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## **Growth Diagnostics in Pakistan**

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## ABSTRACT

Following the Hausmann, *et al.* (2005) methodology, we attempt to identify the constraints to growth in Pakistan. We argue that governance failure and institutional shortcomings are the heart of the matter: corruption is rampant, judicial independence is low, educational institutions do not furnish the right kind of labour force, legal institutions do not protect the lenders against loan defaults, ambiguous land titles constrain mortgage financing and construction activity, labour market institutions restrict hiring/firing, State Bank of Pakistan (SBP) has not done its duty to contain the rising interest spread, and SECP/stock market has not played its due role in the transfer of funds from savers to investors. We identify three binding constraints to growth in Pakistan. These are: (i) poor state of governance, (ii) poor state of institutions, and (iii) lack of competitive environment (that restricts innovation and hence growth). Without improving the state of governance and that of institutions, sustainable growth cannot occur even if other factors, like a reasonable savings rate, are put in place.

*JEL classification:* O40, O43, O11, O12.

*Keywords:* Economic Growth, Institutions and Growth.

## I. INTRODUCTION

Pakistan's growth performance has been fluctuating over time, through the decades of 1960s, 1980s, with some high growth episodes but relatively low growth is observed in the decades of 1970s and 1990s. The fluctuating pattern is evident in recent performance as well (Annexure 1). The first half of '90s, except for the year 92-93, posted reasonable growth rate however the growth performance during the 2nd half of '90s seems less than satisfactory. GDP growth, though low in the initial years of the ongoing decade, started picking up to reach a peak level of 8.6 percent in 2004-5 and declined again in the next year to 6.6 percent. The growth pattern observed overtime raises a number of questions including as to what constrains growth and what kind of reforms are needed to embark upon a high but sustainable growth path.

In Pakistan, the reforms, with the theme being, by and large, in agreement with Washington consensus<sup>1</sup> were initiated in 1988 under the Structural Adjustment Programs (SAPs) of IMF. The reforms were intended in three key areas that include; fiscal policy, monetary policy/financial sector and foreign trade sector. Under the reform package of 1988 fiscal deficit was to be brought in the range of 4.0 percent from the high level of 8.0 percent in 1988. Accordingly major emphasis was placed on resource mobilisation. Specific measures recommended in this regard, included; introduction of general sales tax, unification of corporate tax and reduction of tax holiday provisions. To increase non-tax revenues user charges for utilities like electricity, natural gas and water were to be introduced. On expenditure side, government expenditure, particularly current expenditure, was to be contained, by eliminating/lowering subsidies. Defence expenditure was to be contained and increase in petroleum cost was to be passed on to consumers. Most of the measures recommended by SAPs were implemented and fiscal deficit for the last few years is within the 4.0 percent limit recommended by IMF.

To liberalise the trade regime, import tariffs were reduced and most of non-tariff barriers were eliminated. Accordingly the maximum tariff that stood

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<sup>1</sup>The Washington Consensus broadly envisaged liberalisation of trade and financial regimes, deregulation, privatisation, fiscal prudence, taxation reforms, etc.

at 150 percent in 1988 has been reduced over the years to 25 percent and the list of banned items mostly include the ones that cannot be allowed due religious, security, health and reciprocity considerations. On privatisation front, large scale privatisation/divestiture of state owned entities has been undertaken to improve the efficiency of the enterprises and reduce the burden on national exchequer. Four major banks, PTCL, KESC and number of other entities stand privatised.

In the monetary area, the underlying objective of reforms was that controlled monetary policy should give way to the market based monetary policy and market forces be allowed to determine the interest rate. In this context auctioning of treasury bills was initiated in 1991 and Open Market Operation (OMOs) were introduced in 1995. Interest on concessional credit schemes, like export refinance, were linked with the Treasury bill rate. Credit ceilings imposed on banks were done away with and Statutory Liquidity Reserve (SLR) for commercial banks was drastically cut down to around 15 percent of deposits, from the high of 35-40 percent. Various measures were undertaken to strengthen the health and competitiveness of banking sector that had been leaning under the weight of non-performing loans. In this connection Prudential regulations for banks were framed, a credit information bureau, that would provide information on defaulters of bank loans was established in SBP, non-remunerative branches of banks were closed and downsizing of staff was undertaken ultimately leading to the privatisation of banks. Finally in recent years again major reforms have been initiated in the tax system to widen the tax base and strengthen tax administration.

Though the reforms envisaged in Pakistan generated some positive impact on growth but it appears that neither the reforms have put Pakistan on a sustainable growth path nor have these addressed the issue of poverty. This brings us to the question of as to what kind of reforms suit a specific country. The impact of any kind of policy reform on economic growth, among other things, is a function of country's circumstances. Similar kind of reforms in two countries, with different conditions, may contribute to high growth rate in one country but generate adverse affects in the other one. This happened with the policies recommended by Washington Consensus. Reforms like trade and financial liberalisation, privatisation, deregulation, security of property rights and competitive exchange rates etc. led to varying outcomes in different countries.

All countries have their unique constraints, opportunities and threats. Any set of policies neglecting the uniqueness cannot be successful. For example, policy reforms recommended by Washington Consensus failed in Argentina but these worked well in most of the Latin American Countries, especially in Chile. Most of the Sub-Saharan African countries also remained unsuccessful to achieve a desired growth rate even after applying very strict policy reforms, however Tanzania, and Mozambique did well after instituting these reform policies [Rodrik (2006)]. Thus the argument here is that any standard set of

reforms cannot be applied to a country just because these worked very well in another country. Rodrik (2006) states:

When investment is constrained by poor property rights, improving financial intermediation will not help. When it is constrained by high cost of capital, improving institutional quality will hardly work. [Rodrick (2006)].

Therefore the major challenge is to identify the factors that constrain growth in a specific country so that while devising the set of policy reforms constraints could be properly accounted for Hausmann, *et al.* (2005) argue that, quite often the policy-makers are presented with a long list (the laundry list) of reforms. The policy-makers either attempt to fix all the problems simultaneously or alternatively start with reforms that are not very crucial to their country's growth potential. More often than not the reforms in one area have led to unanticipated distortion in another area. Given these difficulties, the authors propose that countries need to identify one or two most binding constraints to their economies and attempt to lift these constraints. To identify the binding constraints the authors propose a decision tree methodology. The authors, primarily, concern themselves with *short-run* constraints, that is, identification of constraints that inevitably emerge as economy expands and not the identification of constraints that may emerge in future. The authors argue that appropriate policy measures if focussed on binding constraints will produce the 'biggest bang for reform buck'.

