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Growth Diagnostics: Pakistan

**Idrees Khawaja
Sajawal Khan**

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Idrees Khawaja

Pakistan Institute of Development Economics, Islamabad

and

Sajawal Khan

State Bank of Pakistan, Karachi

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Pakistan Institute of Development Economics
Islamabad, Pakistan

E-mail: publications@pide.org.pk
Website: <http://www.pide.org.pk>
Fax: +92-51-9248065

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ABSTRACT

This study investigates critical constraints to growth in Pakistan using Hausmann, Rodrik and Valesco's (2005) decision-tree methodology. The investigation is supplemented by macro-level and firm-level regression analysis. The critical constraints identified using the three set of identifications include; poor institutional quality/poor governance, little foreign inflows, bad financial intermediation, difficult access to finance, macroeconomic instability, shortage of energy and poor labour quality as the critical constraints to growth. Joining the pieces of evidence apparent from the three set of investigations yields poor institutional quality as one mega constraint—constraints like macroeconomic instability, little and expensive energy, poor labour quality, bad financial intermediation and lack of access to finance, all seem to be rooted in poor institutional quality. We also identify various institutions of Pakistan that seemingly constrain growth in the country. These include institutions related to ; plea bargain offered by the National Accountability Bureau to those charged with corruption, institution for creation of provinces, NFC, political finance, SROs, post-fercto approval of supplementary budget, bureaucracy, local government, medium of instruction and the institution for holding population census timely.

1. INTRODUCTION

The study uses the growth diagnostic approach popularised by Hausmann, Rodrik, and Valesco (2005) to identify the critical constraints to the growth in Pakistan. The growth diagnostic approach provides a framework for identifying, which constraints, from amongst the many constraints that an economy may confront, if resolved will provide major a boost to the economic growth. The two defining features of the growth diagnostic approach are; one, given the differences in regional and national environment ‘one-size-fits-all’ approach cannot work and two, countries with their limited capital—political as well as financial, and not-so-good governance capacity cannot engage in wholesale reforms. The approach therefore calls for identifying the country specific constraints and focusing on the more pressing ones to give a boost to economic growth.

The one-size-fit-all approach that seems to be advocated by Washington consensus and cross country Barro-style regression will not work for all countries. Countries quite often face unique constraints to growth. Policies that ignore the uniqueness often fail. For example, Argentina had a bitter experience with policy reforms advocated by Washington Consensus while similar reforms were successfully undertaken in a number of Latin American Countries, especially in Chile. Generally the Sub-Saharan African countries also failed to benefit from such reforms though these served Tanzania, and Mozambique well [Rodrik (2006)]. Thus the message from review of the efforts to reform experience is that a standard set of reforms cannot be applied to country X just because these worked very well in country Y. Barro-style cross country regression cannot be used to identify reform measures because such regressions assume that all countries are average countries. This assumption may not hold always hold true. Hausmann (2008) argues that a cross-country Barro style regression may inform that private sector credit causes growth in a large group of countries but then we have no reason to assume to that country X included in the group is an average country.

Qayyum, *et al.* (2008) have examined the growth diagnostics for Pakistan using the HRV framework however there is a need to revisit the diagnostic in Pakistan for the following reasons. First, the HRV’s Growth Diagnostic framework identifies constraints that call for immediate attention. Thus the framework is a tool, essentially for short run analysis. This implies that the

diagnostic exercise conducted, say five years back may not hold today. Thus there remains a need to revisit periodically. For example Qayyum, *et al.* (2008) argue that infrastructure is not a constraint to growth in Pakistan however severe energy shortfalls that Pakistan has been faced with for some years now point to the need of revisiting the exercise.

Second, HRV on its own may not show accurately how critical a constraint is. However in an empirical exercise the coefficient values being indicative of the marginal product of a variable, the size of the coefficient can signal how severe a constraint is. This makes supplementing the HRV based diagnostics with the empirical investigation of great value. The proposed study plans to supplement the HRV based growth diagnostics for Pakistan with macro and firm level empirical investigation explained later on. Rodrik (2006) argues that “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”. 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. They argue that appropriate policy measures if focussed on binding constraints will produce the ‘biggest bang for reform buck’. It is in this backdrop that we investigate the critical constraints to growth in Pakistan using the HRV’s framework. We begin with an overview of the various economic reform efforts in Pakistan and then briefly review Pakistan’s current state of economy before moving to the analysis using the HRV’s decision tree methodology.

The economic reforms in Pakistan under the Structural Adjustment Programmes (SAPs) of the IMF were first undertaken in 1988. During 1988–2013, Pakistan has had access to aid from IMF under 16 programs. The typical tone of the conditionality attached to these programs conformed to Washington consensus: stabilise, liberalise and privatise. The reforms suggested to Pakistan under IMF programs can be broadly classified in three major areas viz. fiscal, monetary and trade. The primary emphasis of the programs has been upon restoring macroeconomic stability. Some of the reforms envisaged were structural in nature and have come to stay e.g. the controlled monetary policy

regime has given way to a monetary regime that at least partially relies on the market. However the macroeconomic stability, if at all, achieved under any IMF program proved temporary and had to be included in the next IMF aid programs as well. Around 20 programs have been negotiated with IMF since 1998. Except two programs, almost all such programs were scrapped prematurely due to failure to meet the covenants.

Pakistan's growth performance during the last 50 years has remained episodic, with decades of 60s 80s and the first half 2000s—all military regimes, exhibiting high growth. The GDP growth in the performing decades of 60s and 80s averaged 6.8 and 6.4 respectively while from 2002-3 to 2006-7 the growth rate averaged 6 percent. Other than these high growth episodes the growth has remained in the range of 4 percent. Why high growth in the military regimes? A characteristic feature of the military regimes has been relative high foreign aid to Pakistan. Geo-political strategic interests used to facilitate such aid and therefore the aid did not envisage the strict stabilisation measures that are now the norm in IMF aid programs. However the institutional reforms, that would sustain growth, were not undertaken during these high growth periods therefore the growth episodes could not be sustained.

For the last couple of years, Pakistan's economy has been running in a crisis mode. When the incumbent regime assumed office in May 2013, improving the precarious balance of payments position, bringing down fiscal deficit, avoiding debt trap, keeping inflation in check and yet grow, were the major macroeconomic challenges that the economy was faced with. The balance of payments position underpinned by increasing trade deficit, meagre foreign reserves and the then upcoming external debt servicing prompted the government to jack up the BOP position by seeking foreign assistance from the IMF. The IMF agreed to lend \$6.7 billion in July 2013 with front loaded conditionality, primarily focused on stabilisation and back loaded disbursements. This was by and large a repeat of the situation the previous regime had faced on assumption of office 5 years earlier. The then government also went to the IMF and in return agreed to various stabilisation measures. Thus maintaining macroeconomic stability had remained a challenge since long.

Pakistan faced macroeconomic instability twice during the 2008-14. A look at the kind of fluctuations and their timings suggest that Pakistan faced political business cycles—expansionary fiscal and monetary policies close to election time followed by contractionary policies during the initial years of a political regime. An examination of the some critical variables before and after the elections of 2008 and 2013 suggests the occurrence of some sort of political business cycle during those times. The oil prices remained static (at Rs 51/liter) for almost 10 months before the 2008-elections though the prices were on the rise internationally. Moreover in 6 months prior to regime change in 2008 the exchange rate depreciated by only 3.6 percent whereas in seven months following the regime change the exchange rate depreciated by 30 percent.

Electricity prices were not increased for almost a year prior to the elections held in May 2013. This contributed to accumulation of circular debt which was retired in the initial months of the current reign. The exchange rate also showed relative stability prior to the 2013-elections while the economic fundamentals suggested depreciation—in six months prior to the regime change in June 2013 the exchange rate depreciated only 1.3 percent while the depreciation in the 6 months after the regime change is 6.7 percent. The bottom line is that the failure to undertake gradual adjustment in pre-election periods necessitates rapid adjustment post-elections. Occurrence of the political business cycle and this being financed by the central bank on its own speak of institutional deficit. Combine this with the resignation of three governors of the central bank in a span of less than five years, and the picture becomes even clearer – the central has no independence at all. Obviously the institutions are weak.

On the top of it the country is faced with a worst ever security profile and energy crisis both of which constrain investment. A study has estimated the national cost of power outages at 7.2 percent of the GDP in 2012 [Pasha (2012)]. The investment to GDP ratio at 14 percent is at an all times low. Real Gross Fixed Investment at 10.7 percent has shown a decline of over 30 percent during 2008-12. This is the lowest level in over half a century [Pasha (2014)]. Much of the macroeconomic problems emanate from the low level of domestic resource mobilisation. The tax-GDP ratio stands at the abysmal level of around 8 percent and the direct tax-GDP is 3.2 percent compared to 11 percent in Malaysia, 8 percent in Thailand and 6 percent in Turkey, India and Indonesia. Moreover the direct taxes structure heavily relies (almost 58 percent) on collection by way of deduction at source, including advance taxes and presumptive taxes. Around a year back the government announced a tax amnesty scheme to encourage revenue mobilisation. The scheme exempts such persons from tax audit who declare an increase of 25 percent in income over the previous year. All this put together speaks poorly about the institutional capacity of the tax machinery to collect taxes.

