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Impact Assessment of Import Substitution and Export Promotion on Economic Growth of Pakistan

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ABSTRACT

The present study aimed at investigating the impact assessment of import substitution and export promotion on economic growth of Pakistan over period of time 1994-95 to 2020-21. In this regard, econometric techniques i.e Augmented Dicky Fuller Unit Root Test, Ordinary Least Square Test, Auto-regressive Distributive Lag Model, Bound Test and Error Correction Models were applied. The result findings revealed that Export Promotion significantly influenced economic growth of Pakistan. Bound Test witnessed log run relationships exist between explanatory variables (import substitution and export promotion) in the model. Findings of Error Correction Model provided F-Stat value as 4.9 which is higher than upper and lower limit, whereas error correction value is termed as negative (-0.80) and significant (P<0.05) revealing speed of adjustment from short run dynamics towards long run equilibrium. Author recommends as policy implications that special emphasis needs to be paid in utilizing effective trade policies emphasizing the export promotion over import substitution for ensuring aggregate demand exclusively so necessary for accelerating economic growth in Pakistan.

Introduction

Following its independence in 1947, Pakistan inherited a fragile economic structure with minimal industrial capacity, an underdeveloped infrastructure, and a heavy reliance on imported goods. The analysis demonstrates that exports are a key and substantial factor in determining Pakistan's economic growth. Agreeing to the report, Pakistan's exports, labor force, investment, and domestic credit to private sector ratio are all critical to the country's economic growth, both in the short and long term. In response to these challenges, Pakistan adopted an Import Substitution and Export Promotion strategies during the 1950s and 1960s. Such policies aimed to reduce dependency on

foreign goods by promoting domestic production, especially of consumer and intermediate goods, through protective tariffs, subsidies, and import restrictions. The government prioritized heavy industry, including textiles, cement, and fertilizers, assuming domestic industries could thrive under protectionist conditions. Meanwhile, Pakistan experienced significant GDP growth and industrial development. However, over time, the limitations of this approach became apparent. The lack of competition led to inefficiencies, low productivity, and poor-quality outputs. Moreover, while domestic industries grew, they remained dependent on imported machinery and raw materials, undermining the objective of self-reliance. The policy also failed to stimulate exports, resulting in persistent balance-of-payments problems. .

By the late 1980s, under pressure from international financial institutions such as the IMF and the World Bank, Pakistan began transitioning toward a more liberal and export-oriented economic model. Understanding the long-term impact of the import substitution policy is essential to evaluating its role in shaping Pakistan's industrial and economic development and drawing lessons for future policy-making.

The related past studies conducted by Rafiqui et al. (2025); Zafar (2025); Ghazi et al (2024); Qamri (2024); Iqbl etal (2023); Asif et al (2022); Mustafin et al (2022); Khan and Amirullah (2019); Zulfiar (2014) and Ahmed and Wajid (2005).

Significance of study

It is an established fact that the country is constantly facing ongoing trade losses, currency depreciation, and a heavy dependence on imports, understanding the role of import substitutes and export promotion strategies becomes increasingly important. This research offers insights into whether promoting domestic production through import substitutes or export promotion can provide a sustainable path to economic stability and growth. Furthermore, stakeholders such as local manufacturers, investors, and development organizers can leverage this research to identify opportunities and challenges within Pakistan's economic landscape. The study emphasizes the need for a coherent industrial policy aligned with broader development goals, including employment creation, innovation, and productivity growth. By examining past and current applications of these dual trade policies (import substitution and export promotion), the study identifies potentials areas having comparative advantages where local potential production can be increased and exported its excess outcomes to other countries with a dual purpose not only to reduce external dependence, but also to earn foreign exchange. It also contributes to the academic discourse on industrial development in emerging economies by evaluating the trade-offs between protectionism and global competitiveness. The findings are particularly relevant for policymakers designing balanced strategies this supports both import substitution and export promotion.

Objectives of Study

Objective of the research is as follows.

Impact assessment of import substitution and export promotion on economic growth of Pakistan.

Research Hypothesis

Research Hypothesis is as follows.

H_o: No impact of import substitution and export promotion on economic growth of Pakistan.