This study is organised as follows: Section two describes the theoretical framework used by Hausmann, *et al.* Section 3 examines the possible constraints to growth and identifies the binding ones. Section 4 concludes the study.

## **2. THE THEORETICAL FRAMEWORK FOR GROWTH DIAGNOSTICS**

To identify the constraints to growth facing Pakistan and prioritise these as binding for growth we use Hausmann, *et al.* (2005) decision tree methodology (Flow chart at annexure 2). The authors have applied the framework to identify the binding constraints for Brazil, EL Salvador and Dominican Republic. The methodology has also been applied by Richter (2006) and Leipziger and Zaghera (2006). We would like to caution at the outset that if we do not label a variable as binding constraint this by no means imply that the variable is not a constraint/source of growth in the traditional sense. All we mean is that given the present economic environment, targeting a certain variable, which is considered a source of growth as per conventional wisdom, need not be a policy priority in the short run because either there are more important things to take care off or that the pre-requisites essential for reforming the area in question are not in place.

The basic assumption of the decision tree methodology is that private investment and therefore growth depends upon the cost of finance and return to economic activity. Under the methodology first and foremost it is determined whether the cost of finance is high or that return to economic activity is low. Once the problem area has been identified then the attention is focused upon the determinants of the problem area. The authors believe that the cost of finance depends upon the level of savings of the economy, the state of intermediation and availability of external finance on reasonable terms. The return to economic activity, on the other hand, is considered to be a function of the level of social returns and the level of private appropriability of returns. Social returns in turn depend upon factors like human capital and infrastructure while private appropriability of returns is thought to be a function of factors like macroeconomic stability, governance and innovation etc.

The decision tree framework argues that the distortions that make the economy under perform impose the private and social valuation of certain economic behaviour. The wedges created by these distortions can be denoted by:

$$t = \{t_1, t_2, \dots, t_k\} \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad (1)$$

where  $t_i$  represents the distortion in activity  $i$ .

These distortions can be modelled as constraints on the policy making problems and can be written in general:

$$\mu_i^s(t, \dots) - \mu_i^p(t, \dots) - t_i = 0 \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad (2)$$

where,

$\mu_i^s(t, \dots)$  = society's net marginal valuation of activity  $i$

$\mu_i^p(t, \dots)$  = Private agents net marginal valuation of activity  $i$

Besides the distortions 't' there are many other factors which affect economic activities. It is important to mention here that private and social valuation functions for each activity will depend in general equilibrium on all the wedges in the system. These distortions upset the overall welfare 'μ' of the economy. The marginal gain in welfare from reducing one of the distortions is:

$$d\mu/dt_j = -\lambda_j * \lambda_i [d\{\mu_i^s(t, \dots) - \mu_i^p(t, \dots)\}] / dt_j \quad \dots \quad \dots \quad \dots \quad (3)$$

where  $\lambda_i \geq 0$ ,  $i = \{1, 2, \dots, k\}$  are the Lagrange multipliers corresponding to the constraints associated with each of the distortions. The first term on the right hand side of equation (3) captures the 'direct effect' of a small change in  $t_j$ : a small reduction in  $t_j$  increases aggregate welfare by an amount given by the multiplier associated with the  $j$ th constraint,  $\lambda_j$ . The second term captures the effect of varying  $t_j$  on the aggregated sum of the gaps between the social and the private valuation, with the weights corresponding to each distorted activity's own Lagrange multiplier.



The authors start with a simple endogenous growth model comprising number of distortions. According to the standard model, consumption and capital grow, along a balanced growth path in the following manner:

$$\frac{\dot{c}_t}{c_t} = \frac{\dot{k}_t}{k_t} = \sigma [r(1 - \tau) - \rho] \quad \dots \quad \dots \quad \dots \quad \dots \quad (4)$$

Where:

$c$  = consumption

$k$  = capital

$r$  = the rate of return on capital

$\tau$  = the tax rate on capital, actual or expected

$\rho$  = the world rate of interest

$\sigma$  = intertemporal elasticity of consumption

a dot over a variable denotes the rate of change over time.

Besides, the private return on capital  $r$  is given by:

$$r = r(a, \theta, x) \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad (5)$$

where:

$a$  = indicator of total factor productivity

$x$  = availability of complementary factors of production, such as infrastructure and human capital.

$\theta$  = index of externality (a higher  $\theta$  means a larger distortion).

Equations (4) and (5) summarise the possible factors that can affect growth. The challenge in this approach is to identify such reforms, which will provide the high positive direct effect. The figure at annexure 2 presents the whole framework in tree-form. The tree diagram shows that mainly there are two possible reasons for low demand for investment and entrepreneurship. First is the high cost of finance and the second one is the low private return to domestic investment. We take up these in the following sections.

### 3. THE ANALYSIS OF POSSIBLE CONSTRAINTS

In this section we analyse the elements of the decision tree framework to determine as to which one of these constitute binding constraints to growth in Pakistan. The terminal year of our analyses is FY 2005-06.

#### 3.1. Low Savings

A large body of literature on economic growth tends to support the traditional Solow (1956) growth model and the “New Growth Models” of David Romer’s and others in which higher savings leads to higher growth [see for example; Levine and Renelt (1992)]. Mankiw, Romer, and Weil (1992) treat

long-term saving rate as an independent variable and establish a linkage from savings to growth.

The gross saving as percentage of GNI for Pakistan are 23.6 as of FY 2004 (Table 1). This rate is more or less similar to other countries falling in upper middle income (23.1) countries but is relatively less than those classified as middle income (28.3) and lower middle income (32.1) countries.

Table 1  
*Net Savings—2004, World's Average*

Region	Gross Savings* (Percentage of GNI)	Net Savings** (Percentage of GNI)
Low Income	22.7	13.5
Middle Income	28.3	17.2
Lower Middle Income	32.1	21.3
Upper Middle Income	23.1	11.6
Low and Middle Income	27.5	16.6
East Asia and Pacific	39.1	28.6
Europe and Central Asia	23.4	12.7
Latin America and Carib.	22.7	10.6
Middle East and North Africa	30.0	18.8
South Asia	23.6	14.4
Sub-Saharan Africa	17.1	6.2
High Income	19.4	6.2
Europe EMU	20.8	6.6
World	20.8	8.1
Pakistan	23.6	15.4

Source: World Development Indicators, 2006, the World Bank.

\* Gross savings are the difference between gross national income and consumption, plus net current transfers.

\*\* Net savings are gross savings minus the consumption of fixed capital.

