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**Accessing the Role of Macroeconomic Policies on Export and Growth Relationship - A Case of India and Pakistan**

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## Accessing the Role of Macroeconomic Policies on Export and Growth Relationship - A Case of India and Pakistan

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**Abstract:** *The relationship between exports and growth has extensively been discussed in the literature. We have plenty of theoretical as well as empirical literature highlighting this relationship. This study, however, has been conducted in an attempt to explore the impact of the macroeconomic policies of two major South Asian economies on exports and growth. To see the impact of these policies, a policy index has been constructed incorporating the fiscal, monetary and trade policies by using their proxy variables budget balance, inflation and trade openness respectively. Johansen Cointegration technique under VAR has been employed on an annual data from 1980 – 2021. The result suggests that macroeconomic policies have no role in promoting either exports or growth in Pakistan. However, there was evidence that sound macroeconomic policies have promoted exports and growth in India.*

**Keywords:** Policy Index, Trade, Govt Policies, South Asia.

### Introduction

A report of the World Bank states that macroeconomics is a system of policies, technologies, and resources that are required for the economic development of a country. In the absence of a sound macroeconomic environment, the objective of poverty alleviation is impossible. A sound macroeconomic policy framework comprises of low rate of inflation, suitable and effective fiscal and monetary policies and a feasible balance of payment. Such macroeconomic characteristics help the countries to grow at a much faster pace. Fischer (1993) suggests that a sound macro-economic environment is beneficial for growth while high rate of inflation and budget deficit retard growth. Stable macroeconomic policies have helped many Asian countries to achieve desirable rate of growth. Observing the growth pattern of different countries over different periods and the policies they adopted, it is obvious that macro-economic policies have played prominent role. Technological advancement as well as investment in human and non-human capital worked as catalyst in the impressive economic performance of most industrial countries. Nonetheless, inflation

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and external imbalances along with political instability resulted in depressing growth in Africa and Latin America in the 1980's.

According to the traditional approach, reduction in fiscal deficit may reduce the current account deficit, but this is not a piece of cake for developing countries. In developing countries, it is very difficult to reduce the fiscal deficit. Trade liberalization has made this task even more difficult since liberalization calls for tariff reduction, which negatively affects the revenue of the government. Also, a major chunk of expense in the government budget is allotted for subsidies to the local producers to give them an incentive for export. Moreover, the government also has to offer tax concessions and tax holidays to exporters. The government cannot cut down its expenditure, more specifically current expenditure and it seems helpless to increase its revenue from taxation. The tax base in developing countries is narrow and an increase in taxes may increase tax evasion and even lesser revenue from taxation. Moreover, the financial institution is underdeveloped and could hardly help the government improve the trade deficit and increase the tax base rather fail to improve the structure of the market to raise price elasticity of both demand and supply.

As the literature has highlighted, the domestic policies may affect the exports and economic growth. Therefore, we are examining the impact of domestic macro-economic policies in exploring and explaining the relationship between exports and growth. For this purpose, we have used proxies for monetary, fiscal, and trade policies represented by the inflation rate, budget deficit, and trade openness to develop a policy index. Other variables used in the study include GDP, exports, and REER. Annual time-series data from 1980- 2021 has been used.

## **Literature Review**

In this section, we have reviewed selected literature concerning theoretical discussion as well as reviewing some empirical studies to explore the impact of macroeconomic policies on export-growth relationship.

### **Theoretical Overview**

Enough theoretical evidence highlighting the close relationship between trade and economic growth is available which dates back to the times of the classical economists. Adam Smith proposed the theory of Absolute Advantage, focusing on the importance of specialization in production and division of labor. David Ricardo further explained the analysis by presenting the theory of Comparative Advantage. Neo-Classicals have strongly advocated the existence of the relationship between trade and growth. Heckscher and Ohlin, in this attempt, proposed the theory of factor endowment. In the 1980s, the new trade theories were proposed through which the work of Neo-Classical was further elaborated. Bhagwati (1988), in favor of neo-classical, has pointed the export-led growth hypothesis and has claimed that economic growth positively affects both supply and demand. Endogenous growth theory further emphasized that export tends to increase growth in the long-run by promoting high rate of technological innovation (Lucas Jr, 1988). Recently,

the new growth theories have emerged in the theoretical literature. Unlike all the trade theories which are based on “static” foundations, these new growth theories are more “dynamic” in nature. These theories explain how trade policy can affect specialization and eventually, the growth rate in the long run. These theories also suggest that investment in research and development initiates product expansion resulting in the production of new goods or improvement in the quality of products.

