Shifting Development Paradigms: Sequencing Pakistan's New Growth Framework[1]

Robert Looney[*]

A trend setter in Asia up to the sixties, economic management in Pakistan has steadily deteriorated to the point where the economy has, for the past few decades, lurched from one financial crisis to the next. At the heart of the problem has been the poor management of public finances and deep-seated unresolved structural issues in the economy that bad management and poor governance has exacerbated. The consequences of this secular decline in economic governance are plain to see: macroeconomic instability, high inflation, poor public services, criminal neglect of the social sectors, widespread corruption, crippling power outages, growing unemployment, deepening poverty and a deteriorating debt profile.[2]

Introduction

Nadeem ul Haque of Pakistan's Planning Committee has lamented that the "gyrations of politics and security have kept everyone fully engaged—in fact, more than fully—and issues of long-term development planning have been neglected not only by the media but in the public imagination."[3] He sees this situation as particularly ironic given that the state of the economy and its advancement are far more likely to affect politics and security than

[2]Meekal Ahmed, An Economic Crisis State? In Maleeha Lodhi ed., Pakistan: Beyond the Crisis State (New York: Columbia University Press, 2011), p.169

[3]Qtd. In Adil Najam, Devising A New Growth Strategy for Pakistan (7): New Growth Framework Approved, All Things Pakistan, May 29, 2011

vice versa.[4] One of a growing number of Pakistani economists who champions the replacement of the country's inefficient, state-run policies with entrepreneur-led growth, ul Haque observes:

> An unintended consequence of our past policies has been the stifling of internal markets, cities and communities, which play a critical role in fostering productivity, innovation and entrepreneurship and ultimately promote growth, prosperity and development. …In the new development framework, the private sector should be the growth-driver in open market environment that rewards efficiency, innovation and entrepreneurship, while the government is facilitator that protects public interests and rights, provides public goods, enforces laws, punishes exploitative practices, and operates with transparency and accountability.[5]

This sentiment lies at the core of the Pakistani Planning Commission's New Growth Framework, which was formally adopted by the National Economic Council in May 2011. The Framework represents a paradigm shift in Pakistan's approach towards the economy. It proposes that the country move from the current state-led model of development to one that relies on freely-functioning markets with dynamic entrepreneurship playing the leading role in expanding investment, developing new areas of economic activity and providing productive employment for the country's rapidly burgeoning labor force. While the Framework is intuitively appealing to professional economists, it is admittedly theoretical at this point and, as such, has drawn criticism that it offers a list of "what to do," as opposed to "how to do."[6] Critics also note that it is vague regarding the sequencing of its policies and reforms[7] and question whether Pakistan's government has the ability and political will to implement such an ambitious agenda.[8]

The key to implementing the New Growth Framework is the development of a model that places both on a sound empirical footing. As previously noted, the New Growth Framework is vague with regard to the proper sequencing of policies and reforms. To this end sections below develop an empirical model to serve as a starting point for initiating and sustaining Pakistan's New Growth Framework.

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[4]Ibid.

[5]Nadeem ul Haque, Devising a Growth Strategy for Pakistan (2): Towards a New Development Approach, All Things Pakistan, February 5, 2011

[6]Abid Hasan, An Unorthodox Path to Prosperity, The News, July 4, 2011

[7]Safiya Aftab,The Elusive Quest for Sustainable Growth, The Friday Times, May 6, 2011

[8]Pervez Tahir, "A 'New" Growth Strategy," The Express Tribune, February 11, 2011.

Potential Constraints on Pakistan's Economic Advancement and Entrepreneurial Activity

To develop an analytical framework for applying The New Growth Framework, it is first necessary to identify the constraints with the greatest potential to impede the country's progress at each stage of development. In Pakistan's case, the list is long. A cursory survey of the literature on suggests a myriad variety of inhibiting factors. Those most frequently identified as key development constraints include: (1) lack of competitiveness due to limitations in factors ranging from infrastructure to education to technological capacity; (2) limited governance in areas such as rule of law and anti-corruption, and (3) insufficient economic reforms that hinder open markets and trade.

Each of these broad categories is made up of a number of individual variables, which are explored in depth below. The examination of the individual variables is instructive; both in illuminating the wide variety of constraints the Pakistani economy faces and in illustrating the diversity of opinion as to the paramount factor or factors that inhibit Pakistani growth and development.

Potential Competitiveness Constraints

The World Economic Forum's Global Competitive Index provides an excellent starting point for examining Pakistan's inability to sustain long-term growth. Drawing on the work of Harvard's Michael Porter,[9] the index provides a benchmark for identifying impediments to a country's competitiveness.[10] The GCI takes into account macroeconomic as well as the core microeconomic foundations of national competitiveness, which it defines as "the set of institutions, policies, and factors that determine the level of productivity and thus income of a country."[11]

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[9]See for example, Michael Porter, "Enhancing the Microeconomic Foundations of Prosperity: The Current Competitiveness Index," in Klaus Schwab ed., The Global Competitiveness Report 2001-2002 (Geneva: World Economic Forum, 2001); and Michael Porter, "The Microeconomic Foundations of Prosperity: Findings from the Business Competitiveness Index," in Klaus Schwab ed., The Global Competitiveness Report 2007-2008 (Geneva: World Economic Forum, 2007).

[10]Xavier Sala-I-Martin et. al., "The Global Competitiveness Index: Measuring the Productive Potential of Nations," in Klaus Schwab ed., The Global Competitiveness Report, 2007-2008 (Geneva: World Economic Forum, 2007), p. 3

[11]Klaus Schwab, "Preface," in Klaus Schwab ed., The Global Competitiveness Report 2010-11 (Geneva: World Economic Forum, 2010), p. 4

The WEF's approach depicts global competitiveness as a weighted average of many different components, each of which affects some aspect of competitiveness. These components fall into 12 main groups, or "12 pillars of competitiveness."[12] These pillars are: (1) Institutions; (2) Infrastructure; (3) The Macroeconomic Environment (4) Health and Primary Education; (5) Higher Education and Training; (6) Goods Market Efficiency; (7) Labor Market Efficiency; (8) Financial Market

Table 1
Countries at Various Stages of Development 2010-11

Stage 1 (Group 1)	Transition From 1 to 2 (Group 2)	Stage 2 (Group 3)	Transition From 2 to 3 (Group 4)	Stage 3 (Group 5)
Bangladesh	Algeria	Albania	Bahrain	Australia
Benin	Angola	Argentina	Barbados	Austria
Bolivia	Armenia	Bosnia	Chile	Belgium
Burkina Faso	Azerbaijan	Brazil	Croatia	Canada
Burundi	Botswana	Bulgaria	Estonia	Cyprus
Cambodia	Brunei	Cape Verde	Hungary	Czech Republic
Cameroon	Egypt	China	Latvia	Denmark
Chad	Georgia	Colombia	Lithuania	Finland
Cote d'Ivoire	Guatemala	Costa Rica	Oman	France
Ethiopia	Guyana	Dominican Republic	Poland	Germany
Gambia, The	Indonesia	Ecuador	Puerto Rico	Greece
Ghana	Iran, Islamic Rep	El Salvador	Slovak Republic	Hong Kong SAR
Honduras	Jamaica	Jordan	Taiwan, China	Iceland
India	Kazakhstan	Lebanon	Trinidad and Tobago	Ireland
Kenya	Kuwait	Macedonia	Uruguay	Israel
Kyrgyz Republic	Libya	Malaysia		Italy
Lesotho	Morocco	Mauritius		Japan
Madagascar	Paraguay	Mexico		Korea, Rep
Malawi	Qatar	Montenegro		Luxembourg
Mali	Saudi Arabia	Namibia		Malta
Mauritania	Sri Lanka	Panama		Netherlands
Moldova	Swaziland	Peru		New Zealand
Mongolia	Syria	Romania		Norway
Mozambique	Ukraine	Russian Federation		Portugal
Nepal	Venezuela	Serbia		Singapore
Nicaragua		South Africa		Slovenia
Nigeria		Thailand		Spain
Pakistan		Tunisia		Switzerland
Philippines		Turkey		United Arab Emirates
Rwanda				United Kingdom
Senegal				United States
Tajikistan				
Tanzania				
Timor-Leste				
Uganda				
Vietnam				
Zambia				
Zimbabwe				

Source: Xavier sala-i-Martin et. al., The Global Competitiveness Index 2010-2011: Looking Beyond the Economic Crisis, in Klaus Schwab ed., The Global Competitiveness Report: 2010-2011 (Geneva, World Economic Forum, 2010), p. 11.

[12]Ibid.

Development; (9) Technological Readiness; (10) Market Size: (11) Business Sophistication; and (11) Innovation.

Following Porter's[13] earlier work, the WEF further assumes that countries progress through three distinct stages: (1) factor driven, (2) investment-driven, and (3) innovation driven. Using regression analysis, the Forum has found that certain pillars are more important at one stage than at others. Institutions, infrastructure, macroeconomic stability, and health and primary education are key in the factor-driven stage. Higher education and training, goods market efficiency, labor market efficiency, financial market sophistication, technological readiness and market size predominate during the efficiency-driven stage. Business sophistication and innovation play a critical role in the innovation-driven stage.

Drawing on this framework, the WEF is able to classify individual countries into one of these three stages. Each country is assigned to a development stage based on: (1) its level of GDP per capita measured at market exchange rates–a proxy for wages (used by the WEF because internationally comparable data on wages and purchasing power parity (PPP) are not available for all countries covered); and (2) the extent to which countries are factor driven, as proxied by the share of exports of primary goods in total exports.

The Forum deems countries falling between two stages as "in transition." As these countries develop, increasingly more weight is given to the pillars that will assure their competitiveness when they move on to the next development stage. In this way, the GFI rewards countries that do what is needed to ensure a smooth transition and penalizes those that fail to prepare for the next stage. Table 1 provides a summary of the latest (2010) World Economic Forum stage classifications. For the purposes of this report and its empirical model, I have relabeled the WEF stages as Groups 1 through 5, as indicated in parentheses under the main headings on Table 1.

As illustrated in Figure 1, Pakistan's progress toward improved competitiveness has been limited. According to the WEF's 2010-11 Global Competitiveness Report:

> Pakistan falls to 123rd place, weakening across most areas measured by the GCI. Still at an early stage of development, the country will require efforts in particular to improve the basic determinants of its competitiveness, namely its institutions (112th),

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[13]Michael Porter, "Enhancing the Microeconomic Foundations of Prosperity: The Current Competitiveness Index," in Klaus Schwab ed., The Global Competitiveness Report 2001-2002 (Geneva: World Economic Forum, 2001).

infrastructure (110th) and macroeconomic environment 133rd) as well as education at all levels.[14]

On this basis, Pakistan falls into Group 1, the initial, factor-driven, stage of development.

Figure 1. Pakistan's Progress in Improved Competitiveness
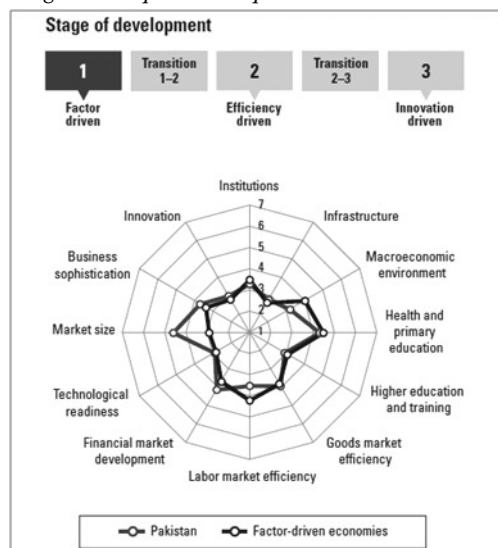
Source World Economic Forum, The Global Competitiveness Report 2010-2011 (Geneva, World Economic Forum, 2010), p.268

Since the early- to mid-1990s, Pakistan's competitive shortcomings have resulted in slowed economic growth relative to other developing countries in Asia (Figure 2). While the country managed to achieve a short spurt of growth in the early- to mid-2000s, this expansion was largely consumption demand driven, rather than the result of a major increase in investment-led productivity.

Even worse, this period of growth appears to have compounded many of the problems plaguing Pakistan today. While no detailed studies of income distribution are available for the last several years of Musharraf's regime, Burki estimates that around 10 million Pakistanis benefitted from the economic growth and restructuring, 25 million would have entered the system had it not been disrupted, and 45 million were completely

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[14]The Global Competitiveness Report 2010-11 (Geneva: World Economic Forum, 2010), p. 30.

ignored.[15] Furthermore, he notes that regional inequality emerged from the Musharraf era, whose benefits were largely confined to the central and northern Punjab and large cities such as Islamabad, Lahore, Karachi, Faisalabad and Gujranwala.[16]

In addition to global competitiveness, the recent literature on failed states notes that development may be affected by deeper determinants of growth, including governance variables such as corruption, political stability and the rule of law.[17] Another body of literature observes that the various dimensions of economic freedom (or the lack thereof) have had a profound effect on the progress of Pakistan and many other countries.[18] Such studies suggest that, besides the WEF's 11 competitiveness components, there are additional factors must be addressed before Pakistan can embark on a path of sustained growth.

