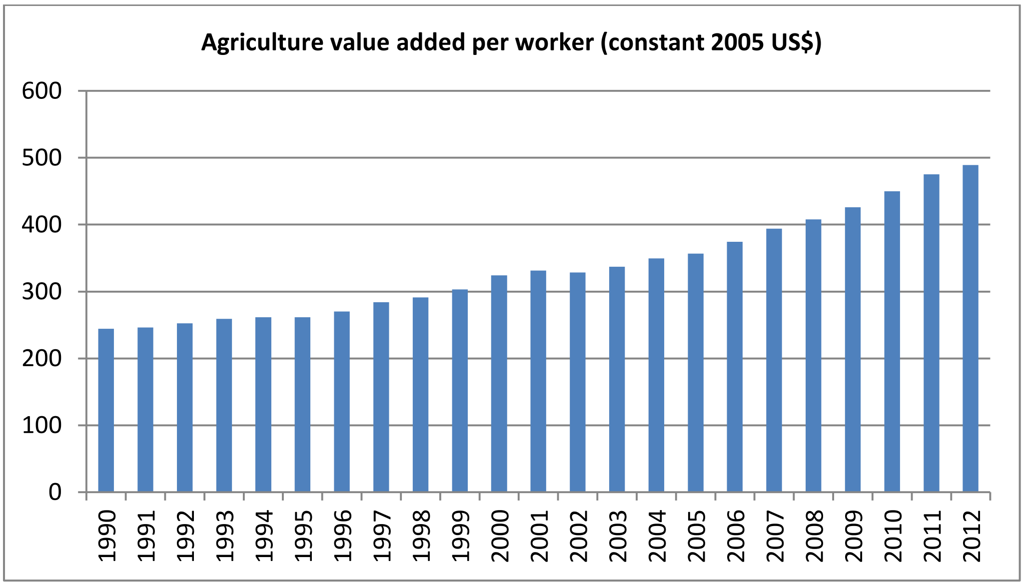


Picture 14



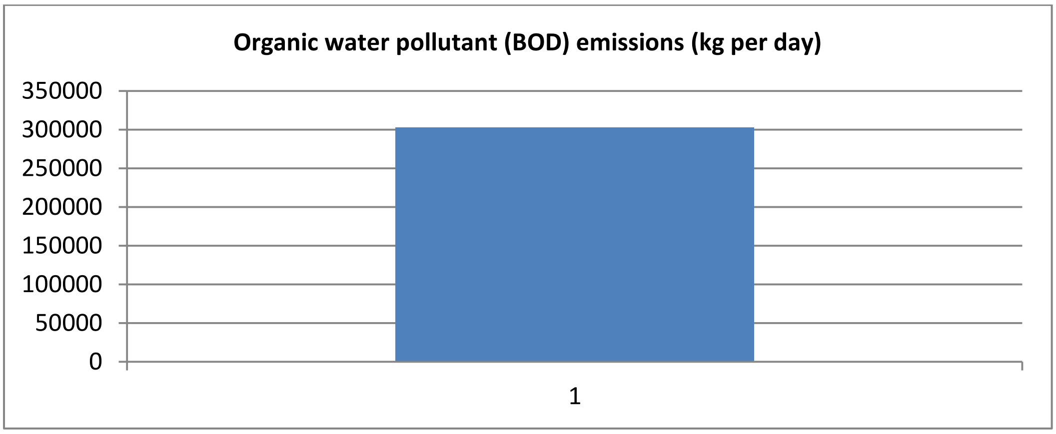
Picture 15

Strong force to GDP growth was given by agricultural sector where in 1990 one worker produced quantity of value added of 244 $ to be increased to 489 $ in 2012.

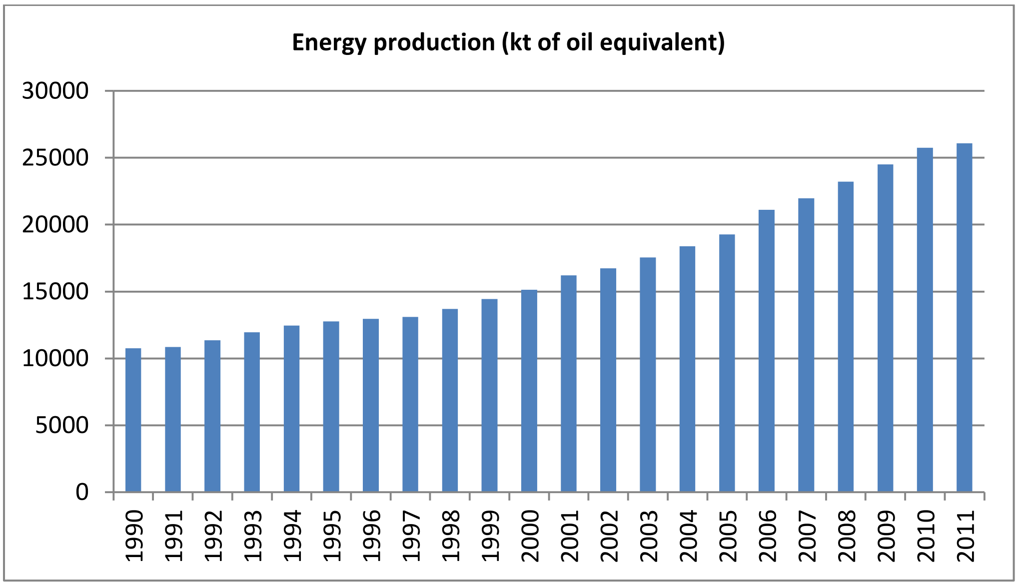


Picture 16

With rising production in agricultural and manufacturing sector larger quantities of emissions and wastes are produced bringing further dangers to environment and living conditions.

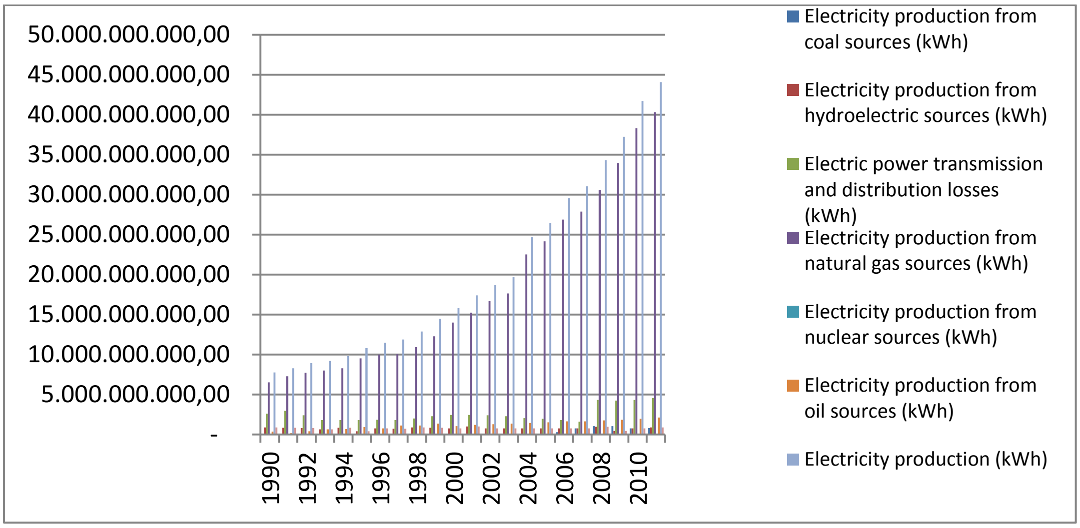


Picture 17



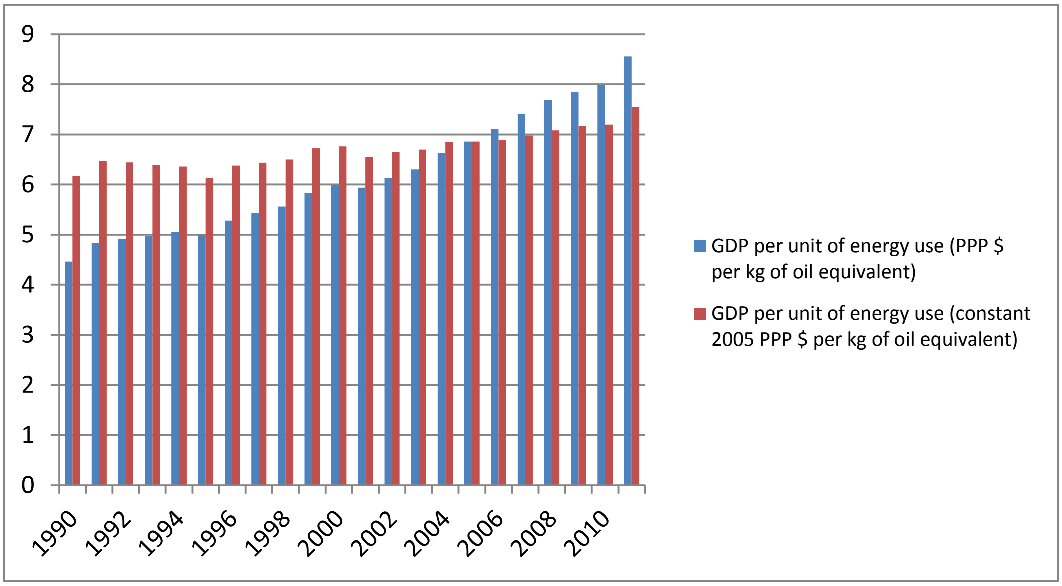
Picture 18

On this large production process that is going on in Bangladesh points data about electricity production that rose more than 600 %. In 1990 electricity produced from gas was 6,45 bil kWh and in 2011 40 bill kWh, electricity from oil in 1990 was 333 mil kWh and in 2011 2 bill kWh, and total production rose from 7,7 bil kWh to amazing 44 bil kWh in 2011.



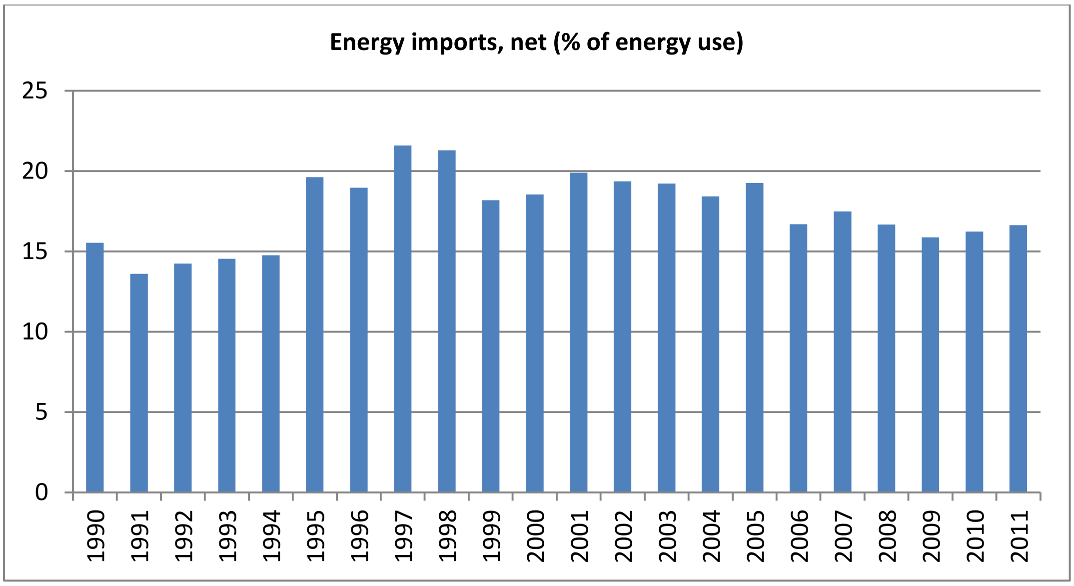
Picture 19

In that respect rose GDP per unit of energy use which in 1990 was 4,4 $/kg of oil equiv) and in 2011 8,5 $/kgoe of energy used.



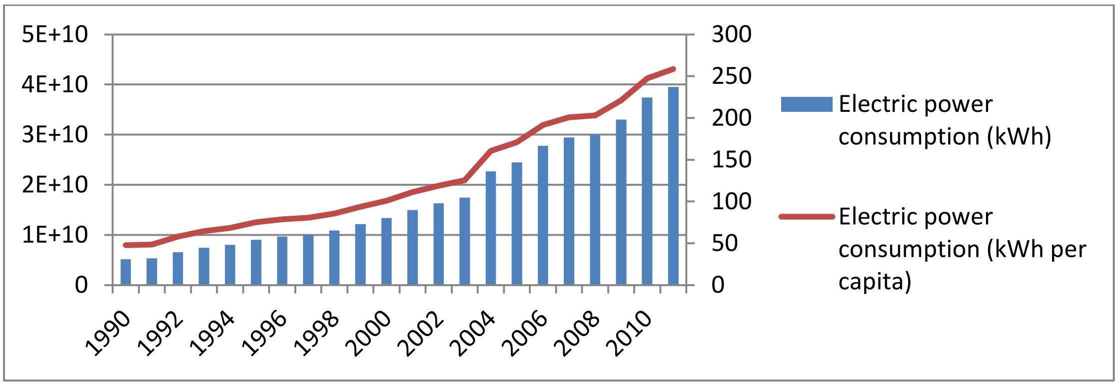
Picture 20

Good news for country however is that energy import remained in boundaries of around 15 % of total energy use in the whole period of significant production rise.



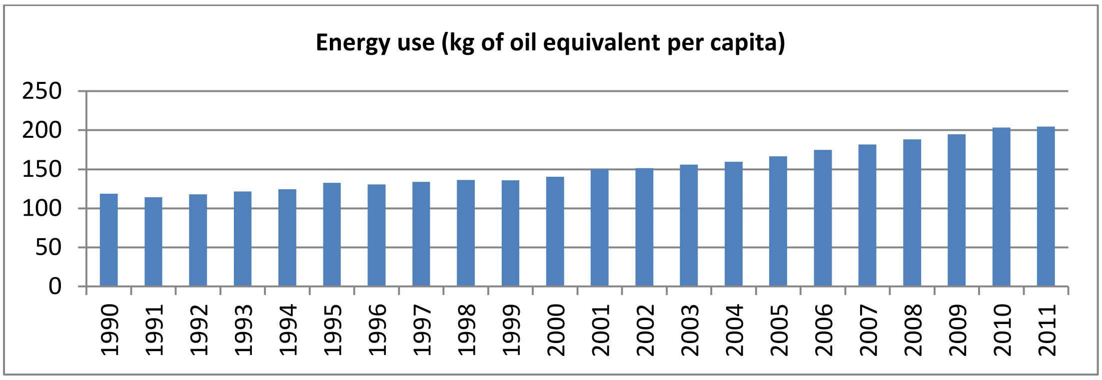
Picture 21

Almost linear connection is to be expected in relation between total electric consumption and electric consumption per capita.



Picture 22

Worries in the future can come from emission part of equation and more energy efficiency measures will be probably required – more renewable energy etc.



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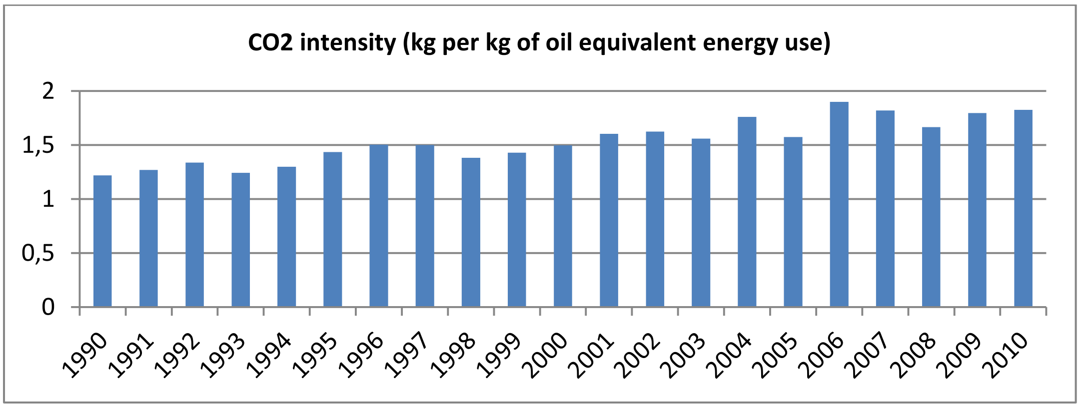

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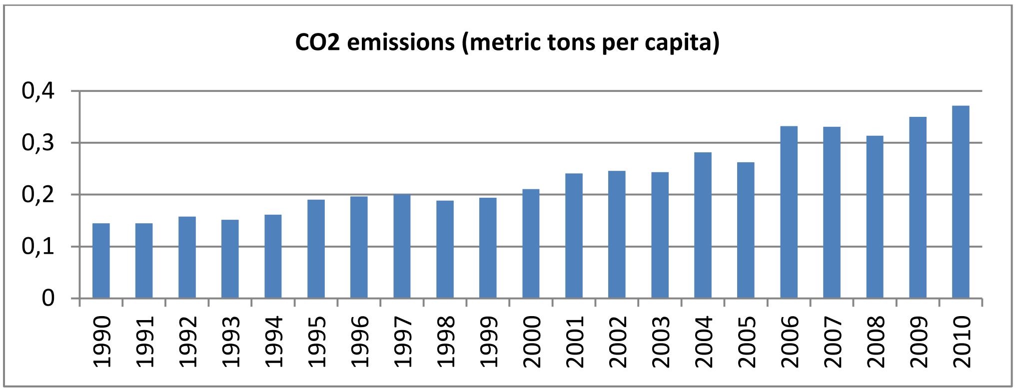
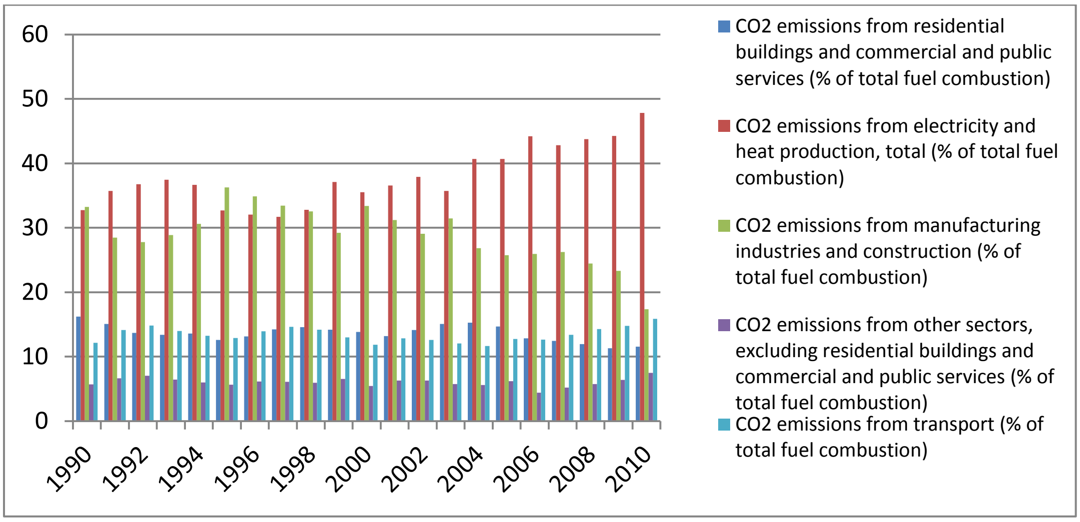


Picture 25

By far the largest source of CO_2 emissions comes from electric and heat production and this is the place where the most attention to clean technologies can be put on. Rising emissions from transport implies not just rising standard and GDP rise but future project of common transport measures with cleaner technologies.



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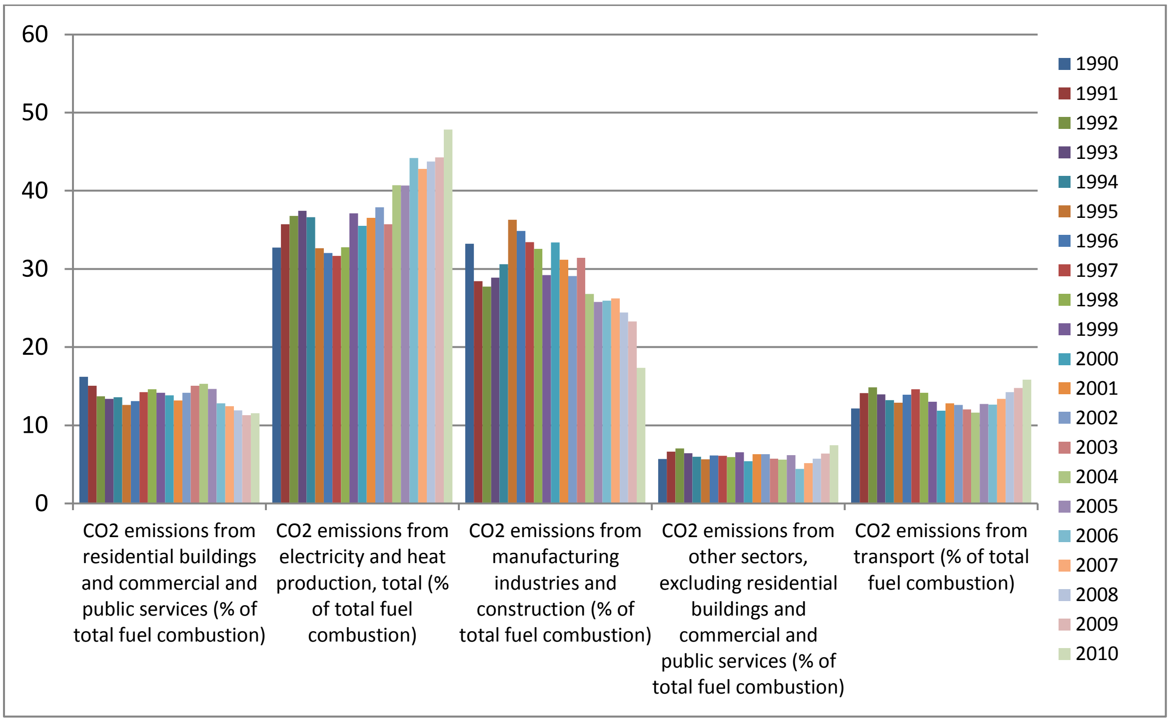
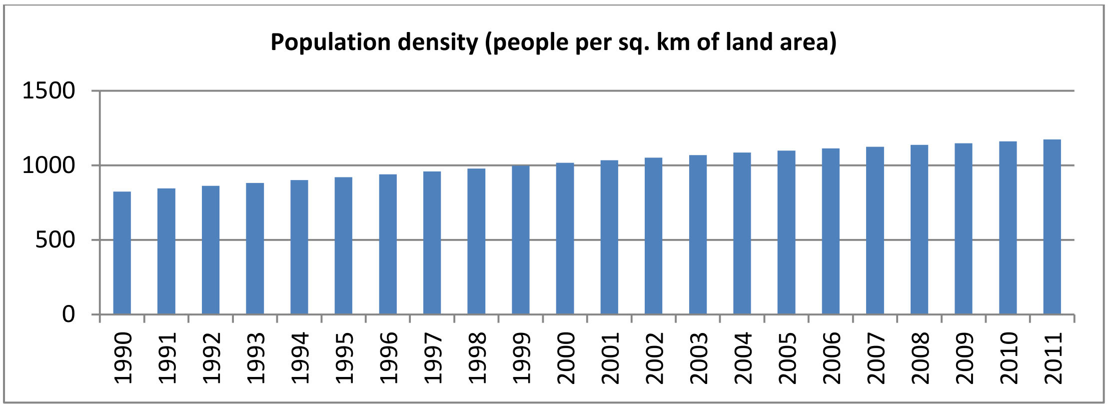


Picture 27

Population density rose from 824 to 1124 per sq km of land and this brings additional attention to housing, investment project on rising population number.



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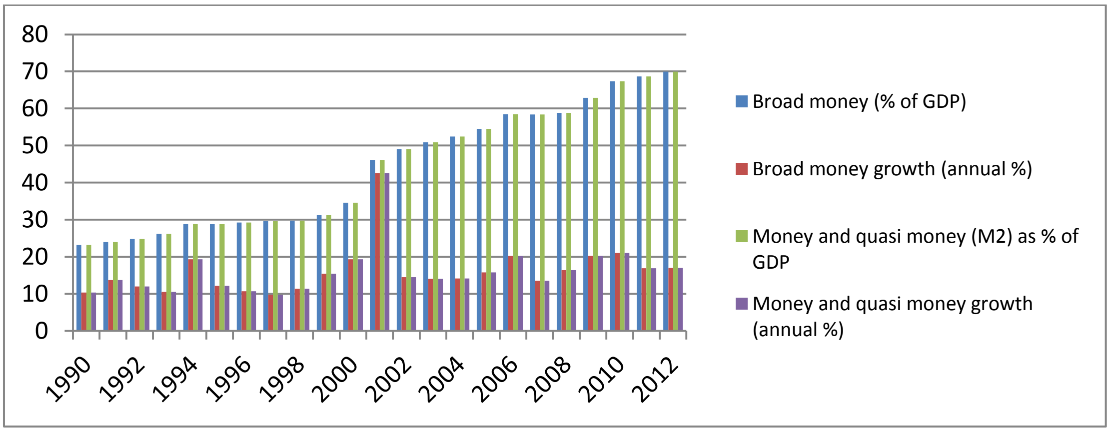

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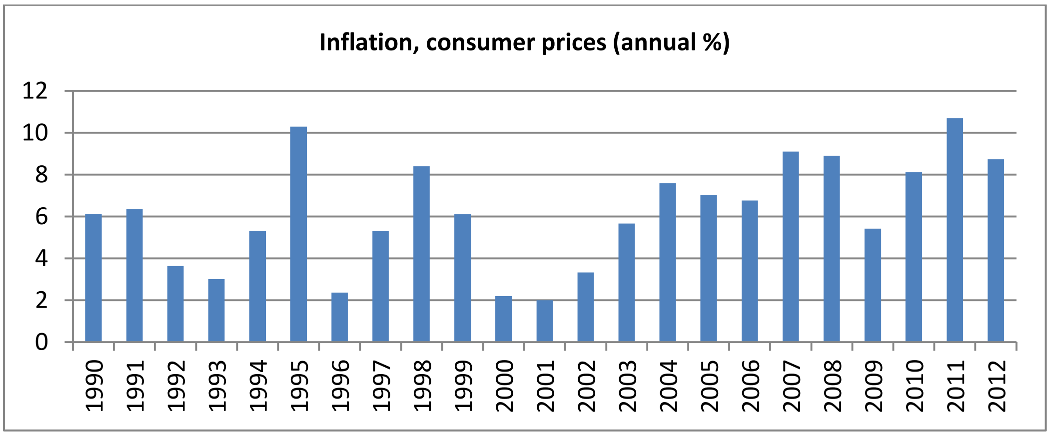
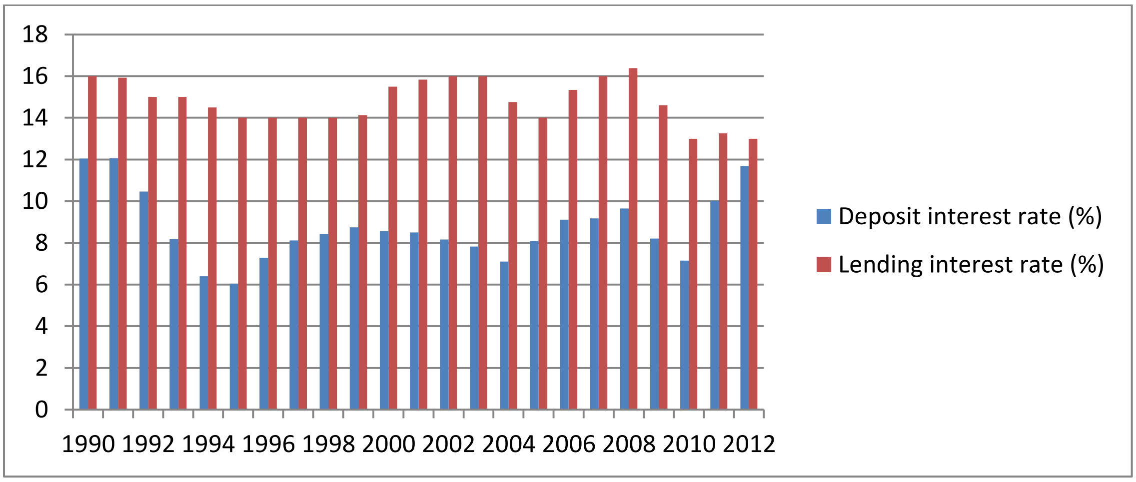


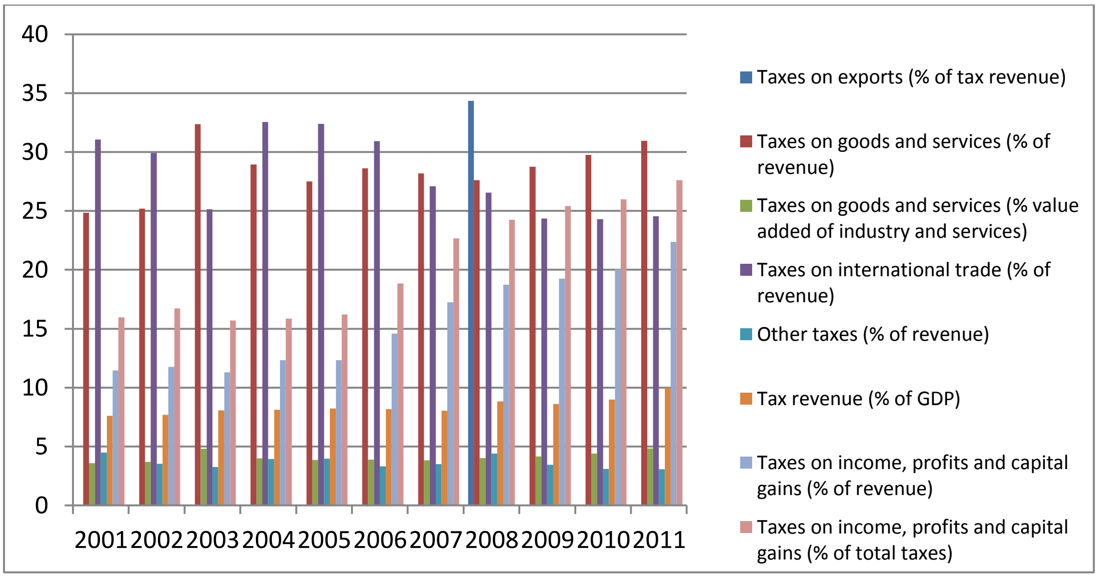
Picture 30

Large difference between deposit interest and lending rate in majority of observed period implies high country risk, strong banking influence, and negative prospect for small investor who faces high interest. This trend is decreasing and in 2012 there is small difference between rates. While base interest is still above 10 % still large risk of country is present. Probably will decrease as GDP continues to growth, and country further gains on stability.

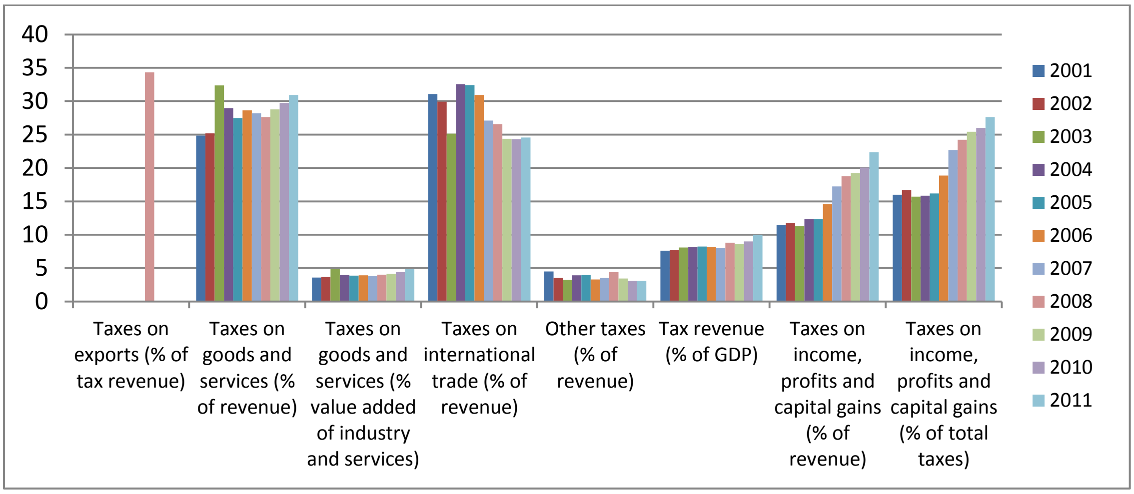


Picture 31

Very vivid picture of tax rates implies changing structure where in 2001 15,9 % of GDP came in form from tax payment to be increased in 2011 to 9,9 % of total revenue. It is important to stress that tax on income,profit,capital gains rose from 15,9 % in 2001 to 27,6 in 2011 of total tax payment.

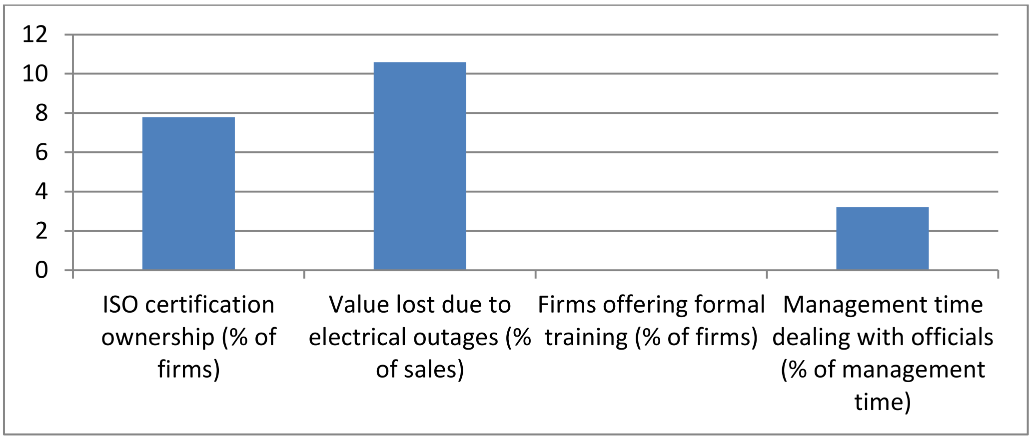


Picture 32



Picture 33

With rising foreign investment, export from agricultural and manufactured products country is more and more involved with standard systems of certifications to reach further investment potentials. Number of patents, innovations and scientific papers is also on rise.



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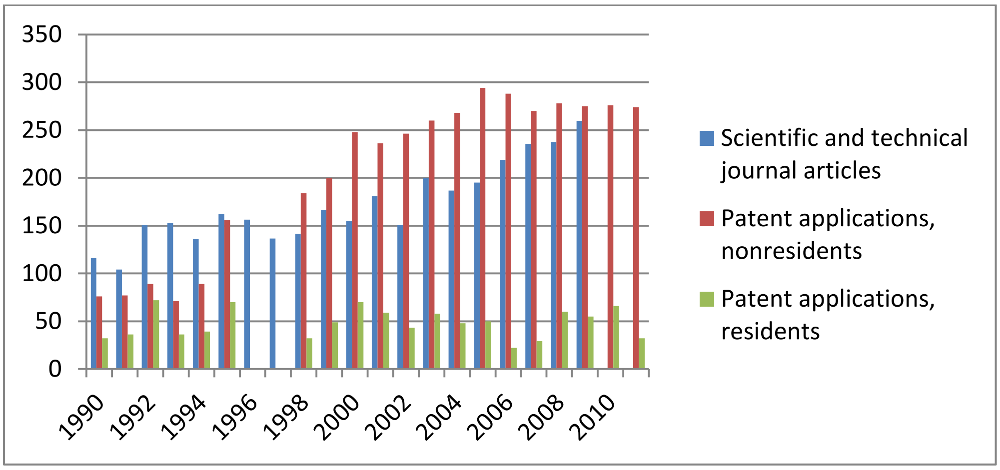

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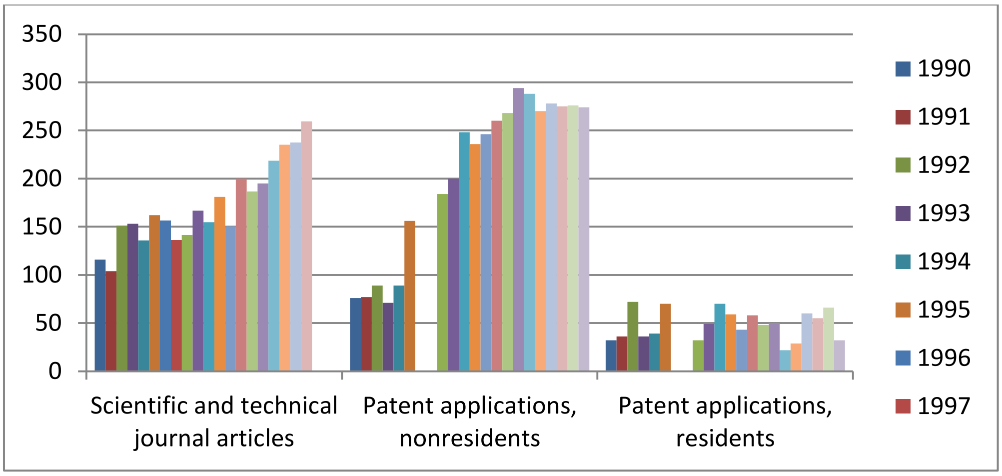

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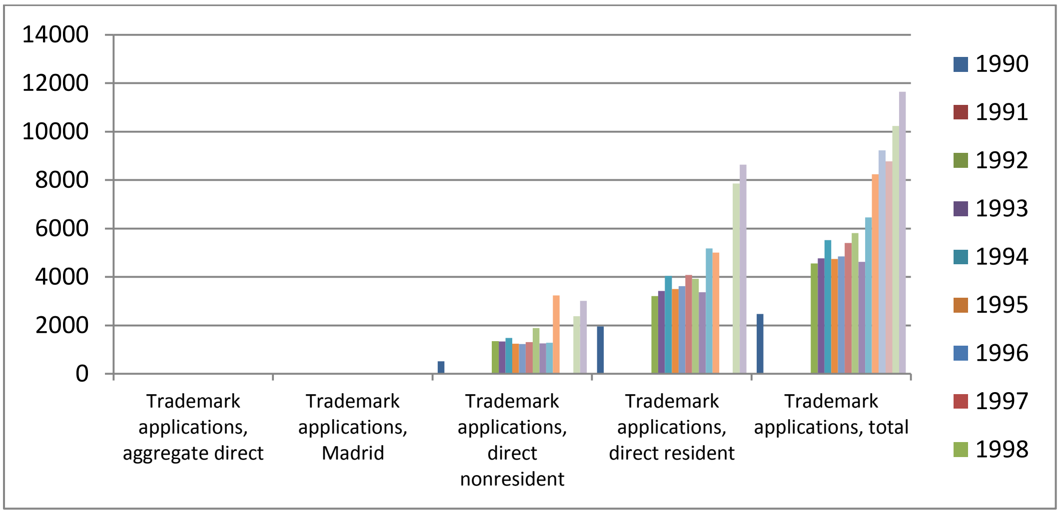
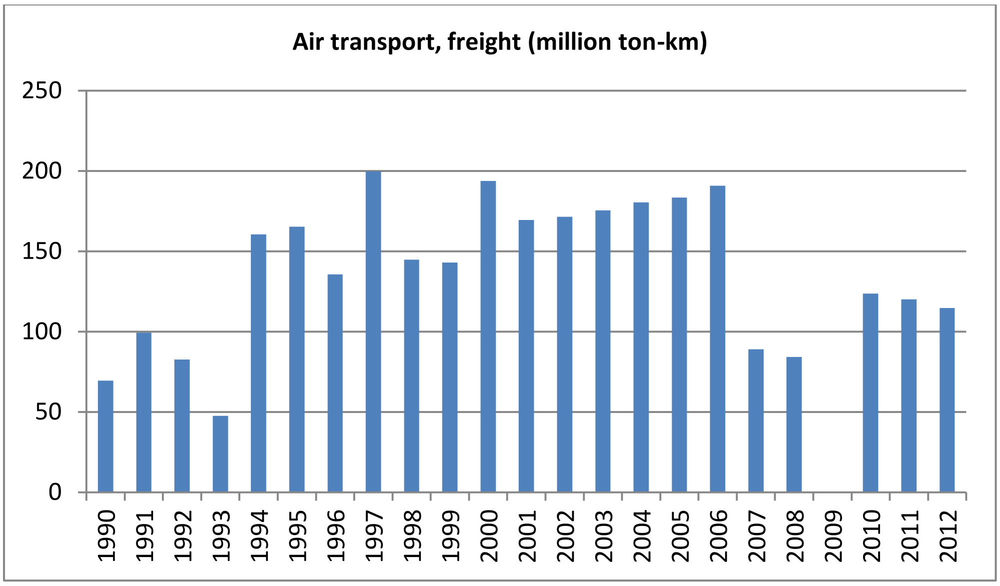


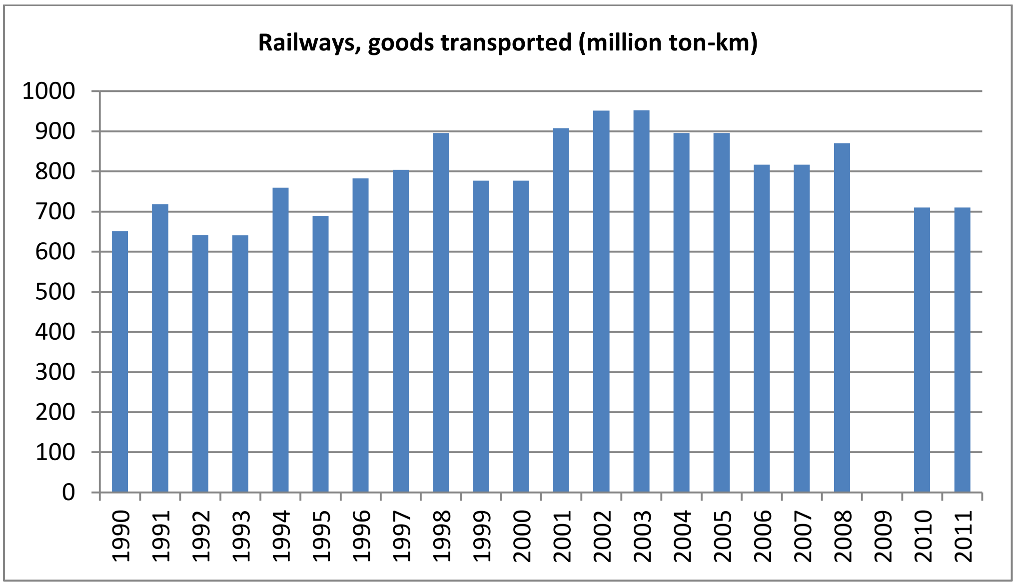
Picture 37

Very large increase in air transport was marked in period from 1994-2006 reaching values to 190 mil ton km, in 2012 however it was only 119 mill ton km.



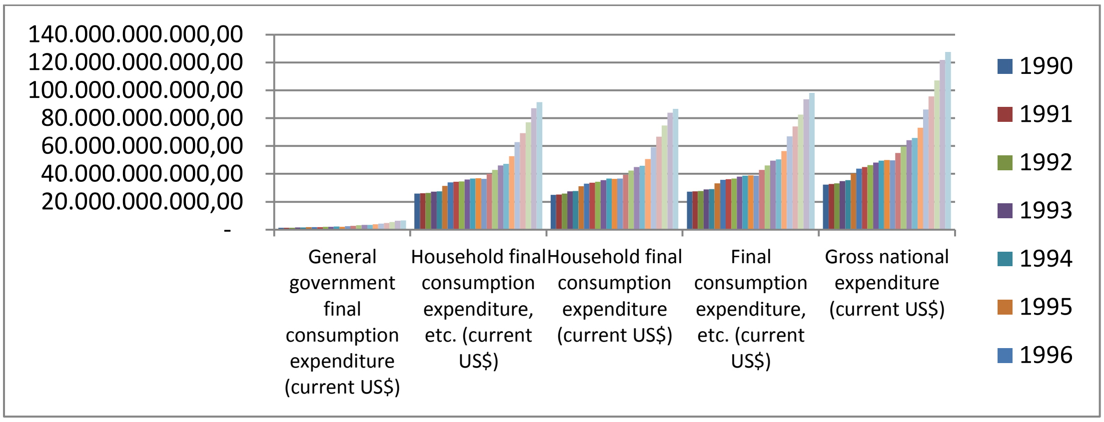
Picture 38

Railway transport also reached local peak in 2003/2004 with 951 mill ton km to reach in 2012 710 mill ton km.



Picture 39

This transport relation is adversely related to expenditure process that in period from 2012/2005 rose 190 %. General government final consumption reached 6 bills USD; household final expenditure reached 91 bills USD, and gross national expenditure rose to 127 bill USD all in trend that took exponential form.



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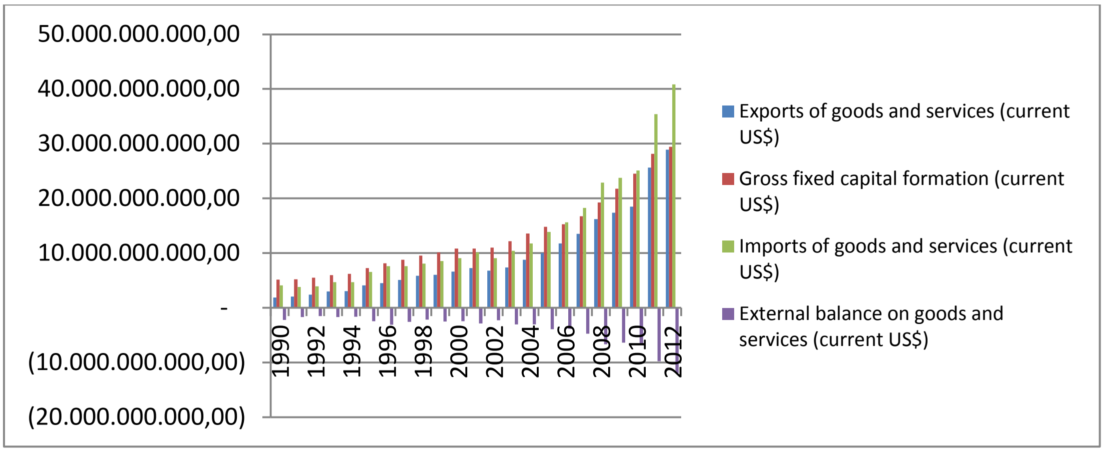
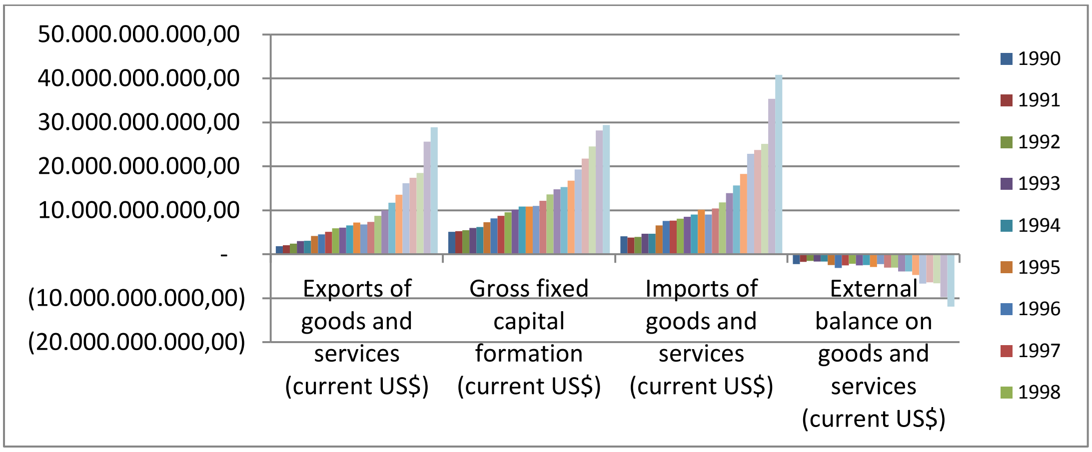


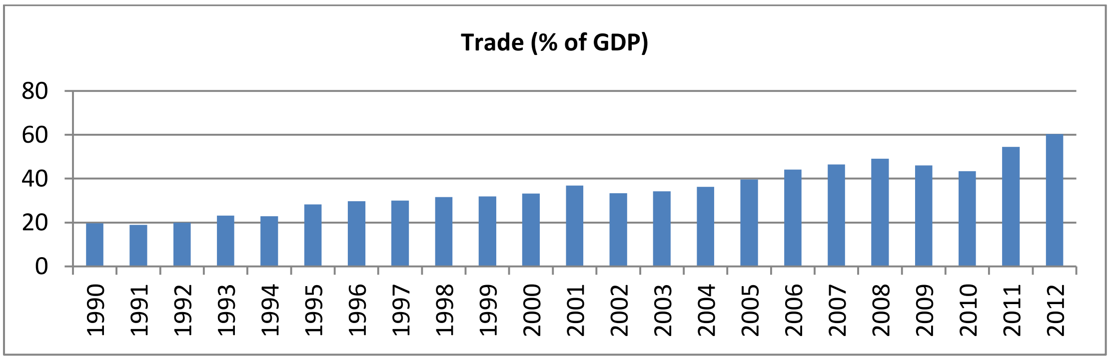
Picture 41

The same percentage marked 2012/2005 Gross fixed capital formation 198 % rise, export of goods and services rose to 289 %, import rose to 293 %, external balance (negative) rose to 306 % in 2012/2005 period.



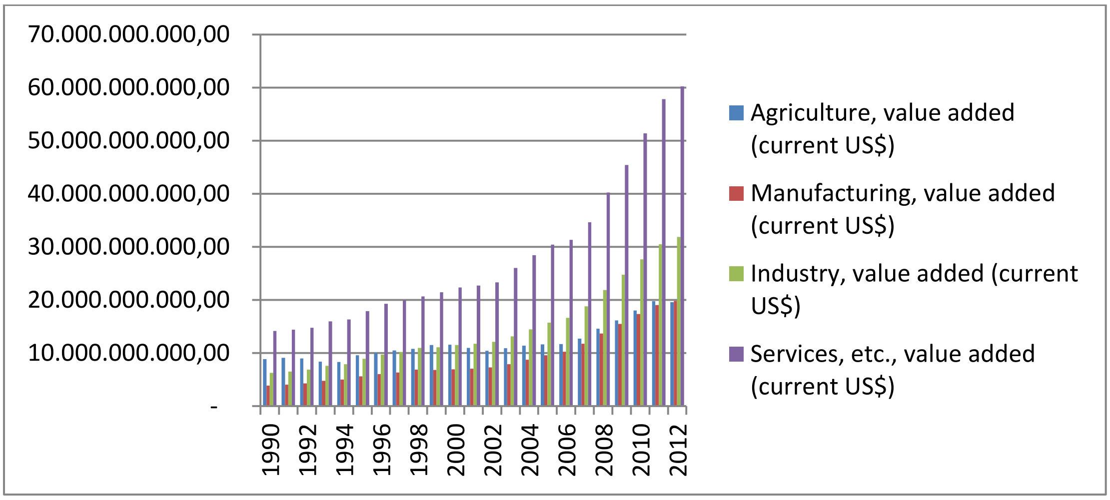
Picture 42

Remarkable is also strong growth in trade as percentage of GDP that rose from 20 % in 1990 to 60% in 2012.