If we assume that the saving rate of Pakistan is relatively low still for saving to be a binding constraint we need to determine whether these satisfy some criteria. Hausmann, *et al.* (2005) and Rodrick (2006) presented criteria to analyse the lowness of savings in a country. The criteria are:

- (i) High foreign debt and large current account deficit
- (ii) Greater willingness to remunerate savings through high interest rate to depositors.
- (iii) Real interest rates to be high, borrowers to be chasing lenders,
- (iv) Entrepreneurs to be full of investment ideas.
- (v) In such an economy, an exogenous increase in investible funds, foreign aid and remittances, will primarily push investment and other productive

economic activities rather than fuel consumption or investment in real estate.

To determine whether or not Pakistan is saving constrained as per Hausmann, *et al.* barometer, the data on the three relevant variables is presented below (Table 2).

Table 2

*Foreign Debt, Current Account Deficit, and Weighted Average Cost of Deposits*

	Weighted		Real Interest Rate			
	Foreign Debt/GDP (%)	Avg. Return on Deposits	Current Account Deficit/GDP (%)	T-Bill Rate	CPI (%) Growth	Real Int. Rate
1996-97	46.9	6.80	-7.20	16.1	11.8	4.3
1997-98	55.4	6.81	-6.20	15.7	7.8	7.9
1998-99	54.9	6.49	-3.10	9.8	5.7	4.1
1999-00	51.7	5.47	-4.10	7.2	3.5	3.7
2000-01	52.1	5.27	-1.60	12.9	4.4	8.5
2001-02	50.9	3.61	-0.70	6.3	3.5	2.8
2002-03	43.1	1.61	1.90	1.7	3.1	-1.4
2003-04	36.7	0.95	3.80	2.3	4.6	-2.3
2004-05	32.6	1.37	1.40	7.9	9.3	-1.4
2005-06	29.1	2.89	-1.60	8.1	8.0	0.1

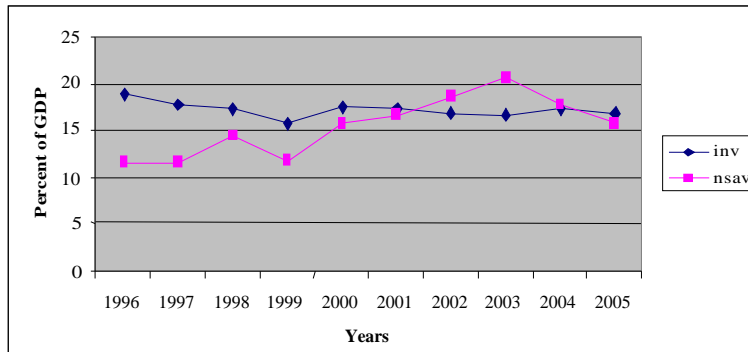
SBP Annual Reports: Various issues.

As may be seen from Table 2 foreign debt as percentage of GDP has registered significant improvement since 2001-02 and declined to 29.1 percent of GDP by 2005-06. The foreign debt at 29.1 percent of GDP cannot be considered high, especially when the ceiling fixed by fiscal responsibility law is much higher. Similarly the current account deficit has shown remarkable improvement during the last couple of years and has been even in surplus for the three years just preceding 2005-06. The return to depositors after registering a decline since 1999-00 has shown some improvement during the last two years but still the return to depositors at an average of 2.89 percent is rather low. Besides the real interest rate at 0.1 percent as at end of 2005-06 is very low and has even remained negative during the preceding three years. If an economy is constrained by low savings then the borrowers are found chasing the lenders and given the scarcity of savings, there is a willingness to remunerate these at a higher rate. The rather low return to depositors and the low real interest rate (Table 2) point towards just the opposite. The mechanics employed by banks for consumer financing also reveal, that currently the lenders are chasing the borrowers rather than being the other way round. Such characteristics can hardly be of a country that is dying to generate additional savings. Given the foregoing, we conclude that at least as per Hausmann, *et al.* measure Pakistan is not savings constrained.

Anecdotal evidence on the utilisation of exogenous inflows suggests that increase in exogenous inflows, particularly remittances, of foreign funds has not fully translated into productive investment rather such inflows have ended up in real estate. The inference that the remittances had found way into the real estate is borne by the unprecedented increase in real estate prices in 2003-04. Had the economy been constrained by low saving the surge in remittances would have found way into productive investment rather than in real estate.

The fragile relationship observed between investment as percentage of GDP and National Savings as percentage of GDP (Fig. 1) also supports the argument that Pakistan is not saving constrained. Over the last ten years though the national savings have fluctuated widely the investment rate has remained relatively stable, especially after year 2000. (Since year 2000 while national savings have fluctuated within a wide band of 15.8 to 20.6 percent of GDP, while the investment rate remained within a narrow band of 17.4 to 16.9 percent of GDP). This shows that the investment rate, at least within a certain band, is insensitive to savings and therefore implies that savings rate, if at all low, does not constitute a binding constraint to growth of the economy.

**Fig. 1. Investment and National Savings**



Besides the low savings rate, discussed above, another reason for the low level of private investment in a country could be the low return to economic activity. Section 3.2 is devoted to the discussion of return to economic activity in Pakistan.

### 3.2. Low Return to Economic Activity

Rodrick (2006) argues that in an economy faced with low private returns to capital the following symptoms will be apparent:

- (i) Low interest rates
- (ii) High bank liquidity
- (iii) Lenders chasing borrowers,
- (iv) Current account is near balance or is in surplus

- (v) Entrepreneurs are more interested in putting their money in a foreign country rather than investing it at home. An increase in foreign aid or remittances finances consumption, housing, or causes capital flight.

It appears that most of the indicators of low private returns are present in Pakistan. We have already shown that interest rates are low, lenders are chasing borrowers and that increase in remittances has gone into real estate. Thus Pakistan seems to be a country where the private returns are low.

It is argued that Low private returns could be either due low appropriability of returns or low social return. The reason for low appropriability could be the policy (governance)/institutional failure or the market failure. On the other hand poor infrastructure or little/poor human capital may cause the social returns to be low. We discuss these issues in the following sections.

### **3.3. Low Appropriability**

#### **3.3.1. Government Failure**

In this section we discuss some evidence from different indices to arrive at an overall picture of the state of governance in Pakistan.

As per the survey of Transparency International on the level of corruption, Pakistan is ranked 147 out of 163, with 163<sup>rd</sup> being the most corrupt. Further Pakistan's overall rank in Global competitiveness index is 91 out of 125 countries, which reflects a very poor level of competitiveness<sup>2</sup>. Pakistan ranking is also low on judicial independence and existence of well defined property rights (77 and 71 respectively out 102).

