

THE IMPACT OF GLOBALIZATION ON ECONOMIC GROWTH OF PAKISTAN: AN ERROR-CORRECTION MODELLING

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ABSTRACT

The impact of globalization varies from country to country depending on the level of social, economic and political developments. LDCs have gained as well as suffered from globalization. Globalization is the need of the hour and no country can afford living in isolation. LDCs can counter the adverse impact of globalization if they unite and adopt policies that serve their genuine cause. This paper examined the impact of globalization on the economic growth of Pakistan's economy for the period 1960-2006. Pakistan's economy remained heavily regulated and protected during three decades (1950s, 1960s, and 1970s). Pakistan started liberalizing the economy in late 1980s. We used trade openness and financial integration measures to account for the impact of globalization on economic growth. Cointegration results indicate a robust long-run relationship between economic growth, trade openness and financial integration. Pakistan's economy will certainly benefit from globalization provided the country pursues sound policies.

JEL Classification: F01, F4 C22

Key Words: Globalization, Economic growth, Cointegration, Causality, Pakistan

1. INTRODUCTION

Globalization has diverse definitions and concepts.¹ Globalization has many facets and has a variety of social, political and economic implications. This term introduced in early 1980, which never precisely defined, is a frequently used word in the political economy. It simply means growing integration of the national economies, openness to trade, financial flows, foreign direct investment and the increasing interaction of people in all facets of their lives. Globalization also implies internationalization of production, distribution and marketing of goods and services. International integration implies the adoption of common policies by the individual countries.

Between 1870 and 1914, the world was integrated into a single world economy dominated by one power: Great Britain. The government functions were limited and faced many constraints like gold standard and lack of freedom to pursue easy monetary policy. Later governments were burdened by performing many functions like achievement of

¹ Streeten (1999) has devoted three and half pages to the definitions of globalisation used by different authors. He has discussed at greater length different aspects of globalisation.

macroeconomic goals — full employment, economic growth and price stability. Freedom of using macroeconomic policies resulted in greater integration of national economies but at the same time they led to international disintegration and interdependence. Streeten (1999) argues that today global market forces can lead to conflict between states, contributing to international disintegration and weakened governance. Before 1914, the world was more integrated than it is today but it did not prevent the First World War.

Globalization has both benefits and costs and thus has supporters and opponents.² Mandle (2003) has discussed at length the benefits and costs of globalization. He attacks the anti-globalization movement and refutes the false notions associated with major criticism of globalization. His major premise is that *globalization is concerned with economic growth* necessary to take care of poverty and therefore, globalization is promoted because development and integration of the global markets have a substantial impact on poverty reduction.

Synthesizing diverse sources on benefits and cost of globalization, Todaro and Smith (2003) have stated that globalization presents new possibilities for eliminating global poverty and globalization can benefit poor countries directly and indirectly through cultural, social, scientific and technological exchanges as well as trade and finance. Some very important low-income countries like India and China have used globalization to their advantage and have succeeded in achieving enviable economic growth rate and thus reducing some international inequalities. Dollar and Kraay ((2004) have studied the effects of globalization on the poor in the developing countries. They note that over half of the developing countries experiencing globalization have gained large increases in trade and considerable reduction in tariffs. These countries are catching- up with the developed countries while the remaining is losing. They have reported that the increase in economic growth leads to a proportionate increases in incomes of the poor.

According to Streeten (1999) globalization has created many opportunities for some peoples and countries. Social indicators such as literacy, school enrolment, infant mortality, and life expectancy have improved a lot in the last few decades. Globalization

² There is vast literature on diverse aspects of globalization and it is very difficult to discuss the plethora of literature on globalization. Modest review of few studies has been provided in order to get an insight about the positive and negative aspects of globalization.

has been particularly good for Asia, for the global growth of production and the owners of capital.

Although poverty is still pervasive in many developing countries notably in Sub-Saharan Africa and South Asian countries, other developing countries have achieved a significant reduction in poverty and this has been made possible by the integration or globalization of the economies (lower trade barriers, rising capital flows and greater pressure for migration). Moreover, evidence shows that the share of population in poverty has declined for developing countries as a whole from 28.3% in 1987 to 24% in 1998 based on \$1day and from 61% in 1987 to 56% in 1998 based on \$2day. Populous countries like India and Indonesia have achieved significant reduction in the incidence of poverty. In India it fell from 57% in 1973 to around 35% in 1998 and from 60% to 20% between 1985 and 1998 in Indonesia (Government of Pakistan (GOP) 2004-05, 39). Promoting rapid economic growth and reduction in poverty and inequality are not mutually conflicting objectives. More open economies have fared well. Evidence shows that growth and poverty reduction are not incompatible (World Bank 1990, Clarke 1995).