Picture 43

In that respect services had a most significant part that rose from 14 bill USD to 40 bill USD in 2012. Agriculture value added rose from 8,8 bill USD in 1990 to 19,5 bill USD in 2012, industry value added was 6,2 bill USD in 1990 to reach 31,8 bill USD in 2012, and manufacturing value added rose from 3,8 bill USD in 1990 to 19,7 bill USD in 2012.



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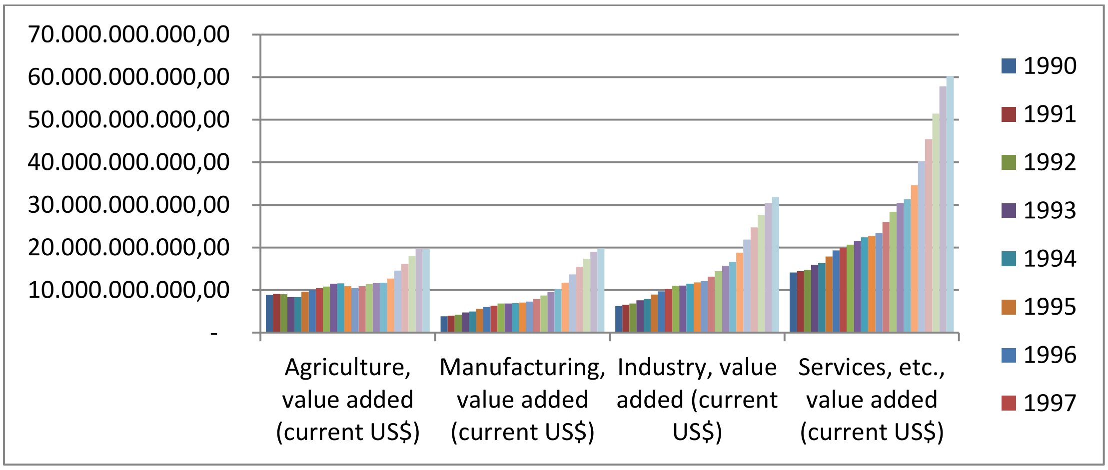
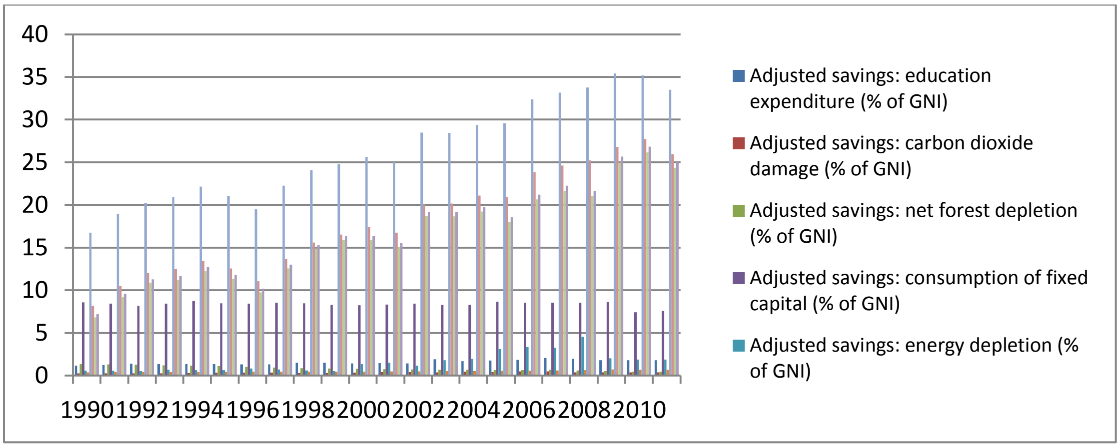


Picture 45

Savings followed that trend but with slower phase rising from 16 % of GNI in 1990 to 33,4% of GNI in 2012.



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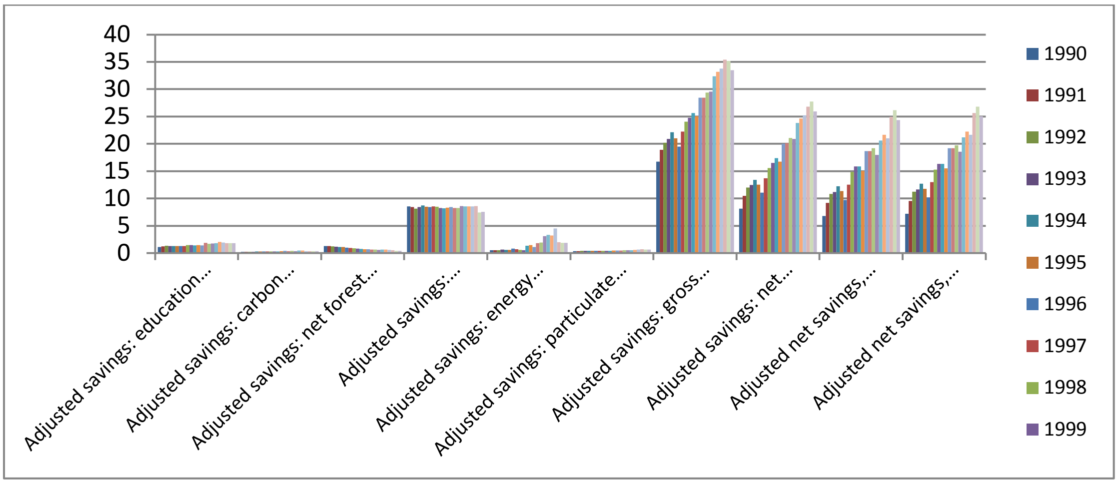

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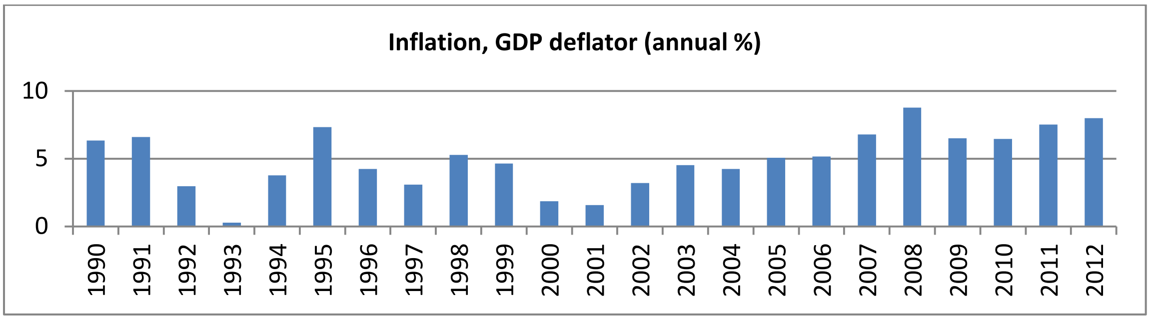

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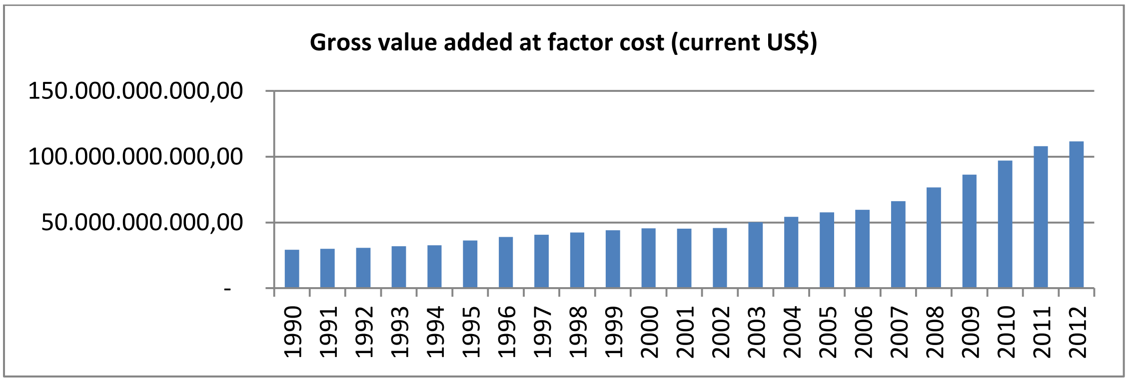
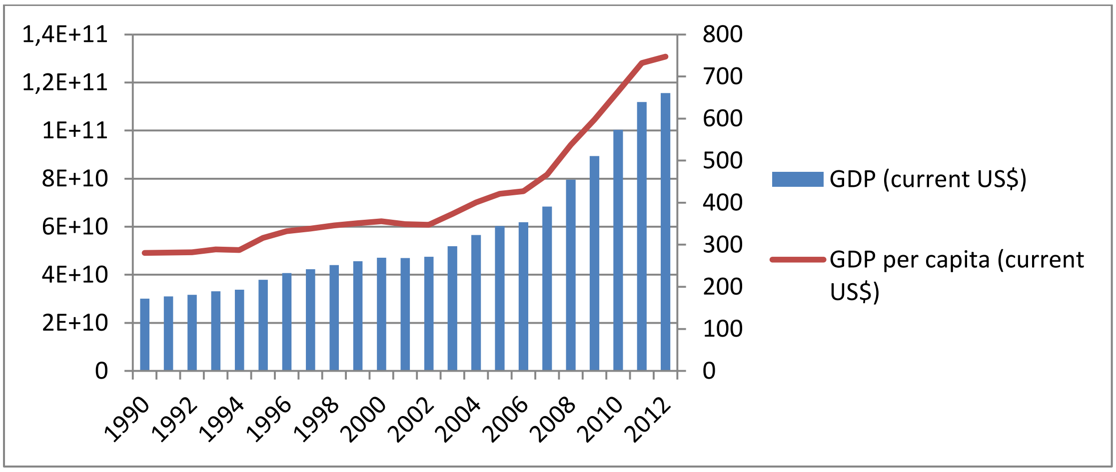


Picture 49

This Results points out at very strong growth of GDP and GDP/capita especially in period after 2002.where in 1990 GDP /capita was 280 USD and in 2012 747 USD. It is still very far away from average of EU, or USA where countries have more than 20 000 USD/capita reaching 3,7 % of average GDP/capita in western economies.



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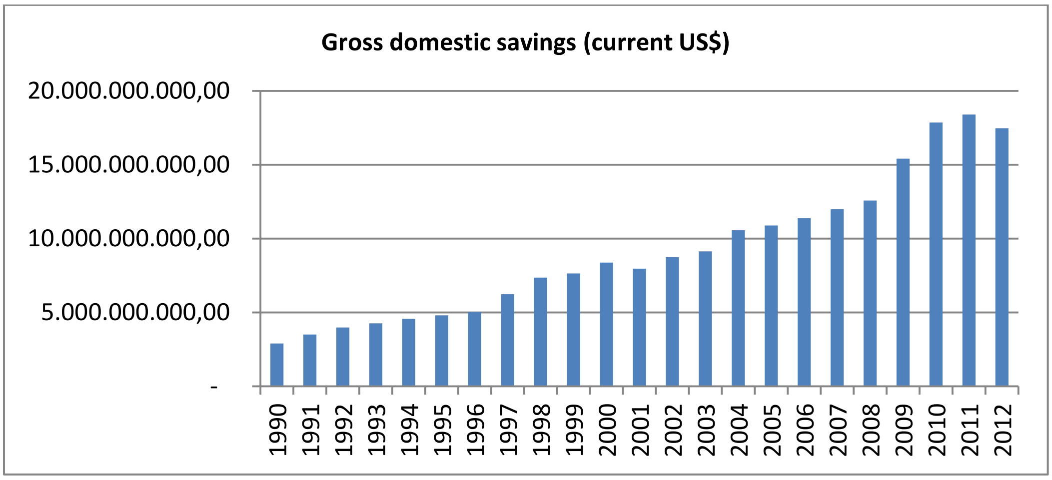
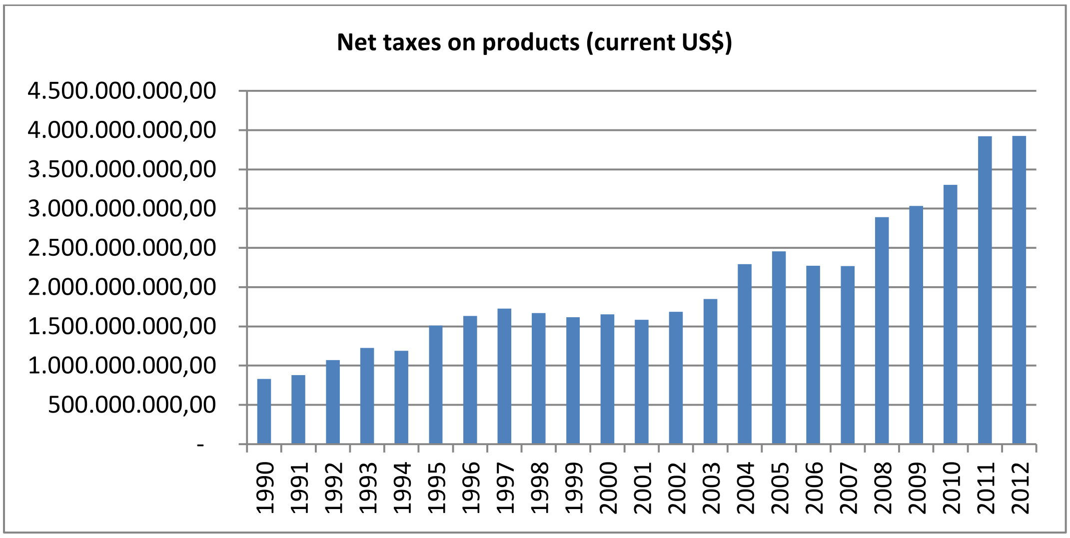


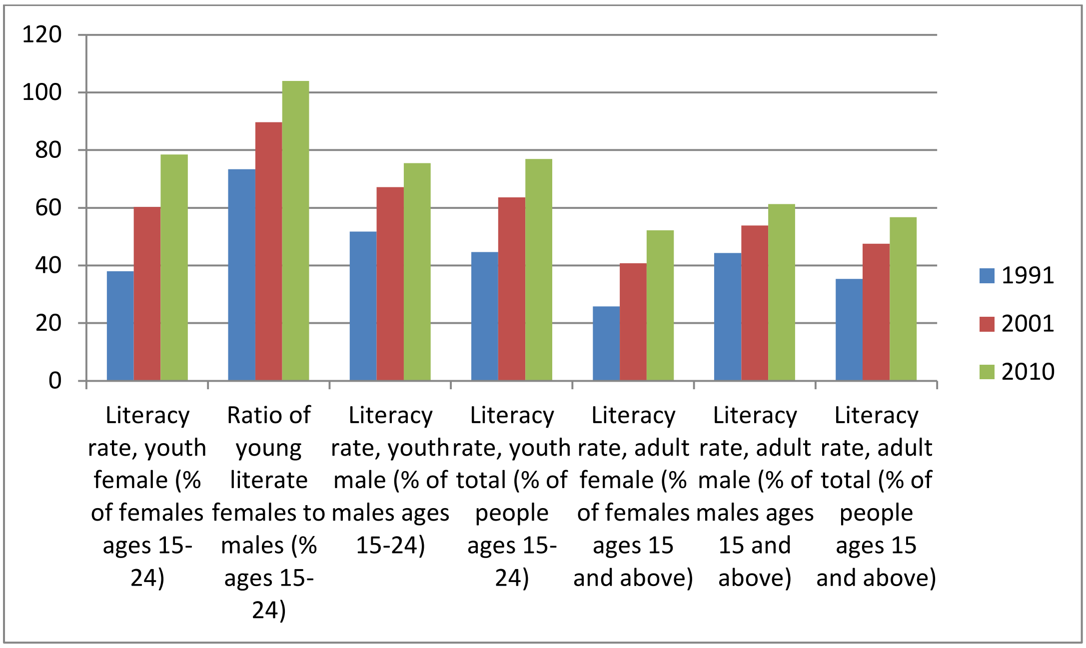
Picture 51

It was to expected that input in industrial and agricultural sector would bring additional tax requirements, but on this side of equation more important is the fact is the tax money used to prevent child labor , improve working conditions in companies, improve some negotiating power with investments from abroad, build additional infrastructure :schools, hospitals, sanitation, roads etc.



Picture 52

As in case of GDP growth social improvements are better but far away from results from average mid income economies. Literacy rates improved but are still under 100 for young's 15-24 years old.



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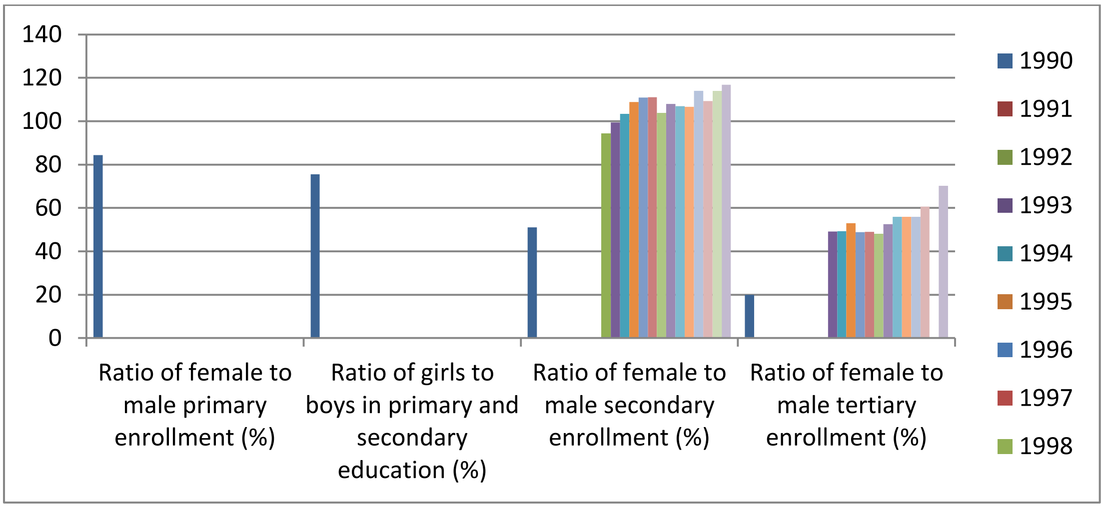

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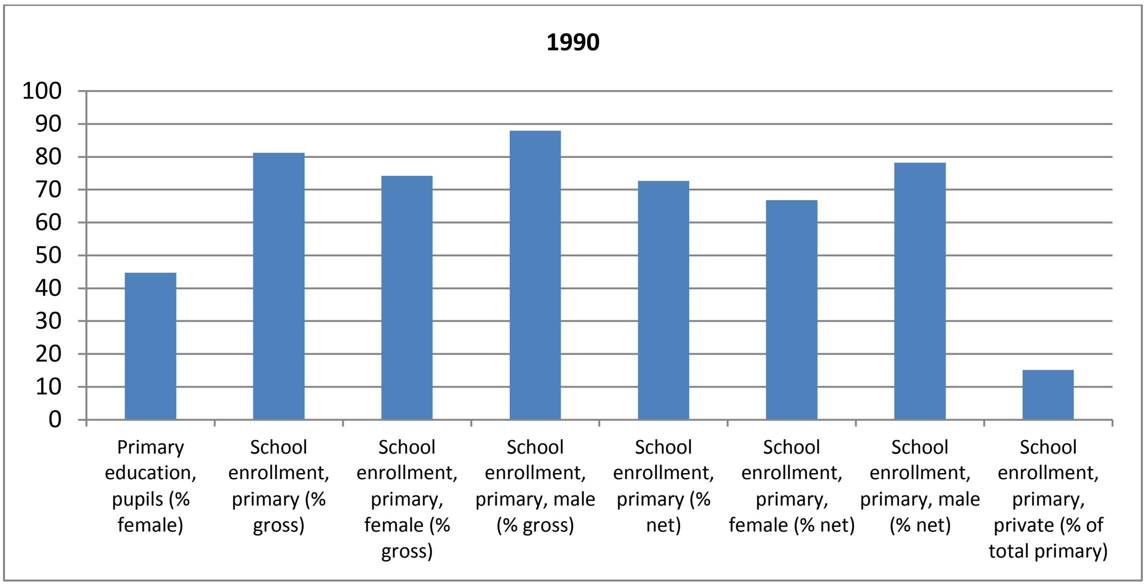

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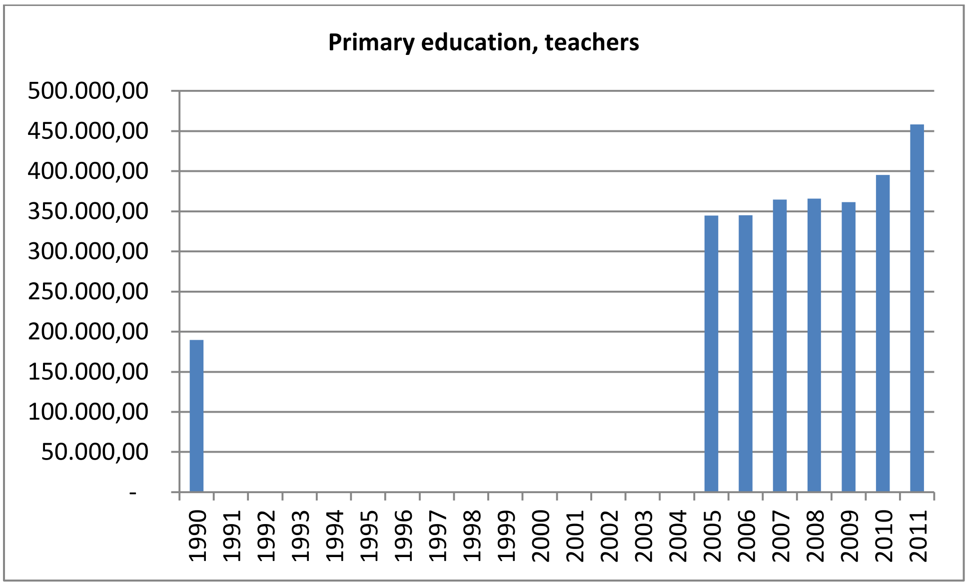

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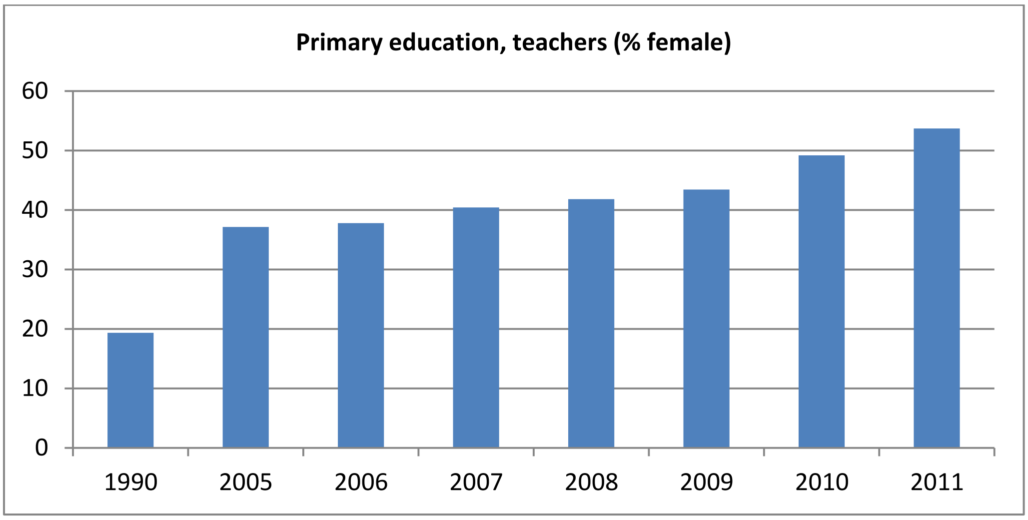

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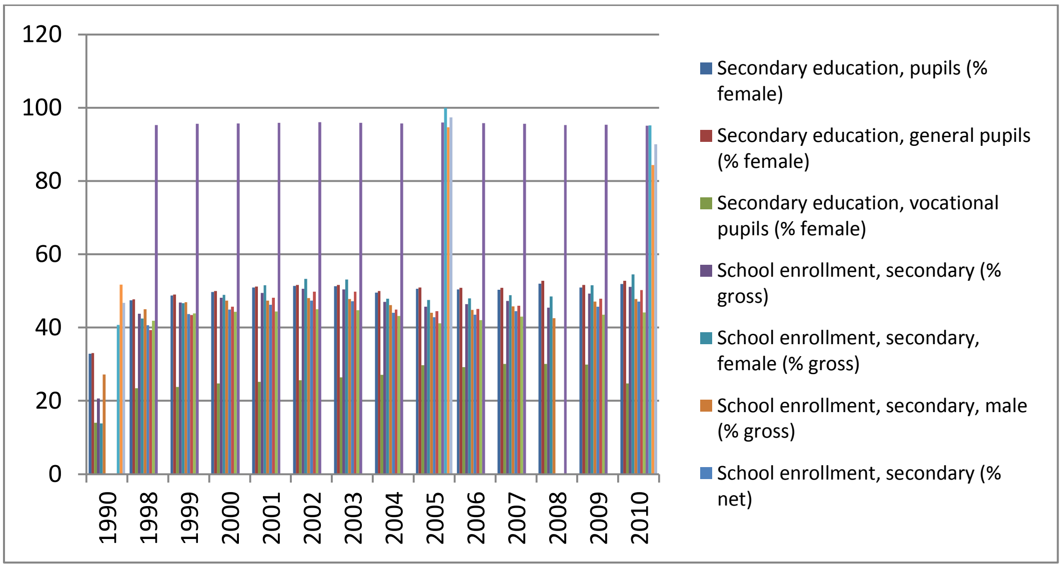

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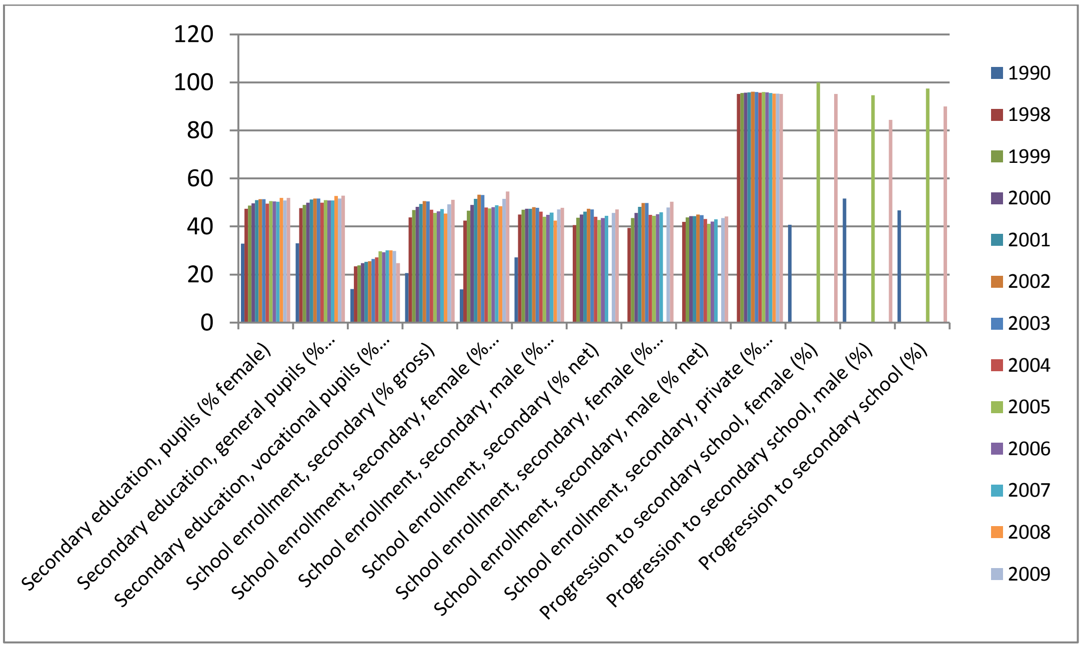

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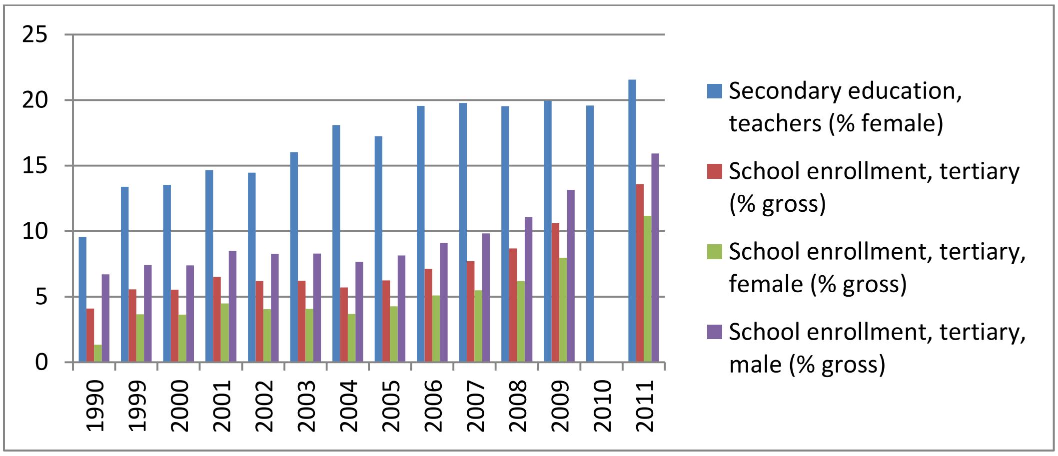

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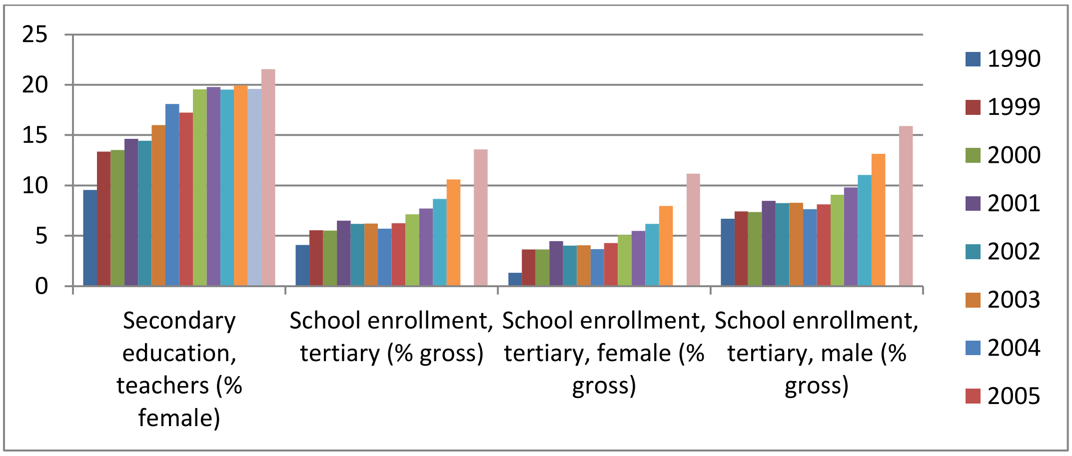

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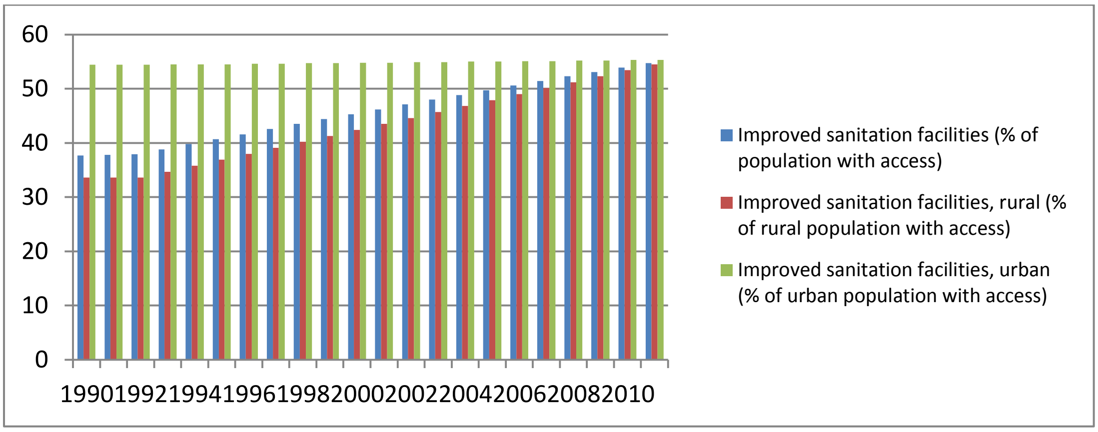

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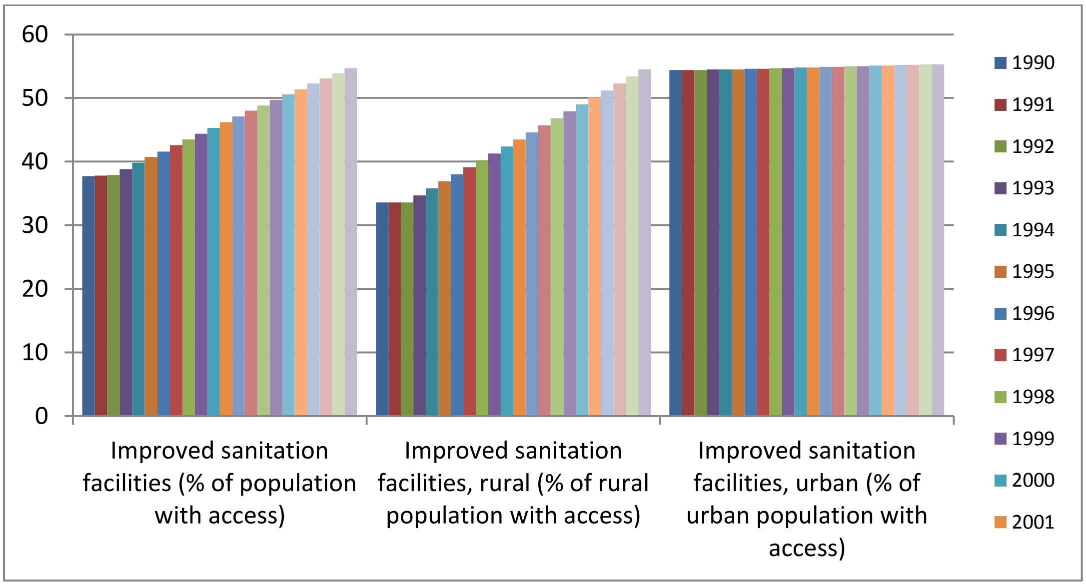

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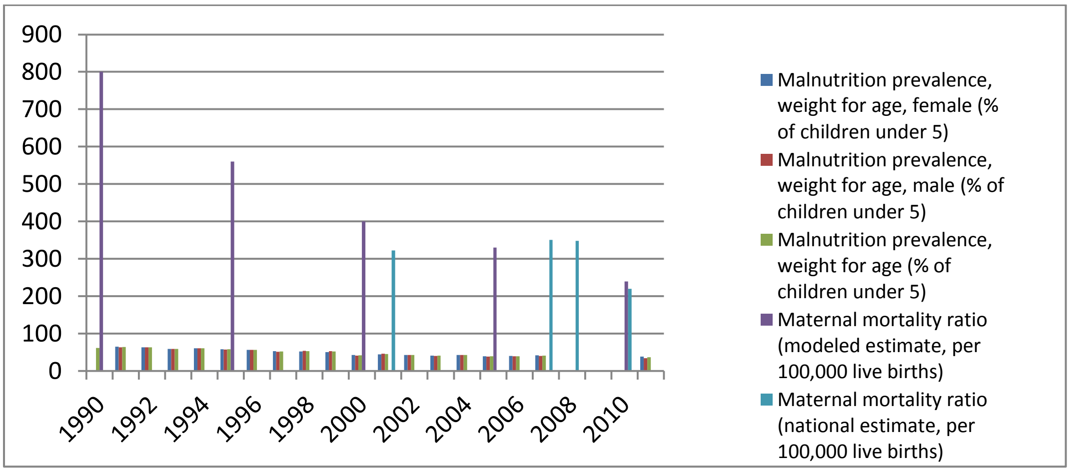

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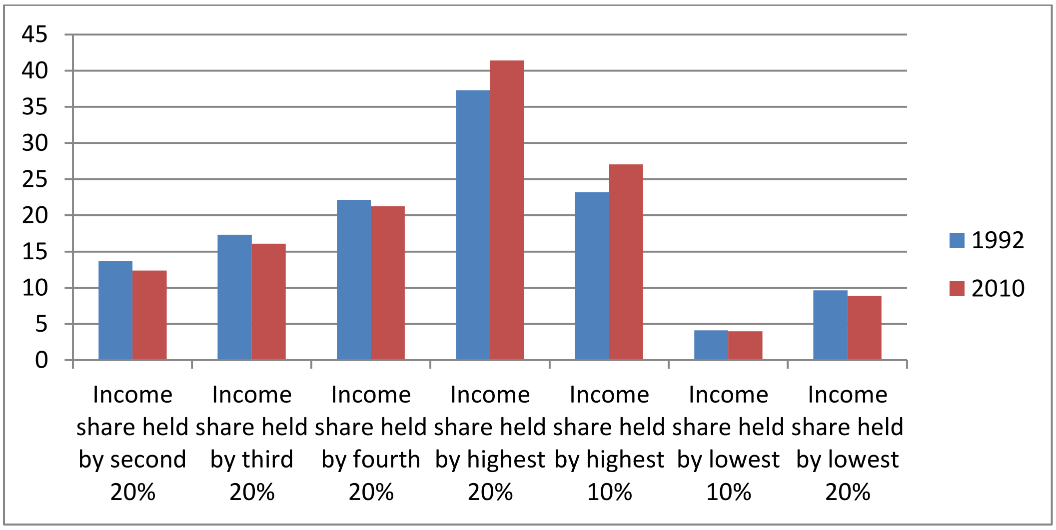
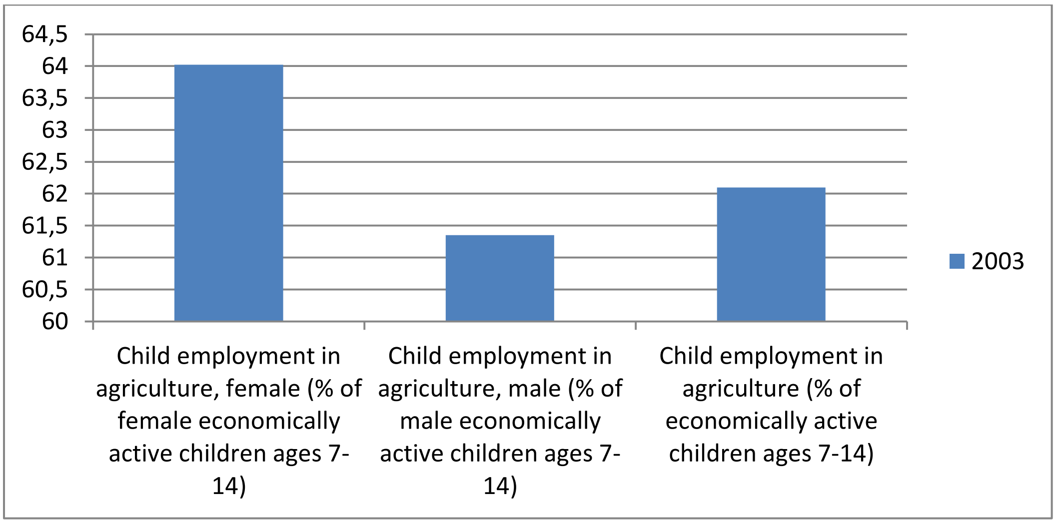


Picture 65

Very large degree of child employment in agriculture sector both female and male in the age from 7-14 still exists. The large number of them is employed in family or village farms and have both school and jobs obligations.



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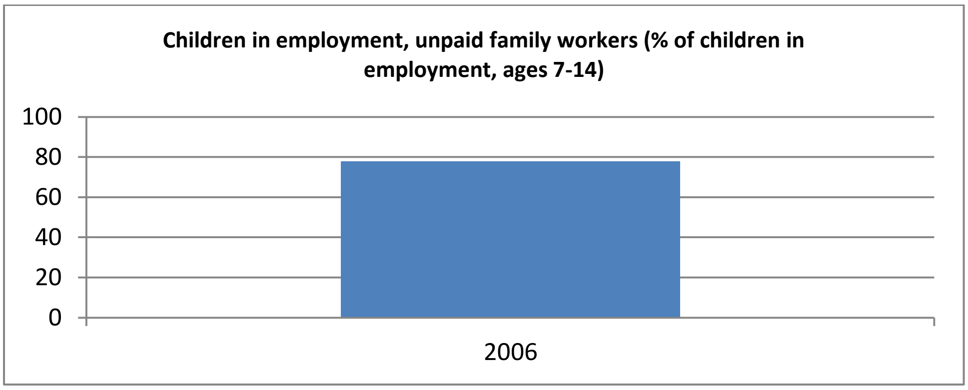
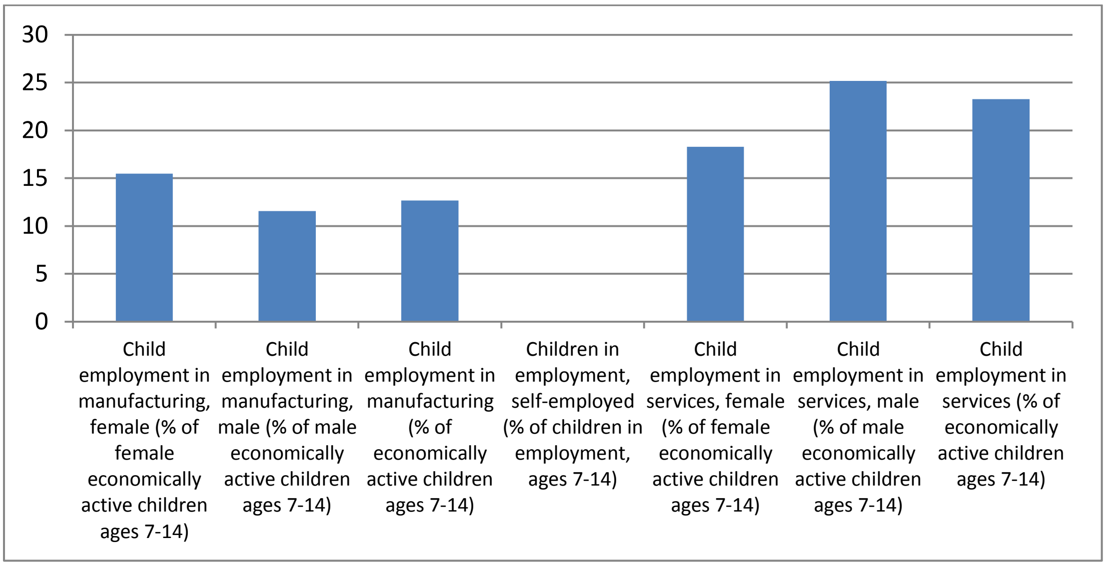


Picture 67

Very disturbing fact is that very large percentage of children work in manufacturing and service sectors missing schools, or not going at school at all.