## **Empirical Evidence on the Role of Macroeconomic Policies on Export and Economic Growth**

Fischer (1991) uses the data over the period from 1970 – 1985. He considers monetary, fiscal, and exchange rate policies as macroeconomic policies. For his analysis, he employs a pooled time-series cross-sectional regression model for 73 developing countries. Fischer finds that inflation is negatively correlated with growth, while, the fiscal balance is positively correlated with growth. However, the debt to GDP ratio is found to be insignificant. Bleaney (1996) has conducted a study using panel data for developing countries over the period 1980-1990. The findings reveal that sound macroeconomic management is related to growth for a given rate of investment, albeit, poor macro-economic performance hurts investment and growth of developing countries. Lin, Lee, and Huang (1996) have used regression analysis to examine the role of macroeconomic policies in export-led growth for South Korea and Taiwan for the period 1966- 1993. There is no evidence of a significant relationship between macroeconomic policies and growth for Taiwan and South Korea. Burnside and Dollar (2000) have implied a two-stage least square method for their analysis on panel data of 51 countries from 1970 to 1993. The study concludes that higher inflation, trade, and budget deficit reflect a poor macroeconomic policy environment and hinders the effectiveness of aid. On the contrary, sound macroeconomic policies promote growth and reduce the saving-investment gap. Morgan (2012) conducts a study in an attempt to see whether the policies stimulate export and economic growth in Asia or not. Evidence is found in support of macroeconomic policies in influencing savings and investment in Asian countries. Arslan and Van Wijnbergen (1993), have conducted a study on the export boom in Turkey covering the period from 1980- 1987 and have found that macroeconomic policies along with trade policies have led to the devaluation of the currency and have a significant positive role in the export growth of Turkey during the period studied. Lord (2002) tries to explore the linkage between trade and policies for the case of Vietnam for the period 1998-2000. He finds that both micro and macroeconomic factors play important role in export growth in Vietnam. Havi and Enu (2014) explore the role of monetary and fiscal policy in the economic growth of Ghana. The study period covers the year from 1980-2012. The result provides evidence of the positive impact of both monetary and fiscal policy, however, the impact of monetary policy is found to be much stronger in the case of Ghana. Baig (2009); Jawaid, Qadri, and Ali (2011) have conducted an empirical examination over on annual time-series data, in an attempt to highlight the role of fiscal, monetary, and trade policies on the economic growth of Pakistan. The study concludes that there exists a significant positive impact of both fiscal and monetary policies on economic growth in the short-run as well as in long run. Moreover, the impact of

monetary policy is found to be stronger than the impact of fiscal policy. Ali and Rehman (2015) consider data for the period 1980-2012. The study reveals that instability of macroeconomic policy has negatively affected the GDP of Pakistan. Sahoo and Acharya (2012) develop a macroeconomic index using 3 indicators – GDP growth rate, price stability, and fiscal deficit. The findings of this study show that FDI and macroeconomic index are positively correlated indicating that macroeconomic performance plays an important role in attracting FDI in India. Luqman, Haq, and Lal (2013) explained the role of foreign aid in Pakistan, they have used time series data during 1972-2011 and have created index of financial sector development by principle component analysis and found positive and significant impact between foreign aid and economic growth of Pakistan. Rahman (2005) conducts a study to see the effect of monetary and fiscal policies on the output growth of Bangladesh. The results of Variance decomposition and Impulse response function indicate that monetary policy is playing a significant positive impact in output growth whereas, the effect of fiscal policy on real output growth is found to be insignificant.

## Methodology

### Construction of Policy Index

Fischer (1993) has laid the theoretical foundation for the construction of the policy index, however, methodological evidence for the construction of the index has been provided by Burnside and Dollar (2000). The main purpose of the construction of this index is to capture the effect of the domestic macroeconomic policy variables to represent the macroeconomic environment of a country. The relationship between macroeconomic policy and economic growth is well developed on theoretical grounds. Moreover, much empirical work has been conducted to demonstrate the relationship between macroeconomic policy and economic growth.

