Middle-East Journal of Scientific Research 13(Special Issue of Economics): 43-49, 2013
ISSN 1990-9233

DOI: 10.5829/idosi.mejsr.2013.13.e.13010

Adoptability of Korean Growth Model to Developing Economies: The Case Study of Pakistan

Rana Ejaz Ali Khan, Nazma Batool and Javaria Sarwar

Department of Economics, The Islamia University of Bahawalpur Pakistan

Abstract: The study attempted to see whether Pakistan economy can follow the Korean growth model or not. For the purpose Granger causality has been employed for the relationship between GDP and exports, capital formation, employment and education for both countries. Annual time series data for the years 1971-2010 has been analyzed through ECM. The results explained that capital formation and employment causes GDP to grow in Korea while the relationship was non-existent for Pakistan. Education also played an important role for growth of GDP in Korea. Pakistan may follow Korea for the positive impact of these macroeconomic variables.

Key words: Human Capital · Employment · Economic Development · Physical Capital formation

INTRODUCTION

In the literature of development economics, Balanced Growth or Big-Push Models are criticized as they have theoretical appeal only, having no country specific examples. Kuznets presented East Asian Model (high investment ratios, small public sectors, export orientation labor market and government intervention) as it has country examples of South Korea, Japan and Taiwan. It has acceptability and explicability to a degree that had made it a convincing and operational model [1]. Rodrik has emphasized on investment boom to explain Korea's economic growth rather than on Export Boom though export policies were also important as they enabled rise in imported capital goods [2]. State development planning as a cause of East Asia's growth is criticized by Powell [3]. Though state had its role but free markets as measured in economic indexes, are the main cause of their rapid growth. These countries were some of the most free market economies in the world, when they were growing.

Pakistan’s economy has grown faster on average than many other low and middle income countries over the past two decades. But several countries in East and South East Asia have fared even better, like South Korea that has one of the fastest economic developments in the world since 1960s and is now the 4th largest economy in Asia and 15th largest economy in the world. The question is, how South Korea has achieved these high levels of development and whether Pakistan can achieve these high levels of economic growth? Alternatively, whether the Korean model can be followed by Pakistan? To answer this question is core of the current study.

Conceptual Framework and Empirical Evidences: The study is concerned with the adaptation of Korean model for Pakistan, so in this section we will go through the strategies of the socioeconomic development in both countries.

After Korean War, South Korea left as a cold, barren and economically bleak country. It began to grow at 7-8 percent annually. Layman gave some basic factors for this growth, first of them was its well educated and hard working peoples. Korean education system and literacy rate was ranked good. It trained its agriculture and industrial workers according to their needs. Second was its diversity in many sectors. Despite being an agriculture economy, it had a highly growing manufacturing and services sector. Third was Korea’s comparative advantage of having large supply of labor at relatively low cost. It made Korea able to process its high cost imported raw material like steel and plywood, etc. Fourth and final was its maturing economic infrastructure, power supply and industrial water supply which boosted after Korean

Corresponding Author: Rana Ejaz Ali Khan, Department of Economics, The Islamia University of Bahawalpur, Pakistan.

war [4]. But there were some serious problems on the back of this picture, like the inadequate facilities of shelter, health and potable water supply. Low cost labor base, being a strong point in Korea's history, created problem of unemployment especially in urban areas.

Kuznets addressed theoretical as well as empirical aspects of East Asian Model of development. For Korea, study counts high investment ratio, small public sector, export orientation, labor market competition, large investment in human capital, absorbing capacity of new technology and government intervention as the specific economic characteristics of the model [1].

South Korea's development in historical perspectives from 1945-1990 has been documented by researchers [5]. Being Japan's colony, Korea had influenced by Japanese economic and political factors like skilled labor force, established enterprises and cultural influences. After 1945, with American aid, textile industry achieved complete import-substitution in cotton, woolen and rayon in 1957 and began to explore export markets. In 1960s, Korea emphasized export-led growth with US aid that was completely on grant basis till 1964 [6]. State acted like a player and made a transition from labor intensive light industries to capital-intensive heavy industries in 1990s.