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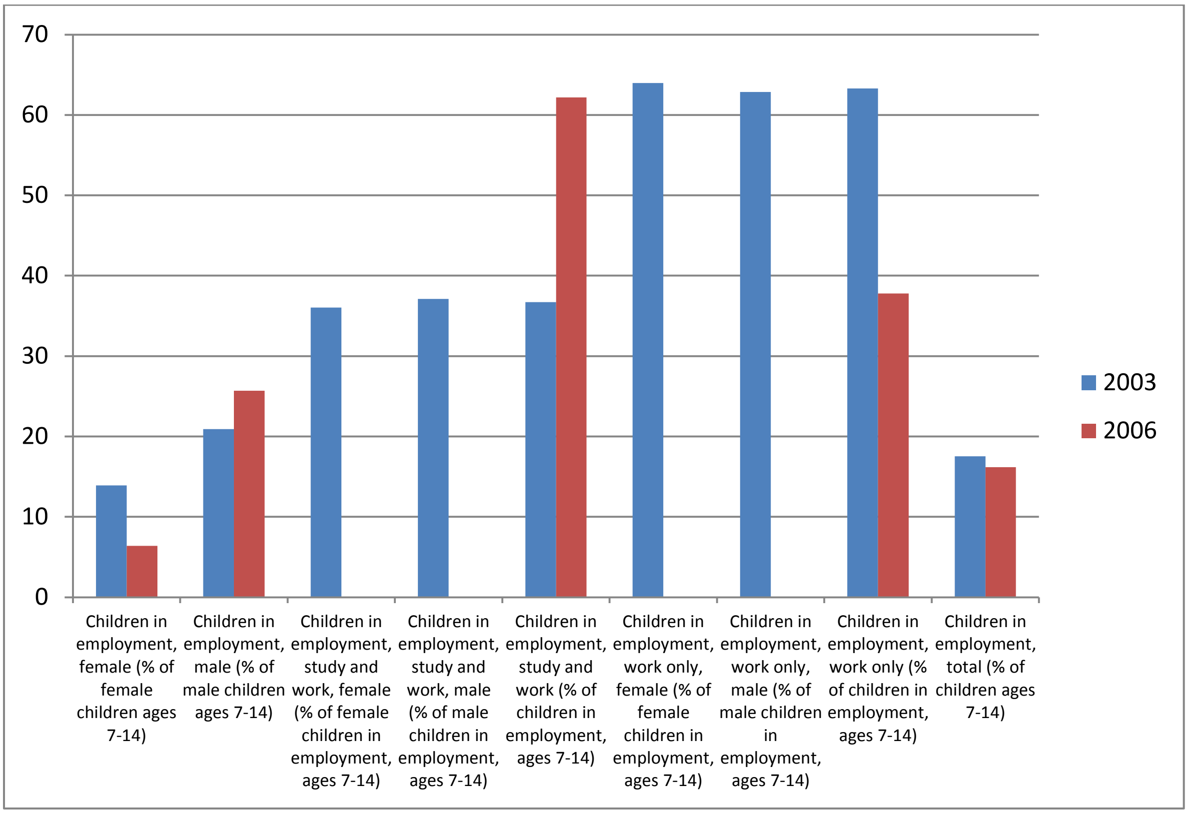

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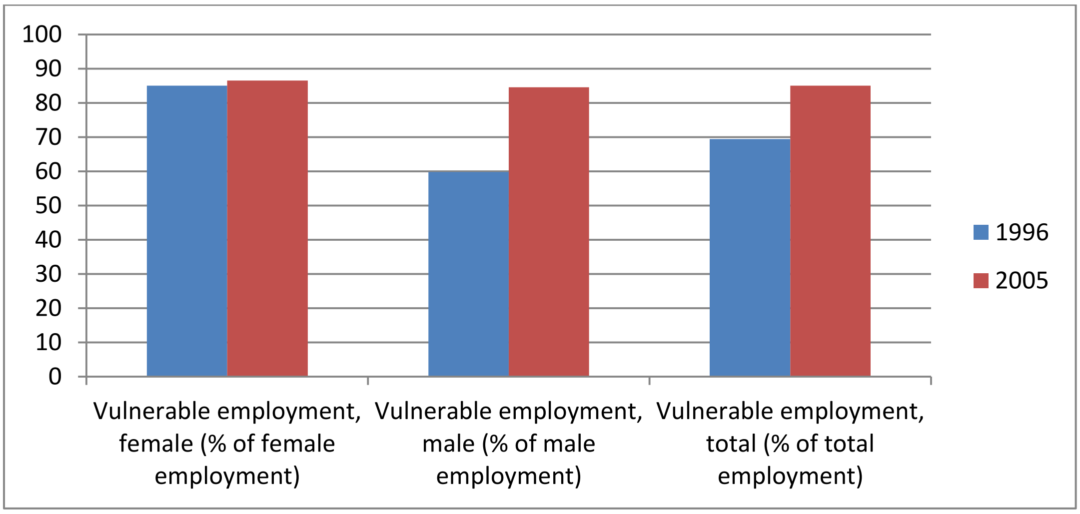

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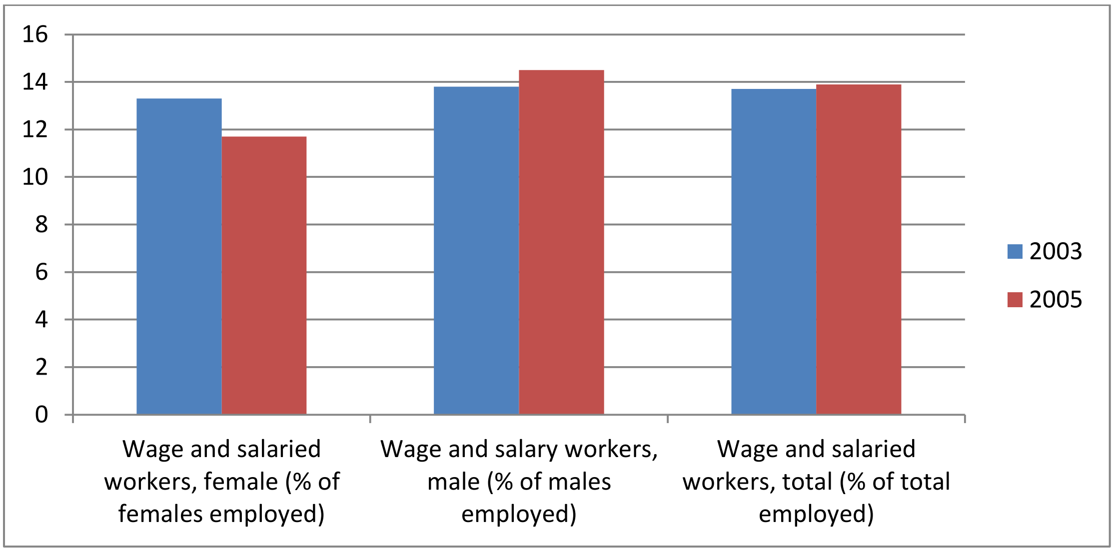

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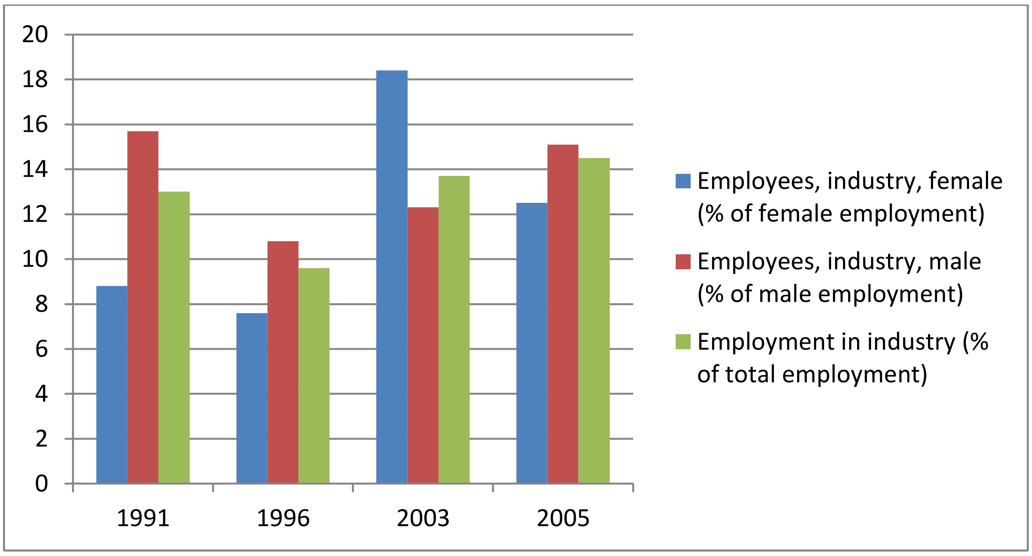

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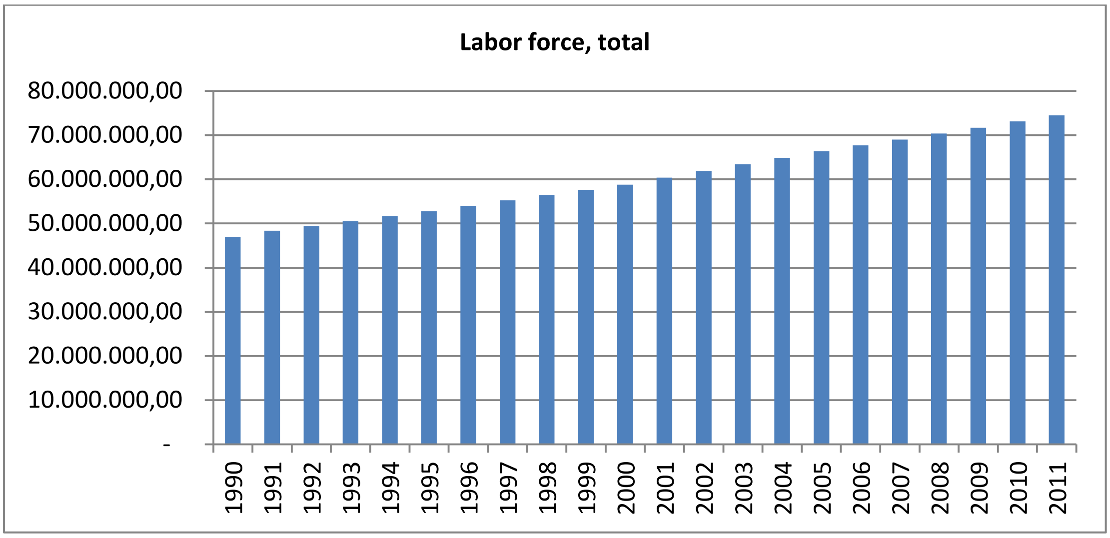

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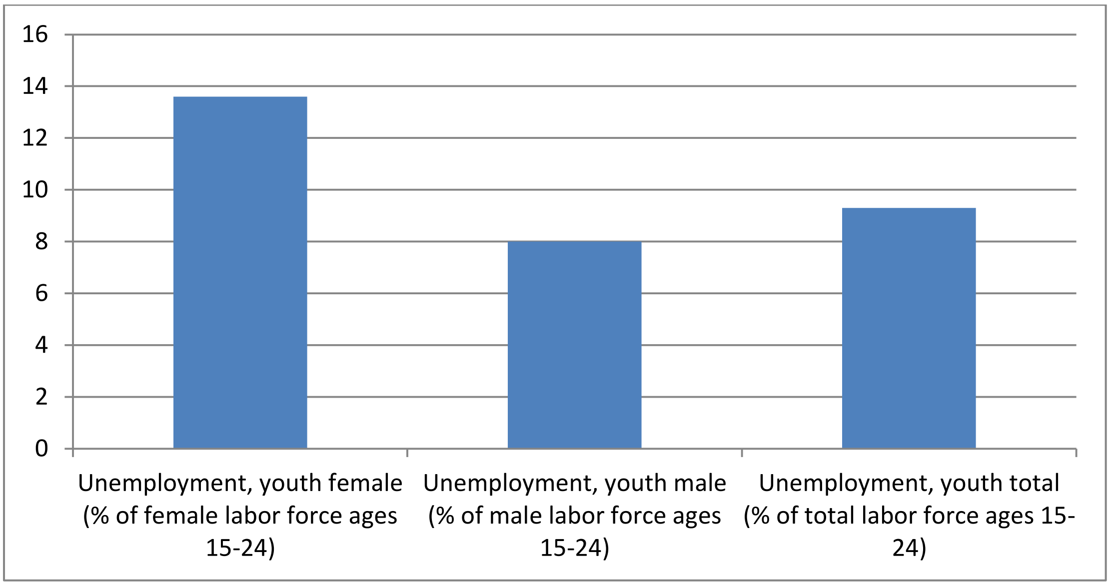

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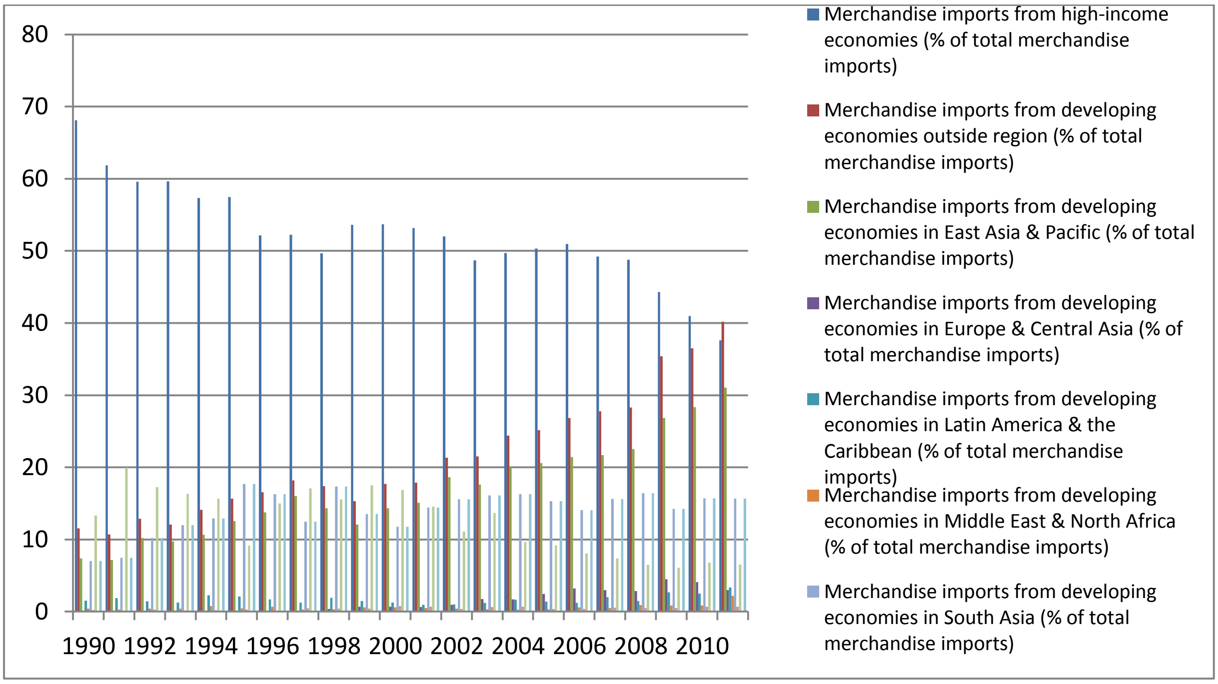

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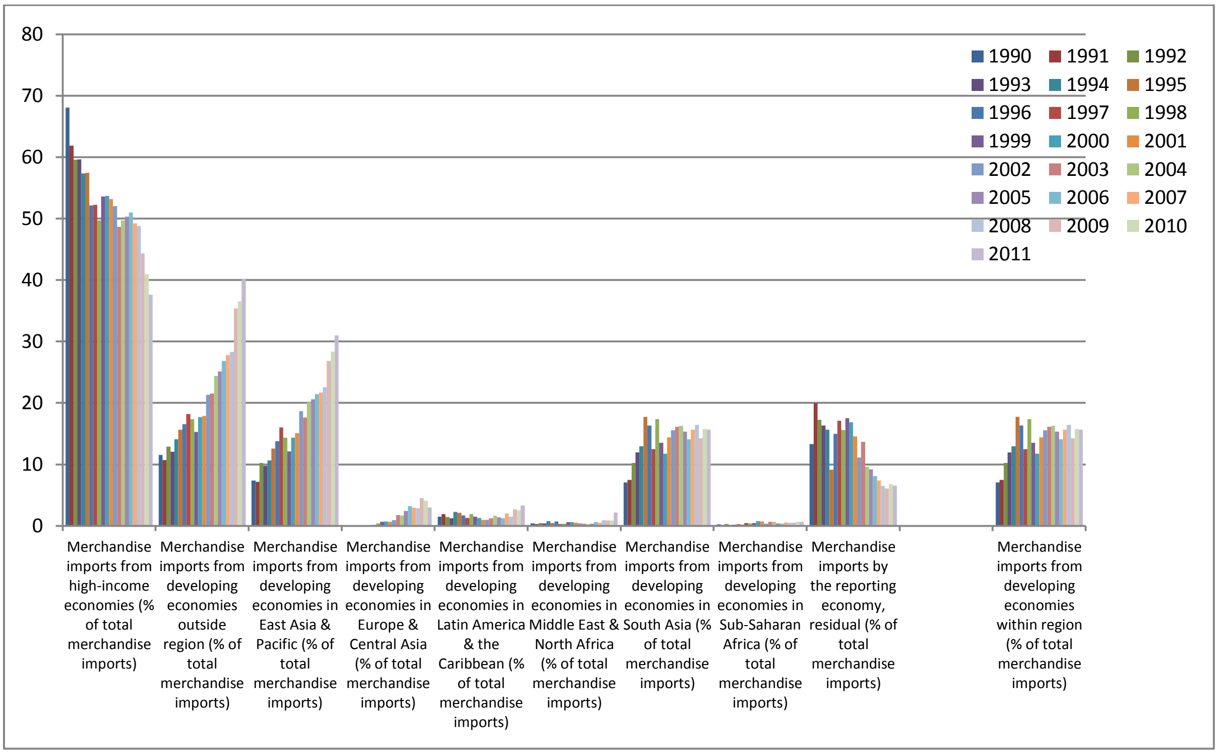

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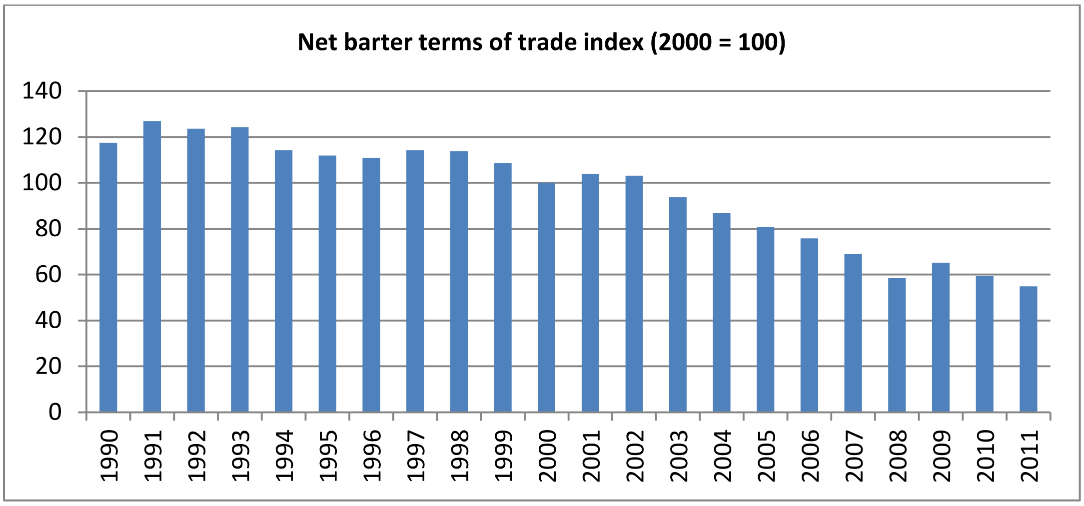

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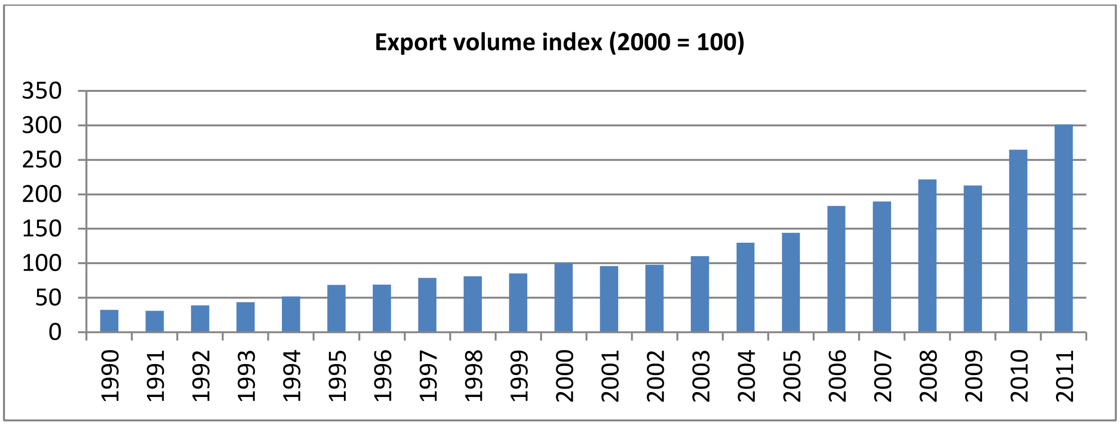

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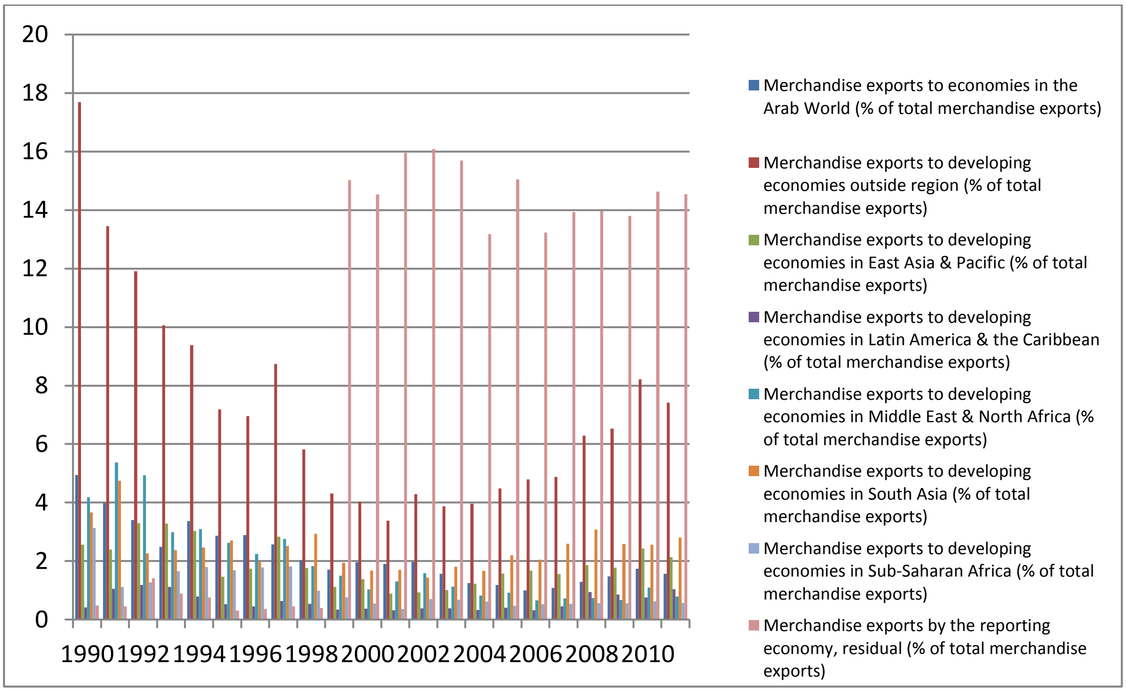
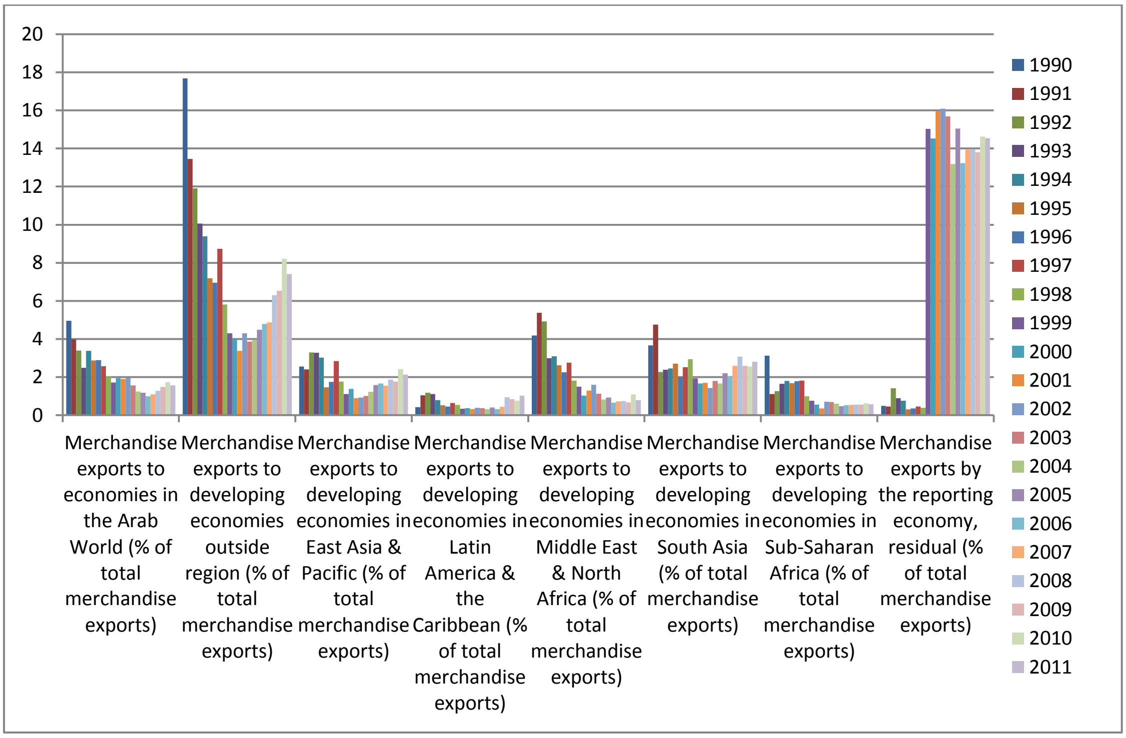


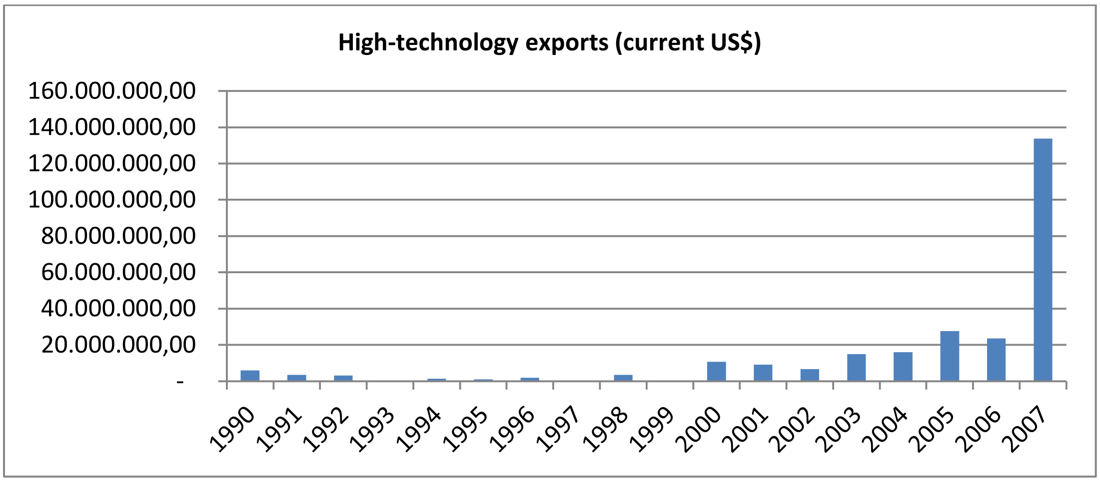
Picture 79

It is of high significance to closely monitor merchandise export in areas around world: potential markets of South America, other developing countries, keep in phase with current trend to export goods to high income economies with proper strategy of wage rise.



Picture 80

Potential for high technology production and export exist- although it seems hard to achieve results from Japan,Korea China. If some parts or reorganization is done on Far East, promoting regional growth and better trading conditions for goods, agricultural and textile great movements can be reached here.



Picture 81

4. CONCLUSION

Very hard time in changing current payment conditions by workers in Bangladesh that is far below average world price is tried to be tackled and solved by this paper. Although several strategies are proposed it is highly likely that all are needed in the best mood situation from all parts in process of rising standard, banning the child labor and improving working conditions in Bangladesh and region as whole.

Although GDP grows in recent years as a consequence of high level of agriculture and manufacturing production, it is mainly done by cheap labor from country that puts its efforts in world trade where profits are not collected by end user or worker in country of origin. The high barriers to loans with high interest rates prevents local people from establishing production with domestic owners and this situation can be solved by agreement with current investor to allow participation ESOP to some extend for his workers. If this is not possible than barriers of enter for new investor from region of continent should be lowered or government promote state bank with lower interest rates with end aim workers participation in ownership and work process as well.

High production, low wages, increasing GDP, increased energy usage point out on larger emissions that could besides monsoon problems bring environmental damages and additional problems to region. High mounting of Tibet with melting snow from one side, and Indian Ocean as source of flooding's can influence large negative impacts on agriculture and population as whole. Without wage rise, proper protection that implied new modern architecture, large transport systems build as infrastructure projects from Government that provoke less emissions, each person aware of problems and acting at best interest for himself and nature as one, new problems will appear with high likelihood.

Wage rise, children that are busying in school instead in factories or fields is just the first step in struggle for decent human living. Aim is however greater : keeping and taking care of the whole system in nature- humans, animals and nature itself in region that connects the highest mounting of Tibet and the lowest sea levels far away in Pacific ocean.

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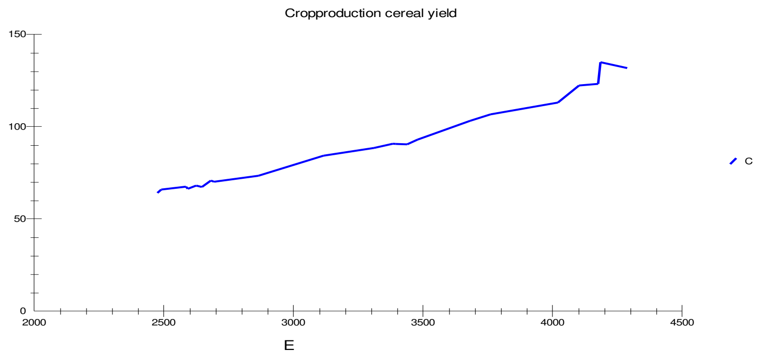
APPENDIX I

CROPPRODUCTION CEREAL YIELD

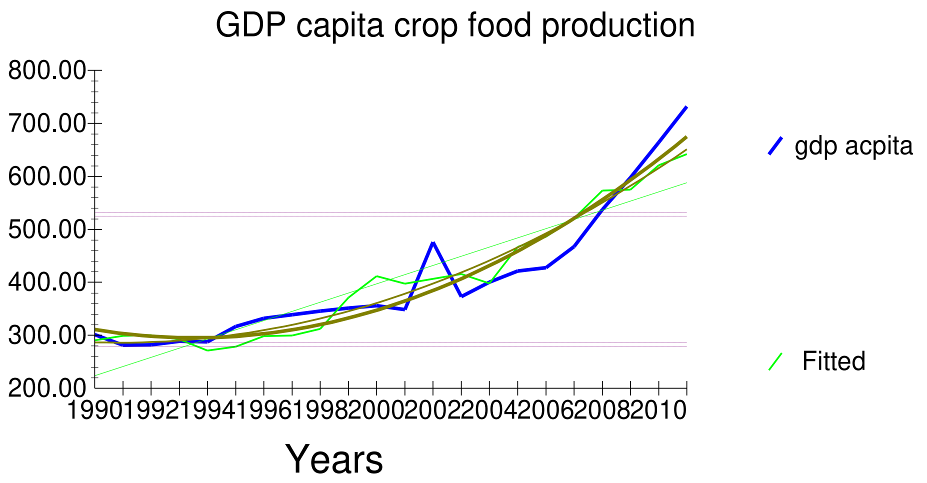
Crop production cereal yield strong rising connection

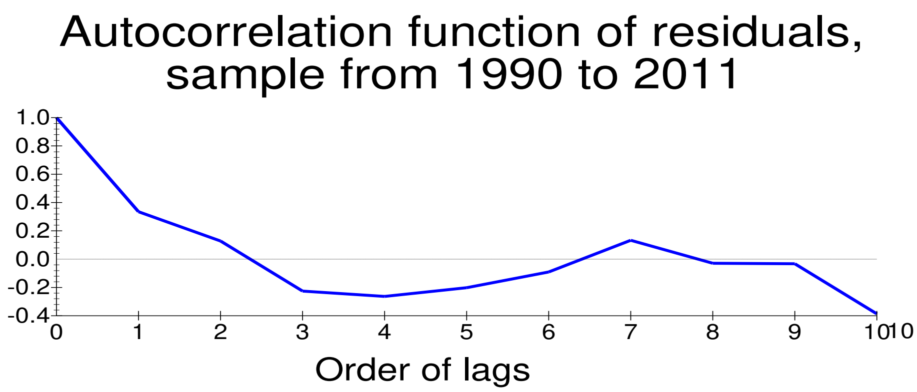


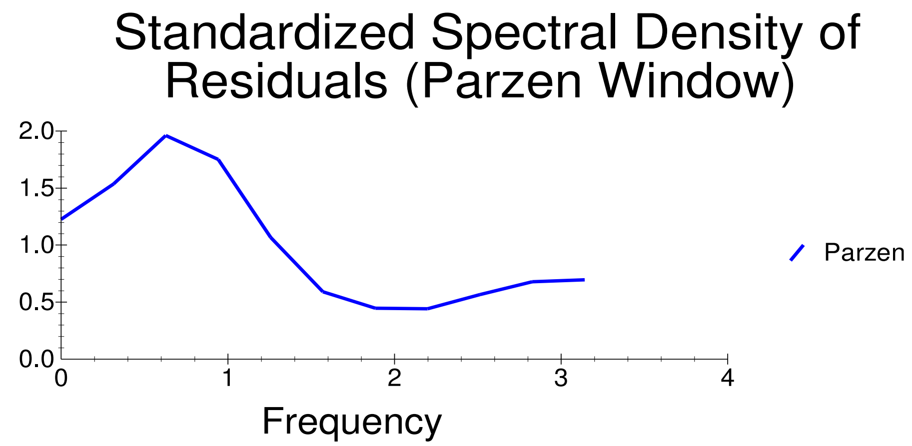
GDP- GG- CON CROP PRODUCTION INDEX (2004=100) -C, FOOD PRODUCTION INDEX (2004=100)-D

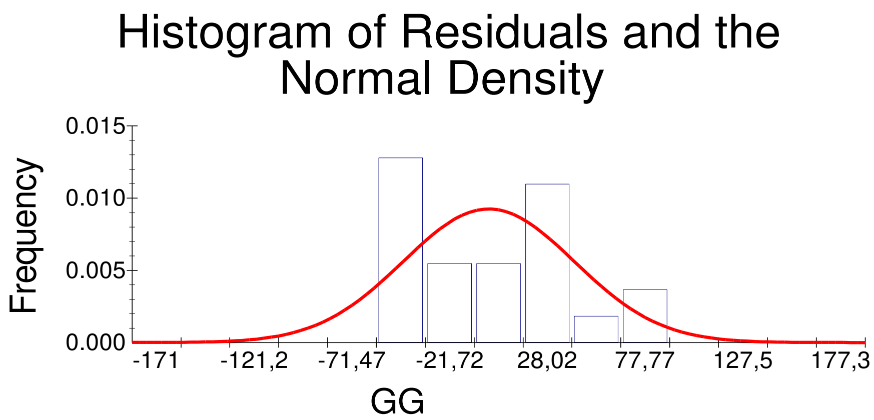
```
    Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is GG
 22 observations used for estimation from 1990 to 2011
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      -46.6678            43.9217            -1.0625[.301]
 C                         11.5784            11.5700             1.0007[.330]
 D                         -6.6085            11.8544            -.55748[.584]
*******************************************************************************
 R-Squared                     .88417   R-Bar-Squared                    .87198
 S.E. of Regression           45.3465   F-stat.    F(  2,  19)   72.5168[.000]
 Mean of Dependent Variable  405.7782   S.D. of Dependent Variable    126.7361
 Residual Sum of Squares      39069.7   Equation Log-likelihood      -113.5193
 Akaike Info. Criterion     -116.5193   Schwarz Bayesian Criterion   -118.1559
 DW-statistic                  1.1182
*******************************************************************************


                              Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   3.3417[.068]*F(   1,  18)=   3.2238[.089]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=  11.8202[.001]*F(   1,  18)=  20.9005[.000]*
```

```
*                      *                           *                             *
* C:Normality          *CHSQ(   2)=   1.0441[.593]*       Not applicable         *
*                      *                           *                             *
* D:Heteroscedasticity*CHSQ(   1)=   6.8985[.009]*F(   1,  20)=   9.1363[.007]*
*******************************************************************************
   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
```





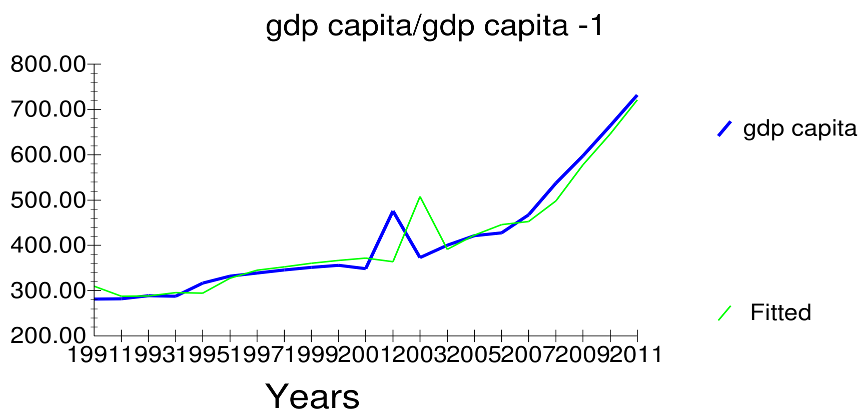

Standardized Spectral Density of Residuals (Parzen Window)
2.0
1.5
1.0
0.5
0.0
0
1
2
3
4
Frequency
Parzen

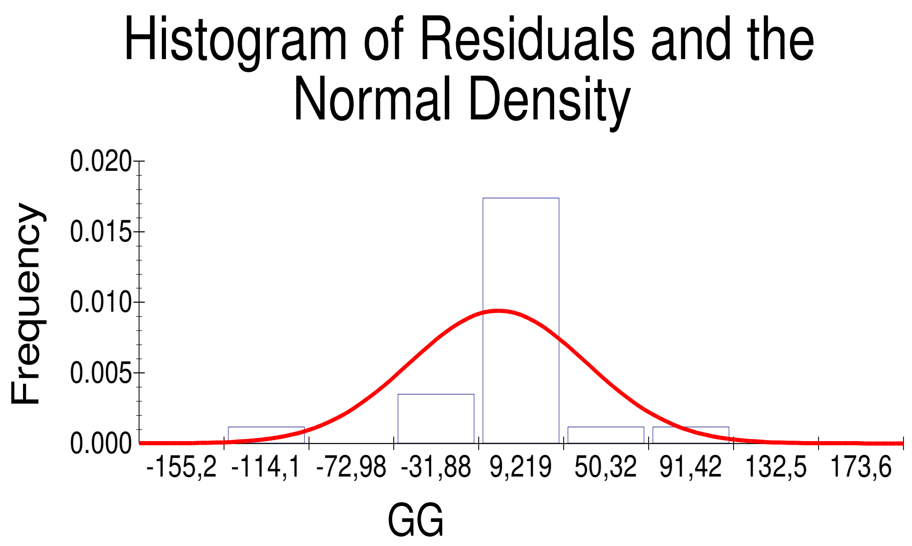

Histogram of Residuals and the Normal Density
Frequency
0.015
0.010
0.005
0.000
-171
-121,2
-71,47
-21,72
28,02
77,77
127,5
177,3
GG

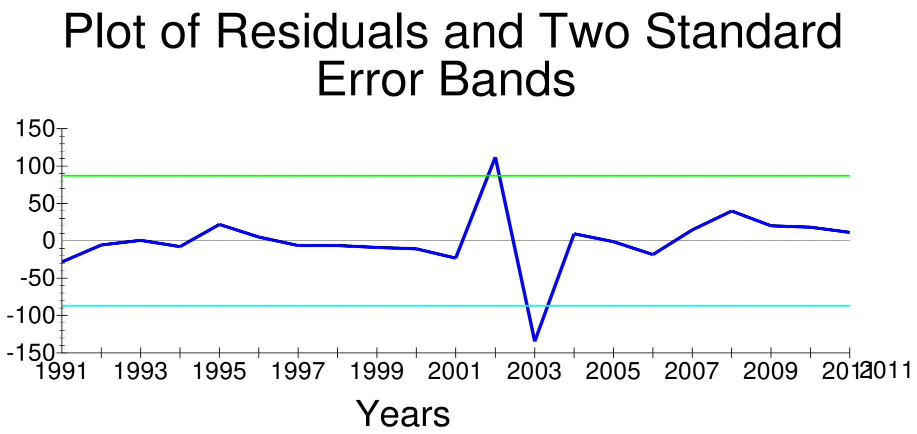
GDP-GG- CON GDP(- 1) –GDP1

```
                        Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is GG
 21 observations used for estimation from 1991 to 2011
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      -31.4638           36.9647            -.85119[.405]
 GDP1                       1.1332           .091547            12.3783[.000]
*******************************************************************************
 R-Squared                     .88968   R-Bar-Squared                    .88387
 S.E. of Regression           43.4984   F-stat.    F(  1,  19)  153.2230[.000]
 Mean of Dependent Variable  410.7539   S.D. of Dependent Variable    127.6449
 Residual Sum of Squares      35950.0   Equation Log-likelihood      -107.9740
 Akaike Info. Criterion     -109.9740   Schwarz Bayesian Criterion   -111.0185
 DW-statistic                  2.9054
*******************************************************************************


                                Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   5.2386[.022]*F(   1,  18)=   5.9826[.025]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   .33351[.564]*F(   1,  18)=   .29047[.597]*
*                     *                          *                            *
```

```
* C:Normality          *CHSQ(   2)=  23.0622[.000]*       Not applicable       *

*                      *                          *                            *

* D:Heteroscedasticity*CHSQ(   1)=   .13257[.716]*F(   1,  19)=   .12071[.732]*

*******************************************************************************

   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
```







GDP (GG) CON DLN GDP 1 DLN GP 2

Ordinary Least Squares Estimation

****

Dependent variable is GG

21 observations used for estimation from 1991 to 2011

****

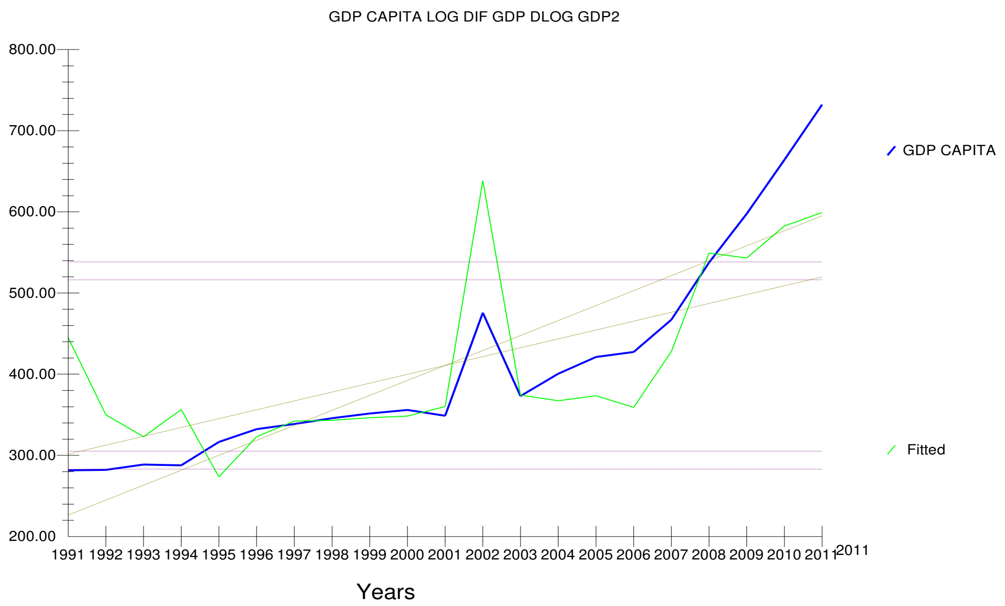
Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	-151756.0	29470.7	-5.1494[.000]
DLNGDP1	-25596.1	4846.6	-5.2813[.000]
DLNGDP2	152108.2	29464.1	5.1625[.000]

****

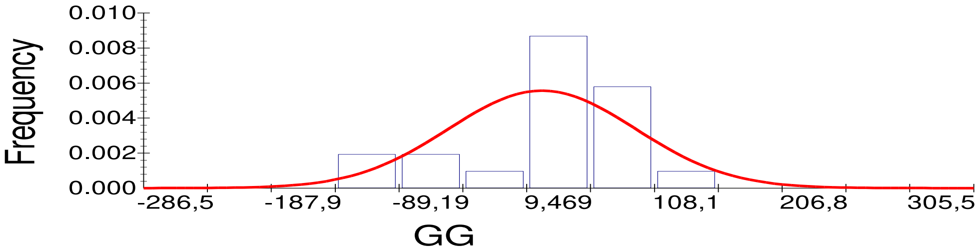
R-Squared	.68471	R-Bar-Squared	.64967
S.E. of Regression	75.5509	F-stat. F(2, 18)	19.5448[.000]
Mean of Dependent Variable	410.7539	S.D. of Dependent Variable	127.6449
Residual Sum of Squares	102743.0	Equation Log-likelihood	-119.0001
Akaike Info. Criterion	-122.0001	Schwarz Bayesian Criterion	-123.5669
DW-statistic	.85181		

****

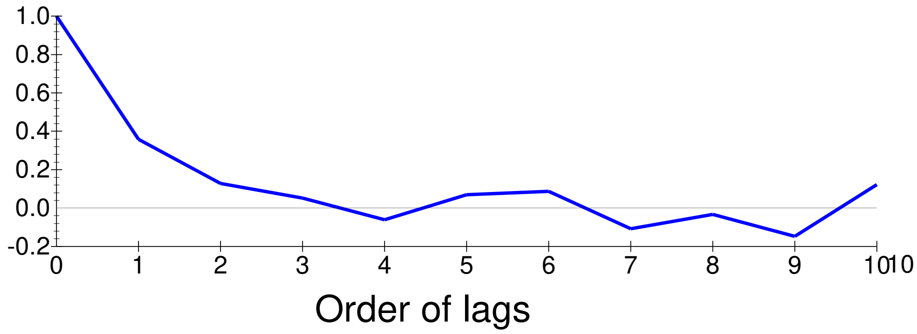
```
                              Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   4.3409[.037]*F(   1,  17)=   4.4297[.051]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=  .016369[.898]*F(   1,  17)=  .013262[.910]*
*                     *                          *                            *
* C:Normality         *CHSQ(   2)=   2.6112[.271]*       Not applicable       *
*                     *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   8.0479[.005]*F(   1,  19)=  11.8059[.003]*
*******************************************************************************
   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
```



Histogram of Residuals and the Normal Density



Autocorrelation function of residuals, sample from 1991 to 2011



Foreign Direct Investment-D- CON GDP /Capita-(G)

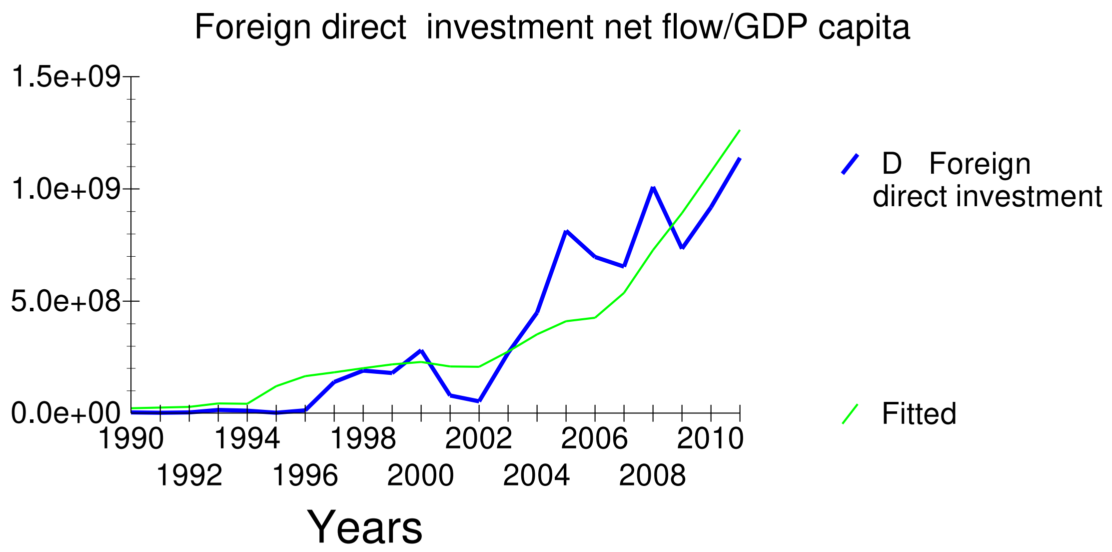
Ordinary Least Squares Estimation

```
*******************************************************************************
 Dependent variable is D
 22 observations used for estimation from 1990 to 2011
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                     -7.47E+08           1.12E+08            -6.6454[.000]
 G                         2746192           269165.7            10.2026[.000]
*******************************************************************************
 R-Squared                     .83883   R-Bar-Squared                    .83077
 S.E. of Regression          1.57E+08   F-stat.    F(  1,  20)  104.0932[.000]
 Mean of Dependent Variable  3.48E+08   S.D. of Dependent Variable    3.82E+08
 Residual Sum of Squares     4.93E+17   Equation Log-likelihood      -445.3455
 Akaike Info. Criterion     -447.3455   Schwarz Bayesian Criterion   -448.4365
 DW-statistic                  .92454
*******************************************************************************
```

Diagnostic Tests

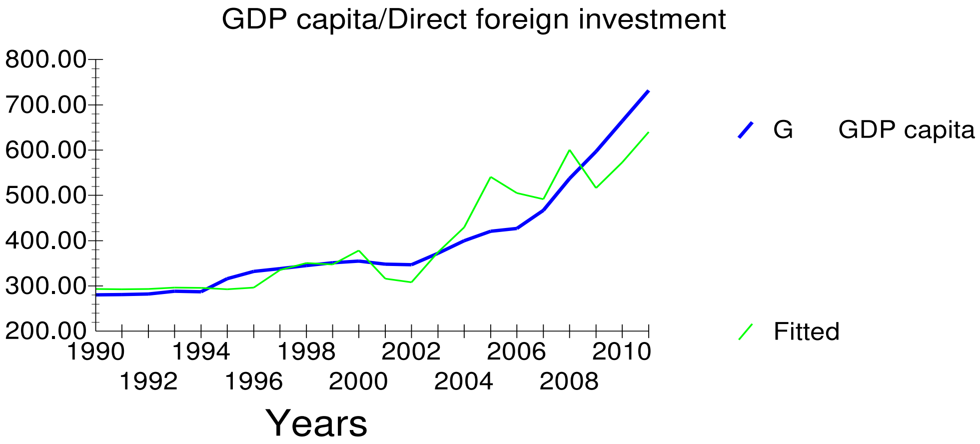
```
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   6.2926[.012]*F(   1,  19)=   7.6117[.012]*
```

```
*                     *                          *                             *
* B:Functional Form   *CHSQ(   1)=   7.0883[.008]*F(   1,  19)=   9.0316[.007]*
*                     *                          *                             *
* C:Normality         *CHSQ(   2)=   5.9530[.051]*       Not applicable        *
*                     *                          *                             *
* D:Heteroscedasticity*CHSQ(   1)=   .44813[.503]*F(   1,  20)=   .41586[.526]*
*******************************************************************************
   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
```



GDP CAPITA-G- CON FOREIGN DIRECT INVESTMENT(D)

```
                        Ordinary Least Squares Estimation
*******************************************************************************
                            Dependent variable is G
              22 observations used for estimation from 1990 to 2011
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      292.3083            15.2623            19.1523[.000]
 D                        .3055E-6           .2994E-7            10.2026[.000]
*******************************************************************************
 R-Squared                     .83883   R-Bar-Squared                   .83077
 S.E. of Regression           52.3575   F-stat.    F(  1,  20)  104.0932[.000]
 Mean of Dependent Variable  398.5000   S.D. of Dependent Variable    127.2750
 Residual Sum of Squares      54826.1   Equation Log-likelihood      -117.2463
 Akaike Info. Criterion     -119.2463   Schwarz Bayesian Criterion   -120.3374
                     DW-statistic                  .79933
*******************************************************************************


                                Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   7.1351[.008]*F(   1,  19)=   9.1200[.007]*
*                     *                          *                            *
```



AGRICULTURE VALUE ADDED (H) PER WORKER CON GDP CAPITA (G)

Ordinary Least Squares Estimation

****

Dependent variable is H

22 observations used for estimation from 1990 to 2011

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	121.0387	14.9756	8.0824[.000]
G	.51992	.035874	14.4930[.000]

****

R-Squared	.91306	R-Bar-Squared	.90871
S.E. of Regression	20.9234	F-stat. F(1, 20)	210.0477[.000]
Mean of Dependent Variable	328.2273	S.D. of Dependent Variable	69.2517
Residual Sum of Squares	8755.7	Equation Log-likelihood	-97.0673
Akaike Info. Criterion	-99.0673	Schwarz Bayesian Criterion	-100.1583
DW-statistic	.24587		

****

Diagnostic Tests

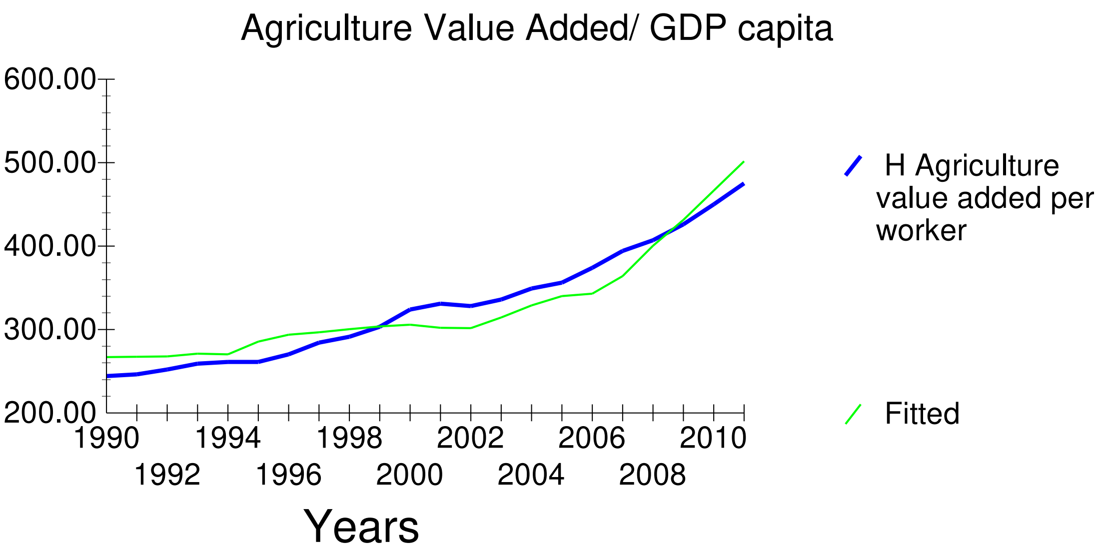
```
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  16.4974[.000]*F(   1,  19)=  56.9634[.000]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=  12.9493[.000]*F(   1,  19)=  27.1841[.000]*
*                     *                          *                            *
* C:Normality         *CHSQ(   2)=   2.2564[.324]*       Not applicable       *
*                     *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=  .049075[.825]*F(   1,  20)=  .044713[.835]*
*******************************************************************************
```

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 G

22 observations used for estimation from 1990 to 2011

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	-177.9175	40.6083	-4.3813[.000]
H	1.7562	.12117	14.4930[.000]

****

R-Squared	.91306	R-Bar-Squared	.90871
S.E. of Regression	38.4542	F-stat. F(1, 20)	210.0477[.000]
Mean of Dependent Variable	398.5000	S.D. of Dependent Variable	127.2750
Residual Sum of Squares	29574.5	Equation Log-likelihood	-110.4565
Akaike Info. Criterion	-112.4565	Schwarz Bayesian Criterion	-113.5476
DW-statistic	.27406		