There are also negative aspects of globalization. The opponents say that globalization may worsen inequalities both across and within countries, environmental degradation and vulnerability of the poor nations might increase and developed countries establish dominance over these countries culminating in revival of colonialism. Streeten (1999) observes that economic liberalization, technological changes, competition in both labour and product markets have contributed to economic failure, weakening of institutions and social support systems, and erosion of established identities and values. Globalization has been bad for Africa and in many parts of the world for employment. International competition has forced both governments and firms to ‘downsize’ and to adopt all necessary steps to save labour cost. After the early 1970s, international integration has led to national disintegration because like trade and education all segments of the population have not benefited from the globalization. Despite widespread availability of electronic media, rural people have been largely bypassed and in many countries there has been a reaction to globalization. Ethnic or cultural passions have divided the societies. All this is a reaction against westernization, the alienating effects of large-scale modern technology and the unequal distribution of the benefits from industrialization.

The critics argue that today's globalization is only superficially different from the old colonialism. Trade liberalization is a key to globalization. Developing countries have not benefited from this because developed countries have raised barriers to exports from the developing countries. Granting of protection to agricultural goods and basic manufactures by the developed countries has done much damage to developing countries. According to United Nations estimates, the resulting cost to the developing countries may exceed \$100 billion per year (Todaro and Smith 2003). The international-dependence theory³ being popular in 1970s lost its support during 1980s and 1990s. However, this theory has seen resurgence in the early years of twenty-first century as some of the arguments of the theory have been adopted by the anti-globalization movement (see Anderson et al. 2000, Gray 2000).

Nasim (1998) has discussed at length the relationship between globalization and economic growth from the technological perspective in East and South Asian countries and has emphasised the adoption of technologies "within the cultural, social, and other desirable parameters of a country". Mustafa et.al. (2001) have reviewed the implications of globalization for agriculture and poverty in Pakistan and have made a number of suggestions to ward off the adverse impact of globalization on agriculture and poverty.

2. PAKISTAN'S EXPERIENCE

Precarious nature of the Pakistan's economy was acknowledged by the government soon after independence in 1947 and a strategy of import substitution (IS) industrialization was adopted through over-valued exchange rate, use of quantitative controls on imports and the export taxes on principal agricultural exports: cotton and jute. Being impressed by the magic of Western industrialization, most developing countries including Pakistan equated development with IS during 1950s and 1960s. However, fall in external financial assistance, persistent balance of payments problems, disillusionment with IS and enviable export performance of few Eastern nations, export promotion (EP) emerged as a desirable strategy of development during 1970s.

During 1960s, though some 1950s policies were continued, Ayub regime adopted a number of new policies in the realm of economic management. Pakistan's economy

³ The neoclassical dependence model, the false-paradigm model, and the dualistic-development model are the major models of the theory. According to these models, developing countries are constrained by institutional, political, and economic rigidities; and have dependence and dominance relationships with the developed countries that perpetuate the dominance of the latter countries.

experienced exceptional and spectacular growth rates in all sectors of the economy, which were the outcome of the “functional inequality” growth strategy, highly protective industrial policy and US experts’ direct involvement in the planning process. There was enviable growth, but it did not adequately trickle down to the poorer sections as well as regions. Overvalued exchange rate and the Export Bonus Scheme (EBS) discriminated against agricultural exports that were an implicit attempt to transfer resources from rural to urban areas. During 1970s Pakistan’s economy suffered as well as benefited from international events. Oil price hike of 1973, on one hand, increased the import bill and thus worsened the balance of payments problem and on the other hand, the emergence of Middle East market and remittances contributed significantly to improving the trade balance. The May 1972 devaluation, elimination of EBS, and the end of import licenses were the most notable measures during 1970s that were taken to reduce anti-export bias. During 1950s and 1960s, Pakistan’s exchange rate was relatively over-valued that helped make imports cheaper and export expensive and stimulated IS. The objective of the end of EBS was to adopt more uniform effective exchange rates for exports.