The fiscal deficit, during the last 5 years, has averaged at 6.5 percent of the GDP with the deficit standing around 8 percent during recent years. Inflationary means have financed a large part of the budget deficit more often than not. With the declining foreign direct investment as well exports the balance of payments position and the exchange rate has remained under pressure. Exports are concentrated in terms of product as well as destination. In early 2000s textiles enjoyed a share of close to 70 percent in the export earnings and around 61 percent of the exports were destined to OECD countries. Now textiles enjoy 53 percent share in commodity exports and the share of exports to OECD countries is 40 percent. Thus though there is some degree of diversification but still the level of concentration is rather high. Official poverty estimates which came in 2016 after a gap of eight years, inform that 29 percent of the population is poor suggesting that poverty has declined overtime.

However all indicators suggest that inequality has risen [UNDP (2016)]. The unemployment rate as at end of 2013 stood at 6.5 percent and has risen from 5.2 percent a couple of years earlier.

This study is organised as follows: section two reviews the related literature on growth diagnostic and the constraints to growth at the firm level. Critical constraints to growth, using the growth diagnostic framework and econometric investigation at the micro level are respectively identified in Sections 3, 4 and 5. Section 6 concludes the study.

2. REVIEW OF RELATED LITERATURE

2.1. Growth Diagnostics

The Growth Diagnostic framework, popularised by Hausmann, Rodrik and Valesco (2005) has been widely used to identify the binding/critical constraints to growth in different countries especially in the developing world. Studies that have used this framework include: Gabriel Sanchez and Butler (2008) for Argentina, ADB (2007) for Philippines, Melendez and Harker (2008) for Colombia, Rahman and Yousaf for Bangladesh, Ricardo Hausman (2008) for Brazil, Enders (2007) for Egypt, World Bank (2009) for Aceh (a province of Indonesia) and Qayyum, *et al.* (2008) for Pakistan, to mention a few. One common constraint found by many but not all studies is the government failure. However these studies also differ widely in diagnosing constraints. For example, ADB (2007) finds that market failure and low savings are the binding constraint in Philippines. Rehman and Yousaf argue that infrastructure and the regulatory environment are critical constraints in Bangladesh. Enders (2007) considers inefficient financial intermediation and high public debt as the binding constraint in Egypt, World Bank (2009) considers electricity as the critical constraint in Aceh, a province of Indonesia and Qayyum, *et al.* (2008) find that institutional failures are critical in Pakistan. Hausmann (2008) finds that the level of savings constrains growth in Brazil. Hausmann and Klinger (2008) find that the lack of structural transformation constrains growth in Peru which the authors argue is due to Peru's location in a poorly connected product space that accentuates coordination failures.

2.2. Constraints to Growth of Small Firms

The barriers to the expansion of small firms identified in literature may be grouped into internal or external obstacles [Doern (2009)]. Internal factors typically include ownership structure, skill composition of the workers and quality and quantity of capital while external barriers comprise institutions including economic, financial and political, governmental policies, and infrastructure; soft as well as hard (i.e. physical). The ownership structure/legal structure of the firms has been identified as a major constraint in the literature on

entrepreneurship. Caves (2007) argue that multinational firms enjoying strong organisational abilities and technological strengths are able to innovate and thereby expand. The absence of innovation constrains the expansion of the firms and certain types of ownership structures are not conducive to innovation. The expansion of smaller firms may also be associated with the personal characteristics of their owner and employees. Reuber and Fischer (1997) argue that firms that are managed by experienced team perform better. Knowledge complemented by experience increases the probability that firms will adopt mechanisms to tap export markets [Mateev and Anastasoy (2010)]. Storey (1994) argues that education and training of owners and employees is the key to the success of a business as the intellectual strengths of the workforce allows the entrepreneurs to face the clients more confidently. The positive role of physical infrastructure in promoting entrepreneurship has been sufficiently discussed in the literature with emphasis on transport network and electric power [Reinikka and Svensson (2002); Dollar, *et al.* (2005); Aterido, *et al.* (2007); Goedhuys and Sleuwaegen (2010)]. Availability of sufficient funds is without doubt crucial to the expansion of the firms. Small firms, especially in developing economies, face financial constraints in conceiving and implementing expansion plans. It is generally believed that small firms are more credit constrained. Various empirical studies support this hypothesis [for example see, Becchetti and Trovato (2002); Carpenter and Petersen (2002) and Sarno (2008)]. Becchetti and Trovato (2002) find that rejection of loan request by a bank is an important restraint on firm's growth. Chen, *et al.* (1985) argue that commercial bank and other financial institutions are reluctant to provide loan to small firms due to their lower repayment capacity. Rajan and Zingales (2003) argue that the lack of well developed financial markets may limit the external financing options for the entrepreneurs. Moreover the low literacy rate, among the entrepreneurs, in the developing economies may also severely limit the ability of the firms to tap external finance. Corruption as a constraint to the growth of entrepreneurship has received sufficient attention in the literature on entrepreneurship. According to BEEP survey, more than 70 percent of the SMEs perceive corruption as an impediment to their business.¹ It is common knowledge that greater the number of regulations that a firm is required to fulfil more will be the bribe money paid to circumvent those regulations. Djankon (2009) argues that many businesses in the developing countries prefer to operate in the informal setup because they do not want to expose themselves to intrusions of the public sector. Understandably host of studies find that corruption is an impediment to the firm's expansion [Gaviria (2002); Mocan (2008)]. One study, Entrepreneurship in Pakistan (Haque, 2007) identifies lack of innovation, rent seeking, corruption, lack of

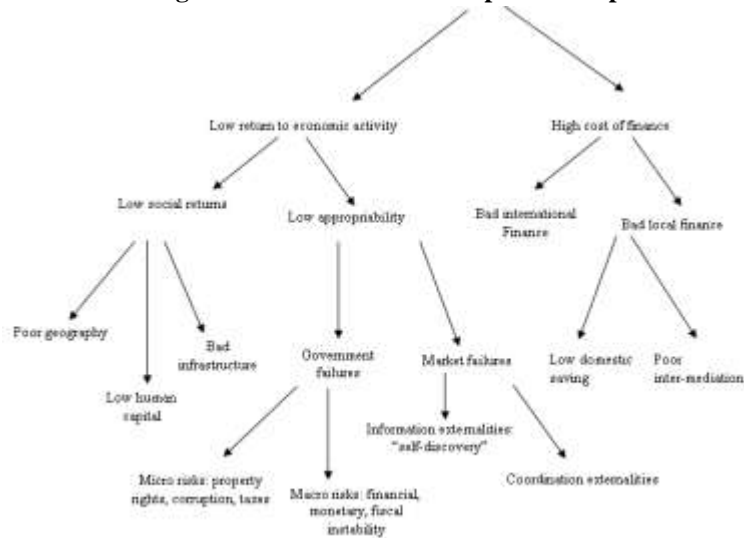
¹BEEP stands for Business Environment and Enterprise Performance Survey jointly conducted by the World Bank and the European Bank for Reconstruction and Development in transition countries

research, lack of knowledge and skills, poor legal framework and inability/lack of interest of the entrepreneurs to tap formal external financing as the constraints to entrepreneurship. The identification of the constraints is based on Focus Group Discussions (FCDs) conducted in four cities² of Punjab.

3. CRITICAL CONSTRAINTS TO GROWTH: FROM HRV'S METHODOLOGY

The basic assumption of the decision-tree methodology is that growth is constrained by the insufficient investment which in turn is constrained either by high cost of finance or low return to economic activity. Once either (or may be both) of the two is identified as the factor constraining investment the attention is focused on the determinants of the problem area(s). The cost of finance, according to Hausmann, *et al.* (2005) depends upon, the (i) level of savings in the economy, (ii) the state of intermediation and the (iii) terms upon which external finance is available. The authors also argue that the return to economic activity depends upon the (i) level of social returns and the (ii) extent to which private agents are able to appropriate these returns. Social returns are considered to be a function the quality and quantity of human capital and the infrastructure while the extent to which the private agents can appropriate the returns to themselves depend upon the quality of governance, macroeconomic stability and innovation. In this section we examine critical constraints to growth in Pakistan while moving down the decision-tree in the manner referred above.