Methodology

Data and Methodology

The data used for this study spans from 1994-95 to 2020-21 and focuses on Pakistan's GDP growth rate and two key components i.e import substitution and export promotion were taken into account for time series econometric analysis. The data is sourced from the Pakistan Economic Survey and covers key economic indicators during this period. The GDP growth rate is taken as the dependent variable in the analysis, representing the annual percentage change in the country's output of goods and services. Import substitution and export promotion are selected as the independent variables, both measured as percentages of GDP. Various econometric Techniques i.e Augmentic Dicky Fuller Unit Root Test, Ordinary Least Square, Auto-regressive Distributive Lag Model, Bound Test and Error Correction Models are applied for data analysis.

Econometric Model

To assess the impact of import substitution and export promotion on economic growth, this study employs two different econometric models: the Ordinary Least Squares (OLS) regression model.

The model is a simple linear regression, specified as:

$GDPt = \alpha_0 + \alpha_1 IS_t + \alpha_2 EP_t + e_t$ ---------- (I)

Where:

GDPt = GDP growth rate of Pakistan in year t

IS_t = Import Substitution in time period t

EP_t= Export Promotion in time period t.

e_t = Error term representing unexplained variation

This model is used to examine the relationship between the dependent variable, GDP growth, and the two independent variables i.e import substitution and export promotion.

To address potential non-linearities in the data, a log-linear model is also employed. This is especially useful when analyzing the percentage change in GDP relative to changes in import substitution and export promotion. The log-linear equation is specified as:

$LGDPt = \alpha_0 + \alpha_1 IS_t + \alpha_2 EP_t + e_t$ ----------(II)

LGDPt = Log linear form of GDP growth rate of Pakistan in year t

This transformation allows for easier interpretation of coefficients in terms of percentage changes rather than absolute values.

Results and Discussion

Augmented Dickey Fuller (ADF) Test for Unit Roots: The integration sequence between the variables in the regression model is ascertained using this test. As shown in Table 1, it has been observed that this test tends to reject the null hypothesis of non-stationarity of all such variables, confirming that the corresponding independent variables (ISt, EPt) are found stationary at first difference I(1) and the corresponding dependent variable (LGDPt) is found stationary at level 1(0).

Table-1: Unit Root Test for Tested Variables *($LGDP_t$, IS_t, EP_t)*

Variables	ADF (Levels)		ADF in 1st Differences		Integration sequence through differencing I( )
	Intercept	Intercept and Trend	Intercept	Intercept and Trend	
$LGDP_t$	-3.593	-3.517	-5.107	-4.999	I(0)
IS_t	-2.389	-2.355	-6.144	-6.222	I(1)
EP_t	-2.271	-2.215	-5.002	-5.106	I(1)

Note: Variables estimated in log linear form

95 percent critical values = -2.98 (Without Intercept and without Trend); and

95 percent critical values = -3.60 (With Intercept and Trend)

Table-2: Ordinary Least Square (OLS) for Tested Variables *($LGDP_t$, IS_t, EP_t)*

Response Variable: LGDP				
Method: Least Squares				
Sample: 1994 2020				
Counted observations: 27				
Variable(s)	**Coefficient(s)**	**Standard Error**	**t-Statistic**	**Probability**
Import Substitution (IS)	0.482352	0.432832	1.114409	0.2761
Export Promotion (EP)	-0.848267	0.487069	-1.741575	0.0944***
Constant (c)	8.544775	3.976462	2.148839	0.0419
R^2	0.141	Durbin-Watson Stat.		1.666
Adjusted R^2	0.069			
F-Stat.	1.962			
Prob(F-Stat.)	0.163			

****Significant level at 1%*

Table 2 showed that, from 1994–1995 to 2020–21, the GDP Growth Rate of Pakistan (LGDPt) was significantly impacted negatively by Export Promotion (IPt) and positively by Import Substitution (ISt). According to Table 2, the independent variables ISt and EPt are predicting a 14% variation in the dependent variable, LGDPt, with an R2 value of 14%. Additionally, DW (1.666) shows no autocorrelation in the model and falls within the permitted range of 1.5 to 2.5.