Figure 2. Per Capita Income in Pakistan and Developing Asia
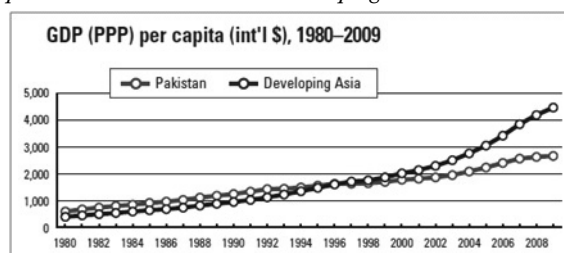
Source: World Economic Forum, The Global Competitiveness Report 2010-2011, p. 266

Limited Institutional Development: Governance

While rating countries on the basis of their relative progress in improving governance is inherently subjective, the World Bank[19] regularly provides a set of rankings incorporating the full extent of our knowledge about this phenomenon. The World Bank data set estimates six dimensions of governance for 213 economies over the period 1996-2009. These dimensions are: (1) Voice and Accountability; (2) Political Stability and Absence of Violence; (3) Government Effectiveness; (4) Regulatory

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[15]Shahid Javed Burki, "Arithmetic of Discontent," Dawn December 11, 2007

[16]Shahid Javed Burki, "Reaching the Disadvantaged," Dawn, December 18, 2007

[17]Dani Rodrik and Mark Rosenzweig, Development Policy and Development Economics: an Introduction in Dani Rodrik and Mark Rosenzweig eds., Handbook of Development Economics, Volume 5 (Amsterdam: North Holland, 2009).

[18]See for example J. Gwartney, J. Hall and R. Lawson, Economic Freedom of the World 2000 Annual Report (Vancouver: Fraser Institute, 2000).

[19]World Wide Governance Indicators.

Quality; (5) Rule of Law; and (6) Control of Corruption. The values for each of the governance figures range from a low of -2.5 to a high of +2.5, with a country sample mean of zero.

The means for the 5-group sample for 2009 (Table 2) show a fairly steady progression on each governance dimension from low for Group 1 to high for Group 5. The one notable exception to the pattern is a drop in the Voice and Accountability dimension as countries move from Group 1 to Group 2.

Pakistan scores low relative to other Group 1 countries on most governance dimensions: -0.997 on Voice and Accountability vs. a Group 1 average of –0.547; –2.756 on Political Stability/Absence of Violence vs. –0.685; –0.934 on Government Effectiveness vs. –0.714; –0.925 on Rule of Law vs. –0.761; and –1.097 on Control of Corruption vs. –0.731. Pakistan surpasses the Group 1 mean only in its Regulatory Quality, on which it scored –0.499 vs. –0.562 for Group 1 countries as a whole. This score not withstanding, poor governance places severe constraints on Pakistan's growth.

These constraints are further exacerbated by Pakistan's high defense spending. Looney and McNab found that countries with high levels of governance and institutional quality, whose defense expenditures make up a relatively low share of GDP, may experience increased rates of growth if defense spending is expanded. Conversely, in countries like Pakistan, with poor institutional quality as proxies by governance indicators such as voice and accountability, expanding already high levels of defense expenditures

Table 2
Group Means on Governance Dimensions, World Economic Forum Development Stages, 2010-2011

	World Economic Forum Stages	Voice	Political Stability	Government Effectiveness	Regulatory Quality	Rule of Law	Control of Corruption
1	Mean	-0.547	-0.685	-0.714	-0.562	-0.761	-0.731
	Number of Countries	38	38	38	37	30	38
	Std. Deviation	0.557	0.813	0.389	0.443	0.461	0.388
	Pakistan	**-0.997**	**-2.756**	**-0.933**	**-0.499**	**-0.925**	**-0.262**
2	Mean	-0.739	-0.300	-0.267	-0.278	-0.415	-0.402
	Number of Countries	25	25	25	25	22	25
	Std. Deviation	0.649	0.787	0.582	0.710	0.552	0.723
3	Mean	0.015	-0.175	0.061	0.137	-0.223	-0.165
	Number of Countries	29	29	29	29	23	29
	Std. Deviation	0.620	0.666	0.412	0.453	0.545	0.442
4	Mean	0.657	0.598	0.802	0.902	0.720	0.572
	Number of Countries	15	15	15	15	13	15
	Std. Deviation	0.680	0.320	0.303	0.331	0.378	0.456
5	Mean	1.127	0.761	1.462	1.358	1.443	1.488
	Number of Countries	32	32	32	32	28	32
	Std. Deviation	0.547	0.558	0.430	0.350	0.454	0.661
Total	Mean	0.051	-0.038	0.183	0.240	0.109	0.097
	Number of Countries	139	139	139	138	116	139
	Std. Deviation	0.932	0.882	0.932	0.886	0.989	1.006

Source: World Economic Forum: The Global Competitiveness Report, 2010-2011 (Geneva: World Economic Forum), 2010

has a negative growth impact.[20] As a result, without governance reforms, increased security spending to combat domestic terrorism could hamper Pakistan's growth even more severely.

Interestingly, one school of thought contends that Pakistan's deficient governance structures may themselves be a major contributing factor to terrorism and instability. In an early study of terrorism Alan Krueger and Jitka Maleckova came to the surprising conclusion that a reduction in poverty in and of itself, or an increase in educational attainment, would not meaningfully reduce terrorism. Their main finding was that any connection between poverty, education, and terrorism is indirect, complicated, and probably quite weak. Instead of viewing terrorism as a direct response to limited market opportunities or ignorance, they suggest that terrorism is a response to political conditions and long-standing feelings, either perceived or real of, indignity and frustration.[21] While subsequent studies have refined this position, Krueger and Maleckova's findings are still the starting point in country-by-country assessments of the factors contributing to terrorism.[22]

Voice and Accountability

In the critical area of Voice and Accountability, Pakistan scores the lowest of the South Asian countries (Figure 3). Despite steady improvement in the post-Musharraf years, which saw the country rise from the 11th percential in 2000 to 21st by 2009, it still lagged below the 2009 Asian average[23] of the 36th percentile and India's 60th percentile.

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[20]Robert Looney and Robert McNab, Pakistan's Economic Security Dilemma: Expanded Defense Expenditures and the Relative Governance Syndrome, Contemporary South Asia, March 2007

[21]Alan Kureger and Jitka Maleckova, Education, Poverty, Political Violence and Terrorism: Is there a Causal Connection? (Cambridge Mass: National Bureau of Economic Research, July 2002).

[22]See also their "Education, Poverty and Terrorism: Is there a Causal Connection?" Journal of Economic Perspectives, Fall 2003, pp. 119-144.

[23]Asian countries included in the World Bank governance data set are: Bangladesh, Brunei, Cambodia, China, Hong Kong, India, Indonesia, Japan, North Korea, South Korea, Laos, Malaysia, Myanmar, Pakistan, Papua New Guinea, Philippines, Singapore, Sri Lanka, Taiwan, Thailand and Vietnam.

Figure 3. Voice and Accountability
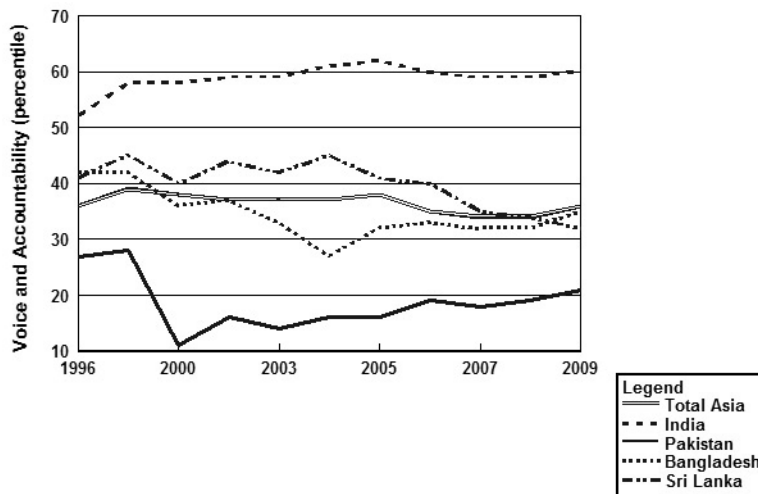
Pakistan's inability to achieve greater voice and accountability no doubt contributes to the country's current economic malaise. Shahid Javed Burki[24] contends that, as a result, the political system has not been able to find a way to reconcile the different economic interests of the country's various competing groups. For example, the ruling Pakistan Peoples Party opposes the levying of taxes on its strong agricultural base, while the Karachi-based Muttahida Quami Movement argues against taxing urban services, and the Pakistan Muslim League (Nawaz) favors tax protection for the merchant class. The resulting political stalemate means that no new forms of direct taxation are available to the country.[25]

Political Stability/Absence of Violence

Pakistan, like the other South Asian countries, is especially deficient in political stability/absence of violence (Figure 4). While all four South Asian countries score considerably below the Asian average (which is not particularly high by international standards), Pakistan's score was by far the worst. From the 16th percentile in 2000, Pakistan experienced a steady decline on this measure until it eventually leveled off at the first percentile in 2007. Bangladesh ranked in the 8th percentile and Sri Lanka in the 12th.

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[24]Shahid Javed Burki, Pakistan's New Political Economy, Business Standard, April 22, 2011.
[25]Shahid Javed Burki, Pakistan's New Political Economy, Business Standard, April 22, 2011.

As might be anticipated, empirical evidence[26] suggests that addressing the country's political instability is a prerequisite for further economic advancement. In addition, political instability and policy instability (Figure 5) ranked second and third (after corruption) as major concerns of businesses–no doubt contributing to the country's low rates of private capital formation and inflows of direct private investment.

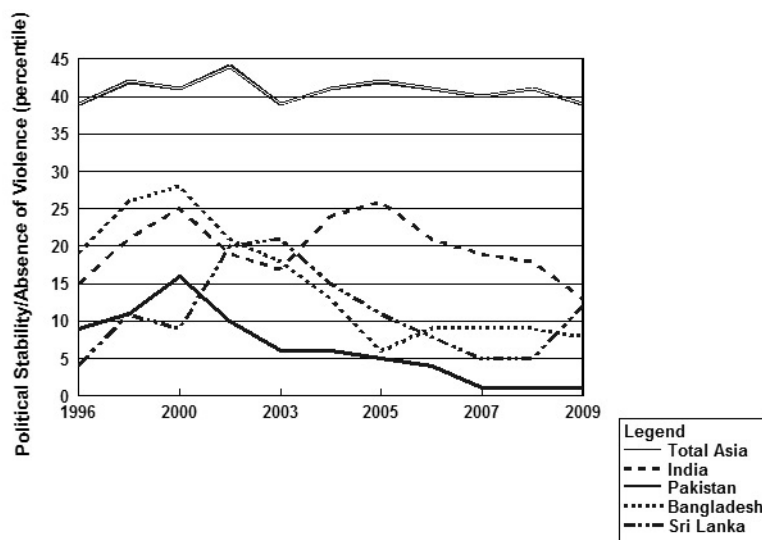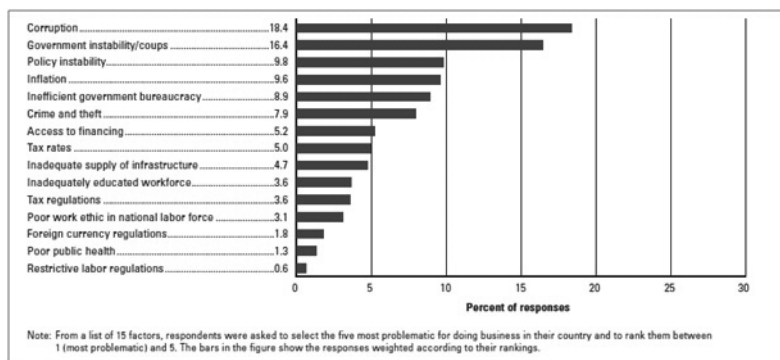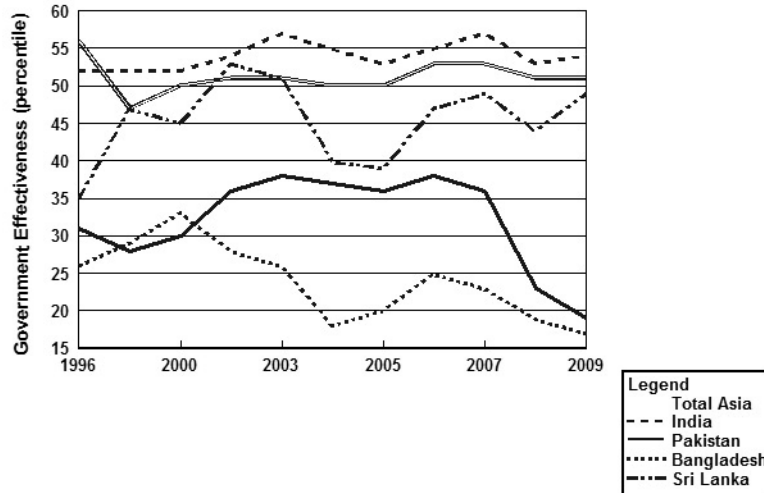*Figure 4. Political Stability, Absence of Violence.*

Figure 5. Pakistan: The Most Problematic Factors for Doing Business

[26]Muhammad Nadeem Qureshi, Karamat Ali and Imran Rafi Khan, Political Instability and Economic Development: Pakistan Time-Series Analysis, International Research Journal of Finance and Economics, 2010

Figure 6. Government Effectiveness

Source: World Economic Forum, The Global Competitiveness Report 2010-2011, p. 266

Government Effectiveness

As shown in Figure 6, Pakistan also scores low in government effectiveness, a key measure of the ability of countries to carry out development programs and effectively implement budgets. After averaging in the high 30s from 2003-2007, the country had fallen to the 19th percentile by 2009, considerably below the Asian average of 51st and India's 54th percentile.