Asian Model of economic development has been attributed to state development planning by Wade [7]. The studies blamed the departures from the state directed model for financial crisis of late 1990 [8]. But Powel stated that state development planning has promoted industrialization rather than growth. The study attributed this success to free markets. State development planning is not the only variable that promoted economic growth; free markets have also their roles [3]. Harvie and Lee viewed the financial crisis of mid 1990s, a consequence of structural, political and organizational weakness inherent in the state-led industrialization strategy [9]. On the other hand, Noland concluded that state-led-development strategy was a basic reason for rapid sustained growth in South Korea in which state had been playing a central role [10]. Harvie and Pahlavani estimated the sources of economic growth in South Korea. ARDL Cointegration results showed that physical and human capital as well as exports significantly affected the real GDP of the economy [11].

For the socioeconomic status of Pakistan, Khan and Zerby used two separate procedures to compare Pakistan with 96 other developing countries of Asia, Africa and Latin America on the basis of social and economic indicators. The Wroclaw Taxonomic Method was run separately for all social, economic and socio-economic indices of development. The results showed that Pakistan is relatively more developed on composite social scale. In aggregate socio-economic index, Pakistan ranked 71^{st} in the third world. It has the strongest position in the South Asian Sub-Continent. The grouping of countries on similarities based on Cluster Technique showed that Pakistan is more likely to the African and some North and South American countries as it has relatively better off in terms of economic indicators than social indicators [12].

Iqbal and Zahid used multiple regression frameworks to see the effects of key macro-economic variables on Pakistan economy. They found the significant effect of human capital, physical capital and foreign trade on GDP [13]. Din, et. al. analyzed the relationship between openness and economic growth of Pakistan. Granger based error-correction model indicated that both openness and economic growth reinforced each other [14].

Naseem discussed Economic Growth and Development in South Asia with and without Regional Cooperation. In South Asian countries government played a much larger role in determining the terms of regional cooperation. The study concluded that regional cooperation is essential for South Asian especially for Pakistan to accelerate growth [15].

Hamid proposed the development strategy for Pakistan, based on knowledge economy, bio-technology driven growth and strong support for the development of the modern retailing sector. These components have linkages among them and other growth areas of the economy [16]. After going through the literature, it seemed suitable to check the adoptability of Korean model to a developing economy like Pakistan.

MATERIALS AND METHODS

Under the conceptual framework, the model proposed to see the determinants of economic growth to both countries to analyze the adaptation of the Korean model in Pakistan is as:

$$GDP = f(EXP, FCF, EMP, EDW) \qquad (1)$$

Where

GDP = Gross Domestic Product, EXP = Exports, FCF = Gross Fixed Capital Formation, EMP = Employment rate and EDU = Education Expenditures as a percentage of GDP.

The econometric function of the model is as:

$$\text{Ln GDP} = \alpha + \beta_1 \text{ Ln EXP} + \beta_2 \text{ Ln FCF} + \beta_3 \text{ Ln EMP} + \beta_4 \text{ Ln EDU} + \mu\iota \quad (2)$$

Annual time series data for the years 1971-2010 taken from Federal Bureau of Statistics, Pakistan, Pakistan Economic Surveys (various issues), International Financial Statistics (International Monetary Fund-IMF), State Bank of Pakistan, Penn World Tables 6.2 and 6.3, Bank of Korea (http://eng.bok.or.kr/) and World Development Indicators (WB) has been used for empirical analysis.

The first step for this empirical investigation was to check the stationarity of the time series data. We employed KPSS Test (Kwiatkowski-Phillips-Schmidt-Shin tests) [17] for unit root. After checking the order of integration, we employed Johansen Co-integration technique to check the series for integration. Then Error Correction Model for checking the direction of causality in long-run relationship with short-run dynamics and ultimately Granger Causality has been employed for causal relationship.