****

Diagnostic Tests

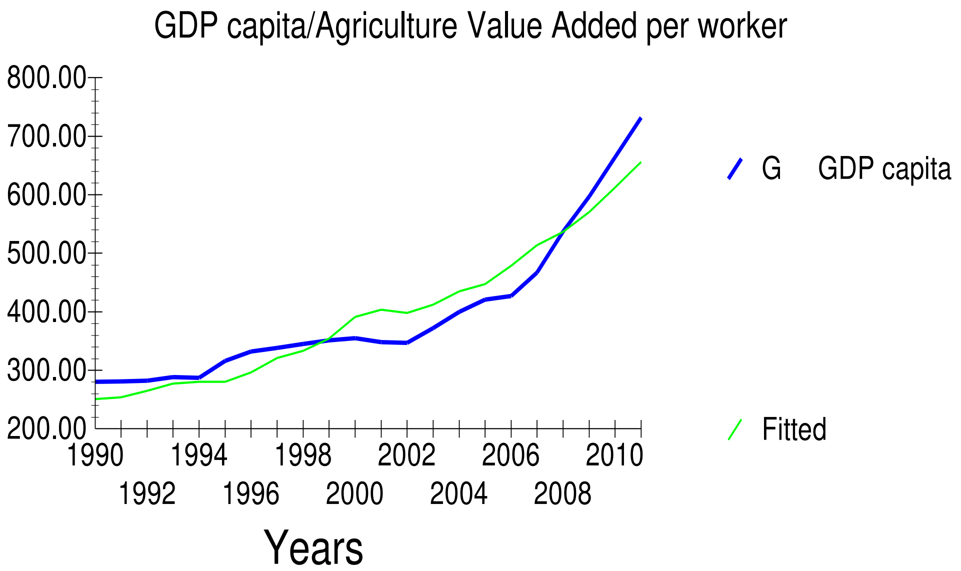
```
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  16.4452[.000]*F(   1,  19)=  56.2504[.000]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=  17.5670[.000]*F(   1,  19)=  75.2934[.000]*
*                     *                          *                            *
* C:Normality         *CHSQ(   2)=   .90121[.637]*       Not applicable       *
*                     *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   8.7253[.003]*F(   1,  20)=  13.1459[.002]*
*******************************************************************************
```

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

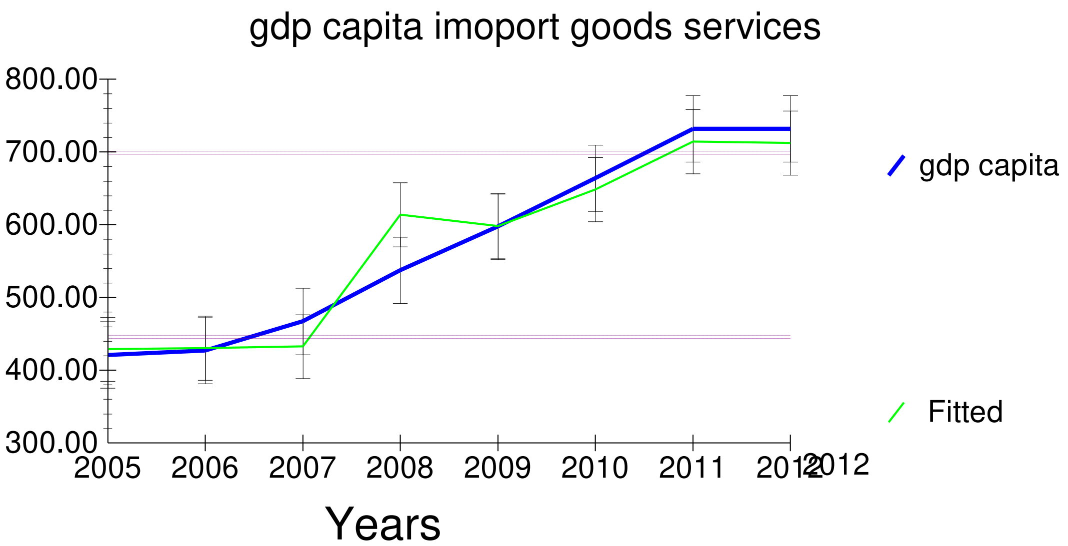
D:Based on the regression of squared residuals on squared fitted values

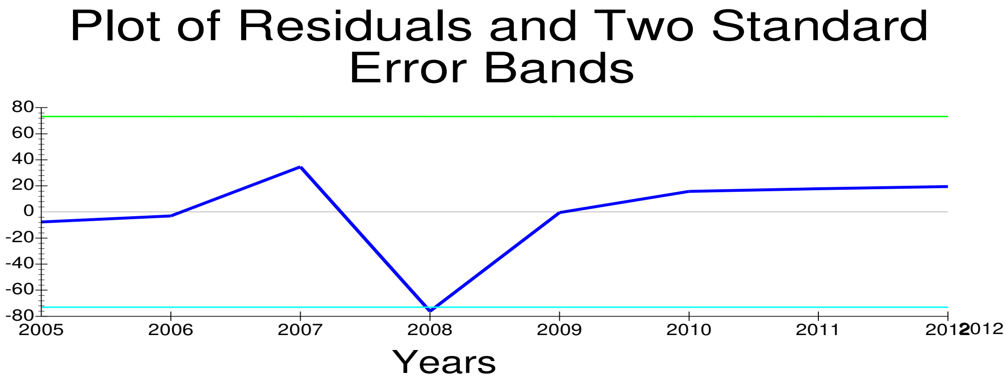


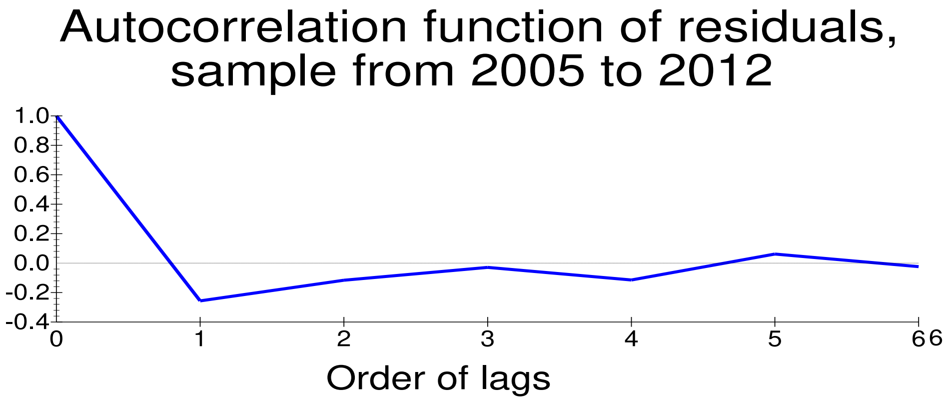
GDP PER CAPITA (K) CON IMPORTS OF GOODS AND SERVICES (Z)

```
Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is K
 8 observations used for estimation from 2005 to 2012
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      417.3985            21.5431            19.3751[.000]
 Z                        .7837E-8           .8712E-9             8.9950[.000]
*******************************************************************************
 R-Squared                     .93096   R-Bar-Squared                   .91946
 S.E. of Regression           36.5746   F-stat.    F(  1,   6)   80.9105[.000]
 Mean of Dependent Variable  572.3876   S.D. of Dependent Variable    128.8746
 Residual Sum of Squares       8026.2   Equation Log-likelihood       -38.9956
 Akaike Info. Criterion      -40.9956   Schwarz Bayesian Criterion    -41.0751
 DW-statistic                  2.4588
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .58044[.446]*F(   1,   5)=   .39116[.559]*
```

```
*                     *                          *                            *

* B:Functional Form   *CHSQ(   1)=   2.5450[.111]*F(   1,   5)=   2.3327[.187]*

*                     *                          *                            *

* C:Normality         *CHSQ(   2)=   3.7410[.154]*       Not applicable       *

*                     *                          *                            *

* D:Heteroscedasticity*CHSQ(   1)=  .047611[.827]*F(   1,   6)=  .035922[.856]*

*******************************************************************************

   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
```



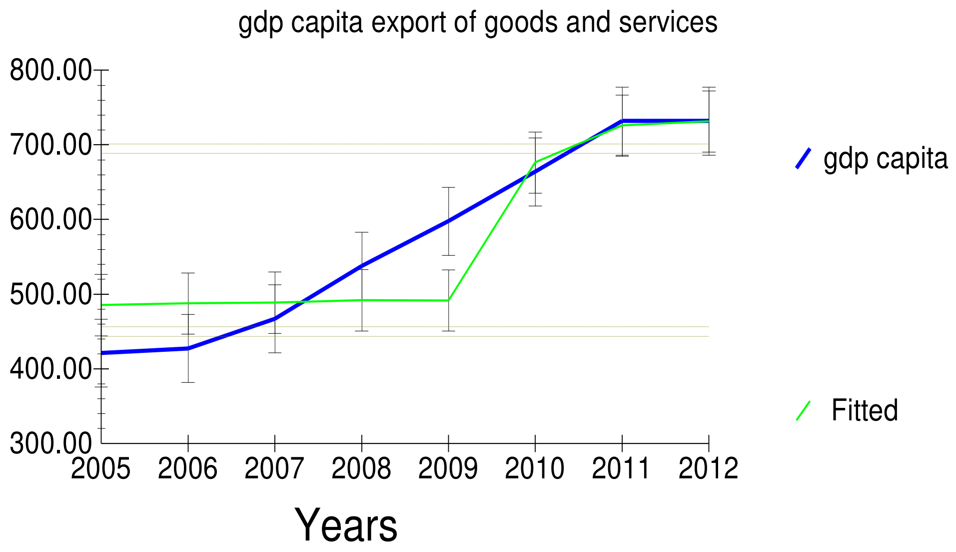

Plot of Residuals and Two Standard Error Bands
80
60
40
20
0
-20
-40
-60
-80
2005
2006
2007
2008
2009
2010
2011
2012
2012
Years

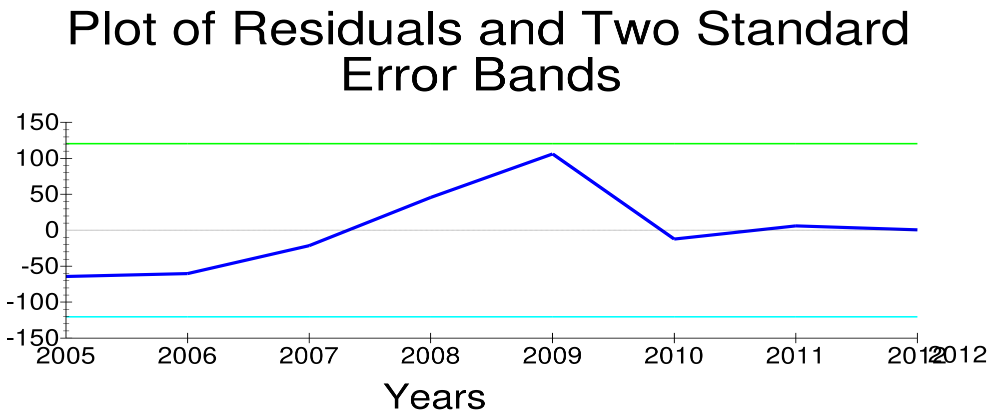

Autocorrelation function of residuals, sample from 2005 to 2012
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
0
1
2
3
4
5
6
6
Order of lags

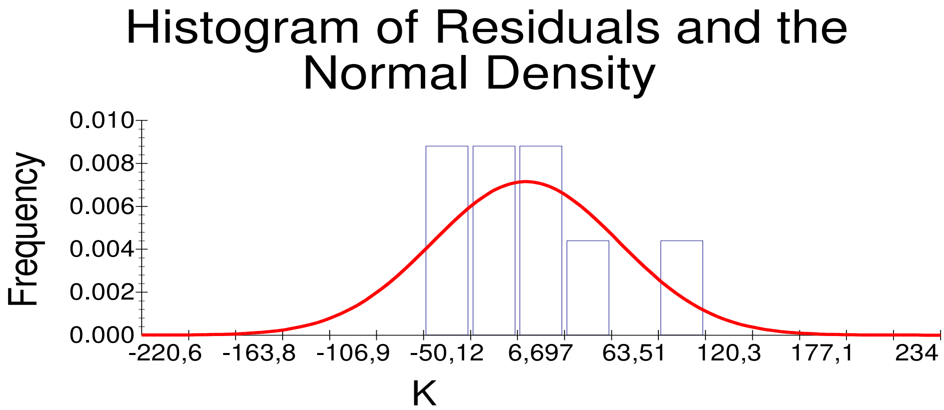
GDP PER CAPITA (K) CON EXPORTS OF GOODS AND SERVICES (BOP current USD) (F)

```
   Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is K
 8 observations used for estimation from 2005 to 2012
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      475.7895            28.5027            16.6928[.000]
 F                        .9267E-8           .1817E-8             5.1012[.002]
*******************************************************************************
 R-Squared                     .81263   R-Bar-Squared                    .78140
 S.E. of Regression           60.2542   F-stat.    F(  1,   6)   26.0227[.002]
 Mean of Dependent Variable  572.3876   S.D. of Dependent Variable    128.8746
 Residual Sum of Squares      21783.4   Equation Log-likelihood       -42.9894
 Akaike Info. Criterion      -44.9894   Schwarz Bayesian Criterion    -45.0688
 DW-statistic                  1.1071
*******************************************************************************



                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   1.1897[.275]*F(   1,   5)=   .87349[.393]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=  .015556[.901]*F(   1,   5)= .0097416[.925]*
*                     *                          *                            *
```

```
* C:Normality          *CHSQ(   2)=   .67467[.714]*       Not applicable      *
*                      *                          *                           *
* D:Heteroscedasticity*CHSQ(   1)=   2.5612[.110]*F(   1,   6)=   2.8254[.144]*
*******************************************************************************
   A:Lagrange multiplier test of residual serial correlation
```



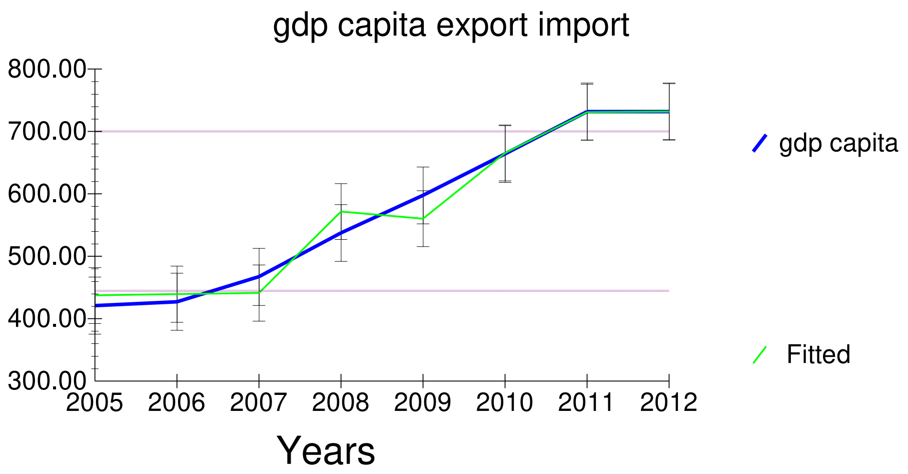


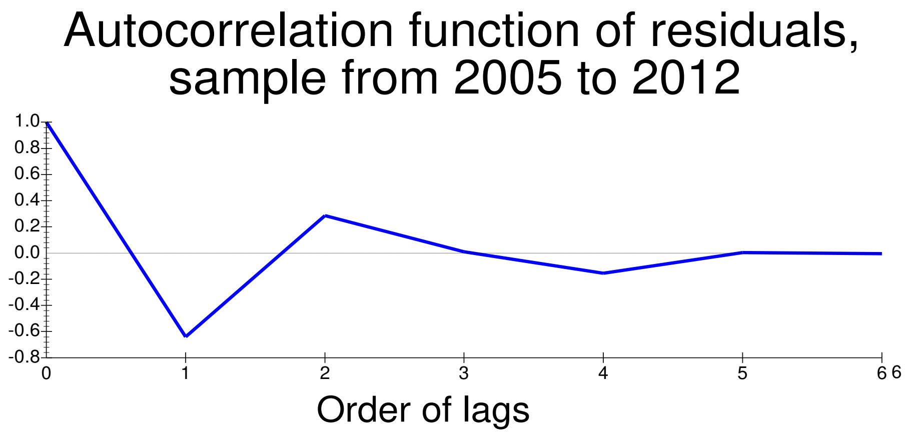


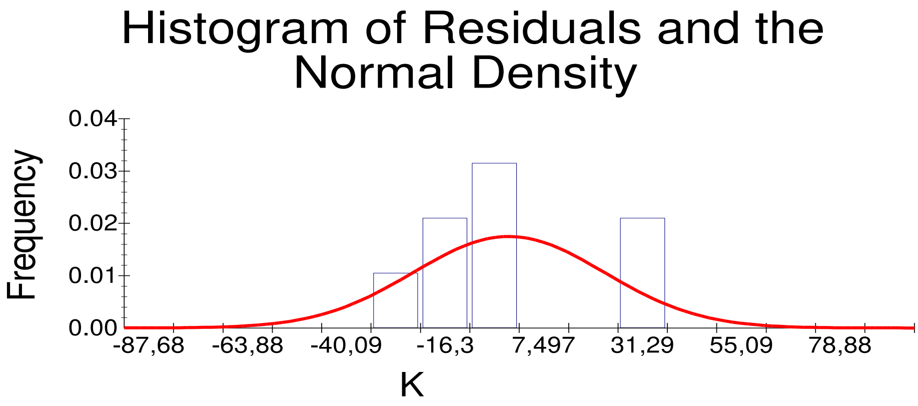
GDP PER CAPITA (K) CON IMPORTS OF GOODS AND SERVICES (Z), EXPORTS OF GOODS AND SERVICES (BOP CURRENT USD) (F)

```
                         Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is K
 8 observations used for estimation from 2005 to 2012
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      425.6328            16.2297            26.2255[.000]
 Z                        .5587E-8           .1118E-8             4.9969[.004]
 F                        .3479E-8           .1415E-8             2.4581[.057]
*******************************************************************************
 R-Squared                     .96874   R-Bar-Squared                   .95624
 S.E. of Regression           26.9606   F-stat.    F(  2,    5)   77.4728[.000]
 Mean of Dependent Variable  572.3876   S.D. of Dependent Variable    128.8746
 Residual Sum of Squares       3634.4   Equation Log-likelihood       -35.8265
 Akaike Info. Criterion      -38.8265   Schwarz Bayesian Criterion    -38.9457
 DW-statistic                  3.2084
*******************************************************************************
```

```
                                Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version         *         F Version          *
*******************************************************************************
*                     *                           *                            *
* A:Serial Correlation*CHSQ(   1)=   3.8332[.050]*F(   1,   4)=   3.6798[.128]*
*                     *                           *                            *
* B:Functional Form   *CHSQ(   1)=  .030581[.861]*F(   1,   4)=  .015349[.907]*
*                     *                           *                            *
* C:Normality         *CHSQ(   2)=   .27503[.872]*       Not applicable       *
*                     *                           *                            *
* D:Heteroscedasticity*CHSQ(   1)=   1.1158[.291]*F(   1,   6)=   .97249[.362]*
*******************************************************************************
   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
```


gdp capita export import
800.00
700.00
600.00
500.00
400.00
300.00
2005
2006
2007
2008
2009
2010
2011
2012
Years
gdp capita
Fitted

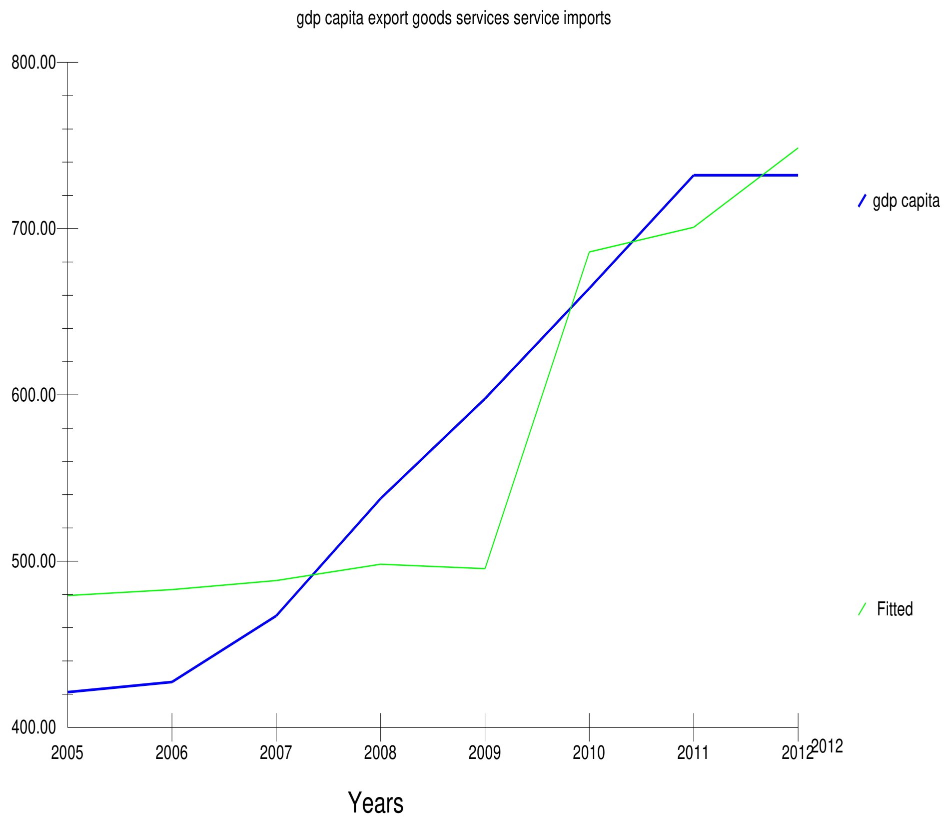

Autocorrelation function of residuals, sample from 2005 to 2012
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.6
-0.8
0
1
2
3
4
5
6 6
Order of lags

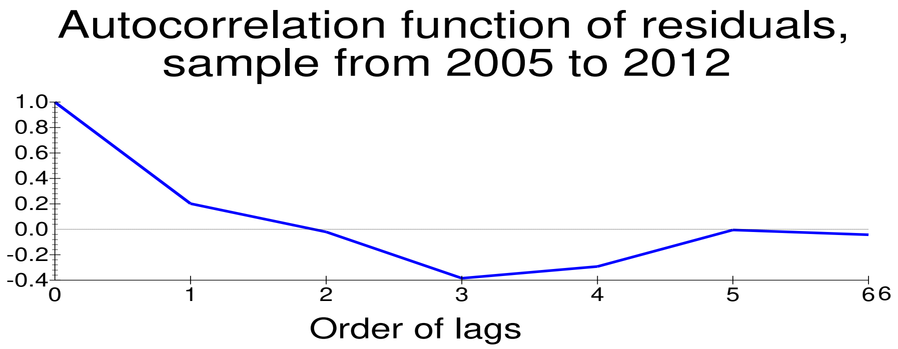

Histogram of Residuals and the Normal Density
Frequency
0.04
0.03
0.02
0.01
0.00
-87,68
-63,88
-40,09
-16,3
7,497
31,29
55,09
78,88
K

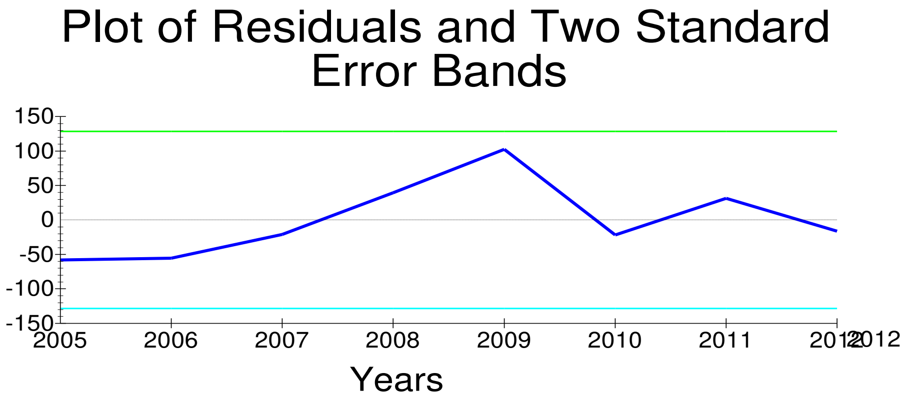
GDP CAPITA (K) CON EXPORT OF GOODS AND SERVICES (F), SERVICE IMPORTS (BOP CURRENT USD)(E)

```
                        Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is K
 8 observations used for estimation from 2005 to 2012
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      450.2514            57.5452             7.8243[.001]
 F                        .9110E-8           .1961E-8             4.6458[.006]
 E                        .8740E-8           .1672E-7             .52270[.624]
*******************************************************************************
 R-Squared                     .82234   R-Bar-Squared                    .75128
 S.E. of Regression           64.2725   F-stat.    F(  2,   5)   11.5719[.013]
 Mean of Dependent Variable  572.3876   S.D. of Dependent Variable    128.8746
 Residual Sum of Squares      20654.8   Equation Log-likelihood       -42.7765
 Akaike Info. Criterion      -45.7765   Schwarz Bayesian Criterion    -45.8957
 DW-statistic                  1.4191
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .61442[.433]*F(   1,   4)=   .33277[.595]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   1.0308[.310]*F(   1,   4)=   .59161[.485]*
*                     *                          *                            *
```

```
* C:Normality          *CHSQ(   2)=   .79556[.672]*       Not applicable       *

*                      *                          *                            *

* D:Heteroscedasticity*CHSQ(   1)=   1.8149[.178]*F(   1,   6)=   1.7605[.233]*

*******************************************************************************

   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
```



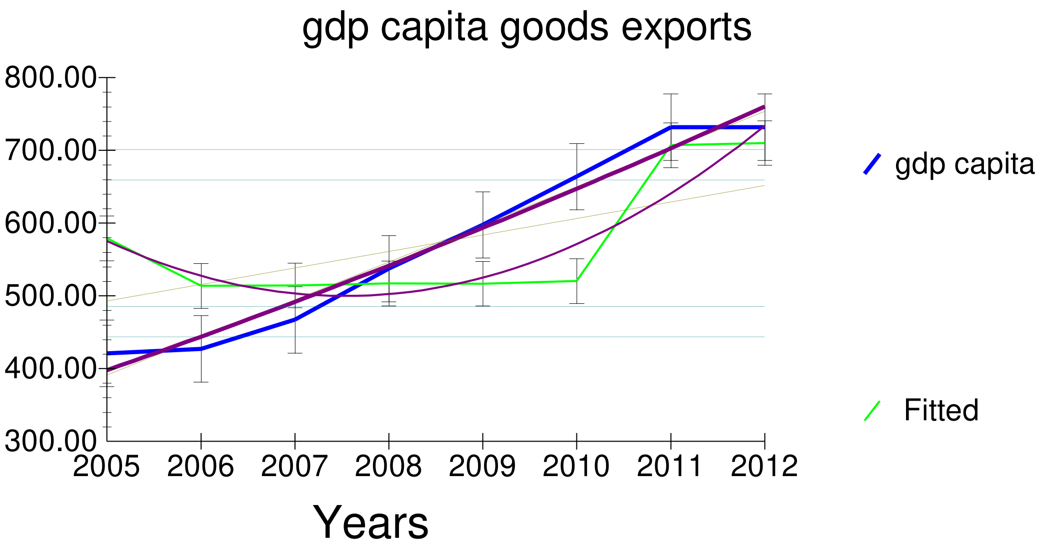

Autocorrelation function of residuals, sample from 2005 to 2012
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
0
1
2
3
4
5
66
Order of lags

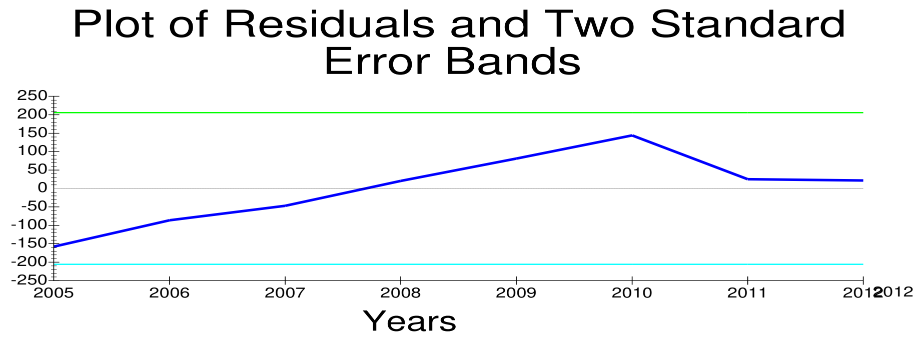

Plot of Residuals and Two Standard Error Bands
150
100
50
0
-50
-100
-150
2005
2006
2007
2008
2009
2010
2011
20122012
Years

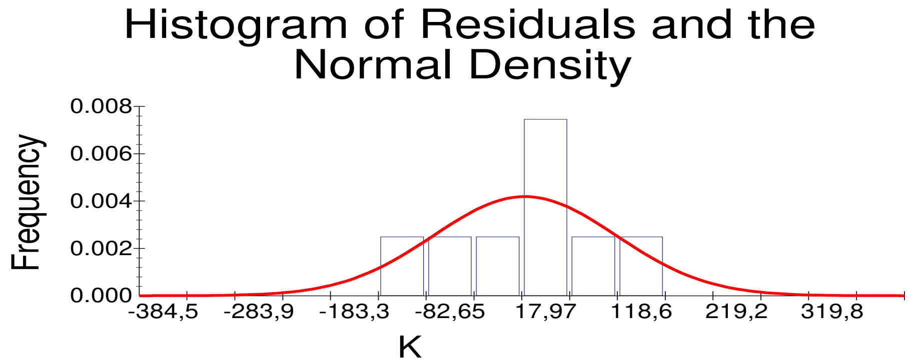
GDP PER CAPITA (K) CON   GOODS EXPORT (BOP CURRENT USD) (W)

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is K
 8 observations used for estimation from 2005 to 2012
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      504.4638            47.3782            10.6476[.000]
 W                        .8258E-8           .3694E-8             2.2355[.067]
*******************************************************************************
 R-Squared                     .45441   R-Bar-Squared                    .36348
 S.E. of Regression          102.8190   F-stat.    F(  1,   6)    4.9973[.067]
 Mean of Dependent Variable  572.3876   S.D. of Dependent Variable    128.8746
 Residual Sum of Squares      63430.4   Equation Log-likelihood       -47.2645
 Akaike Info. Criterion      -49.2645   Schwarz Bayesian Criterion    -49.3440
 DW-statistic                  .51995
*******************************************************************************



                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   3.6378[.056]*F(   1,   5)=   4.1697[.097]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   2.6224[.105]*F(   1,   5)=   2.4382[.179]*
*                     *                          *                            *
```

```
* C:Normality          *CHSQ(   2)=   .22134[.895]*      Not applicable       *
*                      *                           *                          *
* D:Heteroscedasticity*CHSQ(   1)=   .77748[.378]*F(   1,   6)=   .64588[.452]*
*******************************************************************************
   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
```



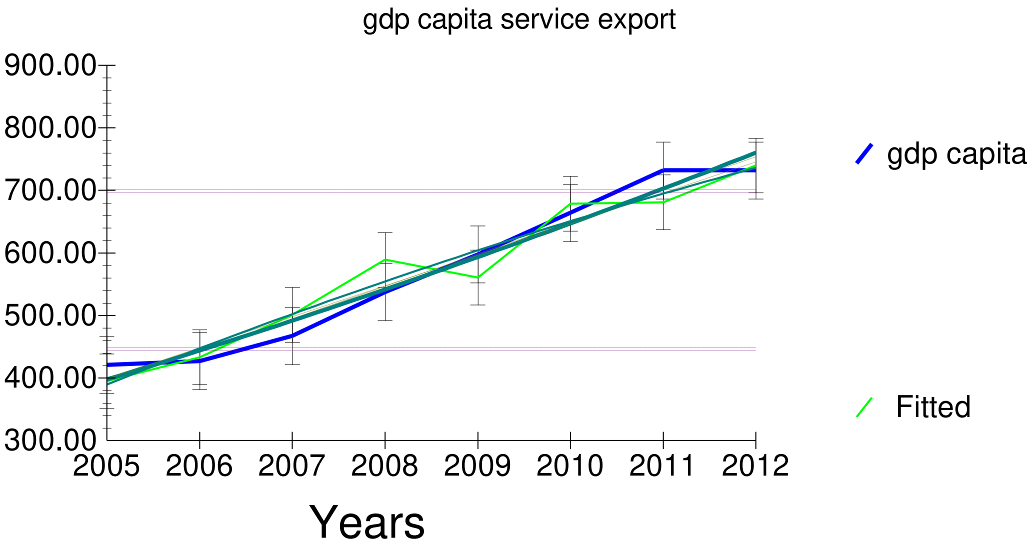

Plot of Residuals and Two Standard Error Bands
250
200
150
100
50
0
-50
-100
-150
-200
-250
2005
2006
2007
2008
2009
2010
2011
2012
2012
Years

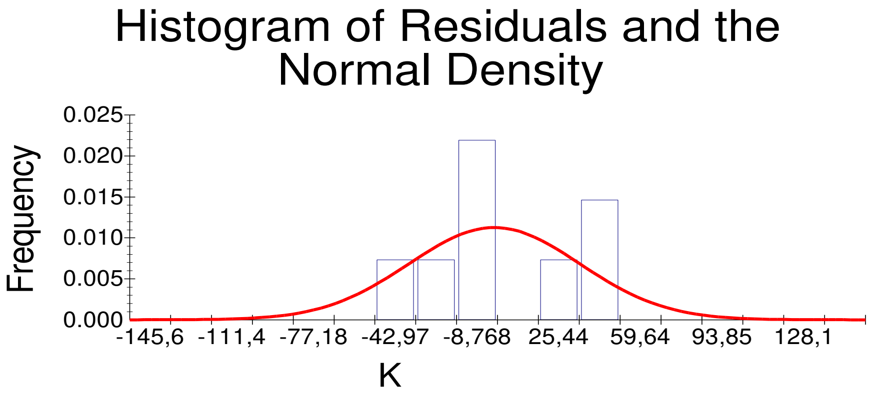

Histogram of Residuals and the Normal Density
Frequency
0.008
0.006
0.004
0.002
0.000
-384,5
-283,9
-183,3
-82,65
17,97
118,6
219,2
319,8
K

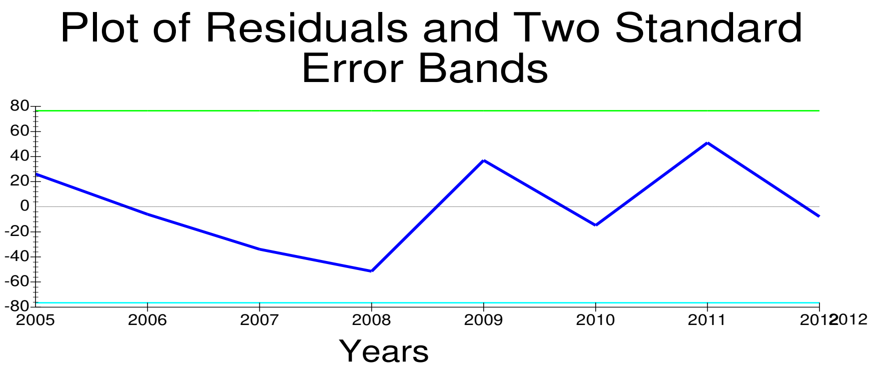
GDP PER CAPITA(K) CON SERVICE EXPORT (BOP CURRENT USD)(P)

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is K
 8 observations used for estimation from 2005 to 2012
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       36.0314            64.0066             .56293[.594]
 P                        .2629E-6           .3067E-7             8.5731[.000]
*******************************************************************************
 R-Squared                      .92453   R-Bar-Squared                   .91195
 S.E. of Regression            38.2416   F-stat.    F(  1,   6)   73.4988[.000]
 Mean of Dependent Variable   572.3876   S.D. of Dependent Variable    128.8746
 Residual Sum of Squares        8774.5   Equation Log-likelihood       -39.3522
 Akaike Info. Criterion       -41.3522   Schwarz Bayesian Criterion    -41.4316
 DW-statistic                   2.3295
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .36832[.544]*F(   1,   5)=   .24131[.644]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   .50341[.478]*F(   1,   5)=   .33576[.587]*
```

```
*                     *                           *                             *
* C:Normality         *CHSQ(   2)=   .46784[.791]*       Not applicable         *
*                     *                           *                             *
* D:Heteroscedasticity*CHSQ(   1)=  .079774[.778]*F(   1,   6)=  .060433[.814]*
*******************************************************************************
   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
```



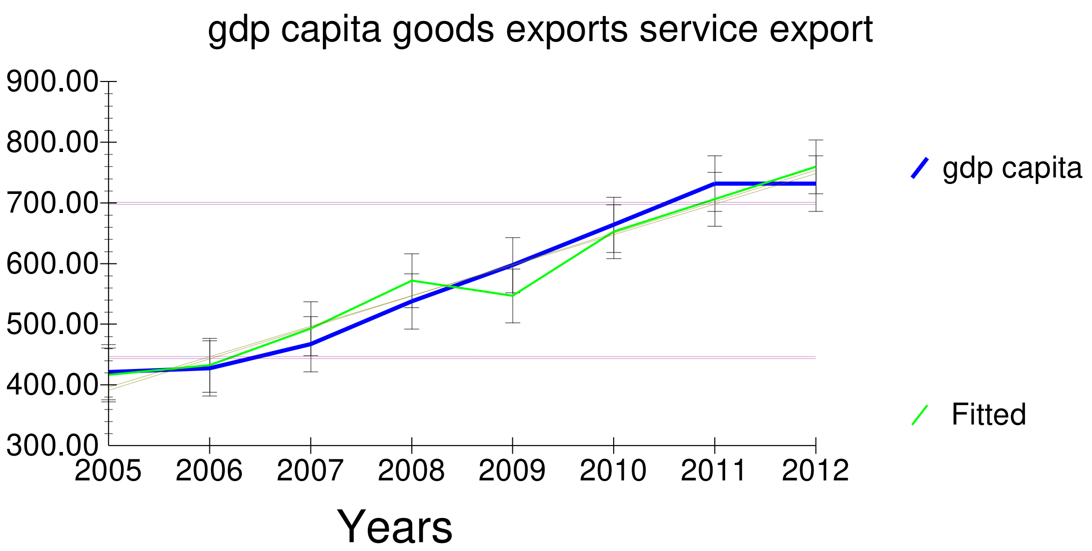

Histogram of Residuals and the Normal Density
Frequency
0.025
0.020
0.015
0.010
0.005
0.000
-145,6 -111,4 -77,18 -42,97 -8,768 25,44 59,64 93,85 128,1
K


Plot of Residuals and Two Standard Error Bands
80
60
40
20
0
-20
-40
-60
-80
2005 2006 2007 2008 2009 2010 2011 2012 2012
Years

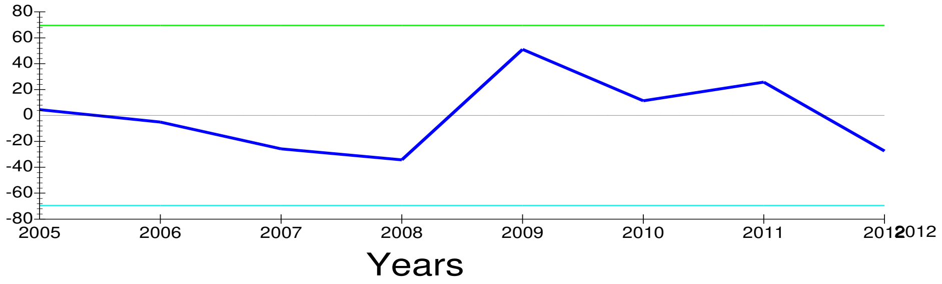
GDP PER CAPITA (K)CON GOODS EXPORTS (W) , SERVICE EXPORTS (BOP CURRENT USD) (P)

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is K
 8 observations used for estimation from 2005 to 2012
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       76.5673            64.1256            1.1940[.286]
 W                       .2286E-8           .1520E-8            1.5037[.193]
 P                       .2338E-6           .3393E-7            6.8913[.001]
*******************************************************************************
 R-Squared                    .94803   R-Bar-Squared                    .92724
 S.E. of Regression          34.7627   F-stat.    F(  2,   5)   45.6035[.001]
 Mean of Dependent Variable  572.3876   S.D. of Dependent Variable    128.8746
 Residual Sum of Squares       6042.2   Equation Log-likelihood       -37.8598
 Akaike Info. Criterion      -40.8598   Schwarz Bayesian Criterion    -40.9790
 DW-statistic                 2.0690
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .11519[.734]*F(   1,   4)=  .058437[.821]*
*                     *                          *                            *
```

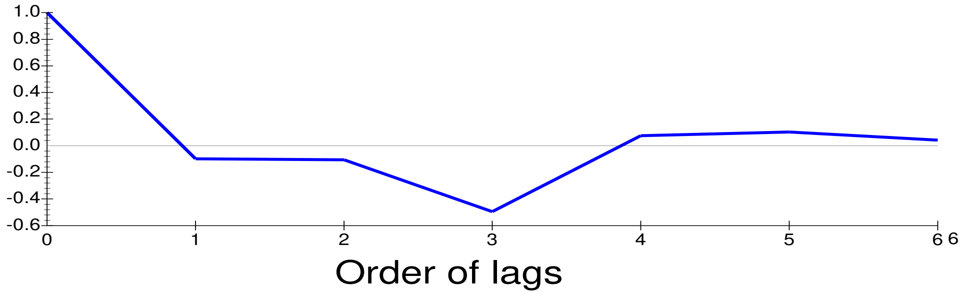
```
* B:Functional Form    *CHSQ(   1)=   1.1534[.283]*F(   1,   4)=   .67386[.458]*
*                      *                           *                            *
* C:Normality          *CHSQ(   2)=   .52093[.771]*       Not applicable        *
*                      *                           *                            *
* D:Heteroscedasticity*CHSQ(   1)=  .089414[.765]*F(   1,   6)=  .067818[.803]*
*******************************************************************************
   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
```



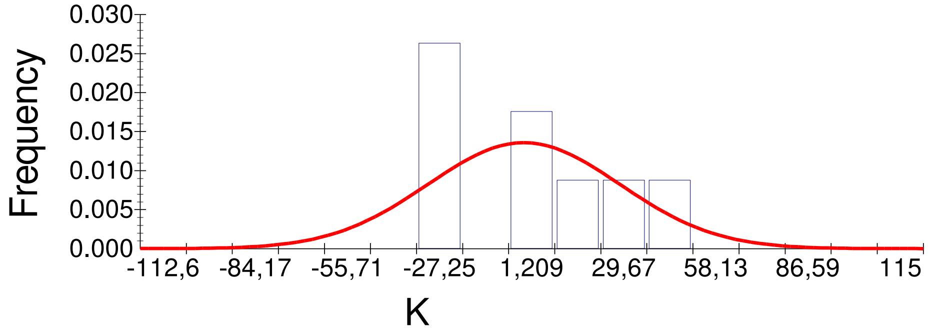
Plot of Residuals and Two Standard Error Bands



Autocorrelation function of residuals, sample from 2005 to 2012



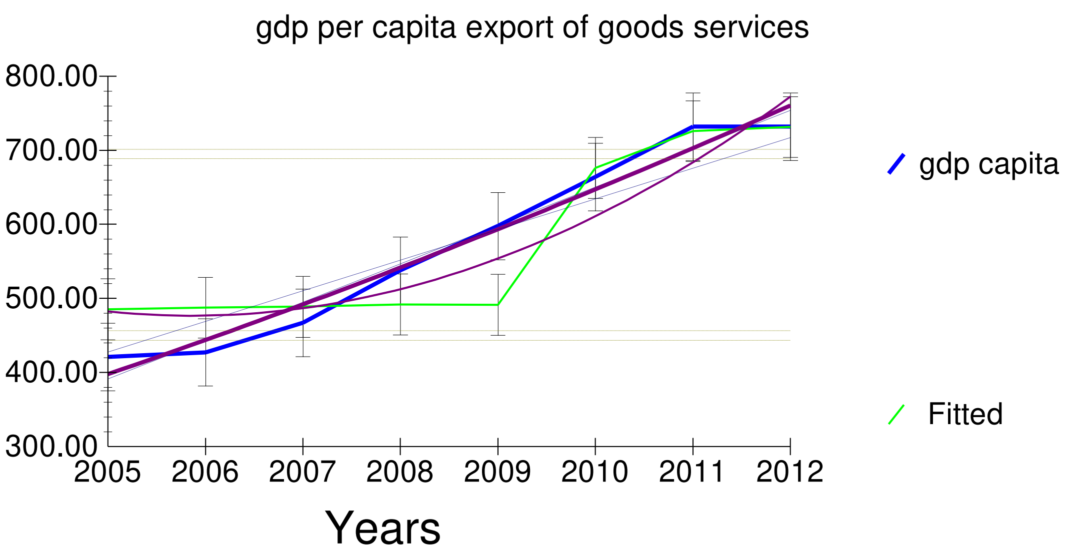
Histogram of Residuals and the Normal Density

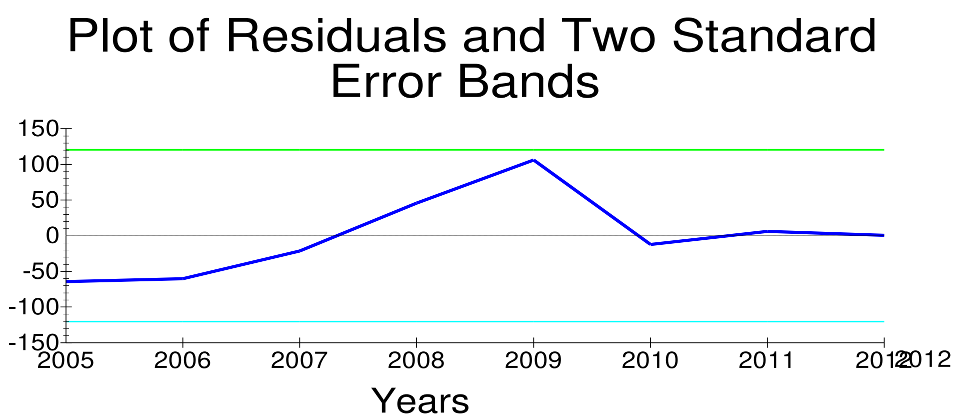


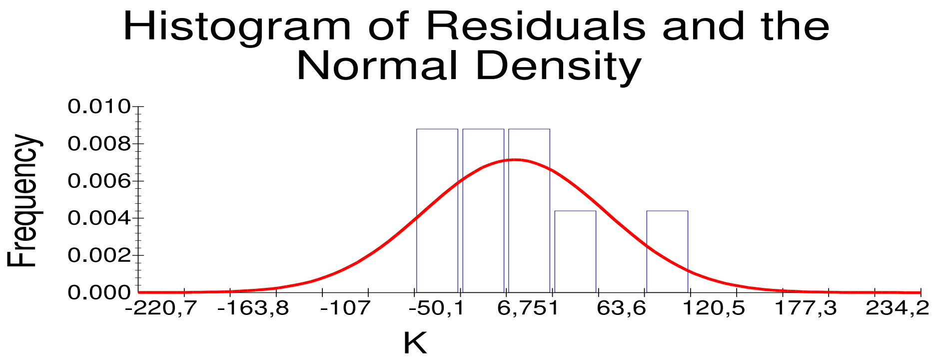
GDPPER CAPITA (K) CON EXPORTS OF GOODS AND SERVICES AND PRIMARY INCOME (BOP CURRENT USD) (RR)

```
                       Ordinary Least Squares Estimation
******************************************************************************
 Dependent variable is K
 8 observations used for estimation from 2005 to 2012
******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      475.7266            28.5259            16.6770[.000]
 RR                       .9216E-8           .1808E-8             5.0982[.002]
******************************************************************************
 R-Squared                     .81245   R-Bar-Squared                   .78120
 S.E. of Regression           60.2831   F-stat.    F(  1,   6)   25.9920[.002]
 Mean of Dependent Variable  572.3876   S.D. of Dependent Variable    128.8746
 Residual Sum of Squares      21804.3   Equation Log-likelihood       -42.9932
 Akaike Info. Criterion      -44.9932   Schwarz Bayesian Criterion    -45.0726
 DW-statistic                  1.1063
******************************************************************************


                               Diagnostic Tests
******************************************************************************
*    Test Statistics  *        LM Version        *         F Version         *
******************************************************************************
*                     *                          *                           *
* A:Serial Correlation*CHSQ(   1)=   1.1936[.275]*F(   1,   5)=   .87683[.392]*
*                     *                          *                           *
* B:Functional Form   *CHSQ(   1)=  .014637[.904]*F(   1,   5)= .0091652[.927]*
*                     *                          *                           *
* C:Normality         *CHSQ(   2)=   .67721[.713]*       Not applicable      *
```

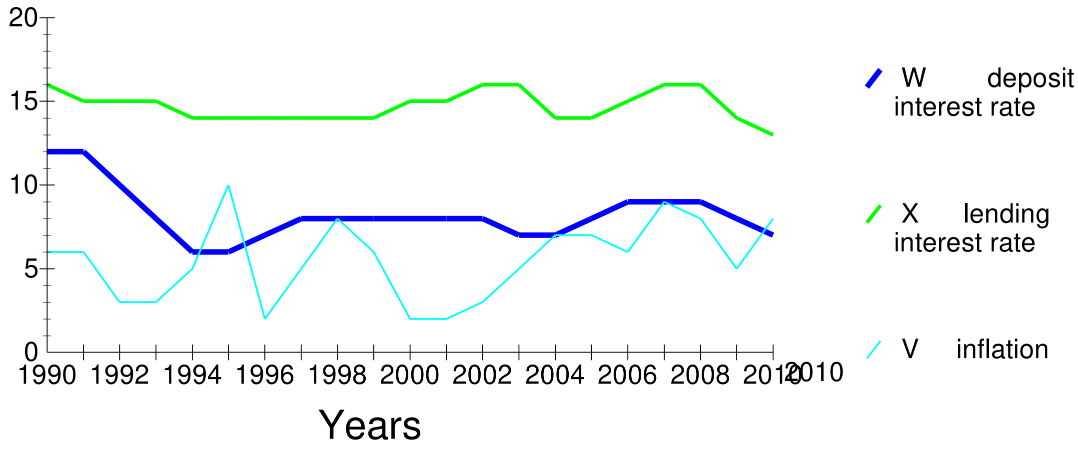
```
*                      *                           *                            *
* D:Heteroscedasticity*CHSQ(   1)=   2.5598[.110]*F(   1,   6)=   2.8232[.144]*
*******************************************************************************
   A:Lagrange multiplier test of residual serial correlation
   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
```







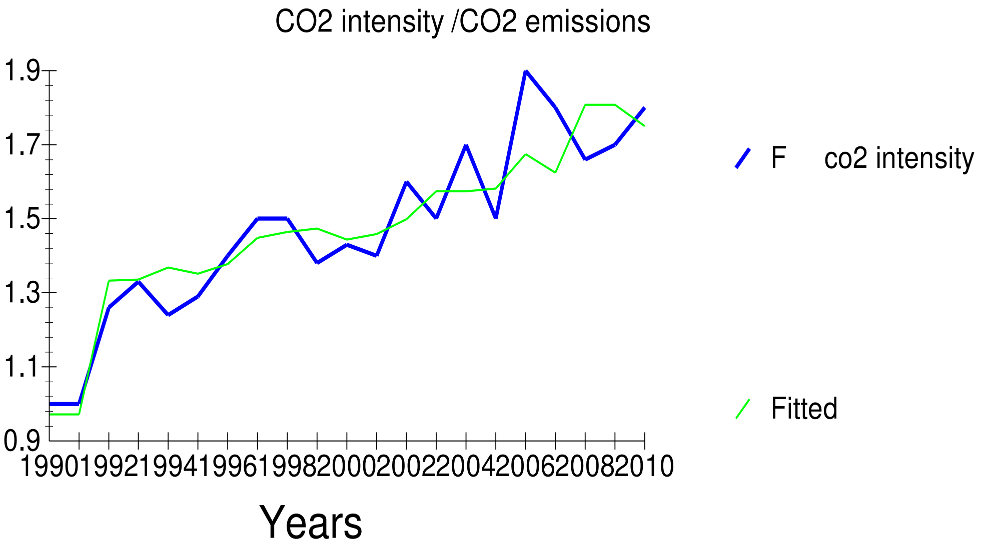
RELATION BETWEEN DEPOSIT INTEREST RATE, LENDING INTEREST RATE, INFLATION



CO2 INTENSITY F CON CO2 EMISSIONS (metric ton per capita) G