Launching a (small) business in Pakistan, on average requires going through 11 different procedures that require 24 days for completion. For OECD countries this average is 6.2 days with number of days required for completion being limited to 16.6. Pakistan ranks 78th on the 'Difficulty of hiring index',<sup>3</sup> while the rankings for OECD and the region are 27 and 41.8 respectively. On legal rights index Pakistan enjoys a ranking of 4 as against 3.8 for the region and 6.3 for OECD.<sup>4</sup> The average tax rate at 43.4 percent in Pakistan is less than that applicable in the region (45.1 percent).<sup>5</sup>

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<sup>2</sup>According to structure of the index higher ranking implies poorer competitiveness. Deeper examination of the index tells that five factors are considered most problematic for doing business in Pakistan. These include: corruption, government instability/coups, policy instability, inefficient government, bureaucracy and inadequate supply of infrastructure. Interestingly all the five factors can be grouped under one title—government failure.

<sup>3</sup>This index assigns value between 0-100 with the lower value being adverse.

<sup>4</sup>The legal rights index ranges from 0-10, with higher scores indicating that those laws are better designed to expand credit. The index specifically measures the degree to which collateral and bankruptcy laws facilitate lending.

<sup>5</sup>Cost of Doing Business: World Bank Report (2006):

Five sectors of Pakistan's economy *viz.* fisheries, mining, ready made garments, light engineering and dairy carry great potential but face serious constraints [World Bank (2006)].<sup>6</sup> The constraints include: high freight, electricity outages, delay in collecting rebates, bribes at the harbour and government involvement in cotton seed. All these constraints are directly traceable to poor governance. [Shaikh (2006)].

All the evidence presented above leads us to conclude that the state of governance in Pakistan is poor and this has contributed to the low appropriability of returns to investment in Pakistan.

### **3.3.2. Institutional Failure**

#### **(a) Legal Institutions**

Azfar (2006) accords high priority to enactment of good commercial laws and their enforcement. According to him, commercial laws include collateral laws—which define the relationships between lenders and borrowers in debt markets—and corporate laws—which define the rights of shareholders in equity markets. Collateral laws and corporate laws are important for augmenting the markets for loans and equity, respectively [Azfar and Matheson (1999)];

The state of collateral laws *vis-à-vis* bank lending in Pakistan is discussed below:

Banks in Pakistan have faced huge defaults on amounts lent but the collateral laws have not come to the rescue of the bankers. As per law a bank cannot on its own appropriate the collaterals against the amount in default rather the bank has to approach the courts for the purpose. When a bank files a suit against a defaulting borrower, it takes years and years before, a defaulting borrower is declared bankrupt, and even more time is required to get the decree enforced. Finally when the assets are to be auctioned to pay off the debtors it is discovered that the assets have been fraudulently taken out of the business premises and are not traceable. It is this dismal situation due to which the state owned banks have been running into losses and the government had to inject equity of Rs 20.0 billion and Rs 7.0 billion respectively in United Bank and Habib Bank (while these banks were in public sector) to make these viable for privatisation. Besides to clean the balance sheet of state owned banks a, separate corporation was created by the government, to which, based on a certain criteria, the non-performing loans of banks were transferred.

Given the above account it is apparent that as far as the collateral law/banking law is concerned, the performance of legal institutions leaves much to be desired. The poor enforcement of collateral laws is just one example of the failure the legal institutions. Many other cases could be cited to prove the failure of the legal institutions.

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<sup>6</sup>Value Chain Index.

(b) Land Titles

Mortgage Financing (House Building Finance) is gradually gaining ground in Pakistan but only in urban centres. Despite the urge banks have so far failed to introduce mortgage financing in villages. Typically, the land on which the house is to be constructed serves as collateral for the bank loan. The ambiguity/disputes over land title in villages shy away the banker. Weaker land titles are at the heart of the near-absence of mortgage financing in villages. Thus due the failure of the legal institutions to do their bit, much needed construction activity, that can contribute significantly to growth, is not being undertaken.

The theories that lay emphasis on encouraging savings to increase growth, assume that savings are converted into investment. The poor implementation of collateral laws and weaker land titles constrain bank lending and therefore investment activity. Therefore the increase in savings *per se* will not increase investment because legal institutions that are supposed to facilitate the investor are not strong enough.

(c) Financial Institutions

(i) *Banks*

As an illustration of SBP weakness we discuss below SBP's failure to control the rather high interest spread. However this by no means is the only weakness with the system.

From January 2004 to June 2006 average interest spread has risen by 1.94 percentage points. During this period the weighted average interest earned on loans outstanding had increased by 3.49 percentage points whereas the weighted average interest paid on bank deposit has risen by only 1.55 percentage points only. This unequal increase in lending and deposit rates has caused the spread to rise. Khawaja and Din (2007) argue that inelasticity of deposit supply is the main driving force behind the rising interest spread.

The central bank being the regulator of banks has issued public warnings to the banks that failure to pay a higher return to depositors would force the central bank to take action against the banks. Despite the fact that the spread is still very high (7.14 as of December 2007) the warning has not been translated into action. Thus it is the institutional weakness — the weakness of SBP which is responsible for the rising spread.

(ii) Capital Markets

Capital markets are intermediaries between savers and investors. In capital markets, one way to channel funds from savers to investors is through Initial Public Offerings (IPOs)—sale of securities in the primary market. In Pakistan the proportion of capital mobilised through IPOs is rather low. The capital mobilised through IPOs over the past 8 years is shown in Table 3.

Table 3

*Initial Public Offerings*

Year	No. of IPOs	Amount of Offering (Rs in millions)
2007	14	32,330
2006	3	8,319
2005	18	38,082
2004	12	82,861
2003	4	4,834
2002	4	3,166
2001	3	1,180
2000	3	171

The rather low rate of IPOs could be due to either of the following two reasons: one; the institutional mechanism does not sufficiently facilitate the firms in generation of capital through the capital markets or two; lack of demand for funds or put differently low return on investment in equity securities deters investors.

The possible mechanisms for conducting IPOs include (i) Fixed price mechanism, (ii) Auction procedure and (iii) Book Building procedure. In Pakistan IPOs are conducted through fixed price mechanism only where as in developed markets the other two procedures are mostly used<sup>7</sup>. Under the mechanism that Pakistan follows permission for the floatation price is to be sought from Securities and Exchange Commission of Pakistan (SECP). The SECP typically does not allow floatation at a premium. Sohail and Nasr (2007) have shown that average underpricing in Pakistan is 36 percent, which is rather high relative to the underpricing observed in developed capital markets. The potential loss, to existing shareholders, due to underpricing, could be one reason why companies do not go for IPOs. The fact that Pakistan is sticking to a least efficient IPO procedure that has lost popularity in the developed world, speaks of the failure of the regulator.