Estimation Results

Results for Korea: First of all, it is necessary to check the stationarity of variables because during the model building for time series, the underlying stochastic process that generated the series must be invariant with respect to time. The result so KPSS are shown in Table 1.

KPSS results show that the variables are nonstationary at level for without trend and with trend so the null hypothesis for stationarity is rejected for all variables. To determine the order of integration, we applied the KPSS technique at first difference. Null of stationarity is accepted for all variables at their first difference. So, all variables are first difference stationary I (1) or integrated of order 1.

To capture the long-run relationship among the variables, we applied cointegration among the variables. In the first step we select optimal lag length. Table 2 presents the result of optimal lag length selection criteria of the unrestricted VAR model. The results show that optimal lag length for the Johansen Cointegration Test is 1, that is selected on the basis of LR, FPE, AIC, HQ and SC criterion. Table 3 shows the results of Johansen cointegration test.

The results of trace test in table 3 indicates three cointegration vector, on the other hand maximum eigenvalue test in table 4 indicates one cointegration vector. On the basis of maximum eigenvalue test, one cointegration vector exists in the analysis.

After detecting the Cointegration relations, we applied VEC model to estimate the long-run relationship along short-run dynamics. The existence of Cointegration implies that unidirectional or bidirectional Granger Causality exists. Therefore it is necessary to improve the simple granger causality test with error-correction mechanism. Based on Engle and Granger [18] representation theorem, the error-correction model of equation (2) is formulated as follows:

$$\Delta\text{ln GDP}_t = \alpha + \lambda Z_{t-1} + \Sigma\beta_1 \Delta\text{ln GDP}_{t-1} + \Sigma\beta_2 \Delta\text{n CF}_{t-1} + \Sigma\beta_3 \Delta\text{ln EXP}_{t-1} + \Sigma\beta_4 \Delta\text{ln EMP}_{t-1} + \Sigma\beta_5 \Delta\text{ln EDU} + \mu_t \quad (3)$$

Where, 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 regress and 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. The error-correction model shows how system converges to long-run equilibrium implied by Equation [18]. The results of ECM are shown in Table 5.

Lagged explanatory variables represent short-run impact and the long-run impact is given by the error correction term. Error-correction results show that the error correction term Z_{t-1} has the correct sign and is significant for GDP, FCF (capital formation), EMP (employment), EXP (exports) and EDU (education) and indicate long-run equilibrium among these variables.

We have also applied Wald test based on χ_2-statistics to know about Granger Causality. The results of causality in Table 6 show that education (EDU) cause economic growth (GDP) in the short-run. While capital formation (FCF), exports (EXP) and employment (EMP) have no short-run impact on economic growth (GDP). However, they have long-run relationship with GDP. There is evidence of short-run causality running from capital formation (CF) to education (EDU) but there is no reverse causality.

Results for Pakistan: We have applied KPSS unit root test for Pakistan. The results are shown in Table 7. All variables are first difference stationary I (1) thus integrated of order 1.

To explain the long-run relationship among variables, we applied the Johansen cointegration test. Table 8 presents the result of optimal lag length selection criteria

Table 1: KPSS Unit Root Test for Korean Data

	KPSS Level		KPSS First Difference	
Variables	Without Trend	With trend	Without trend	With trend
GDP	0.691516	0.185585	0.442092	0.106402
FCF	0.681013	0.203204	0.409102	0.062687
EXP	0.701755	0.113975	0.120817	0.089519
EMP	0.688671	0.180090	0.363929	0.066515
EDU	0.414980	0.103850	0.175031	0.127843

5% and 10% critical values for KPSS are 0.46 and 0.35 for without trend. 5% and 10% critical values for KPSS are 0.146 and 0.1199 for with trend. The critical values are from Kwiatkowski-Phillips-Schmidt-Shin [17] Table 1, Pp.166)