Economist Safiya Aftab notes some of the economic shortcomings that have stemmed from the lack of government effectiveness and decision-making in recent years:

- There is no energy plan (not even a conservation strategy) and little attempt to resolve the circular debt issue that plagues the sector. Worst of all, there seems to be no planning for crises–what happens if crude oil prices spike in the short run, for example?
- Agricultural policy is supposed to be a provincial subject but the federal government doesn't seem to have even a guiding framework for the sector. It's not clear what the priorities are–is the priority to get the support price right or to invest in storage for instance? Is the attempt to deregulate agricultural markets and set up commodity exchanges going to go anywhere, or has it been quietly shelved?
- There is no attempt to introduce new forms of direct taxation. If there is any background work on the pros and cons of imposing

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agricultural income tax, or different forms of capital gains taxes, it has not been made public.

- Cuts in expenditure have been occasioned after the floods, but it is mainly development spending that has been axed not non-salary current expenditure.
- Cutting the Public Sector Development Projects (PSDP) is probably the right way to go, but the government needs to be more transparent about what it's going to axe and why.
- In spite of the obvious fiscal crisis there has been little attempt to restructure loss-making state owned enterprises. The government has given in to pressure on at least two occasions when such attempts were made in Karachi Electric Supply Company (KESC), though the government has a minority share in the utility and Pakistan International Airlines (PIA). For the KESC, the government's action was unpardonable. Imposing on a private entity in order to re-employ staff on the basis of a 26% shareholding is absurd.[27]

The precipitous drop in government effectiveness in recent years has led Stephen Cohen to conclude that the bureaucracy and other state structures are largely incapacitated and unable to respond to the country's demographic and economic challenges. As a result, the country's effective governance and ultimate viability now depend on a combination of massive foreign assistance and remittances of overseas Pakistanis.[28] Pointing to Pakistan's inclusion in the Top 10 of the Failed State Index, he predicts that the consequences will be "disastrous for future stability and governance, translating into a chronic incapacity to integrate security, political, economic and administrative requirements in a central and long-term decision-making process."[29]

Regulatory Quality

Pakistan's performance (Figure 7) in improving regulatory quality has been somewhat better than its efforts in other governance areas. Starting from a low of the 18th percentile in 2004, the country had increased its score to the 33rd percentile by 2009 (albeit down from 39th in 2006). This

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[27]Safiya Aftab, Democracy, Three Years Later, The Friday Times, April 1, 2011

[28]Stephen Cohen, Keeping Pakistan from Falling Apart, World Politics Review, May 2011, p. 1.

[29]Stephen Cohen, Keeping Pakistan from Falling Apart, World Politics Review, May 2011, p. 1.

score was still somewhat below the Asian average of the 50th and India's 44th percentiles.

Burki notes that, even though Pakistan has done relatively well in improving regulatory quality in recent years, Pakistan's regulatory system remains seriously underdeveloped for a country of its size. He argues that this situation stems from the fact that regulation in Pakistan has evolved more in response to special interests rather than to citizen needs and demands. While this pattern may change with the devolution of authority to the provinces, Burki cautions that the weaknesses in the existing regulatory system could complicate efforts to distinguish between functions that can only be performed at the federal level and those that can be more efficiently handled locally.[30]

Nadeem ul Haq cites regulatory quality as key to improving Pakistan's productivity. Ul Haq notes that state enterprises like PIA, Pakistan Railways and power sector organizations could improve productivity significantly, and hence contribute to national economic growth, through regulatory reforms.[31]

Figure 7. Regulatory Quality.
Rule of Law

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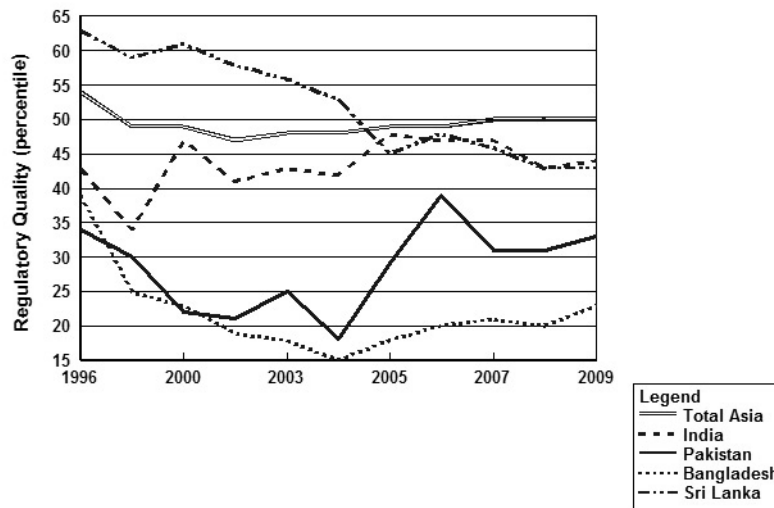
[30]Javed Burki, Devolution and Regulatory Changes, Dawn, April 25, 2011
[31]Nadeem-ul-Haq Links High Growth Rate to Economic Reforms, Associated Press of Pakistan, July 6, 2011

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In the critical area of rule of law, Pakistan again falls short of other South Asian countries (Figure 8). The country ranked in the 31st percentile in 1996, declined to the 20th percentile in 2004, improved slightly to the 22nd percentile, then dipped to the 19th percentile by 2009. In 2009, the average for Asian countries as a whole was the 48thpercentile, with India ranking in the 56th, and Sri Lanka the 53rd. Between 2004 and 2009, Bangladesh was able to increase its ranking from the 17th to the 28th percentile.

A study by the Asian Society highlights the importance of Pakistan's improving its rule of law. The Asia Society's Study Group concluded that seven core issues needed to be addressed to ensure a sound future for the country by 2020. The recommendations included: (1) strengthening democratic institutions; (2) strengthening the rule of law; (3) improving human development and social services, especially in health and education; (4) developing the energy infrastructure; (5) assisting the victims of the 2010 flood in their recovery; (6) improving internal security; and (7) advancing the peace process with India.[32]

Figure 8. Rule of Law

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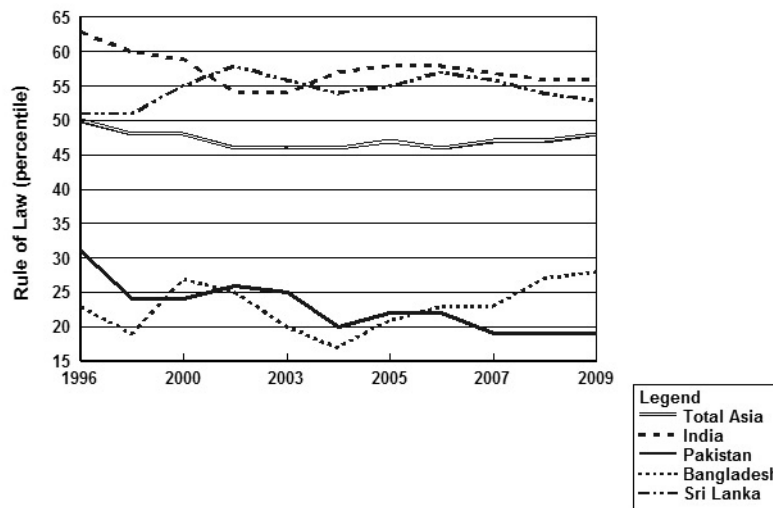
[32]Hassan Abbas, Pakistan 2020: A Vision for Building a Better Future, May 2011

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Control of Corruption

Corruption, the final World Bank measurement of governance, has followed an erratic pattern in Pakistan during the past two decades (Figure 9). Starting in the 7th percentile in 1996, Pakistan gradually improved its score to the 30th percentile in 2003, declined again to the 14 and 15th percentiles in 2004 and 2005 respectively, and rose to the 26th percentile in 2007. Since then the country's ranking has fallen (2009) to the 13th percentile, the lowest rank among the South Asian countries. In reference, the Asian average in 2009 was the 42nd percentile with India slightly higher at the 47th percentile. Ominously, the perception of corruption in Pakistan is worsening, with the police, land administration institutions, the judiciary, education, and local governments regarded as the most corrupt public-sector institutions.[33]

As shown in Figure 5, businesses cite corruption as their major concern in doing business in Pakistan. Furthermore, according to Transparency International's 2009 report, corruption prevents the "poor from partici-pating equally in political decisions, from enjoying equality under the law, from seeing their needs reflected in policies and budgets and from accessing public goods and services. …Decisions on food and energy security, natural resources, technology and investments are often compromised by corruption—with fatal consequences."[34] Significantly, the government of Pakistan has barred Transparency International from conducting surveys in the country for the organization's next annual report.[35]

Potential Economic Reform Constraints

In addition to arguments linking poor growth and development, instability, and even terrorism to governance failures, an equally valid claim can be made that these processes stem from a poor country record in economic reforms and associated progress towards economic freedom. Bremer and Kasarda's terrorism and economic transitions model suggests that failure to enact needed economic reforms can result in inefficiencies and a lack of incentives for entrepreneurship, while preventing more dynamic growth

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[33]Heritage House, Index of Economic Freedom, 2011

[34]Transparency International Corruption Perceptions Index, Berlin: Transparency International, 2009.

[35]Siddiqi Hammad, "No Corruption Survey in Pakistan This Year," Center for International Private Enterprise Development Blog, accessed online at http://www.cipe.org/blog/ p=8649 July 7, 2011.

patterns. The resulting economic malaise spurs a vicious circle of instability, low investment, low growth and further wide-spread discontent.[36]

Figure 9. Control of Corruption
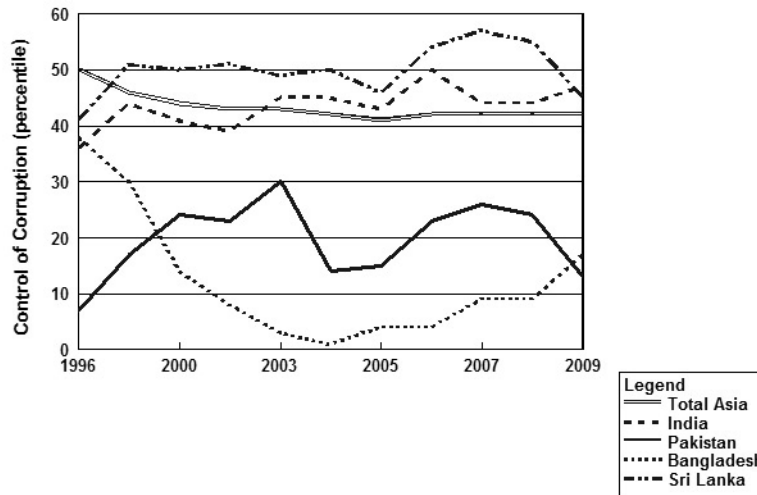
Bremer and Kasarda view transition as occurring in three phases (Figure 10). The first phase typically begins when a low-income country rapidly begins to industrialize, launching an agrarian-industrial transition and the complex transformations in urbanization, income growth, and economic diversification that accompany it. A process similar but not identical to Rostow's[37] take-off occurs. If growth is sustained for a decade or more, the country may reach the second transition phase, in which industrial production per capita can increase as much as threefold, growth in low-value-added manufacturing is rapid and sustained, and rising incomes lead to the emergence of a middle class. Assuming this middle phase is successful, the country will likely reach the advanced phase in 10 to 20 years. Countries that are currently in the advanced phase include Brazil, Poland, Russia, and Turkey.[38]

In contrast, Pakistan remains stalled in the first stage of this model, along with countries like Egypt, Iran, and Saudi Arabia. According to Bremer and Kasarda, these countries are trapped in this stage due to their failure to adopt choice-based systems encompassing both market-based economic

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[36]Jennifer Bremer and John Kasarda, "The Origins of Terror: Implications for U.S. Foreign Policy," Milken Institute Review, Fourth Quarter 2002, pp. 34-48

[37]Footnote Rostow's book

[38]Jennifer Bremer and John Kasarda, op. cit.

reforms and democratic political institutions and organizations. Without the adoption and proper sequencing of such reforms, they cannot progress up the ladder to more sophisticated production structures and, as a result, will face rising popular discontent and instability, along with the threat of terrorist insurrection.[39]

Figure 10. Transitions and Institutional Constraints
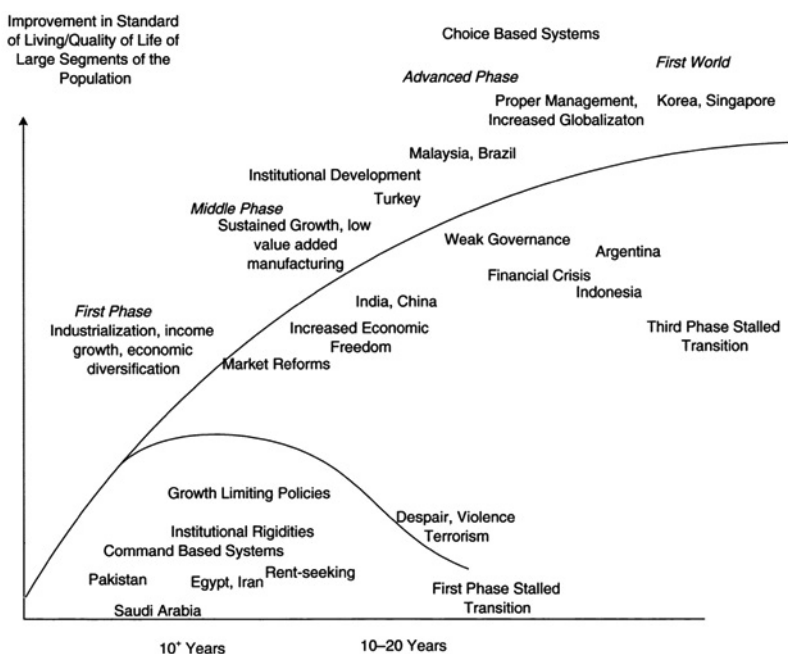
Source: Robert Looney, Failed Economic Take-Offs and Terrorism in Pakistan, Asian Survey, November/December 2004, p.787.

