Global Entrepreneurship Monitor

PAKISTAN REPORT 2012

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Foreword

Pakistan's population in 2012 was over 179 million, making it the world's sixth most-populous country, behind Brazil and ahead of Nigeria. During 1950–2011, Pakistan's urban population expanded over sevenfold, while the total population increased by over fourfold. The structure of the population pyramid has changed a lot in the past decade as the base of the pyramid has become very heavy and about 80 million people are in the age bracket of 15 to 40 years.

With the intended shift towards creating an entrepreneurial economy and increased calls for public-private partnerships to achieve this goal, the role of the government, the private sector and the academic institutions is to create an ecosystem which favours and creates incentives for promoting entrepreneurial activity. Government's role has to go beyond the traditional economic rational of relying on the existence of market failures and distortions, but rather, intervening so that these market failures and distortions do not negatively impact on an emerging entrepreneurial society. The academic institutions have to play the role of educating the youth and developing an entrepreneurial mindset.

The Pakistani nation has a God gifted ability to be entrepreneurial. In the national economy Small and Medium Enterprises (SMEs) constitute nearly 90% of all private firms; they employ 80% of the non-agricultural labor force; and their share in the annual GDP is 40%. The industrial clusters of Gujranwala and Sialkot are famous for their entrepreneurial spirit and contribution to the national economy. The textile based SMEs are the back bone of the economy. I consider entrepreneurship a panacea for a developing country such as Pakistan, which has one of the highest population growth rate particularly of youth population. It is high time that all the stakeholders join hands in promoting entrepreneurship.

IBA AMA-CED has been created to play a leading role in promoting entrepreneurship in the country. IBA, along with partner universities from all over the country, has embarked on a journey to promote entrepreneurship through various programs including:

- Agriculture entrepreneurship
- Technology entrepreneurship
- Women entrepreneurship
- Family businesses
- Youth entrepreneurship
- All Pakistan business plan competition

IBA is also working with other local and global partners including KCCI, the World Bank, British Council, Babson College, SP Jain Business School, and Coventry University to develop an ecosystem to promote entrepreneurship in the country.

This GEM study by IBA Karachi carried out jointly with IBA Sukkur, UET Peshawar, NUST business school, and GIFT University has helped us to understand the state of entrepreneurship in the country and will greatly aid Pakistan in benchmarking with its peer nations.

I congratulate the GEM Pakistan Team on the completion of this third GEM research cycle. I am confident that the research findings will help our policy makers, researchers and educators in Pakistan to create awareness and enhance learning about entrepreneurship by improving support for the development of new and innovative business ventures.

Dr. Ishrat Husain
Dean and Director
IBA, Karachi

ACKNOWLEDGEMENTS

While, we are celebrating the completion of our third consecutive cycle of GEM research, we are cognizant of the commitment of the Center for Entrepreneurial Development at IBA to promote entrepreneurship in the nation by sustaining this project of global significance. This year, under the guidance of Dr. Ishrat Husain, Dean and Director IBA, we expanded our partnerships to include other institutions of higher education in Pakistan: IBA Sukkur, NUST Islamabad, UET Peshawar, and GIFT Gujranwala. On behalf of the GEM Pakistan team, my special thanks go to Syed Ali Akbar Rizvi, Director Centre for Entrepreneurship, IBA Sukkur; Mr. Akhtar Ali Qureshi, General Manager Centre for Innovation & Entrepreneurship (CIE), NUST Islamabad; Mr. Asif Shah, Director Incubator UET Peshawar; and Mr. Nadeem Mustafa, Head of Business School, GIFT University Gujranwala.

On the ground, the professionalism of our survey vendor and cooperation of the interviewees and survey respondents have been crucial for the success of this study. Therefore, I would like to thank all those national experts and adult survey respondents who spared their valuable time for interviews and answered our questions. Our vendor team from OASIS Insights played a key role in our APS data collection — their professionalism and timely completion of the survey is appreciated.

For support in project supervision, fundraising, and report writing, I would like to take the opportunity to recognize my IBA-CED colleagues: Dr Qureshi, the CED Program Director supervised the Adult Population Survey, was responsible for data analysis and co-authored this report; Mr. Zafar Siddiqui of the IBA Alumni Office helped in providing fund raising leads; Mr. Moid Sultan and Mr. Jehanzeb of IBA's Accounts and Finance Department were always available for help; Mr. Waleed Wasti and Mr. Shaheer Kazmi provided the necessary research assistance; they made the work easier and I thank them all for their contributions.

Finally, I would like to express my appreciation to the Global GEM Project Management Team including Dr. Mike Herrington, Dr. Niels Bosma, Ms. Marcia Cole, Mr. Chris Aylett, Ms. Yana Litovsky, Dr. Alicia Coduras, Dr. Jeff Seaman and Ms. Ingrid Blake; their continued encouragement and support of our GEM Pakistan project.

Sincerely,

Sarfraz A. Mian, PhD
Head and PI,
GEM Pakistan Team

Executive Summary

1. In 2012, the Global Entrepreneurship Monitor (GEM) research consortium measured entrepreneurial activity of adult individuals in 69 member economies, making it the world's most authoritative comparative study of entrepreneurial activity in the general population. Over, two thousand individuals aged 18-64 participated in the GEM Pakistan Survey in 2012.
2. This national study compares global entrepreneurship monitor (GEM) measures of various entrepreneurial characteristics (attitudes, aspirations, and activities) in Pakistan and other participating countries. It summarizes these entrepreneurial characteristics within various regions and cities of Pakistan. It also reports expert views on the environment for entrepreneurship in Pakistan and compares these with other GEM nations.
3. The number of people in Pakistan who have a positive attitude towards entrepreneurship is less than the average of its factor driven peer countries. However, it is higher than the average figures of innovation driven economies. Moreover, the male population has a more positive attitude towards entrepreneurship in Pakistan as compared to the female population.
4. Within Pakistan, the residents of Sindh and Khyber Pakhtoon Khuwa (KPK) have a relatively higher level of favorable attitude towards entrepreneurship and perceive more opportunities in the near future. Among the major cities, the residents of Quetta, Islamabad, and Hyderabad have a more positive perception of entrepreneurial opportunities in the future and perceive to have the highest level of skill set, knowledge and experience to start an entrepreneurial venture as compared to other major cities of Pakistan.
5. Total Early Stage Entrepreneurial Activity or TEA rate (the sum of the nascent entrepreneurship rate and the new business owner-manager rate) in Pakistan was 11.57%. This is significantly lower than the average TEA rates for the factor-driven economies (23.68%) and also lower than efficiency-driven economies (13.11%). However this is greater than the average TEA rate of Innovation-driven economies (7.09 %).
6. The TEA rate is classified into two types, i.e. opportunity based TEA rate and necessity based TEA rate. About 24% (of the 11.57%) of Pakistanis were involved in opportunity based early stage entrepreneurial activity (the rest 76% were need based). This opportunity based portion of the TEA rate for Pakistan is considerably lower than the average opportunity based TEA rate of factor- driven (42%) and efficiency- driven countries (46%).
7. The male TEA rate in Pakistan is more than seventeen times that of the female TEA rate. This gender gap in Pakistan is one of the highest in the world when compared with the rest of the world including its other factor-driven peer nations.
8. The Established Business Ownership (EBO) rate in Pakistan was 3.78 %. This is significantly lower than the average EBO rates for Pakistan's peer factor driven

economies (11.43 %), as well as efficiency driven (7.79 %) and innovation driven (6.67 %) economies

9. The male Established Business Ownership (EBO) rate in Pakistan is more than 3 times that of female EBO rate. This shows that the gender gap in EBO is also very high when compared to other factor, efficiency and innovation driven countries.
10. When surveyed, 8.29% of the adult population in Pakistan was trying to start a business (nascent entrepreneurs), which was lower than the average of factor-driven economy nations (11.85%); it is 15.42% in Ghana, 14.67% in Peru and 14.68% in Chile.
11. According to the survey, Pakistani population's new business ownership rate (owner managers of a business that was between 3 to 42 months old) was 3.42%. This rate is considerably less than the average of factor- driven countries (12.75 %), efficiency-driven countries (5.57%) but a bit higher than that of innovation driven- economies rate (3.04%)
12. Entrepreneurial activity in various Pakistani regions is found to be as follows: KPK has the highest rate of active involvement in the startup effort and at the same time has a high business closure rate. Sindh and KPK have the highest rate of established business owners (5.7%) and Sindh and Punjab have the highest rate of expectations to start a business in the next three years.
13. In Pakistan early stage entrepreneurs and new-business managers have relatively high aspirations to grow as compared to most other GEM participating countries. The proportion of early stage Pakistani entrepreneurs reporting new product/market combinations and with at least one fourth foreign customers is 22.96%, which is above the average of factor- driven countries.
14. In Pakistan 31.24% of the total working age population (including those who are entrepreneurially active) expressed opinion that the fear of failure would prevent them from starting a business. The fear of failure in the Pakistani population is higher than the average of the factor driven economies.
15. Experts on entrepreneurship in Pakistan generally rated their government support programs significantly lower than those of the innovation and efficiency driven countries. Cultural and social norms were also reported as more negative for entrepreneurship in Pakistan than in the other factor and efficiency driven countries.

Chapter 1: Introduction and Background

1.1 Study Introduction

After our second GEM Pakistan 2011 study, published in early 2013, this report provides the results of Pakistan's third national survey of various entrepreneurial characteristics studied under the Global Entrepreneurship Monitor (GEM) program. This grass-roots research program is aimed at better comprehending the dynamics of national/local entrepreneurship context by measuring attitudes, activities and aspirations of adult individuals participating in different phases of entrepreneurship. There is an ever increasing evidence of the use of GEM data and its research findings in policy making at all levels of government and academia in order to promote entrepreneurship in member nations.

The GEM project is implemented through the collaborative efforts of participating national teams and is coordinated by the Global GEM consortium. According to the research design, each GEM national team conducts its adult population survey (APS) along with a national expert survey (NES) and the data are harmonized allowing national comparisons of the key entrepreneurial dimensions. The last GEM 2012 Global Report summarizing this world-wide data gathering and research activity of 69 national teams including Pakistan was released earlier in January 2013 (see www.gemconsortium.org).