```
                       Ordinary Least Squares Estimation
*******************************************************************************
                         Dependent variable is F
             21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                        .97140           .056490            17.1960[.000]
 G                          2.5114            .26076             9.6313[.000]
*******************************************************************************
 R-Squared                     .83000   R-Bar-Squared                   .82105
 S.E. of Regression            .10255   F-stat.    F(  1,  19)   92.7619[.000]
 Mean of Dependent Variable    1.4710   S.D. of Dependent Variable      .24242
 Residual Sum of Squares       .19982   Equation Log-likelihood        19.0783
 Akaike Info. Criterion       17.0783   Schwarz Bayesian Criterion     16.0338
                     DW-statistic                 2.1762
*******************************************************************************


                              Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .19865[.656]*F(   1,  18)=   .17190[.683]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)= .0016187[.968]*F(   1,  18)= .0013875[.971]*
*                     *                          *                            *
```

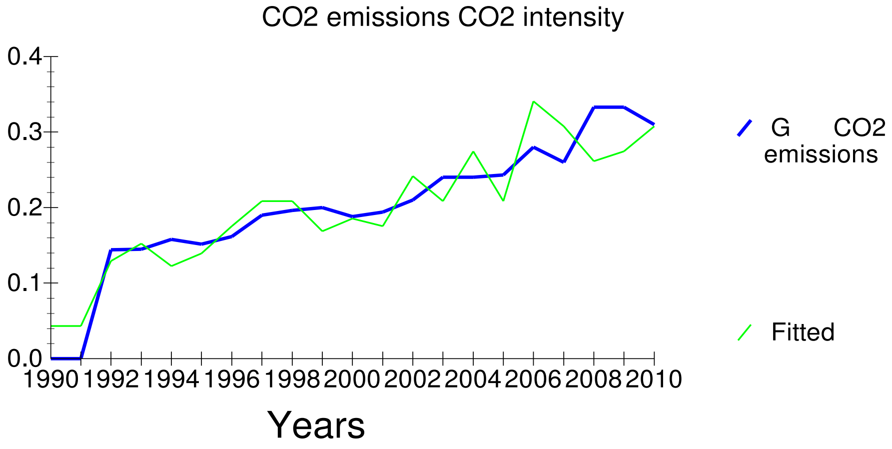
```
* C:Normality          *CHSQ(   2)=   1.2583[.533]*       Not applicable       *
*                      *                           *                            *
* D:Heteroscedasticity*CHSQ(   1)=   5.1389[.023]*F(   1,   19)=   6.1559[.023]*
*******************************************************************************
          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
```



CO2 EMISSIONS G CON CO2 INTENSITY (kg per kg of oil equiv energy used) F

```
                     Ordinary Least Squares Estimation
*******************************************************************************
                         Dependent variable is G
              21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       -.28722            .051123            -5.6182[.000]
 F                          .33049            .034314             9.6313[.000]
*******************************************************************************
 R-Squared                     .83000   R-Bar-Squared                   .82105
 S.E. of Regression           .037201   F-stat.    F(  1,  19)   92.7619[.000]
 Mean of Dependent Variable    .19891   S.D. of Dependent Variable     .087941
 Residual Sum of Squares      .026295   Equation Log-likelihood        40.3728
 Akaike Info. Criterion       38.3728   Schwarz Bayesian Criterion     37.3283
                    DW-statistic                 1.9894
*******************************************************************************


                             Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  .021128[.884]*F(   1,  18)=  .018128[.894]*
*                     *                          *                            *
```

```
* B:Functional Form    *CHSQ(    1)=    6.6225[.010]*F(    1,   18)=    8.2910[.010]*
*                      *                            *                              *
* C:Normality          *CHSQ(    2)=    .69316[.707]*       Not applicable         *
*                      *                            *                              *
* D:Heteroscedasticity*CHSQ(    1)=    4.2269[.040]*F(    1,   19)=    4.7881[.041]*
*******************************************************************************
```



ELECTRIC POWER CONSUMPTION –D CON ELECTRIC POWER CONSUMPTION kwh PER CAPITA E

```
                       Ordinary Least Squares Estimation
*******************************************************************************
                          Dependent variable is D
             21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                     -2.85E+09          1.12E+08          -25.3924[.000]
 E                        1.62E+08          831158.7          194.5598[.000]
*******************************************************************************
 R-Squared                    .99950   R-Bar-Squared                   .99947
 S.E. of Regression         2.30E+08   F-stat.    F(  1,  19)   37853.5[.000]
 Mean of Dependent Variable  1.67E+10   S.D. of Dependent Variable    1.00E+10
 Residual Sum of Squares    1.00E+18   Equation Log-likelihood      -433.0652
 Akaike Info. Criterion    -435.0652   Schwarz Bayesian Criterion   -436.1097
                     DW-statistic                  .63416
*******************************************************************************


                              Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   7.4521[.006]*F(   1,  18)=   9.9010[.006]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   8.6642[.003]*F(   1,  18)=  12.6425[.002]*
*                     *                          *                            *
```

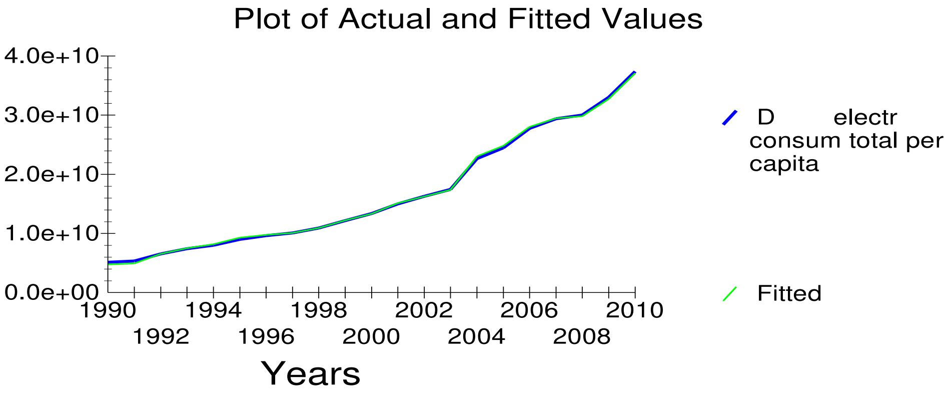
```
* C:Normality          *CHSQ(   2)=   .69100[.708]*       Not applicable       *
*                      *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   1.1520[.283]*F(   1,   19)=   1.1028[.307]*
*******************************************************************************
```

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

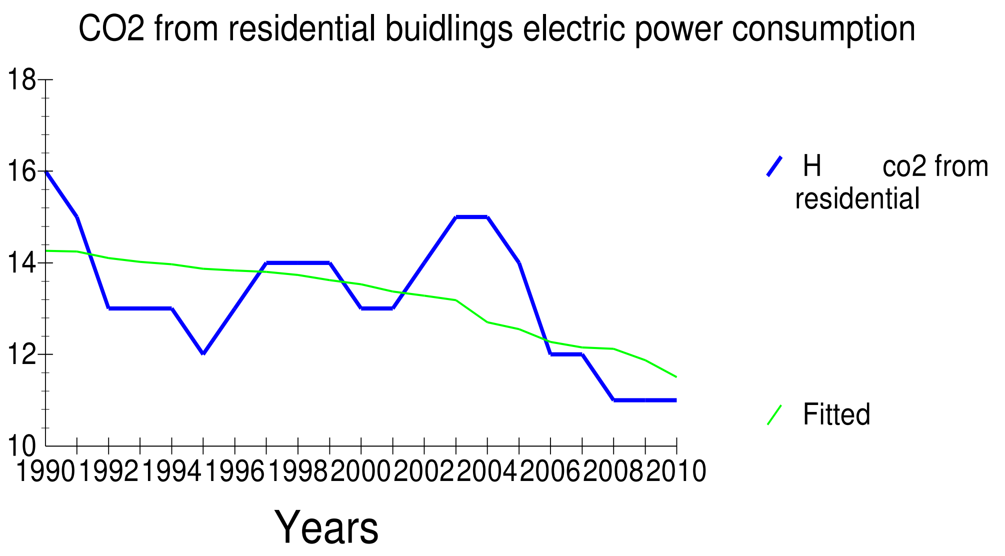
D:Based on the regression of squared residuals on squared fitted values



CO2 EMISSIONS FROM RESIDENTIAL BUILDINGS-H- AND COMMERCIAL PUBLIC SERVICES CON ELECTRIC POWER CUNSUMPTION kWh per capita –E-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
                          Dependent variable is H
             21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       14.9063            .56368            26.4448[.000]
 E                        -.013787          .0041685            -3.3073[.004]
*******************************************************************************
 R-Squared                     .36536   R-Bar-Squared                   .33196
 S.E. of Regression            1.1531   F-stat.    F(  1,  19)   10.9382[.004]
 Mean of Dependent Variable   13.2381   S.D. of Dependent Variable      1.4108
 Residual Sum of Squares      25.2647   Equation Log-likelihood       -31.7390
 Akaike Info. Criterion      -33.7390   Schwarz Bayesian Criterion    -34.7835
                    DW-statistic                  .62357
*******************************************************************************


                              Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   8.3060[.004]*F(   1,  18)=  11.7779[.003]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   1.9085[.167]*F(   1,  18)=   1.7994[.196]*
```

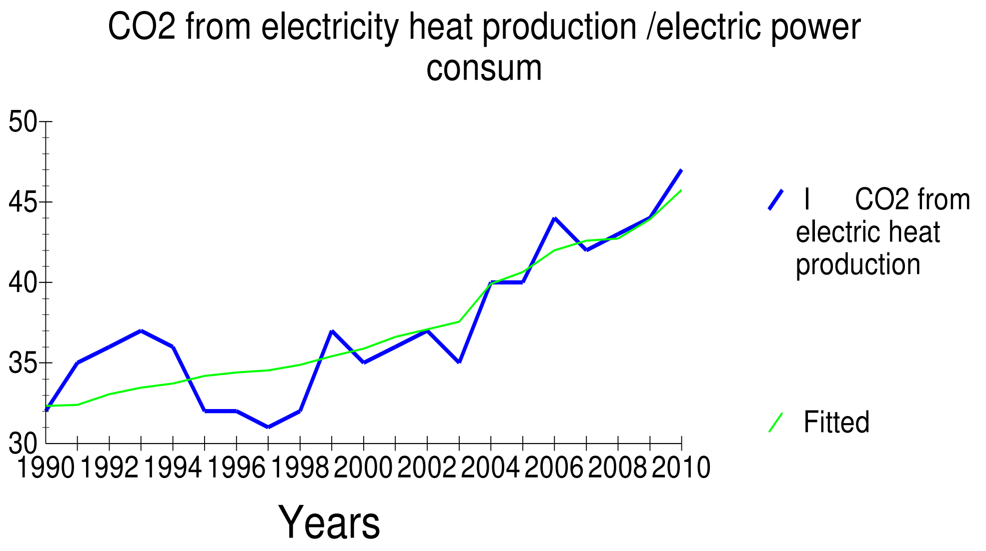
```
*                     *                           *                              *
* C:Normality         *CHSQ(   2)=   1.3159[.518]*       Not applicable         *
*                     *                           *                              *
* D:Heteroscedasticity*CHSQ(   1)=  .083731[.772]*F(   1,  19)=  .076060[.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
```



CO_2 EMISSIONS FROM ELECTRICITY AND HEAT PRODUCTION –I -CON ELECTRIC POWER CONSUMPTION kWh per capita –E-

```
                    Ordinary Least Squares Estimation
*******************************************************************************
                        Dependent variable is I
          21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       29.1615            1.0112            28.8383[.000]
 E                         .067142           .0074781            8.9785[.000]
*******************************************************************************
 R-Squared                    .80926   R-Bar-Squared                   .79922
 S.E. of Regression           2.0687   F-stat.    F(  1,  19)   80.6137[.000]
 Mean of Dependent Variable  37.2857   S.D. of Dependent Variable      4.6167
 Residual Sum of Squares     81.3084   Equation Log-likelihood       -44.0118
 Akaike Info. Criterion     -46.0118   Schwarz Bayesian Criterion    -47.0564
                    DW-statistic                 1.0885
*******************************************************************************


                           Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   4.2863[.038]*F(   1,  18)=   4.6161[.046]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   3.6035[.058]*F(   1,  18)=   3.7285[.069]*
```

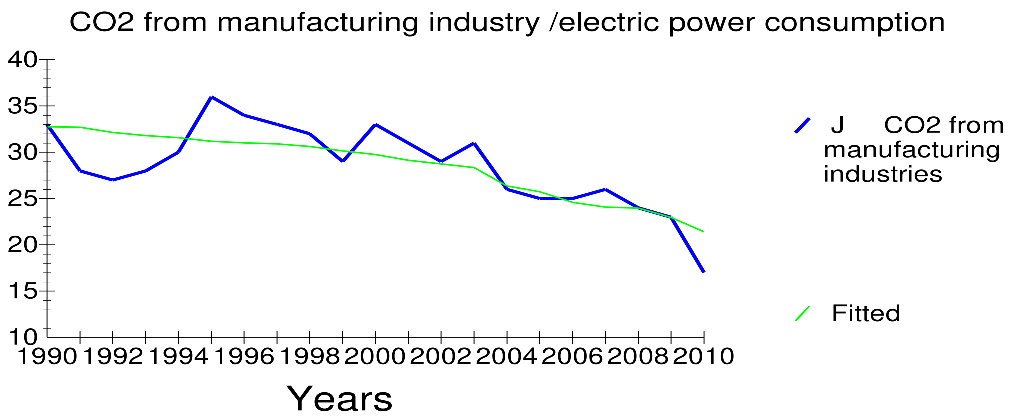
```
*                    *                          *                            *
* C:Normality         *CHSQ(   2)=   .74226[.690]*       Not applicable       *
*                    *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   6.3737[.012]*F(   1,  19)=   8.2796[.010]*
*******************************************************************************
          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
```



CO2 EMISSIONS FROM MANUFACTURING INDUSTRY AND CONSTRUCTION –J-CON ELECTRIC POWER CONSUMPTION kWh per capita-E-

```
                         Ordinary Least Squares Estimation
*******************************************************************************
                            Dependent variable is J
             21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       35.4386            1.3765            25.7455[.000]
 E                       -.056753            .010180            -5.5753[.000]
*******************************************************************************
 R-Squared                    .62063   R-Bar-Squared                   .60067
 S.E. of Regression           2.8160   F-stat.    F(  1,  19)   31.0835[.000]
 Mean of Dependent Variable   28.5714   S.D. of Dependent Variable      4.4561
 Residual Sum of Squares     150.6627   Equation Log-likelihood       -50.4882
 Akaike Info. Criterion      -52.4882   Schwarz Bayesian Criterion    -53.5327
                     DW-statistic                  .99089
*******************************************************************************


                                Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   4.8837[.027]*F(   1,  18)=   5.4545[.031]*
*                     *                          *                            *
```

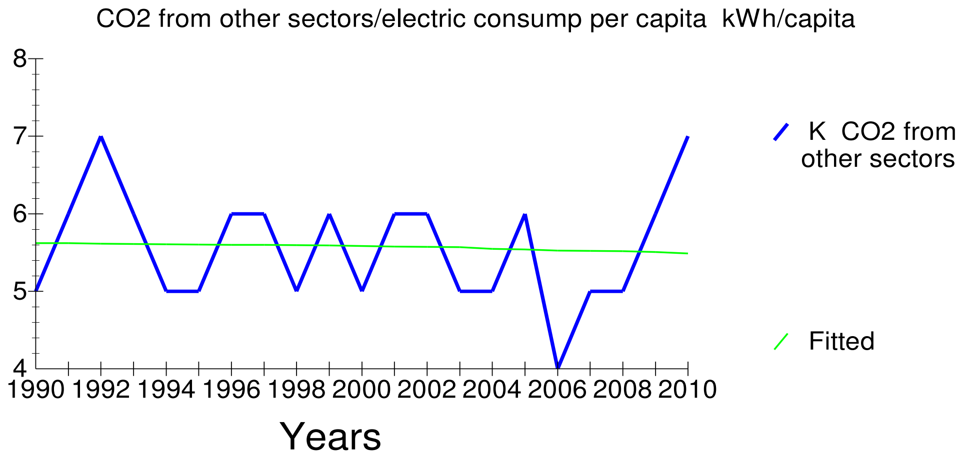
```
* B:Functional Form    *CHSQ(   1)=    7.1092[.008]*F(   1,  18)=   9.2123[.007]*
*                      *                           *                             *
* C:Normality          *CHSQ(   2)=    .92374[.630]*       Not applicable        *
*                      *                           *                             *
* D:Heteroscedasticity*CHSQ(   1)=    2.4384[.118]*F(   1,  19)=   2.4960[.131]*
*******************************************************************************
           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
```



CO_2 FROM OTHER SECTORS EXCLUDING RESIDENTIAL BUILDINGS AND COMMERCIAL AND PUBLIC SECTORS-K-
CON ELECTRIC POWER CONSUMPTION (kWh per capita) –E-

```
                      Ordinary Least Squares Estimation
*******************************************************************************
                           Dependent variable is K
            21 observations used for estimation from 1990 to 2010
*******************************************************************************
Regressor              Coefficient       Standard Error         T-Ratio[Prob]
CON                         5.6505             .37379           15.1166[.000]
E                        -.6534E-3          .0027643           -.23637[.816]
*******************************************************************************
R-Squared                    .0029319   R-Bar-Squared                  -.049545
S.E. of Regression             .76469   F-stat.    F(  1,  19)   .055869[.816]
Mean of Dependent Variable     5.5714   S.D. of Dependent Variable      .74642
Residual Sum of Squares       11.1102   Equation Log-likelihood       -23.1128
Akaike Info. Criterion       -25.1128   Schwarz Bayesian Criterion    -26.1573
                    DW-statistic                 1.6237
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .13307[.715]*F(   1,  18)=   .11479[.739]*
*                     *                          *                            *
```

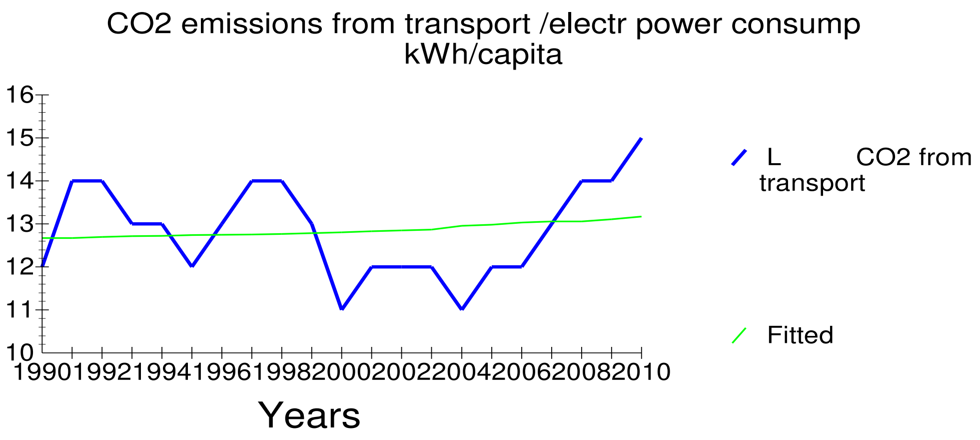
```
* B:Functional Form    *CHSQ(   1)=   3.3731[.066]*F(   1,  18)=   3.4444[.080]*
*                      *                           *                            *
* C:Normality          *CHSQ(   2)=   .22892[.892]*       Not applicable        *
*                      *                           *                            *
* D:Heteroscedasticity*CHSQ(   1)=   2.4458[.118]*F(   1,  19)=   2.5046[.130]*
*******************************************************************************
          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
```



CO_2 FROM TRANSPORT-L- CON ELECTRIC POWER CONSUMPTION kWh per capita-E-

```
                    Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is L
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       12.5536             .55041           22.8076[.000]
 E                        .0025090           .0040704             .61640[.545]
*******************************************************************************
 R-Squared                     .019605   R-Bar-Squared                 -.031994
 S.E. of Regression             1.1260   F-stat.    F(  1,  19)    .37995[.545]
 Mean of Dependent Variable    12.8571   S.D. of Dependent Variable      1.1084
 Residual Sum of Squares       24.0897   Equation Log-likelihood       -31.2390
 Akaike Info. Criterion       -33.2390   Schwarz Bayesian Criterion    -34.2835
 DW-statistic                   .79025
*******************************************************************************


                            Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   7.1137[.008]*F(   1,  18)=   9.2211[.007]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   9.5909[.002]*F(   1,  18)=  15.1315[.001]*
*                     *                          *                            *
```

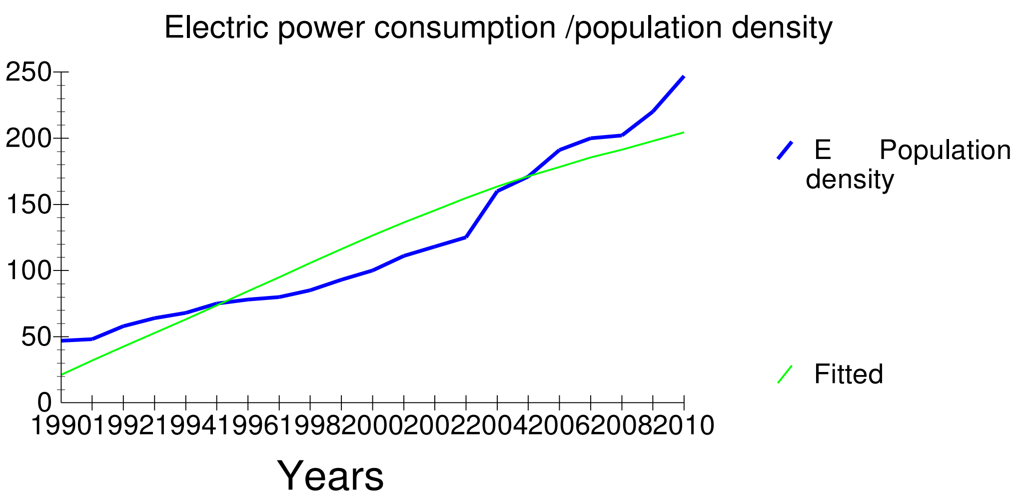
```
* C:Normality          *CHSQ(   2)=   1.0710[.585]*       Not applicable       *
*                      *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   1.3071[.253]*F(   1,  19)=   1.2611[.275]*
*******************************************************************************
   A:Lagrange multiplier test of residual serial correlation
```



ELECTRICAL POWER CONSUMPTION –E- CON POPULATION DENSITY-M-

```
                    Ordinary Least Squares Estimation
*******************************************************************************
                        Dependent variable is E
            21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                     -428.5034            44.2730            -9.6787[.000]
 M                          .54566            .043729            12.4783[.000]
*******************************************************************************
 R-Squared                     .89125   R-Bar-Squared                   .88552
 S.E. of Regression           20.9287   F-stat.    F(  1,  19)  155.7076[.000]
 Mean of Dependent Variable  121.0000   S.D. of Dependent Variable     61.8563
 Residual Sum of Squares       8322.2   Equation Log-likelihood       -92.6104
 Akaike Info. Criterion      -94.6104   Schwarz Bayesian Criterion    -95.6549
                     DW-statistic                 .21661
*******************************************************************************


                           Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  15.5954[.000]*F(   1,  18)=  51.9409[.000]*
```

```
*                     *                          *                             *
* B:Functional Form   *CHSQ(   1)=  17.5432[.000]*F(   1,  18)=  91.3490[.000]*
*                     *                          *                             *
* C:Normality         *CHSQ(   2)=   .71808[.698]*       Not applicable       *
*                     *                          *                             *
* D:Heteroscedasticity*CHSQ(   1)=   2.2900[.130]*F(   1,  19)=   2.3255[.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
```



CO2 EMISSIONS (metric ton per capita)-G- CON POPULATION DENSITY -M-

Ordinary Least Squares Estimation

****

Dependent variable is G

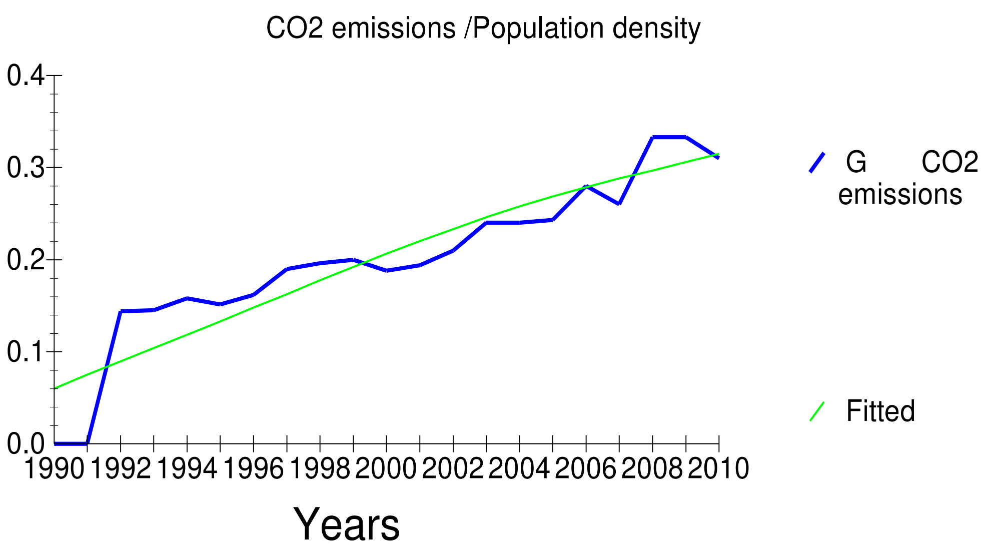
21 observations used for estimation from 1990 to 2010

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	-.56577	.072954	-7.7551[.000]
M	.7593E-3	.7206E-4	10.5379[.000]

****

R-Squared	.85390	R-Bar-Squared	.84621
S.E. of Regression	.034487	F-stat. F(1, 19)	111.0468[.000]
Mean of Dependent Variable	.19891	S.D. of Dependent Variable	.087941
Residual Sum of Squares	.022598	Equation Log-likelihood	41.9638
Akaike Info. Criterion	39.9638	Schwarz Bayesian Criterion	38.9193
DW-statistic	1.1611		



ELECTRIC POWER CONSUMPTION –D-CON GDP PER CAPITA (CURRENT USD)-O-

```
                    Ordinary Least Squares Estimation
*******************************************************************************
                        Dependent variable is D
          21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                     -1.77E+10          2.68E+09            -6.5860[.000]
 O                        8.99E+07           6773883            13.2698[.000]
*******************************************************************************
 R-Squared                     .90261   R-Bar-Squared                   .89748
 S.E. of Regression          3.20E+09   F-stat.    F(  1,  19)  176.0869[.000]
 Mean of Dependent Variable  1.67E+10   S.D. of Dependent Variable    1.00E+10
 Residual Sum of Squares     1.95E+20   Equation Log-likelihood      -488.3848
 Akaike Info. Criterion     -490.3848   Schwarz Bayesian Criterion   -491.4294
                   DW-statistic                  .37860
*******************************************************************************


                            Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  14.3174[.000]*F(   1,  18)=  38.5652[.000]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=  11.2029[.001]*F(   1,  18)=  20.5830[.000]*
*                     *                          *                            *
```

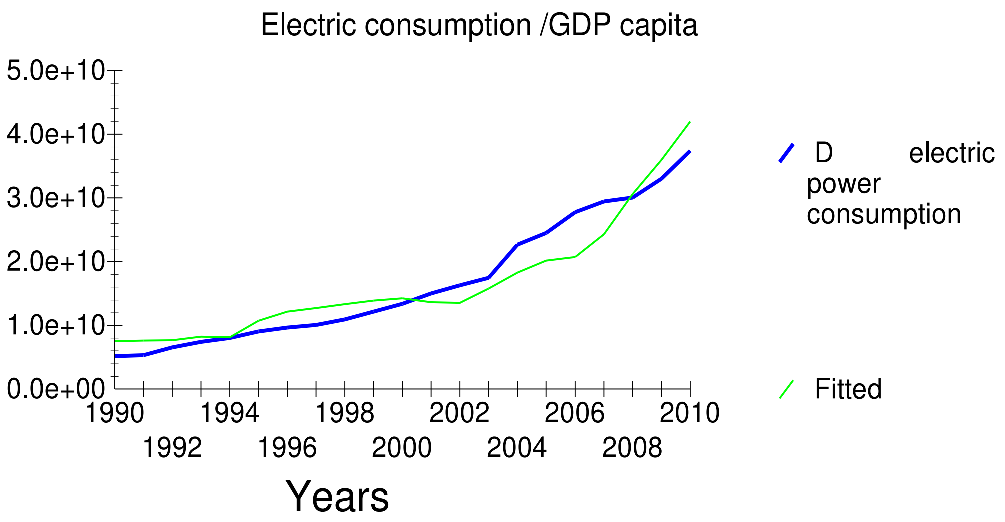
```
* C:Normality          *CHSQ(   2)=   2.3148[.314]*       Not applicable       *
*                      *                           *                            *
* D:Heteroscedasticity*CHSQ(   1)=   2.3940[.122]*F(   1,  19)=   2.4447[.134]*
*******************************************************************************
```

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

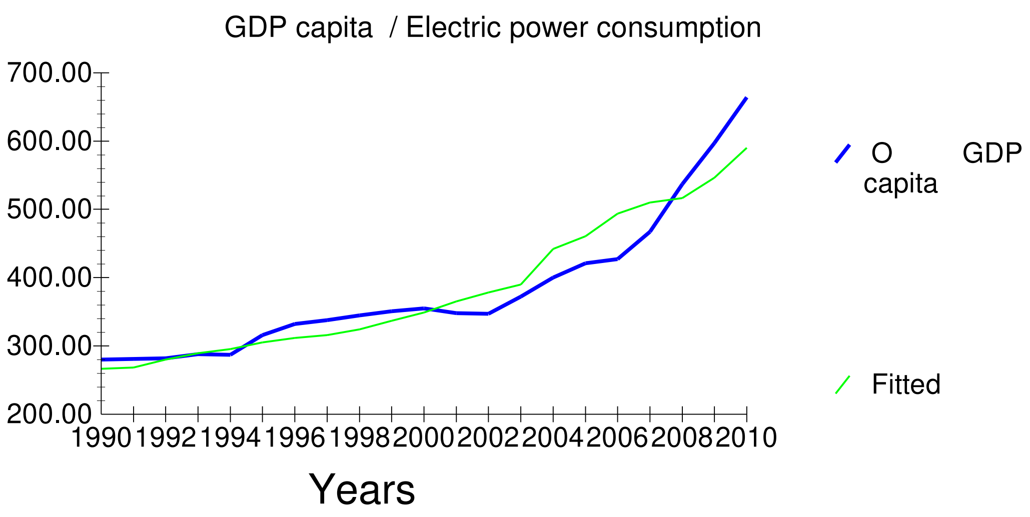
D:Based on the regression of squared residuals on squared fitted values



GDP PER CAPITA (CURRENT USD) –O- CON ELECTRIC POWER CONSUMPTION (kWh) –D-

```
                    Ordinary Least Squares Estimation
*******************************************************************************
                        Dependent variable is O
             21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      214.7953            14.6472            14.6646[.000]
 D                         .1004E-7           .7567E-9           13.2698[.000]
*******************************************************************************
 R-Squared                     .90261   R-Bar-Squared                   .89748
 S.E. of Regression           33.8594   F-stat.    F(  1,  19)  176.0869[.000]
 Mean of Dependent Variable  382.6190   S.D. of Dependent Variable    105.7495
 Residual Sum of Squares      21782.7   Equation Log-likelihood      -102.7134
 Akaike Info. Criterion     -104.7134   Schwarz Bayesian Criterion   -105.7579
                    DW-statistic                 .41521
*******************************************************************************


                           Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  13.6498[.000]*F(   1,  18)=  33.4270[.000]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   9.8637[.002]*F(   1,  18)=  15.9432[.001]*
```

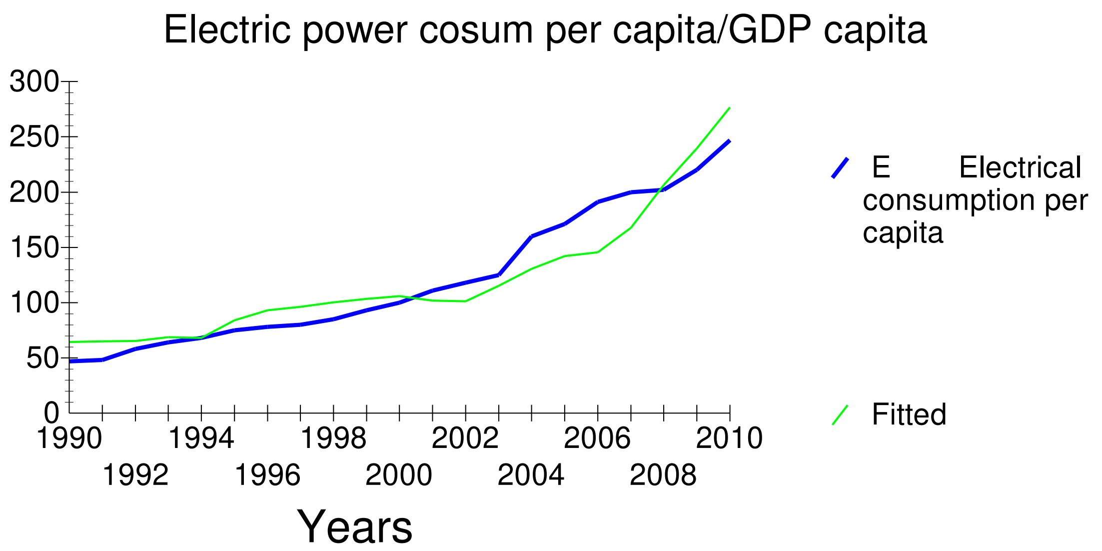
```
*                    *                          *                             *
* C:Normality        *CHSQ(   2)= .0051326[.997]*       Not applicable        *
*                    *                          *                             *
* D:Heteroscedasticity*CHSQ(   1)=  14.2835[.000]*F(   1,  19)=  40.4060[.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
```



ELECTRIC POWER CONSUMPTION (kWh per capita)-E- CON GDP PER CAPITA-O-

```
                      Ordinary Least Squares Estimation
*******************************************************************************
                          Dependent variable is E
              21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      -90.5569            17.3523            -5.2187[.000]
 O                          .55292            .043787            12.6276[.000]
*******************************************************************************
 R-Squared                     .89353   R-Bar-Squared                   .88793
 S.E. of Regression           20.7078   F-stat.    F(  1,  19)  159.4558[.000]
 Mean of Dependent Variable  121.0000   S.D. of Dependent Variable     61.8563
 Residual Sum of Squares       8147.4   Equation Log-likelihood       -92.3875
 Akaike Info. Criterion      -94.3875   Schwarz Bayesian Criterion    -95.4321
                    DW-statistic                  .38243
*******************************************************************************


                             Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  14.0533[.000]*F(   1,  18)=  36.4141[.000]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=  11.4551[.001]*F(   1,  18)=  21.6024[.000]*
```

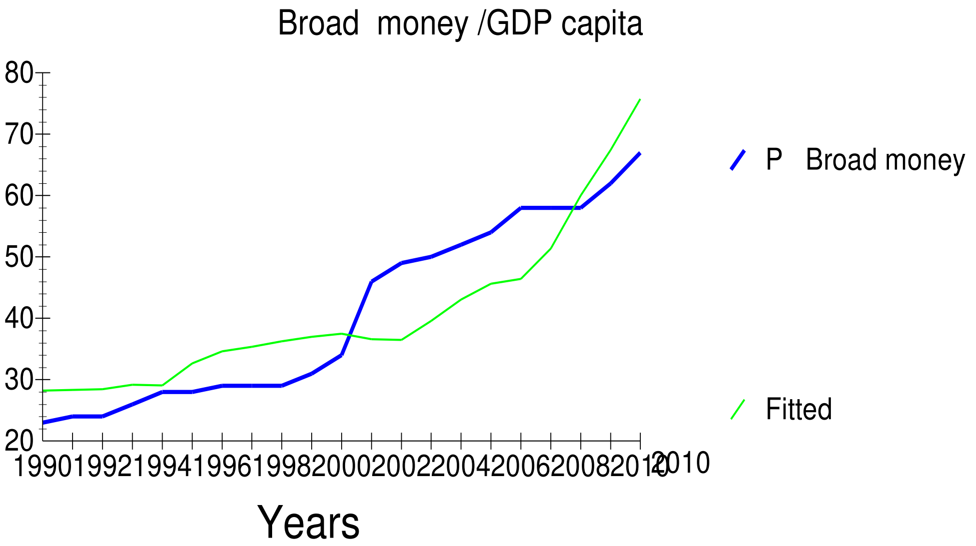
```
*                     *                           *                             *
* C:Normality         *CHSQ(   2)=   2.3152[.314]*       Not applicable         *
*                     *                           *                             *
* D:Heteroscedasticity*CHSQ(   1)=   2.4691[.116]*F(   1,  19)=   2.5316[.128]*
*******************************************************************************
          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
```



```
BROAD MONEY (% GDP )-P-  CON  GDP PER CAPITA (current USD)-O-
```

```
                         Ordinary Least Squares Estimation
*******************************************************************************
                          Dependent variable is P
              21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       -6.4571            6.2673            -1.0303[.316]
 O                          .12378           .015815             7.8270[.000]
*******************************************************************************
 R-Squared                     .76328   R-Bar-Squared                   .75082
 S.E. of Regression            7.4792   F-stat.    F(  1,  19)   61.2627[.000]
 Mean of Dependent Variable   40.9048   S.D. of Dependent Variable     14.9830
 Residual Sum of Squares       1062.8   Equation Log-likelihood       -71.0016
 Akaike Info. Criterion      -73.0016   Schwarz Bayesian Criterion    -74.0461
                     DW-statistic                  .32448
*******************************************************************************


                                Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  14.9624[.000]*F(   1,  18)=  44.6079[.000]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   8.7792[.003]*F(   1,  18)=  12.9310[.002]*
*                     *                          *                            *
```

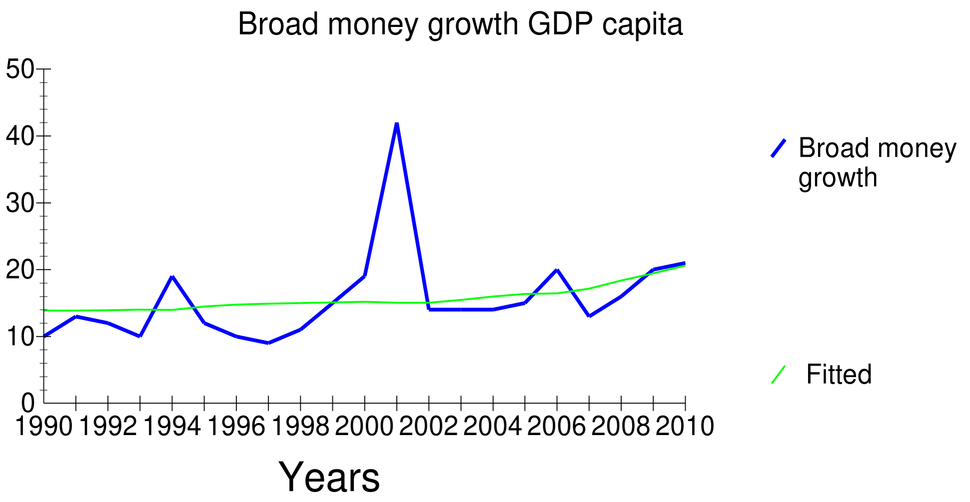
```
* C:Normality         *CHSQ(   2)=   2.8566[.240]*       Not applicable       *

*                     *                          *                            *

* D:Heteroscedasticity*CHSQ(   1)=   .32779[.567]*F(   1,  19)=   .30128[.589]*

*******************************************************************************

           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
```



BROAD MONEY GROWTH (% ANNUAL) -PR-CON GDP PER CAPITA (CURRENT USD)-O-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is PR
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                        8.9412            5.8486             1.5288[.143]
 O                         .017577           .014758             1.1910[.248]
*******************************************************************************
 R-Squared                    .069473   R-Bar-Squared                   .020498
 S.E. of Regression            6.9795   F-stat.    F(  1,  19)    1.4185[.248]
 Mean of Dependent Variable   15.6667   S.D. of Dependent Variable      7.0522
 Residual Sum of Squares     925.5642   Equation Log-likelihood       -69.5495
 Akaike Info. Criterion      -71.5495   Schwarz Bayesian Criterion    -72.5940
 DW-statistic                  1.7355
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .32403[.569]*F(   1,  18)=   .28209[.602]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=  .066280[.797]*F(   1,  18)=  .056991[.814]*
*                     *                          *                            *
```

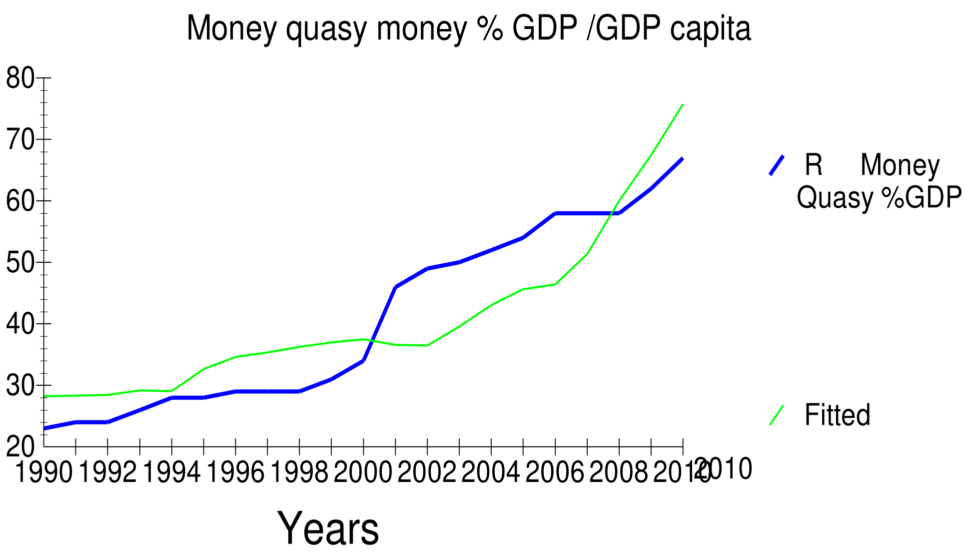
```
* C:Normality          *CHSQ(   2)= 121.7177[.000]*       Not applicable       *
*                      *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   .21913[.640]*F(   1,  19)=   .20035[.659]*
*******************************************************************************
   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
```



MONEY AND QUASY MONEY AS % GDP –R- CON GDP PER CAPITA (CURRENT USD) –O-

```
                      Ordinary Least Squares Estimation
*******************************************************************************
                         Dependent variable is R
            21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       -6.4571            6.2673            -1.0303[.316]
 O                          .12378           .015815             7.8270[.000]
*******************************************************************************
 R-Squared                    .76328   R-Bar-Squared                    .75082
 S.E. of Regression           7.4792   F-stat.    F(  1,  19)   61.2627[.000]
 Mean of Dependent Variable   40.9048   S.D. of Dependent Variable     14.9830
 Residual Sum of Squares       1062.8   Equation Log-likelihood       -71.0016
 Akaike Info. Criterion      -73.0016   Schwarz Bayesian Criterion    -74.0461
                    DW-statistic                  .32448
*******************************************************************************


                            Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  14.9624[.000]*F(   1,  18)=  44.6079[.000]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   8.7792[.003]*F(   1,  18)=  12.9310[.002]*
*                     *                          *                            *
```

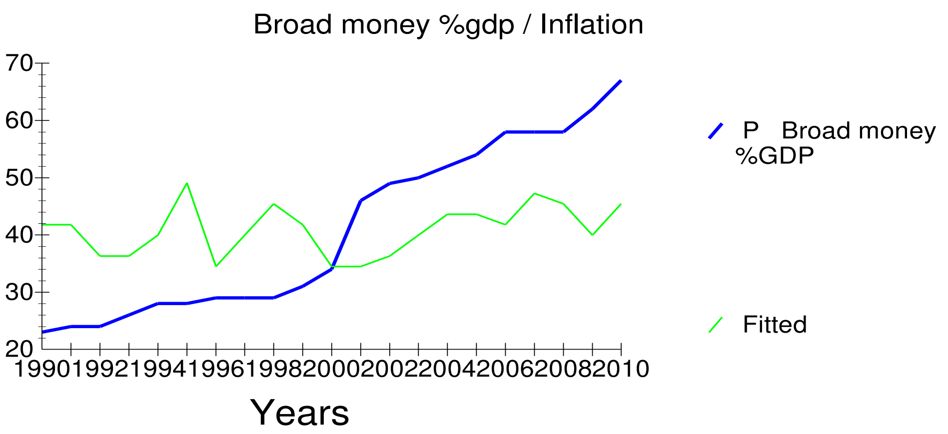
```
* C:Normality          *CHSQ(   2)=   2.8566[.240]*      Not applicable       *
*                      *                          *                         *
* D:Heteroscedasticity*CHSQ(   1)=   .32779[.567]*F(   1,  19)=   .30128[.589]*
*******************************************************************************
          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
```



BROAD MONEY % GDP-P- CON INFLATION CONSUMER PRICES (% ANNUAL) -V-

```
                         Ordinary Least Squares Estimation
******************************************************************************
                           Dependent variable is P
             21 observations used for estimation from 1990 to 2010
******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       30.8049            8.2830            3.7190[.001]
 V                          1.8284            1.3823            1.3227[.202]
******************************************************************************
 R-Squared                     .084318   R-Bar-Squared                  .036124
 S.E. of Regression            14.7099   F-stat.    F(  1,  19)    1.7496[.202]
 Mean of Dependent Variable    40.9048   S.D. of Dependent Variable     14.9830
 Residual Sum of Squares        4111.2   Equation Log-likelihood       -85.2058
 Akaike Info. Criterion       -87.2058   Schwarz Bayesian Criterion    -88.2503
                     DW-statistic                  .21428
******************************************************************************


                              Diagnostic Tests
******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  17.1752[.000]*F(   1,  18)=  80.8298[.000]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   .15764[.691]*F(   1,  18)=   .13614[.716]*
*                     *                          *                            *
```

```
* C:Normality           *CHSQ(   2)=   1.9644[.374]*      Not applicable        *
*                       *                           *                           *
* D:Heteroscedasticity*CHSQ(   1)=   4.8866[.027]*F(   1,  19)=   5.7620[.027]*
*******************************************************************************
          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
```

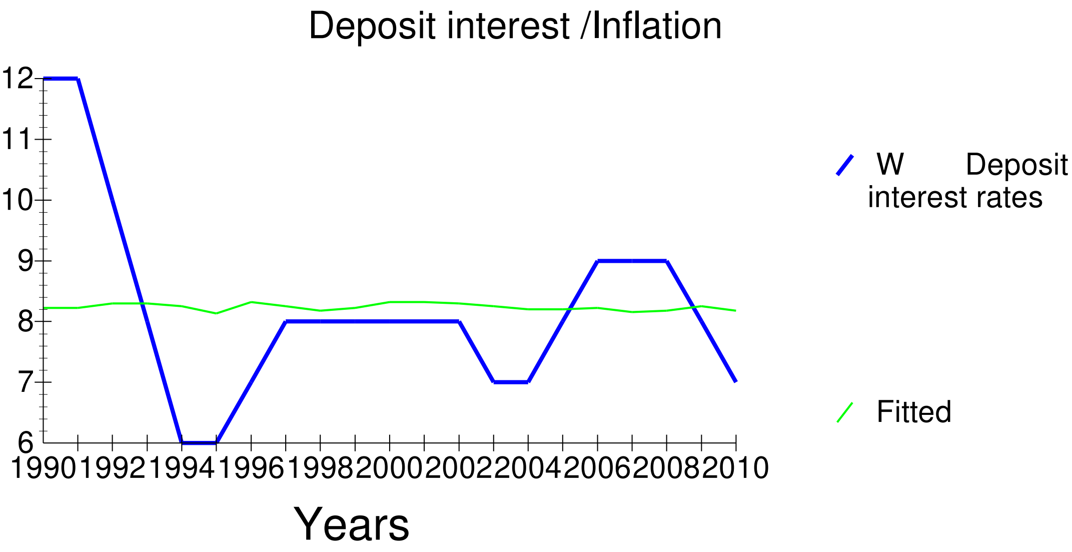


BROAD MONEY GROWTH (ANNUAL %) –PR-CON INFLATION CONSUMER PRICES (ANNUAL %)-V-

```
                         Ordinary Least Squares Estimation
 *******************************************************************************
                              Dependent variable is PR
               21 observations used for estimation from 1990 to 2010
 *******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       19.8293            3.9403              5.0324[.000]
 V                         -.75357            .65759             -1.1460[.266]
 *******************************************************************************
 R-Squared                    .064650   R-Bar-Squared                   .015421
 S.E. of Regression            6.9976   F-stat.    F(  1,  19)    1.3132[.266]
 Mean of Dependent Variable   15.6667   S.D. of Dependent Variable      7.0522
 Residual Sum of Squares     930.3616   Equation Log-likelihood       -69.6037
 Akaike Info. Criterion      -71.6037   Schwarz Bayesian Criterion    -72.6483
                    DW-statistic                 1.6896
 *******************************************************************************


                                  Diagnostic Tests
 *******************************************************************************
 *    Test Statistics  *        LM Version        *         F Version          *
 *******************************************************************************
 *                     *                          *                            *
 * A:Serial Correlation*CHSQ(   1)=   .28150[.596]*F(   1,  18)=   .24456[.627]*
 *                     *                          *                            *
 * B:Functional Form   *CHSQ(   1)=   .54875[.459]*F(   1,  18)=   .48298[.496]*
```