Another reason why companies do not go for IPOs is that young and small companies are not able to capture the investors' trust. The reason for lack of investors' trust is that generally enough dividends are not paid forcing the minority shareholders to rely on price movements for securing return through capital gain. Price appreciation, being the major source of gain for ordinary investors, vested interests engages in all sorts of wrongdoings to ensure price appreciation however since equilibrium cannot be established at a price not supported by fundamentals of the company, the market therefore becomes

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<sup>7</sup>For merits/demerits of the three procedure, [see Benveniste and Spindt (1989), Biais, Bossaert, and Rochet (2002), Biais and Crouzet (2002)].



volatile. This drives the passive investor out of the market leaving the market in the hands of day traders, who have an interest in keeping the market volatile. The volatility in turn discourages the small investor from buying shares be it in the secondary market or through IPOs.

Had the companies been paying sufficient return to investors in the form of dividend the investors would not carry the incentive to indulge in price manipulation and speculation that keeps the market volatile [Qayyum and Kemal (2006)]. The SECP and the stock exchange rules do provide that payment of cash dividend is must once in five years. However no severe action is taken against the companies that default on payment of dividend. Besides, small investors generally prefer a regular stream of income. This perhaps calls for dividends almost every year. It is the lack of dividends that keeps the investors interest low in IPOs. The SECP and the stock exchange management can frame rules that bound the companies to pay dividends more frequently but so far not much has been done in this regard. Thus once again it is the institutional weakness—the weakness of SECP and Stock exchange authorities that constrains IPOs. Thus a key channel that transfers funds from savers to investors is not functioning to its potential.

#### (d) Educational Institutions

Aghion, Meghir, and Vandenbussche (2003) show that countries close to the technological frontier require greater investment in higher education. Their argument is based on the model that innovation requires highly educated labour while imitation can be performed by both highly educated and low skilled workers. As per Global Competitiveness Report 2004-05, Pakistan ranks 94<sup>th</sup> on the innovation index out of 102 countries. This reflects almost no innovation at all. This finding puts to question Pakistan's current emphasis on higher education to the neglect of primary and secondary education.

At school/college level Pakistan follows variety of systems that include: the O/A level system, the English-medium private and public schools that follow the syllabi prescribed by the government, the *urdu*-medium government schools and the *madressah* system. The ultimate result is that the elite few from the O/A level system and from English-medium schools perform better while the vast majority, in general, does not get the right kind of education and is therefore an underperformer. What is required is to have a single appropriate system that not only meets the need of the day but is dynamic enough as well to produce the professionals and skilled workers as demanded by the ever changing environment.

Another shortcoming of our education system is that it is merely focused on imparting knowledge with very little attention to imparting technical skills required by the industry. An evidence of this is that educational institute awarding degrees in Business and IT are mushrooming but very few poly-

technique institutes have come up while the industrial sector is starved of skilled labour. Thus the focus of the education system calls for a paradigm shift.

From the above account it is apparent that the educational institutions have failed to provide good quality labour force in sufficient numbers to the labour market. Thus inappropriate functioning of the educational institutes is a serious impediment to growth.

#### (e) Labour Market Institutions

Pakistan ranks 78<sup>th</sup> on the 'Difficulty of hiring index' that assigns value between 0-100 with the higher value being adverse. The ranking for OECD and region are 27 and 41.8 respectively. On the Job Training (OJT) is, considered an essential way of imparting skills to an industrial worker. Only 15 percent of the Pakistani firms covered by investment climate survey reported to have sponsored OJT of their employees [World Bank (2006)].

Pakistan's industrial labour market is over-regulated, especially in respect of hiring and firing, because of the strict provisions of the Industrial Relation Ordinance (IRO) like minimum wage regulation etc. and the legal/*defecto* powers enjoyed by trade unions. This has led to increase in trend towards temporary workers. Though this development has provided the needed flexibility to the labour market, this has adversely affected the firms in respect of skill levels and the employees in terms of social security. It is apparent that the ease of hiring and firing and investment in imparting technical skills to workers will foster growth. Thus the inappropriate functioning of the labour market institutions is an impediment to growth.

### **3.2.3. Market Failure**

#### (a) Asymmetric Information

Akerlof (1970) was the first to point out that asymmetric information between buyers and sellers hinder trade and in the extreme case may even cause collapse of the market (Market for Lemons). To avoid the 'Lemons problem' a number of market structures have emerged that enable markets with asymmetric information to function. These include gaurantees/warranties and 'sales returns' etc. In Pakistan, sellers rarely accept 'Returns' thus any potential buyer who carries some apprehension about the product refuses to buy. The products for which Gaurantees/Warranties are available can perhaps be counted on finger tips. Even for these products the enforcement of Gaurantees/Warranties runs into problem if the product actually turns out to be defective. Thus the institutions that are supposed to assure the buyer that he will get the value that he paid for are almost absent. The near absence of such institutions stifles trade and hence growth. However it is difficult to determine the exact volume of trade adversely affected on this count and therefore it is difficult to assess whether or not inadequacy of such institutions is a binding constraint.

## (b) Innovation

Schumpeter (1934) defines entrepreneurship as the process of carrying out new combination (innovation) through the process of 'creative destruction' thus he looks upon innovation as the critical link between entrepreneurship and economic growth. The presence of competitive environment is essential to induce innovation. It is the free and flexible markets that will enable the closing down of business that have run their course and be replaced by more efficient firms [Haque (2007)]. What the lack of competition did to Pakistan's industry is clear from Hussain's (1999) following statement.

The external competition which would have beneficial effect on the diffusion of technology and innovation, efficient use of resources, and managerial and organisational skills, was conspicuously absent and left Pakistan's industry lagging behind its competitors.

A fairly competitive environment is a prerequisite for innovation while the business environment prevailing in Pakistan has been of rent seeking. For example, in the perspective of globalisation and WTO Din and Abbas (1999) argue that in the past textile industry despite receiving protection under high tariffs, subsidies, concessionary finance, subsidised cotton prices and numerous other incentives has not been able to achieve high efficiency. In 1959 Pakistan's share of textile exports was 11 percent of world market share, today the share has declined to only slightly over 2 percent. The loss of world market share is due the failure to diversify into higher value added products. Neither the country diversified its textile exports into higher value-added product nor new products came up to make up for the export volume lost by textile sector.