Limited Progress in Economic Freedom

No indices of the prevalence of choice-based systems exist. However, the Fraser Institute's Economic Freedom of the World[40] and the Heritage House/Wall Street Journal's Index of Economic Freedom[41] are good proxies in that they measure the relative progress of countries in moving toward a deregulated, limited government, free-market environment. The

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[39]Ibid.

[40]James Gwartney, Joshua Hall and Robert Lawson, Economic Freedom of the World 2010 Annual Report (Vancouver, Fraser Institute, 2011),

[41]Heritage House, Economic Opportunity and Prosperity: The 2011 Index of Economic Freedom (Washington: Heritage House, 2011).

Heritage House data set was chosen for this study because it contains a larger sample of countries.

To measure economic freedom, the Heritage Index takes ten different factors into account: (1) trade policy; (2) fiscal burden of government; (3) government intervention in the economy; (4) monetary policy; (5) banking and finance; (6) capital flows and foreign investment; (7) wage and prices; (8) property rights; (9) regulation, and (10) the informal market. These factors are designed to measure the openness of countries to competition, the degree of state intervention in the economy, and the ability of the courts to enforce rules and property rights. Heritage House emphasizes that countries must score well in all ten of the factors in order to improve their economic efficiency and, consequently, the living standards of their people.[42]

In the 2011 Heritage House Index of Economic Freedom, Pakistan's score was 55.1, compared highest-ranking Hong Kong at 89.7. Pakistan ranked 24th of 41 countries in the Asia-Pacific region, with an overall score that was below both the world and regional averages. While Pakistan's aggregate Economic Freedom ranking compared relatively favorably those of Bangladesh, Sri Lank and India (Figure 11), the country made few gains in the overall liberalization of the economy, as indicated by the fact that its score in 2011 was slightly lower than in 1995.[43]

Figure 11. Overall Economic Freedom Score

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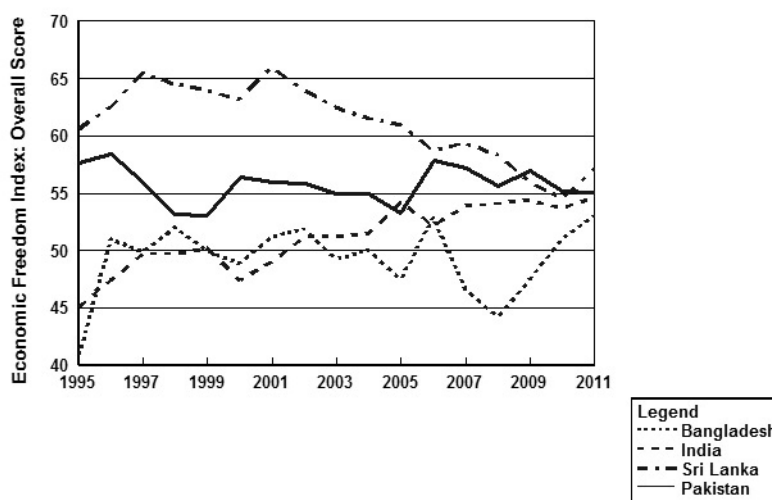
[42]Ibid.
[43]Ibid.

On the positive side, Pakistan has pursued reforms to improve its entrepreneurial environment and facilitate private sector development. In addition, the country made significant gains in recent years in liberalizing restrictions on trade (Figure 12) although its progress in this area lagged behind India's by a wide margin. However, in other areas, Pakistan's progress lags considerably. Its tax system is complex and inefficient, though reforms have been undertaken to cut tax rates, broaden the tax base, and increase transparency. The judicial system suffers from a serious backlog and poor security, and corruption taints the both judiciary and civil service. In addition, restrictions on foreign investment and state involvement in the economy are serious drags on economic dynamism.[44]

Figure 12. Trade Freedom
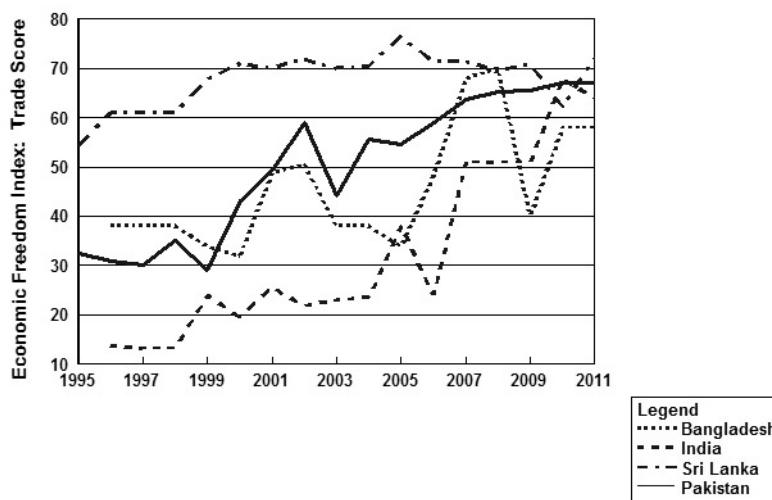
An examination of the group means by World Economic Forum groupings (Tables 3 and 4) shows a pattern similar to that found in the governance dimensions: countries show steady progress in economic reforms as they move from Group 1 to Group 5. The one major exemption is in the fiscal area, where lower levels of government spending and taxes are considered freer. Given the expansion of government spending in the advanced countries, Groups 4 and 5 score low on this dimension.

In contrast with the governance indicators, Pakistan compares slightly favorably with other Group 1 countries. Overall it scored 55.1 vs. 54.3 for Group 1 countries. For Business Freedom it scored 70.9 vs. 55.5, for Fiscal

[44]Ibid.

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Table 3
Group Means on Economic Freedom Dimensions I, World Economic Forum Development Stages, 2010-2011

World Economic Forum Stages		Overall Freedom Score	Business Freedom	Trade Freedom	Fiscal Freedom	Government Spending	Monetary Freedom
1	Mean	54.300	55.460	69.537	77.051	75.168	69.886
	Number of Countries	38	38	38	37	37	37
	Std. Deviation	5.867	11.605	7.503	9.418	15.816	5.591
	Pakistan	**55.2**	**71.7**	**67.0**	**80.5**	**88.8**	**69.4**
2	Mean	57.260	65.150	74.792	82.204	71.667	66.329
	Number of Countries	24	24	24	24	24	24
	Std. Deviation	9.639	16.136	10.320	11.229	15.905	7.024
3	Mean	61.890	67.110	78.090	80.517	71.893	71.928
	Number of Countries	29	29	29	29	29	29
	Std. Deviation	6.263	9.410	7.970	7.884	16.450	4.942
4	Mean	68.910	72.550	84.136	80.693	63.229	72.879
	Number of Countries	14	14	14	14	14	14
	Std. Deviation	4.936	9.822	7.166	9.408	17.512	4.184
5	Mean	73.190	85.470	86.391	64.234	49.128	78.613
	Number of Countries	32	32	32	32	32	32
	Std. Deviation	6.899	10.272	3.562	14.439	19.451	3.810
Total	Mean	62.330	68.380	77.696	76.059	66.496	72.055
	Number of Countries	137	137	137	138	136	138
	Std. Deviation	10.057	15.860	9.818	12.693	19.661	6.649

Source: Heritage Foundation, Index of Economic Freedom data base, 2010

Freedom 80.5 vs. 77.1, and for Government Spending 88.8 vs. 75.2. It should be noted, however, that Heritage House considers low government spending and minimal tax rates as a sign of economic freedom. While many would agree that this measure makes sense for developed economies, critics of Pakistan's economic management contend it is precisely these attributes that have created the country's current crisis of growing income inequality, crumbling infrastructure, and an educational system incapable of meeting the needs of a modern economy.

On the negative side, Pakistan scores below the Group 1 norm in the areas of Trade Freedom (67 vs. 69.5 for Group 1 countries), Monetary Freedom (63.6 vs. 70.0), Investment Freedom (40.0 vs. 41.2), Financial Freedom (40.0 vs. 43.3), Property Freedom (30.0 vs. 30.2), Freedom From Corruption (24.0 vs. 27.0) and Labor Freedom (46.3 vs. 57.6).

In sum, the progress made by Pakistan in the critical areas of competitiveness, governance, and economic reform remains disappointing, with retrogressions occurring in several key areas. Even during periods of rapid growth, the country was unable to make significant gains.

If the models of economic stagnation and terrorism developed by Bremer and Kasarda play out along expected lines, the country's future is dire. The situation has been best summed up by long-time Financial Times columnist

Table 4
Group Means on Economic Freedom Dimensions II, World Economic Forum Development Stages, 2010-2011

World Economic Forum Stages		Investment Freedom	Financial Freedom	Property Rights	Freedom from Corruption	Labor Freedom
1	Mean	41.180	43.290	30.210	27.010	57.600
	Number of Countries	38	38	38	37	37
	Std. Deviation	14.861	12.318	8.918	6.482	14.868
	Pakistan	**30**	**40**	**30**	**25**	**49.8**
2	Mean	45.430	43.750	35.220	31.000	60.429
	Number of Countries	23	24	23	24	24
	Std. Deviation	22.508	16.101	14.498	11.425	19.769
3	Mean	54.310	53.450	40.170	38.140	63.403
	Number of Countries	29	29	29	29	29
	Std. Deviation	16.568	12.328	13.462	8.855	12.870
4	Mean	68.570	63.570	62.500	54.500	66.621
	Number of Countries	14	14	14	14	14
	Std. Deviation	11.673	13.927	13.552	10.559	15.062
5	Mean	75.310	70.630	80.940	74.530	66.678
	Number of Countries	32	32	32	32	32
	Std. Deviation	12.885	12.165	12.472	14.213	18.589
Total	Mean	55.550	53.980	48.440	43.970	62.366
	Number of Countries	136	137	136	137	137
	Std. Deviation	20.911	17.141	23.577	21.328	16.561

Source: Hetitage Foundation, Index of Economic Freedom data base, 2010

Farhan Bokhari. Observing the country's ever shifting political alliances and infighting he notes that such developments:

> …only work to reinforce the largely tainted view of Pakistan's prevailing political order, built to protect and promote the country's vested interests across its urban and rural belts. Pakistan's survival, prosperity and stability depend fundamentally on the ability of its ruling class to reform the country on multiple fronts. Without giving a new direction to Pakistan's economy backed by reforms surrounding internal management and governance, the country's outlook will largely remain unchanged.[45]

If the country is to move ahead, where should the emphasis lie in developing a reform strategy to overcome the impediments posed by the country's governance/institutional structures? The next section addresses this issue through the development of an empirically based model structured to identify the nature and sequencing of the most urgent reforms.

Constraints on Pakistan's Growth Potential and Entrepreneurship

It is unrealistic to expect that the Pakistani government, or any government for that matter, could address all the potential constraints identified in the previous section. Hausman, Rodrik and Velasco suggest that a better approach is to identify and address the one or two most

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[45]Farhan Bokhari, "Pakistan Stability Hinges on Reform," gulfnews.com, April 24, 2011

binding present constraints. To this end, they propose that each country use a decision tree methodology (Figure 13) to identify binding constraints and policy options. Their framework focuses on the short-term, identifying constraints as they emerge rather than attempting to anticipate future impediments to growth.[46]

Figure 13. Growth Constraint Decision Tree

Time for a checkup
A decision tree, such as the one below, can help identify the biggest obstacles to growth.
Problem: Low levels of private investment and entrepreneurship

Source: Hausmann, Rodrik, and Velasco (2005).
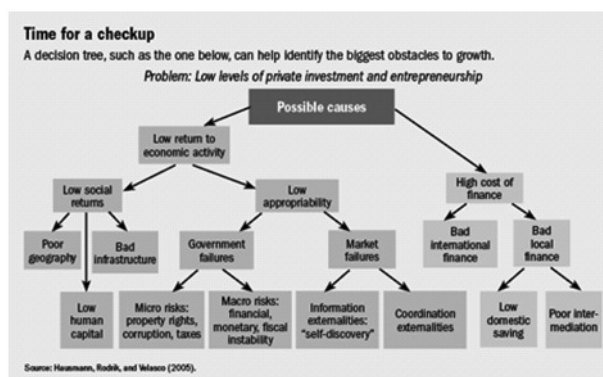
Source: Ricardo Hausmann, Dani Rodrik and Andres Velasco, Getting the Diagnosis Right: Finance and Development, March 2006

While this approach provides a good starting point, the goal of the present study is to develop a model that addresses both entrepreneurship and growth, which are unlikely to face the same constraints simultaneously. Furthermore, given Pakistan's history of stalled growth and failed take-offs, it is crucial to identify the correct sequence of reforms necessary to firmly set the country on the path to development and keep it there. It is hoped that the model that emerges can offer direction, not only to Pakistan, but to broad classes of countries facing similar circumstances.