Following Burnside and Dollar, we have included three variables for the construction of policy index – inflation, budget balance (as a percentage of GDP), and trade openness.

The principal component analysis is a statistical procedure in which a larger set of possibly correlated variables is transformed into a smaller set of uncorrelated variables called principal components.

$$PC_m = \alpha_{m1}X_1 + \alpha_{m2}X_2 + \dots + \alpha_{mm}X_m \quad (1)$$

Where,  $\alpha_{mm}$  represents the weight for the  $m^{th}$  principal component and the  $n^{th}$  variable, from a set of variables from  $X_1$  through  $X_m$ .

PCA produces a new set of orthogonal linearly independent dimensions and orders them according to the variation of data along with them. The components are ranked such that the first component (PC1) explains the maximum variation in the data. Similarly, all the subsequent components are uncorrelated with previous components, while each component captures an additional but smaller variation of the original variables. The variance for each principal component is given by the eigenvalue of the corresponding eigenvector.

The macroeconomic policy index used in our study is explained in the following equation:

$$PolicyIndex = -\alpha_1(Inflation) + \alpha_2(TradeOpenness) + \alpha_3(BudgetBalance/GDP) \quad (2)$$

Where,  $\alpha_1$ ,  $\alpha_2$  and  $\alpha_3$  are weights of the first component and as the previous studies suggest  $\alpha_1 < 0$ ,  $\alpha_2 > 0$  and  $\alpha_3 > 0$ .

## Econometric Methodology

Vector Autoregressive (VAR) gained much attention after the criticism of the simultaneous equation approach by Sims (1980). VAR has been used in empirical studies for over two decades now. We have applied VAR based (Johansen 1988) Cointegration technique since it does not involve the hassle of selecting a dependent variable since all the variables are treated as endogenous dependent variables. Moreover, Johansen Cointegration test can detect multiple cointegrating relationships. Johansen Cointegration technique under VAR is considered as one of the most suited methodologies since it easily captures heterogeneity in data and addresses static as well as dynamic interdependencies.

The first step is to check the order of integration. We will apply the Augmented (Dickey-Fuller 1979) test for this purpose. Next step is the determination of autoregressive lag length for the time series. A long-run relationship can be explored between the variables by applying The Johansen Co-integration test.

### Equation for Cointegration

$$\Delta X_t = \alpha + \Gamma_1 \Delta X_{t1} + \Gamma_2 \Delta X_{t2} + \dots + \Gamma_{k-1} \Delta X_{tk-1} + \prod k X_{tk} + \omega_m \quad (3)$$

Where  $X_t$  is an  $(nx1)$  column vector of  $p$  variables,  $\alpha$  is  $(nx1)$  vector of the constant term,  $\Gamma$  and  $\prod$  are coefficient matrices and  $k$  denote lag length. The coefficient matrix  $\prod$ , known as the impact matrix explains the long-run relationships.

After determining the order of integration of the variables, Johansen's methodology computes two likelihood ratio test statistics: the trace test and maximal eigenvalue ( $\lambda$ -max) test, expressed as:

$$L_{trace} = -T \sum_{i=r+1}^n \ln(1 - \lambda_r) \quad (4)$$

$$L_{max} = -T \ln(1 - \lambda_{r+1}) \quad (5)$$

Where  $\lambda_r$  is the estimated eigen values, and  $T$  is the number of valid observations. Granger Causality Test According to co-integration analysis, if two variables are co-integrated, there exist unidirectional or bi-directional causality between the variables. Co-integration indicates the presence or absence of Granger-causality; it does not indicate the direction of causality between variables. The direction of the Granger causality can only be detected through the vector error-correction model.

## Sources of Data

We have used annual time series data from 1980 – 2021. Variables included in the model are inflation rate, budget deficit, trade openness, REER, exports of goods and services in US\$, and GDP per capita in US \$. Most of the data for the variables included in our model has been extracted from the World Bank's Database of World Development Indicators including GDP and exports of goods and services. However, we have relied on the IMF for the data of REER. Since the data for the fiscal balance was unavailable on WDI, we have relied on various publications of economic surveys of Pakistan and Union Budget of India.