Table 2: Results of Lag Length Selection

Lag Length	LR[1]	FPE[2]	AIC[3]	SC[4]	HQ[5]
0	NA	7.9e-11	-9.071519	-8.840231	-8.996125
1	314.0702*	1.42e-15*	-20.02142	-18.63369*	-19.56906*
2	20.29239	2.97e-15	-19.42314	-16.87897	-18.59380
3	33.74031	2.31e-15	-20.05959	-16.35898	-18.85328
4	25.10044	2.37e-15	-20.95673*	-16.09968	-19.37345

* indicates optimal lag length selected by the Criterion. 1 Sequential modified LR test statistic, 2 Final prediction error, 3 Akaike information criteria, 4 Schwarz information criteria and 5 Hannan-Quinn information criteria

Table 3: Johansen Cointegration Test (Trace Eigenvalue Statistic)

No. of CEs	Eigenvalue	Trace statistics	0.05% critical value	Prob.**
None*	0.689926	109.3623	76.99277	0.0000
At most 1*	0.570692	70.72114	54.07904	0.0008
At most 2*	0.535922	42.81697	35.19275	0.0062
At most 3	0.338116	17.48277	20.26184	0.1155
At most 4	0.110517	3.864807	9.164546	0.4326

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level. * indicates significance at 0.05% level and ** Mackinnon-Haug-Michelis [20] p-values.

Table 4: Johansen Cointegration Test (Maximum Eigenvalue Statistic)

No. of CEs	Eigenvalue	Max statistics	0.05% critical value	Prob.**
None*	0.689926	38.64114	38.80587	0.0166
At most 1	0.570692	27.90417	28.58808	0.0609
At most 2	0.535922	21.33420	22.29962	0.0683
At most 3	0.338116	13.61796	15.89210	0.1102
At most 4	0.110517	3.864807	9.164546	0.4326

Max-Eigenvalue test indicates 1 co integrating eqn(s) at the 0.05 level, *indicates significance at 0.05% level and ** Mackinnon-Haug-Michelis [20] p-values.

Table 5: Results of Error-Correction Model

Dependent Variable→	D(ln EDU)	D(ln EMP)	D(ln EXP)	D(ln GDP)	D(ln FCF)
λ	-0.389133 (4.06013)*	0.128965 (2.38580)*	0.569233 (3.78594)*	0.294426 (3.01715)*	0.566290(2.56722)*
D(ln CF(-1))	-0.248487 (-1.79612)	0.139488 (1.78768)	-0.052254 (-0.24077)	0.270217 (1.91833)	1.105846 (3.47304)*
D(ln GDP(-1))	1.597079 (3.38922)*	-0.325425 (-1.22446)	0.073275 (0.09912)	-0.681345 (-1.42010)	-2.100941 (-1.93718)
D(ln EXP(-1))	0.020248 (0.19924)	0.057303 (0.99975)	0.417657 (2.61972)*	0.241819 (2.33702)*	0.214730 (0.91806)
D(ln EMP(-1))	-0.442410 (-0.84514)	-0.088453 (-0.29960)	-0.86763 (-1.05583)	0.232891 (0.43695)	0.401252 (0.33305)
D(ln EDU(-1))	0.466389 (2.73329)*	-0.055924 (-0.58110)	0.314746 (1.17581)	0.143425 (0.82555)	-0.142159 (-0.36199)

Figures in parentheses are t-statistic and * indicates significance at 5 percent.

Table 6: Causality based on Vector Error Correction Model (Korea)

Dependent variables	Ln GDP	Ln FCF	Ln EXP	Ln EDU	Ln EMP
Ln GDP	-	0.6296 (0.232597)	0.0728 (3.218524)	0.0033 (8.630573)*	0.0616 (3.493403)
Ln CF	0.7978 (0.065664)	-	0.6735 (0.177550)	0.0073 (7.191928)*	0.9368 (0.006288)
Ln EXP	0.5837 (0.300307)	0.3089 (1.035405)	-	0.0000 (16.86354)*	0.3807 (0.768469)
Ln EDU	0.6764 (0.174200)	0.5064 (0.441517)	0.7317 (0.117560)	-	0.8096 (0.058073)
Ln EMP	0.3277 (0.957810)	0.1826 (1.776435)	0.1794 (1.802954)	0.5816 (0.303607)	-

Figures in parentheses are $\chi 2$-statistics and * indicates significant at 5 percent.

of the unrestricted VAR model. The results revealed that optimal lag length for the Johansen Cointegration Test is 1 (which is selected on the basis of LR, FPE, AIC, HQ and SC criterion).