As the basis for the model, the World Economic Forum Competitiveness Indicators (WEF), the World Bank Governance Indicators (WB), and the Heritage House Index of Economic Freedom (EF) were merged into a single data base.[47] Added to this were the World Bank's data base on

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[46]Ricardo Hausman, Dani Rodrick and Andres Velasco, Getting the Diagnosis Right: A New Approach to Economic Reform" Finance & Development March 2006.

[47]Preliminary analysis suggested that while the Milken Institute Capital Access data set provided some interesting insights to the Pakistani situation, because of its relatively narrow focus it t did not contribute a significant amount of information over and above that provided by the other three data sets.

entrepreneurial activity[48] and the size of the shadow economy (% GDP) in individual countries.[49] The shadow economy is relatively large in Pakistan, averaging around 37.1 percent of GDP.[50] It is included in part to track the country's movement towards an efficient competitive economy, since the literature on entrepreneurship and growth stresses the necessity of transforming informal/shadow activities into formal entities with higher productivity and tax-paying potential.[51]

Discriminant Analysis—Key Constraints on Group Advancement

The WEF uses two criteria for allocating countries into five stages of development. The first is the level of GDP per capita at market exchange rates as a proxy for wages, since comparable data on wages are not available for all countries. The second is the extent to which countries are factor driven, as proxies by the share of minerals in total exports. For example, countries in which minerals make up 70 percent or more of average total exports over a five-year period are deemed to be factor-driven.[52]

The inability of Pakistan and many other countries to sustain steady growth raises the more interesting question of whether there are specific impediments that might cause a country to get "stuck" in one of these groups. Rather than per capita income and primary product exports, are there specific governance/competitiveness/economic freedom variables associated with each pair of country groupings that constrain or delay the development process until threshold levels are reached? While not conclusive proof of causation, if the hypothesis derived from the factor analysis is correct, we should expect to find that entrepreneurship is a leading force in affecting either directly or indirectly these key transition variables.

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[48]World Bank, Enterprise Snapshots (WBGES), 2010 which comprises the number of newly registered limited liability companies per 1,000 working-age people (those ages 15-64).

[49]Data compiled in Friedrich Schneider and Andreas Buehn, Shadow Economics and Corruption All Over the World: Revised Estimates for 120 Countries, Economics: the Open Access, Open-Assessment E-Journal, October 27, 2009

[50]Data compiled in Friedrich Schneider and Andreas Buehn, Shadow Economics and Corruption All Over the World: Revised Estimates for 120 Countries, Economics: the Open Access, Open-Assessment E-Journal, October 27, 2009

[51]Friedrich Schneider with Domninik Enste, Hiding in the Shadows: The Growth of the Underground Economy (Washington: International Monetary Fund, 2002).

[52]World Economic Forum, The Global Competitiveness Report 2010-2011 (Geneva, World Economic Forum, 2010), p. 10

To test this theory, a discriminant analysis[53] was undertaken to determine which variables were statistically significant in correctly classifying countries in each of the five WEF stages of development. The discriminate results start with Groups 1 and 2, with group membership gradually expanded to see which variables come into play when more developed countries are added to the sample.

Table 5
Country Group Profiles

Groups 1 and 2   (82.5% Placement as WEF)   Pakistan 90.4% in WEF Group 1

Mean Values Discriminant Groups

Discriminating Variables in Order of Importance	Group 1	Group 2	Pakistan
WEF Innovation	2.79	2.96	3.03
WEF Infrastructure	2.53	3.72	2.75
Pakistan			

Groups 1, 2 and 3   (75.0% Placement as WEF)   Pakistan 89.4% in WEF Group 1

Mean Values Discriminant Groups

Discriminating Variables in Order of Importance	Group 1	Group 2	Group 3	Pakistan
WEF Technological Readiness	2.77	3.27	3.67	2.94
WEF Innovation	2.80	2.95	3.05	3.03
WEF Infrastructure	2.52	3.66	3.80	2.75
WB Voice and Accountability	-0.49	-0.95	0.16	-1.00

Groups 1, 2, 3 and 4   (72.9% Placement as WEF)   Pakistan 94.1% in WEF Group 1

Mean Values Discriminant Groups

Discriminating Variables in Order of Importance	Group 1	Group 2	Group 3	Group 4	Pakistan
WEF Technological Readiness	2.78	3.29	3.67	4.38	2.94
WEF Innovation	2.79	2.95	3.13	3.36	3.03
WEF Infrastructure	2.50	3.71	3.80	4.64	2.75
WEF Growth Potential	3.47	4.07	4.19	4.36	3.48
WB Voice and Accountability	-0.53	-0.93	0.22	0.72	-1.00

Groups 1, 2, 3, 4 and 5
(75.0% Placement as WEF)   Pakistan 97.0% in WEF Group 1

Mean Values Discriminant Groups

Discriminating Variables in Order of Importance	Group1	Group 2	Group 3	Group 4	Group 5	Pakistan
WEF Innovation	2.77	2.99	3.05	3.31	4.68	3.03
WEF Higher Education and Training	2.85	3.81	4.11	4.7	5.41	2.91
WEF Infrastructure	2.46	3.62	3.77	4.63	5.61	2.75
EF Monetary Freedom	70.67	65.03	72.66	73.67	79.14	69.4
WEF Growth Potential	3.44	4.06	4.12	4.36	5.09	3.48
WB Rule of Law	-0.77	-0.46	-0.21	0.72	1.53	-0.93

Notes: SPSS 19.0 Stepwise Multiple Discriminant Analysis. WEF = World Economic Forum Competitiveness data.
EF = Heritage House Economic Freedom data set; WB = World Bank governance data set

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[53]Irma Adelman and Cynthia Taft Morris, Performance Criteria for Evaluating Economic Development Potential: An Operational Approach, Quarterly Journal of Economics, May 1968. See Also Randal Jones, A Model For Predicting Expropriation in Latin America Applied to Jamaica, Colombia Journal of World Business, Spring 1980 for an early example of the use of factor and discriminant analysis in classifying countries and assessing the requirements for progression from one group to another.

Of the 28 possible profiling elements (Table 5), only two were statistically significant in separating Group 1 and 2 countries into distinct groupings based on competitiveness/governance and economic freedom. In order of importance, these were the WEF's innovation variable and the WEF's infrastructure variable, which together correctly classified 82.5% of countries into their original WEF groupings. In the case of both variables, Group 2 countries had a significantly higher level of attainment, especially with regard to infrastructure. Pakistan was classified as a Group 1 country with a 90.4% probability. It scored higher than even Group 2 countries in innovation but, although above the Group 1 mean, was considerably underdeveloped in infrastructure. These results indicate that infrastructure must be developed before Pakistan can move to the next stage.

Broadening the discriminant analysis to include Group 3 countries produced another distinct profiling pattern. Four variables were statistically significant in profiling the combined group of countries into their three original WEF groupings with 75.0 percent accuracy. In declining order of statistical importance, these variables were: the WEF's measure of techno-logical readiness, the WEF's innovation, the WEF's infrastructure, and finally, the World Bank's measure of governance, voice and accountability.

Pakistan was again classified as a Group 1 country with 89.4% confidence. As in the previous analysis, it matches up well in terms of innovation, with a score in the range of the Group 3 mean. Whether the country will be able to overcompensate in this area sufficiently to move up the development ladder is problematic, given that it currently scores only slightly better than the mean for Group 1 not only in infrastructure, but in technological readiness.

In contrast to the other key transition variables which show steady progress as countries move to higher groupings, the mean group scores for voice and accountability decline for Group 2 countries before increasing dramatically for Group 3. This finding suggests that authoritarian regimes may be more adept at initiating a growth process, and, in fact, Pakistan's economic performance has been somewhat better under military rule. On the other hand, reliance on the military has not resulted in sustained growth. Instead, it appears that economic reforms, like the ones undertaken by Musharraf in the early and mid-2000s, simply give rise to a new set of rent-seekers intent on maintaining the status quo.[54] Pakistan's democratic institutions and government accountability must be immediately

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[54]Shahid Javed Burki, Changing Perceptions, Altered Reality: Pakistan's Economy Under Musharraf, 1999-2006 (Oxford: Oxford University Press, 2007), Chapter 1.

strengthened to sustain its progress from Group 1 to Group 2, with governance reforms continuing to facilitate the transition to Group 3.

When the discriminant sample is further expanded to include countries in Group 4, the WEF's overall growth potential variable contributes to group delineation. 72.9% of the countries are correctly classified in their respective WEF groupings, with Pakistan having a 94.1% probability of remaining in Group 1.

Pakistan's score on the WEF's growth potential term is very slightly above the Group 1 norm. The growth potential term increases steadily from the lower to the higher country groupings, suggesting that a balanced attainment of many of the competitiveness measures is critical for continued advancement.

Finally, when the discriminant analysis included all five groups, six key variables were identified that create a distinct competitiveness/ governance/economic freedom environment. In addition to innovation, infrastructure and growth potential, the WEF's higher education and training, the World Banks rule of law and the Heritage House's monetary freedom are statistically significant in correctly classifying 75% of the countries in their original WEF groupings. Pakistan is classified with a 97% probability as belonging in Group 1.

Regression Analysis—Key Linkages Surrounding Entrepreneurship
The discriminant analysis was suggestive of the potentially key role entrepreneurship could play in Pakistan's transition to higher levels of development. Still left unanswered however are the relationships between entrepreneurship and other key competitiveness/governance/economic freedom variables. To fill this gap, a regression analysis was performed on the country sample to determine the specific factors that contribute to entrepreneurship.

Factors Contributing to Increased Entrepreneurship
Neoliberal thought holds that economic liberalization and increased efforts in many of the WEF's categories of competitiveness can produce an environment conducive to the creation of new small and medium sized enterprises (SME).[55] This assumption underlay the neo-liberal approach to economic reform in Chile after the fall of Allende and later became the rationale for many of the dramatic market reforms in post-communist

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[55]Robert Looney, Neo-liberalism in R.J. Barry Jones, Routledge Encyclopedia of International Political Economy (London: Routledge, 2001) Volume 2, pp.1106-1110.

Eastern and Central Europe.[56] To test this proposition, the World Bank's entrepreneurship (density) was regressed on the WEF's competitiveness data set and the Heritage House economic freedom variables. As with the discriminant analysis, the analysis began with Groups 1 and 2 and gradually expanded to the more developed country groupings.[57]

Of the competitiveness and economic freedom variables, entrepreneurship in Group 1 and 2 countries responded most strongly to improved trade freedom, followed by business freedom (Table 6). These two variables alone accounted for over 50% of the fluctuation in entrepreneurship for this sample of countries.

Table 6
Determinants of Entrepreneurial Activity

(Stepwise Regression)

	Standardized Coefficient	t	Sig	df	R	R Square	Adjusted R Square
WEF Group 1							
Model 1							
EF Trade Freedom	0.584	3.447	0.002	23	0.584	0.341	0.312
Model 2							
EF Trade Freedom	0.565	4.114	0.000				
EF Business Freedom	0.495	3.598	0.002	22	0.765	0.585	0.547
WEF Groups 1 and 2							
Model 1							
WEF Technological Readiness	0.503	3.775	0.000	42	0.503	0.253	0.236
Model 2							
WEF Technological Readiness	0.547	4.330	0.000				
EF Fiscal Freedom	0.326	2.583	0.013	41	0.598	0.358	0.327
Model 3							
WEF Technological Readiness	0.540	4.451	0.000				
EF Fiscal Freedom	0.266	2.131	0.039				
WEF Labor Market Efficiency	0.260	2.101	0.042	40	0.649	0.422	0.378
Model 4							
WEF Technological Readiness	0.381	2.762	0.009				
EF Fiscal Freedom	0.254	2.119	0.041				
WEF Labor Market Efficiency	0.273	2.301	0.027				
EF Freedom From Corruption	0.292	2.132	0.039	39	0.734	0.482	0.429

Notes: Stepwise Regression Model: IBM SPSS 19.0; Country groupings are those from the World Economic Forum Competitiveness 2010-2011 data set. Data Set: WEF = World Economic Forum Dompetitiveness data set;, EF = Heritage Economic Freedom Data Set; Entrepreneurship data: World Bank Enterprise Snapshots (WBGES) 2010.
Regression Analysis was entrepreneurship on the combined WEF and EF data sets.
Additional Variables: SHADOW = Size of the Shadow Economy (% GDP), WEFGROUP, group prediction dummy

[56]Ibid.