Pakistan joined GEM in 2010 under the sponsorship of IBA Karachi and undertook its first GEM study in the summer of 2010. The second study was conducted in the late summer of 2011 and the third in the late summer of 2012. Every effort was made to ensure data quality and reliability of results, for which necessary weights were calculated (see Appendix 2) to address representativeness of the sample along gender and urban-rural lines. This report focuses on Pakistan specific findings providing necessary analyses and benchmarking with the peer factor-driven and other (efficiency and innovation driven) more advanced nations. The work is intended to create public awareness, promote research and aid policymakers of Pakistan in identifying and helping to address the underlying issues impeding entrepreneurial growth by formulating enabling policies and support programs to promote entrepreneurship in the nation.

1.2 Overview of the GEM Program and Research Model[1]

Founded in late 1990s[2], GEM program is administered by the Global Entrepreneurship Research Association (GERA), a not-for-profit body of academic researchers from prominent business schools across the globe. Over the last 14 years of its inception the program has experienced phenomenal growth to include over 80 countries most of whom conduct their national GEM surveys every year.

GEM focuses on three main objectives:

- To measure differences in entrepreneurial attitudes, activity and aspirations among nations.
- To uncover factors determining the nature and level of national entrepreneurial activity.
- To identify policy implications for enhancing entrepreneurship in an economy.

GEM is based on the following premises. First, an economy's prosperity is highly dependent on a dynamic entrepreneurship sector. This is true across all stages of development. Yet the nature of this activity can vary in character and impact. Necessity-driven entrepreneurship, particularly in less developed regions or those experiencing job losses, can help an economy benefit from self-employment initiatives when there are fewer work options available. More developed economies, on the other hand, can leverage their wealth and innovation capacity, yet they also offer more employment options to attract those that might otherwise become entrepreneurs. In order to maintain their entrepreneurial dynamism they need to instill more opportunity-based motives.

Second, an economy's entrepreneurial capacity requires individuals with the ability and motivation to start businesses, and positive societal perceptions about entrepreneurship. Entrepreneurship should include participation from all groups in society, including women, a range of age groups and education levels and disadvantaged populations. Finally, high-growth entrepreneurship is a key contributor to new employment in an economy, and national competitiveness depends on innovative and cross-border entrepreneurial ventures.

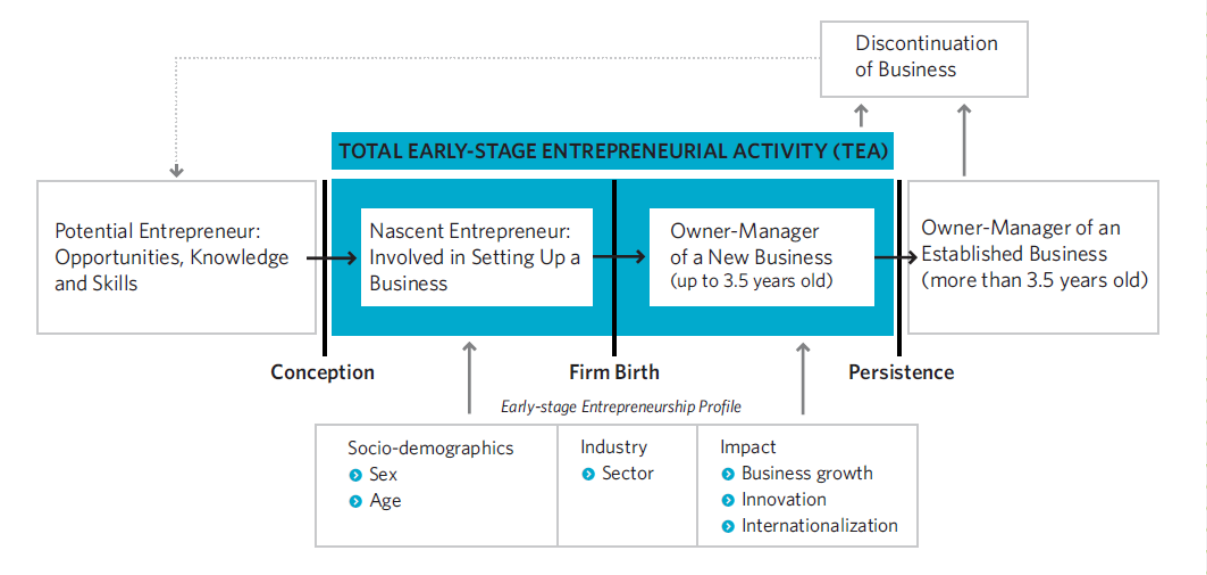
GEM Measures

At the time of GEM's founding, traditional analyses of economic growth and competitiveness had, for the most part, neglected the role played by new and small firms in national economies, due, in some measure, to the lack of good data on this sector. This information, when available, tended to be present in only those countries at the most advanced stages of economic development. Existing measures, such as self-employment rates, did not reflect the dynamic scope of entrepreneurship. And while most governments have long maintained records of formal business registrations, it wasn't until GEM emerged that an accurate picture could be drawn of the entrepreneurially conscious people, and how many of them are actually involved in documented and undocumented businesses in different corners of the world.

The main guiding purpose of GEM is to measure *individual* involvement in venture creation. This differentiates GEM from other data sets, most of which record firm-level data. A second aim of this research is to promote entrepreneurship as a process comprising different phases, from intending to start, to just starting, to running new or established enterprises and even discontinuing these.

Figure 1 summarizes the entrepreneurship process and GEM's operational definitions. For more information on the GEM methodology, visit the website at www.gemconsortium.org. The most common operational variables and their definitions are outlined in Appendix 1.

Figure 1 — The Entrepreneurship Process and GEM Operational Definitions



Through the wealth of measures GEM tracks, we can understand which types of people are (and are not) participating in entrepreneurship. We capture both those formally registering their businesses and those running informal ones. These unregistered businesses, in fact, can compose as much as 80% of economic activity in developing countries.[3]

People launch businesses for a variety of reasons. They may be led into entrepreneurship out of necessity: the pursuit of self-employment when there are no better options for work. In contrast, their efforts may be powered by the desire to maintain or improve their income, or to increase their independence. GEM therefore assesses the motives of entrepreneurs.

GEM additionally measures aspirations. These aspirations may be evident in innovative products or services or the pursuit of customers beyond national borders. They may also include high- growth ambitions, thereby contributing more markedly to new employment in their economies.

Recognizing that entrepreneurs are driven not only by their own perceptions about starting a business, but the attitudes of those around them, GEM considers the attitudes representing the climate for entrepreneurship in a society. Entrepreneurs need to be willing to take risks and have positive beliefs about the availability of opportunities around them, their ability to start businesses and the value of doing so. At the same time, they need customers who are willing to buy from them, vendors willing to supply them and families and investors ready to support their efforts. Even positive societal perceptions about entrepreneurship may indirectly stimulate this activity.

Economic Development Level and Entrepreneurship

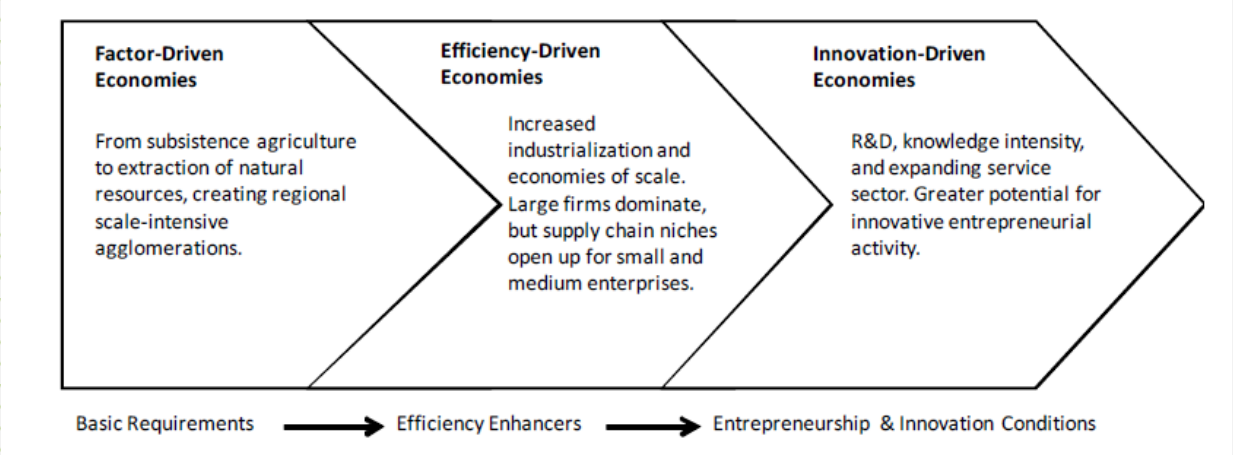
GEM's harmonized dataset enables comparisons of entrepreneurship activity around the globe, and within and across geographic regions. This report additionally examines groups of economies at similar

development levels. Following a typology used by the World Economic Forum, GEM classifies the 69 GEM participants as "factor-driven," "efficiency-driven" or "innovation-driven" economies[4].

Figure 2 illustrates the characteristics of these economic groups and the key development focus at each level. As an economy develops, productivity increases and, consequently, so does per capita income. This is often accompanied by the migration of labor across different economic sectors. For example, labor may move from agricultural and extractive sectors to manufacturing, and then eventually to services[5]. In their early stages of development, economies typically have a higher proportion of necessity-driven activities. Here, the demand for jobs in high-productivity sectors outpaces supply. As a result, many people must create their own source of income.

With further development comes the growth of productive sectors. This increases employment capacity but leads to gradual declines in the level of necessity-driven entrepreneurship. At the same time, improvements in wealth and infrastructure stimulate opportunity-based businesses, shifting the nature of entrepreneurship activity. These ventures are more likely associated with greater aspirations for growth, innovation and internationalization. They rely, however, on the economic and financial institutions created during the developing phases. To the extent these institutions are able to accommodate and support opportunity-seeking entrepreneurship activity; innovative entrepreneurial firms may emerge as significant drivers of economic growth and wealth creation[6].

Figure 2 — Characteristics of Economic Groups and Key Development Focus



GEM additionally considers geographic factors, grouping countries into six geographic regions: sub-Saharan Africa, the Middle East and North Africa (MENA), Latin America and the Caribbean, European Union, Asia Pacific and South Asia, the United States, and the Non-European Union. With both economic and geographic groupings, we can compare economies across similar development levels and geographic locations. The GEM grouping of the 69 participating countries are shown in Table 1.