## Empirical Equations

In order to empirically estimate the impact of domestic policies in explaining the relationship between exports and economic growth, we have constructed the following set of equations for each country.

$$\ln GDP_{it} = \alpha_{1i} + \sum \beta_{11} \ln GDP_{i,t-1} + \sum \beta_{12} \ln Exp_{i,t-1} + \sum \beta_{13} \ln REER_{i,t-1} + \sum \beta_{14} \ln P.Index_{i,t-1} + \mu_{1it} \quad (6)$$

$$\ln Exp_{it} = \alpha_{2i} + \sum \beta_{21} \ln GDP_{i,t-1} + \sum \beta_{22} \ln Exp_{i,t-1} + \sum \beta_{23} \ln REER_{i,t-1} + \sum \beta_{24} \ln P.Index_{i,t-1} + \mu_{2it} \quad (7)$$

$$\ln REER_{it} = \alpha_{3i} + \sum \beta_{31} \ln GDP_{i,t-1} + \sum \beta_{32} \ln Exp_{i,t-1} + \sum \beta_{33} \ln REER_{i,t-1} + \sum \beta_{34} \ln P.Index_{i,t-1} + \mu_{3it} \quad (8)$$

$$\ln P.Index_{it} = \alpha_{4i} + \sum \beta_{41} \ln GDP_{i,t-1} + \sum \beta_{42} \ln Exp_{i,t-1} + \sum \beta_{43} \ln REER_{i,t-1} + \sum \beta_{44} \ln P.Index_{i,t-1} + \mu_{4it} \quad (9)$$

The explanatory variables in the model include GDP per capita, exports of goods and services  $Exp$ , real effective exchange rate (REER) and P.Index which represents the policy index which we have constructed using Principal Component Analysis including inflation as an indicator of monetary policy, budget balance as a percentage of GDP as a measure of fiscal policy and trade openness as an instrument of trade policy. Lastly,  $\mu$  represents the residuals of the estimated equation. All the variables are in logarithm form to avoid the problem of heteroscedasticity.

## Results

### Impact of Domestic Macro-Economic Policies in Determining the Relationship between Exports and Growth

Augmented Dickey-Fuller test has been applied to the variables – GDP per Capita, Exports of goods and services in US\$, policy index, and real effective exchange rate. All the variables are in logarithm form.

Table 1: Unit Root Test

|          | Variables    | Augmented Dickey-Fuller |                  |                     |                  |
|----------|--------------|-------------------------|------------------|---------------------|------------------|
|          |              | Intercept               |                  | Trend and Intercept |                  |
|          |              | Level                   | First Difference | Level               | First Difference |
| Pakistan | GDP          | 0.559                   | -5.845*          | -1.608              | -6.035*          |
|          | Exports      | -1.356                  | -5.338*          | -1.161              | -5.370*          |
|          | Policy Index | -1.846                  | -6.981*          | -2.075              | -6.935*          |
|          | REER         | -2.184                  | -4.971*          | -0.035              | -7.356*          |
| India    | GDP          | 1.389                   | -5.460*          | -1.357              | -5.831*          |
|          | Exports      | 0.383                   | -4.091*          | -2.198              | -4.036*          |
|          | Policy Index | -1.146                  | -2.097*          | -2.181              | -3.798*          |
|          | REER         | -1.855                  | -3.337*          | -0.329              | -4.021*          |

Notes: \*, \*\*, and \*\*\* denote rejection of the null hypothesis of unit root at 1%, 5%, and 10% significance levels, respectively.

All the variables are found to be non-stationary at level and stationary at first difference. The order of integration is, therefore, I(1).