Fig. 1. Investment and Entrepreneurship



²The Focus Group Discussions were held in Lahore Sialkot, Gujranwala and Sargodha

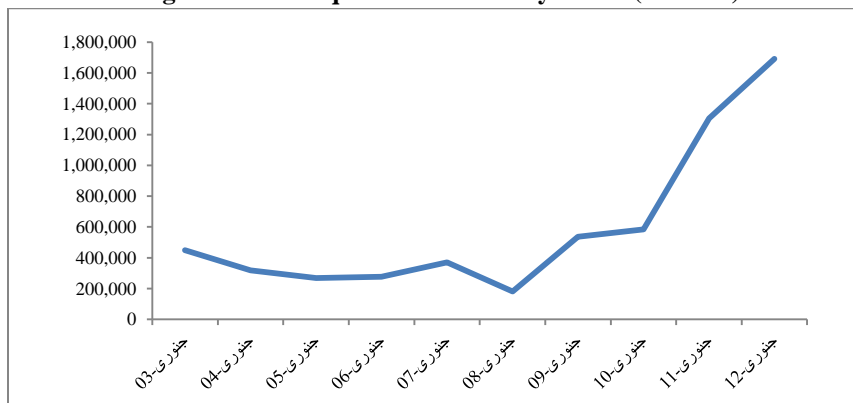
3.1. Cost of Finance

The cost of finance, according Hausmann, *et al.* (2005) could be high either due to difficulty in accessing local or international finance. While international finance has its own complex dynamics including the geo political environment, difficulty in accessing local finance can be attributed to either the low level of savings in the economy or the bad financial intermediation. In the following section we assess the state of intermediation and the level of savings to conclude whether or not these critically constrain growth.

3.1.1. Does bad intermediation constrain investment?

How do we define good intermediation? Ideal financial intermediation would be that financial sector mobilises savings from the savers (i.e. general public) and lends across the board to the private sector while keeping the interest spread at low. To decide whether bad intermediation constrains we must know the state intermediation. Is it good or bad? From 2003-8 the interest spread of the banks has been on the rise and the return to depositors was on the decline. The central bank (i.e. State Bank of Pakistan) had not been successful in persuading the banks, through moral suasion, to pay better return to depositors. Finally the central bank came hard on the banks and fixed a mandatory floor rate of 5 percent on saving deposit (equivalent of checking account). The very fact that the central bank had to fix a mandatory floor rate on savings, suggests that financial intermediation is bad. Moreover over the last couple of years the government has been borrowing heavily from the banking system thereby crowding out the private sector. (Reference).The investment of the banks in liquid assets, primarily in government securities, during the last 10 years has remained significantly above the minimum required level and has increased overtime. Fig. 2 shows the excess of liquid assets maintained by the banks over the minimum required level).

Fig. 2: Excess Liquid Assets held by banks (Mn. Rs.)



Historically, private sector bank lending has been primarily concentrated in the manufacturing sector. Service sector, with over 50 percent contribution to GDP, is nearly missing from the list of beneficiaries of bank credit. The pro-poor wholesale and retail, with significant contribution to GDP, is conspicuous by its absence. The public sector crowds out the private sector and the bank lending is concentrated in the manufacturing sector—the two again point towards bad intermediation (PIDE, Economy Watch). Financial intermediation is decidedly bad, the question is does bad intermediation constrain investment?

To assess whether or not availability of finance constrains investment, we need to figure out whether or not firms are constrained by availability of finance. In case the firms are constrained we need to figure out does the constraint lie on the demand side i.e. on the part of would-be borrowers or is it on the supply-side i.e. on the part of would-be lenders. If the constraint lies on the supply side, we need to find out whether the constraint is due to the cost of finance or due to bad intermediation. Some micro evidence in this regard is presented below.

As a part of the forthcoming study on the State of Entrepreneurship in Pakistan we conducted a survey of over 300 micro and small retail firms across, Rawalpindi, a populous city of Pakistan. The responses to the questions related to finance suggest that 87 percent of the micro and small firms use retained earnings/personal money to finance business, 11 percent borrow from family/friends and only two percent borrow from bank (Table 1). Our survey informs that that as many as 88 percent of the micro and small entrepreneurs never tried to obtain a loan from a formal source. Out of those who did not try to obtain a bank loan, 66 percent said they did not try because they ‘did not need a loan’ for business. Prima facie this suggests that if at all finance is a constraint, the constraint lies on the demand-side (Table 2). However a closer look is needed before sounding a verdict. The survey also informs that as many 53 percent of the entrepreneurs use finance from informal sources and 63 percent make use of committees (Table 3).³ As many as 37 percent of the entrepreneurs

³Committees, also known as ROCSA (Rotating Credit and Saving Association) in relevant literature, are sort of informal credit unions where members of the committee pool in funds and the members can draw upon the funds. The following illustration explains how a Committee works. Suppose A,B, C and D are the members of a committee and they decide to pool in Rs 1000 monthly. On the first day of each month all the members deposit Rs 1,000/- with A, the manager of the committee. In the first month A, the manager takes away the 4,000/- collected in the pool. In the second month when Rs 4,000/- are similarly pooled, A invites the remaining three members to his shop and holds a draw, with B,C, D as the potential candidates to take the entire pool of Rs 4000. D’s name comes up in the draw and Rs 4000 pooled in the second month are handed over to him. In the 3rd month B’s is the lucky winner of the draw held among B & C and therefore the Rs.4000 pooled in the 3rd month goes to B. In the fourth month the Rs 4000 pooled are handed over to the only member left i.e. C. The Committee is terminated after all the 4 members have received Rs 4000 in successive months—the total amount they contributed in four monthly installments of Rs 1000 each.

Table 1

Source of Finance

Type	Total Sample	Micro <5*	Small >=5 & <10*	Small to Medium >=10*
Personal Money	87.3	86.3	90.0	85.7
Borrowed from Family	10.6	11.4	8.9	9.5
Borrowed from Banks	2.1	2.3	1.1	4.8

Table 2

Formal Financing

Type	Total Sample	Micro <5*	Small >=5 & <10*	Small to Medium >=10*
Do you have bank account?				
Yes	62.8	55.8	75.6	81.0
No	37.2	44.2	24.4	19.1
Does your firm have a separate bank account?				
Yes	20.8	10.6	38.2	52.4
No	79.2	89.4	61.8	47.6
Did you ever tried to obtain loan from a formal source?				
Yes	12.5	11.5	14.4	14.3
No	87.5	88.5	85.6	85.7
If not, Why?				
Do not require	65.6	63.7	68.0	76.5
High interest rate	11.9	10.9	13.3	17.7
Religious reasons	11.9	14.5	8.0	0.0
Difficult to obtain	8.8	8.3	10.7	5.9
Others	1.8	2.6	0.0	0.0

Table 3

Informal Financing

Type	Total Sample	Micro <5*	Small >=5 & <10*	Small to Medium >=10*
Do you use informal finance?				
Yes	52.3	53.9	48.3	52.4
No	47.7	46.1	51.7	47.6
Do you rely on committees as a source of finance?				
Yes	62.9	62.0	66.2	61.1
No	37.1	38.1	33.8	38.9
You rely on committees, as a source of?				
Saving	44.4	50.4	34.0	18.2
Business investment	55.6	49.6	66.0	81.8
With whom you have had a committee?				
Friends/relatives	26.5	25.8	27.1	33.3
Market colleagues	73.5	74.2	72.9	66.7
What type of financing you cover through committees?				
Capital financing	26.2	25.6	25.5	36.4
Working capital	7.9	9.0	6.4	0.0
Both	66.0	65.4	68.1	63.6
Why you prefer committee over formal banking?				
Convenience in deposit	56.7	59.3	45.8	72.7
Customised terms	11.3	5.9	25.0	18.2
Lump sum amount	27.3	31.1	22.9	0.0
Others	4.6	3.7	6.3	9.1

of the micro enterprises and medium-sized firms⁴ did not even had a bank account, let alone approaching the bank for financing. Out of those who use committees, 56 percent use ‘committee finance’ as a source of investing in business or meeting business expenditures. It is note-worthy that out of those who prefer ‘committees’ over banks, 57 percent carry this preference because of the ‘convenience of making deposits’ to a ‘Committee’.

The rather low percentage of entrepreneurs making an attempt to obtain loan from a formal source, a high percentage of firms using informal sources/committees to finance business expenditures and a large percentage being unbanked altogether coupled with low literacy levels of the entrepreneurs suggest that it is only the formal finance which is ‘not needed’. This apparently is due the inability of the entrepreneurs to interact with the bank or to satisfy the collateral conditions of the bank. In an economy where the literacy level of the entrepreneurs is rather low it is the bank that should reach out to the customers rather than waiting for the customer to drop-in. The failure of the banks to reach out to those in need of finance is clearly a case of bad intermediation. The banks need to come up with innovative lending solutions e.g. the micro finance and branchless banking.

Oligopolistic nature of the banking market, the high interest spread of the banks, inclination of the banks to lend more to the government rather than to entrepreneurs all suggest that financial intermediation is bad. The entrepreneurs borrowing at a much higher rate from the informal market suggests that bad intermediation constrains investment.

3.1.2. Are Savings Low

Hausmann, Rodrik and Valesco (2005) specify the following indicative conditions to determine that the savings constraint binds.

- (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.

The state of different variables that can help diagnose whether or not savings constrain investment is given in Table 4.

⁴Micro enterprise: A firm run by 1-4 persons (entrepreneur plus employees), Medium-sized enterprise: A firm run by 5-19 persons.