Pakistan started liberalizing the economy with the help of IMF and World Bank in 1982-83 with a view to improving the efficiency of the economy by increasing the role of the private sector. The reforms included the de-linking of the rupee from US dollar in January 1982, price deregulation of a large number of products, denationalization of industry, imports liberalization and export expansion schemes. Most of these reforms were implemented by mid-1980s.

The process of liberalization started during 6th Five-Year-Plan (1983-88) and was implemented with great force after 1988. The government pursued vigorous trade liberalization in the beginning of 1990s to convert the economy from a relatively inward looking to an open and outward looking economy. Government has taken a number of measures during 1990s that includes: privatization, liberalization of trade and foreign exchange, and opening up its capital markets to foreign investors.⁴

The above review shows that like many other developing countries, Pakistan has made significant efforts to integrate its economy with rest of the world through foreign trade, investment and other macroeconomic policies. More recent evidence on the incidence of

⁴ The above review of Pakistan’s economic growth and development strategies draws on Afzal (2006).

poverty indicates that poverty that declined in 1970s and 1980s increased in 1990s that have adversely affected the poor families demand for education and the health and housing conditions have also deteriorated (Amjad and Kemal 1997, Ali and Tahir 1999, Arif 2000, Qureshi and Arif 2001). Because performance of the economy remained dismal in the 1990s. However, realizing the rising trends in poverty during the 1990s, the government of Pakistan adopted a strategy for poverty reduction in 2001. Accelerating economic growth, macroeconomic stability and investing in human capital are the important elements of the poverty reduction strategy (see GOP 2004-05 for detail).

There are divergent views regarding the adequacy and desirability of globalization. There is a need to study which view is supported by Pakistan's experience based on sound empirical evidence? Because Pakistan has not only liberalized its economy but also aims at reducing poverty that could be achieved by achieving a respectable economic growth. We aim at addressing the impact of globalization on economic growth using Pakistan's data.

3. MODEL AND DATA SOURCES

Economic growth, proxied by real GDP or real per capita GDP, is influenced by a variety of factors. The importance and relevance of these factors may differ from country to country and may also change overtime. Since capital stock is not available for most developing countries because of inherent difficulties of measurement, we use gross investment for capital. This is further divided into public sector and private sector investments in order to appreciate their relative significance for economic growth. Two measures of openness are used to measure the degree of integration of Pakistan's economy. First is the ratio of the sum of imports (M) and exports (X) to GDP and the second measure is the ratio of sum of capital inflow and capital outflow to the GDP. The latter measure represents financial integration and the international interdependence is represented by the first measure. For capital inflow we use the sum of official aid and foreign direct investment in Pakistan. Since consistent and regular time series data is not available for capital outflow, we use debt servicing as a proxy for capital outflow.

Education and health are basic objectives of development and are vital components of growth and development. Health is a prerequisite for increases in productivity and successful education depends on adequate health. Therefore, instead of using the growth of labor as factor input, we use the expenditure on education, training and health as a

proxy for HRD (human resource development). It is the human resources of a nation that ultimately determine the character and pace of its economic and social development because education makes not only efficient workers but also good citizens. Therefore using neoclassical production function, in log-linear form the growth equation is:

$$\ln Y = \beta_0 + \beta_1 \ln \text{Invpr} + \beta_2 \ln \text{Invpu} + \beta_3 \ln \text{OP} + \beta_4 \ln \text{FI} + \beta_5 \ln \text{HRD} + \varepsilon \quad (1)$$

The expected sign of all the coefficients is positive.

Where

\ln = natural logarithm

Y = nominal gross domestic product (GDP)

Invpu = public sector investment

Invpr = private sector investment

OP = trade openness

FI = financial Integration (capital inflow + capital outflow)

HRD = Human resource development

ε = White noise error term

The data on GDP, public and private sector investment, exports, imports, aid, debt-servicing and expenditure on health and education have been taken from government of Pakistan (GOP) *Economic Survey* (1987-88, 1997-98 and 2005-06). Data on foreign direct investment were obtained from State Bank of Pakistan *Assets, Liabilities and foreign investment* (various issues). All the variables are in current prices and expressed in national currency. Since quarterly data were not available, we have used annual data. The period of the study is from 1960-2006.