Table 1 — GEM 2012 Participating Countries Classified by Economy and Geography

	Factor-Driven	Efficiency-Driven	Innovation-Driven
Sub-Saharan Africa	Angola, Botswana, Ethiopia, Ghana, Malawi, Nigeria, Uganda, Zambia	Namibia, South Africa	
Middle East & North Africa	Algeria, Egypt, Iran, Palestine	Tunisia	Israel
Latin America and Caribbean		Argentina, Barbados, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Panama, Peru, Trinidad & Tobago, Uruguay	
Non-European Union		Bosnia and Herzegovina, Croatia, Macedonia, Russia, Turkey	Norway, Switzerland
Asia Pacific & South Asia	Pakistan	China, Malaysia, Thailand	Japan, Republic of Korea, Singapore, Taiwan
European Union		Estonia, Hungary, Latvia, Lithuania, Poland, Romania	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Slovakia, Slovenia, Spain, Sweden, United Kingdom
United States			United States

The GEM Model

Figure 3 illustrates the GEM model, which shows, first, the relationship between the social, cultural and political context and three sets of framework conditions. These framework conditions are modeled as impacting the attitudes of a population toward entrepreneurship, and the activity and aspirations of entrepreneurs. In turn, entrepreneurship activity, as well as the growth of established firms in the primary economy influences economic growth.

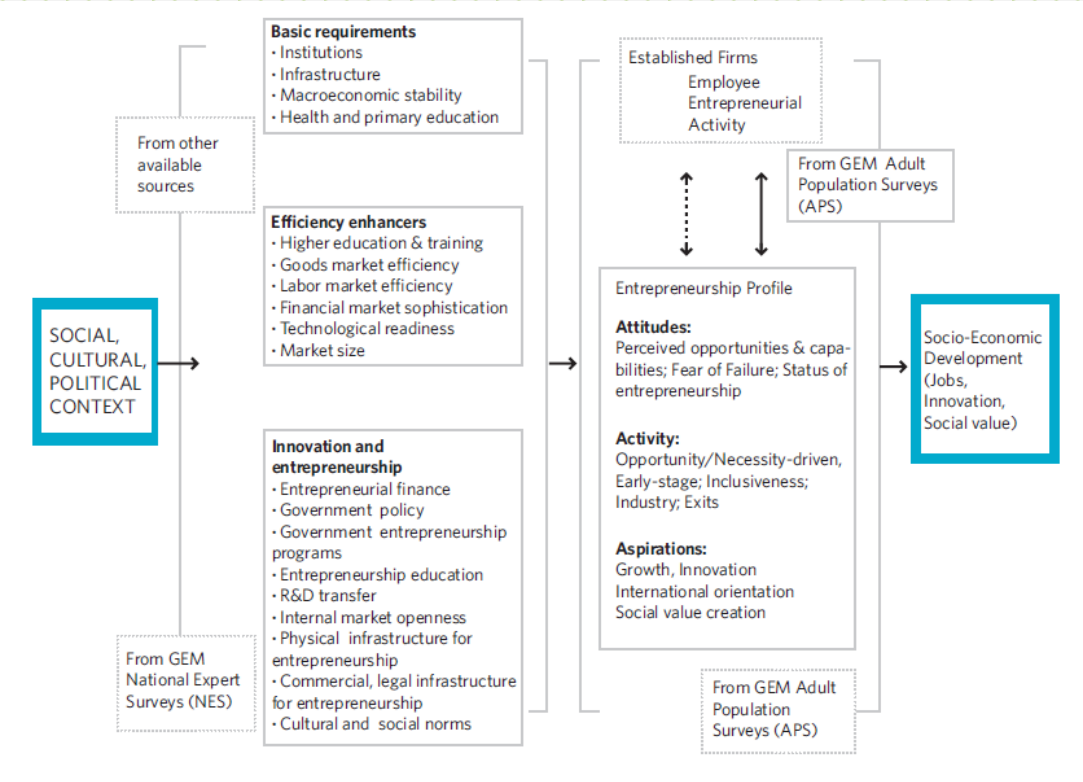
As Figure 2 shows, the key imperative in factor-driven economies lies in building basic requirements such as primary education, healthcare, infrastructure and so forth. Later-stage factors like entrepreneurial finance and government entrepreneurship programs are unlikely to have substantial impact if, for instance, entrepreneurs don't have good roads to transport goods or a sufficiently educated labor force from which they can recruit employees. In other words, investments in entrepreneurship-specific framework conditions may be less effective in enabling business creation if they are made at the expense of basic requirements.

Entrepreneurs with high aspirations fare better in countries with a stable economic and political climate and well-developed institutions. This, in fact, may account for the activities of certain groups of immigrants into wealthier economies. At the same time, economic progress begets scale economies. Large firms are more efficient from a national perspective and, for many individuals, a more attractive employment alternative to necessity-based entrepreneurship.

To replace the migration of necessity entrepreneurs toward employment in large companies, efficiency-driven economies must attract more opportunity-based entrepreneurship. The second set of framework conditions represents efficiency enhancers. These are directed toward ensuring that markets function properly. The nurturing of economies of scale can, in fact, be complemented by the emergence of growth- and technology-oriented entrepreneurs, expanding the scope of employment in a society.

Advanced economies have a relatively sophisticated foundation of basic requirements and efficiency enhancers. While these factors are essential in sustaining necessity-based entrepreneurship, they may be insufficient drivers of opportunity-based behavior. Here, knowledge is prevalent but labor is expensive. Entrepreneurship-specific framework conditions become the levers that drive dynamic, innovation-oriented behavior, while the foundation of basic requirements and efficiency enhancers needs to be maintained.

Figure 3 — The GEM Model



1.3 Entrepreneurship in Pakistan: Challenges and Opportunities

Historically, entrepreneurship, in the sense of its modern definition[7] has remained very limited in Pakistan. The development of small-scale industrial sector measured through new firm entry rate, if taken as proxy to reflect entrepreneurial activity in Pakistan, shows the average annual firm entry rate in Pakistan lower than most regional averages around the world[8]. There is, however, a note of caution here that a large number of new firm entries remain unregistered in Pakistan's significant small scale informal business sector. The Small and Medium Enterprise Development Authority (SMEDA) estimates that in Pakistan, small and medium enterprises (SMEs) with less than 100 employees constitute nearly 90% of all 3.5 million private firms that `employ 80% of the non-agricultural labor force; and their share in the annual GDP is 40%[9]. Their firm structure is dominated by sole proprietorship and most are family run businesses with no culture of taking it to the pubic (IPOs).

A review of the past 6 decades of Pakistan's development priorities reveals that entrepreneurship has never been the focus of economic development planners. All these years of government efforts clearly show a bias towards large scale industry and neglect of the small. The historical evidence clearly indicates that, in the context of Pakistan, when one talks about industrialization, for most people it implies large plants and factories run by machines and employing a large number of workers. It definitely comes as a surprise to people when they discover the reality; that it is actually the informal sector and the small scale business sector

that dominates the industrial landscape of Pakistan, which have been continuously ignored in the national economic policies.

As stated above, generally, the development of small-scale business sector reflected the characteristics of entrepreneurship, however, this sector had largely grown up as an informal sector. The informal small scale business sector has dominated employment in the construction, wholesale, retail trading, hotels, transport, communications and storage industries in urban areas. Some of the issues faced by the small and medium size firms located in different SME clusters in Pakistan are reported as follows[10]:

- Small businesses face a complex legal, tax and administrative environment in Pakistan therefore most firms avoided the economic obligations associated with the registered status.

- Entrepreneurs generally are not tuned to conducting R&D as they believed that the high cost of production and narrow margins did not give them the leverage to go for R&D. Major rationale behind the high cost included high utility prices and minimum wage fixed by government. Another reason of lack of focus on R&D was the nature of industry, which was skill based (imitation) rather than the knowledge based. Nevertheless, research was being undertaken to explore new markets based on personal visits of entrepreneurs either privately or in some cases in groups sent out by the government organizations to promote trade.

- The small businessman, by and large, expected from the government to provide incentives and subsidies, given the rent-seeking culture that has now been established; businessmen, instead of focusing on their own innovation, expected help from the government most of the times.

- Businesses remained largely owner-operated by individuals/families and resistant to developing professional management, as the business growth was traditionally dependent on policy favors rather than on professional management and strategy. Moreover, in clusters, there was no expertise for providing practical advice on key areas such as project feasibility, business operations, brand establishment and marketing. Given the lack of market depth, input from research institutions, universities and other forms of specialized knowledge, knowledge spillovers remained narrow and imitative.

- Scarcity of skilled labor was considered a major constraint for the development of entrepreneurship. Like all less resourceful firms, the SMEs typically had skill deficiencies and were unable to compete with larger firms' better-qualified manpower. Inter-firm transfer of skilled labor was a usual phenomenon directly influenced by relative wage levels. In this game, the larger firms had advantage over SMEs. Unfortunately, the

technical skills were not adequately rewarded by the employers. Even the society never respected people having blue-collared jobs.

• Over and above, lack of trust among the business community was a serious hindrance to growth, impeded cooperation among entrepreneurs to develop the existing or explore the new markets. The entrepreneurs in their attempts to hide business information used to maintain mailing address and banks in other cities. Another serious complaint was that the labor trained by one employer, either moved to another employer or opened up his own firm. Businesses remained owner-operated owing to lack of trust on professional employees within the business community as an employee who gained knowledge easily replicated with stolen business information.

• Small businessmen had little recourse to bank financing. They believed that the banks lent only to the big borrowers for non-commercial and political reasons. The biggest stumbling block was the State Bank of Pakistan's Prudential Regulations and documentation requirements, which most SMEs were unable to meet. Cut-throat competition, willing to go for the solo flight, lack of attitude towards delegation, lack of corporate culture, lack of knowledge/proper homework and lack of relevant business development systems provision in the industry had knocked down the SMEs in Pakistan.

However, in recent years, with the increasing realization of entrepreneurship and innovation as engines of economic growth, there had been a rise in interest in Pakistan to review the country's economic policies by placing emphasis on entrepreneurial growth[11]. Given the nation's socio-economic challenges and perceived untapped potential, a more heightened realization has resulted in the adoption of a New Growth Framework by the National Economic Council in May 2011[12]. Barring the forces of status-quo and vested interests of the elite groups which make up the distributional coalition and is content on their rent seeking behavior in the form of subsidies, protectionism and tax evasion, entrepreneurship offers an attractive opportunity driven merit-based option which is known to serve as equalizer in socio-economic development[13]. More recently, to operationalize this New Growth Framework, some studies have proposed the use of *Expeditionary Economics* [14]to focus on the nuts-and-bolts implementation of these new entrepreneurially-led economic growth principles in Pakistan's post-conflict settings. It has been noted that while poor infrastructure and weak governance are significant barriers, the nation has the making of a large and dynamic entrepreneurial class with the potential of facilitating country's rise into the next levels of national economic groups[15].