Overriding features of the policies practiced in different regimes also shed light upon prevalence of rent seeking that served to constrain a competitive environment and hence innovation and growth. In '50s the trade policy relying on high tariffs and quantitative restrictions conferred windfall gains on a small group of import licensees [Hussain (1999)], while in '60s the import substituting industrialisation and the export bonus scheme allowed the exporters to amass wealth at the expense of other segments of the society. 1970 was the era of the public sector which by default is inimical to innovation because of the lack of incentives available to public officials for taking risk. However to explain the development of small scale sector during the Bhutto era John Adams and Sabiha Iqbal<sup>8</sup> argue that the development of small scale sector, during Bhutto era, is not owed to any incentives from the government rather it is the absence of favours extended to the large scale sector, that has been the norm in '60s that gave a boost to the small scale sector. In '80s and '90s the banks, while in public sector

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<sup>8</sup>Cited in Zaidi (1999).

had been forced to lend on non commercial consideration that in the '90s resulted in banks being burdened with huge non performing loans. The benefit of such loans went to a small elite class.

The above account only seeks to illustrate that a rent seeking culture has characterised the economy through out its history.<sup>9</sup> This rent seeking culture has altogether eliminated the competitive environment that is so essential for the Schumpeterian 'creative destruction' to materialise. For an economy to prosper it must innovate new products as old products die off. Economies that fail to innovate are bound to exhibit slow growth. Thus it is the lack of innovation, which in turn stems from the rent seeking culture or the absence of competitive environment that forms one of the binding constraints to growth.

(c) Macro Risks / Macroeconomic Instability

Hausmann, *et al.* argue that macroeconomic instability is determined by deficit on fiscal account, loss of international reserves, large depreciation of exchange rate and large external imbalances. Table 4 shows the data on these variables for several years.

Table 4

<i>Indicators of Macroeconomic Stability</i>			
	Fiscal Deficit (% of GDP)	Exchange Rate Depreciation	Current Account Deficit (\$ bil.)
1998-99	6.1	11.72	-1856
1999-00	5.4	0.78	-217
2000-01	4.3	23.79	-326
2001-02	4.3	-6.32	2833
2002-03	3.7	-3.75	4028
2003-04	2.4	0.55	1812
2004-05	3.3	2.72	-1,753

Given the criteria for determining macroeconomic stability referred above, Pakistan's macroeconomic environment does not appear unstable since the last 5 years or so. The fiscal deficit, in recent past, has remained close to the level considered safe and the exchange rate during the past couple of years has remained more or less stable. However one should not loose sight of the fact that Pakistan's growth episodes bears some correlation with the external shocks that the economy experienced [Shaikh (2006)]. Table 5 and the discussion that follows highlight the point.

<sup>9</sup>For an exhaustive account of rent-seeking, reading through the host of books written on Pakistan economy is essential. These include Zaidi (2005), Hussain (1999) etc.

Table 5  
*GDP Growth Rates in Pakistan*

	(Avg., Annual, %)				
	1960s	1970s	1980s	1990s	2000-06
GDP Growth	6.77	4.84	6.45	4.38	5.52*

Source: Zaidi (2005).

\*Average growth from 2003-04 to 2005-06 is 6.8 percent.

Its apparent from Table 5 that Pakistan experienced three high growth episodes during its 60 years history: in 60s, 80s and 00s. Each one was accompanied by foreign aid in consequence of an external shock/war: cold war, Soviet-Afghan war and 9/11 respectively. None of the three lasted for more than 4-5 years. In first two cases the growth episodes ended when foreign aid tapered off. [Shaikh (2006).]

Given the above account the risk looms large that if geo-political environment does not remain as favourable to Pakistan as it is today, the current growth spell may meet the fate similar to the two earlier ones. However the geo-political environment not being easily predictable, we assume that the politico-economy perspective would not change much at least in the very short run. Therefore we do not consider the macroeconomic environment to be a binding constraint to growth.

### 3.4. Social Returns

#### (a) *Infrastructure*

The relationship between infrastructure and economic growth has been studied extensively for United States and other developed countries.<sup>10</sup> Development economists have long recognised that social overhead capital is a necessary input in the structure of production [e.g., Hirschman (1958)]. Arrow and Kurz (1970) and Weitzman (1970) have incorporated infrastructure into formal growth theory. The impact of infrastructure on productivity of firms, welfare, and on overall growth is difficult to understand in developing countries because of lack of availability of data on social return to such investments. It is critical not to combine wasteful infrastructure with productive investments. Studies that rely on public spending patterns may not capture the true effect of infrastructure if there is widespread waste in spending [see Devarajan, *et al.* (1992)].

Pakistan has an area of 803,950 square kilometres and a population of around 157.9 millions. Pakistan, in 1947, inherited only 50,000 KMs of roads of

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<sup>10</sup>For instance, see Aschauer (1989a, 1989b), Munnell (1990), Eberts (1990), Holtz-Eakin (1994), Berndt and Hansson (1991).

various categories with a density of 0.06 KMs / Sq KMs areas and about 21,000 registered vehicles only. The total length of paved roads in Pakistan is now in excess of 250,000 KMs and current national average road density stands at 0.32 percent KMs /Sq KMs.<sup>11</sup> The transport sector account for about 8 percent of Pakistan's GDP and is growing at 5 percent annually. Global Competitiveness Report 2006-07 ranks Pakistan at 101, 39th and 87th position among 125 countries for telephone lines, railroad infrastructure development and quality of electricity supply respectively. Table 6 presents the comparison of overall quality of infrastructure amongst some selected Asian countries.

Table 6

<i>Overall Infrastructure Quality</i>	
Country	Score
Indonesia	2.5
India	3.3
China	3.4
Pakistan	3.4
Thailand	5.0
Korea	5.1
Taiwan	5.4
Malaysia	5.7
Hong Kong	6.4

*Source:* Global Competitiveness report 2006-07.

*Note:* (Score of 1 reflects highly underdeveloped infrastructure while 7 represents as extensive and efficient as the world's best).

Given that quality of infrastructure in Pakistan is equivalent to that of China—a high growth performer and is better than that of Indonesia and India, we take the stand that quality of infrastructure is not a binding constraint to growth for Pakistan. However the gap between electricity demand and supply that has emerged very recently may seriously impede growth till the problem is resolved in the coming years.