Table 2: VAR Lag Order Selection Criteria (Determination of Lag Length)

|                 | Lag | LogL    | LR       | FPE       | AIC     | SC      | HQ      |
|-----------------|-----|---------|----------|-----------|---------|---------|---------|
| <b>Pakistan</b> | 0   | 38.23   | NA       | 1.75E-06  | -1.90   | -1.72   | -1.84   |
|                 | 1   | 202.57* | 283.01*  | 4.66E-10* | -10.14* | -9.26*  | -9.83*  |
|                 | 2   | 213.01  | 15.66    | 6.58E-10  | -9.83   | -8.25   | -9.28   |
|                 | 3   | 233.29  | 25.91    | 5.69E-10  | -10.07  | -7.78*  | -9.27   |
|                 | Lag | LogL    | LR       | FPE       | AIC     | SC      | HQ      |
| <b>India</b>    | 0   | -15.839 | NA       | 3.54E-05  | 1.102   | 1.278   | 1.163   |
|                 | 1   | 156.289 | 296.444* | 6.09E-09* | -7.571  | -6.691* | -7.264  |
|                 | 2   | 179.496 | 34.811*  | 4.23E-09* | -7.972  | -6.388  | -7.419* |
|                 | 3   | 197.084 | 22.472   | 4.25E-09  | -8.060* | -5.772  | -7.261  |

Notes: \* indicates lag order selected by the criterion.

LR: sequential modified LR test statistic (each test at 5%).

The results of the cointegration test in the table ?? show the existence of at most 1 cointegration relationship among the variables in case of both the countries. The estimated relationships for all the countries are given below:

$$\text{Pakistan GDP} = 27.70 + 1.23\text{Exp} - 1.15\text{REER} + 0.28\text{P.Index} \quad t\text{-stats} (3.8) (-2.9) (0.05)$$

$$\text{India GDP} = 2.191 + 0.95\text{Exp} - 0.816\text{REER} + 0.03\text{P.Index} \quad t\text{-stats} (3.05) (-3.15) (3.25)$$

Table 3: Cointegration Test

| Countries | Hypothesized No. of CE(s) | Eigenvalue | Trace Statistics | 0.05 Critical Value | Max-Eigen Statistics | 0.05 Critical Value |
|-----------|---------------------------|------------|------------------|---------------------|----------------------|---------------------|
| Pakistan  | None *                    | 0.555      | 53.840           | 47.856              | 29.201               | 27.584              |
|           | At most 1                 | 0.389      | 24.643           | 29.797              | 17.790               | 21.131              |
|           | At most 2                 | 0.171      | 6.852            | 15.494              | 6.789                | 14.264              |
|           | At most 3                 | 0.001      | 0.063            | 3.841               | 0.063                | 3.841               |
| India     | None *                    | 0.524      | 53.63            | 47.856              | 35.57                | 27.584              |
|           | At most 1                 | 4.007      | 23.05            | 29.797              | 13.84                | 21.131              |
|           | At most 2                 | 0.229      | 9.21             | 15.494              | 8.41                 | 14.264              |
|           | At most 3                 | 0.002      | 0.79             | 3.841               | 0.79                 | 3.841               |

\* indicates lag order selected by the criterion.

## Results of Granger Causality Based on VECM

VECM is applied after the cointegration test indicates the presence of cointegration. The granger causality test applied explains the direction of causality.

Table 4: Granger Causality Based on VECM

| Countries | Variables | DGDP               | DExports           | DP.Index           | DREER             | EC term             |
|-----------|-----------|--------------------|--------------------|--------------------|-------------------|---------------------|
| Pakistan  | GDP       |                    | 1.289<br>(0.256)   | 0.658<br>(0.416)   | 0.103<br>(0.747)  | -0.103*<br>(0.008)  |
|           | Exports   | 4.178**<br>(0.040) |                    | 0.004<br>(0.748)   | 1.212<br>(0.270)  | 0.049*<br>(0.005)   |
|           | P. Index  | 0.740<br>(0.388)   | 0.200<br>(0.646)   |                    | 0.743<br>(0.388)  | -0.175<br>(0.361)   |
|           | REER      | 0.734<br>(0.391)   | 4.148**<br>(0.041) | 2.542<br>(0.110)   |                   | -0.202**<br>(0.041) |
| India     | GDP       |                    | 4.315**<br>(0.037) | 3.818**<br>(0.048) | 0.465<br>(0.494)  | -0.052*<br>(0.002)  |
|           | Exports   | 10.32*<br>(0.001)  |                    | 8.850*<br>(0.002)  | 4.759*<br>(0.001) | -0.070*<br>(0.006)  |
|           | P. Index  | 3.882*<br>(0.048)  | 4.050*<br>(0.044)  |                    | 0.185<br>(0.666)  | -0.088*<br>(0.001)  |
|           | REER      | 0.120<br>(0.728)   | 0.267<br>(0.605)   | 2.212<br>(0.136)   |                   | -0.201<br>(0.496)   |