Despite the challenges, the two key potential areas of opportunity where entrepreneurship can make significant contributions are: First, more than 2/3rd of Pakistan's population is concentrated below the age of 30, which will change the age structure of working age population over the next few years. Majority of the youth entering the labor force over the next two decades will have little education and skills catering to market demand. Moreover, incessant shocks to the economy such as energy crisis, international commodity price shocks,

security issues, and flash floods of 2010/11 have left little resilience in the economy and absorption capacity for growing youth labor force. This required a rethinking about the sources of growth in Pakistan's context and entrepreneurship has the greatest potential to fill this gap.

Second, in the area of indigenous technology transfer, various researchers have underscored the need for establishing industry-university linkages. According to some estimates[16] in eight years, between 1999 and 2007, Pakistan had increased R&D investment by 600% which stood at 0.7% of GDP or USD 1.176 billion. At the same time number of researchers in Pakistan has grown from 187 per million in 2005 to 310 in 2007. Though Pakistan suffered significant economic challenges in the following years[17], there is still considerable R&D capacity in the nation's universities and institutions, particularly in the science and technology focused programs[18]. This new capacity can be converted into new innovative entrepreneurship opportunities, economic growth and wealth creation by linking it with better trained young entrepreneurial minds.

The above scenario leads us to believe that the country's underdeveloped small business and entrepreneurial sector which is facing numerous economic challenges, can benefit from the available manpower resource opportunity if mobilized through an entrepreneurially oriented innovative development approach envisaged in the new entrepreneurially-led economic growth approach[19], which is also the ultimate aim envisaged by the GEM project.

Chapter 2: Findings of GEM Pakistan 2012

2.1 Overview of the Research Results

In this cycle Pakistan shows a mix of increase and decrease in many entrepreneurship activity indicators. The people of Pakistan perceive more opportunities in the surrounding environment and perceive to have more capabilities than many of its peer countries. The fear of failure is 31% which is a bit higher than the last year but still lower than average of the factor driven countries. The TEA rate is 11.57, higher than that of last year. Nascent entrepreneurship rate has gone up from 7.5 to 8.29. Necessity driven TEA rate has gone up from 4.3 to 6.1 indicating that people are being forced into necessity entrepreneurship. There is a rise in new business manager rate from 1.7 to 3.42 and a decline in established business owner rate from 4.1 to 3.78.

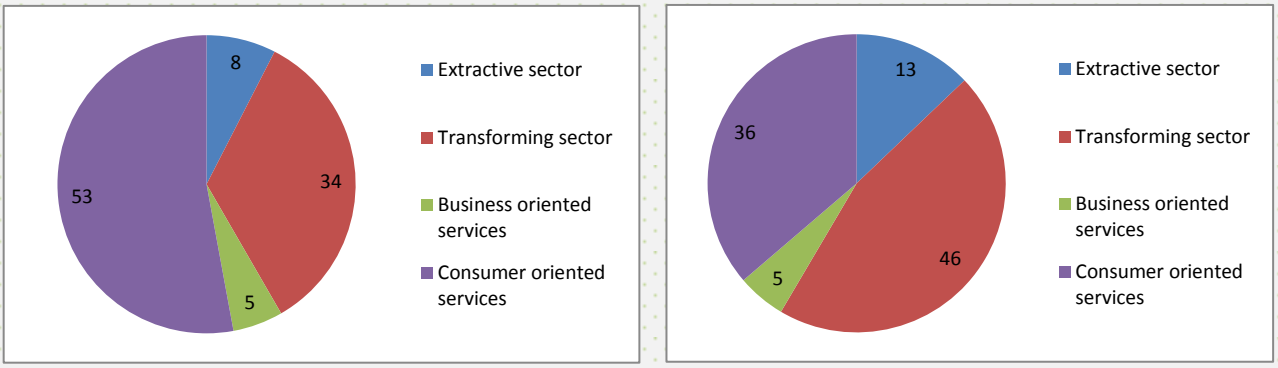
Table 2a: Some general characteristics and entrepreneurship indicators of Pakistan

General Characteristics*		GEM 2012 Entrepreneurship Indicators*	
Population (x 1,000):	179,160	Perceived Opportunities	46
Area (x 1,000 km^2):	771	Perceived Capabilities	49
Density (persons / km^2):	232.4	Fear of Failure	31
GDP Per Capita (PPP):	2,891		
		Nascent Entrepreneurship Rate:	8.29
Global Happiness Index:	5 (81/156)	Owner-Managers in New Businesses Rate:	3.42

Human Development Index:	0.5 (146/187)	Owner-Managers in Established Businesses Rate:	3.78
		Total early-stage Entrepreneurial Activity Rate (TEA):	11.57
Global Competitiveness Index:	3.41 (133/148)	- Necessity-Driven TEA Rate:	6.1
Global Innovation Index:	23.33	- Medium-High Job Expectation Rate: (MHEA)	1.4
Doing Business Index:	(107/185)	Entrepreneurial Employee Activity Rate (EEA):	0.1
GEDI Index:	0.14 (104/118)	- Private Sector EEA Rate (PEEA):	0.0
Classification Phase of Economic Development:		Factor-Driven Economies	
Classification Entrepreneurship Profile (Ch. 4):		High non-ambitious entrepreneurship (SLEA) only	

* For definitions and sources of the indicators, see the Annex

Figure 4: Sector Structure Total early-stage Entrepreneurial Activity (TEA) and Established Business Activity (EB)



Most of the early stage TEA in Pakistan is in the consumer oriented services followed by transforming and extractive sector. The early stage established business activity is the highest in the transforming sector followed by consumer and the extractive sector.

Table 2b: Comparison of various entrepreneurial characteristics and framework conditions of Pakistan with its Peer Nations, 2012

	Pakistan	Algeria	Iran	Turkey	Malaysia
Entrepreneurial Characteristic					
TEA Rate	11.57	8.75	10.79	12.22	6.99
Nascent Entrepreneurship rate	8.29	1.62	4.47	7.25	2.79
New Business Ownership rate	3.42	7.25	6.48	5.36	4.20
Necessity driven Entrepreneurship	52.95%	29.96%	41.96%	30.88%	13.32%

Female to male TEA ratio	1 to 17.6	1 to 2.2	1 to 2.7	1 to 2.6	1 to 1.3
Perceived capability to carry out Entrepreneurship	49%	54%	54%	49%	31%
Fear of failure	31%	35%	41%	30%	36%
Entrepreneurial Intentions	25%	21%	23%	15%	13%
Entrepreneurship as a good career choice	66%	79%	60%	67%	46%

2.2 Entrepreneurial attitudes According to GEM, entrepreneurial attitudes convey the feelings of a population group towards entrepreneurship in general. People who recognize the importance of entrepreneurship as it relates to the ability of individuals to deploy their competencies in order to exploit opportunities given a favorable or not so favorable environment tend to formulate certain views about entrepreneurship which are manifested in their attitudes towards this phenomenon. For this purpose GEM employs specific questions in the Adult Population Survey (APS) that measure these attitudes through various indicators.

More importantly, the difference in entrepreneurial activity rates between countries can be explained by differences in attitudes of the population towards entrepreneurship. Table 3 provides the attitudinal estimates for all participating countries in the adult working age (18-64) population who are not entrepreneurially active[20]. The percentage of the responding adults in each participating country including Pakistan, who expressed an opinion and agreed with the four key indicators, is listed in the Table. The countries are divided into three groups i.e., innovation driven, efficiency driven and factor driven economies with the following salient findings.

- In the innovation driven countries, the proportion of the non-entrepreneurial working age population who are aware of new entrepreneurial startups is the highest in Slovakia and Finland. The highest perception of good startup opportunities in the next six months is in Sweden and Norway. The skill, knowledge and experience perception is highest in the US followed by Slovenia. The people of Slovenia and Netherlands have the lowest fear of failure.
- In the efficiency driven countries, the proportion of the non-entrepreneurial working age population who are aware of new entrepreneurial startups is the highest in Namibia and then China, who perceive good startup opportunities in the next six months are in Namibia and Colombia and the skill, knowledge and experience perception is the highest in Trinidad & Tobago. The Tunisian people have the lowest fear of failure.
- In the factor driven countries, , the proportion of the non-entrepreneurial working age population who are aware of new entrepreneurial startups is highest in Zambia and Nigeria and the perception of good startup opportunities in the next six months and the

skill, knowledge and experience perception is the highest in Nigeria and Uganda. The Malawi population has the lowest fear of failure.

Overall, respondents from factor-driven economies generally rated their entrepreneurial attitudes more positively followed by efficiency driven economies and innovation-driven economies respectively.

There was a participation of 13 factor driven countries in the GEM 2012 cycle. Comparisons within the 13 factor driven economies show that Pakistan's adult population attitude measures are less positive than the group averages in the first three indicators. However Pakistan scores higher than the average in the last indicator.