[57]The results presented here are for countries classified in groups derived from the discriminant analysis. However a separate analysis of the WEF groupings produced a similar set of findings.

When the sample was expanded to include Group 3, competitiveness factors, especially technological readiness and labor market efficiency, took on an added role in facilitating increased entrepreneurial activity. Increased freedom from corruption was also a critical factor at this juncture.

With the addition of Group 4, economic freedom factors were replaced by variables reflecting increased competitiveness, namely, technological readiness and labor market efficiency (Table 7). The fact that the economic liberalization reforms impact primarily at early stages of development was confirmed through regressions omitting Group 1 countries. For Groups 2, 3, and 4 and for 3 and 4 separately, only competitiveness variables–technological readiness and labor market efficiency–were statistically significant in affecting entrepreneurship.

Table 7
Determinants of Entrepreneurial Activity (contd.)

(Stepwise Regression)

	Standardized Coefficient	t	Sig	df	R	R Square	Adjusted R Square
WEF Groups 1, 2, 3 and 4							
Model 1							
WEF Technological readiness	0.616	5.585	0.000	51	0.616	0.380	0.367
Model 2							
WEF Technological Readiness	0.563	5.260	0.000				
WEF Labor Market Efficiency	0.269	2.508	0.015	50	0.670	0.449	0.427
WEF Groups 2, 3 and 4							
Model 1							
WEF Technological Readiness	0.529	3.373	0.001	36	0.529	0.280	0.260
Model 2							
WEF Technological Readiness	0.383	2.703	0.011				
WEF Labor Market Efficiency	0.378	2.663	0.012	35	0.633	0.401	0.367
WEF Groups 3 and 4							
Model 1							
WEF Labor Market Efficiency	0.536	3.237	0.003	26	0.536	0.287	0.260

Notes: Stepwise Regression Model: IBM SPSS 19.0; Country groupings are those from the World Economic Forum Competitiveness 2010-2011 data set. Data Set: WEF = World Economic Forum Dompetitiveness data set;, EF = Heritage Economic Freedom Data Set; Entrepreneurship data: World Bank Enterprise Snapshots (WBGES) 2010.
Regression Analysis was entrepreneurship on the combined WEF and EF data sets.
Additional Variables: SHADOW = Size of the Shadow Economy (% GDP), WEFGROUP, group prediction dummy

With market liberalization, especially trade freedom and business freedom reforms, opportunities for increased entrepreneurial activity open up for Group 1 countries like Pakistan. Further increases in market reforms do not appear as critical in influencing movement through the higher stages of development, although a key market reform may still make a significant contribution to the growth of new firms.

However, while market reform can produce increased entrepreneurial activity, it is not sufficient in and of itself sufficient to create a virtuous circle of continued growth and reform. This fact is illustrated by the vicious circle in which Pakistan now finds itself, despite the market reforms undertaken by Musharraf in the, as well as by the experiences of several of the former European Communist countries.

Entrepreneurship and Governance

The literature suggests that the impact of entrepreneurship on governance may play a major role in determining whether initial growth will be devolve into a vicious or evolve into a virtuous circle of development.[58] According to Havrylyshyn and Wolf,[59] a vicious circle is precipitated when the first set of entrepreneurs and other vested interests, content merely to live off their rents, derail the development process by blocking further governance (and possibly economic) reforms. In contrast, the creation of a virtuous circle requires entrepreneurs to take a longer term view and push for continuing reforms to spur additional growth and increase profits.[60]

The analysis thus far appears to support this theory. The components of governance, with the exception of voice and accountability, show steady improvement as countries move to higher and higher groupings. The level of improvement for both the WEF groups and the discriminant groupings used in this model appears to peak as countries move from Group 3 to Group 4 (Table 8). Control of corruption also improves markedly at this level, but reaches its maximum rate of improvement during the transition from Group 4 to Group 5.

Are these patterns, in fact, associated with pressure from entrepreneurial groups for further reforms, especially in the area of governance? After controlling for what appears to be a normal improvement in governance as countries develop, does increased governance contribute an additional amount to the upgrading of national governance dimensions? If a pattern exists, it may to do so with a lag due to the time it takes to realize major changes in areas like the rule of law or control of corruption. Thus, we

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[58]From somewhat different perspectives, this theme is touched upon in William Baumol, Robert Litan and Carl Schramm, Good Capitalism, Bad Capitalism and the Economics of Growth and Prosperity (New Have: Yale University Press, 2007) and Raghuram Rajan, Saving Capitalism from The Capitalists (New York: Crown Business, 2003)

[59]Oleh Havrylyshyn and Thomas Wolf, Determinants of Growth in Transition Countries, Finance & Development, June 1999

[60]Ibid.

Table 8
Governance Patterns by Country Grouping

(group means)

WEF Country Group	Voice and Accounrtabili	Political Stability	Governmen ffectivenes	Regulatory Quality	Rule of Law	Control of Corruption
Group 1	-0.547	-0.685	-0.714	-0.562	-0.760	-0.732
Group 2	-0.739	-0.300	-0.267	-0.278	-0.394	-0.403
Difference: Group 2 - Group 1	-0.192	0.385	0.447	0.284	0.366	0.329
Group 3	0.015	-0.176	0.016	0.137	-0.178	-0.165
Difference: Group 3 - Group 2	0.754	0.124	0.283	0.415	0.216	0.238
Group 4	0.657	0.598	0.802	0.902	0.715	0.572
Difference: Group 4 - Group 3	0.642	0.774	0.786	0.765	0.893	0.737
Group 5	1.127	0.761	1.462	1.358	1.436	1.488
Difference: Group 5 - Group 4	0.470	0.163	0.660	0.456	0.721	0.916

Discriminant Country Group	Voice and Accounrtabili	Political Stability	Governmen ffectivenes	Regulatory Quality	Rule of Law	Control of Corruption
Group 1	-0.535	-0.694	-0.751	-0.569	-0.774	-0.737
Group 2	-0.638	-0.279	-0.340	-0.374	-0.455	-0.481
Difference: Group 2 - Group 1	-0.103	0.415	0.411	0.195	0.319	0.256
Group 3	-0.083	-0.299	0.008	0.165	-0.215	-0.201
Difference: Group 3 - Group 2	0.555	-0.020	0.348	0.539	0.240	0.280
Group 4	0.650	0.577	0.789	0.889	0.719	0.557
Difference: Group 4 - Group 3	0.733	0.876	0.781	0.724	0.934	0.758
Group 5	1.200	0.769	1.561	1.419	1.530	1.629
Difference: Group 5 - Group 4	0.550	0.192	0.772	0.530	0.811	1.072

Notes: Data from World Bank Governance Indicators data set for 2009

would expect major gains in governance to follow somewhat behind flurries of increased entrepreneurial activity.

Regression analysis was used to identify possible linkages between improved levels of governance and entrepreneurship. Because there appears to be a normal progression of regression improvement by group (again with Voice and Accountability the exception), a control stage dummy variable was included as an independent variable–assuming values of 1, 2, 3 4, 5 to reflect the various country groupings. For the regressions involving the WEF stages, these values replicate the country groupings. In

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a similar fashion, for the analysis of the progression of governance improvement through the discriminant stages, the dummy assumed the value of each of the assigned groupings.

For the WEF Groups 1 and 2 (Table 9), there are very weak linkages between entrepreneurship and increased levels of governance, with slight improvements occurring in the areas of political stability and regulatory quality. For the other measures of governance, no statistically significant linkages were found.

Table 9
Entrepreneurship and Improved Governance: WEF Country Groupings

Governance Measures	Standardized Coefficient	t	Sig	R Square adjusted
WEF Country Groups 1 and 2				
Voice and Accountability	No Variables Statistically Significant			
Political Stability				
Entrepreneurship	0.376	2.184	0.031	0.141
Government Effectiveness				
WEF Stage Group Dummy	0.418	2.475	0.019	0.146
Regulatory Quality				
Entrepreneurship	0.444	2.619	0.014	0.168
Rule of Law	No Variables Statistically Significant			
Control of Corruption	No Variables Statistically Significant			
WEF Country Groups 2 and 3				
Voice and Accountability				
WEF Stage Group Dummy	0.376	2.504	0.017	
Entrepreneurship	0.331	2.208	0.034	0.288
Political Stability				
Entrepreneurship	0.500	3.368	0.002	0.228
Government Effectiveness				
WEF Stage Group Dummy	0.408	2.608	0.013	0.142
Regulatory Quality				
Entrepreneurship	0.478	3.171	0.003	0.205
Rule of Law				
Entrepreneurship	0.476	3.160	0.003	0.204
Control of Corruption				
Entrepreneurship	0.402	2.855	0.007	
WEF Stage Group Dummy	0.387	2.746	0.100	0.373

Note: Stepwise Regression -- Dependent Variables Listed in order of Entry. Data: Governance measures World Bank Governance Indicators; Entrepreneurship: World Bank, Enterprise Snapshots (WBGES), 2020 All data is for 2009.

The picture improves somewhat for countries in Groups 2 and 3. For these countries expanded entrepreneurship results in improved governance, with the exception of government effectiveness. However, as indicated by the adjusted r2 term, these linkages are not particularly strong.

Entrepreneurial linkages improve dramatically for countries in WEF Groups 3 and 4 (Table 10). Again, entrepreneurship is statistically significant for all categories of governance, with the exception of government effectiveness. More importantly, in contrast to the previous groupings, the adjusted r2 values move into the 40 and 50% range, with the exception of voice and accountability. That is, entrepreneurship accounts for nearly half the observed fluctuations in governance after controlling for the normal patterns of improvement.

Table 10
Entrepreneurship and Improved Governance: WEF Country Groupings (contd.)

Governance Measures	Standardized Coefficient	t	Sig	R Square adjusted
WEF Country Groups 3 and 4				
Voice and Accountability				
WEF Stage Group Dummy	0.398	2.690	0.011	
Entrepreneurship	0.363	2.450	0.020	0.306
Political Stability				
WEF Stage Group Dummy	0.563	4.179	0.000	
Entrepreneurship	0.282	2.096	0.440	0.425
Government Effectiveness				
WEF Stage Group Dummy	0.702	5.580	0.000	0.477
Regulatory Quality				
WEF Stage Group Dummy	0.616	5.186	0.000	
Entrepreneurship	0.341	2.870	0.007	0.553
Rule of Law				
WEF Stage Group Dummy	0.654	5.694	0.000	
Entrepreneurship	0.312	2.716	-0.011	0.582
Control of Corruption				
WEF Stage Group Dummy	0.593	4.592	0.000	
Entrepreneurship	0.290	2.246	0.032	0.472

Note: Stepwise Regression -- Dependent Variables Listed in order of Entry. Data: Governance measures World Bank Governance Indicators; Entrepreneurship: World Bank, Enterprise Snapshots (WBGES), 2020 All data is for 2009.

Finally, countries in Groups 4 and 5 (Table 11) show few linkages between improved levels of governance and increased entrepreneurial activity. Entrepreneurship is statistically significant only in the case of regulatory quality, and even here it is a secondary factor after taking into account the progression of stages.

Table 11
Entrepreneurship and Improved Governance: WEF Country Groupings (contd.)

Governance Measures	Standardized Coefficient	t	Sig	R Square adjusted
WEF Country Groups 4 and 5				
Voice and Accountability				
WEF Stage Group Dummy	0.395	2.652	0.012	0.156
Political Stability	No Variables Statistically Significant			
Government Effectiveness				
WEF Stage Group Dummy	0.610	4.743	0.000	0.355
Regulatory Quality				
WEF Stage Group Dummy	0.418	2.998	0.005	0.284
Entrepreneurship	0.296	2.124	0.040	
Rule of Law				
WEF Stage Group Dummy	0.621	4.882	0.000	0.369
Control of Corruption				
WEF Stage Group Dummy	0.545	4.008	0.000	0.279

Note: Stepwise Regression -- Dependent Variables Listed in order of Entry. Data: Governance measures World Bank Governance Indicators; Entrepreneurship: World Bank, Enterprise Snapshots (WBGES), 2020 All data is for 2009.

A slightly different pattern emerges when countries are examined in the discriminant analysis framework. Again, there are few linkages for Groups 1 and 2 (Table 12) outside political stability and regulatory quality between expanded entrepreneurship and higher levels of governance. The linkages that do occur are extremely weak and barely significant.

Linkages strengthen somewhat, especially in the area of voice and accountability, once countries reach Groups 2 and 3. Here entrepreneurship, along with the stage progression term, account for over 60% of the variance across countries in voice and accountability. More importantly, for countries in these groups, entrepreneurship has a statistically significant link to all governance measures.