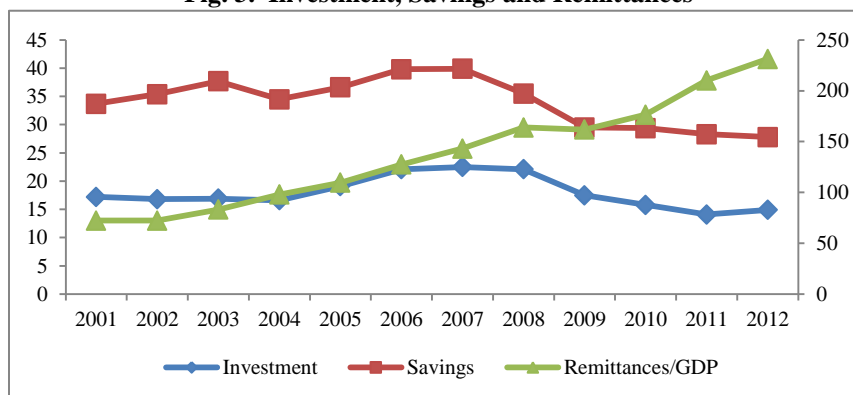
Table 4

Foreign Debt, Current Account Deficit and Weighted Avg. Cost of Deposits

	Foreign Debt/GDP (%)	Weighted avg. Return on deposits	Current Account Deficit/ GDP (%)	Real Interest Rate	Real Interest Rate		
					T-Bill Rate	CPI (% Growth)	Real int. Rate
2001-2	50.9	3.61	-0.70	2.8	6.3	3.5	2.8
2002-3	43.1	1.61	1.90	-1.4	1.7	3.1	-1.4
2003-4	36.7	0.95	3.80	-2.3	2.3	4.6	-2.3
2004-5	32.6	1.37	1.40	-1.4	7.9	9.3	-1.4
2005-6	28.7	1.96	-3.92	0.6	8.5	7.9	0.6
2006-7	27.5	2.60	-4.81	1.1	8.9	7.8	1.1
2007-8	29.9	4.13	-8.47	-0.5	11.5	12.0	-0.5
2008-9	30.4	4.44	-5.52	-5.0	12.0	17.0	-5.0
2009-10	33.3	4.29	-2.23	2.0	12.3	10.1	2.0
2010-11	29.8	4.53	0.10	0.0	13.7	13.7	0.0
2011-12	28.0	4.56	-2.07	0.0	11.9	11.0	0.9
2012-13	24.3	4.38	-1.04	0.9	8.9	7.4	1.9

Real interest rate during the last 10 years or so has fluctuated within a band of negative 2.3 percent to positive 2.0 percent, with negative 5 percent being an outlier. For five years during 2003-13 the real interest has remained negative and even when positive the rate has not been too high. If savings were a constraint, the weighted average return on deposits should have been high. What we see is that return to depositors decreased further from the already low level of 3.6 percent per annum in June 2002 to reach mere 0.95 percent by June 2004. The return picked up slightly in the next two years to reach 2.60 by June 2007. The return to depositors suddenly rose to 4.13 percent in next twelve months and since then has hovered close to this level. What happened during June 2007-08 to cause a jump of 1.53 percentage points in weighted average return to depositors? Is this a case willingness of the banks to remunerate savings at a higher rate due to high demand for loanable funds? No! in fact it was the just the opposite, the weighted average return to depositors increased not because of the willingness of the banks to remunerate savings at a higher rate rather it increased because of the mandatory floor rate fixed by the central bank in February 2008 (See previous section).

According to HRV (2005), if investment is constrained by savings, an exogenous increase in funds like foreign aid or remittances should lead to increase in investment. The remittances from overseas Pakistani's have shown a rapid increase since 2001 however the increase has not translated into increase in investment (Fig. 3). This also suggests that investments are not constrained by savings.

Fig. 3. Investment, Savings and Remittances

Here we may mention that HRV's argument that in an economy constrained by savings, an exogenous increase in foreign inflows like remittances or foreign aid will lead to increase in investment rather than consumption may not be entirely true for the low income countries. In these countries it is the overseas workers that send remittances to their relatives back home. These workers go abroad to serve in foreign countries primarily because their households are finding it difficult to make ends meet i.e. the poor households are consumption-constrained. The remittances from these workers thus naturally go into feeding consumption rather than saving and investment. Similarly the foreign aid cannot always be expected to boost investment. First foreign aid, in recent past, has not been easily available to Pakistan and when available, it is mostly for balance of payments support from the IMF. For example in June 2013, Pakistan managed to negotiate a stand-by facility of \$6.7 billion with the IMF. The context of the IMF reform program is that foreign reserves were barely enough to meet two months of imports—a dangerously low level and without the fresh aid it would have been very difficult for the country to make upcoming repayments of the previous loans to the IMF. In these circumstances aid cannot be expected to boost investment even if savings are a constraint.

We have mentioned earlier that given low return paid to depositors by the banks the central bank had to fix a mandatory floor rate in February 2008. This clearly shows the absence of willingness of the banks to remunerate savings at a high rate. Thus yet another indicator of savings being low, specified by HRV (2005) seems absent in Pakistan.

We conclude from this section that cost of finance is implicitly high due to bad financial intermediation. The level of savings, even if low, does not contribute to high cost of finance or for that matter the low level of investment. In next section we examine whether investment is constrained by low return to economic activity and if so what keeps the return to economic activity low.

3.2. Low Return to Economic Activity

HRV (2005) 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.

Symptoms suggest that the return to private economic activity is low in Pakistan. Table 4 shows that real interest rate is quite low. As shown in the Figure 2 and discussed under section 3.1.1 banks are high on liquidity. Despite the high liquidity the banks in Pakistan do not seem to be chasing lenders. Why? The answer lies in the huge borrowings of the government from the banking system—given the huge appetite of the government to borrow the banks do not seem pushed to haunt borrowers. Secondly, the cumbersome and long litigation process makes it extremely difficult for the banks to recover from defaulters of bank loan. Therefore they prefer to lend risk-free to government at lower rate rather than engage in high-risk lending to private sector. We have also shown in fig.3 that remittances do not bear any significant relationship with investment and that these are used more, to feed consumption rather than investment. Moreover with increase in remittances, real estate prices also have been on the rise in Pakistan. There is also some evidence to suggest that Pakistani investors have invested in the real estate of Dubai and in the industry of Bangladesh. Thus, other than the state of current account, being in near balance or surplus, the country carries all the symptoms which suggest that the return to economic activity is low in Pakistan.

HRV (2005) argue that low private return to economic activity could be either due low appropriability of returns or low social return. The reason for low appropriability could be 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.

3.2.1. *Government Failure*

Table 5 shows that Pakistan is way behind not only the Asian tigers but is also behind her South Asian neighbours on almost all the elements of governance/institutional quality. Moreover Table 6 shows that the governance/institution quality has declined overtime in the country. Tables 5 and 6, on their own, speak of governance failure in Pakistan.

Table 5

Comparison of Pakistan with Other Countries in Terms of World Bank Governance Indicators (The Indices Correspond for the Year 2012)

Variables	Pakistan	Average		Malaysia
		South Asia	Asian Tigers	
Voice and Accountability	-0.87	-0.44	0.55	-0.34
Political Stability/ Absence of Violence	-2.68	-0.98	0.84	0.00
Government Effectiveness	-0.79	-0.39	1.58	1.01
Regulatory Quality	-0.73	-0.65	1.49	0.55
Rule of Law	-0.91	-0.45	1.33	0.51
Control of Corruption	-1.06	-0.45	1.26	0.30

Table 6

Comparison of Governance Indicators in Pakistan Across Time

Variables	1996	2000	2006	2011	2012
Voice and Accountability	-0.67	-1.31	-0.93	-0.83	-0.9
Political Stability/Absence of Violence	-1.21	-1.14	-2.05	-2.7	-2.7
Government Effectiveness	-0.59	-0.58	-0.36	-0.82	-0.8
Regulatory Quality	-0.45	-0.73	-0.44	-0.61	-0.7
Rule of Law	-0.66	-0.94	-0.83	-0.9	-0.9
Control of Corruption	-1.15	-0.82	-0.76	-1	-1.1

Numerous reform efforts have been undertaken in various areas of governance. Failure is one thing which is common to all efforts. Since independence of the country in 1947, 8 law commissions have been constituted at different times to recommend reforms of the judicial system. The culmination of the reform effort was the framing of the National Judicial Policy in 2009. Police reforms started with a 1948 bill to introduce metropolitan policing in Karachi and culminated in Police Act 2002. Three out of four provinces have done away with the police Act 2002 and have reverted back to the policing system prevailing prior to the Act. The education sector has seen 11 major reform efforts. Four full scale commissions have thoroughly debated civil service reforms during 1972–2009. These commissions were over the top of numerous other efforts at a smaller scale. However the debate over reforming the civil service still continues. The federal structure has been restructured thrice including the 18th amendment enacted in 2009. Local governments have been suspended and revived 5 times. Almost all the reforms efforts mentioned above have faced failure. The reasons behind this failure includes; assigning the implementation of reform to the would-be losers of the reforms process, who either block the implementation or at least temper with the essence of reforms

e.g. implementation of the civil service reforms is often assigned to the civil servants. Most reform efforts lack a clear implementation framework that assigns responsibility, benchmarks for performance and budgetary provisions. Moreover implementation of the intended reforms is often beyond the capacity of those charged with implementation—politicians and civil servants are trained and experienced in leading and managing the status quo rather than transforming it.