Table 3: Attitudes towards Entrepreneurship in participating GEM Countries in 2012

Participating Country	I personally know someone who started a business in the past 2 years	There are good start up opportunities where I live in the next 6 months	I have the required knowledge/ skills & experience to start a business	Fear of failure would prevent me starting a business
Innovation Driven				
Austria	38.62	49.21	49.61	35.96
Belgium	22.13	33.29	37.11	40.83
Denmark	33.53	44.41	31.02	39.26
Finland	41.77	55.33	34.32	36.52
France	33.83	37.52	35.66	42.84
Germany	24.33	36.16	37.09	41.91
Greece	27.77	12.95	50.00	61.29
Ireland	37.33	25.55	45.16	35.37
Israel	28.56	30.62	29.31	46.76
Italy	20.12	19.80	29.97	57.68
Japan	13.97	6.37	9.00	53.13

Korea	28.67	12.52	26.93	43.01
Netherlands	34.99	34.40	42.30	30.45
Norway	35.17	64.43	34.37	39.37
Portugal	25.29	16.19	46.80	42.30
Singapore	18.74	22.51	26.58	41.63
Slovakia	42.49	17.84	49.73	38.32
Slovenia	40.08	19.62	51.32	27.28
Spain	31.10	13.90	50.38	41.76
Sweden	41.04	66.48	36.99	32.61
Switzerland	32.34	35.67	37.34	32.29
Taiwan	31.31	38.55	26.38	37.60
United Kingdom	30.07	32.82	47.13	36.01
United States	28.95	43.49	55.88	32.32
Average	**30.93**	**32.07**	**38.35**	**40.27**
Efficiency-driven				
Argentina	33.9	50.08	63.46	27.02
Barbados	31.49	47.01	69.86	17.27
Bosnia and Herzegovina	29.63	19.57	49.11	26.94
Brazil	33.63	52.40	53.94	31.05
Chile	41.85	64.91	59.91	27.99
China	52.42	32.24	37.60	35.82
Colombia	29.99	71.80	56.57	32.04
Costa Rica	40.51	47.14	63.26	35.26
Croatia	23.48	17.15	44.06	36.04
Ecuador	34.24	58.55	72.10	32.85

El Salvador	39.75	42.74	58.51	41.72
Estonia	37.51	45.24	43.19	34.49
Hungary	27.59	10.95	39.83	34.28
Latvia	32.34	33.05	43.56	36.74
Lithuania	32.91	29.99	39.83	35.78
Macedonia	31.34	30.79	55.11	39.43
Malaysia	45.99	35.69	30.82	36.34
Mexico	41.72	44.99	62.34	25.66
Namibia	66.4	75.22	74.00	35.15
Panama	30.8	38.48	43.34	16.67
Peru	45.94	56.99	65.47	30.36
Poland	40.95	20.42	53.89	43.45
Romania	30.36	36.73	38.34	40.87
Russia	33.75	20.08	23.50	46.51
South Africa	30.15	35.47	39.50	30.56
Thailand	34.74	44.61	45.97	50.06
Trinidad & Tobago	37.34	59.23	76.06	16.65
Tunisia	34.6	32.55	62.18	14.88
Turkey	34.06	39.88	49.44	30.38
Uruguay	35.57	51.03	57.81	27.18
Average	**36.50**	**41.50**	**52.42**	**32.32**
Factor-driven				
Algeria	60.04	45.67	54.10	35.44
Angola	67.42	66.17	72.05	37.94
Botswana	48.27	66.70	70.59	24.79

Egypt	30.61	53.72	58.66	32.96
Ethiopia	56.05	64.89	69.10	32.66
Ghana	55.71	79.29	86.26	18.23
Iran	39.95	39.17	54.15	41.42
Malawi	74.82	74.29	84.53	12.37
Nigeria	76.72	82.19	87.93	20.96
Pakistan	37.9	46.48	48.74	31.24
Palestine	39.68	46.14	59.37	40.19
Uganda	68.8	80.69	87.69	15.25
Zambia	77.54	77.87	83.75	16.68
Average	**56.42**	**63.33**	**70.53**	**27.70**

Entrepreneurial Attitudes in Pakistan

Table 4 shows estimates of the prevalence of attitudes towards entrepreneurship in Pakistan among the non-entrepreneurially active working age population by gender. Those successful at starting a new business have a high level of status and respect in society and most people consider starting a new business a good career choice. The Table shows that males tend to have more positive entrepreneurial attitude than females. The gap is particularly marked between the variables as follows.

The male respondents are about three times more aware of someone who has started a business in the last two years, a proxy measure of networking with entrepreneurial individuals. The male respondents perceive a higher number of startup opportunities and feel better equipped with the knowledge, skill and experience to start a new business.
The female respondents have less fear of failure to start a business however male respondents are more aware of stories about people starting successful new businesses in the media.

Table 4: Entrepreneurial Attitude in Pakistan: Respondents expressing the opinion and agreeing with the statement (2012)

Statement	All	Male	Female
I personally know someone who started a business in the past 2 years	36.9%	53.6%	19.9%

There will be good startup opportunities where I live in the next six months	45.5%	55.7%	34.9%
I have the knowledge, skill and experience to start a new business	49.2%	61.2%	36.3%
Fear of failure would prevent me from starting a business	29.2%	34.9%	22.9%
Most people in my country would prefer that everyone had a similar standard of living	72.3%	71.5%	73.1%
Most people consider starting a new business a desirable career choice.	66.9%	70.1%	63.6%
Those successful at starting a new business have a high level of status and respect in society	68.0%	65.0%	71.2%
You will often see stories about people starting successful businesses in the media	50.7%	53.8%	47.2%

Entrepreneurial attitudes of the non-entrepreneurially active working age population in various provinces of Pakistan are presented in table 5.

The key findings are as follows.

- The people of Sindh and Baluchistan were more likely to agree with the statement "I personally know someone who has started a business in the last two years" which is a proxy for networking with entrepreneurs.
- The people of Sindh and KPK had the highest proportion of the non-entrepreneurially active population reporting that there were good start-up opportunities in their local area in the next six months.
- The people of Sindh and KPK were the most likely to agree with statement that "I have the knowledge, skill and experience required to start a new business".
- The people of Baluchistan had the lowest fear of failure to start a business.

Table 5B reports that the people living in Sindh prefer an egalitarian standard of living for all followed by KPK. KPK residents gave the highest ratings to starting a new business a desirable career choice. The people of Sindh and Punjab have the highest perception that those successful at starting a new business have a high level of status and respect in society. Moreover Punjab has the highest number of people reporting that they have seen stories about people starting successful businesses in the media.

Table 5 A: Perceptions of entrepreneurship among non-entrepreneurially active working age population towards entrepreneurship in various provinces of Pakistan

Province	I personally know someone who started a business in the past 2 years	There will be good startup opportunities where I live in the next six months	I have the knowledge, skill and experience to start a new business	Fear of failure would prevent me from starting a business
Sindh	48.8%	57.6%	55.5%	18.6%
Punjab	32.7%	39.9%	47.1%	33.3%
Baluchistan	32.2%	39.5%	35.3%	32.5%
Khyber Pakhtoon Khowa	32.1%	47.3%	52.9%	33.9%

Table 5 B: Perceptions of entrepreneurship among non-entrepreneurially active working age population towards entrepreneurship in various provinces of Pakistan

Province	Most people in my country would prefer that everyone had a similar standard of living	Most people consider starting a new business a desirable career choice.	Those successful at starting a new business have a high level of status and respect in society	You will often see stories about people starting successful businesses in the media
Sindh	86.7%	70.4%	70.3%	46.7%
Punjab	68.1%	67.1%	68.8%	55.3%
Baluchistan	50.0%	42.4%	61.3%	29.2%
Khyber Pakhtoon Khowa	71.0%	71.6%	61.7%	47.1%

The self-reporting of attitudes of the non-entrepreneurially active working age population towards entrepreneurship in various cities of Pakistan is presented in table 6A.

- The residents of Hyderabad and Karachi were more likely to agree with the item "I personally know someone who has started a business in the last two years than respondents in any other region.
- The residents of Quetta, Islamabad, Hyderabad and Karachi had the highest proportion of the non-entrepreneurially active population reporting that there was good start up opportunities in their local areas in the next six months.
- The people of Peshawar, Lahore and Hyderabad were the most likely to agree with statement that "I have the knowledge, skill and experience required to start a new business".

- The people of Multan had the lowest fear of failure to start a business followed by Peshawar.

Table 6A: Perceptions of entrepreneurship in various cities of Pakistan

City	I personally know someone who started a business in the past 2 years	There will be good startup opportunities where I live in the next six months	I have the knowledge, skill and experience to start a new business	Fear of failure would prevent me from starting a business
Karachi	35.10%	40.50%	40.70%	21.20%
Hyderabad	59.10%	40.90%	54.50%	22.70%
Quetta	0.00%	50.00%	40.00%	10.00%
Multan	13.30%	35.70%	50.00%	53.30%
Lahore	23.50%	26.10%	55.10%	30.20%
Faisalabad	30.80%	35.30%	47.50%	48.70%
Peshawar	27.30%	33.30%	56.30%	50.00%
Islamabad	5.30%	47.10%	50.00%	0.00%

Table 6B: Perceptions of entrepreneurship in various cities of Pakistan

City	Most people in my country would prefer that everyone had a similar standard of living	Most people consider starting a new business a desirable career choice.	Those successful at starting a new business have a high level of status and respect in society	You will often see stories about people starting successful businesses in the media
Karachi	82.60%	56.90%	56.70%	35.40%
Hyderabad	63.60%	90.90%	100.00%	59.10%
Quetta	62.50%	28.60%	60.00%	0.00%
Multan	66.70%	60.00%	73.30%	77.80%
Lahore	72.90%	72.40%	81.50%	44.40%
Faisalabad	65.00%	81.60%	84.60%	57.10%
Peshawar	81.80%	89.50%	36.80%	57.90%
Islamabad	57.90%	100.00%	92.90%	69.20%

Table 6B reports that the people living in Karachi and Peshawar prefer an egalitarian standard of living for all followed by Lahore and Multan. The residents of Islamabad, Hyderabad and Peshawar gave the highest ratings to starting a new business as a desirable career choice. The people of Hyderabad, Islamabad and Faisalabad have the highest perception that those

successful at starting a new business have a high level of status and respect in society. Moreover Multan, Islamabad and Hyderabad have the highest number of people reporting that they have seen stories about people starting successful businesses in the media.

2.3 Entrepreneurial Activity

GEM considers entrepreneurship as a step-wise process in which individuals become increasingly engaged in this activity. Total Early-stage Entrepreneurial Activity (TEA) the key regional measure employed by GEM includes nascent entrepreneurs involved in setting up of businesses and those owning and running new businesses less than 3.5 years (42 months) old. Additionally, GEM assesses the rate and nature of business discontinuance as well as necessity based verses opportunity oriented entrepreneurship.

Table 7 shows TEA rates in various GEM participating countries listed under three economic levels. On average, the highest TEA rates are found in factor-driven economies, followed by efficiency driven economies and they are lowest in innovation driven economies. The nature of these differences are explained primarily by the need for necessity verses opportunity motives given the development level of a country or region and is further articulated in the relevant sections below. Compared to Pakistan (11.57), Ghana had higher rate (36.52) in 2012. There are significant variations in the TEA rates of efficiency driven economies with Ecuador showing high rate (26.61), followed by South American countries like Chile and Peru. Among the innovation driven economies, US (12.84) and Singapore (11.56) have the highest rate followed by Netherlands, Slovakia and Austria. Italy and Japan had the lowest TEA rate among these nations.