### ***(b) Human Capital***

The literacy rate in Pakistan is 53 percent, enrolment rate is quite low and quality of education provided by public schools is poor. The issue is does low human of human capital explains unsatisfactory growth performance of a country? Countries and regions that attained very high literacy rate, for example; Sri Lanka, Philippines and Costa Rica have failed to show decent economic growth. The

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<sup>11</sup>*Sources:* Ministry of Industries and Production; Experts Advisory Cell, September 2003.

existence of good educational performers relative to income implies that investment in human capital does not invariably lead to high level of output.<sup>12</sup>

Following, Hausmann, *et al.* (2005) we take into account the return to investment in education for determining whether or not low investment in human capital is a binding constraint. The return to education for different levels of education are presented in Table 7.

Table 7

*Rate of Return for Primary, Secondary, and Higher Level of Education*

Year	RORp	RORs	RORh	Source
1978-1979	4	5.6	6.3	Guisinger (1984)
1985-1986	3.5	6.6	6.25	Ashraf (1993)
1993-1994	0.97	4.9	6.95	Nasir (1998)
2001-2002	1.52	3.94	9.02	Hyder (2005)

*Notes:* (1) RORp, RORs and RORh shows rate of return to primary, secondary and higher level of education respectively.

(2) The rate of return presented here should be used only as approximate figures because these have been calculated with different methodologies and different data sets.

The rate of return to education in different time periods by and large show decreasing trends in primary and secondary schooling, however increasing trend is observed in case of higher education. When compared with other countries, these rates of return are not very high except for higher education. The relatively low rate of return implies that the country failed to produce high demand for primary and secondary level education. Given the rates of return for different levels of education, the scarcity of people educated up to the secondary level does not seem to be a constraint however shortage of highly educated people could be a constraint.

We feel that the scarcity of highly educated people lies in the inadequacy of educational system discussed in section 3.2.2(d). First, good institutes of higher learning are scarce and secondly the education system that prevails up to the higher secondary level does not allow a vast majority of poor and middle class to enter good schools so that people qualitatively eligible for higher education are not available in sufficient numbers. Thus if at all the dearth of human capital is a constraint, it is the poorer educational system at the primary, secondary and higher secondary level that is at the heart of the matter.

#### 4. CONCLUSION

Using the Hausmann, *et al.* (2005) decision tree methodology we have analysed as to what constitutes the binding constraint to growth in Pakistan. The

<sup>12</sup>Pritchett (1996) "Where has all the education gone?". Washington, DC: World Bank.

decision tree suggest that investment and hence growth may be constrained either due high cost of finance or due to low return to economic activity. We ruled out the high cost of finance being a binding constraint to growth in Pakistan. As per the framework followed in this study, the primary reason for the cost of finance being high could be the low saving rate of the economy. Given the criteria, we do not consider Pakistan to be a savings constrained country because anything that is scarce carries a high price. Thus if the saving rate is low one should observe willingness to remunerate savings at higher rate. In this context we showed that the real interest rate in Pakistan is rather low and at times has even remained negative. Given the low interest rate on savings one cannot say that Pakistan is savings constrained. The fact that foreign debt is not too high also supports our contention that country is not savings constrained. Besides had the low savings rate been a constraint than the surge in remittances after 9/11 should have translated into higher investment. However dramatic rise in real estate prices after 9/11 suggests that a sizable part of the exogenous increase in foreign inflows has gone into real estate. Similarly, proceeding in this manner we also rule out infrastructure and human capital to be a binding constraint for Pakistan.

We showed that the state of governance and the quality of institutions leaves much to be desired. We discussed at length that the functioning of legal institutions, educational institutions, Labour market institutions, SBP and SECP is not up to the mark. We argued that given the of failure of institutions that effect almost every aspect of life economic growth will remain constrained even if factors like a sound saving rate are in place because the institutional mechanism required for converting savings into investment leaves much to be desired. Thus we consider the failure of governance and that of institutions to be the binding constraint to growth.

That innovation is an essential characteristic of a growing economy needs no emphasis. Given that the level of innovation has remained very low in Pakistan, we argued that rent seeking in the shape of licences, subsidies and tariff protection has not allowed the development of a competitive environment which is essential for the innovation to occur. Thus it is the prevalence of rent seeking environment that stifles innovation or viewing it the other way round, it is the lack of competitive environment which we consider to be yet another binding constraint to economic growth in Pakistan.



## Annexure-I

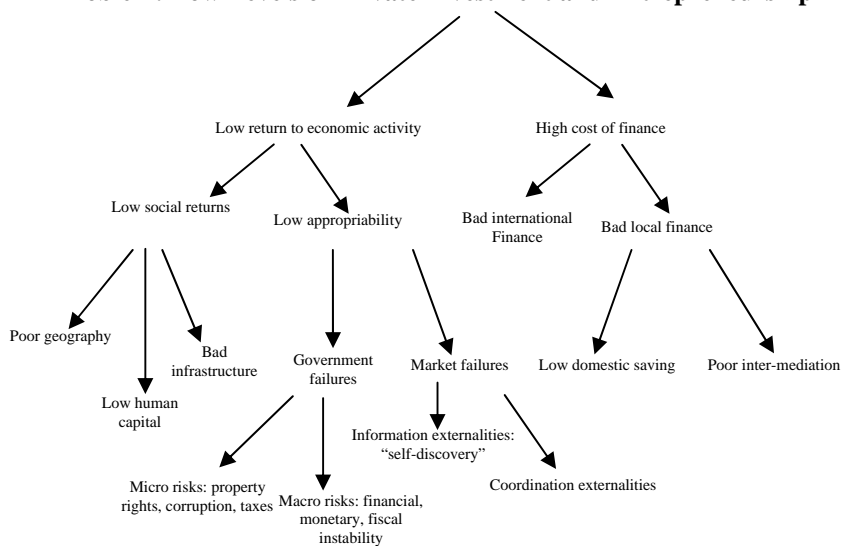
Table A-1

<i>Growth Performance</i>			
Year	GDP Growth	Year	GDP Growth
90-91	5.6	98-99	4.2
91-92	7.7	99-00	3.9
92-93	2.3	00-01	2.5
93-94	4.5	01-02	3.1
94-95	5.2	02-03	4.8
95-96	5.2	03-04	7.5
96-97	1.7	04-05	8.6
97-98	3.5	05-06	6.6
<b>Decade-Averages</b>			
1960s	6.77	1990s	4.38
1970s	4.84	2000s	5.52
1980s	6.45		

Source: State Bank of Pakistan (Various Issues). Annual Reports.

