External indebtness and gdp per capita growth economics essay

Economics

ASSIGN BUSTER

This is an applied, secondary research. Applied research is defined as a type of research that is applied, accessing and using some part of the research communities' accumulated theories, information, facts, methods, and techniques, for a precise, often stated, marketable, or client driven purpose. Applied research is often opposed to pure research in debates about research principles, programs, and projects. The Research will completely rely on secondary sources to have authentic empirical results. The nature of data which I have used in this research is time series. Time series data is a set of data gathered over time to period of time. My data is taken from 1976 till 2005. Two models were setup . First model was applied to see the impact of various macro indiactors like the official exchange rate , inflation rate, Gross investment, dummy for government regime and current account % of GDP on the overall indebtedness of the country. The regression equation will be formed as below: Dummy for indebtedness = f(Exchange Rate, Gross investment, Inflation, Current account % of GDP). A second model is also incorporated to further see the change in the indebtedness of the country on its gross national product which is taken as a proxy for the sustainability of Economic growth. The model incorporates other independent variables like Exchange rate, gross investment. Moreover two dummies, one for government regime representing(1 for all other regimes and 0 for military regime) and an a dummy for aid conditionality (representing 1 for the year in which the conditionality was imposed and 0 for the year in which no conditionality was imposed). The regression equation for the second model is formed as below: GDP per cap = f(Dummy External debt to exports, Exchange rate, Government regime, Gross investment , dummy Aid

conditionality)The econometric model used to run the regression on the statistical software will be the Ordinary least squares method in which the R-Squares of the results when run on a statistical software will show the percentage variation in the dependant variable explained by the independent variables, holding all other things constant. The equations will tell us the relation of the independent variables to the Dependent variable. The P values will explain the level of significance of the model and the independent variables impacting the dependant variable. F-Stat will explain the goodness of fit of the mode.

3. 2 Data Type and Research Period

The data will be secondary in nature as all data is being collected from second hand sources. No questionnaires, surveys or any other primary data collection technique will be used. Most of the data was obtained from the world development indiactors (WDI) and the GDP databases. Moreover economic survey of Pakistan were consulted along with data bases of the state bank(hand book of statistics) were consulted to gather relevant data on Pakistan

3. 3 Data Analysis Tools

Data will be analyzed using statistical software to test for the significance of the variables and furthermore, their explanation of the dependant variable. Data set will be compiled on a spread sheet using Microsoft Excel will be made which will comprise of all the data of the said variables on a single sheet. This data will then be run on competent statistical software such as MintiTab, Statgraphics, EViews or Stata.

3. 4 Data Selection and Estimation Procedure

All data will be collected from reliable and authentic sources. WDIGDFState of Pakistan.

3. 5 Research Hypothesis

H0a : Exchange rate has no impact on the External Indebtness , HAa : Exchange rate volatility has an impact on the External Indebtness. H0b : Gross Investment has no impact on the External Indebtness, HAb : Gross Investment has an impact on the External Indebtness. H0c : Government regime has no impact on External Indebtness, HAc : Government regime has an impact on External Indebtness. H0d : Inflation (CPI) has no impact on External Indebtness , HAd : Inflation (CPI) has an impact on External Indebtness. H0e : Current account % of GDP has no impact on External Indebtness, HAe : Current account % of GDP has an impact on External Indebtness. H0e : External debt to exports has no impact on the GDP per capita growth, HAe : External debt to exports has an impact on GDP per capita growth. H0e : Gross investment has no impact on GDP per capita growth, HAe : Gross investment has an impact on GDP per capita growth. H0e : Exchange rate has no impact on GDP per capita growth, HAe : Exchange rate has an impact on GDP per capita growth. H0e : Aid conditionality has no impact on GDP per capita growth, HAe : Aid conditionality has an impact on GDP per capita growth. H0e : Government regime has no impact on GDP per capita growth, HAe : Government regime has an impact on GDP per capita growth.

3. 6 Theoretical Framework

Sustainability of Economic Growth

Aid ConditionalityOfficial Exchange rateCurrent account deficitInflation (CPI)

External Indebtedness

Total Gross InvestmentStock of External DebtType of Government RegimeGDp per capita is taken as the best proxy available for the Sustainability of Economic Growth. Data on Official Exchange rate is taken from the world development indicators database . An overall increase increase in the official exchange rate implies a depreciation of the cuurency making exports less expensive in the foreign market and eventual increase in the country’s export. More foreign revenues in return and less dependency on foreign borowings. Theoretically the rise in the Exchange rate leads to a decline in the country’s external indebtness. However in the case of Pakistan this is not the case since Pakistan is a major oil importing country and any depreciation in the currency implies much more oil import bill which the theory doesn’t hold in the case of Pakistan and any increase in the official exchange rate leads to a increase in the external indebtness of the country. Inflation data (CPI) was obtained fom the WDI database. An Increase in the overall inflation in the country will make the domestically produced goods more expensive making it inattractive for the foreign buyers implying more dependence on the foreign assistance. Hence an increase in the overall level of External Indebtness. Total gross investment data was obtained from the state of Pakistan database. An increase in the total investment in the country implies less dependence on foreign borrowing and hence a decrease in the overall External Indebtness of the country. Government regime is taken as

dummy allotting 1 for military rule and 0 for all other regimes. Data on Current account deficit was obtained from the state bank of Pakistan data base and an increase in the current account balance will lead to less reliance on foreign assistance.