Table 7: Total early stage Entrepreneurial Activity in GEM participating countries in 2012

Country	TEA Rate	Country	TEA Rate	Country	TEA Rate
Innovation Driven		**Efficiency Driven**		Thailand	18.94
Austria	9.58	Argentina	18.88	Trinidad & Tobago	14.96
Belgium	5.20	Barbados	17.12	Tunisia	4.78
Denmark	5.36	Bosnia and Herzegovina	7.78	Turkey	12.22
Finland	5.98	Brazil	15.44	Uruguay	14.63
France	5.17	Chile	22.58	**Average (unweighted)**	**13.11**
Germany	5.34	China	12.83	**Factor-Driven**	

Greece	6.51	Colombia	20.11	Algeria	8.75
Ireland	6.15	Costa Rica	15.04	Angola	32.39
Israel	6.53	Croatia	8.27	Botswana	27.66
Italy	4.32	Ecuador	26.61	Egypt	7.82
Japan	3.99	El Salvador	15.26	Ethiopia	14.73
Korea	6.64	Estonia	14.26	Ghana	36.52
Netherlands	10.31	Hungary	9.22	Iran	10.79
Norway	6.75	Latvia	13.39	Malawi	35.56
Portugal	7.67	Lithuania	6.69	Nigeria	35.04
Singapore	11.56	Macedonia	6.97	Pakistan	11.57
Slovakia	10.22	Malaysia	6.99	Palestine	9.84
Slovenia	5.42	Mexico	12.11	Uganda	35.76
Spain	5.70	Namibia	18.15	Zambia	41.46
Sweden	6.44	Panama	9.46	**Average (unweighted)**	23.68
Switzerland	5.93	Peru	20.21		
Taiwan	7.54	Poland	9.36		
United Kingdom	8.98	Romania	9.22		
United States	12.84	Russia	4.34		
Average (unweighted)	**7.09**	South Africa	7.32		

Figure 5 shows the TEA rates of the GEM 2012 participating countries. The countries are grouped according to economy type. It is evident that the factor and efficiency driven countries have a generally higher TEA as compared to Innovation driven countries.

Figure 5: TEA rates of GEM 2012 participating countries

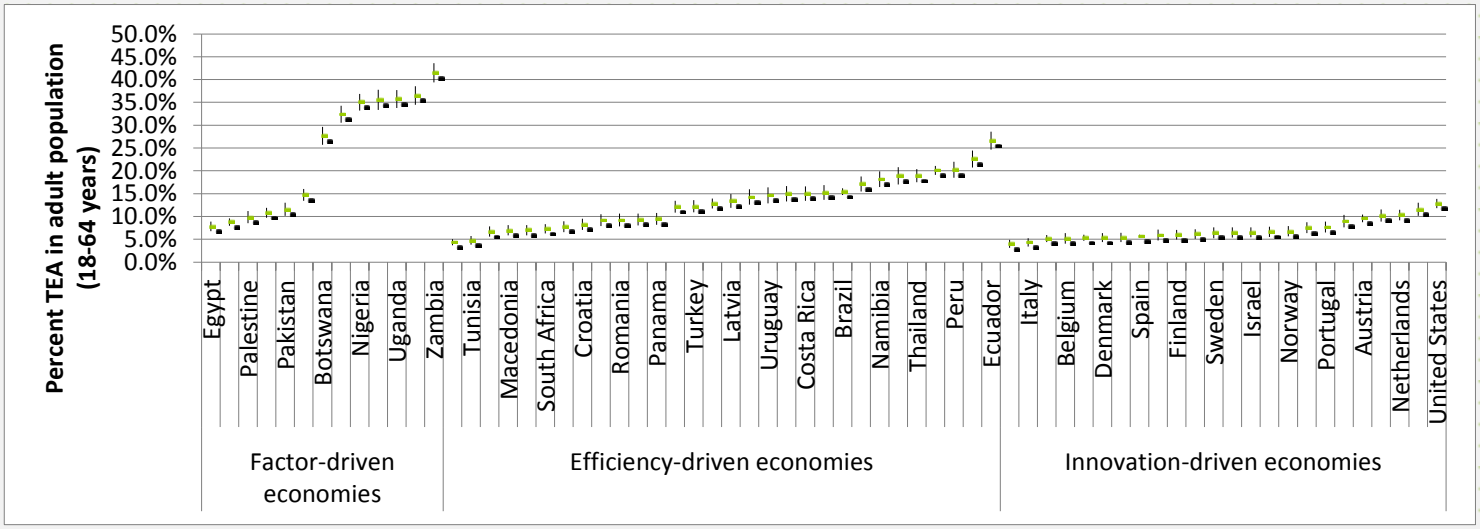
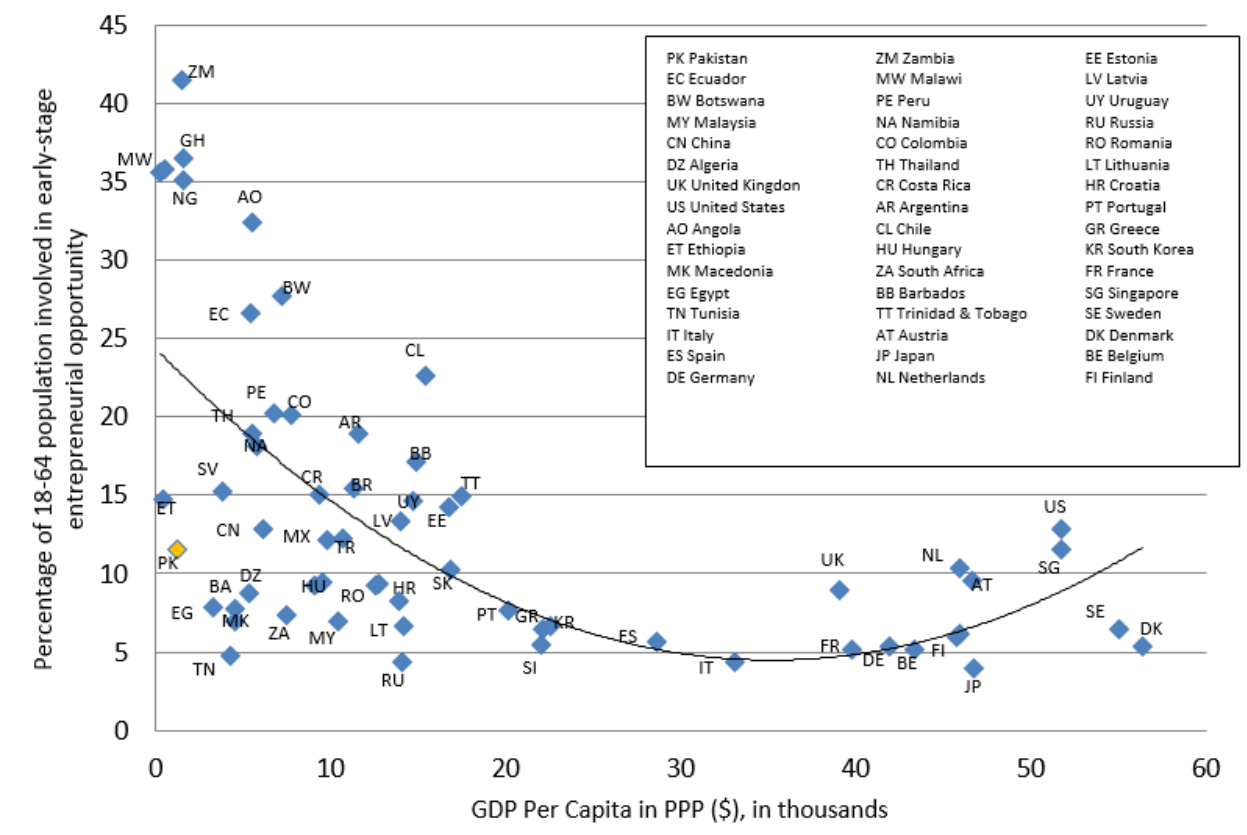


Figure 6 — Total Early-Stage Entrepreneurial Activity Rates and Per Capita GDP 2012



In addition to the TEA rate, GEM measures the proportion of established business owners-managers in the working age population (EBO). Established business owner managers have owned or managed a business for more than 42 months. Finally, GEM measures the proportion of individuals of working age population who closed down their businesses in the last 12 months, one that did not continue under a different form or ownership.

The ratio of established business ownership to early stage entrepreneurship gives a proxy measure of transition rates from early stage entrepreneurship to established business ownership. This can be interpreted as a proxy survival measure.

The ratio of closure to business ownership (new plus established) gives a proxy of entrepreneurial dynamism or "churn". The 2012 results of the participating countries are given in Table 8.

The GEM survey is a survey of individuals and not a survey of registered businesses. Therefore, the figures reported for business ownership will not necessarily tally with official statistics on the size of the registered businesses. The table presents some interesting summary points.

- Among the innovation driven countries, the nascent entrepreneurial activity (NEA) is the highest in US followed by Singapore, Slovakia, Austria, UK, Sweden and Portugal. Japan, Italy, and Korea have the lowest rate of NEA. The highest total entrepreneurial activity (TEA) i.e. the sum of nascent entrepreneurship and the new business owner manager rate is reported to be the highest in US followed by Singapore, Netherlands, Slovakia, Austria and UK. Japan and Italy report the lowest level of total entrepreneurial activity. The highest number of established business units (for more than 42 months) is observed in Greece, Taiwan and Korea. Slovakia, US, and Greece report the highest number of business closures in the past 12 months.

- Among the efficiency driven countries, the nascent entrepreneurial activity (NEA) is the highest in the South American countries of Ecuador, Chile, Peru, Colombia and Argentina followed by Namibia and Uruguay. On the other hand lowest level of NEA is reported in Tunisia, Russia and Malaysia. The highest total entrepreneurial activity (TEA) i.e. the sum of nascent entrepreneurship and the new business owner manager rate is reported to be the highest again in South American countries of Ecuador, Chile, Peru and Colombia followed Thailand and then Argentina. The highest number of established business units (for more than 42 months) is observed in Thailand, Ecuador, and Brazil. Namibia, El Salvador, and Ecuador report the highest number of business closures in the past 12 months.