## Annexure-II

### Problem: Low Levels of Private Investment and Entrepreneurship



## REFERENCES

- Aghion, P., C. Meghir, and J. Vandenbussche (2003) Productivity Growth and the Composition of Education Spending. Eicher Theo S. and Gracia-Penalo, C., CESifo (eds.) *Institutions, Development, and Economic Growth*. Seminar Series. Massachusetts Institute of Technology. Cambridge: MIT Press.
- Akerlof, George A. (1970) The Market for Lemons: Quality Uncertainty and the Market Mechanism. *Quarterly Journal of Economics* 84:3, 488–500.
- Arrow, Kenneth J. and Mordecai Kurz (1970) *Public Investment, the Rate of Return and Optimal Fiscal Policy*. Baltimore: The Johns Hopkins University Press.
- Aschauer, David A. (1989a) Is Public Expenditure Productive? *Journal of Monetary Economics* 23:2, 177–200.
- Aschauer, David A. (1989b) Does Public Capital Crowd out Private Capital? *Journal of Monetary Economics* 24:2, 171–188.
- Ashraf Javed and Birjees Ashraf (1993) Analysis of the Male-Female Earning Differential in Pakistan. *The Pakistan Development Review* 32:4, 895–904.
- Azfar, Omer (2006) The New Institutional Economics Approach to Economic Development: A Discussion of Social, Political, Legal and Economic Institutions. *The Pakistan Development Review* 45:4, 965–80.
- Azfar, Omer and Thornton Matheson (2003) Market-mobilised Capital, Public Choice.
- Benveniste, L. and P. Spindt (1989) How Investment Banker Determine the Offer Price and Allocation of New Issues. *Journal of Financial Economics* 24, 343–61.
- Berndt, E. R. and B. Hansson (1991) Measuring the Contribution of Public Infrastructure Capital in Sweden. (NBER Working Papers Series, WP 3842.)
- Biais, B., and A. M. Faugeron-Crouzet (2002) IPO Auctions: English, Dutch...French and Internet. *Journal of Financial Intermediation* 11, 9–36.
- Biais, B., P. Bossaerts, and J. C. Rochet (2002) An Optimal IPO Mechanism. *Review of Economic Studies* 69:1, 999–1017.
- Devarajan, S., S. Vinaya, and Heng-Fu Zou (1992) *What do Governments Buy? The Composition of Public Expenditures and Economic Performance*. The World Bank: Country Economic Department.
- Din, Musleh-ud and Kalbe Abbas (1999) Uruguay Round Agreement: Implications for Pakistan's Textile and Clothing Sector. *The Pakistan Development Review* 38:4, 823–33.
- Eberts, Randall W. (1990) Public Infrastructure and Regional Economic Development. *Economic Review*. Federal Reserve Bank of Cleveland. Q10,15–27.
- Guisinger, Stephen E. and Muhammad Irfan (1974) Real Wages of Industrial Workers in Pakistan 1954 to 1970. *The Pakistan Development Review* 13:4, 363–88.

- Hausmann, R. and Dani Rodrick (2002) Economic Development and Self-Discovery. National Bureau of Economic Research. (Working Paper 8952.)
- Hausmann, R., D. Rodrick, and A. Velasco (2005) Growth Diagnostics. John F. Kennedy School of Government, Harvard University. <<http://ksghome.harvard.edu/drodrik/barcelonafinalmarch2005.pdf>>
- Haque, Nadeen Ul (2007) Entrepreneurship in Pakistan. Pakistan Institute of Development Economics, Islamabad. (PIDE Working Papers No. 29.)
- Hirschman, Albert O. (1958) *The Strategy of Economic Development*, New Haven CT: Yale University Press.
- Holtz-Eakin (1994) Public Sector Capital and the Productivity Puzzle. *Review of Economics and Statistics* 76:1.
- Hussain, Ishrat (1999) *Pakistan the Economy of an Elitist State*. Karachi: Oxford University Press.
- Hyder, Asma (2007) Wage differentials, Rate of Return to Education and Occupational Wage Share in the Labour Market of Pakistan. Pakistan Institute of Development Economics, Islamabad. (PIDE Working Papers No. 17.)
- Khawaja, Idrees and Musleh-ud Din (2007) Determinants of Interest Spread. Pakistan Institute of Development Economics, Islamabad. (PIDE Working Papers No. 22.)
- Levine, R. and D. Renelt (1992) A Sensitivity Analysis of Cross-country Growth Regressions. *American Economic Review* 82, 942–963.
- Leipziger, D. and R. Zaghera (2006) Getting Out of the Rut: Applying Growth Diagnostics at the World Bank. *Finance and Development* 43:1.
- Mankiw, N. G., D. Romer, and D. N. Weil (1992) A Contribution to Empirics of Economic Growth. *Quarterly Journal of Economics* 107, 407–437.
- Munnell, A. (1990) Why has Productivity Growth Declined? Productivity and Public Investment. *New England Economic Review*. January/February.
- Nasir, Zafar Mueen (1998) Determinants of Personal Earnings in Pakistan: Findings from the Labour Force Survey 1993-94. *The Pakistan Development Review* 37:4, 251–274.
- Pritchett, L. (1996) Where Has All the Education Gone. The World Bank. (Policy Research Working Paper 1581.)
- Qayyum, A. and A. R. Kemal (2006) Volatility Spillover between the Stock Market and the Foreign Exchange Market in Pakistan. Pakistan Institute of Development Economics, Islamabad. (PIDE Working Papers No. 7.)
- Richter, Kaspar (2006) Thailand's Growth Path: From Recovery to Prosperity. (World Bank Policy Research Working Paper 3912).
- Rodrik, D. (2006) Goodbye Washington Consensus, Hello Washington Confusion? A Review of the World Bank's Economic Growth in the 1990s: Learning from a Decade of Reform. *Journal of Economic Literature* 44, 973–987.

- Shaikh, Hafeez (2006) Towards Reorienting the Role of Government in Pakistan. *The Pakistan Development Review* 45:4, 537–554.
- Sohail, M. K. and M. Nasr (2007) Performance of Initial Public Offerings in Pakistan. *International Review of Business Research Papers* 3:2, 420–441.
- Solow, R. M. (1956) A Contribution to the Theory of Economic Growth. *Quarterly Journal of Economics* 70, 65–94.
- Schumpeter, Joseph A. (1934) *The Theory of Economic Development*. Cambridge: Harvard University Press.
- Weitzman, Martin L. (1970) Optimal Growth with Scale Economies in the Creation of Overhead Capital. *Review of Economic Studies*.
- World Bank (2006) *Doing Business in 2006: Creating Jobs*.
- Zaidi, S. Akbar (2005) *Issues in Pakistan's Economy*. Karachi: Oxford University Press.