Note: The values in the columns for lagged variables report the  $\chi^2$ -statistics, while the column for EC term provides the coefficients for the error-correction terms. The values in parenthesis represent p-values. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

## Conclusion

During the early 80s, in Pakistan, the introduction of a flexible exchange rate system and provision of incentives to the exporters did have a positive impact on export performance. The World Bank (1988: 75) however, concluded that the trade regime was biased towards import substitution. The 1990s is marked as an era of the debt crisis. Political instability and mismanaged economic policies led to slow down the pace of growth. It was in the 1990s when for the first time, the Export-Led growth strategy became a part of Pakistan's trade policy. The flexible exchange rate regime, however, was continued during 1990-1997. The exports were stagnant in early 2000. However, the world globalization and liberal policies favored the export growth in Pakistan and due to trade reforms, the export performance of Pakistan started improving from 2012. According to the Economic Complexity Index, Pakistan was 41st economy in the world in terms of GDP (current US\$), and 65th in total exports in 2020. During the fiscal year 2020-21 country's exports registered about \$25 billion whereas the GDP economy has been recorded at 3.94%.

In India, the initial years of 1980' marked the period when export competitiveness was given much attention. During this period, crude oil was one of the major exports of India amounting to 18.17 billion in 1984-85. The state laid much stress on enhancing the productivity level therefore, it was decided to improve and upgrade technology in

industries. But the high level of tariffs and licensing mechanism destroyed the real essence of these policies. Some internal factors were leading to the depletion of foreign reserves. The balance of payment position in 1991 was worse. In the early years of the 1990s, India faced severe economic crises and financial crunch. There was an introduction of a new liberalized exchange rate management system that eliminated import licensing in most capital goods and raw material. In 1991, there was a major shift in the policies, and India became integrated with other countries in real terms and became a globalized economy. In 1997-98, more importance was given to economic growth and growth-oriented fiscal measures were adopted. In 2001-02 quantitative restrictions were completely removed. India's export of services had been exemplary with the fastest growing rate of 17% per annum while the world average is 5.6% per annum.

Indian cottage industries and handicrafts also started capturing the market of sub-Saharan Africa from 2002 onwards. India has adopted a vigorous export promotion strategy and is focusing on the sectoral growth of industries. The state has continued focusing on growth-oriented strategies, while the public and private sectors are working side by side with the service sector growing at a rapid pace of over 9% since 2001.

For this study, we have employed annual time series data for the period from 1980 to 2021. Johansen Cointegration Technique has been used in the VAR environment and for this purpose. Policy index using principal component analysis has been constructed, incorporating three variables inflation representing monetary policy, budget balance representing fiscal policy, and trade openness as an indicator of trade policy. ADF test is applied to check the order of integration. All the variables are found to be non-stationary at level and stationary at first level. Since the variables are found to be associated in the long run, we applied VECM. No impact of policy index is found in the case of Pakistan. However, the policy index is found to be positively influencing the export and GDP growth in India. The study also supports the export-led growth hypothesis in the short run for India. However, the findings of the study support growth driven export for Pakistan.

## **Policy Recommendations**

In light of the findings and results produced from this study, we can say that a sound and stable macro-environment is inevitable to promote exports and growth in a country. A well-suited fiscal policy in compliance with suitable monetary and trade policies can be crucial role in achieving the desired rate of output growth.