Majority of State Owned Enterprises (SOEs) are incurring large losses and are a burden on the national exchequer as well as inefficient in service delivery. A number of these (SOEs) are headed by bureaucrats who as discussed above have little incentive to perform. Moreover at present (i.e. in 2016) a number of these entities are without a regular CEO since long and there does not seem to be a sense of urgency in the government to appoint professional CEOs on a regular basis in the loss making PSE's.

Numerous events suggest that the government does not take governance too seriously. Since 2008 it happened often that ineligible persons were appointed to certain key posts. The appointments were challenged in the court and the persons were removed. Moreover in 2013-14 the government had arbitrarily removed heads of some public sector institutions who were later restored by the court. The previous regime (2008–13) through-out its five year tenure remained bogged down by court cases on one or the other issue. Even one prime minister lost his job after refusing to comply with court orders regarding corruption allegations against no less than the Head of the State i.e. president of the country. Obviously preoccupation of the government with litigation against her was at the cost of time that should have been devoted to the other activities including ensuring good governance. During 2008–14 three heads of central bank of the country i.e. State Bank of Pakistan, have resigned without completing their tenure. Reportedly they were made to resign after failing to toe the line of the government. Typically, around the world, the governor of the central bank is an economist, however during 2008–14 successive regimes have insisted upon appointing commercial bankers as head of the central bank.

All this clearly speaks volumes about the poor state of governance and under this state of governance appropriability of economic returns could not be too high. A number of constraints e.g. energy shortages that prima facie may look like a supply constraint, in fact may be rooted in bad governance and poor institutional quality, discussed at length below next section.

Institutional Quality

The adverse impact poor institutional quality on appropriability, governance and growth is well established. We discuss below some examples of the poor institutions which obviously are contribute to poor governance and hence adversely influence growth.

Plea Bargain

Corruption constrains growth. One of the major organisations charged with the task of controlling corruption in Pakistan is National Accountability Bureau (NAB). The NAB ordinance allows ‘voluntary return of money’ and ‘Plea bargain’. If the person suspected of corruption voluntarily returns the entire money involved before being formally charged, then he faces no charges and of course, faces no penalty. If formal inquiry has been initiated into a case of corruption the person charged has the option to enter into plea bargain. Under Plea bargain the person charged has to return 80 percent of the money involved and he faces only a mild penalty like ineligibility to hold public office. Thus the maximum a corrupt person stands to lose is the money embezzled. This obviously is not enough to control corruption. If corruption negatively influences growth then the institution of plea bargain by failing to control corruption also negatively influences growth.

Structure of Electricity Distribution: Controlling Theft of Electricity

Huge amount of electricity is stolen from the grid every day. The country lacks appropriate incentive structure that would curb power theft—constitutionally electricity distribution all over Pakistan, except the port city of Karachi, is controlled by the federal government. The primary agency that can curb theft by nabbing and punishing power-thieves is the police, which is under provincial control. Thus while distribution is with the federal government, the responsibility for controlling theft is with the provincial governments. If a province and the federal government do not see eye to eye, for political reasons, which quite often is the case, there is little hope that the police would be employed to curb theft of electricity. Clearly the incentive structure leaves much to be desired. The failure to control theft contributes to the shortfall of electricity which obviously negatively influences growth.

Creation of New Provinces

Off and on the demands for the creation of new provinces crops up in Pakistan. Smaller administrative units have the advantage of focusing upon lagged areas thereby contributing to development. If provinces are viewed as administrative units then new provinces should become inevitable with increase in population of a province beyond a level considered optimal for administrative purpose.

The institutional arrangement for creation of new province, in Pakistan is that the concerned provincial assembly, from which the new province is proposed to be carved-out, should pass a resolution in favour of the creation of the new province. This process is self-defeating— as nobody wants to cut her own empire so it is highly unlikely that the resolution required would be passed.

Clearly, this is a poor institutional arrangement. The Indian practice is that if the Lok Sabha (Lower House at the national level) votes by 2/3rd majority in favour of the creation of a new State then the State is created. The concerned State from which the new state is proposed to be carved-out has no role in allowing or disallowing the creation of the new state. No wonder that 12 new states have been created in India since 1947 while in Australia where the process is similar to that of Pakistan no new state has been created since over a century [Amjad, *et al.* (2012)]. Assuming that smaller administrative units are good for growth, the institution for creation of new provinces in Pakistan constrains growth.

National Finance Commission

All countries practice some system to distribute national financial resources among the constituent/administrative units. From 1947–2009 Pakistan had been distributing the national resources among the provinces entirely on the basis provincial share of the population in the country's population. Distribution on the basis of population ignores the specific socio-economic and geographic features of a region. Besides Pakistan, Nigeria had been the only country which has been distributing national resources entirely on the basis of population. Number of countries distributes resources on need-basis while accounting, for example, for the demographic structure of the population, a jurisdictions ability to generate own source revenue and so on. Pakistan slightly improved upon the institutional arrangement for distribution of resources by introducing Multiple Indicator Criteria (MIC) for distribution of resources among the provinces. The MIC includes population share, inverse population density, revenue generation and poverty/backwardness. However the irony is that even in the MIC the population share enjoys a weight of 82 percent. Thus while the MIC has tried to pacify the stakeholders vying for broad based criteria the essence of the population share criterion in vogue since 1947 has been retained.

The allocation of funds to regions within provinces is largely discretionary—some receive bulk while others remain starved. The starved regions lack resources to build physical infrastructure and human capital. To the extent that economic growth depends upon physical and human capital, the skewed distribution of resources constrains regional and hence national economic growth.

All the demands for creation of new provinces have arisen in regions lagging in development. It is the distribution of resources under the above referred mechanisms that has partly contributed to lagged development of some regions. The lagged development includes poor infrastructure like roads, utilities, public transport network, health care and educational facilities. Such infrastructural constraints, rooted in poor institutional arrangement for distribution of resources among the sub-national units, adversely influence private investment and hence growth.

Political Finance

In Pakistan, the candidates and the political parties contesting elections finance themselves and the expenses incurred on elections are huge. Anecdotal evidence suggests that often the political parties acquire electoral funds through questionable means. Most political parties also require their members to contribute huge funds to the parties. This system excludes the poor and even the middle class from the electoral process. It would not be surprising if a government that emerges from such a process, practices policies favouring only the elite. The negative impact on growth can easily be imagined. This financing system induces the candidates and the political parties in power to recover the money spent on elections through questionable means and also offer lucrative contracts and posts to their financiers. Such leakages obviously effect growth negatively. Relevant literature suggests that while the jury is still out on what is the best system of political finance but still one can argue in favour of one system over another. Pakistan has never debated the possibility of considering alternates to her present growth-constraining system of political finance.

Statutory Regulatory Orders (SROs)

SRO is the term used to reflect the delegated legislation made by the executive head of the ministries without referring the matter to the Parliament. Most frequently the SROs have been used by the ministry of Finance/FBR to impose new taxes or to offer tax concessions without the approval of the parliament. Quite often these have been used to impose such taxes which the Parliament is not expected to approve or to allow tax concessions to specific industries. Such concessions quite often involve rent seeking. One study [SDPI (2013)] estimates that more than 80 percent of the tariff lines are influenced by one or the other SRO. The SROs clearly conflict with the institution of 'no taxation without representation' and these negatively influence growth to the extent of rent seeking involved.

Supplementary Budget

The aggregate actual expenditures incurred by the federal government are almost always in excess of the limit laid down in annual budget passed by the parliament right before the commencement of the fiscal year. Such excess has to be approved by the parliament. Moreover quite often the budget approved for a specific use by the parliament is re-appropriated to be spent elsewhere. Again such re-appropriation has to be approved by parliament. If the will of the people and by implication democracy and parliament is to enjoy supremacy than it is only logical that expenditures exceeding budgetary limits and re-appropriation be approved ex-ante and this is the practice in most of the countries. However in Pakistan the supplementary budget, including the excess of expenditures over the budget originally approved by the parliament and the re-appropriation are

approved ex-post. If expenditure allocation approved in a democratic manner have anything to with growth than the institution for approval of supplementary budget in Pakistan constrains growth.