```
*                    *                          *                            *
* C:Normality         *CHSQ(   2)=  35.3287[.000]*       Not applicable       *
*                    *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   3.7599[.052]*F(   1,  19)=   4.1437[.056]*
*******************************************************************************
          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
```

DEPOSIT INTEREST INFLATION



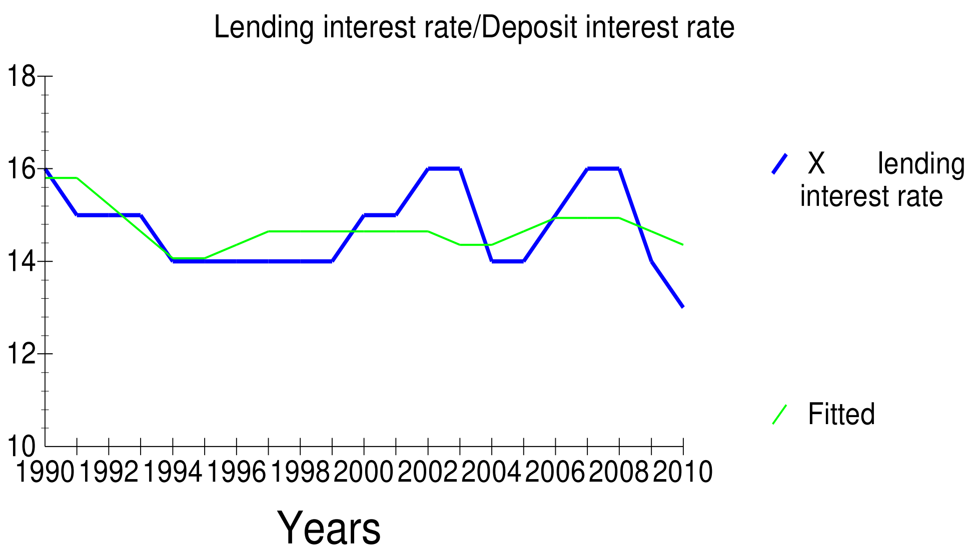
LENDING INTEREST RATE –X-CON INFLATION CONSUMER PRICES (ANNUAL %)-V-

```
                         Ordinary Least Squares Estimation
*******************************************************************************
                              Dependent variable is X
               21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       15.0488            .51463            29.2417[.000]
 V                        -.060555           .085886            -.70506[.489]
*******************************************************************************
 R-Squared                     .025497   R-Bar-Squared                -.025793
 S.E. of Regression             .91394   F-stat.    F(  1,  19)    .49712[.489]
 Mean of Dependent Variable   14.7143   S.D. of Dependent Variable      .90238
 Residual Sum of Squares      15.8705   Equation Log-likelihood       -26.8571
 Akaike Info. Criterion      -28.8571   Schwarz Bayesian Criterion    -29.9016
                     DW-statistic                  .95575
*******************************************************************************


                                 Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   3.8210[.051]*F(   1,  18)=   4.0036[.061]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)= .0041918[.948]*F(   1,  18)= .0035937[.953]*
*                     *                          *                            *
```

```
* C:Normality          *CHSQ(   2)=   1.2557[.534]*       Not applicable       *
*                      *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   3.2020[.074]*F(   1,  19)=   3.4182[.080]*
*******************************************************************************
          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
```

```
LENDING INTEREST RATE (%) -X- CON  DEPOSIT INTEREST RATE (%)-W-

                         Ordinary Least Squares Estimation
*******************************************************************************
                           Dependent variable is X
              21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       12.3279            .94789            13.0057[.000]
 W                          .28967            .11310             2.5612[.019]
*******************************************************************************
 R-Squared                      .25664   R-Bar-Squared                   .21752
 S.E. of Regression             .79823   F-stat.    F(  1,  19)    6.5597[.019]
 Mean of Dependent Variable   14.7143   S.D. of Dependent Variable      .90238
 Residual Sum of Squares      12.1061   Equation Log-likelihood      -24.0142
 Akaike Info. Criterion      -26.0142   Schwarz Bayesian Criterion    -27.0587
                     DW-statistic                 1.0836
*******************************************************************************


                                Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   3.7104[.054]*F(   1,  18)=   3.8628[.065]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   .71389[.398]*F(   1,  18)=   .63344[.436]*
*                     *                          *                            *
```

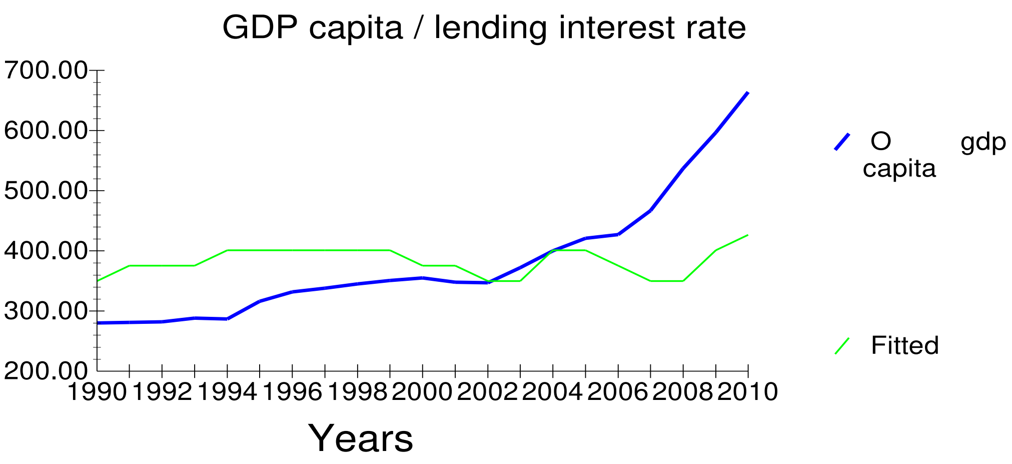
```
* C:Normality          *CHSQ(   2)=   1.2047[.548]*       Not applicable       *
*                      *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   .26568[.606]*F(   1,  19)=   .24346[.627]*
*******************************************************************************
          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
```



GDP PER CAPITA –O-CON LENDING INTEREST RATE (%)-X-

```
                     Ordinary Least Squares Estimation
*******************************************************************************
                         Dependent variable is O
              21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      758.7368          386.7619             1.9618[.065]
 X                        -25.5614           26.2378            -.97422[.342]
*******************************************************************************
 R-Squared                    .047576   R-Bar-Squared               -.0025513
 S.E. of Regression          105.8843   F-stat.    F(  1,  19)    .94910[.342]
 Mean of Dependent Variable  382.6190   S.D. of Dependent Variable    105.7495
 Residual Sum of Squares     213018.1   Equation Log-likelihood      -126.6561
 Akaike Info. Criterion     -128.6561   Schwarz Bayesian Criterion   -129.7006
                     DW-statistic                 .083002
*******************************************************************************


                            Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  19.3134[.000]*F(   1,  18)= 206.1217[.000]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   8.1625[.004]*F(   1,  18)=  11.4449[.003]*
```

```
*                     *                          *                             *
* C:Normality         *CHSQ(   2)=   4.2510[.119]*      Not applicable         *
*                     *                          *                             *
* D:Heteroscedasticity*CHSQ(   1)=   1.6716[.196]*F(   1,  19)=   1.6432[.215]*
*******************************************************************************
          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
```



PRIMARY EDUCATION TEACHERS (% FEMALE) -K-CON TAXES ON GOODS AND SERVICES (% OF REVENUE) –C-

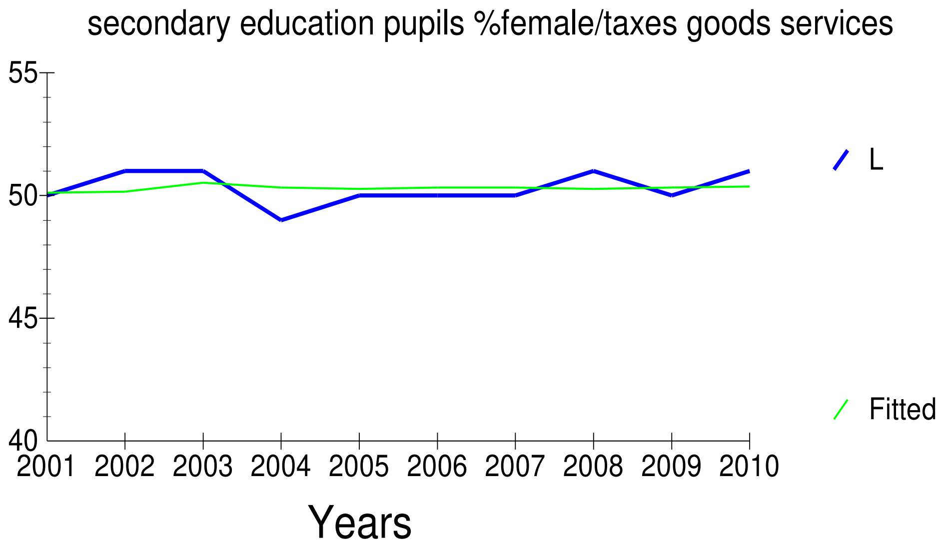
```
Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is K
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       14.2264            25.7014             .55353[.595]
 C                          .83962             .92863             .90415[.392]
*******************************************************************************
 R-Squared                    .092713   R-Bar-Squared                 -.020698
 S.E. of Regression            6.0468   F-stat.    F(  1,   8)    .81749[.392]
 Mean of Dependent Variable   37.4000   S.D. of Dependent Variable      5.9852
 Residual Sum of Squares     292.5094   Equation Log-likelihood       -31.0689
 Akaike Info. Criterion      -33.0689   Schwarz Bayesian Criterion    -33.3715
 DW-statistic                  .37037
*******************************************************************************

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

```
* A:Serial Correlation*CHSQ(   1)=   6.0143[.014]*F(   1,   7)=  10.5629[.014]*
*                     *                          *                             *
* B:Functional Form   *CHSQ(   1)=   4.8784[.027]*F(   1,   7)=   6.6677[.036]*
*                     *                          *                             *
* C:Normality         *CHSQ(   2)=   .25022[.882]*      Not applicable         *
*                     *                          *                             *
* D:Heteroscedasticity*CHSQ(   1)=   3.4124[.065]*F(   1,   8)=   4.1439[.076]*
*******************************************************************************
   A:Lagrange multiplier test of residual serial correlation
```

SECONDARY EDUCATION PUPILS (% FEMALE) –L-CON TAXES ON GOODS AND SERVICES (% OF REVENUE)-C-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is L
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       48.8679             3.0002            16.2883[.000]
 C                         .051887             .10840             .47866[.645]
*******************************************************************************
 R-Squared                    .027842   R-Bar-Squared                 -.093678
 S.E. of Regression            .70585   F-stat.    F(  1,   8)    .22911[.645]
 Mean of Dependent Variable   50.3000   S.D. of Dependent Variable      .67495
 Residual Sum of Squares       3.9858   Equation Log-likelihood        -9.5902
 Akaike Info. Criterion      -11.5902   Schwarz Bayesian Criterion    -11.8928
 DW-statistic                  2.1237
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .16796[.682]*F(   1,   7)=   .11958[.740]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   1.2906[.256]*F(   1,   7)=   1.0373[.342]*
*                     *                          *                            *
```

```
* C:Normality          *CHSQ(   2)=   .40118[.818]*       Not applicable        *
*                      *                          *                             *
* D:Heteroscedasticity*CHSQ(   1)= .0015000[.969]*F(   1,   8)= .0012002[.973]*
*******************************************************************************
   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
```



SECONDARY EDUCATION GENERAL PUPILS (% FEMALE)-M- CON TAXESON GOODS AND SERVICES (%REVENUE) –C-

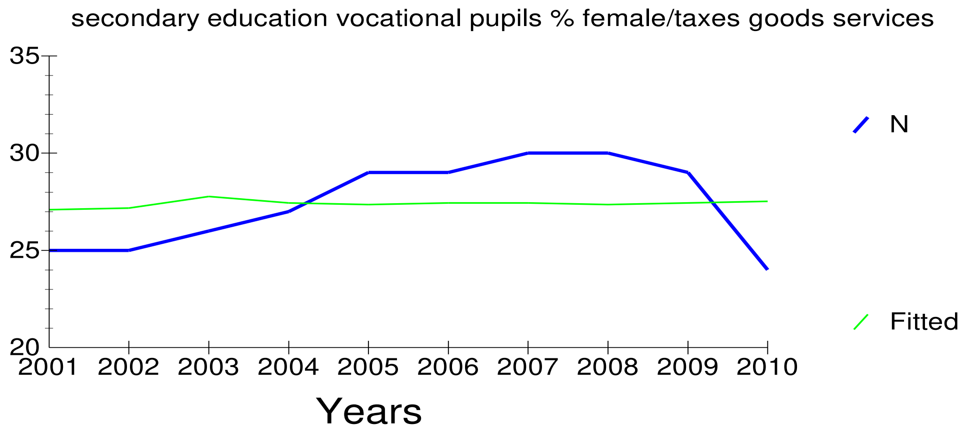
```
                     Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is M
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       50.8302            4.2766           11.8855[.000]
 C                       -.0047170            .15452          -.030526[.976]
*******************************************************************************
 R-Squared                   .1165E-3   R-Bar-Squared                  -.12487
 S.E. of Regression            1.0062   F-stat.    F(  1,   8)  .9319E-3[.976]
 Mean of Dependent Variable   50.7000   S.D. of Dependent Variable      .94868
 Residual Sum of Squares       8.0991   Equation Log-likelihood       -13.1352
 Akaike Info. Criterion      -15.1352   Schwarz Bayesian Criterion    -15.4378
 DW-statistic                  1.3642
*******************************************************************************


                             Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .57421[.449]*F(   1,   7)=   .42643[.535]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   *NONE*      *F(   1,   7)=   *NONE*      *
```

*   *   *   *

SECONDARY EDUCATION VOCATIONALPUPILS (% FEMALE)-N- CON TAXESON GOODS AND SERVICES (% OF REVENUE)-C-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is N
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                        25.0566            10.2026            2.4559[.040]
 C                          .084906             .36863            .23032[.824]
*******************************************************************************
 R-Squared                    .0065875   R-Bar-Squared                    -.11759
 S.E. of Regression             2.4004   F-stat.    F(  1,    8)    .053050[.824]
 Mean of Dependent Variable    27.4000   S.D. of Dependent Variable        2.2706
 Residual Sum of Squares       46.0943   Equation Log-likelihood         -21.8299
```

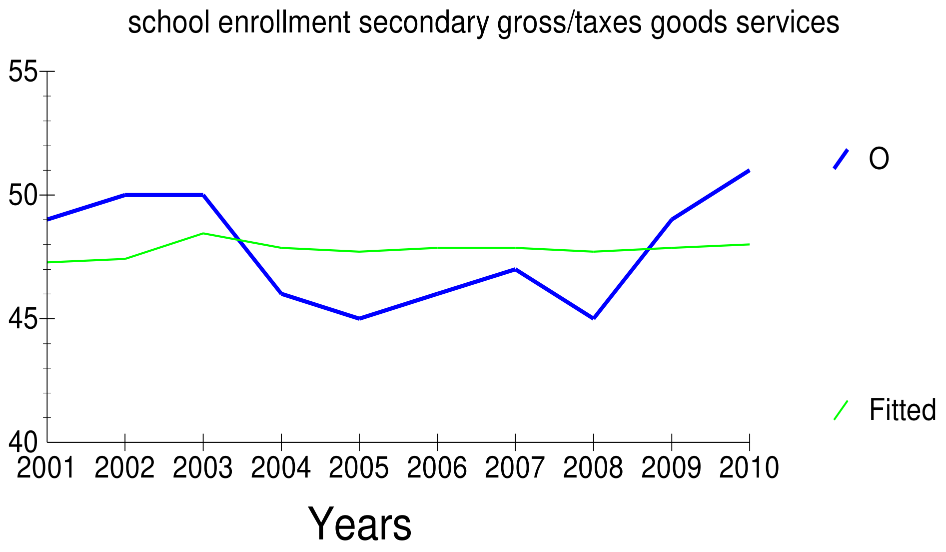
```
 Akaike Info. Criterion      -23.8299   Schwarz Bayesian Criterion    -24.1325

 DW-statistic                  .74545

*******************************************************************************

*    Test Statistics  *        LM Version         *         F Version          *

*******************************************************************************

*                     *                           *                            *

* A:Serial Correlation*CHSQ(   1)=   2.8209[.093]*F(   1,    7)=   2.7505[.141]*

*                     *                           *                            *

* B:Functional Form   *CHSQ(   1)=   3.5350[.060]*F(   1,    7)=   3.8275[.091]*

*                     *                           *                            *

* C:Normality         *CHSQ(   2)=   1.0216[.600]*       Not applicable        *

*                     *                           *                            *

* D:Heteroscedasticity*CHSQ(   1)= .0075447[.931]*F(   1,    8)= .0060403[.940]*

*******************************************************************************

   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
```



SCHOOL ENROLLMENT SECONDARY (%GROSS) -O-CON TAXESON GOODS AND SERVICES (% REVENUE) –C-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is O
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       43.7642           10.0463             4.3562[.002]
 C                          .14623            .36299             .40284[.698]
*******************************************************************************
 R-Squared                    .019882   R-Bar-Squared                   -.10263
 S.E. of Regression            2.3636   F-stat.    F(  1,   8)    .16228[.698]
 Mean of Dependent Variable   47.8000   S.D. of Dependent Variable      2.2509
 Residual Sum of Squares      44.6934   Equation Log-likelihood       -21.6756
 Akaike Info. Criterion      -23.6756   Schwarz Bayesian Criterion    -23.9782
 DW-statistic                  .84178
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   2.6554[.103]*F(   1,   7)=   2.5309[.156]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   3.0083[.083]*F(   1,   7)=   3.0118[.126]*
*                     *                          *                            *
* C:Normality         *CHSQ(   2)=   1.1056[.575]*       Not applicable       *
```

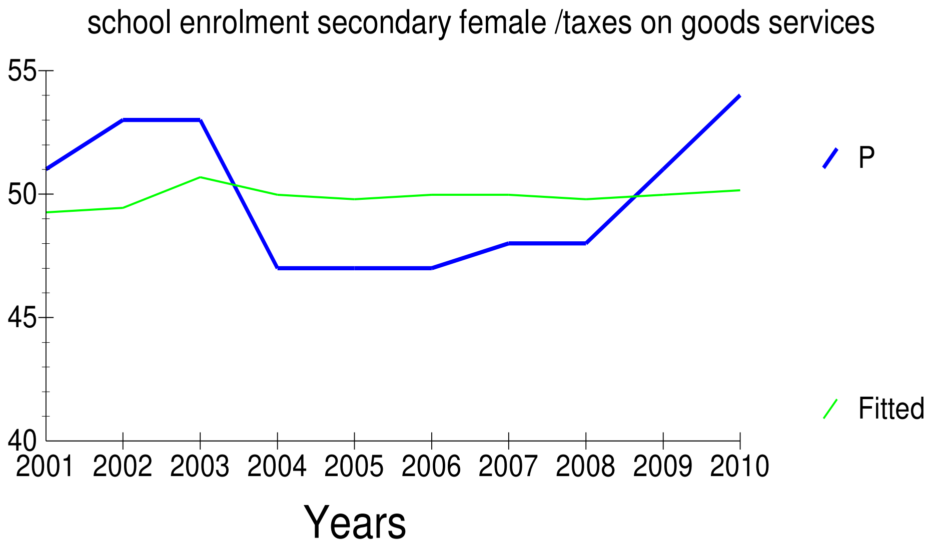
```
*                      *                           *                            *
* D:Heteroscedasticity*CHSQ(   1)=   .32511[.569]*F(   1,   8)=   .26883[.618]*
*******************************************************************************
   A:Lagrange multiplier test of residual serial correlation
   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
```



SCHOOL ENROLLMENT SECONDARY FEMALE (% GROSS) –P-CON TAXES ON GOODS AND SERVICES (% REVENUE)-C-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is P
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       44.9528           12.5313            3.5872[.007]
 C                          .17925            .45277            .39588[.703]
*******************************************************************************
 R-Squared                    .019214   R-Bar-Squared                   -.10338
 S.E. of Regression            2.9483   F-stat.    F(  1,   8)    .15672[.703]
 Mean of Dependent Variable   49.9000   S.D. of Dependent Variable      2.8067
 Residual Sum of Squares      69.5377   Equation Log-likelihood       -23.8858
 Akaike Info. Criterion      -25.8858   Schwarz Bayesian Criterion    -26.1884
 DW-statistic                  .71629
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   3.7434[.053]*F(   1,   7)=   4.1881[.080]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   3.3328[.068]*F(   1,   7)=   3.4992[.104]*
*                     *                          *                            *
```

```
* C:Normality          *CHSQ(   2)=   1.1628[.559]*       Not applicable       *
*                      *                           *                            *
* D:Heteroscedasticity*CHSQ(   1)= .0089111[.925]*F(   1,   8)= .0071352[.935]*
*******************************************************************************
   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
```



SCHOOL ENROLLMENT SECONDARY MALE (% GROSS) –PR-CON TAXES ON GOODS AND SERVICES (% ON REVENUE)-C-

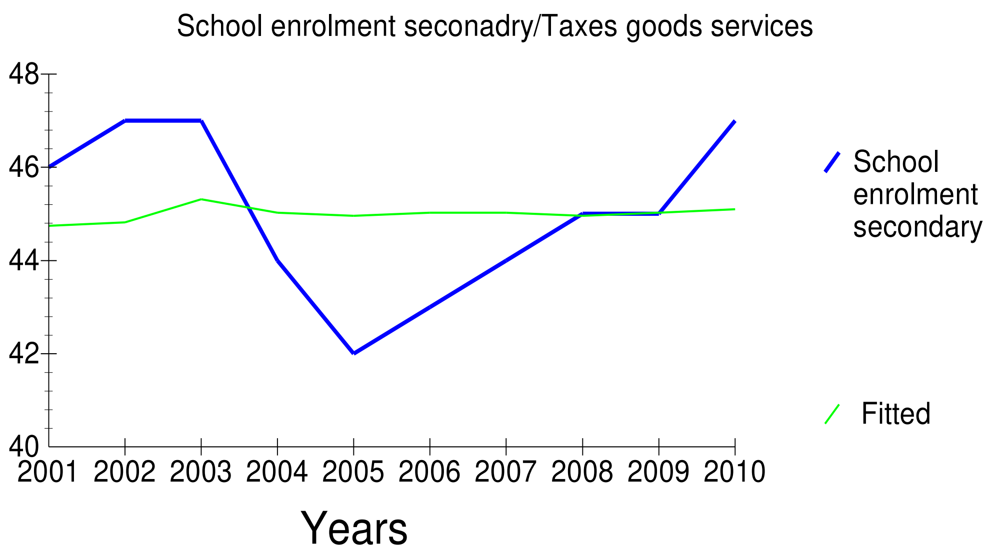
```
                        Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is PR
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       45.8302            8.5140             5.3829[.001]
 C                       -.0047170            .30762           -.015334[.988]
*******************************************************************************
 R-Squared                    .2939E-4   R-Bar-Squared                   -.12497
 S.E. of Regression             2.0031   F-stat.    F(  1,   8)  .2351E-3[.988]
 Mean of Dependent Variable    45.7000   S.D. of Dependent Variable      1.8886
 Residual Sum of Squares       32.0991   Equation Log-likelihood       -20.0206
 Akaike Info. Criterion       -22.0206   Schwarz Bayesian Criterion    -22.3232
 DW-statistic                   1.3109
*******************************************************************************


                                Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .93846[.333]*F(   1,   7)=   .72496[.423]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   *NONE*      *F(   1,   7)=   *NONE*      *
*                     *                          *                            *
```

```
* C:Normality         *CHSQ(   2)=   .97683[.614]*       Not applicable       *
*                     *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   .50523[.477]*F(   1,   8)=   .42569[.532]*
*******************************************************************************
   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 R
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       43.0472             7.9216             5.4341[.001]
 C                         .070755             .28622             .24720[.811]
*******************************************************************************
 R-Squared                    .0075809   R-Bar-Squared                   -.11647
 S.E. of Regression             1.8637   F-stat.    F(  1,   8)   .061110[.811]
 Mean of Dependent Variable    45.0000   S.D. of Dependent Variable      1.7638
 Residual Sum of Squares       27.7877   Equation Log-likelihood       -19.2994
 Akaike Info. Criterion       -21.2994   Schwarz Bayesian Criterion    -21.6020
 DW-statistic                   .68195
*******************************************************************************
```

Diagnostic Tests

```
*******************************************************************************
*    Test Statistics  *        LM Version         *         F Version         *
*******************************************************************************
*                     *                           *                           *
* A:Serial Correlation*CHSQ(   1)=   3.8838[.049]*F(   1,   7)=   4.4450[.073]*
*                     *                           *                           *
* B:Functional Form   *CHSQ(   1)=   3.8896[.049]*F(   1,   7)=   4.4560[.073]*
*                     *                           *                           *
* C:Normality         *CHSQ(   2)=   .67824[.712]*       Not applicable       *
*                     *                           *                           *
* D:Heteroscedasticity*CHSQ(   1)=  .037637[.846]*F(   1,   8)=  .030223[.866]*
*******************************************************************************
   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
```



TAXES ON GOODS AND SERVICES (% REVENUE) –C-CON SCHOOL ENROLLMENT SECONDARY (% NET) R

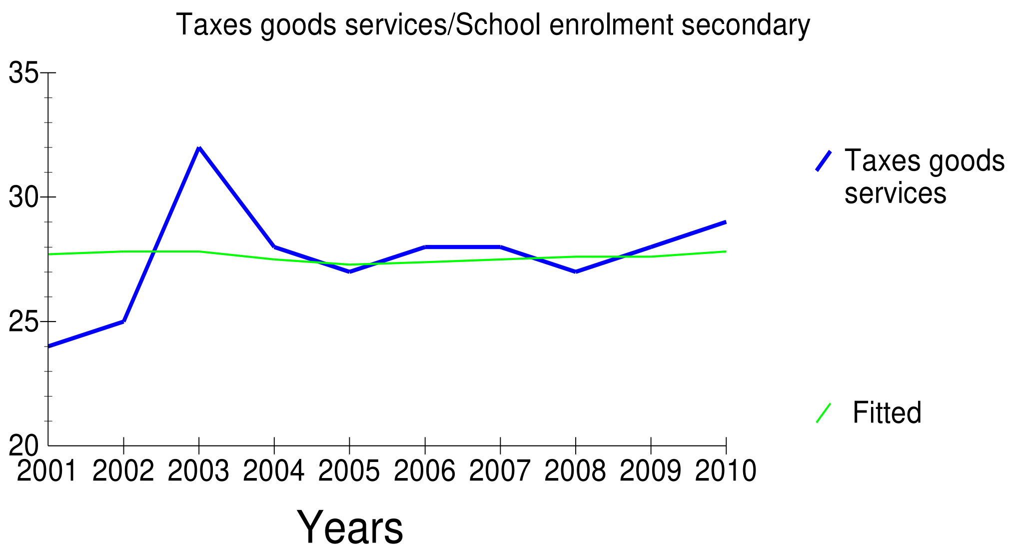
Ordinary Least Squares Estimation

```
*******************************************************************************
 Dependent variable is C
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       22.7786           19.5173             1.1671[.277]
 R                          .10714            .43342             .24720[.811]
*******************************************************************************
 R-Squared                  .0075809   R-Bar-Squared                   -.11647
 S.E. of Regression           2.2934   F-stat.    F(  1,   8)   .061110[.811]
 Mean of Dependent Variable  27.6000   S.D. of Dependent Variable      2.1705
 Residual Sum of Squares     42.0786   Equation Log-likelihood       -21.3742
 Akaike Info. Criterion     -23.3742   Schwarz Bayesian Criterion    -23.6767
 DW-statistic                 1.6065
*******************************************************************************
```

Diagnostic Tests

```
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)= .0040805[.949]*F(   1,   7)= .0028575[.959]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   .20660[.649]*F(   1,   7)=   .14767[.712]*
```

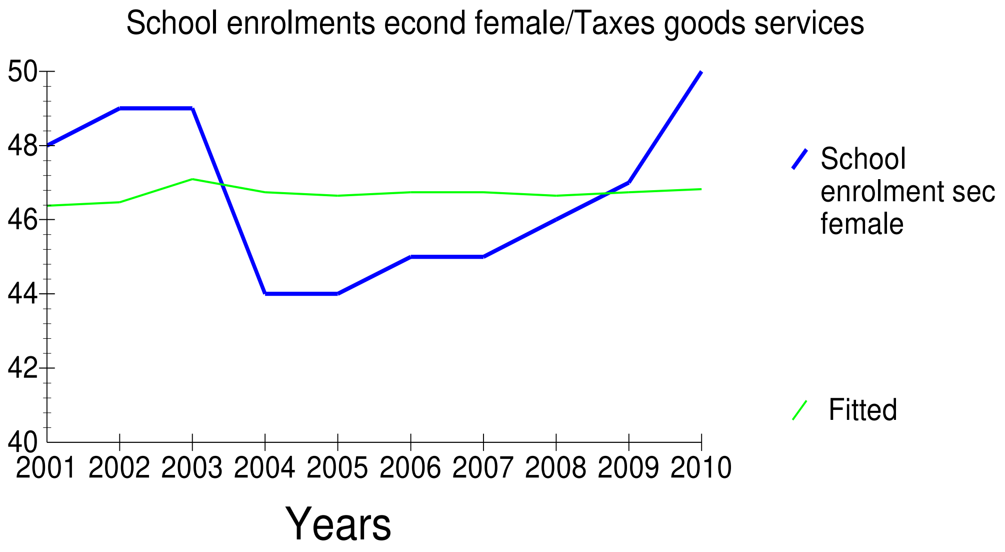
```
*                     *                           *                             *
* C:Normality         *CHSQ(   2)=  .012763[.994]*       Not applicable        *
*                     *                           *                             *
* D:Heteroscedasticity*CHSQ(   1)=   4.0523[.044]*F(   1,   8)=   5.4506[.048]*
*******************************************************************************
   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
```



SCHOOL ENROLLMENT SECONDARY FEMALE –S- CON TAXES ON GOODS AND SERVICES 8 % REVENUE)-C-

```
   Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is S
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       44.2264             9.9408             4.4490[.002]
 C                         .089623             .35918             .24952[.809]
*******************************************************************************
 R-Squared                    .0077226   R-Bar-Squared                  -.11631
 S.E. of Regression             2.3388   F-stat.    F(  1,   8)   .062262[.809]
 Mean of Dependent Variable    46.7000   S.D. of Dependent Variable      2.2136
 Residual Sum of Squares       43.7594   Equation Log-likelihood       -21.5700
 Akaike Info. Criterion       -23.5700   Schwarz Bayesian Criterion    -23.8726
 DW-statistic                   .77901
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   3.0679[.080]*F(   1,   7)=   3.0979[.122]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   3.5789[.059]*F(   1,   7)=   3.9016[.089]*
*                     *                          *                            *
```

```
* C:Normality          *CHSQ(   2)=   .96276[.618]*       Not applicable       *
*                      *                           *                            *
* D:Heteroscedasticity*CHSQ(   1)=  .059563[.807]*F(   1,   8)=  .047936[.832]*
*******************************************************************************
   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
```



SCHOOL ENROLLMENT SECONDARY MALE -T- CON   TAXES ON GOODS AND SERVICES (% OF REVENUE)-C-

Ordinary Least Squares Estimation

****

Dependent variable is T

10 observations used for estimation from 2001 to 2010

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	44.6321	5.0929	8.7635[.000]
C	-.051887	.18402	-.28197[.785]

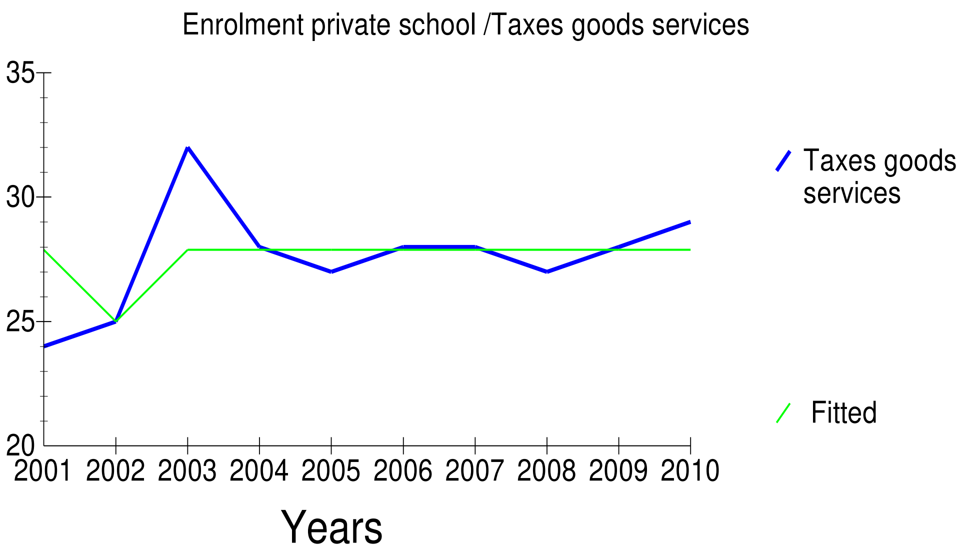
****

R-Squared	.0098406	R-Bar-Squared	-.11393
S.E. of Regression	1.1982	F-stat. F(1, 8)	.079507[.785]
Mean of Dependent Variable	43.2000	S.D. of Dependent Variable	1.1353
Residual Sum of Squares	11.4858	Equation Log-likelihood	-14.8820
Akaike Info. Criterion	-16.8820	Schwarz Bayesian Criterion	-17.1846
DW-statistic	.90535		

TAXES ON GOODS AND SERVICES –C– CON SCHOOL ENROLLMENT SECONDARY PRIVATE (% TOTAL SECONDARY) –U–

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is C
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      302.3333           209.3437             1.4442[.187]
 U                         -2.8889             2.2013            -1.3124[.226]
*******************************************************************************
 R-Squared                     .17715   R-Bar-Squared                  .074292
 S.E. of Regression            2.0883   F-stat.    F(  1,   8)    1.7223[.226]
 Mean of Dependent Variable   27.6000   S.D. of Dependent Variable      2.1705
 Residual Sum of Squares      34.8889   Equation Log-likelihood       -20.4373
 Akaike Info. Criterion      -22.4373   Schwarz Bayesian Criterion    -22.7399
 DW-statistic                  1.5198
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)= .6328E-3[.980]*F(   1,   7)= .4430E-3[.984]*
*                     *                          *                            *
```

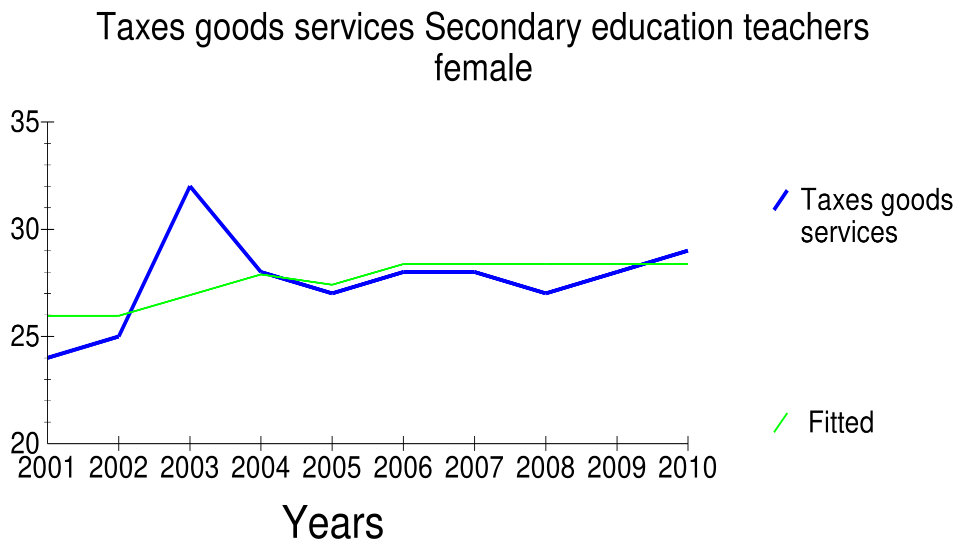
```
* B:Functional Form    *CHSQ(   1)= .2706E-8[1.00]*F(   1,    7)= .1894E-8[1.00]*
*                      *                          *                            *
* C:Normality          *CHSQ(   2)=   .69394[.707]*       Not applicable       *
*                      *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   .34204[.559]*F(   1,    8)=   .28332[.609]*
*******************************************************************************
   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
```



TAXES ON GOODS AND SERVICES-C- CON SECONDARY EDUCATION TEACHERS (% FEMALE) -V-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is C
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       19.1719            5.7728             3.3211[.011]
 V                          .48438            .32969             1.4692[.180]
*******************************************************************************
 R-Squared                    .21249   R-Bar-Squared                    .11405
 S.E. of Regression           2.0430   F-stat.    F(  1,   8)    2.1585[.180]
 Mean of Dependent Variable  27.6000   S.D. of Dependent Variable      2.1705
 Residual Sum of Squares     33.3906   Equation Log-likelihood       -20.2178
 Akaike Info. Criterion     -22.2178   Schwarz Bayesian Criterion    -22.5204
 DW-statistic                 1.9566
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  .017809[.894]*F(   1,   7)=  .012489[.914]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   4.0078[.045]*F(   1,   7)=   4.6819[.067]*
*                     *                          *                            *
```

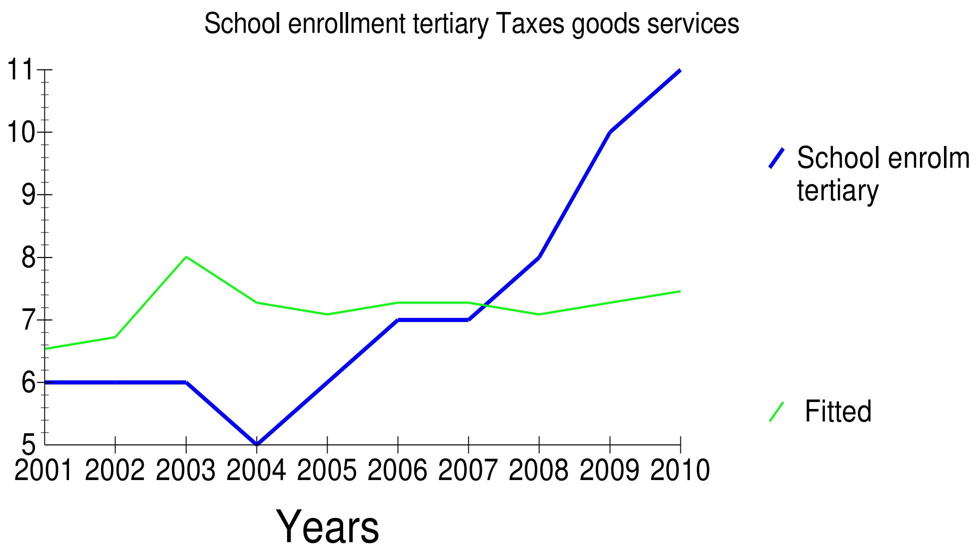
```
* C:Normality          *CHSQ(   2)=  10.5517[.005]*       Not applicable      *
*                      *                          *                           *
* D:Heteroscedasticity*CHSQ(   1)=   1.0789[.299]*F(   1,    8)=   .96749[.354]*
*******************************************************************************
   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
```



SCHOOL ENROLLMENT TERTIARY -W-CON TAXES ON GOODS AND SERVICES (% REVENUE) –C-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is W
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor               Coefficient       Standard Error         T-Ratio[Prob]
 CON                          2.1226               8.5227            .24906[.810]
 C                            .18396               .30794            .59740[.567]
*******************************************************************************
 R-Squared                    .042706   R-Bar-Squared                   -.076956
 S.E. of Regression            2.0052   F-stat.    F(  1,   8)    .35689[.567]
 Mean of Dependent Variable    7.2000   S.D. of Dependent Variable      1.9322
 Residual Sum of Squares      32.1651   Equation Log-likelihood       -20.0309
 Akaike Info. Criterion      -22.0309   Schwarz Bayesian Criterion    -22.3335
 DW-statistic                  .28588
*******************************************************************************


                              Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   7.6385[.006]*F(   1,   7)=  22.6419[.002]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   1.4976[.221]*F(   1,   7)=   1.2329[.304]*
*                     *                          *                            *
```

```
* C:Normality         *CHSQ(   2)=   1.0642[.587]*       Not applicable       *
*                     *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   2.0021[.157]*F(   1,   8)=   2.0026[.195]*
*******************************************************************************
   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 value
```



SCHOOL ENROLLMENT TERTIARY FEMALE -X- CON TAXES ON GOODS AND SERVICES (% REVENUE) -C-

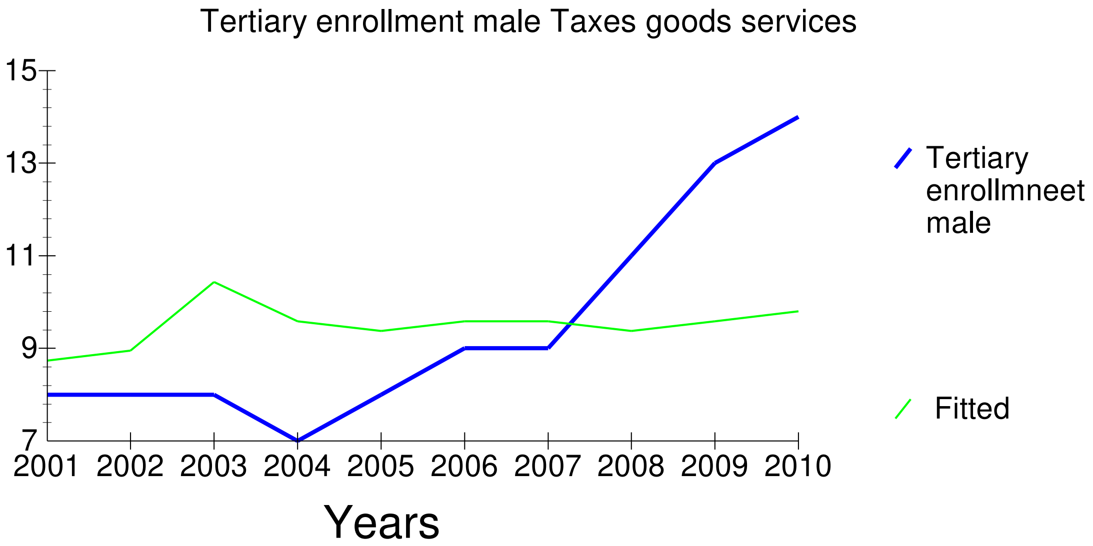
```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is X
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                        1.0943            6.9112             .15834[.878]
 C                          .14151            .24971             .56669[.586]
*******************************************************************************
 R-Squared                    .038593   R-Bar-Squared                  -.081582
 S.E. of Regression            1.6260   F-stat.    F(  1,   8)    .32114[.586]
 Mean of Dependent Variable    5.0000   S.D. of Dependent Variable      1.5635
 Residual Sum of Squares      21.1509   Equation Log-likelihood       -17.9349
 Akaike Info. Criterion      -19.9349   Schwarz Bayesian Criterion    -20.2375
 DW-statistic                  .28399
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   7.5629[.006]*F(   1,   7)=  21.7229[.002]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   1.5777[.209]*F(   1,   7)=   1.3113[.290]*
*                     *                          *                            *
```

```
* C:Normality          *CHSQ(   2)=   .68232[.711]*       Not applicable       *
*                      *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   2.0037[.157]*F(   1,   8)=   2.0046[.195]*
*******************************************************************************
   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
```

SCHOOL ENROLLMENT TERTIARY MALE-Y- CON TAXES ON GOODS AND SERVICES (% REVENUE) -C-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is Y
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                        3.6415            10.4751             .34763[.737]
 C                          .21226             .37848             .56083[.590]
*******************************************************************************
 R-Squared                    .037829   R-Bar-Squared                  -.082442
 S.E. of Regression            2.4645   F-stat.    F(  1,   8)    .31453[.590]
 Mean of Dependent Variable    9.5000   S.D. of Dependent Variable      2.3688
 Residual Sum of Squares      48.5896   Equation Log-likelihood       -22.0935
 Akaike Info. Criterion      -24.0935   Schwarz Bayesian Criterion    -24.3961
 DW-statistic                  .26912
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   7.7311[.005]*F(   1,   7)=  23.8525[.002]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   1.5453[.214]*F(   1,   7)=   1.2794[.295]*
*                     *                          *                            *
```

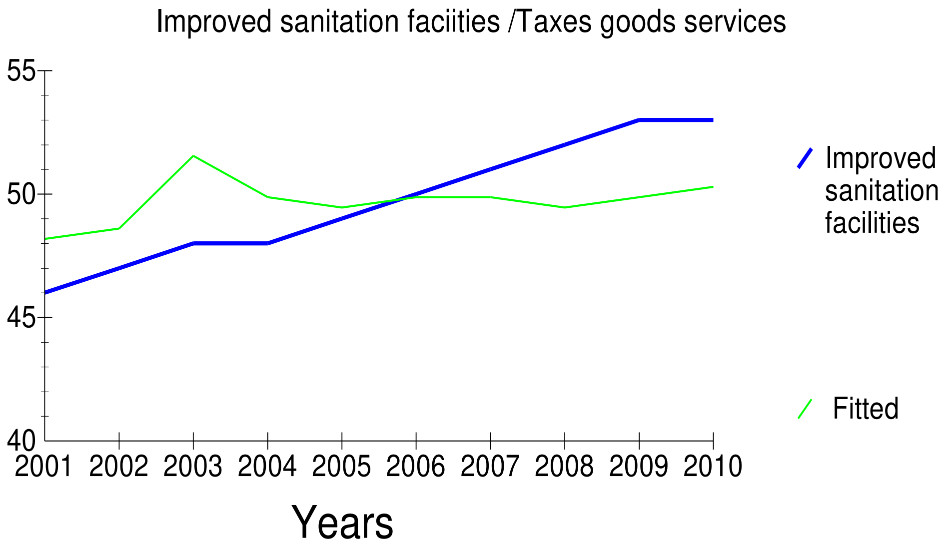
```
* C:Normality          *CHSQ(   2)=   1.2001[.549]*       Not applicable       *
*                      *                          *                          *
* D:Heteroscedasticity*CHSQ(   1)=   1.9909[.158]*F(   1,   8)=   1.9887[.196]*
*******************************************************************************
   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
```



IMPROVED SANITATION FACILITIES (% OF POPULATION WITH ACCESS) -Z-CON TAXES ON GOODS AND SERVICES-C-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is Z
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       38.1132           10.4792             3.6370[.007]
 C                          .41981            .37863             1.1088[.300]
*******************************************************************************
 R-Squared                      .13320   R-Bar-Squared                  .024852
 S.E. of Regression             2.4654   F-stat.    F(  1,   8)    1.2294[.300]
 Mean of Dependent Variable    49.7000   S.D. of Dependent Variable      2.4967
 Residual Sum of Squares       48.6274   Equation Log-likelihood       -22.0974
 Akaike Info. Criterion       -24.0974   Schwarz Bayesian Criterion    -24.4000
 DW-statistic                   .26315
*******************************************************************************


                              Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   6.6650[.010]*F(   1,   7)=  13.9892[.007]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   5.2916[.021]*F(   1,   7)=   7.8672[.026]*
```

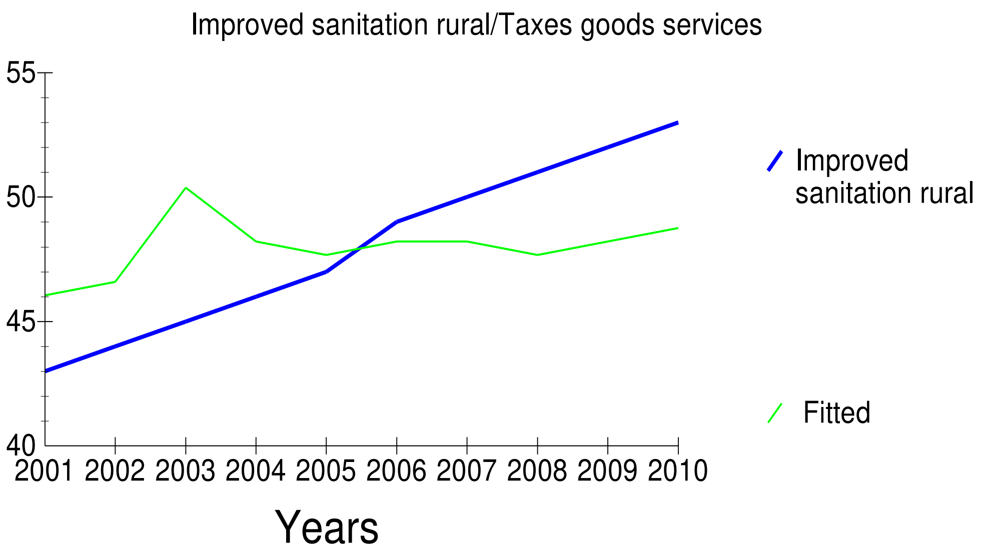
```
*                     *                          *                            *
* C:Normality         *CHSQ(   2)=   .73972[.691]*       Not applicable       *
*                     *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   2.8838[.089]*F(   1,   8)=   3.2420[.109]*
*******************************************************************************
   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
```



IMPROVED SANITATION FACILITIES RURAL (% OF RURAL POPULATION WITH ACCESS)-AA- CON TAXESON GOODS AND SERVICES (% REVENUE)-C

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is AA
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       33.0283           14.8403            2.2256[.057]
 C                          .54245            .53620            1.0117[.341]
*******************************************************************************
 R-Squared                     .11342   R-Bar-Squared                .0025997
 S.E. of Regression            3.4915   F-stat.    F(  1,   8)    1.0235[.341]
 Mean of Dependent Variable   48.0000   S.D. of Dependent Variable      3.4960
 Residual Sum of Squares      97.5236   Equation Log-likelihood       -25.5769
 Akaike Info. Criterion      -27.5769   Schwarz Bayesian Criterion    -27.8795
 DW-statistic                  .27053
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   6.5959[.010]*F(   1,   7)=  13.5633[.008]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   5.8750[.015]*F(   1,   7)=   9.9697[.016]*
```

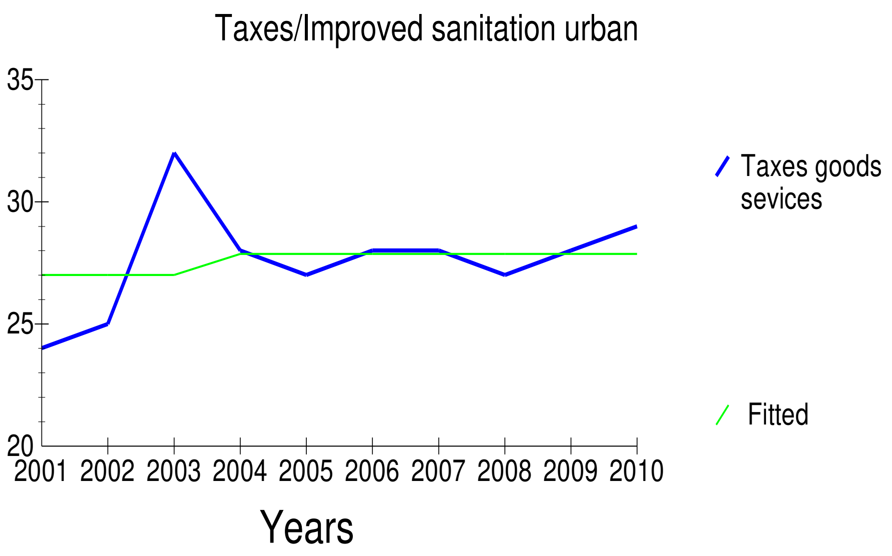
```
*                     *                           *                             *
* C:Normality         *CHSQ(   2)=   .68603[.710]*       Not applicable        *
*                     *                           *                             *
* D:Heteroscedasticity*CHSQ(   1)=   3.7429[.053]*F(   1,   8)=   4.7855[.060]*
*******************************************************************************
   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
```