- In the Factor driven countries, the nascent entrepreneurial activity (NEA) is the highest in Zambia, Nigeria and Malawi. The lowest level of NEA is reported in Iran, Egypt and

Algeria. The highest total entrepreneurial activity (TEA) i.e. the sum of nascent entrepreneurship and the new business owner manager rate is reported to be the highest in Zambia, Ghana and Uganda. The lowest level of TEA is observed in Algeria and Egypt. The highest number of established business units (for more than 42 months) is observed in Ghana and Uganda. Palestine reports the lowest number of established business units.

Table 8: Measurement of entrepreneurial activity in GEM participating countries

	Nascent Entrepreneurial Activity rate	New Business Owner/ Manager Rate(4-42 months)	Nascent + New Business Owner Manager rate	Established Business Owners (>42 months)	Business Closure Rate (Business closed in the last 12 months)	Proxy Early Stage Business Survival Rate	Proxy Business Churn Rate
Country	**NEA**	**NBO**	**TEA**	**EBO**	**BC**	**EBO/TEA**	**BC/(NBO+EBO)**
Innovation-Driven							
Austria	6.58	3.42	9.58	7.61	3.56	0.8	0.3
Belgium	3.32	1.95	5.20	5.12	2.39	1.0	0.3
Denmark	3.07	2.36	5.36	3.45	1.34	0.6	0.2
Finland	3.45	2.68	5.98	8.04	1.99	1.3	0.2
France	3.74	1.54	5.17	3.23	1.96	0.6	0.4
Germany	3.51	2.15	5.34	4.95	1.91	0.9	0.3
Greece	3.82	2.84	6.51	12.27	4.43	1.9	0.3
Ireland	3.91	2.28	6.15	8.32	1.74	1.4	0.2
Israel	3.50	3.03	6.53	3.78	4.04	0.6	0.6
Italy	2.47	1.92	4.32	3.32	2.43	0.8	0.5
Japan	2.26	1.72	3.99	6.11	1.12	1.5	0.1
Korea	2.56	4.08	6.64	9.57	3.17	1.4	0.2
Netherlands	4.08	6.26	10.31	9.49	2.17	0.9	0.1
Norway	3.70	3.15	6.75	5.75	1.45	0.9	0.2
Portugal	4.26	3.63	7.67	6.23	2.98	0.8	0.3
Singapore	7.60	4.18	11.56	3.10	3.88	0.3	0.5
Slovakia	6.65	3.91	10.22	6.38	4.69	0.6	0.5

Slovenia	2.95	2.53	5.42	5.79	1.62	1.1	0.2
Spain	3.35	2.45	5.70	8.74	2.11	1.5	0.2
Sweden	4.59	1.85	6.44	5.25	1.86	0.8	0.3
Switzerland	2.90	3.03	5.93	8.44	2.02	1.4	0.2
Taiwan	3.33	4.21	7.54	10.38	5.67	1.4	0.4
United Kingdom	5.30	3.74	8.98	6.16	1.69	0.7	0.2
United States	8.86	4.08	12.84	8.56	4.49	0.7	0.4
Average (unweighted)	**4.16**	**3.04**	**7.09**	**6.67**	**2.70**	**1.00**	**0.29**
Efficiency-driven							
Argentina	11.79	7.30	18.88	9.63	4.92	0.5	0.3
Barbados	9.98	7.23	17.12	12.23	2.87	0.7	0.1
Bosnia and Herzegovina	4.51	3.35	7.78	6.00	7.19	0.8	0.8
Brazil	4.48	11.30	15.44	15.19	4.51	1.0	0.2
Chile	14.68	8.43	22.58	7.77	4.97	0.3	0.3
China	5.45	7.43	12.83	12.45	3.73	1.0	0.2
Colombia	13.58	6.86	20.11	6.72	6.74	0.3	0.5
Costa Rica	10.00	5.34	15.04	3.33	3.49	0.2	0.4
Croatia	6.38	1.89	8.27	3.06	4.24	0.4	0.9
Ecuador	16.72	11.68	26.61	18.92	7.59	0.7	0.2
El Salvador	7.69	7.79	15.26	9.39	7.83	0.6	0.5
Estonia	9.46	5.09	14.26	7.24	3.96	0.5	0.3
Hungary	5.83	3.59	9.22	8.10	3.77	0.9	0.3
Latvia	8.71	4.82	13.39	7.93	3.39	0.6	0.3
Lithuania	3.15	3.64	6.69	8.24	2.20	1.2	0.2
Macedonia	3.73	3.25	6.97	6.73	3.86	1.0	0.4
Malaysia	2.79	4.20	6.99	6.96	1.62	1.0	0.1
Mexico	7.94	4.28	12.11	4.67	4.31	0.4	0.5

Namibia	11.30	7.00	18.15	3.17	11.59	0.2	1.1
Panama	7.21	2.69	9.46	1.86	1.82	0.2	0.4
Peru	14.67	6.22	20.21	5.10	6.75	0.3	0.6
Poland	4.83	4.55	9.36	5.81	3.89	0.6	0.4
Romania	5.51	3.83	9.22	3.91	3.81	0.4	0.5
Russia	2.65	1.80	4.34	2.05	1.00	0.5	0.3
South Africa	4.30	3.08	7.32	2.32	5.03	0.3	0.9
Thailand	8.74	11.32	18.94	29.69	2.78	1.6	0.1
Trinidad & Tobago	8.76	6.52	14.96	7.19	4.50	0.5	0.3
Tunisia	2.38	2.48	4.78	4.37	3.98	0.9	0.6
Turkey	7.25	5.36	12.22	8.68	5.24	0.7	0.4
Uruguay	10.18	4.71	14.63	4.97	4.99	0.3	0.5
Average (unweighted)	**7.82**	**5.57**	**13.11**	**7.79**	**4.55**	**0.62**	**0.42**
Factor-Driven							
Algeria	1.62	7.25	8.75	3.32	6.93	0.4	0.7
Angola	14.89	18.88	32.39	9.06	25.86	0.3	0.9
Botswana	17.04	12.24	27.66	6.33	16.26	0.2	0.9
Egypt	3.10	4.87	7.82	4.15	5.28	0.5	0.6
Ethiopia	5.70	9.25	14.73	10.20	3.40	0.7	0.2
Ghana	15.42	22.78	36.52	37.74	16.24	1.0	0.3
Iran	4.47	6.48	10.79	9.53	5.05	0.9	0.3
Malawi	18.45	20.39	35.56	10.80	28.91	0.3	0.9
Nigeria	21.77	14.19	35.04	15.67	8.31	0.4	0.3
Pakistan	8.29	3.42	11.57	3.78	2.53	0.3	0.4
Palestine	6.22	3.81	9.84	2.98	7.73	0.3	1.1
Uganda	9.58	27.56	35.76	31.25	25.92	0.9	0.4
Zambia	27.50	14.57	41.46	3.84	20.23	0.1	1.1
Average (unweighted)	**11.85**	**12.75**	**23.68**	**11.43**	**13.28**	**0.49**	**0.62**

Entrepreneurial Activity by Stages in Pakistan

Table 9 illustrates the proportion of respondents by stage of entrepreneurial activity in Pakistan. In Pakistan 42.7% of working age individuals were not engaged in entrepreneurial activity and had no intention of starting a business within the next three years. A further 27.5% expected to start a business in the next three years, but were not actively trying to start a business or running an existing business. A further 13.7% were nascent entrepreneurs and an additional 16.1% were new business owner/ managers.

Table 9: Proportion of respondents by stage of entrepreneurial activity in Pakistan

	2012	2011	2010
Are you, alone or with others, currently the owner of a business you help manage, self-employed, or selling any goods or services to others?	16.1%	16.7%	19.3%
Are you, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others?	13.7%	14.1%	18.0%
Are you, alone or with others, expecting to start a new business, including any type of self-employment, within the next three years?	27.5%	25.8%	32.2%
No Activity or intention	42.7%	43.4%	30.5%

Opportunity and Necessity Based Entrepreneurship Activity

One way of distinguishing between different types of entrepreneurial activity is the extent to which the activity is based on necessity (i.e. there are no better alternatives for work) or opportunity (where entrepreneurs may be exploiting the potential for new market creation).

From the GEM 2012 survey both opportunity motivated entrepreneurship rates (Opportunity TEA) and Necessity driven entrepreneurship rates (Necessity TEA) are presented side by side in Table 10. The Table shows that the levels of necessity entrepreneurship in 2012 are lower than levels of opportunity entrepreneurship in most participating countries except a few including Iran and Pakistan.

Table 10: Opportunity and Necessity Entrepreneurship (as a % of TEA) in GEM Participating countries

	Opportunity TEA (% of TEA)	Necessity TEA (% of TEA)
Innovation Driven Economies		
Austria	38	11
Belgium	62	18
Denmark	71	8
Finland	60	17
France	59	18
Germany	51	22
Greece	32	30
Ireland	41	28
Israel	46	19
Italy	22	16
Japan	66	21
Korea	46	35
Netherlands	66	8
Norway	70	7
Portugal	53	18
Singapore	54	15
Slovakia	43	36
Slovenia	64	7
Spain	33	26
Sweden	49	7
Switzerland	57	18
Taiwan	43	18
United Kingdom	43	18
United States	59	21
Average	**51**	**18**
Efficiency Driven Economies		
Argentina	47	35
Barbados	63	12
Bosnia and Herzegovina	20	58
Brazil	59	30
Chile	69	17
China	39	37
Colombia	48	12
Costa Rica	48	20
Croatia	36	34
Ecuador	30	36
El Salvador	39	35

Estonia	49	18
Hungary	35	31
Latvia	46	25
Lithuania	51	25
Macedonia	29	52
Malaysia	61	13
Mexico	52	13
Namibia	37	37
Panama	57	19
Peru	53	23
Poland	30	41
Romania	38	24
Russia	31	36
South Africa	40	32
Thailand	67	17
Trinidad & Tobago	60	15
Tunisia	42	35
Turkey	55	31
Uruguay	40	18
Average	**46**	**28**
Factor Driven Economies		
Algeria	47	30
Angola	38	24
Botswana	48	33
Egypt	23	34
Ethiopia	69	20
Ghana	51	28
Iran	36	42
Malawi	43	42
Nigeria	53	35
Pakistan	24	53
Palestine	27	42
Uganda	42	46
Zambia	46	32
Average	**42**	**35**

In the innovation driven countries the highest level of opportunity TEA is observed in the Denmark, Norway, Netherlands, and Japan. In the efficiency driven economies, the highest level of opportunity TEA is in Chile, Thailand, and Barbados. In the Factor driven economies, Ethiopia, Nigeria, and Ghana have the highest level of opportunity TEA. The data shows that generally, developing regions have higher numbers for necessity entrepreneurship than their developed region counterparts. This is obvious due to the lack of good job opportunities in most of the factor driven economies.