Bureaucracy

The importance of bureaucracy, referred to as civil service in Pakistan, as an institution cannot be overemphasised—it is the executive arm of the government that implements the policies. The performance of the bureaucracy depends upon the incentive structure that it faces. The entire corps of public servants including the bureaucracy in Pakistan enjoys almost absolute job security. It is very rare that anybody is fired for non-performance. Even poor performance being reflected in Annual Performance Reviews is also rare. Promotions are mostly based on seniority. Salary within the same grade (i.e. rank) does not vary with performance. Pakistan's civil service is generalist rather than specialist in nature—a geologist might be posted in the ministry of information and a person with degree in Journalism may end up in the ministry of petroleum. Frequent transfers and postings are the norm in civil service - these transfers can occur at the discretion of the government as well as at the request of the officer concerned. When at the discretion of the government, at times the underlying reason could be to get rid of an officer who does not toe the line and when at the request of the officer concerned the objective could be to secure a 'prized' posting. Though the degree of provincial autonomy is relatively high still top provincial bureaucracy comes from the federal government, though of course with the consent of the provincial government. For example, maintaining law and order is a provincial subject but the provincial police chief is an employee of the federal government. Therefore tension between the federal and provincial government over posting of top civil servants is not unusual. Moreover federal employees posted in provinces, enjoying the option to move back to the federal government do not feel hard pressed to go along well with the provincial political set up. With the kind of incentive structure discussed above one cannot expect the bureaucracy to express great zeal in ensuring the implementation of the policies framed by the government. Secondly the institutional structure of civil service neither encourages the best to opt it nor is it designed to have right man at the right place. All this obviously constrains growth.

Local Government

The benefits of having local governments, especially taking into account the developmental preferences at the grass root level, cannot be overemphasised. During her 69 years history Pakistan has had three episodes of local governments under the three military regimes. During these regimes the local governments were primarily used to co-opt local influentials rather than impart the benefits typically attributed to local bodies. Democratic regimes have mostly remained averse to the local bodies [Cheema, *et al.* (2005)], the averseness is

owed to the fact that politicians at all three levels, national, provincial and local vie for the same constituency—offering petty jobs to the voters, helping them with petty disputes at police stations and courts, ensuring funds for levelling local streets and the kind. To avoid this kind of overlap the political forces at higher tiers have generally remained reluctant to devolve sufficient powers to these bodies. To the extent that inclusiveness in agenda setting encourages growth, the country lacks the institution required.

Medium of Instruction: English versus Urdu

The office-language in Pakistan is mostly English. However the education system does not develop equal proficiency of all in English. There are schools in public sector as well as private sector. The public schools charge only a fraction of the fee charged by private schools, therefore the poor by default go to public schools. In some remote areas, the public schools still teach all subjects in national or native language till grade 5th and then start teaching English language from grade 6th with rest of the subjects e.g. mathematics, and science being taught in the national language till grade 10th. The private schools, on the other hand, teach English as a language from class one and teach all subjects in English right from class one. Thus the private schools develop greater proficiency of their pupils in English. This puts the pupils from public sector schools at a disadvantage in the job market, which also means that the poor are at a disadvantage. It is no wonder that out of thousands of people who fail every year in the exam for entry into bureaucracy, a large majority of them fail in the subject of English. Thus this English-Urdu divide throws out of the white collar labour pool the not-so proficient in English though otherwise they might be brilliant. This shrunken labour pool obviously yields poor quality of labour which constrains growth. Moreover this divide constrains equal access to opportunity, which harms growth through the ‘conflict’ channel.

Financing Education

In a significant part of the world education up to a certain level, often Grade 12, is compulsory and is financed by the state. Secondly it is only very few who can afford higher education in private sector universities and the quality of education in the public sector universities leaves much to be desired. Obviously again the poor are at a disadvantage. The university education in developed countries too is expensive, but still, in these countries, this expensiveness does not constrain the poor to seek higher education—across the board availability of loans to students from the government and banks makes it possible for the not so well off to seek higher education. Thus the state’s failure to send all to school and to facilitate access to finance for higher education, constrains literacy and hence growth.

Holding Census

Population census, as per the constitution of Pakistan, is to be held on decennial basis in the country. The census due in 1981 was held in 1998 and the one due in 2008 is yet to be held. Different governments have delayed the holding of censuses on one or the other pretext. The political economy tied to holding the population count cannot be ruled out because number of things are attached to the headcount including; distribution of national financial resources among provinces, the delimitation of electoral constituencies for the purpose of general elections and provincial quotas in federal jobs. The stakeholders wary of being adversely affected by expected new numbers are likely to oppose the census. There is no provision in the constitution that would force the government or somehow reprimand her if the government delays the census. If knowing the correct population of the country has anything to do with growth, the non-availability of an institutional mechanism that make it mandatory for the government to hold population census at a regular frequency constrains growth.

3.2.2. Macroeconomic Instability

Pakistan faced macroeconomic instability twice during the 2008–14. A look at the kind of fluctuations and their timings suggest that Pakistan faced political business cycles—expansionary fiscal and monetary policies close to election time followed by contractionary policies during the initial years of a political regime. An examination of the some critical variables (Table 7) before and after the elections of 2008 and 2013 suggests the occurrence of some sort of political business cycle during those times. The oil prices remained static (at Rs 51/liter) for almost 10 months before the 2008-elections though the prices were on the rise internationally. Moreover in 6 months prior to regime change in 2008 the exchange rate depreciated by only 3.6 percent whereas in seven months following the regime change the exchange rate depreciated by 30 percent. Electricity prices were not increased for almost a year prior to the elections held in May 2013. This contributed to accumulation of circular debt which was retired in the initial months of the current reign. The exchange rate also showed relative stability prior to the 2013-elections while the economic fundamentals suggested depreciation—in six months prior to the regime change in June 2013 the exchange rate depreciated only 1.3 percent while the depreciation in the 6 months after the regime change is 6.7 percent. The bottom line is that the failure to undertake gradual adjustment in pre-election periods necessitates rapid adjustment post-elections. Occurrence of the political business cycle and this being financed by the central bank on its own speak of institutional deficit. Combine this with the resignation of three governors of the central bank in a span of less than five years, and the picture becomes even clearer—the central has no independence at all. Obviously the institutions are weak.

Table 7

Indicators of Macroeconomic Stability

	Fiscal Deficit (% of GDP)	Exchange Rate depreciation	Current Account (% of GDP)	Foreign Reserves (\$ in Billions)
2002-03	3.7	-3.75	4.9	9,529
2003-04	2.3	-1.57	1.8	10,564
2004-05	3.3	3.11	-1.4	9,805
2005-6	4.2	1.36	-3.9	10,836
2006-7	4.3	0.45	-4.8	14,333
2007-8	7.6	12.79	-8.4	8,745
2008-9	5.3	19.19	-5.7	9,527
2009-10	6.3	5.02	2.2	13,112
2010-11	7.2	0.71	0.1	15,662
2011-12	8.5	9.87	-2.1	10,856
2012-13	8.0	4.76	-1.0	6,047

3.2.3. Market Failure: Asymmetric Information

For businesses to grow and survive, it is essential for them to gain confidence of their customers. Asymmetry in information between buyers and sellers constrains trade and at times even cause collapse of the market. To give confidence to the buyers that they are not buying a 'lemon' in the Akerlof (2001) sense, developed markets have adopted variety of institutional mechanisms. These include 'guarantees' and 'warranties' and 'Returns' against full cash refunds with 'no questions' asked. In Pakistan only a handful of larger firms offer guaranties/warranties. However if the product turns out to be defective the enforcement of guarantees runs into problems. Small firms rarely accept 'Returns' against cash refund. In a survey of small retailers conducted in the populous city of Rawalpindi (close to the country's capital) only 4 percent of the retailers indicated that they accept 'Returns' against refund of the cash paid by the buyer—at best they allow replacement with a product of a similar kind. The volume of trade affected by the inadequate supply of institutions that reduce the asymmetry of information between the buyers and sellers could be a major constraint to the growth of the business. However it is difficult to assess the volume of trade thus affected and it is difficult to say whether or not asymmetric information is a binding constraint to growth in Pakistan.

3.3. Social Returns

Social returns, according to Hausmann, *et al.* (2005) are a function of quality of infrastructure and the state of human capital. We look at the state of the two in the following section.

3.3.1. Infrastructure: Energy

Under the head of infrastructure, energy is the single most important item that demands discussion in the context of growth diagnostics of Pakistan. During the past couple of years the country has faced serious energy shortages, with urban areas going without electricity for up to 12 hours and rural areas for 20 hours [NEPRA, State of Industry Report (2012)]. Compressed Natural Gas (CNG), a fuel used in majority of the vehicles, is not available at the gas stations for 3-4 days a week. Commercial sector, including manufacturing and services also face power outages for similar durations in urban and rural areas. The electricity crisis is more than just the capacity constraint. At times given, forex/financial constraint, the country has restrained from importing fuel oil required for running its furnace oil based power plants at full capacity. A large proportion of domestic as well as commercial consumers use personal generators to obtain electricity when they are not getting it from the grid. Electricity from generators costs much more than the electricity from the grid. The use of personal generators suggests that consumers are willing to pay more than they are currently paying for the electricity from the grid. Consumers of CNG buy costlier petrol when the gas stations are not providing CNG. Going by the HRV's view that a constraint to growth has a high price, leads us to suspect that electricity constraint is a binding one and that its alleviation can give a significant boost to growth. Better growth performance of the manufacturing sector during July 2013–June 2014 over last year on the back of improved energy supply yields some credence to our view. The question is, can we take energy constraint at face value, i.e. term this merely an energy constraint or could it be that the constraint might be rooted in some other constraint e.g. the state of governance.