The results of Johansen cointegration test with linear trend and intercept are presented in table 9. After selecting one of the options from five options in Table 9, we employed the Johansen cointegration test to estimate rank of cointegration vector. Results are shown in Table 10.

The results in Table 9 show that trace test indicates one cointegration vector. On the other hand Maximum eigenvalue test also indicates one cointegration vector (Table 10). On the basis of maximum eigenvalue test, one Cointegration vector exists in our estimation.

After detecting the cointegration relations, we applied VEC model to estimate the long-run relationship along short-run dynamics. Based on Engle and Granger [18] representation theorem, the error-correction model of equation is same as for Korea (see equation 3). The results of ECM have been provided in Table 11.

Error-correction results indicate long-run equilibrium among GDP, FCF (capital formation) and EXP (exports). Capital formation causes GDP in but long-run but inverse relation does not exist. GDP cause exports growth and exports cause capital formation (FCF).

We also performed Wald test based on χ^2-statistics (Table 12) to know about Granger Causality. The results of causality show that FCF (capital formation) cause growth in the short-run. Education (EDU), exports (EXP) and employment (EMP) have no short-run impact on economic growth (GDP).

The above table of causality shows that there is evidence of short-run causality running from exports (EXP) to capital formation (CF) but there is no reverse causality.

Table 7: KPSS Unit Root Test for Pakistani Data

	KPSS Level		KPSS First Difference	
Variables	Without Trend	With trend	Without trend	With trend
GDP	0.696091	0.157491	0.199232	0.120542
FCF	0.710774	0.112304	0.191671	0.137808
EXP	0.669696	0.191846	0.210746	0.102131
EMP	0.703894	0.154346	0.179190	0.106899
EDU	0.701007	0.191122	0.331982	0.094757

5% and 10% critical values for KPSS are 0.46 and 0.35 for without trend. 5% and 10% critical values for KPSS are 0.146 and 0.1199 for with trend. The critical values are from Kwiatkowski-Phillips-Schmidt-Shin [17], Table 1, p.166)

Table 8: Result of Lag Length Selection (Pakistan)

Lag Length	LR	FPE	AIC	SC	HQ
0	NA	1.01e-09	-6.527278	-6.295990	-6.451884
1	268.5362*	1.12e-13*	-15.65582	-14.26809*	-15.20346*
2	33.05863	1.23e-13	-15.69585	-13.15168	-14.86652
3	29.83748	1.25e-13	-16.07211	-12.37150	-14.86581
4	18.76177	2.41e-13	-16.33539*	-11.47833	-14.75211

*indicates optimal lag length selected by the Criterion

Table 9: Johansen Cointegration Test (Trace Eigenvalue Statistic) (Pakistan)

No. of CEs	Eigenvalue	Trace statistics	0.05% critical value	Prob.**
None*	0.754277	99.62076	88.80380	0.0066
At most 1	0.445184	53.30363	63.87610	0.2796
At most 2	0.379700	33.86271	35.19525	0.2948
At most 3	0.296836	18.10347	25.87211	0.3370
At most 4	0.178337	6.482006	12.51798	0.4017

Trace test indicates 1 co integrating eqn(s) at the 0.05 level, *indicates significance at 0.05% level and ** Mackinnon-Haug-Michelis [20] p-values.