A high rate of inflation and increasing government deficit do not support a sound macro environment. Therefore, it's the need of time to overcome these hurdles to attain GDP growth. Moreover, the policy makers should design their trade policies accordingly aiming to achieve higher rate of export growth. Pakistan has somehow managed to maintain a fair rate of GDP, despite facing several wars, political instability, transfer of powers between military and civilian regimes and debt crisis. But the imbalanced macroeconomic policies have persistently affected the growth of the country and the increasing debts and inflation are still posing threats to the growth and development of Pakistan. Successive governments have not been successful in reducing the deficit. Moreover, the growth in

the real revenue has been stagnant which has further worsened the situation. . The share of exports in GDP of Pakistan is not much appreciating. There is a need to encourage local industries to ensure the production of diversified goods by dynamic industries to be offered in the international market. Also the insignificance of policy index explains that the policy framework has failed to address the ground realities of the country. There is a need to revise and revisit the existing policies so as to promote the exports and ensure competitiveness of Pakistani products in the International market. A proper research and analysis of International market can also be helpful in identifying the shortcomings and finding out niche to penetrate the exports of Pakistan.

India, on the contrary, is currently considered as a key player in international trade. Its trade reforms and strategies along with the use of technological advancement and financial liberalization have promoted its trade. Since 1991, India is enjoying an average GDP of about 6-7%. The favorable macroeconomic policies have also resulted in reducing the inflation rate to 5.5% in 2021 from 12% in 2010. However, the fiscal deficit is a major concern for the country.

## References

- Ali, A., & Rehman, H. U. (2015). Macroeconomic instability and its impact on gross domestic product: an empirical analysis of Pakistan. *Pakistan Economic and Social Review*, 285–316.
- Arslan, I., & Van Wijnbergen, S. (1993). Export incentives, exchange rate policy and export growth in turkey. *The review of Economics and Statistics*, 128–133.
- Baig, M. A. (2009). Investigating the export and economic growth nexus: A time series analysis. *Pakistan Business Review (PBR)*, 11(2), 318–339.
- Bhagwati, J. N. (1988). Export-promoting trade strategy: issues and evidence. *The World Bank Research Observer*, 3(1), 27–57.
- Bleaney, M. F. (1996). Macroeconomic stability, investment and growth in developing countries. *Journal of development economics*, 48(2), 461–477.
- Burnside, C., & Dollar, D. (2000). Aid, policies, and growth. *American economic review*, 90(4), 847–868.
- Fischer, S. (1991). Growth, macroeconomics, and development. *NBER macroeconomics annual*, 6, 329–364.
- Fischer, S. (1993). The role of macroeconomic factors in growth. *Journal of monetary economics*, 32(3), 485–512.
- Havi, E. D. K., & Enu, P. (2014). The effect of fiscal policy and monetary policy on Ghana's economic growth: which policy is more potent. *International Journal of Empirical Finance*, 3(2), 61–75.
- Jawaid, S. T., Qadri, F. S., & Ali, N. (2011). Monetary-fiscal-trade policy and economic growth in Pakistan: Time series empirical investigation. *International Journal of Economics and Financial Issues*, 1(3), 133–138.
- Lin, K. S., Lee, H.-Y., & Huang, B.-Y. (1996). The role of macroeconomic policy in export-led growth: the experience of Taiwan and South Korea. *Financial deregulation and integration in East Asia*, 193–224.
- Lord, M. (2002). Vietnam's export competitiveness: Trade and macroeconomic policy linkages. Retrieved from <https://mpra.ub.uni-muenchen.de/50638/>
- Lucas Jr, R. E. (1988). On the mechanics of economic development. *Journal of monetary economics*, 22(1), 3–42.
- Lugman, M., Haq, M., & Lal, I. (2013). Foreign aid and macroeconomic performance in Pakistan: Exploring the role of local financial sector development. Retrieved from <https://mpra.ub.uni-muenchen.de/106866/>
- Morgan, P. J. (2012). The role of macroeconomic policy in rebalancing growth. *Journal of Asian Economics*, 23(1), 13–25.
- Rahman, M. H. (2005). Relative effectiveness of monetary and fiscal policies on output growth in Bangladesh: A VAR approach. *Policy Analysis Unit Bangladesh Working Paper WP0601*, 22(1/2).
- Sahoo, B. K., & Acharya, D. (2012). Constructing macroeconomic performance index of Indian states using DEA. *Journal of Economic Studies*, 39(1), 63–83.
- Sims, C. A. (1980). Macroeconomics and reality. *Econometrica: journal of the Econometric Society*, 1–48.