TAXES ON GOODS AND SERVICES (% REVENUE) –C-CON IMPROVED SANITATION FACILITIES URBAN (% OF URBAN POPULATION WITH ACCESS) -AB

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is C
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      -19.2857            85.3065            -.22608[.827]
 AB                         .85714             1.5595             .54963[.598]
*******************************************************************************
 R-Squared                     .036388   R-Bar-Squared                 -.084063
 S.E. of Regression             2.2599   F-stat.    F(  1,   8)    .30210[.598]
 Mean of Dependent Variable    27.6000   S.D. of Dependent Variable      2.1705
 Residual Sum of Squares       40.8571   Equation Log-likelihood       -21.2269
 Akaike Info. Criterion       -23.2269   Schwarz Bayesian Criterion    -23.5295
 DW-statistic                   1.9236
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .10854[.742]*F(   1,   7)=  .076811[.790]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   *NONE*      *F(   1,   7)=   *NONE*      *
```

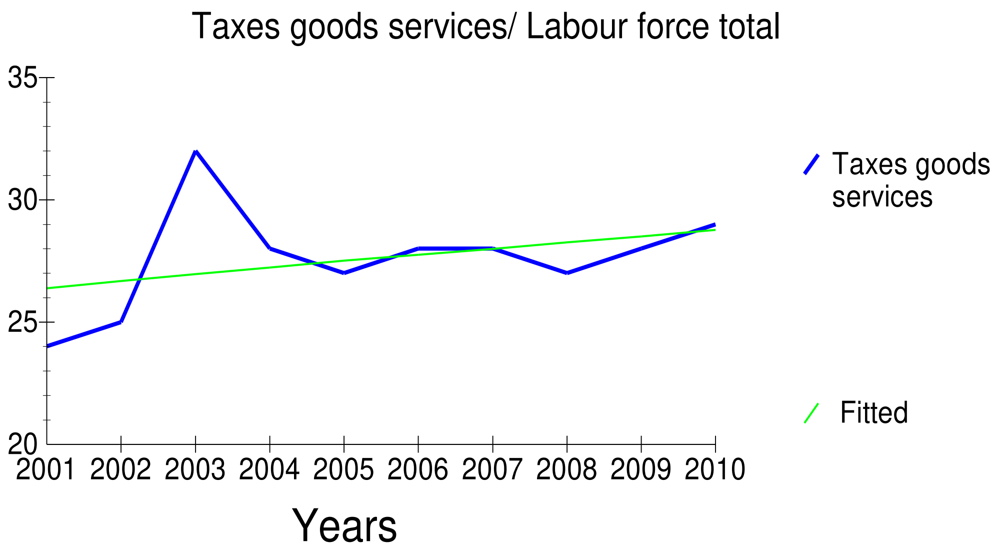
```
*                     *                          *                             *
* C:Normality         *CHSQ(   2)=   2.7404[.254]*       Not applicable        *
*                     *                          *                             *
* D:Heteroscedasticity*CHSQ(   1)=   5.6568[.017]*F(   1,   8)=  10.4196[.012]*
*******************************************************************************
   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
```



TAXES ON GOODS AND SERVICES (% REVENUE) –C- CON LABOUR FORCE TOTAL-AC

```
         Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is C
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       15.0639            11.2819             1.3352[.219]
 AC                       .1874E-6           .1683E-6             1.1132[.298]
*******************************************************************************
 R-Squared                      .13412   R-Bar-Squared                  .025886
 S.E. of Regression             2.1422   F-stat.    F(  1,   8)    1.2392[.298]
 Mean of Dependent Variable    27.6000   S.D. of Dependent Variable      2.1705
 Residual Sum of Squares       36.7133   Equation Log-likelihood       -20.6921
 Akaike Info. Criterion       -22.6921   Schwarz Bayesian Criterion    -22.9947
 DW-statistic                   1.8747
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)= .0023383[.961]*F(   1,   7)= .0016372[.969]*
*                     *                          *                            *
```

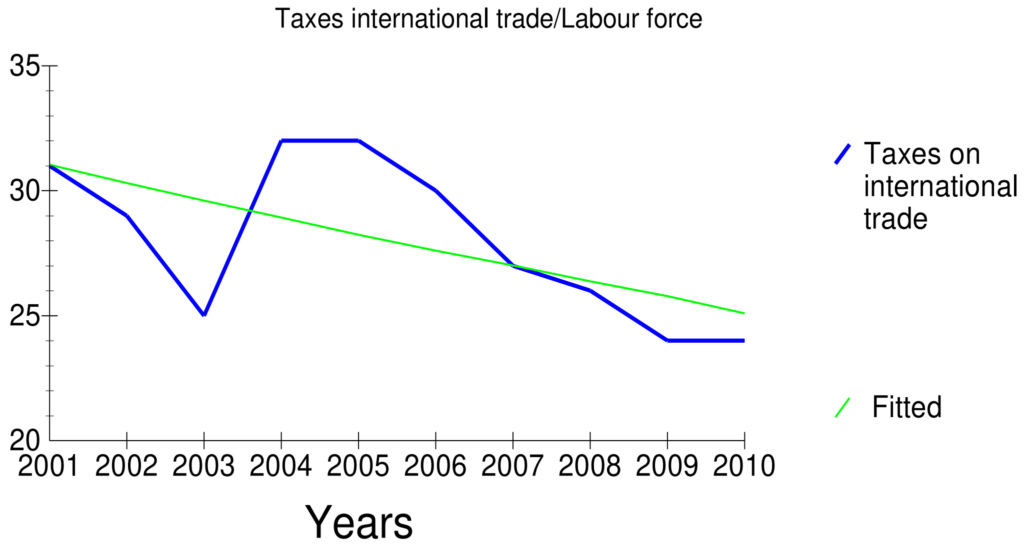
```
* B:Functional Form    *CHSQ(   1)=   1.1866[.276]*F(   1,   7)=   .94246[.364]*
*                      *                           *                             *
* C:Normality          *CHSQ(   2)=   5.8808[.053]*       Not applicable         *
```



```
TAXES ON INTERNATIONAL TRADE  ( % REVENUE)-E- CON  LABOUR FORCE TOTAL –AC-
```

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is E
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       59.1781            14.0359            4.2162[.003]
 AC                      -.4661E-6           .2094E-6           -2.2253[.057]
*******************************************************************************
 R-Squared                     .38234   R-Bar-Squared                   .30513
 S.E. of Regression            2.6652   F-stat.    F(  1,   8)    4.9521[.057]
 Mean of Dependent Variable   28.0000   S.D. of Dependent Variable      3.1972
 Residual Sum of Squares      56.8248   Equation Log-likelihood       -22.8763
 Akaike Info. Criterion      -24.8763   Schwarz Bayesian Criterion    -25.1789
 DW-statistic                  1.4465
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .72974[.393]*F(   1,   7)=   .55103[.482]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   2.1808[.140]*F(   1,   7)=   1.9523[.205]*
*                     *                          *                            *
```

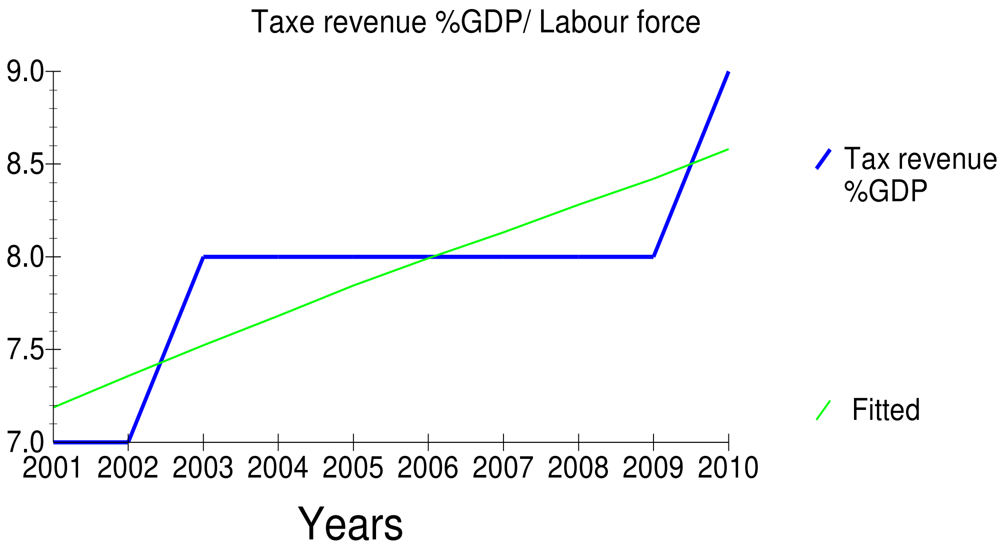
```
* C:Normality          *CHSQ(   2)=   .14040[.932]*       Not applicable       *
*                      *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   .76612[.381]*F(   1,   8)=   .66375[.439]*
*******************************************************************************
   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
```



TAX REVENUE (% GDP)-G- CON LABOUR FORCE TOTAL –AC

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is G
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                        .58981            1.8303             .32225[.756]
 AC                       .1093E-6          .2731E-7             4.0012[.004]
*******************************************************************************
 R-Squared                     .66680   R-Bar-Squared                   .62515
 S.E. of Regression            .34754   F-stat.    F(  1,   8)   16.0097[.004]
 Mean of Dependent Variable    7.9000   S.D. of Dependent Variable      .56765
 Residual Sum of Squares       .96628   Equation Log-likelihood        -2.5049
 Akaike Info. Criterion       -4.5049   Schwarz Bayesian Criterion     -4.8075
 DW-statistic                  1.6230
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  .084652[.771]*F(   1,   7)=  .059762[.814]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   .24553[.620]*F(   1,   7)=   .17620[.687]*
*                     *                          *                            *
```

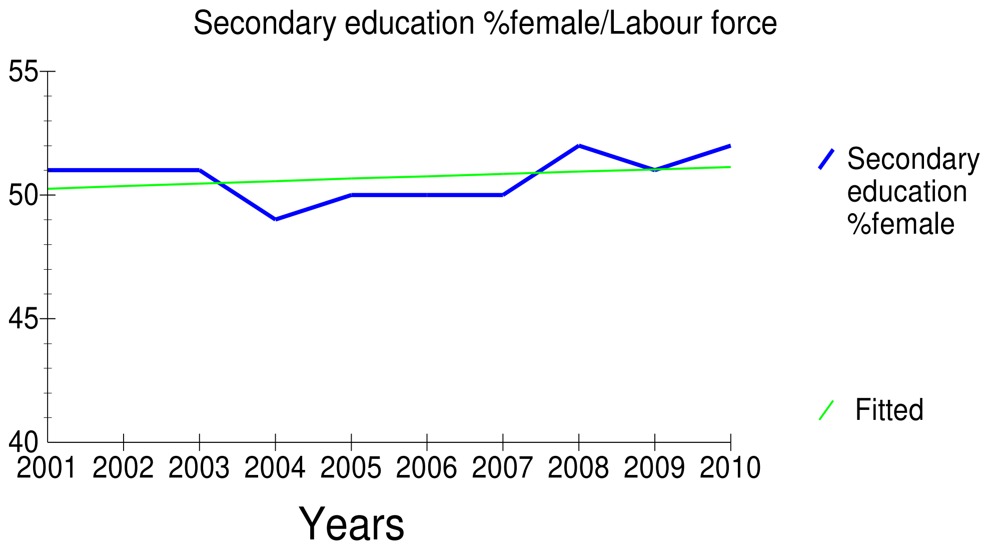
```
* C:Normality          *CHSQ(   2)=   .90035[.638]*       Not applicable       *
*                      *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   .18616[.666]*F(   1,   8)=   .15175[.707]*
*******************************************************************************
   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
```



SECONDARY EDUCATION GENERAL PUPILS (% FEMALE)-M- CON LABOUR FORCE TOTAL-AC

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is M
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       46.0572             5.0376             9.1426[.000]
 AC                      .6941E-7           .7517E-7             .92330[.383]
*******************************************************************************
 R-Squared                     .096298   R-Bar-Squared                 -.016665
 S.E. of Regression             .95656   F-stat.    F(  1,   8)    .85247[.383]
 Mean of Dependent Variable   50.7000   S.D. of Dependent Variable      .94868
 Residual Sum of Squares       7.3200   Equation Log-likelihood       -12.6295
 Akaike Info. Criterion      -14.6295   Schwarz Bayesian Criterion    -14.9321
 DW-statistic                  1.4869
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .32572[.568]*F(   1,   7)=   .23568[.642]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   5.1520[.023]*F(   1,   7)=   7.4389[.029]*
*                     *                          *                            *
```

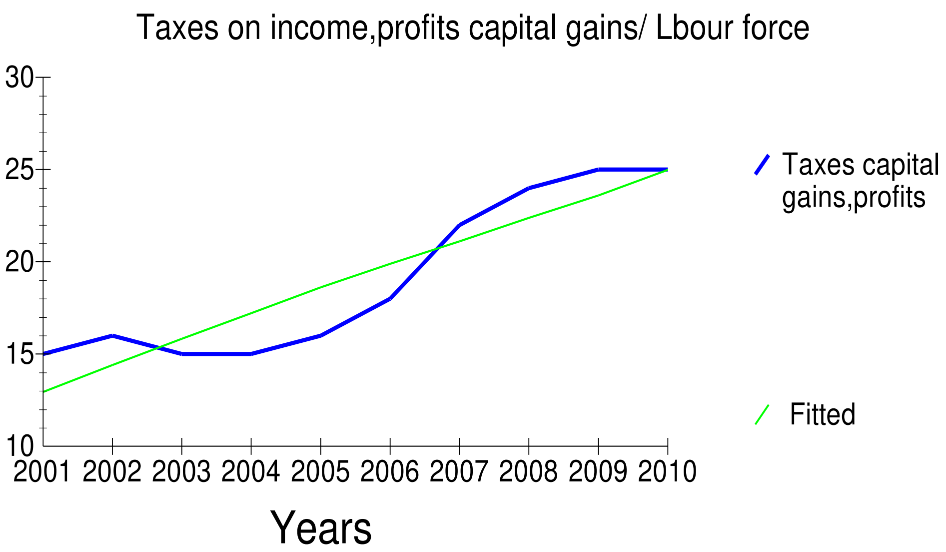
```
* C:Normality         *CHSQ(   2)=   .90540[.636]*       Not applicable       *
*                     *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=  .024356[.876]*F(   1,   8)=  .019532[.892]*
*******************************************************************************
   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
```



TAXES ON INCOME PROFITS AND CAPITAL GAINS (% OF TOTAL TAXES)-I- CON LABOUR FORCE TOTAL-AC

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is I
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      -44.1446            9.8809            -4.4677[.002]
 AC                       .9454E-6          .1474E-6             6.4123[.000]
*******************************************************************************
 R-Squared                     .83712   R-Bar-Squared                   .81676
 S.E. of Regression            1.8762   F-stat.    F(  1,   8)   41.1170[.000]
 Mean of Dependent Variable   19.1000   S.D. of Dependent Variable      4.3830
 Residual Sum of Squares      28.1613   Equation Log-likelihood       -19.3662
 Akaike Info. Criterion      -21.3662   Schwarz Bayesian Criterion    -21.6688
 DW-statistic                  .67261
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   3.4678[.063]*F(   1,   7)=   3.7161[.095]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   4.3815[.036]*F(   1,   7)=   5.4588[.052]*
```

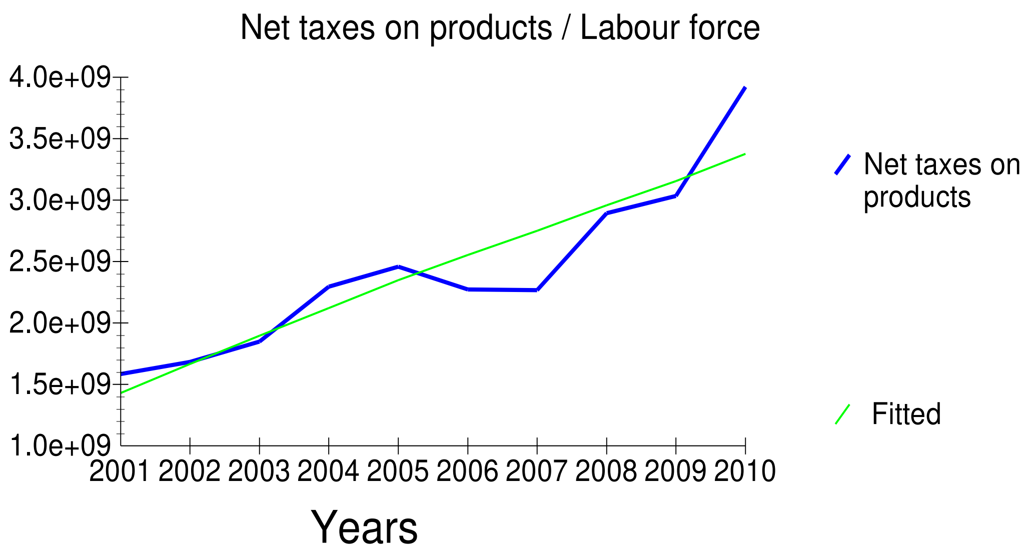
```
*                      *                          *                             *
* C:Normality          *CHSQ(   2)=   1.1087[.574]*       Not applicable        *
*                      *                          *                             *
* D:Heteroscedasticity*CHSQ(   1)=   1.8847[.170]*F(   1,   8)=   1.8579[.210]*
*******************************************************************************
   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
```



NET TAXES ON PRODUCTS –J-CON LABOUR FORCE TOTAL –AC-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is J
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                     -7.81E+09           1.55E+09            -5.0285[.001]
 AC                       152.9917            23.1705             6.6029[.000]
*******************************************************************************
 R-Squared                     .84495   R-Bar-Squared                    .82557
 S.E. of Regression          2.95E+08   F-stat.    F(  1,   8)   43.5979[.000]
 Mean of Dependent Variable  2.43E+09   S.D. of Dependent Variable    7.06E+08
 Residual Sum of Squares     6.95E+17   Equation Log-likelihood      -208.0933
 Akaike Info. Criterion     -210.0933   Schwarz Bayesian Criterion   -210.3959
 DW-statistic                  1.2793
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .44071[.507]*F(   1,   7)=   .32272[.588]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   3.3798[.066]*F(   1,   7)=   3.5738[.101]*
```

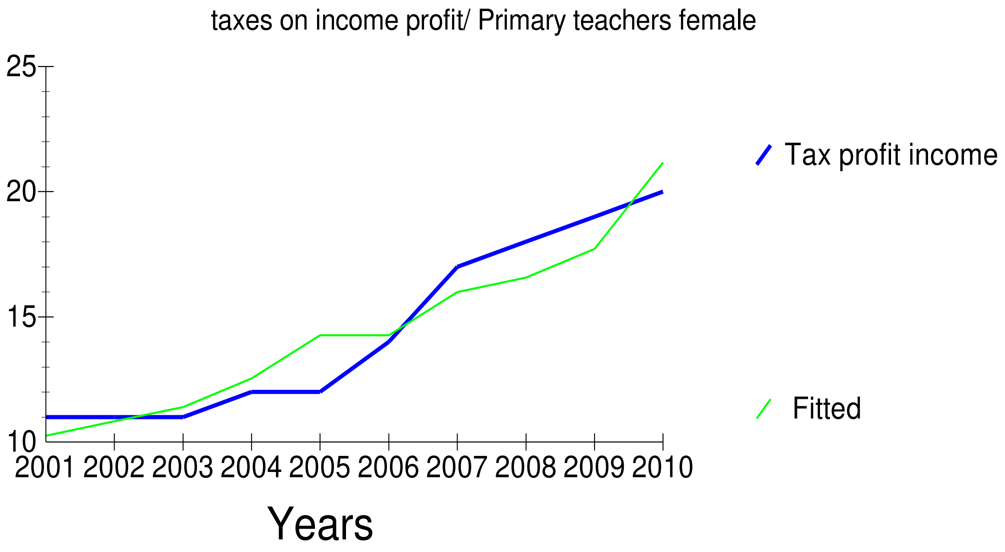
```
*                      *                          *                             *
* C:Normality          *CHSQ(   2)=  .067116[.967]*       Not applicable        *
*                      *                          *                             *
* D:Heteroscedasticity*CHSQ(   1)=   3.3728[.066]*F(   1,   8)=   4.0714[.078]*
*******************************************************************************
   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
```



TAXES ON INCOME PROFITS AND CAPITAL GAINS –H-CON PRIMARY EDUCATION TEACHERS (% FEMALE) –K-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       -6.9609            2.6169           -2.6600[.029]
 K                          .57382           .069178            8.2948[.000]
*******************************************************************************
 R-Squared                     .89584   R-Bar-Squared                   .88282
 S.E. of Regression            1.2421   F-stat.    F(  1,   8)   68.8043[.000]
 Mean of Dependent Variable   14.5000   S.D. of Dependent Variable      3.6286
 Residual Sum of Squares      12.3431   Equation Log-likelihood       -15.2419
 Akaike Info. Criterion      -17.2419   Schwarz Bayesian Criterion    -17.5445
 DW-statistic                  1.2517
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   1.1768[.278]*F(   1,   7)=   .93363[.366]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   .24920[.618]*F(   1,   7)=   .17890[.685]*
*                     *                          *                            *
```

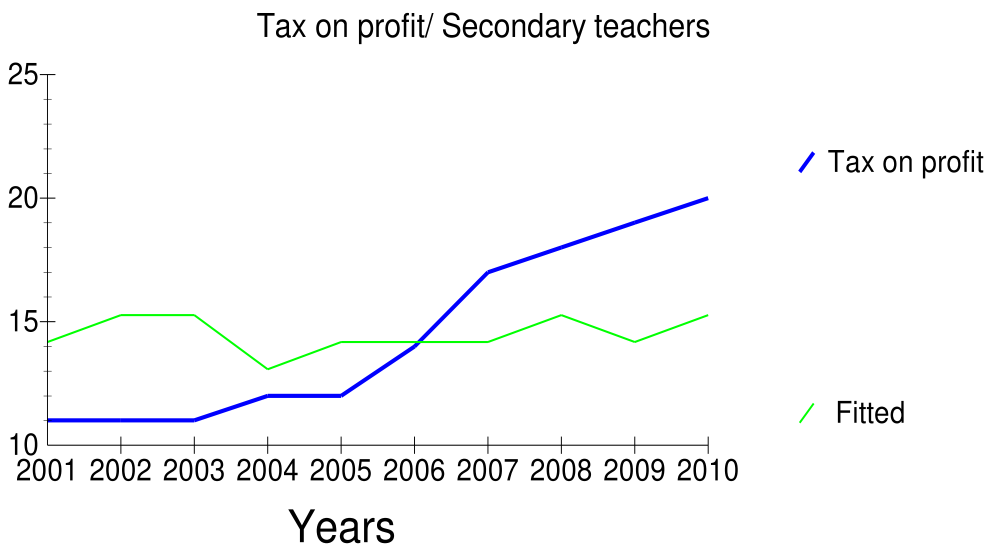
```
* C:Normality          *CHSQ(   2)=   .57358[.751]*       Not applicable       *
*                      *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   .77555[.379]*F(   1,   8)=   .67260[.436]*
*******************************************************************************
   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
```



TAXES ON INCOME PROFITS AND CAPITAL GAINS (% OF REVENUE) -H-CON SECONDARY EDUCATION PUPILS (% FEMALE)-L-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      -40.7073            93.6011            -.43490[.675]
 L                          1.0976             1.8607             .58986[.572]
*******************************************************************************
 R-Squared                    .041680   R-Bar-Squared                -.078111
 S.E. of Regression            3.7676   F-stat.    F(  1,   8)    .34794[.572]
 Mean of Dependent Variable   14.5000   S.D. of Dependent Variable     3.6286
 Residual Sum of Squares     113.5610   Equation Log-likelihood      -26.3382
 Akaike Info. Criterion      -28.3382   Schwarz Bayesian Criterion   -28.6407
 DW-statistic                  .26450
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   7.4203[.006]*F(   1,   7)=  20.1349[.003]*
*                     *                          *                            *
```

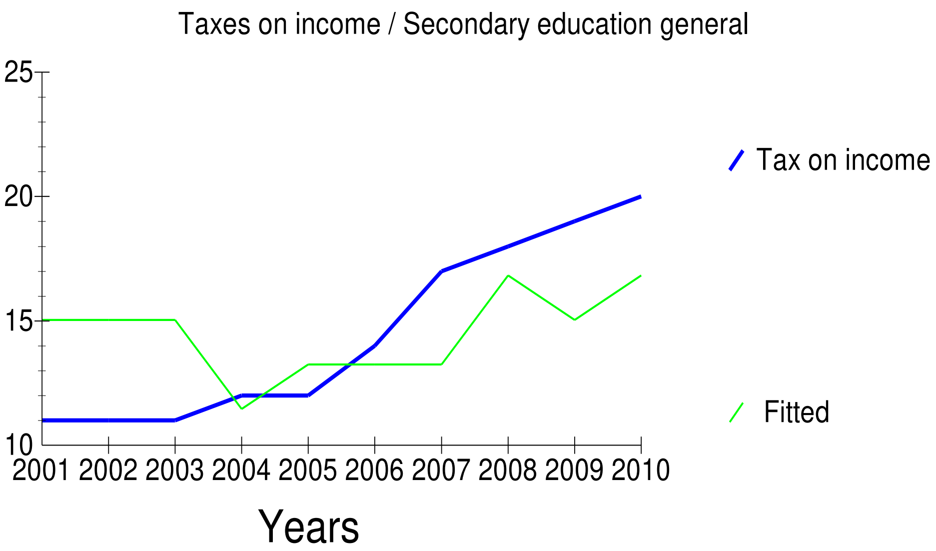
```
* B:Functional Form    *CHSQ(   1)=   .20790[.648]*F(   1,   7)=   .14862[.711]*
*                      *                          *                             *
* C:Normality          *CHSQ(   2)=   .96401[.618]*      Not applicable         *
*                      *                          *                             *
* D:Heteroscedasticity*CHSQ(   1)=   3.5382[.060]*F(   1,   8)=   4.3804[.070]*
*******************************************************************************
   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
```



TAXESON INCOME PROFITS AND CAPITAL GAINS –H- CON SECONDARY EDUCATION GENERAL PUPILS (%FEMALE)-M-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 10 observations used for estimation from 2001 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      -76.2593            60.5984            -1.2584[.244]
 M                          1.7901             1.1950             1.4980[.173]
*******************************************************************************
 R-Squared                     .21904   R-Bar-Squared                   .12143
 S.E. of Regression            3.4012   F-stat.    F(  1,   8)    2.2439[.173]
 Mean of Dependent Variable   14.5000   S.D. of Dependent Variable      3.6286
 Residual Sum of Squares      92.5432   Equation Log-likelihood       -25.3148
 Akaike Info. Criterion      -27.3148   Schwarz Bayesian Criterion    -27.6174
 DW-statistic                  .56460
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   5.6224[.018]*F(   1,   7)=   8.9905[.020]*
*                     *                          *                            *
```

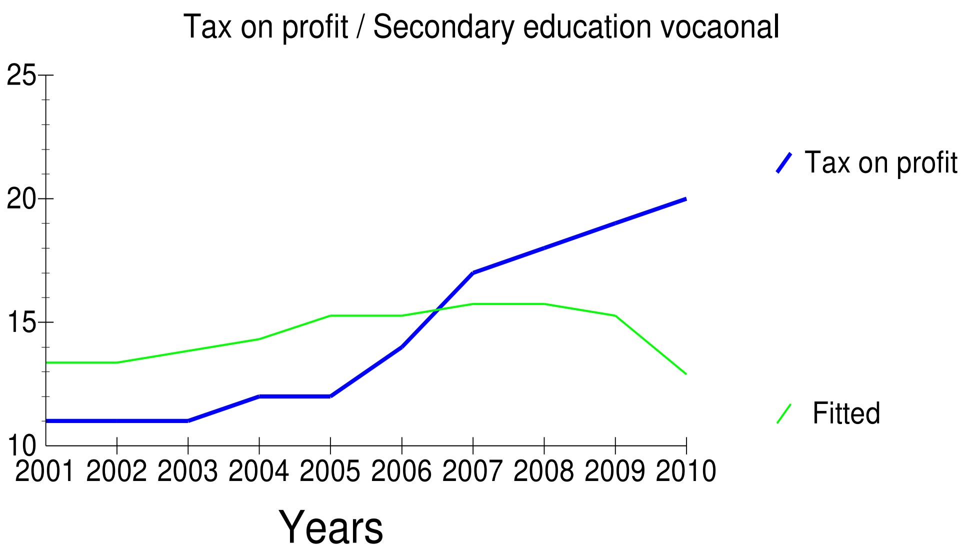
```
* B:Functional Form    *CHSQ(   1)=   1.2914[.256]*F(   1,   7)=   1.0380[.342]*

*                      *                          *                             *

* C:Normality          *CHSQ(   2)=   .90009[.638]*       Not applicable        *

*                      *                          *                             *

* D:Heteroscedasticity*CHSQ(   1)=   1.0105[.315]*F(   1,   8)=   .89927[.371]*
*******************************************************************************
   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
```



TAXES ON INCOME, PROFITS AND CAPITAL GAINS (% REVENUE) -H-CON SECONDARY EDUCATION VOCATIONAL PUPILS (% FEMALE)-N-

```
 Ordinary Least Squares Estimation
******************************************************************************
 Dependent variable is H
 10 observations used for estimation from 2001 to 2010
******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                        1.5086            14.8298             .10173[.921]
 N                          .47414             .53957             .87874[.405]
******************************************************************************
 R-Squared                    .088026   R-Bar-Squared                -.025971
 S.E. of Regression            3.6754   F-stat.    F(  1,   8)    .77218[.405]
 Mean of Dependent Variable   14.5000   S.D. of Dependent Variable      3.6286
 Residual Sum of Squares     108.0690   Equation Log-likelihood       -26.0903
 Akaike Info. Criterion      -28.0903   Schwarz Bayesian Criterion    -28.3929
 DW-statistic                  .24350
******************************************************************************


                              Diagnostic Tests
******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   8.0888[.004]*F(   1,   7)=  29.6256[.001]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   5.2457[.022]*F(   1,   7)=   7.7235[.027]*
```

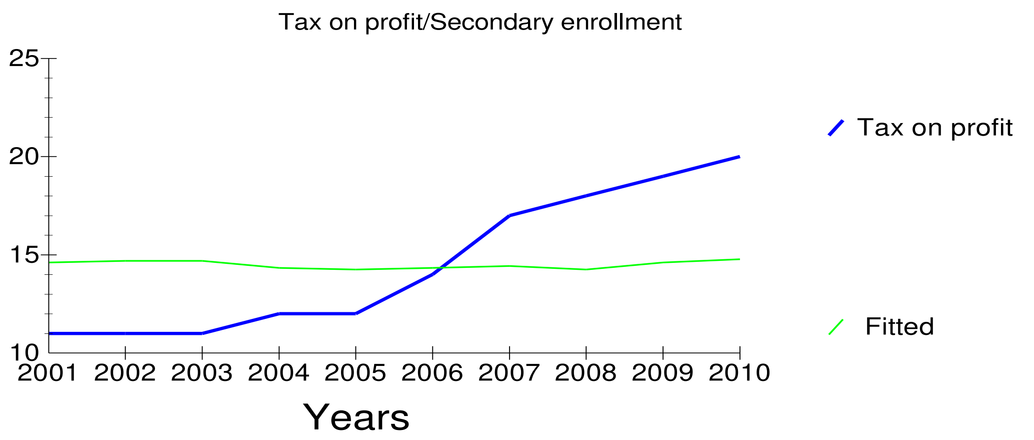
```
*                    *                          *                            *
* C:Normality        *CHSQ(   2)=   1.4798[.477]*       Not applicable       *
*                    *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   2.5469[.111]*F(   1,   8)=   2.7338[.137]*
*******************************************************************************
   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
```



TAXES ON INCOME PROFITS AND CAPITAL GAINS (% REVENUE) –H- CON SCHOOL ENROLLMENT SECONDARY-O-

```
Ordinary Least Squares Estimation
******************************************************************************
 Dependent variable is H
 10 observations used for estimation from 2001 to 2010
******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                       10.3070            27.2301             .37852[.715]
 O                         .087719             .56910             .15414[.881]
******************************************************************************
 R-Squared                   .0029610   R-Bar-Squared                  -.12167
 S.E. of Regression            3.8430   F-stat.    F(  1,   8)   .023758[.881]
 Mean of Dependent Variable   14.5000   S.D. of Dependent Variable      3.6286
 Residual Sum of Squares     118.1491   Equation Log-likelihood       -26.5362
 Akaike Info. Criterion      -28.5362   Schwarz Bayesian Criterion    -28.8388
 DW-statistic                  .13933
******************************************************************************


                               Diagnostic Tests
******************************************************************************
*    Test Statistics  *        LM Version        *         F Version         *
******************************************************************************
*                     *                          *                           *
* A:Serial Correlation*CHSQ(   1)=   8.0707[.004]*F(   1,   7)=  29.2820[.001]*
*                     *                          *                           *
* B:Functional Form   *CHSQ(   1)=   .50577[.477]*F(   1,   7)=   .37290[.561]*
*                     *                          *                           *
```

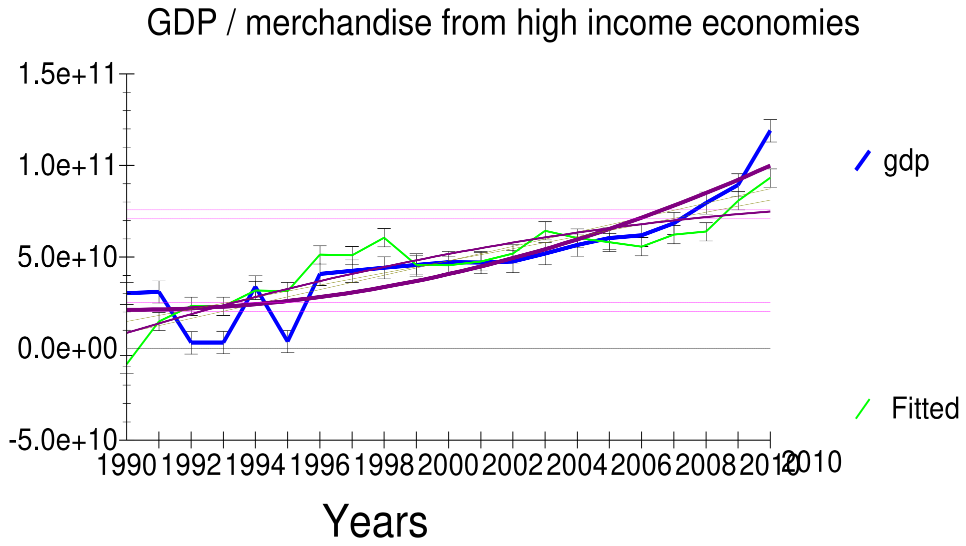
```
* C:Normality          *CHSQ(   2)=   1.2254[.542]*       Not applicable       *
*                      *                           *                            *
* D:Heteroscedasticity*CHSQ(   1)=   5.4250[.020]*F(   1,   8)=   9.4864[.015]*
*******************************************************************************
   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
```

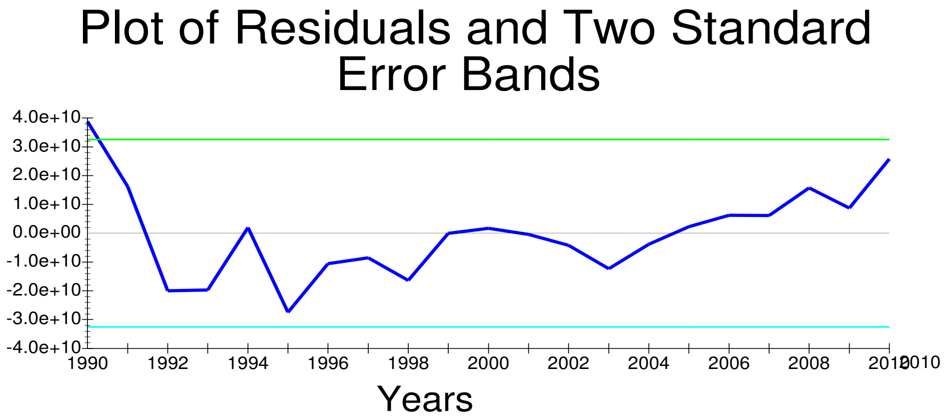


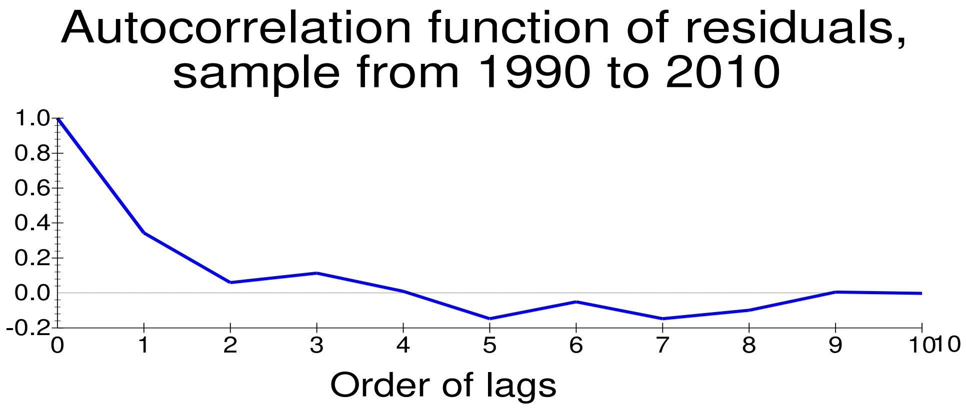
GDP –H- CON MERCHANDISE IMPORT FROM HIGH INCOME ECONOMIES (% OF TOTAL MERCHANDISE IMPORT)-C-

```
   Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      1.50E+11          4.07E+10            3.6742[.002]
 C                       -2.01E+09          7.63E+08           -2.6386[.016]
*******************************************************************************
 R-Squared                      .26817   R-Bar-Squared                    .22965
 S.E. of Regression           2.08E+10   F-stat.    F(  1,  19)    6.9623[.016]
 Mean of Dependent Variable   4.28E+10   S.D. of Dependent Variable    2.36E+10
 Residual Sum of Squares      8.18E+21   Equation Log-likelihood      -527.6199
 Akaike Info. Criterion      -529.6199   Schwarz Bayesian Criterion   -530.6644
 DW-statistic                   1.3217
*******************************************************************************


                              Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .76686[.381]*F(   1,  18)=   .68222[.420]*
```

```
*                    *                          *                            *
* B:Functional Form  *CHSQ(   1)=   .48340[.487]*F(   1,  18)=   .42411[.523]*
*                    *                          *                            *
* C:Normality        *CHSQ(   2)=   4.6289[.099]*      Not applicable        *
*                    *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   5.4535[.020]*F(   1,  19)=   6.6649[.018]*
*******************************************************************************
   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
```



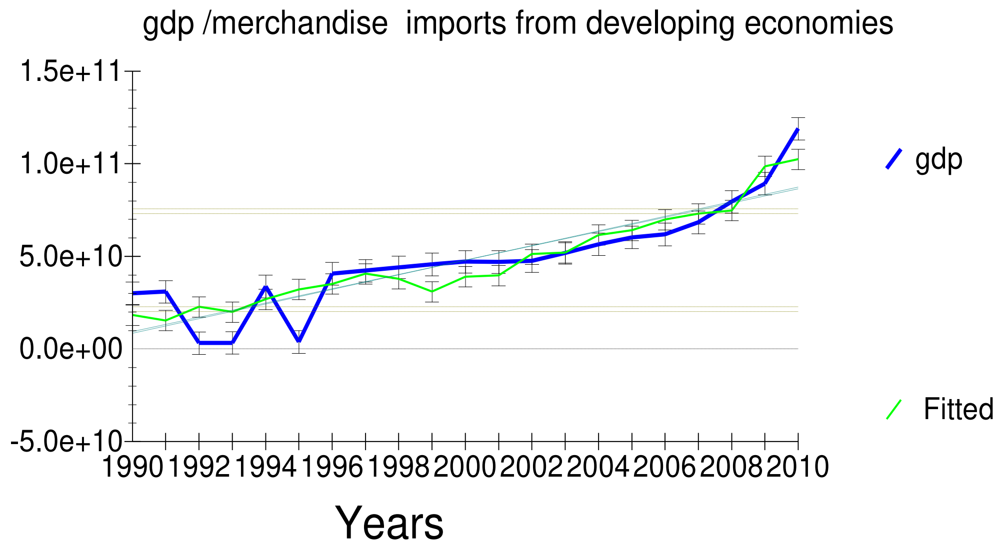

Plot of Residuals and Two Standard Error Bands
4.0e+10
3.0e+10
2.0e+10
1.0e+10
0.0e+00
-1.0e+10
-2.0e+10
-3.0e+10
-4.0e+10
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2010
Years


Autocorrelation function of residuals, sample from 1990 to 2010
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
0 1 2 3 4 5 6 7 8 9 10 10
Order of lags

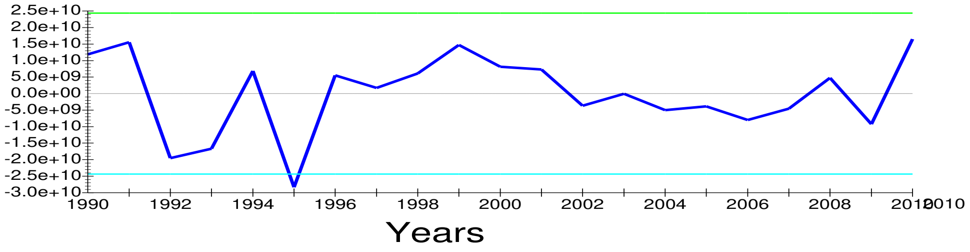
GDP-H- CON MERCHANDISE IMPORT FROM DEVELOPING ECONOMIES OUTSIDE REGION (% TOTAL MERCHANDISE IMPORT)-D-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                     -2.07E+10           7.90E+09           -2.6197[.017]
 D                        3.37E+09           3.66E+08            9.2251[.000]
*******************************************************************************
 R-Squared                      .81749   R-Bar-Squared                   .80788
 S.E. of Regression           1.22E+10   F-stat.    F(  1,  19)   85.1032[.000]
 Mean of Dependent Variable   4.79E+10   S.D. of Dependent Variable    2.78E+10
 Residual Sum of Squares      2.82E+21   Equation Log-likelihood      -516.4542
 Akaike Info. Criterion      -518.4542   Schwarz Bayesian Criterion   -519.4988
 DW-statistic                   1.9448
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  .049531[.824]*F(   1,  18)=  .042556[.839]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   .52975[.467]*F(   1,  18)=   .46582[.504]*
*                     *                          *                            *
```

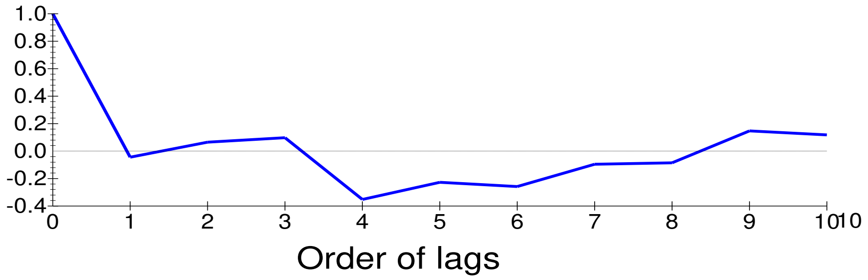
```
* C:Normality          *CHSQ(   2)=   1.5471[.461]*       Not applicable       *
*                      *                          *                           *
* D:Heteroscedasticity*CHSQ(   1)=   .66559[.415]*F(   1,  19)=   .62192[.440]*
*******************************************************************************
   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
```



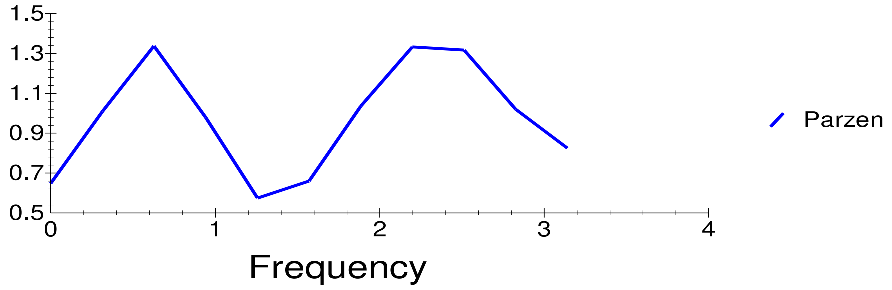
Plot of Residuals and Two Standard Error Bands



Autocorrelation function of residuals, sample from 1990 to 2010



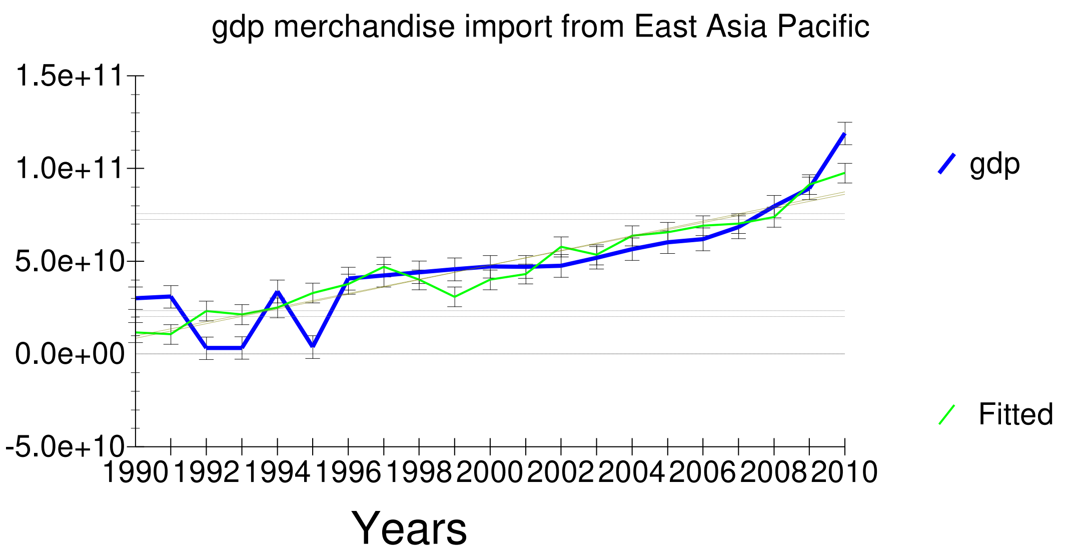
Standardized Spectral Density of Residuals (Parzen Window)

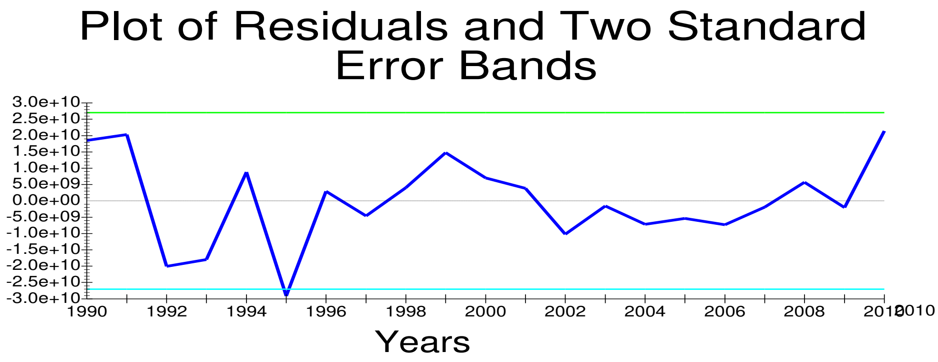


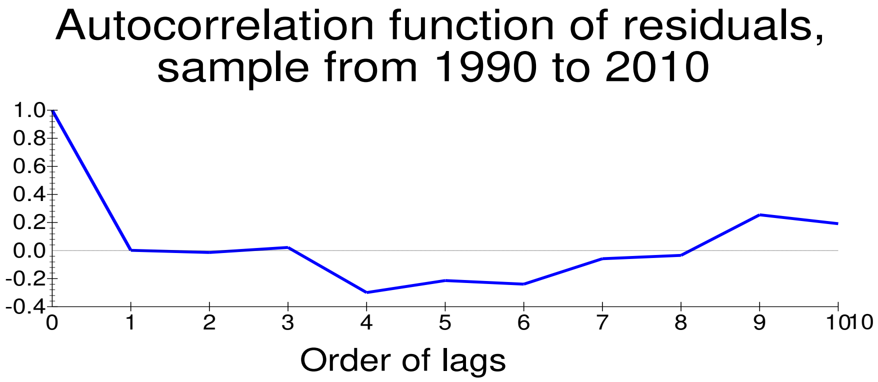
GDP –H-CON MERCHANDISE IMPORTS FROM DEVELOPING ECONOMIES IN EAST ASIA AND PACIFIC (% OF TOTAL MERCHANDISE IMPORT)-E-

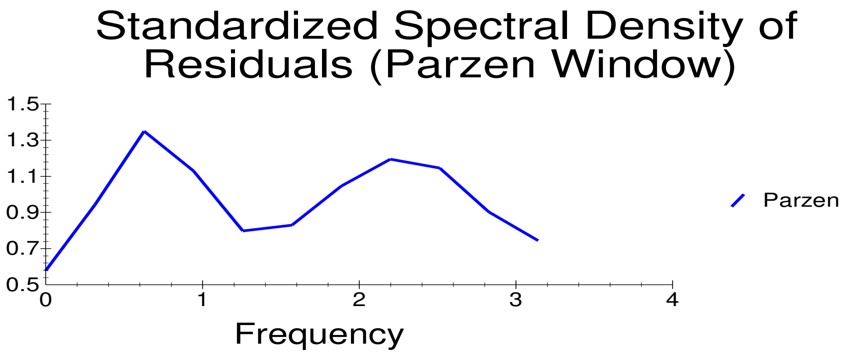
```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                     -1.87E+10           8.74E+09            -2.1358[.046]
 E                        4.10E+09           5.06E+08             8.0958[.000]
*******************************************************************************
 R-Squared                     .77526   R-Bar-Squared                   .76343
 S.E. of Regression          1.35E+10   F-stat.    F(  1,  19)   65.5425[.000]
 Mean of Dependent Variable  4.79E+10   S.D. of Dependent Variable    2.78E+10
 Residual Sum of Squares     3.48E+21   Equation Log-likelihood      -518.6396
 Akaike Info. Criterion     -520.6396   Schwarz Bayesian Criterion   -521.6841
 DW-statistic                  1.7683
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)= .6556E-5[.998]*F(   1,  18)= .5619E-5[.998]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   4.2247[.040]*F(   1,  18)=   4.5332[.047]*
*                     *                          *                            *
```

```
* C:Normality          *CHSQ(   2)=   .30359[.859]*       Not applicable       *
*                      *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   1.0490[.306]*F(   1,  19)=   .99900[.330]*
*******************************************************************************
   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
```