Chapter 4: Estimation Analysis & Conclusion

4. 1 Estimation Results

After establishing the basework and collection of the data, it was put to test empirically by using the statistical software; Stat-graphics. Using the Ordinary Least Squares method (OLS), a multiple regression was run for the explained model equation. Before making the equation for the model, scatter plots for the independent variables were made using Stat-graphics. Model 1regression tayyab. JPGRegression analysis is used to forecast the affect of the dependent variable using one or more independent variables. This equation has the form where Y is the dependent variable in my case Y is External indebtness of Pakistan and my independent variables usually denoted as Exchange rate , gross investment, Inflation , government regime and the current account as a % of GDP. The output shows the results of fitting a multiple linear regression model to describe the relationship between External Indebtness and the 5 independent variables mentioned aboveExternal Debt to Export% = The theory states that as the average exchange rate rises i. e. the currency is depreciated the foreign denominated debt of the country increases due to the devaluation of the currency. Theoretically devaluation of the currency should increase the exports as the goods of your country become cheap to the importers of the other countries and the imports of the other countries becomes expensive to the home

country. The increase in exports and decrease in imports helps to overcome the trade deficit as there is more inflow of foreign earnings that flow into the country . However in case of Pakistan the theory doesn't hold as it is a major oil importing country.. And the devaluation of the currency didn't increase the exports of the country and imports did not decreased as it should have decreased. All this caused immense loss to Pakistan's economy and hence the total outstanding debt of Pakistan increased. This relation of devaluation of currency and decrease in the total outstanding debt did not hold because of heavy reliance on imported good. An increase in the exchange rate by Rs 1 will lead to a positive increase of 0. 436983 % increase in the overal external indebtness of the country. P value for Exchange rate is less than 10% percent hence it cannot be rejected at this level showing a strong relation with external indebtness of the country. An increase in the gross investment in the country will lead to fall in the external indebtness by -0. 00000301091 %. This finding is consistent will the theory base behind it as more investment takes place in the economy will lead to less reliance on foreign assistance and hence and overall decline in the external indebtness. Since the pvalue for investment is less than 10% hence the variable has a significant impact on the External indebtness and cannot be rejected. An increase in the incidence of inflation in the previous year by 1% will lead to a increase in the external indebtnesss by0. 00495604 % which is consistent with the underlying theory behind it however the p value for the variable is much higher than the 10% significance hence we reject the variable as it has a insignificant relationship with the external indebtness . When there will be any other regime other than military rula it will have a negative impact on

the External indebtness as there is more reliance on foreign aid in the case of political regime. An increase in the current account balance of the country will lead to more funds available and less reliance on the external sources of funding hence an increase in current account balance in $1 would inturn lead to a fall in the external indebtness by -0. 0932135%. Since the p value for the variable is significant at 10% significance level hence it cannot be rejected. The overall R square of the model comes out to be 85. 83% implying that approx. 86 percent of the variation the dependant variable is explained by the independent variable.

Model 2

Capture. JPGThis model above accounts for the impact of External indebtness on the Economic growth Process. The dependant variable is GDP per capita taken as a proxy for Economic Sustainability. Other independent variables include Exchange rate, type of government regime , a dummy for aid conditionality and the total gross investment. The output shows the results of fitting a multiple linear regression model to describe the relationship between External Indebtness and the 5 independent variables mentioned aboveGDP per cap= An increase in the external indebtness will lead to a positive change of 1. 9872% . The underlying theory behind this is that external debt helps enhance the growth process until a certain limit is crossed and the country falls into the situation of debt overhang in which the total stock of external debt crosses the country’s debt servicing capability. Since the p value of the variable is less than the 10% significance level hence it cannot be excluded and it may be concluded that both the variables have a significance relationship. An increase in the previous year exchange

rate will lead to a negative impact of -0. 269213% in the GDP per capita growth . The underlying theory behing which is that an increase in the exchange rate make our products cheaper for the foreign community which will enhance the exports of the country however as mentioned earlier this is not the case in Pakistan due to its heavy dependence on oil import. P value is less than 10% hence this exchange rate has a significant impact on Gdp per capita growth rate. When there will be any other regime other than military it will have a negative impactof 1. 93888% on the GDP per capita growth. Since the p value is less than the significance level it is statistically significant at this level. In the year when aid conditionality is imposed this will lead to a negative impact of 0. 22613% on the GDP per capita growth rate however since the pvalue is significantly higher we reject the hypothesis. An increase in the overall gross investment will lead to an overall increase of 0. 0000144831% in the GDP per capita. P value is less than the significance level of 10%