4. UNIT ROOTS, JOHANSEN COINTEGRATION TEST AND ERROR-CORRECTION MODEL

Before testing for cointegration, first we want to examine whether the time series is nonstationary? Several tests of non-stationarity called unit root tests have been developed in the time series econometrics literature. In most of these tests the null hypothesis is that there is a unit root, and it is rejected only when there is strong evidence against it. Most

tests of the Dickey-Fuller (DF) type have low power (see Dejong et al. 1992). Because of this Maddala and Kim (1998) argue that DF, ADF (augmented Dickey-Fuller) and PP (Phillips and Perron) tests should be discarded. We, therefore, use the KPSS (Kwiatkowski, Phillips, Schmidt and Shin 1992) test which is considered relatively more powerful (Bahmani-Oskooee 1999). The KPSS Lagrange Multiplier tests the null of stationarity ($H_0: \rho < 1$) against the alternative of a unit root ($H_1: \rho = 1$). The critical values for the LM test statistic are based on the asymptotic results given in KPSS (1992, Table 1. p.166).

If the hypothesis of nonstationarity is established for the underlying variables, it is desirable and important that the time series data are examined for cointegration. Toda and Philips (1993) have shown that ignoring cointegration when it exists, can lead to serious model misspecification. We use the maximum likelihood procedure of Johansen (1991, 1995) because it is based on well-established maximum Likelihood procedure. Johansen's method uses two test statistics for the number of cointegrating vectors: the trace test (λ_{trace}) and maximum eigenvalue (λ_{max}) test. λ_{trace} statistic tests the null hypothesis (H_0) that the number of distinct cointegrating vectors is less than or equal to r against the alternative hypothesis of more than r cointegrating vectors. The second statistic tests H_0 that the number of cointegrating vectors is r against the alternative of $r + 1$ cointegrating vectors. Since Johansen approach has become standard in the econometric literature, the reader is referred to Charemza and Deadman (1997) for discussion.

5. THE EMPIRICAL ANALYSIS

The ordinary least squares (OLS) estimates of equation (1) are as under:

Table 1: OLS Results

Dependent Variable: lnY				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.56	0.27	12.86	0.000
lnInvpr	0.26	0.04	6.18	0.000
lnInvpu	0.04	0.08	0.43	0.66
lnOP	0.43	0.07	5.80	0.000
lnFI	0.09	0.10	0.87	0.38
lnHRD	0.06	0.03	1.84	0.07
R ²	0.99	DW	0.99	-

The OLS results in Table 1 show that the primary variables have the expected sign. However, there are problems in the above regression results from the point of view of standard econometric assumptions. The equality of R^2 and DW implies that the regression might be what Granger and Newbold (1974) call a spurious regression that arises in the presence of non-stationary variables. Furthermore, the above regression results do not take into consideration dynamic aspects and may result in serially correlated errors making parameters estimates inconsistent. Though our sample size is not large (47 observations) we subjected the residuals of regression (1) to Q-statistic, LM test for serial correlation and ARCH test. F-version of these tests indicates significance. The results are not reported for space considerations. Therefore, the data is examined for time series properties.

The KPSS results (Table 2) show that all the variables are non-stationary in level form because the null of stationarity of the KPSS is rejected for all variables for without trend. We get mixed results in level form for with trend. To determine the order of integration, we also applied KPSS unit root test to examine the variables in their first differences. The null of stationarity is accepted for all the variables for their first differences. Therefore, all the variables are first difference stationary I (0) thus integrated of order 1.

Table 2: Unit Root Test

Variable (log)	KPSS level		KPSS First Difference	
	Without Trend	With trend	Without Trend	With trend
Y	0.88	0.08	0.22	0.11
Invpu	0.87	0.16	0.12	0.06
Invpr	0.88	0.16	0.09	0.09
HRD	0.91	0.08	0.21	0.11
X	0.88	0.17	0.16	0.13
M	0.87	0.10	0.07	0.07
OP	0.88	0.17	0.16	0.13
Aid	0.87	0.12	0.17	0.07
FDI	0.73	0.14	0.16	0.08
FKI	0.88	0.08	0.05	0.04
DS	0.88	0.21	0.65	0.06
FI	0.88	0.09	0.15	0.07

Note: 1%, 5% and 10% critical values for KPSS are 0.73, 0.46 and 0.35 for *without trend*. 1%, 5% and 10% critical values for *with trend* are 0.216, 0.146 and 0.1199. These critical values are from Kwiatkowski-Phillips-Schmidt-Shin (1992, Table 1, p.166).