Table-3: Autoregressive Distribute Lags Model for Tested *($LGDP_t$, IS_t, EP_t)*

Response Variable: Log(GDP)				
Method: **ARDL**(1, 0, 0)				
Sample: 1995 to 2020				
Counted observations: 26 after adjustments				
Variable(s)	**Co-efficient**	**Standard Error**	**t-Statistics**	**Probability***
GDP(-1)	0.182681	0.211547	0.863549	0.3972
Import Substitution (IS)	0.294503	0.474966	0.620050	0.5416
Export Promotion (EP)	-0.646401	0.539248	-1.198709	0.2434
C	8.154593	4.415782	1.846693	0.0783
R^2	0.177	**Durbin Watson Statistics (DW)**		1.893
Adjusted R^2	0.064			
F-Stat.	1.578			
Prob(F-Stat.)	0.223			

Table 3 shows how to use the Auto-Regressive Distribute delays Model (ARD), which is a type of standard least square regression that uses explanatory variables and response delays as regressors. After applying the ARDL approach, Table 3's results showed a positive and negligible influence on import substitution values, while the GDP Growth Rate of Pakistan showed a negative and negligible effect on export promotion. This is because both the order of integration at level I(0) and at first difference I(1) conditions predominate in Table 1. There is no autocorrelation in the model, as indicated by the Durbin Watson (DW) value of 1.893, which falls within the permissible range of 1.5 to 2.5.

Table-4: Bound Test for estimating long run relationships among Variables *($LGDP_t$, IS_t, EP_t)*

ARDL Bounds Test		
Sample: 1995 to 2020		
Counted observations after making adjustments: 26		
HO: No long-run relationships		
Test Statistics	Value(s)	K
F-Statistics	4.943	2
Critical Bounds Value		
Significance Levels	I0 Bounds	I1 Bounds
10%	3.17	4.14
5%	3.79	4.85
2.5%	4.41	5.52
1%	5.15	6.36

HO= No Long Run Relationships between variables
HI = Long Run Relationships between variables

Review of Table-4 provided the value of F statistics (4.943), which is greater than upper bound critical value revealing long run relationships between dependent and independent variables in the model.

Table-5: Error Correction Mechanism (ECM) for estimating short run relationships and long run adjustments among Variables *($LGDP_t$, IS_t, EP_t)*

Response Variable: D(LGDP)				
Method: Least Squares				
Adjusted Sample: 1995 2020				
Counted observations after making adjustments: 26				
Variable(s)	**Coefficient(s)**	**Standard Error**	**t-Statistic**	**Probability***
C	-0.018394	0.406660	-0.045233	0.9643
D(IS)	0.465438	0.425629	1.093528	0.2860
D(EP)	-0.631901	0.484450	-1.304367	0.2056
ECT(-1)	-0.843341	0.215078	-3.921089	0.0007*
R^2	0.418	Durbin-Watson Stat.		1.824
Adjusted R^2	0.339			
F-Stat.	5.274			
Prob(F-Stat.)	0.007*			

**Significant at 1%*

Inspection of Table-5 designated the value of Co-integrating equation, which is worked out as negative value (-0.843) and statistically found significant (P<0.01) offers speed of adjustment will be corrected in next period by converging from short run dynamics towards long run equilibrium.

Implications of the Findings

These findings have several important implications for policymakers:

The researchers looked at how import substitution and export promotion policies affected Pakistan's economy. Since independence of Pakistan 1947, Pakistan is consistently trying to grow local industries by reducing imports and enhancing exports. It is evident from historical perspective, such attempts of import substitution and export promotion helped local potential industries to grow upto some extend, but later caused problems like low quality, imposition of trade restrictions, difficulties in finding perfect import substituted products, less opportunities for exports competitiveness, and heavy dependence on importing raw materials especially machinery and equipment from advanced countries.

Policy Implications

Based on the findings from the regression analysis and the econometric models used in this study, policy recommendations highlighted the issue of unfavorable balance of payment, wherein country is primarily producing and exporting agriculture and primary goods, but on the other hand importing machinery and equipments at large. In the international market the price of primary goods are much lesser than the price of machinery and equipment, it is therefore, a moment of considerable point of attention towards policy makers to formulate appropriate and effective import substitution and export promotion strategies based on globalization, market competitiveness and international quality standards so necessary to improve balance of payments and to accelerate economic growth of Pakistan.

Conclusion

The study arrived at conclusion that combination of import substitution and export promotion being two distinct strategies for economic growth, offered the country a pathway to reduce its trade deficit, build foreign exchange reserves and foster sustainable economic growth. However, Pakistan's import substitution and export promotion strategies hold significant potential for driving economic growth and stability can better enhance its trade performance and could achieve sustainable economic progress through adoption of holistic approaches such as technological advancement, trade policy implementation, financial support and capacity building in line with changing dynamic global market competitiveness.

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