We take a look at the underlying causes of energy crisis to understand the nature of constraint. The energy crisis of Pakistan is unique in the sense that it has helped coin a new term called 'circular debt'. The circular debt is defined as "the revenue shortfall within the state owned Central Power Purchase Agency (CPPA) to the extent that it cannot pay for the electricity purchased from the power supply companies". The revenue shortfall then cascades through the entire supply chain, from electricity generation companies to fuel suppliers, refiners and producers; resulting in shortage of fuel supplies to the generation companies and increase in power outages [USAID (2013)].

To allow the readers to understand the causes of circular debt, which constrains generation and supply of electricity in Pakistan, some understanding of the structure of the country's power industry is warranted. The industry comprises, generation companies (Gencos), 9 electricity distribution companies (Discos), Central Power Purchase Agency (CPPA),

National Transmission Dispatch Company (NTDC) and Nepra the regulator. The regulator sets the tariff that a Disco can charge from consumers. The tariff determination is based on a certain criterion which takes into account the efficiency of the Discos. The tariff which a Disco is actually allowed to charge from the consumers is announced by the federal government and is typically; uniform across the country and is generally less than the different tariffs allowed by the Nepra to the Discos. The difference between tariff allowed by the Nepra to a Discos and what the government allows the Discos to charge from the ultimate consumer is payable as 'tariff differential subsidy (TDS)' by the federal government to the Discos. There are at least two problems in implementing this subsidy mechanism. One, the TDS is inadequately budgeted by the government and then there are long delays in actual payment of the TDS to the Discos [USAID (2013)]. The Discos are also unable to collect their bills in full and the public sector is one big defaulter. Line losses are very high—25 percent and a large part of losses are owed to power theft. The government has so far failed to enact stringent laws to penalise power thieves or otherwise curb theft. All this makes the Discos cash-strapped. The cash strapped Discos are unable to pay the CPPA /Gencos which then fail to pay the fuel companies. This makes the public sector fuel supplier cash strapped. As payments due from Gencos accumulate, the fuel supplier stops supplies to them. Moreover the liquidity constrained fuel supplier also finds it difficult to buy fuel. Finally the power generation declines despite the availability of generation capacity.

The foregoing shows that uniform tariffs, tariff subsidy, delay in payment of TDS, power theft, line losses owed to old and worn out transmission infrastructure all this is nothing but governance failure. Moreover the generation companies are operating at less than optimal efficiency (are using more fuel per unit of electricity generated) and the regulator has failed to force the Gencos to improve the efficiency of the plants—again a governance failure. Other governance failures include failure of the policy makers to foresee growth in demand from 2000–2007 and develop generation capacity accordingly. The use of expensive energy mix with greater reliance on thermal sources despite the availability of sufficient potential for generation of electricity from hydel sources is yet another case of governance failure.

To conclude the discussion on electricity and governance we cite another case of governance failure. The K-Electric [formerly Karachi Electric Supply Company (KESC owns Residual Fuel Oil (RFO) based power plants. Generation of electricity from these plants is relatively expensive. The K-electric therefore does not operate these plants. On the other hand as per an agreement signed between the K-electric and the government owned NTDC, the NTDC is bound to supply 650 MW of electricity to the KESC. To supply the promised electricity to the K-electric the NTDC has to operate plants that are even more inefficient than the RFO based plants of the K-electric—

operating expansive plants while relatively efficient plants are available is nothing but a crisis in governance.

The Gas Sector in Pakistan has the largest share in energy consumption (50 percent in 2011-12) owing to an established natural gas industry and its availability at relatively cheap rates. However, the share of electricity generation based on natural gas is decreasing drastically due to country's depleting gas reserves. Power generation based on natural gas costs Rs 4.24 per kwh (in 2011-12), which is much lower than the generation cost using furnace oil (Rs 15.94 per kWh) or high-speed diesel (Rs 18.89 per kwh). Use of gas for power generation and as car fuel coupled with inefficient pricing since ages has put enormous burden on the available gas resources which are depleting very fast.

Anecdotal evidence suggests that Pakistan has a huge gas potential but has failed to exploit it. Roughly around 29 trillion cubic feet (TCF) of natural gas remains to be exploited. Similarly, over 50 TCF of Shale Gas in the lower Indus Basin (and approximately 150 TCF in the whole Indus Basin excluding Baluchistan and KPK regions) remains to be exploited because of missing policy incentives, absence of geological data, lack of know-how and technologies. Exploration and production activities are not keeping pace with the growing demand for this source of energy. The well-head gas price is regulated but has failed in offering exploration and production companies with adequate incentive to discover and develop additional indigenous gas resources. Although Petroleum Policy 2012 offers high well-head gas prices but still Pakistan is far behind countries in the Asia-Pacific region in attracting upstream investments and operations.⁵

Depletion of gas reserves on the back of highly subsidised domestic and commercial usage of gas, failure to develop own-source sufficient exploration capacity and failure to woo sufficient foreign investment for exploration of gas in Pakistan are all governance failures.

3.3.2. Human Capital

Psacharopoulos (1994) estimates the rate of return to education for scores of countries and regions. Findings from one of his study are shown below. It is apparent from Table 8 that the return to education, in Pakistan, for all categories is rather low relative to the average for the lower middle income. The more worrying factor is that the return to primary and secondary education—the categories in which most of the literate Pakistanis are classified—is significantly lower than the average for the lower middle income countries.

⁵Not only policies are fragmented, same price for all zones may not provide any incentive to explore and produce in difficult zones. Policy focus on exploration of shale gas, which is getting popular in other parts of world, is almost absent.

Table 8
Returns to Education

	Male			Female		
	Prim	Sec	Tertiary	Prim	Sec	Tertiary
Low Income (\$610)	23.4	15.2	10.6	35.2	19.3	23.0
Lower Middle Income (\$2,449)	18.2	13.4	11.4	29.9	18.7	18.9
Upper Middle Income (\$7,619)	14.3	10.6	9.5	21.3	12.7	14.8
Upper Income (\$7,620 or more)	n.a.	10.3	8.2	n.a.	12.8	7.7
World	20.0	13.5	10.7	30.7	17.7	19.0
Pakistan (Male)	3.5	8.7	11.4	2.6	27.1	46.0

Note: Prim, Sec and Tertiary reflect Primary, Secondary and Tertiary Education.

A glance at Table 8 shows that return to primary education in Pakistan for male as well as female is much below the norm for lower middle income countries. The return to secondary education for males is also below the norm for countries with comparable level of income and while return to higher education for males is similar to the returns found around the world. However for females the returns to secondary and higher education are sufficiently above the world average.

What makes the return to female tertiary education relatively high? The literacy rate in Pakistan is 57 percent. The male literacy rate is 65 percent while for female the literacy rate is only 45 percent. The gender gap in literacy perhaps explains the abnormally higher return to female education. According to UNESCO's 2009 global digest only 6.3 percent of Pakistanis (8.9 percent males and only 3.5 percent females) were university graduates in 2007.

What makes highly educated generally scarce? It is the extractive nature of institutions that constraint the access to opportunity and therefore constrains the development of human capital. We have explained earlier that the Urdu-English divide constrains the access to opportunity and hence their entry into white-collar labour market.

Secondly, rapidly increasing share of the private sector in education despite it being relatively expensive suggests that people are opting out of the public education. This speaks of generally relatively poor quality of education in public sector which again reflects governance failure. Moreover it is only very few who can afford education in private sector universities, obviously again the poor are at a disadvantage. The university education in developed countries too is expensive, but still, in these countries, this expensiveness does not restrain the poor to seek higher education—across the board loans available to the students from the government and banks makes it possible for the not so well off to seek higher education.

Thus, though, *prima facie* it appears that human capital constrains growth but the underlying factors that make human capital a constraint are the extractive nature of institutions that restricts access to opportunity.

4. MICRO (FIRM LEVEL) CONSTRAINTS TO GROWTH

To investigate the determinants of firms' expansion we have conducted cross section analysis based on the 'The Enterprise Survey' data of 2007. The following model has been estimated.

$$y_i = \alpha + \beta z_i + \varepsilon_i \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad \dots \quad (2)$$

Where y_i represents expansion/growth of firm i and z represent the matrix of variables that may influence growth of firms.

The World Enterprise survey provides data for 402 manufacturing firms in Pakistan. The survey was conducted in 2007. Possible candidate variables that would proximate the growth of a firm include: growth in sales, growth in workforce and growth in capacity utilisation. Regarding capacity utilisation the World Enterprise data reports utilisation, only for the survey year i.e. 2007 therefore computing growth in capacity utilisation is not possible. For sales and workforce the World Enterprise data reports figures for the survey year (2007) as well as for 3 years back. This allows us to compute the growth in these variables. Among the growth in sales and growth in workforce we have chosen to use the growth in workforce as the dependent variable for our regression analysis. The reason is that firms are more likely to reveal the true number of people employed rather than their annual sales. (It is noteworthy here that the Enterprise survey asks the firms about their annual sales—the sales are not verified from published account, of the firms, if available.)