Since the principal variables are non-stationary and integrated of order 1, we apply now the Johansen cointegration test to see whether the variables are cointegrated or not suggesting long-run relationship. To apply this test it is imperative to determine the

optimal lag length and also the stability condition of the VAR. We used FPE (final prediction error), AIC (Akaike information criterion), and SC (Schwarz criterion) criteria to determine the lag length and these criteria supported lag 1 as the optimal lag order for VAR. Based on roots of characteristic polynomial and inverse roots of characteristic polynomial, VAR satisfied the stability condition because all roots were within the unit circle. The Johansen cointegration results are shown in Tables 3 and 4. Trace test indicates 2 cointegrating equations while Maximum-Eigenvalue test indicates one cointegrating relationship. Therefore, Economic growth and all right hand side variables are cointegrated thus having long-run relationship.

Table 3: Johansen Trace Test: lnY, lnInvp, lnInvpu, lnOP, lnFI, lnHRD

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.697246	129.2861	95.75366	0.0000
At most 1 *	0.505899	75.51861	69.81889	0.0163
At most 2	0.399836	43.79293	47.85613	0.1144
At most 3	0.271195	20.81805	29.79707	0.3691
At most 4	0.135051	6.582309	15.49471	0.6267
At most 5	0.001189	0.053517	3.841466	0.8170

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Table 4: Johansen Maximum Eigenvalue Test: lnY, lnInvp, lnInvpu, lnOP, lnFI, lnHRD

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.697246	53.76752	40.07757	0.0008
At most 1	0.505899	31.72568	33.87687	0.0884
At most 2	0.399836	22.97488	27.58434	0.1746
At most 3	0.271195	14.23574	21.13162	0.3460
At most 4	0.135051	6.528792	14.26460	0.5463
At most 5	0.001189	0.053517	3.841466	0.8170

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

6. ERROR-CORRECTION MODEL

The acceptance of cointegration between two series implies that there exists a long run relationship between them and this means that an error-correction model (ECM) exists which combines the long-run relationship with the short-run dynamics of the model. The existence of cointegration implies that unidirectional or bidirectional Granger causality must exist. Therefore, it is necessary that the simple Granger causality test is improved with error-correction mechanism, derived from the residuals of the cointegrating relationship. Based on Engle and Granger (1987, 255) representation theorem, the error-correction model of equation (1) is formulated as follows and the results have been provided in Table 5 below.

$$\Delta \ln Y_t = \alpha + \lambda Z_{t-1} + \sum_{i=1}^n \beta_i \Delta \ln Y_{t-i} + \sum_{i=1}^n \psi_i \Delta \ln \text{Invpr}_{t-i} + \sum_{i=1}^n \varphi_i \Delta \ln \text{Invpu}_{t-i} + \sum_{i=1}^n \eta_i \Delta \ln \text{HRD}_{t-i} + \sum_{i=1}^n \delta_i \Delta \ln \text{OP}_{t-i} + \sum_{i=1}^n \theta_i \Delta \ln \text{FI}_{t-i} + \mu_t \quad (6)$$

Z_{t-1} is the error correction term generated from the Johansen multivariate procedure and the parameter λ is the error correction coefficient that measures the response of the regressand in each period to departures from equilibrium. The presence of Z_{t-1} reflects the presumption that dependent variable does not adjust instantaneously to its long-run determinants. Therefore, in the short-run an adjustment is made to correct any disequilibrium in the long-run. Therefore, error-correction model shows how system converges to long-run equilibrium implied by equation 6 (see Arize 1994). Lagged explanatory variables represent short-run impact and the long-run impact is given by the error correction term.

Table 5 Error-correction Results

Dependent Variable→	d(lnY)	D(lninvpr)	d(lninvpu)	D(lnOP)	d(lnFI)	D(lnhrd)
λ	-0.16[3.66]*	0.18[0.39]	-0.54[4.13]*	0.05[0.25]	-0.56[-3.49]*	1.52[1.90]
D(lnY(-1))	0.07[0.51]	0.01[0.01]*	0.48[1.14]	-0.7[-1.19]	-0.28[-0.54]	1.26[0.48]
D(lninvpr(-1))	-0.02[-1.39]	-0.61[4.35]	-0.12[3.08]	0.16[2.74]	0.036[0.71]	0.12[0.51]
D(lninvpu(-1))	0.09[1.99]*	0.98[1.95]*	0.26[1.81]	-0.20[0.92]	0.13[0.76]	0.97[1.09]
D(lnOP(-1))	-0.01[-0.19]	-0.91[1.66]	-0.19[1.19]	0.41[1.72]	-0.23[-1.19]	1.77[1.83]
D(lnFI(-1))	-0.04[-0.98]	0.50[1.26]	-0.09[0.83]	-0.08[0.47]	-0.24[-1.74]	1.11[-1.60]
d(lnhrd(-1))	-0.09[-2.41]*	-0.27[0.72]	-0.09[0.88]	0.02[0.10]	0.10[0.75]	0.14[0.22]