Table 12
Entrepreneurship and Improved Governance: Discriminant Analysis Country Groupings

Governance Measures	Standardized Coefficient	t	Sig	R Square adjusted
Discriminant Analysis Country Groups 1 and 2				
Voice and Accountability		No Variables Statistically Significant		
Political Stability				
Entrepreneurship	0.376	2.184	0.037	0.141
Government Effectiveness		No Variables Statistically Significant		
Regulatory Quality				
Entrepreneurship	0.444	2.619	0.014	0.168
Rule of Law		No Variables Statistically Significant		
Control of Corruption		No Variables Statistically Significant		
Discriminant Analysis Country Groups 2 and 3				
Voice and Accountability				
Discriminant Stage Group Dummy	0.679	6.326	0.000	
Entrepreneurship	0.294	2.741	0.010	0.617
Political Stability				
Entrepreneurship	0.500	3.368	0.002	0.228
Government Effectiveness				
Entrepreneurship	0.361	2.256	0.031	0.105
Regulatory Quality				
Entrepreneurship	0.407	2.761	0.009	
Discriminant Stage Group Dummy	0.313	2.128	0.041	0.280
Rule of Law				
Entrepreneurship	0.476	3.160	0.003	0.204
Control of Corruption				
Entrepreneurship	0.456	3.178	0.003	
Discriminant Stage Group Dummy	0.293	2.043	0.049	0.316

Note: Stepwise Regression -- Dependent Variables Listed in order of Entry. Data: Governance measures World Bank Governance Indicators; Entrepreneurship: World Bank, Enterprise Snapshots (WBGES), 2020 All data is for 2009.

In sharp contrast to the findings reported above for the WEF stages, countries in discriminant groups 3 and 4 show no statistically significant linkages with entrepreneurship (Table 13). In all cases, the discriminant stage dummy has high levels of statistical significance for all measures other than voice and accountability.

Table 13
Entrepreneurship and Improved Governance: Discriminant Analysis Country Groupings (contd.)

Governance Measures	Standardized Coefficient	t	Sig	R Square adjusted
Discriminant Country Groups 3 and 4				
Voice and Accountability				
Discriminant Stage Group Dummy	0.560	3.823	0.001	0.292
Political Stability				
Discriminant Stage Group Dummy	0.689	5.378	0.000	0.458
Government Effectiveness				
Discriminant Stage Group Dummy	0.877	10.337	0.000	0.762
Regulatory Quality				
Discriminant Stage Group Dummy	0.796	7.435	0.000	0.622
Rule of Law				
Discriminant Stage Group Dummy	0.893	11.222	0.000	0.791
Control of Corruption				
Discriminant Stage Group Dummy	0.812	7.868	0.000	0.649

Note: Stepwise Regression -- Dependent Variables Listed in order of Entry. Data: Governance measures
World Bank Governance Indicators; Entrepreneurship: World Bank, Enterprise Snapshots (WBGES), 2020
All data is for 2009.

Another sharp contrast occurs between the two country grouping systems for Groups 4 and 5. As noted, there was only a weak linkage between entrepreneurship and regulatory quality for countries in WEF Groups 4 and 5. In the discriminant country scheme (Table 14), entrepreneurship forms a highly significant link to four areas of governance: government effectiveness, regulatory quality, rule of law and control of corruption.

What might account for these differences between country grouping schemes? As with governance (Table 8), entrepreneurial activity increases as countries move through the sequence of groupings (Table 15). However, increases in entrepreneurship between stages vary somewhat by grouping scheme. For the WEF classification framework, the highest percent increase in entrepreneurship occurs between Groups 2 and 3, with a marked fall-off in entrepreneurial activity between Groups 3 and 4. In the case of the discriminant country scheme, a big jump in entrepreneurial activity occurs between groups 1 and 2. In contrast with the WEF scheme, there is also a relatively large increase in entrepreneurship between Groups 3 and 4.

If we assume some delay between surges in entrepreneurship and improvements in governance, these different patterns of entrepreneurial expansion are roughly in line with the observed contrasts in governance

Table 14
Entrepreneurship and Improved Governance: Discriminant Analysis Country Groupings (contd.)

Governance Measures	Standardized Coefficient	t	Sig	R Square adjusted
Discriminant Country Groups 4 and 5				
Voice and Accountability				
Discriminant Stage Group Dummy	0.497	3.531	0.001	0.227
Political Stability				
Discriminant Stage Group Dummy	0.346	2.273	0.029	0.097
Government Effectiveness				
Discriminant Stage Group Dummy	0.770	8.628	0.000	
Entrepreneurship	0.256	2.872	0.007	0.695
Regulatory Quality				
Discriminant Stage Group Dummy	0.613	5.364	0.000	
Entrepreneurship	0.312	2.733	0.010	0.499
Rule of Law				
Discriminant Stage Group Dummy	0.752	7.795	0.000	
Entrepreneurship	0.224	2.319	0.026	0.643
Control of Corruption				
Discriminant Stage Group Dummy	0.722	7.069	0.000	
Entrepreneurship	0.233	2.282	0.028	0.600

Note: Stepwise Regression -- Dependent Variables Listed in order of Entry. Data: Governance measures World Bank Governance Indicators; Entrepreneurship: World Bank, Enterprise Snapshots (WBGES), 2020 All data is for 2009.

between the two classification schemes. In the case of the WEF countries, the pattern is fairly straightforward: the big gains in governance observed in Groups 3 and 4 follow the maximum rate of growth in entrepreneurship that occurs between Groups 2 and 3. Because of the big drop-off in entrepreneurial expansion when countries reach Groups 3 and 4, entrepreneurship ceases to play a significant role in governance change in Group 4 and 5 countries.

The same general lagged pattern occurs for the discriminant country groupings, albeit not quite as sharply. For these countries the largest rate of increase in entrepreneurship occurs between Groups 1 and 2. These increases are followed by improved governance in Groups 2 and 3, especially in voice and accountability where entrepreneurship and the group dummy accounted for over 60% of the observed variance across countries.

While there is a slight drop-off in the rate of growth of entrepreneurial activity from Group 2 to 3 and 3 to 4, it is not nearly as dramatic as the decline from Group 3 to Group 4 in the WEF scheme. As a result, entrepreneurship continues to play a significant role in improving governance for

Table 15
Entrepreneurial Activity by Country Grouping

Country Grouping	Entrepreneurship	
	Discriminant Country Grouping	WEF Country Grouping
Group 1	0.404	0.472
Group 2	0.993	0.990
(% difference)	59.32	52.32
Group 3	2.036	2.374
(% difference)	51.23	58.30
Group 4	3.736	3.417
(% difference)	45.50	30.52
Group5	6.267	5.948
(% difference)	40.39	42.55

Notes:World Bank: The 2020 World Bank Group Entrepreneurship Snapshots (WBGES).
World Bank Entrepreneurship Data Set: Number of newly registered limited
liablility firms per 1,000 working-age population (those of ages 15-64)
for the year 2009

countries in Groups 3 and 4. With a 15% higher increase in entrepreneurship between Groups 3 and 4 than that observed with the WEF countries, entrepreneurship continues to play a significant role in the upgrading of governance for countries reaching stages 4 and 5.

From these results, one can tentatively conclude that successful movement through higher stages of development has been associated with entrepreneurial gains resulting in subsequent improvements in governance, as seen in the virtuous circle pattern of successful reform-led growth.

Entrepreneurship, Governance, and the Shadow Economy

One of the main impediments to competiveness and sustained growth is the development of a large shadow, or informal, economy. Numerous studies have documented that, while the shadow economy may provide a temporary haven for the unemployed, its low level of productivity and tax

potential ultimately causes a drag on sustained rates of economic growth.[61] Furthermore, the development of a large shadow economy is usually one of the symptoms of the vicious circle noted above. Often with the development of a large shadow economy, insurgent and criminal groups are able to establish secure sources of financing for their operations, further contributing to on-going instability and economic decline.[62]

As might be expected, the size of the shadow economy declines as countries pass through the various stages of development, although this reduction appears to stall at around 35% of GDP at the Group 3 level before declining rapidly to 15.25% as countries reach Group 4. While the shadow economy contracts as entrepreneurial activity increases, it does so at a differential rate. Recent estimates place Pakistan's shadow economy at about 37 percent of the country's GDP,[63] which is somewhat lower than the 40.45% mean for Group 1 countries (Table 16).

To test whether the reduction in the shadow economy is a direct result of increased entrepreneurship or of a more indirect process stemming from the improved governance associated with increased entrepreneurial activity, regressions were undertaken beginning with Group 1 and gradually expanding the Group sample size. For these countries (Table 17), improved goods market efficiency was the strongest factor reducing the size of the shadow economy, followed by innovation (a key element affecting the expansion of entrepreneurship for this group of countries) and fiscal freedom. The last term is logical since higher tax rates at early stages of development have been known to force many firms into informal (tax-avoidance) activities. These three variables account for over 80% of the variance in the size of the shadow economies across this group of countries. Beyond these variables, entrepreneurship was not statistically significant in contributing to the regression equation. The model predicted the size of Pakistan's shadow economy to be 37.5%–quite close to its actual value of 37.1%

[61]See for example, Robert Looney, "The Economic Consequences of Conflict: The Rise of Iraq's Informal Economy", Journal of Economic Issues, December 2006; Robert Looney, "Iraq's Shadow Economy," Revista Internazionale di Scienze Economiche e Commercialli, December 2005.

[62]Robert Looney, "The Business of Insurgency: The Expansion of Iraq's Shadow Economy, The National Interest, Fall 2005

[63]This figure along with those for our sample of countries are taken from Andreas Buehn and Friedrich Schneider, Shadow Economies and Corruption All Over the World: Revised Estimates for 120 Countries, Economics: The Open-Access, Open-Assessment E-Journal, October 27, 2009

Table 16
Shadow Economy and Entrepreneurship

Country Grouping	WEF Country Grouping	
	Shadow Economy	Entrep- reneurship
Group 1	40.56	0.472
Group 2	35.54	0.990
(% difference)	-14.12	52.32
Group 3	35.1	2.374
(% difference)	-1.25	58.30
Group 4	27.86	3.417
(% difference)	-25.99	30.52
Group5	15.25	5.948
(% difference)	-82.69	42.55

Notes: Entrepreneurship: The 2020 World Bank Group Entrepreneurship Snapshots (WBGES) Data Set -- Newly registered limited liability firms per 1,000 working age population. Shadow Economy (% GDP) from Andreas Buehn and Friedrich Schneider, Shadow Economies and Corruption All Over the World: Revised Estimates for 120 Countries, Economics: The Open-Access, Open-Assessment E-Journal
 27-Oct-09

Expanding the sample to include Group 2 countries produced a shift in factors affecting the size of the shadow economy. Now innovation becomes the most important variable, followed by investment freedom. Regulatory quality is marginally significant and positive sign, i.e., it increases the size of the shadow economy. Improved regulatory quality at this stage of development may force firms that are unable to comply into the shadow economy. Finally, expanding the sample to include Group 4 and 5 countries (Table 18) resulted in the rule of law playing the dominant role in the shadow economy's reduction.

The results for the shadow economy are roughly consistent with the entrepreneur-led virtuous circle described above and, in that sense, close the circle. For Group 1 countries, economic reforms, especially in the areas of trade and improved business freedom, jump-start entrepreneurial activity (Table 6). As entrepreneurial activity takes hold, this class begins to generate more resources for growth and supportive government services. With growth, political stability becomes easier to maintain (Table 9). For

Table 17
Determinants of the Shadow Economy

(Stepwise Regression)

	Standardized Coefficient	t	Sig	df	R	R Square	Adjusted R Square
WEF Group 1							
Model 1							
WEF Goods Market Efficiency	-0.816	-5.099	0.000	13	0.816	0.667	0.641
Model 2							
WEF Goods Market Efficiency	-0.553	-3.637	0.003				
WEF Innovation	-0.464	-3.054	0.010	12	0.901	0.812	0.781
Model 3							
WEF Goods Market Efficiency	-0.547	-4.151	0.002				
WEF Innovation	-0.673	-4.155	0.002				
EF Fiscal Freedom	-0.317	-2.222	0.048	11	0.933	0.871	0.835
Pakistan	**Actual = 37.1%**	**Predicted = 37.5%**					
WEF Groups 1 and 2							
Model 1							
WEF Innovation	-0.638	-3.970	0.001	23	0.638	0.407	0.381
Model 2							
WEF Innovation	-0.679	-4.494	0.000				
EF Monetary Freedom	-0.318	-2.105	0.047	22	0.711	0.506	0.461
Pakistan	**Actual = 37.1%**	**Predicted = 39.6%**					
WEF Groups 1 2 and 3							
Model 1							
WEF Innovation	-0.449	-3.255	0.002	42	0.449	0.201	0.182
Model 2							
WEF Innovation	-0.521	-3.802	0.000				
EF Invedstment Freedom	-0.287	-2.099	0.042	41	0.528	0.279	0.244
Model 3							
WEF Innovation	-0.671	-4.478	0.000				
EF Investment Freedom	-0.623	-3.009	0.005				
WB Regulatory Quality	0.426	2.099	0.042	40	0.592	0.350	0.302
Pakistan	**Actual = 37.1%**	**Predicted = 42.7%**					

Notes: Stepwise Regression Model: IBM SPSS 19.0; Country groupings are those formed from a discriminant analysis of the combined
data set. Data Set: WEF = World Economic Forum Dompetitiveness data set;, EF = Heritage Economic Freedom Data Set;
WB = World Bank Governance Indicators data set.
Entrepreneurship data: World Bank Enterprise Snapshots (WBGES) 2010.
Regression Analysis was the size of the shadow economy (%GDP) on the combined WEF, WB and EF data sets.
Additional Variable: WEFGROUP, WEF Grouping from the WEF's 2010-2011 Competitiveness Report

successful countries that are able to continue moving up the development scale, further growth and expansion in entrepreneurial activities result in the broad improvements in governance required for sustained growth. These patterns occur in WEF Groups 3 and 4, with subsequent dramatic declines in the size of the shadow economy in Groups 4 and 5.