Table 10: Johansen Cointegration Test (Maximum Eigenvalue Statistic) (Pakistan)

No. of CEs	Eigenvalue	Max statistics	0.05% critical value	Prob.**
None*	0.754277	46.31713	38.33101	0.0050
At most 1	0.445184	19.44092	32.11832	0.6958
At most 2	0.379700	15.75923	25.82321	0.5662
At most 3	0.296836	11.62147	19.38704	0.4512
At most 4	0.178337	6.482006	12.51798	0.4017

Max-Eigenvalue test indicates 1 co integrating eqn(s) at the 0.05 level, *indicates significance at 0.05% level and ** Mackinnon-Haug-Michelis [20] p-values.

Table 11: Results of Error Correction Model (Pakistan)

Dependent Variables?	D(ln FCF)	D(ln GDP)	D(ln EXP)	D(ln EMP)	D(ln EDU)
λ	-0.358439 (3.00232)*	0.055412 (2.16331)*	-0.564089 (2.63177)*	-0.059971 (0.49734)	-0.024916 (0.72335)
D(ln CF(-1))	0.303288 (2.07242)*	-0.070918 (2.25865)*	-0.022820 (0.08686)	-0.268797 (1.81849)	-0.028292 (0.67004)
D(ln GDP(-1))	1.438857 (1.80579)	0.297589 (1.74076)	3.021080 (2.11189)*	0.069953 (0.08692)	0.012583 (0.05474)
D(ln EXP(-1))	0.258407 (2.35162)*	-0.043775 (1.77527)	0.138759 (0.70337)	0.158242 (1.42576)	-0.009222 (0.29086)
D(ln EMP(-1))	0.447302 (0.53327)	0.183938 (1.02209)	-1.203338 (0.79909)	-0.944527 (1.11488)	-0.128964 (0.53289)
D(ln EDU)	0.100349 (0.62574)	0.043775 (1.27226)	0.126585 (0.49761)	-0.05052 (0.69153)	0.033748 (0.72938)

Figures in parentheses are t-statistic and * indicates significance at 5 percent.

Table 12: Causality based on Vector Error Correction Model (Pakistan)

Dependent variable	Ln GDP	Ln FCF	Ln EXP	Ln EDU	Ln EMP
Ln GDP	-	0.0710 (3.260894)	0.0347 (4.460099)	0.9307 (0.007555)	0.9563 (0.002996)
Ln CF	0.0239 (5.101509)*	-	0.9308 (0.007544)	0.0690 (3.306916)	0.5028 (0.448957)
Ln EXP	0.0759 (3.151597	0.0187 (5.530140)*	-	0.1539 (2.032805)	0.7712 (0.084602)
Ln EDU	0.2033 (1.618651)	0.5315 (0.391550)	0.4260 (0.633690)	-	0.4658 (0.531995)
Ln EMP	0.3067 (1.044673)	0.5938 (0.284379)	0.4242 (0.638542)	0.2649 (1.242948)	-

Figures in parentheses are χ2-statistics and * indicates significant at 5 percent.

DISCUSSION AND CONCLUSION

The results enabled us to make a comparison of both countries, empirically based on the determinants of economic growth in both countries. Econometric analysis shows that there is long-run relationship between GDP and gross fixed capital formation (FCF) in case of Korea. Direction of long-run relationship through ECM shows that in Korea capital formation causes GDP in the long-run more than GDP capital formation. There exists long-run relationship between GDP and capital formation in case of Pakistan.

Capital formation causes GDP to grow but the inverse relation is non-existent. The higher growth rate of Korea than to Pakistan is explained by the results. Due to bi-directional relationship between GDP and capital formation the growth rate surpass the growth rate of Pakistan. The explanation may be that capital accumulation and investment in Korea come from its indigenous sources while Pakistan depends more on external resources.

For both countries Korea and Pakistan, there exists uni-directional causality from GDP to exports but not from exports to GDP. So we can say that in the foreign trade the situation for both countries is same.

The result explained that for Korea, employment has contributed to economic growth. Korea's cheap and skilled labor force played a significant role in Korea's economic growth. But for Pakistan there exists no relationship between employment and GDP in the short and long-run.