Note: Figures within parentheses are t-statistic and * indicates significance at 5%

To select an appropriate lag length, we used FPE, AIC, and SC and the optimal lag length was one. Error correction results show that the error correction term Z_{t-1} has the correct negative sign and is significant for GDP, public sector investment and financial integration and indicate the long-run equilibrium between the foresaid variables. An estimate of -0.16 for GDP indicates that 16% of the preceding year disequilibrium is eliminated in the current year.

Table 6 Causality Based on vector error correction model

Dependent Variable	Lagged Y	Lagged Invpr	Lagged Invpu	Lagged OP	Lagged FI	Lagged HRD
Y	-	1.94 (0.16)	3.98 (0.04)*	0.03 (0.84)	0.97 (0.32)	5.80 (0.01)*
Invpr	0.0001 (0.99)	-	3.79 (0.05)*	2.74 (0.09)	1.61 (0.20)	0.52 (0.46)
Invpu	1.31 (0.25)	9.52 (0.02)*	-	1.43 (0.23)	0.69 (0.40)	0.77 (0.37)
OP	1.42 (0.23)	7.48 (0.006)*	0.84 (0.35)	-	0.2 (0.63)	0.01 (0.91)
FI	0.29 (0.58)	0.51 (0.47)	0.57 (0.45)	1.43 (0.23)	-	0.57 (0.44)
HRD	0.23 (0.62)	0.26 (0.61)	1.20 (0.27)	3.36 (0.06)*	2.59 (0.10)	-

Note: Figures within parentheses are χ^2 -statistic and * indicates significance at 5%

We also performed Wald test based on χ^2 -statistic to know about Granger causality. The results of causality (Table 6) show that public sector investment and human resource development cause growth in the short – run and supports the view that public sector investment has a beneficial impact on economic growth. This is in disagreement with Ghani and Musleh-Ud-Din (2006). Their results show that growth is largely driven by private investment and public investment has negative though insignificant impact on output. Openness and financial integration do not have short-run impact on economic growth. However, both have long-run relationship with GDP. There is evidence of short-run causality from public sector investment to private investment and vice-versa. Thus the two investments stimulate each other that in turn benefit the economic growth. Private investment has short-run impact on openness but there is no reverse causality. We observe no evidence of short-run causality from any variable to financial integration while openness has short-run impact on human resource development.

7. CONCLUSIONS

This paper examined the impact of globalization on the economic growth of Pakistan's economy for the period 1960-2006. Globalization has been variously defined and interpreted from different perspectives. There is divergence of opinion regarding the desirability of globalization that simply implies openness and integration of the domestic economy with rest of the world in order to keep pace with dynamics of the international economy. The impact of globalization varies from country to country and from region to region depending on the level of social, economic and political developments as well as macroeconomic policies. Less developed countries (LDCs) have gained as well as suffered from globalization. Globalization is the need of the hour and no country can afford living in isolation. LDCs can counter the negative effects of globalization if they unite and adopt policies that adequately serve their genuine cause.

Like other LDCs, Pakistan's economy remained heavily regulated and protected during three decades (1950s, 1960s, and 1970s). However, constrained by domestic economic situation and conditions of the world economy, Pakistan started liberalizing the economy in 1980s. Towards the end of 1980s, government of Pakistan went ahead with a comprehensive programme of economic reforms with view to integrating the economy with rest of the world in order to meet the global challenges. Today Pakistan's economy is more open and liberal than it was two decades ago.

To examine the impact of globalization empirically, we used trade openness and financial integration measures besides other important and relevant macroeconomic variables expected to influence the economic growth. Johansen's cointegration procedure showed that all the fore-mentioned variables are cointegrated implying these have long-run equilibrium relationship with economic growth proxied by GDP. Error-correction model results also supported the cointegration results. Public sector investment and private investment stimulate each other that in turn benefit the economic growth. Openness and financial integration do not have short-run impact on economic growth. Pakistan's economy will certainly benefit from globalization provided the country pursues sound policies and this is inevitable.

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