The World Enterprise Survey collects information from the manufacturing firms on various aspects of entrepreneurship. These aspects are: corruption, crime, finance, gender, informality, infrastructure, innovation, performance, regulation and taxes, trade and workforce. Under a single aspect the Enterprise survey poses several questions to the respondents. As the responses to individual questions under a single aspect e.g. 'access to finance', are likely to be correlated therefore we construct indices of the variables, which we feel are potential constraints to growth, and include these indices as the explanatory variables in the firm-growth model that we estimate. We may mention here that governance/institutions figure prominently in the survey questions under all categories and the questions asked under a specific aspect, for example infrastructure (electricity) may in fact reflect the state of governance/institutions rather than tell something directly about the state of the variable, inferred from the title under which the question is posed. We have included such responses under 'institutional quality' rather than under 'electricity'. For example though the question; "how many days did it take to obtain an electrical connection" appears under 'Infrastructure and Services' in the questionnaire, we have included this question under 'institutional quality'. Thus using the questions from almost all aspects we have constructed 5 indices on the following: institutional quality, access to finance, energy (proxied by

electricity), quality of labour and law and order (proxied by crimes). All questions have been assigned equal weights in the construction of the indices.

4.1. Results: Micro Evidence

The results, presented in Table 9, show that labour quality and institutional quality are highly significant. Access to finance is also significant but the size of coefficient is not very large. The law and order and energy/electricity are insignificant. Not only the labour quality and institutional quality are significant the coefficient size of these variables is quite large. As the coefficient size of a variable shows the marginal impact of the variable concerned upon the dependent variable, this implies that if the labour quality and the institutional quality are improved the improvement will have a very large impact upon growth of the economy. A typical citizen of Pakistan has been experiencing long power outages and a very poor law and order situation over the past couple of years. Some geographic regions have been experiencing power outages for roughly 12 hours a day while the media is rife with news of suicide bombings, bomb blasts and street crimes, like snatching of cell phones and outright demand of cash by extortionists from firms. Given this, one would expect a positive relationship of ‘law & order’ and ‘energy/electricity’ with growth of firm. One would have expected a positive relationship between the two variables and growth because a slight improvement in energy supply and law and order could influence growth, therefore on first look the insignificant relationship of these two variables with firm-growth is hard to believe. However a deeper look provides some explanation for the apparently implausible results. Afia (2012) argues that the electricity crisis in Pakistan is essentially a crisis in governance. We have also discussed earlier at length how electricity crisis in fact is a governance failure. A crude evidence of this is that while demand has been increasing over the years due to economic and population growth very little was added to supply from 2000 to 2012. Though private power producers have entered the power generation market the thermal generation is characterised by monopsony—government is the sole buyer of electricity produced by the private power producers. Given this the generation by the private power producers strongly depends upon the package of incentives/disincentives included in the power policy pursued by the government. As power generation policy is formulated by the government therefore the short supply of electricity essentially reflects the failure of governance. Therefore the impact of the energy crisis is likely to be observed through the lens of relationship between governance/institutional quality and growth rather than the between energy and growth *per se*.

Regarding the insignificance of law and order we suspect that a lot many crimes, especially street crimes go unreported. The reason perhaps is that people do not expect any worthwhile action from the police. Secondly regarding suicide

bombings and bomb blasts one incident gets recorded as one crime though their severity in terms of immediate loss of human and physical capital as well as long run damage caused to the business confidence is much greater than other typical crimes. Therefore the data on crime may not adequately capture the negative impact of crime on growth unless all/majority of the crime incidents are reported and the data is available at a level of disaggregation which allows the researcher to assign weights to the crime incidents depending upon the severity of the potential loss caused to economic growth.

Table 9

Evidence from Firm Level Regression

Dependent Variable	Growth in Employment
Labour Quality	84.03 (35.47)**
Institutional Quality	74.15 (14.75)***
Finance	18.29 (8.46)**
Law and Order	-16.16 (18.56)
Electricity	-2.77 (4.20)
Constant	-107.59 (27.10)***

The World Enterprise Survey asks the respondents to choose the biggest constraint from a list of 15 constraints. According to perceptions of the firms availability of electricity tops the list with as many as 41.7 percent saying that availability of electricity is the biggest constraint (Table 10), next comes corruption with 17.7 percent of the respondents choosing it as the biggest constraint. Access to finance is third on the list with 9 percent of the respondents saying that availability of finance represents the biggest constraint to doing business. Prima facie the perceptions referred above conflict with the results obtained from regression analysis. However a closer look at the questionnaire and the causes of energy crisis shows that this is not the case. As we have explained earlier the energy crisis is essentially a governance crisis the end result of which is shortage of energy. Therefore when a respondent is asked “Do you think electricity is the biggest constraint”. The respondent has in mind the end result i.e. shortage of energy’ rather than the cause(s) of energy crisis. For regression analysis if we include the questions related to governance aspect of energy under the ‘energy category’ then energy comes out as significant in the regression analysis as well. However to emphasise upon the root cause we

decided to include such questions under ‘institutional quality’. The constraint ranked as the biggest constraint by the second highest number of respondents is ‘corruption’ which obviously has roots in poor governance and institutions. The perception of the respondents that corruption is a major constraint to doing business and the significant influence of institutional quality on growth, with a large coefficient supports the view that the poor state of institutions severely constrain economic growth in Pakistan. ‘Access to finance’ has been indicated as the biggest constraint by third highest number of respondents. The regression analysis supports this perception—access to finance is statistically significant and its coefficient is smaller than ‘labour quality and ‘institutional quality’ suggesting that ‘access to finance’ ranks third in terms severity of the constraint.

Table 10

Most Serious Obstacles to Growth: Respondents Perception: Year: 2007

	Number of Respondents	Percent
Electricity	167	41.75
Corruption	71	17.75
Access to finance	38	9.5
Macroeconomic instability	28	7.0
Crime, theft and disorder	20	5.0
Tax rates	17	4.25
Access to land	11	2.75
Political instability	11	2.75
Practices of competitors in the informal sector	8	2.0
Tax administration	7	1.75
Customs and trade regulations	5	1.25
Labour regulations	4	1.0
Business licensing and permits	4	1.0
Transportation	4	1.0
Inadequately educated workforce	3	0.75
Functioning of the courts	2	0.5
Total	400	100

5. CONCLUSION

Our analysis based on HRV’s decision-tree methodology and the econometric analysis at the micro level has identified several critical constraints. The decision-tree analysis shows that poor institutional quality/poor governance as the most critical constraint to growth. Other constraints that come out prominently from the decision-tree analysis include bad financial intermediation (which constraints access to finance), macroeconomic instability, shortage of

energy and access to better labour quality. Empirical evidence at the micro level yields institutional quality, labour quality and access to finance as the three critical constraints. When we join the pieces of evidence apparent from the two set of investigations and also account for the common findings from the set of investigations, the institutional quality emerges as one mega constraint to economic growth in Pakistan. Constraints like, macroeconomic instability, energy, poor labour quality, bad financial intermediation, lack of access to finance all seem to be rooted in institutional quality. For example one reason for the macroeconomic instability during the past decade has been the politically motivated unrestrained spending by the incumbent governments in an effort to seek re-election. Corruption is another factor which has contributed to unrestrained spending over the decades. The absence of institutions that would constrain this sort of spending speaks of institutional deficit. Related to this is the bad financial intermediation—the banks instead of mediating savings and borrowings between the borrowers and savers in the private sector, prefer to lend to the government. With the government's appetite for borrowing rather high, and the lending to the government being risk-free, the banks are more than willing to lend. The central bank despite making the right noise lacks the independence required to restrain the government from borrowing at will from the central bank. The Fiscal Responsibility Debt Limitation (FRDL) Act, which supposedly puts limits on the debt which the government can incur, is too tame to restrain government's borrowing in practice—the outstanding debt is 66 percent of GDP as against the 60 percent limit prescribed by the FRDL. Weaker independence of the central bank and a tame FRDL again speak of institutional deficit.

On the energy front, uniform tariffs, subsidy, delay in payment of Tariff Differential Subsidy, power theft, line losses owed to worn out transmission infrastructure, inability to foresee growth in energy demand, expensive energy mix and regulator's (i.e. NEPRA) failure to force efficient practices onto power producers all seem to stem from poor institutional quality.

Poor quality of labour has much to do with the kind of education offered at educational institutions and also with whether a broad cross section of the society enjoys access to good schooling. We have shown that the country implicitly and explicitly follows different educational systems, at least in terms of medium of instruction, for the rich and the poor—the rich study in English medium schools and English being the language of the office, the rich enjoy an edge over the poor in the labour market. Moreover with the rich having opted out of the public school system, the quality of education at public schools leaves much to be desired. Thus the educational system does not provide good quality education to the poor, which constitutes a large majority. This limits the pool which sends graduates to the labour market. The limited pool and the practices of imparting knowledge, which encourages rote

learning rather than creative thinking, keep the quality of labour rather poor. Different systems for rich and poor, different languages at schools and offices and practicing systems that encourage memorisation rather than thinking and creativity, again speak of poor institutions.

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