Education expenditures as a percentage of GDP are related to GDP growth in Korean Economy. Pakistan may learn lessons from Korea's experience especially in the case of physical and human capital. Pakistan's population is about three times of South Korea's and its illiterate population is 34 percent higher than South Korea's total population. So there is a need to develop Pakistan's human capital in the form of literacy to utilize the bulk of the labor force for economic growth.

REFERENCES

1. Kuznets, P.W., 1988. An East Asian Model of Economic Development: Japan, Taiwan and South Korea. Econ. Dev. Cult. Change., 36(3): 11-43.
2. Rodrik, D., 1995. Growth Policy, Getting Interventions Right: How South Korea and Taiwan Grew Rich. NBER Working Paper Series, NBER Working Paper No.4964. National Bureau of Economic Research, Cambridge, M.A.
3. Powell, B., 2005. State Development Planning: Did it Create an East Asian Miracle?. Review Austrian Econ., 18(34): 305-323.
4. Layman, P.N., 1966. Economic Development in South Korea: Prospects and Problems. Asian Survey, 6(7): 381-388.
5. Eckert, C.J., K.B. Lee, Y.I. Lew, M. Robinson and E.W. Wagner, 1990. Korea Old and New: A History. Ilchockak Publishers for Korea Institute, Seoul.
6. Manyin, M.E. and M.B. Kikitin, 2012. Foreign Assistance to North Korea. CRS Report for Congress. Congressional Research Services, Washington, D.C.
7. Wade, H.H., 1998. The Asian Debt and Development Crisis of 1997? Causes and Consequences. World Dev., 26(8): 1535-1553.

8. Stiglitz, J., 1999. Lesson from East Asia. Journal of Policy Modeling, 21(3): 311-330.
9. Harvie, C. and H.H. Lee, 2005. Korea's Fading Economic Miracle 1990-97. Economic Working Papers. Faculty of Commerce, University of Wollongong.
10. Noland, M., 2005. From Player to Referee, The State and The South Korean Economy. Paper presented in Conference, Towards the Second Miracle of Han River, Yousci University, Seoul, Korea. 12 October 2005.
11. Harvie, C. and M. Pahlavani, 2006. Sources of Economic Growth in South Korea: An Application of the ARDL Analysis in the Presence of Structural Breaks-1980-2005. Economics Working Paper Series 2006. University of Wollongong,
12. Khan, M.H. and J.A. Zerby, 1981. The Socioeconomic Position of Pakistan in the Third World. Pak. Dev. Review, 20(3): 347-365.
13. Iqbal, Z. and G.M. Zahid, 1998. Macroeconomic Determinants of Economic Growth in Pakistan. Pak. Dev. Review, 37(2): 125-148.
14. Din, M., E. Ghani. and O. Siddique, 2003. Openness and Economic Growth in Pakistan. Paki. Dev. Review. 42(4): 495-807.
15. Naseem, S.M., 2004. Economic Growth and Development in South Asia, With and Without Regional Cooperation. Pak. Dev. Review, 43(3): 397-422.
16. Hamid, N., 2008. Rethinking Pakistan's Development Strategy. Lahore J. Econ. Special Edition September, pp: 47-62.
17. Kwiatkowski, D., P.C.B. Philips, P. Schmidt and Y. Shin, 1992. Testing the Null Hypothesis of Stationary against the Alternative of a Unit Root. J. Econometrics. 54: 159-178.
18. Engle, R.F. and C.W.J. Granger, 1987. Cointegration and Error Correction: Representation Estimation and Testing. Econometrica, 55: 251-276.
19. Arize, A.C., 1994. Conintegration Test of a Long-run Relation between the Real Effective Exchange Rate and the Trade Balance. Int. Econ. J., 8: 1-9.
20. Mackinon, J.C., M.A. Haug and L. Michelis, 1999. Numerical Distribution Function of Likelihood Ratio Test for Cointegration. J Appl. Econometrics. 14: 563-577.