Plot of Residuals and Two Standard Error Bands
3.0e+10
2.5e+10
2.0e+10
1.5e+10
1.0e+10
5.0e+09
0.0e+00
-5.0e+09
-1.0e+10
-1.5e+10
-2.0e+10
-2.5e+10
-3.0e+10
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2010
Years

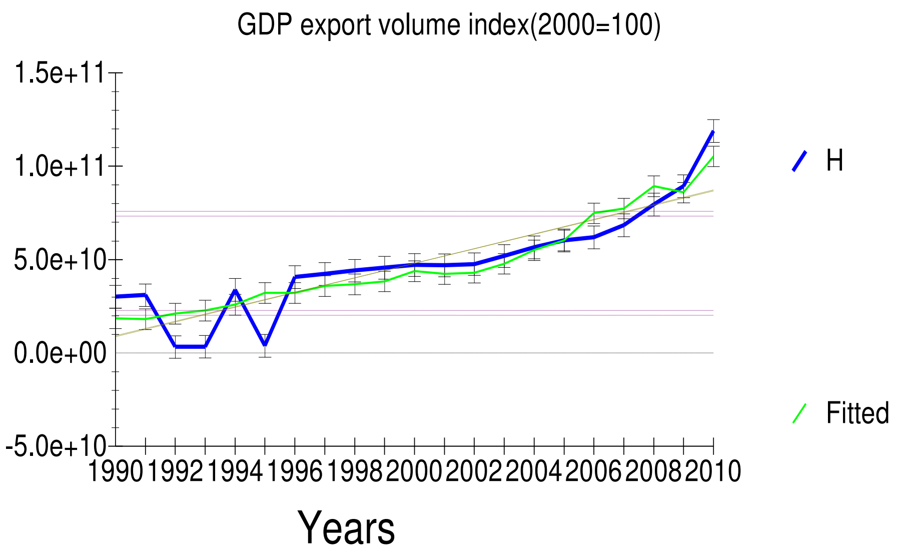

Autocorrelation function of residuals, sample from 1990 to 2010
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
0 1 2 3 4 5 6 7 8 9 10 10
Order of lags

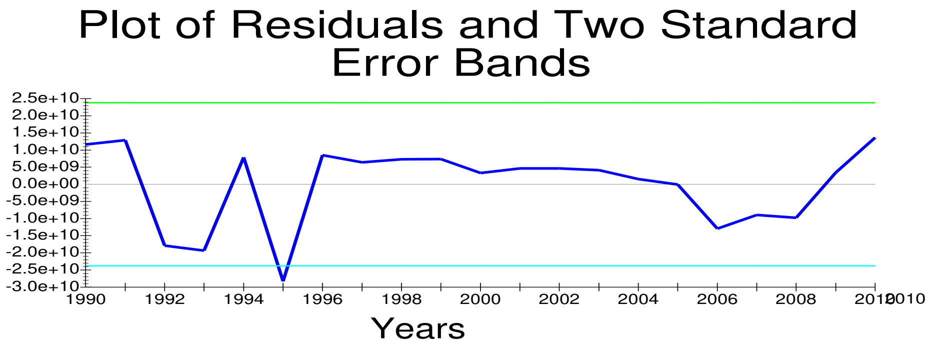

Standardized Spectral Density of Residuals (Parzen Window)
1.5
1.3
1.1
0.9
0.7
0.5
0 1 2 3 4
Frequency
Parzen

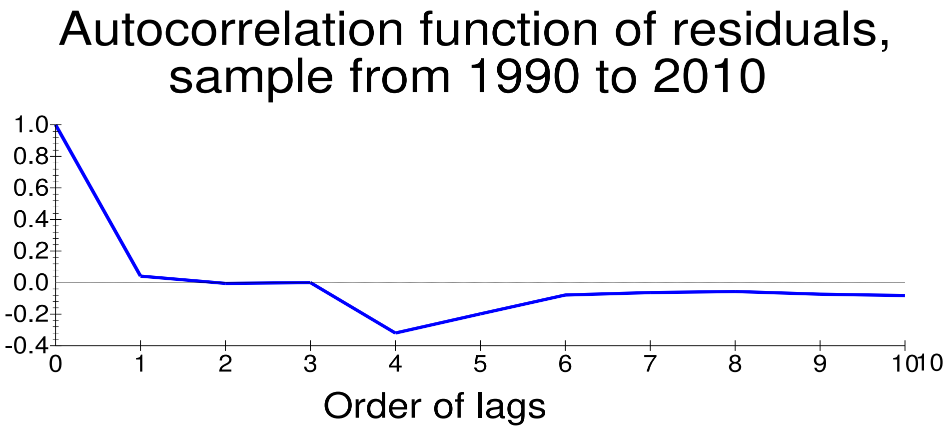
GDP C-H-ON EXPORT VOLUME INDEX (2000=100)-F-

```
                        Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      6.48E+09          5.08E+09            1.2752[.218]
 F                        3.73E+08          3.93E+07            9.4944[.000]
*******************************************************************************
 R-Squared                     .82592   R-Bar-Squared                   .81675
 S.E. of Regression          1.19E+10   F-stat.    F(  1,  19)   90.1432[.000]
 Mean of Dependent Variable  4.79E+10   S.D. of Dependent Variable    2.78E+10
 Residual Sum of Squares     2.69E+21   Equation Log-likelihood      -515.9578
 Akaike Info. Criterion     -517.9578   Schwarz Bayesian Criterion   -519.0023
 DW-statistic                  1.8004
*******************************************************************************


                                Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  .037173[.847]*F(   1,  18)=  .031919[.860]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   .21125[.646]*F(   1,  18)=   .18291[.674]*
```

```
*                    *                           *                             *
* C:Normality        *CHSQ(   2)=   3.5538[.169]*       Not applicable        *
*                    *                           *                             *
* D:Heteroscedasticity*CHSQ(   1)=   .54242[.461]*F(   1,  19)=   .50377[.486]*
*******************************************************************************
   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
```



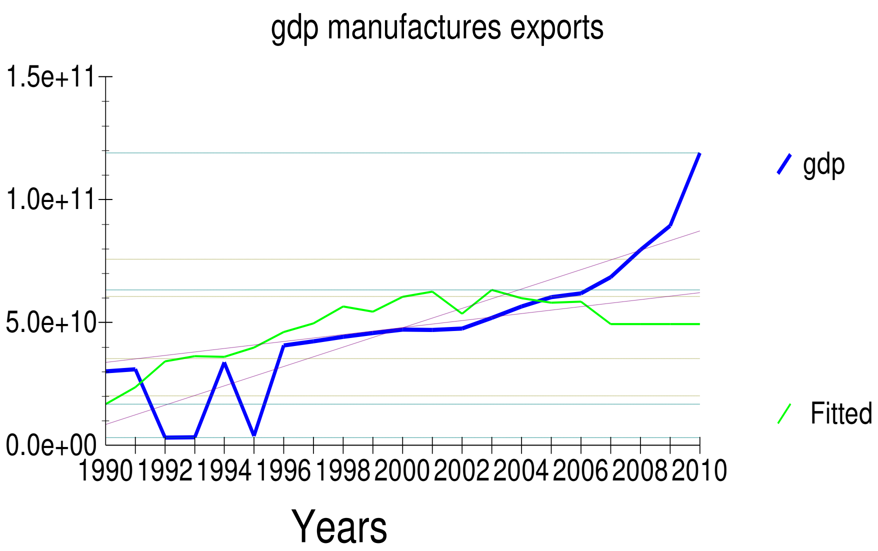

Plot of Residuals and Two Standard Error Bands
2.5e+10
2.0e+10
1.5e+10
1.0e+10
5.0e+09
0.0e+00
-5.0e+09
-1.0e+10
-1.5e+10
-2.0e+10
-2.5e+10
-3.0e+10
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
Years


Autocorrelation function of residuals, sample from 1990 to 2010
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
0
1
2
3
4
5
6
7
8
9
10
Order of lags

GDP -H-CON MANUFACTURES EXPORT (% OF MERCHANDISE EXPORTS) –G-

```
        Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                     -2.17E+11           1.19E+11            -1.8279[.083]
 G                        3.02E+09           1.35E+09             2.2342[.038]
*******************************************************************************
 R-Squared                    .20806   R-Bar-Squared                    .16638
 S.E. of Regression         2.54E+10   F-stat.    F(  1,  19)    4.9917[.038]
 Mean of Dependent Variable  4.79E+10   S.D. of Dependent Variable    2.78E+10
 Residual Sum of Squares     1.23E+22   Equation Log-likelihood      -531.8648
 Akaike Info. Criterion     -533.8648   Schwarz Bayesian Criterion   -534.9093
 DW-statistic                 .50308
*******************************************************************************


                              Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  10.6148[.001]*F(   1,  18)=  18.3979[.000]*
*                     *                          *                            *
```

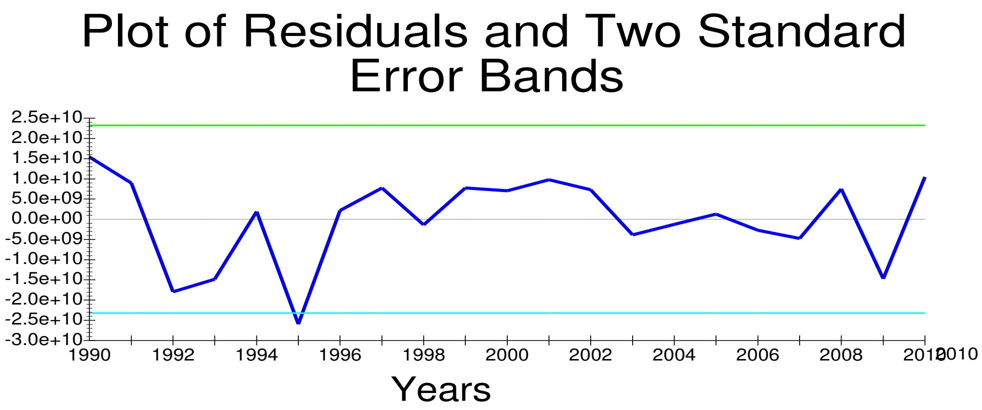
```
* B:Functional Form    *CHSQ(   1)=  .065792[.798]*F(   1,  18)=  .056570[.815]*
*                      *                          *                            *
* C:Normality          *CHSQ(   2)=   5.6229[.060]*       Not applicable       *
*                      *                          *                            *
* D:Heteroscedasticity*CHSQ(   1)=   .40490[.525]*F(   1,  19)=   .37354[.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
```

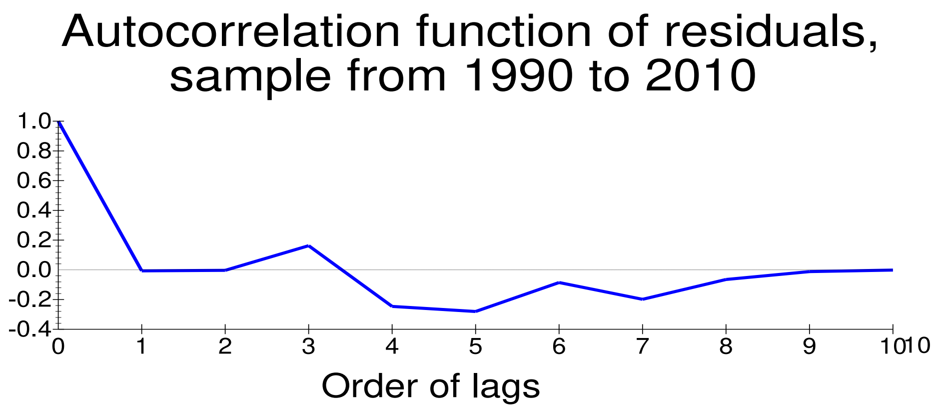


GDP -H-CON MERCHANDISE IMPORT FROM HIGH INCOME-C-; FROM DEVELOPING ECONOMIES-D-; FROM ECONOMIESIN EAST ASIA –E-;

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      1.11E+11           7.73E+10             1.4311[.171]
 C                       -1.93E+09           1.14E+09            -1.7022[.107]
 D                        7.63E+09           2.62E+09             2.9141[.010]
 E                       -7.11E+09           3.82E+09            -1.8610[.080]
*******************************************************************************
 R-Squared                     .85174   R-Bar-Squared                   .82558
 S.E. of Regression          1.16E+10   F-stat.    F(  3,  17)   32.5543[.000]
 Mean of Dependent Variable  4.79E+10   S.D. of Dependent Variable    2.78E+10
 Residual Sum of Squares     2.29E+21   Equation Log-likelihood      -514.2719
 Akaike Info. Criterion     -518.2719   Schwarz Bayesian Criterion   -520.3610
 DW-statistic                  1.8632
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)= .0012473[.972]*F(   1,  16)= .9504E-3[.976]*
*                     *                          *                            *
```

```
* B:Functional Form    *CHSQ(   1)=   .27884[.597]*F(   1,  16)=   .21531[.649]*
*                      *                           *                             *
* C:Normality          *CHSQ(   2)=   2.7587[.252]*       Not applicable        *
*                      *                           *                             *
* D:Heteroscedasticity*CHSQ(   1)=   .29765[.585]*F(   1,  19)=   .27318[.607]*
*******************************************************************************
   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
```

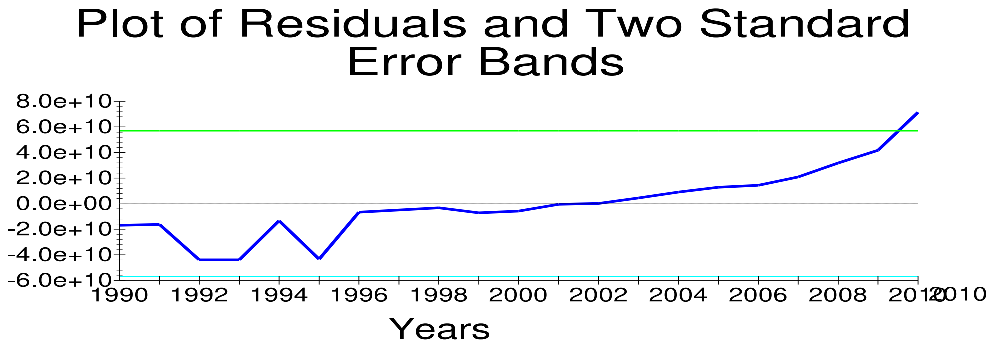

Plot of Residuals and Two Standard Error Bands
2.5e+10
2.0e+10
1.5e+10
1.0e+10
5.0e+09
0.0e+00
-5.0e+09
-1.0e+10
-1.5e+10
-2.0e+10
-2.5e+10
-3.0e+10
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2010
Years


Autocorrelation function of residuals, sample from 1990 to 2010
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
0
1
2
3
4
5
6
7
8
9
10
10
Order of lags

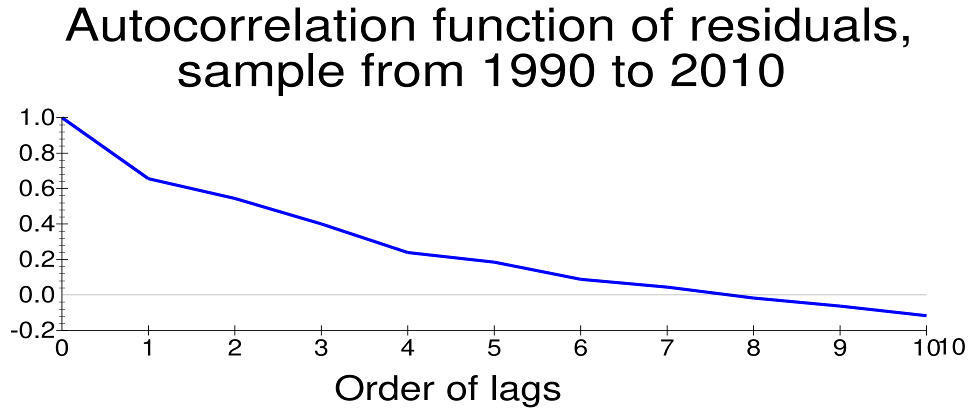
GDP -H-CON TRADE (% GDP) -J-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      4.68E+10          7.50E+09              6.2398[.000]
 J                        1.74E+07          6.58E+07              .26433[.794]
*******************************************************************************
 R-Squared                     .0036639   R-Bar-Squared                  -.048775
 S.E. of Regression          2.85E+10   F-stat.    F(  1,  19)   .069871[.794]
 Mean of Dependent Variable  4.79E+10   S.D. of Dependent Variable    2.78E+10
 Residual Sum of Squares     1.54E+22   Equation Log-likelihood      -534.2756
 Akaike Info. Criterion     -536.2756   Schwarz Bayesian Criterion   -537.3201
 DW-statistic                  .33818
*******************************************************************************



                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  13.8622[.000]*F(   1,  18)=  34.9573[.000]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=  14.0520[.000]*F(   1,  18)=  36.4041[.000]*
*                     *                          *                            *
```

```
* C:Normality          *CHSQ(   2)=   1.3612[.506]*       Not applicable       *
*                      *                           *                            *
* D:Heteroscedasticity*CHSQ(   1)=   .62635[.429]*F(   1,  19)=   .58412[.454]*
*******************************************************************************
   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
```



Plot of Residuals and Two Standard Error Bands
8.0e+10
6.0e+10
4.0e+10
2.0e+10
0.0e+00
-2.0e+10
-4.0e+10
-6.0e+10
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2010
Years



Autocorrelation function of residuals, sample from 1990 to 2010
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
0 1 2 3 4 5 6 7 8 9 10 10
Order of lags

GDP –H-CON AGRICULTURE VALUE ADDED-K-; MANUFACTURING VALUE ADDED-L; INDUSTRY VALUE ADDED-M; SERVICES VALUE ADDED-N;

Ordinary Least Squares Estimation

****

Dependent variable is H

21 observations used for estimation from 1990 to 2010

****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	-4.80E+09	1.24E+10	-.38761[.703]
K	-1.3773	.77980	-1.7662[.096]
L	-8.0947	8.8263	-.91712[.373]
M	2.5287	1.4549	1.7380[.101]
N	3.5925	3.2009	1.1223[.278]

****

R-Squared	.91029	R-Bar-Squared	.88786
S.E. of Regression	9.32E+09	F-stat. F(4, 16)	40.5885[.000]
Mean of Dependent Variable	4.79E+10	S.D. of Dependent Variable	2.78E+10
Residual Sum of Squares	1.39E+21	Equation Log-likelihood	-508.9967
Akaike Info. Criterion	-513.9967	Schwarz Bayesian Criterion	-516.6080
DW-statistic	2.1174		

****

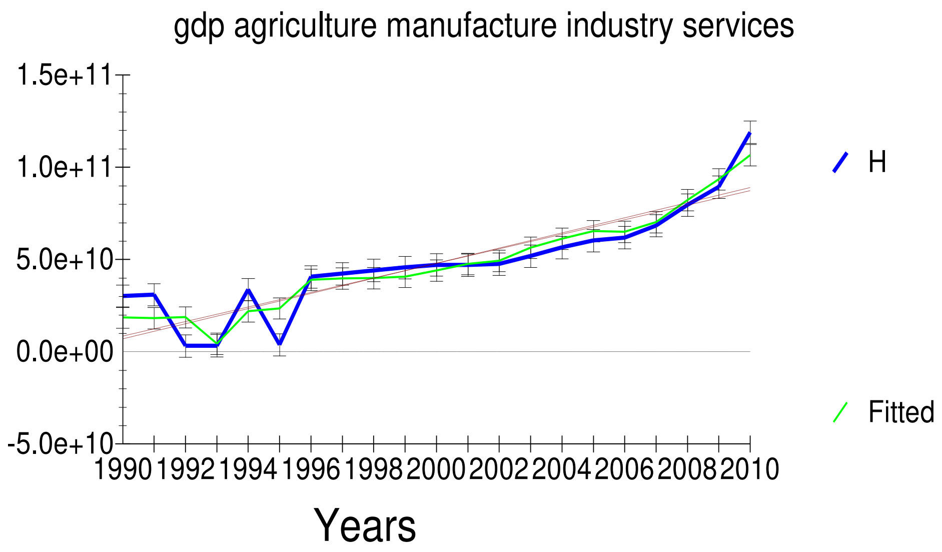
Diagnostic Tests

****

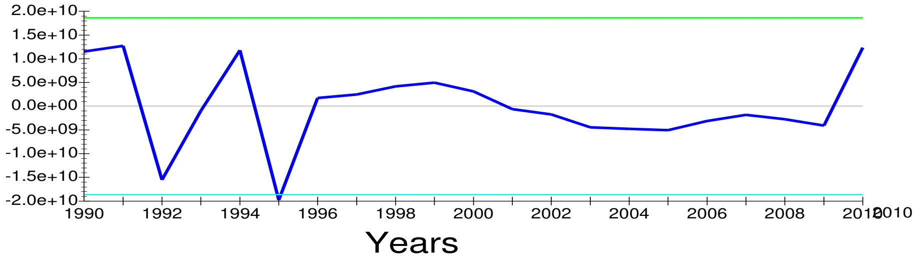
* Test Statistics * LM Version * F Version *

****

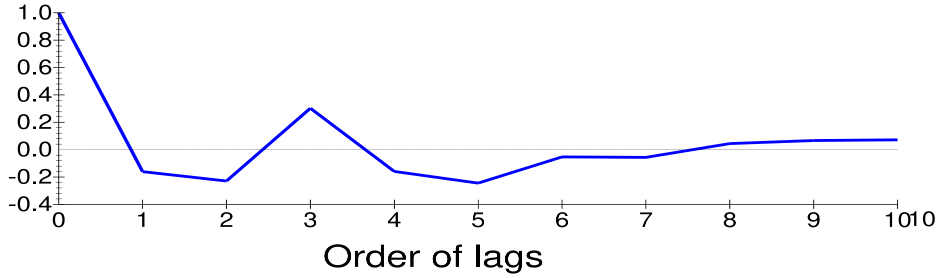
```
*                      *                           *                             *
* A:Serial Correlation*CHSQ(   1)=   1.3580[.244]*F(   1,  15)=   1.0370[.325]*
*                      *                           *                             *
* B:Functional Form    *CHSQ(   1)=   5.6607[.017]*F(   1,  15)=   5.5355[.033]*
*                      *                           *                             *
* C:Normality          *CHSQ(   2)=   .64354[.725]*      Not applicable        *
*                      *                           *                             *
* D:Heteroscedasticity*CHSQ(   1)=   .95564[.328]*F(   1,  19)=   .90585[.353]*
*******************************************************************************
   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
```



Plot of Residuals and Two Standard Error Bands



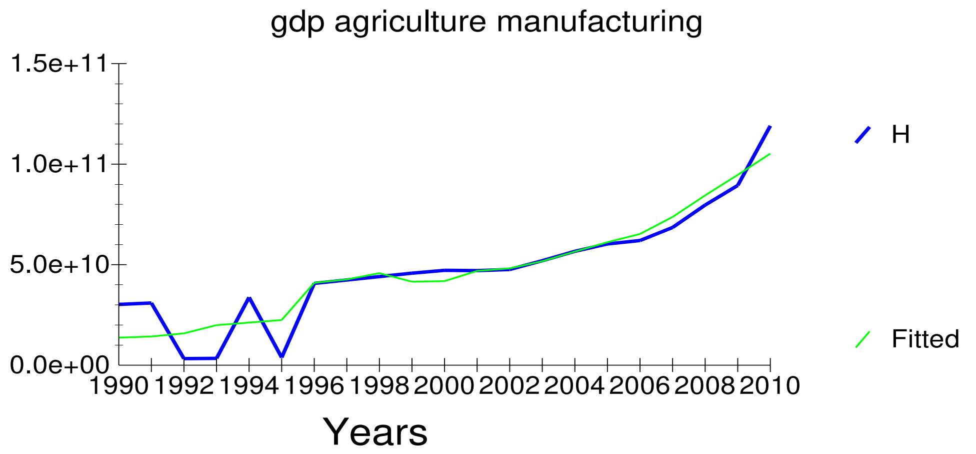
Autocorrelation function of residuals, sample from 1990 to 2010

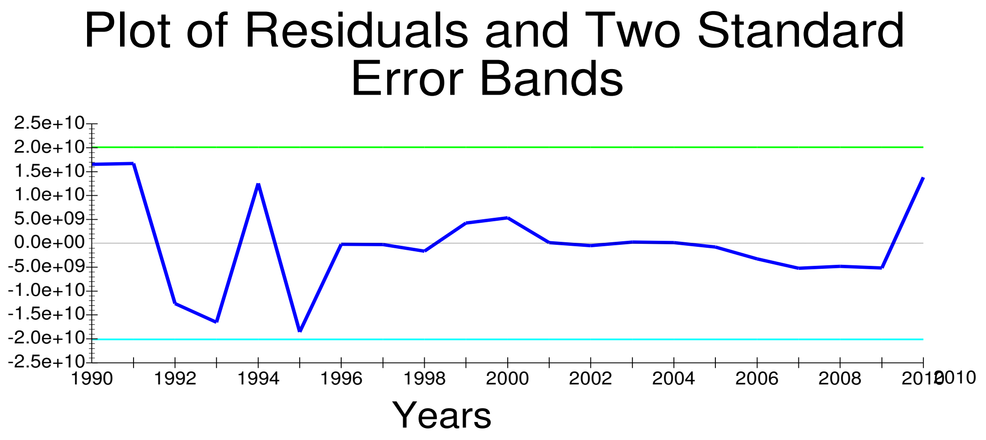


GDP –H-CON AGRICULTURE VALUE ADDED-K-; MANUFACTURING VALUE ADDED-L-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      7.77E+09          8.33E+09            .93222[.364]
 K                         -1.8536            .79892           -2.3201[.032]
 L                          5.8031            .74182            7.8228[.000]
*******************************************************************************
 R-Squared                     .88257   R-Bar-Squared                   .86952
 S.E. of Regression          1.00E+10   F-stat.    F(  2,  18)   67.6400[.000]
 Mean of Dependent Variable  4.79E+10   S.D. of Dependent Variable    2.78E+10
 Residual Sum of Squares     1.82E+21   Equation Log-likelihood      -511.8242
 Akaike Info. Criterion     -514.8242   Schwarz Bayesian Criterion   -516.3910
 DW-statistic                  1.9088
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .17647[.674]*F(   1,  17)=   .14407[.709]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   5.1857[.023]*F(   1,  17)=   5.5744[.030]*
```

```
*                      *                           *                             *

* C:Normality          *CHSQ(   2)=  .049877[.975]*       Not applicable        *

*                      *                           *                             *

* D:Heteroscedasticity*CHSQ(   1)=   1.7973[.180]*F(   1,  19)=   1.7784[.198]*
*******************************************************************************

   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
```





GDP –H-CON GENERAL GOVERNMENT FINAL CONSUMPTION EXPENDITURE –O-; HOUSEHOLD FINAL CONSUMPTION EXPENDITURE   -P-

Ordinary Least Squares Estimation

****

Dependent variable is H

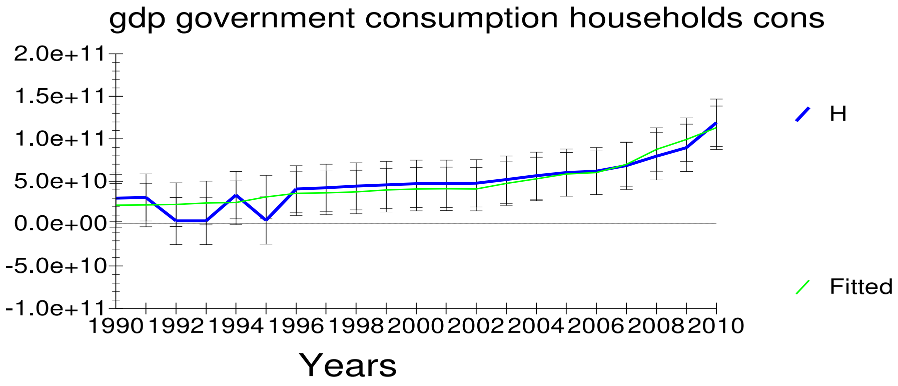
21 observations used for estimation from 1990 to 2010

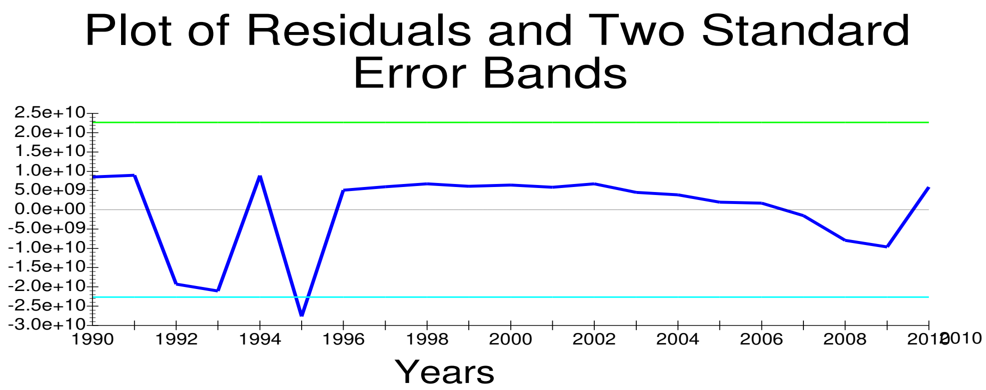
****

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
CON	-2.35E+10	1.15E+10	-2.0441[.056]
O	1.5742	12.7940	.12304[.903]
P	1.6616	1.0431	1.5929[.129]

****

R-Squared	.85065	R-Bar-Squared	.83405
S.E. of Regression	1.13E+10	F-stat. F(2, 18)	51.2599[.000]
Mean of Dependent Variable	4.79E+10	S.D. of Dependent Variable	2.78E+10
Residual Sum of Squares	2.31E+21	Equation Log-likelihood	-514.3490
Akaike Info. Criterion	-517.3490	Schwarz Bayesian Criterion	-518.9158
DW-statistic	1.9084		

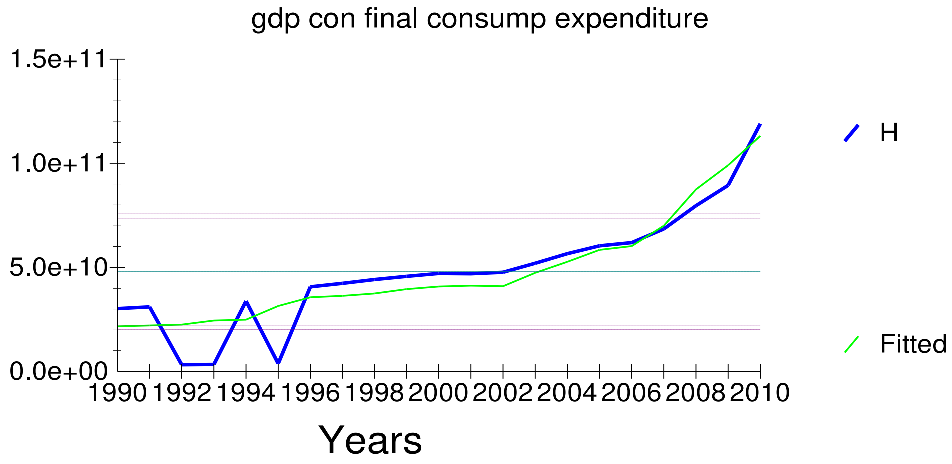

gdp government consumption households cons
2.0e+11
1.5e+11
1.0e+11
5.0e+10
0.0e+00
-5.0e+10
-1.0e+11
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010
Years
H
Fitted

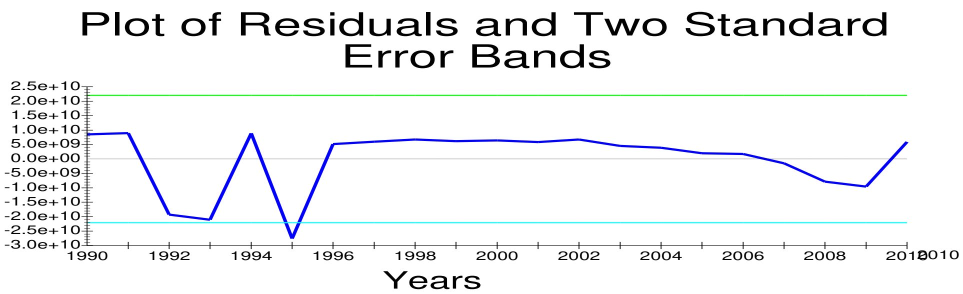

Plot of Residuals and Two Standard Error Bands
2.5e+10
2.0e+10
1.5e+10
1.0e+10
5.0e+09
0.0e+00
-5.0e+09
-1.0e+10
-1.5e+10
-2.0e+10
-2.5e+10
-3.0e+10
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2010
Years

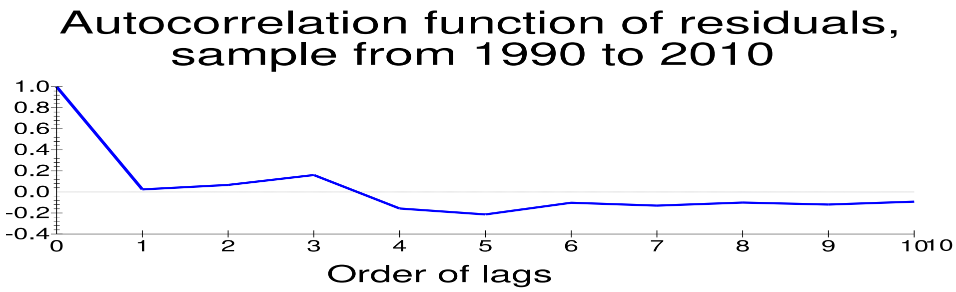
GDP –H-CON FINAL CONSUMPTION EXPENDITURE –R-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                     -2.34E+10           7.27E+09           -3.2217[.004]
 R                          1.6551             .15911           10.4026[.000]
*******************************************************************************
 R-Squared                      .85065   R-Bar-Squared                    .84279
 S.E. of Regression          1.10E+10   F-stat.    F(  1,  19)  108.2150[.000]
 Mean of Dependent Variable  4.79E+10   S.D. of Dependent Variable    2.78E+10
 Residual Sum of Squares     2.31E+21   Equation Log-likelihood      -514.3490
 Akaike Info. Criterion     -516.3490   Schwarz Bayesian Criterion   -517.3935
 DW-statistic                   1.9083
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  .011182[.916]*F(   1,  18)= .0095897[.923]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   .55697[.455]*F(   1,  18)=   .49041[.493]*
```

```
*                    *                          *                             *

* C:Normality        *CHSQ(   2)=   7.8592[.020]*       Not applicable        *

*                    *                          *                             *

* D:Heteroscedasticity*CHSQ(   1)=   1.2839[.257]*F(   1,  19)=   1.2373[.280]*

*******************************************************************************

   A:Lagrange multiplier test of residual serial correlation
```



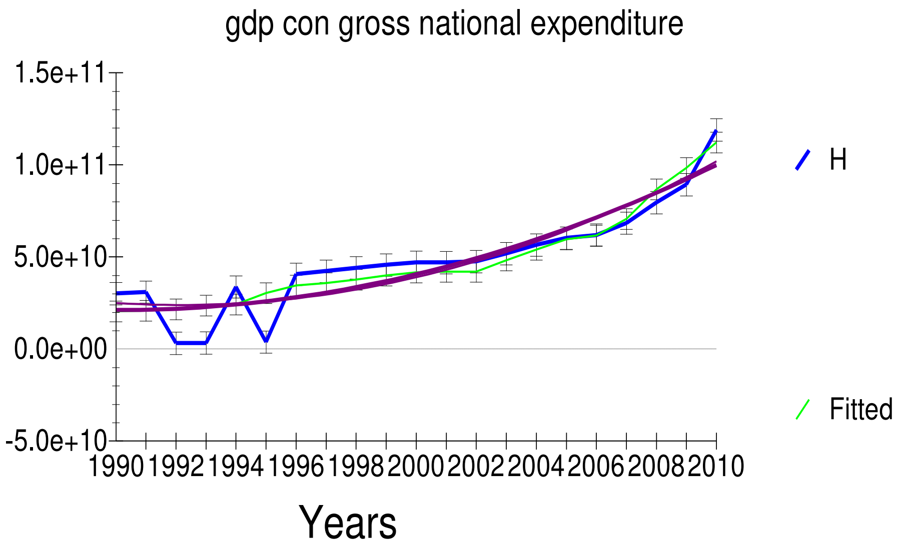


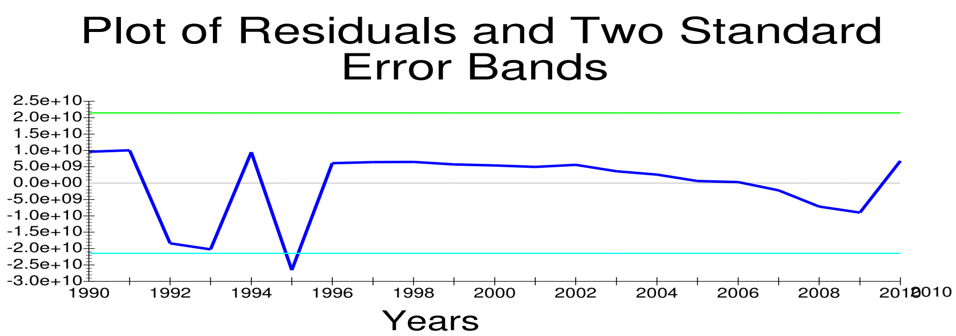


GDP –H-CON   GROSS NATIONAL EXPENDITURE –S-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                     -1.92E+10           6.67E+09           -2.8828[.010]
 S                          1.2285             .11423           10.7548[.000]
*******************************************************************************
 R-Squared                     .85891   R-Bar-Squared                    .85148
 S.E. of Regression          1.07E+10   F-stat.    F(  1,  19)  115.6650[.000]
 Mean of Dependent Variable  4.79E+10   S.D. of Dependent Variable    2.78E+10
 Residual Sum of Squares     2.18E+21   Equation Log-likelihood      -513.7515
 Akaike Info. Criterion     -515.7515   Schwarz Bayesian Criterion   -516.7960
 DW-statistic                  2.0004
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=  .022030[.882]*F(   1,  18)=  .018903[.892]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   .25539[.613]*F(   1,  18)=   .22160[.643]*
*                     *                          *                            *
```

```
* C:Normality          *CHSQ(   2)=   6.7504[.034]*       Not applicable       *
*                      *                          *                          *
* D:Heteroscedasticity*CHSQ(   1)=   1.4944[.222]*F(   1,  19)=   1.4557[.242]*
*******************************************************************************
   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
```

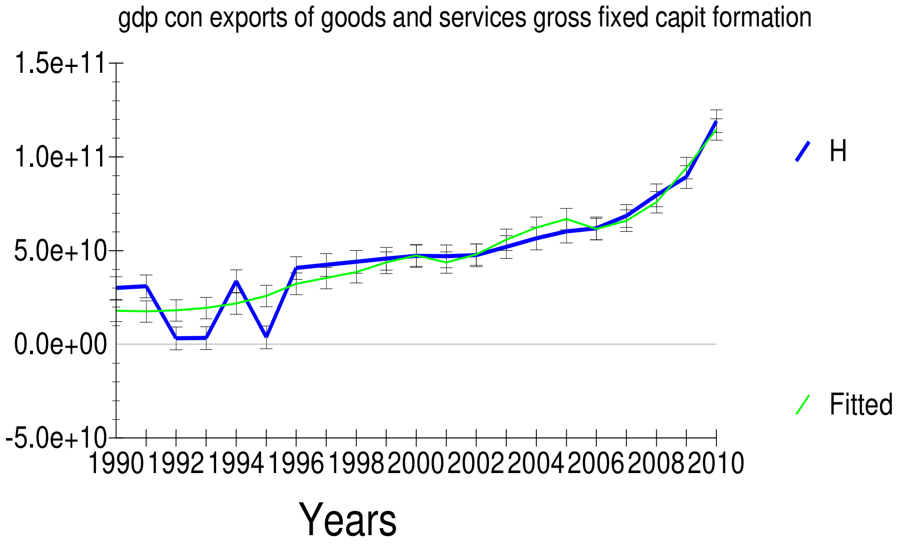


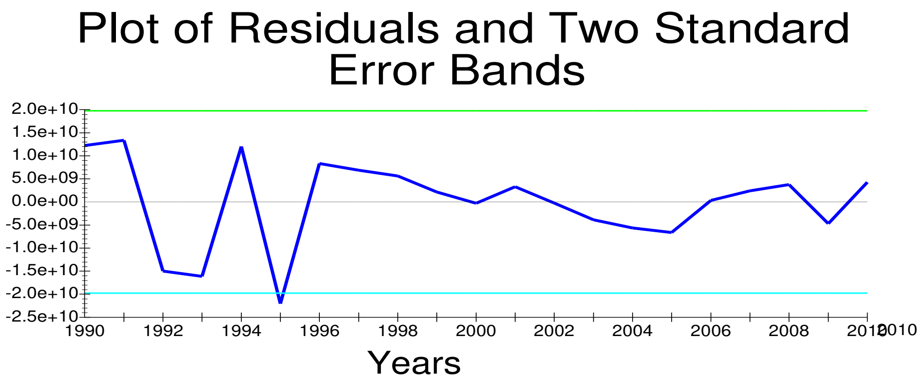


GDP C-H-ON   EXPORT OF GOODS AND SERVICES-T-; GROSS FIXED CAPITAL FORMATION -U

```
                     Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                     -2.25E+10          1.12E+10            -2.0054[.060]
 T                         -5.7382            3.5484            -1.6171[.123]
 U                          9.9259            3.2579             3.0467[.007]
*******************************************************************************
 R-Squared                      .88641   R-Bar-Squared                    .87378
 S.E. of Regression           9.88E+09   F-stat.    F(  2,  18)   70.2297[.000]
 Mean of Dependent Variable   4.79E+10   S.D. of Dependent Variable     2.78E+10
 Residual Sum of Squares      1.76E+21   Equation Log-likelihood       -511.4753
 Akaike Info. Criterion      -514.4753   Schwarz Bayesian Criterion    -516.0421
 DW-statistic                   2.2491
*******************************************************************************


                             Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .63484[.426]*F(   1,  17)=   .52994[.477]*
*                     *                          *                            *
```

```
* B:Functional Form    *CHSQ(   1)=   .044854[.832]*F(   1,  17)=  .036388[.851]*
*                      *                           *                            *
* C:Normality          *CHSQ(   2)=   1.8617[.394]*       Not applicable        *
*                      *                           *                            *
* D:Heteroscedasticity*CHSQ(   1)=   4.0462[.044]*F(   1,  19)=   4.5345[.047]*
```

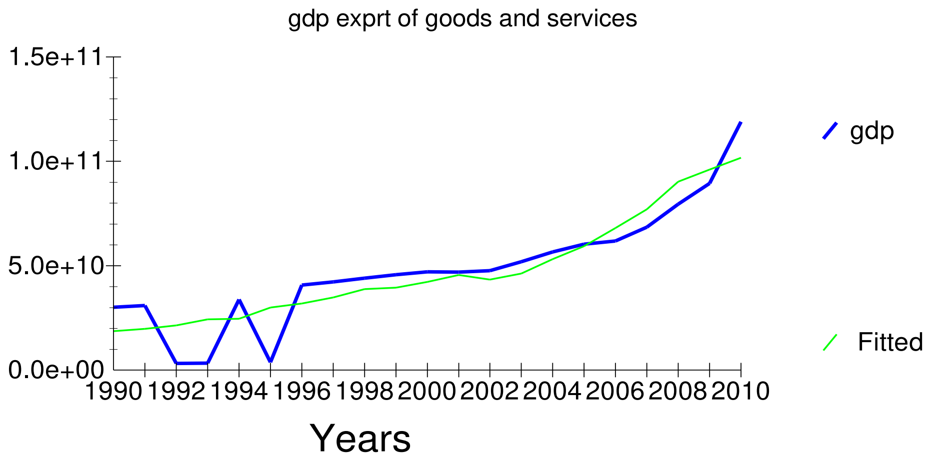




GDP –H-CON EXPORTS OF GOODS AND SERVICES-T-

```
                        Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      9.44E+09           4.79E+09            1.9721[.063]
 T                          4.9910             .52218            9.5579[.000]
*******************************************************************************
 R-Squared                      .82783   R-Bar-Squared                   .81876
 S.E. of Regression          1.18E+10   F-stat.    F(  1,  19)   91.3533[.000]
 Mean of Dependent Variable  4.79E+10   S.D. of Dependent Variable    2.78E+10
 Residual Sum of Squares     2.66E+21   Equation Log-likelihood      -515.8420
 Akaike Info. Criterion     -517.8420   Schwarz Bayesian Criterion   -518.8866
 DW-statistic                  1.8614
*******************************************************************************


                                Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)= .0036007[.952]*F(   1,  18)= .0030868[.956]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)= .0026473[.959]*F(   1,  18)= .0022694[.963]*
```

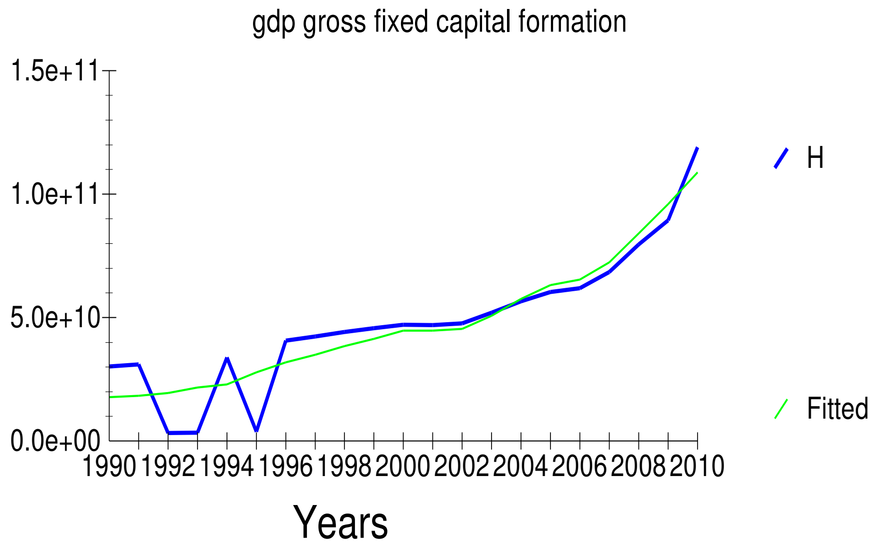
```
*                    *                           *                             *
* C:Normality         *CHSQ(   2)=   2.4583[.293]*       Not applicable        *
*                    *                           *                             *
* D:Heteroscedasticity*CHSQ(   1)=   .21689[.641]*F(   1,  19)=   .19829[.661]*
*******************************************************************************
   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
```

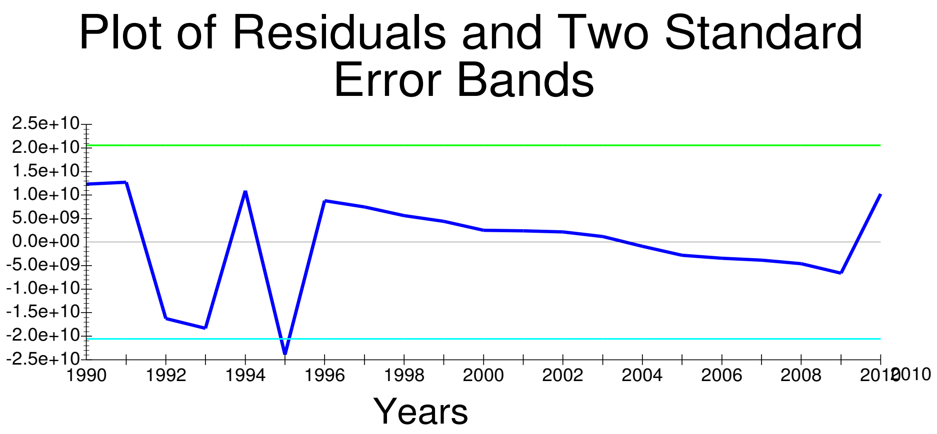


GDP –H-CON GROSS FIXED CAPITAL FORMATION -U-

```
                      Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                     -6.34E+09          5.31E+09           -1.1930[.248]
 U                          4.6974            .41675           11.2714[.000]
*******************************************************************************
 R-Squared                     .86990   R-Bar-Squared                   .86306
 S.E. of Regression          1.03E+10   F-stat.    F(  1,  19)  127.0447[.000]
 Mean of Dependent Variable  4.79E+10   S.D. of Dependent Variable    2.78E+10
 Residual Sum of Squares     2.01E+21   Equation Log-likelihood      -512.8997
 Akaike Info. Criterion     -514.8997   Schwarz Bayesian Criterion   -515.9442
 DW-statistic                  2.1332
*******************************************************************************


                              Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .38810[.533]*F(   1,  18)=   .33892[.568]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=   .11522[.734]*F(   1,  18)=  .099304[.756]*
*                     *                          *                            *
```

```
* C:Normality          *CHSQ(   2)=   2.5949[.273]*       Not applicable       *

*                      *                           *                             *

* D:Heteroscedasticity*CHSQ(   1)=   2.1521[.142]*F(   1,  19)=   2.1695[.157]*

*******************************************************************************

   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
```





GDP –H-CON EXTERNAL BALANCE ON GOODS AND SERVICES-W-

```
                       Ordinary Least Squares Estimation
*******************************************************************************
 Dependent variable is H
 21 observations used for estimation from 1990 to 2010
*******************************************************************************
 Regressor              Coefficient       Standard Error         T-Ratio[Prob]
 CON                      1.41E+10           4.94E+09             2.8648[.010]
 W                        -10.8103             1.2855            -8.4093[.000]
*******************************************************************************
 R-Squared                     .78822   R-Bar-Squared                   .77708
 S.E. of Regression          1.31E+10   F-stat.    F(  1,  19)   70.7169[.000]
 Mean of Dependent Variable  4.79E+10   S.D. of Dependent Variable    2.78E+10
 Residual Sum of Squares     3.28E+21   Equation Log-likelihood      -518.0158
 Akaike Info. Criterion     -520.0158   Schwarz Bayesian Criterion   -521.0603
 DW-statistic                  1.5149
*******************************************************************************


                               Diagnostic Tests
*******************************************************************************
*    Test Statistics  *        LM Version        *         F Version          *
*******************************************************************************
*                     *                          *                            *
* A:Serial Correlation*CHSQ(   1)=   .96657[.326]*F(   1,  18)=   .86846[.364]*
*                     *                          *                            *
* B:Functional Form   *CHSQ(   1)=  .013570[.907]*F(   1,  18)=  .011639[.915]*
*                     *                          *                            *
* C:Normality         *CHSQ(   2)=  14.4816[.001]*       Not applicable       *
```

```
*                      *                           *                             *
* D:Heteroscedasticity*CHSQ(   1)=   .98802[.320]*F(   1,  19)=   .93806[.345]*
*******************************************************************************
   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
```