Entrepreneurial Development and the New Growth Framework

An extensive quantitative analysis of the growth patterns of successful countries suggests that entrepreneurial-led development, which forms the foundation for Pakistan's New Growth Framework is a promising

Table 18
Determinants of the Shadow Economy (contd.)

(Stepwise Regression)

	Standardized Coefficient	t	Sig	df	R	R Square	Adjusted R Square
WEF Groups 1, 2, 3 and 4							
Model 1							
WB Rule of Law	-0.517	-4.315	0.000	51	0.517	0.267	0.253
Model 2							
WB Rule of Law	-0.505	-4.363	0.000				
WEF Market Size	-0.254	-2.195	0.333	50	0.576	0.332	0.305
Pakistan	**Actual = 37.1%**	**Predicted = 42.0%**					
WEF Groups 2, 3 and 4							
Model 1							
WB Rule of Law	-0.503	-3.429	0.001	36	0.503	0.253	0.232
WEF Groups 3, 4 and 5							
Model 1							
WB Rule of Law	-0.804	-9.835	0.000	53	0.804	0.646	0.639
Model 2							
WB Rule of Law	-0.793	-10.041					
WEF Market Size	-0.176	-2.231		54	0.823	0.677	0.665

Notes: Stepwise Regression Model: IBM SPSS 19.0; Country groupings are those formed from a discriminant analysis of the combined data set. Data Set: WEF = World Economic Forum Dompetitiveness data set;, EF = Heritage Economic Freedom Data Set;
WB = World Bank Governance Indicators data set.
Entrepreneurship data: World Bank Enterprise Snapshots (WBGES) 2010.
Regression Analysis was the size of the shadow economy (%GDP) on the combined WEF, WB and EF data sets.
Additional Variable: WEFGROUP, WEF Grouping from the WEF's 2010-2011 Competitiveness Report

alternative. The analysis found that entrepreneurial activity was a key element driving the growth process through progressive stages of economic development. Successful countries that followed an entrepreneurial-led strategy, such as the Czech Republic and Poland, sustained their growth through a series of ongoing economic and governance reforms initiated by this growing stakeholder group. The result was the creation of a virtuous circle in which increased economic liberalization led to expanded entrepreneurship, increased growth, and improved governance, which in turn led to further growth and development (Figure 14).

According to the World Bank's Business in Pakistan Report:

> There is no blueprint for how to grow and prosper in a challenging environment, but one factor is creating an investment climate conducive to starting and running a business, where complying with regulations brings more benefits than costs, and where an entrepreneur with an innovative idea can test the waters and succeed or fail. Where commercial regulations are simple, efficient and accessible to all, entrepreneurs can focus on what they do best–running their businesses. This is important for Pakistan

where small and medium size firms constitute nearly 90% of all enterprises, employ 80% of the nonagricultural labor force and contribute 40% of annual GDP.[64]

Figure 14. Successful Reforms and Virtuous Circles
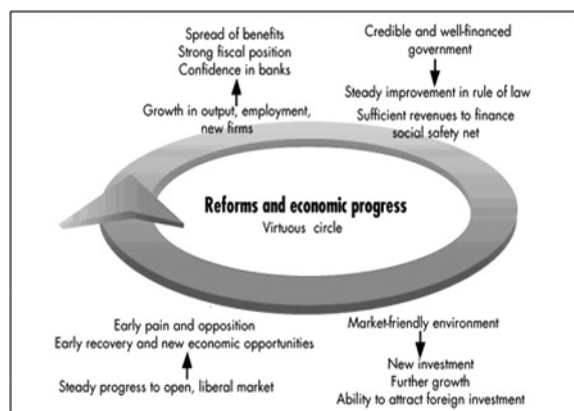
Source: Oleh Havrylyshyn and Thomas Wolf, Determinants of Growth in Transition Countries, Finance & Development, June 1999

The empirical results support this argument. For Pakistan and other Group 1 countries, trade liberalization and increased business freedom have the most simulative effects on entrepreneurship and new firm creation, out of a wide range of governance, economic freedom and competitiveness factors.

Local communities have some degree of control over the rules and regulations governing business, as illustrated by the wide range of differences in the ease of doing business between Pakistan's major cities (Table 19). However, while business freedom can be addressed at the local level, trade liberalization lies firmly in the hands of Pakistan's central government. According to Heritage House, Pakistan's level of trade freedom is below the norm for Group 1 countries, with import restrictions, inconsistent and burdensome regulations, and corruption adding considerably to the cost of trade.[65] Proponents of the New Growth Framework will need to amass sufficient support and momentum to overcome the many entrenched groups who currently benefit from these added costs and restrictions.

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[64]World Bank, Doing Business in Pakistan 2010 (Washington IBRD, 2010), p.xv

[65]Heritage House, Economic Opportunity and Prosperity: The 2011 Index of Economic Freedom (Washington: Heritage House, 2011).

Table 19
Ease of Doing Business in Pakistan

City, Province	Ease of Doing Business (rank)	Starting a Business (rank)	Dealing With Construction Permits (rank)	Registering Priperty (rank)	Paying Taxes (rank)
Falsalabad, Punjab	1	2	6	1	3
Multan, Punjab	2	6	1	7	3
Lehore, Punjab	3	3	3	4	3
Islamabad, ICT	4	1	8	3	1
Shelkhupura, Punjab	5	9	8	5	3
Gujranwala, Punjab	6	13	2	6	3
Sukkur, Sindh	7	10	4	10	11
Peshawaar, Khyber Pakhtunkhwa	8	3	6	9	10
Karachi, Sindh	9	3	10	11	11
Rawalpindi, Punjab	10	8	5	7	3
Slalkot, Punjab	11	12	11	1	3
Quetta, Baluchistan	12	6	12	13	2
Hyderbad, Sindh	13	11	13	11	11

Note: The ease of doing business is calculated as the ranking on the simple average percentile rankings on each of the six topics covered. The ranking on each topic is the simple average of the percentile rankings on its component indicators.
Source: World Bank, Doing Business in Pakistan, 2010, p.7

Assuming these reforms can be put in place, the discriminate analysis identified innovation and infrastructure as the most important factors facilitating a country's rise from Group 1 to Group 2. Pakistan scored above even the Group 2 countries on innovation, which indicates that it has the makings of a large and dynamic entrepreneurial class. The country lags significantly, however, in infrastructure.

In the usual development sequence, the government would take the lead in addressing this deficiency in order to reduce the costs of entrepreneurial activities so that their profitability becomes readily apparent. Unfortunately, Pakistan's government is notoriously bad at this type of decision-making and innovation. One advantage of the discriminant analysis approach is that it suggests ways that countries can make-up for these types of deficiencies by overcompensating in other areas, in a process akin to the unbalanced growth strategy originally developed by Albert Hirschman.[66] In Pakistan's case, the analysis suggests that the entrepreneurial class could assume the lead role in a Hirschman-type process.

Under this scenario, the New Growth Framework would encourage entrepreneurs to continue and expand their innovative activity. The entrepreneurs, in turn, would place increased pressure on the government to provide accommodating infrastructure. As the entrepreneurial class grew in strength, its influence would help spur a productive public

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[66]Albert Hirschman, The Strategy of Economic Development, (New Haven: Yale University Press, 1958).

investment program to meet specific needs and overcome well-identified bottlenecks to increased economic activity. Such a public investment program would extend not only to physical, but to human capital, as the increasing sophistication of firms combines with trade-induced technology transfer to expand the demand for skilled workers.

Once growth has been jump-started, entrepreneurial reform efforts must immediately shift to governance reforms, particularly in the areas of voice and accountability, to create a virtuous circle that will allow the country to sustain its growth and continue up the development ladder to Group 2, 3 and beyond, as illustrated in Figure 15.

Figure 15. Blueprint for Pakistani Development
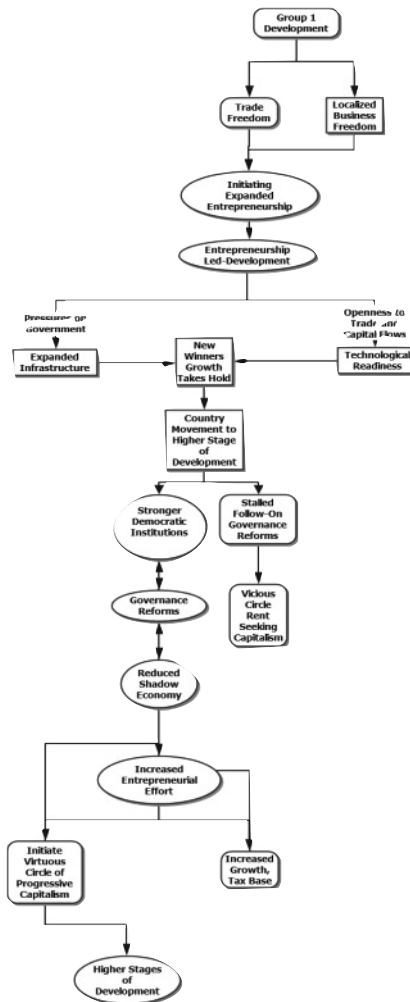
Economic reforms by Musharraf in the early to mid-2000s were not followed by improvements in governance and instead gave rise to a new set of rent-seekers who blocked further reforms, stalling the economic take-off.[67] Eastern European countries, like Belarus and Romania, that were unsuccessful in completing their transitions from communism followed a similar pattern and devolved into:

> …a vicious circle in which initial steps toward market reform create opportunities for rent seeking and corruption. Vested interests that benefit from these opportunities very soon establish themselves and resist further reform steps, such as allowing open entry to the market, fostering competition, providing for full liberalization, and establishing a solid rule of law. As a side effect, an underground economy emerges. Limited competition, incomplete liberalization, incentives to go underground, and the uneven rule of law can freeze the transformation in its tracks. Slow economic progress, a reversal of growth, and a collapse of financial stabilization can easily result (Figure 16).[68]

Figure 16. Failed Reforms and Vicious Circles
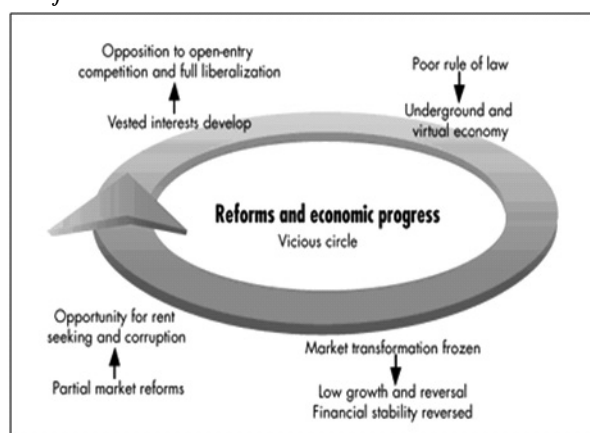
Source: Oleh Havrylyshyn and Thomas Wolf, Determinants of Growth in Transition Countries, Finance & Development, June 1999.

The present study has focused on Pakistan, where instability and conflict are on-going and well-established groups with strong vested interests abound. Even in such a situation, the results presented above suggest that an entrepreneurial-based development strategy is on firm theoretical and empirical grounds. Over time, the institutional reforms induced by the entrepreneurial

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[67]Robert Looney, "Failed Take-Off: An Assessment of Pakistan's October 2008 Economic Crisis, University of Bradford, Pakistan Security Research Unit, Brief Number 46, April 21, 2009, p.7

[68]Oleh Havrylyshyn and Thomas Wolf, Determinants of Growth in Transition Countries, Finance & Development, June 1999.

class would enable the country to overcome existing impediments to sustained growth and move to higher levels of development.

In summary, the findings presented above suggest that:

1. It is unlikely that in Pakistan's current institutional/political setting traditional aid programs, even with greatly expanded funding, could initiate a process of institutional development and reform sufficient to offset Pakistan's current slow growth and cycle of violence.

2. However, an extensive quantitative assessment of successful country growth patterns found that entrepreneurial activity is a key element in driving the growth process through progressive stages of economic development.

3. Successful countries whose development relies on increased entrepreneurial activity appear to sustain growth through a series of ongoing reforms initiated by this growing stakeholder group. As a result, they are able to establish virtuous circles of increased economic liberalization, extended entrepreneurship, expanded growth, and improved governance, which lead in turn to further growth and development.

4. Increased trade liberalization and improvements in the business climate are the most important factors for stimulating entrepreneurial expansion for countries at Pakistan's stage of development.

5. Consequently, entrepreneurial efforts could be expanded in the short-term without major improvements in governance.

6. Entrepreneurial-led development could potentially create a virtuous of circle of growth and reform in Pakistan capable of overcoming the constraints of violence, bureaucratic inertia, and the country's many vested interests.

7. In principle, Pakistan's New Growth Framework incorporates all of the elements noted above.