Male Verses Female Entrepreneurial Activity

Women enter into entrepreneurship for many of the same reasons as men: to support themselves and families, to enrich their lives with careers and financial independence etc. Yet there may be special reasons for female entrepreneurial activity. The findings suggest that women's participation in entrepreneurship varies significantly across economies, but is nearly always less than that of men.

Table 11 presents a summary of Total early stage Entrepreneurial activity (TEA) rates by gender for all participating GEM countries including Pakistan.

In some high income countries, men are around twice as likely to be entrepreneurially active as women, for example the gender gap is very high in countries like, Netherlands, Slovakia, UK, Korea, Norway, and Ireland. On the other hand a narrower gender gap was reported in US, Singapore, and Austria.

In the efficiency driven countries, there is a high gender gap in Argentina, Uruguay, Costa Rica, Estonia, Latvia, and Turkey. A lower gender gap is observed in Chile, Peru, Columbia, and Namibia. Female TEA is higher than Male TEA in Ecuador, Thailand and Panama. In the factor driven countries, the lowest level of women participation can be found in Pakistan, Egypt and Palestine. Across the three development levels, the factor-driven and efficiency-driven groups are a bit similar on average with factor-driven higher of both male and female TEA rates, but the innovation-driven group has a much lower average proportion of women entrepreneurs.

Table 11: Total Early stage entrepreneurial activity by gender in Participating GEM Countries

	Male TEA Rate	Female TEA Rate
Innovation Driven Economies		
Austria	11.04	8.12
Belgium	7.73	2.64
Denmark	7.60	3.09
Finland	7.83	4.09
France	6.36	4.02
Germany	7.15	3.54
Greece	8.63	4.37
Ireland	8.29	3.95

Israel	7.62	5.46
Italy	5.73	2.91
Japan	5.88	2.07
Korea	10.83	2.28
Netherlands	13.90	6.68
Norway	9.83	3.56
Portugal	9.26	6.15
Singapore	13.15	10.01
Slovakia	13.72	6.73
Slovenia	8.09	2.59
Spain	7.36	4.00
Sweden	7.99	4.84
Switzerland	6.41	5.45
Taiwan	9.05	6.04
United Kingdom	11.63	6.30
United States	15.24	10.47
Average	**9.18**	**4.97**
Efficiency Driven Economies		
Argentina	23.98	14.16
Barbados	18.24	16.07
Bosnia and Herzegovina	10.44	5.08
Brazil	16.19	14.73
Chile	26.21	19.11
China	14.65	11.02
Colombia	22.82	17.57
Costa Rica	19.72	10.65
Croatia	11.77	4.85
Ecuador	25.71	27.43

El Salvador	16.40	14.34
Estonia	19.13	9.74
Hungary	12.76	5.77
Latvia	18.88	8.18
Lithuania	9.40	4.15
Macedonia	9.35	4.54
Malaysia	7.75	6.18
Mexico	12.17	12.05
Namibia	18.80	17.50
Panama	8.47	10.40
Peru	22.87	17.63
Poland	12.57	6.21
Romania	13.19	5.33
Russia	5.35	3.42
South Africa	8.89	5.72
Thailand	17.26	20.56
Trinidad & Tobago	16.71	13.18
Tunisia	6.75	2.87
Turkey	17.49	6.85
Uruguay	19.86	10.00
Average	**15.46**	**10.84**
Factor Driven Economies		
Algeria	12.08	5.37
Angola	34.37	30.61
Botswana	30.00	25.44
Egypt	13.09	2.39
Ethiopia	16.63	12.90
Ghana	34.99	37.97

Iran	15.60	5.88
Malawi	39.29	32.10
Nigeria	34.47	35.60
Pakistan	21.27	1.21
Palestine	16.01	3.42
Uganda	36.04	35.51
Zambia	42.91	40.04
Average	**26.67**	**20.65**

Table 12 presents a summary of established business ownership by gender in GEM participating countries in 2012. The gender gap in participation rates appear to be wider among established business owner-managers than among early-stage entrepreneurs in innovation driven economies. In efficiency driven countries the gender gap is also more in established businesses as compared to early stage entrepreneurs with the exception of Mexico, Peru, South Africa and Russia.

In the factor driven economies female EBO is much lower as compared to innovation and factor driven economies.

Table 12: Established business ownership by gender

	Male EBO	Female EBO
Innovation Driven Economies		
Austria	9.33	5.89
Belgium	6.73	3.51
Denmark	4.75	2.13
Finland	11.67	4.34
France	4.27	2.23
Germany	5.88	4.02
Greece	17.73	6.79
Ireland	11.82	4.74
Israel	4.71	2.87

Italy	5.01	1.63
Japan	7.96	4.24
Korea	15.14	3.77
Netherlands	13.04	5.90
Norway	7.67	3.77
Portugal	8.83	3.73
Singapore	4.37	1.85
Slovakia	9.15	3.63
Slovenia	8.54	2.87
Spain	11.07	6.36
Sweden	7.32	3.11
Switzerland	9.78	7.08
Taiwan	14.40	6.35
United Kingdom	8.82	3.49
United States	10.45	6.70
Average	**9.10**	**4.21**
Efficiency Driven Economies		
Argentina	13.45	6.10
Barbados	16.82	7.93
Bosnia and Herzegovina	7.67	4.31
Brazil	17.39	13.10
Chile	9.24	6.36
China	14.34	10.57
Colombia	9.01	4.57
Costa Rica	3.54	3.14
Croatia	3.67	2.48
Ecuador	23.50	14.76
El Salvador	10.41	8.56

Estonia	10.55	4.18
Hungary	12.04	4.27
Latvia	10.20	5.78
Lithuania	12.40	4.35
Macedonia	9.19	4.20
Malaysia	8.34	5.49
Mexico	6.03	3.42
Namibia	3.83	2.50
Panama	2.80	0.97
Peru	5.66	4.55
Poland	8.45	3.22
Romania	5.98	1.88
Russia	2.16	1.95
South Africa	2.79	1.83
Thailand	29.93	29.46
Trinidad & Tobago	9.46	4.88
Tunisia	7.21	1.61
Turkey	14.57	2.69
Uruguay	7.03	3.15
Average	**9.92**	**5.74**
Factor Driven Economies		
Algeria	5.46	1.15
Angola	8.87	9.24
Botswana	7.96	4.80
Egypt	7.57	0.61
Ethiopia	10.26	10.13
Ghana	39.77	35.81
Iran	15.90	3.01
Malawi	12.60	9.14

Nigeria	15.95	15.41
Pakistan	5.81	1.60
Palestine	5.18	0.69
Uganda	33.82	28.94
Zambia	4.12	3.56
Average	**13.33**	**9.55**

Entrepreneurial Activity in Pakistani Provinces

Table 13 displays different measures of entrepreneurial activity in various regions of Pakistan.

Table 13: Different measures of entrepreneurial activity in various regions of Pakistan

Province	Expects to start a business in the next 3 years (future)	Nascent Entrepreneurial Activity Rate (Actively involved in start-up effort, owner, no wages yet)	New Business Owner-Manager Rate (Manages a business that is up to 42 months old)	Nascent + New Business Owner Manager Rate	Established Business Owners (>42 months)	Business Closure rate (Discontinued a business in the past 12 months)	Proxy for Early stage business survival rate	Proxy for business churn Rate of Business Closure to Ownership
	FUT	**NEA**	**NBO**	**TEA= NEA+NBO**	**EBO**	**BC**	**EBO/TEA**	**BC/(NBO+EBO)**
Sindh	31.20	6.40	2.60	9.30	5.70	2.50	0.61	0.30
Punjab	28.40	6.90	3.20	10.60	3.00	1.10	0.28	0.18
Baluchistan	17.90	7.80	6.30	14.10	1.60	0.00	0.11	0.00
Khyber Pakhtoon Khowa	18.40	19.30	0.90	19.70	5.70	1.50	0.29	0.23

In Sindh and Punjab, the number of people expected to start the business were highest as compared to the other provinces of Pakistan. Sindh, along with KPK, has the highest established business owner rate, has the highest early stage business survival rate and also the highest business closure rate. Surprisingly KPK reports the highest nascent entrepreneurial activity rate but also second highest business closure rate. Baluchistan reports the lowest business closure rate. The ratio of EBO to TEA, a proxy of early stage business survival is relatively high in Sindh. The rate of business closure to business ownership is the highest in Sindh and then KPK.

The total early stage entrepreneurial activity in the various provinces of Pakistan is presented in Table 14. The highest TEA rate is reported in KPK followed by Baluchistan, and then Punjab, and Sindh.

Table 14: Total Early Stage Entrepreneurial Activity in Pakistani Regions in 2012

Sindh	9.30%
Punjab	10.60%
Baluchistan	14.10%
Khyber Pakhtoon Khowa	19.70%

Table 15 A, displays male and female early stage entrepreneurial activity (TEA) rates by region. It shows that KPK has the highest rate of Male TEA. The female TEA rate is the highest for Sindh followed by Punjab.

Table 15 A: Male and Female Total early stage Entrepreneurial Activity in Pakistani Regions, 2012

Province	Male	Female
Sindh	14.60%	3.20%
Punjab	20.50%	0.90%
Baluchistan	30.50%	-
Khyber Pakhtoon khowa	37.50%	-

Table 15 B, displays the Opportunity and Necessity Entrepreneurial Activity in Pakistani Regions. The highest Opportunity based entrepreneurship is taking place in KPK followed by Baluchistan and Punjab. The highest Necessity based entrepreneurial activity is taking place in Baluchistan followed by KPK.

Table 15 B: Opportunity and Necessity Entrepreneurial Activity in Pakistani Regions, 2012

Province	Opportunity TEA	Necessity TEA
Sindh	3.20%	5.90%
Punjab	4.40%	5.90%
Baluchistan	4.70%	9.40%
Khyber Pakhtoon khowa	13.60%	6.10%

Table 16 and 17, display male and female early stage entrepreneurial activity based on opportunity and necessity entrepreneurship. KPK reports the highest Male TEA rates based on opportunity entrepreneurship followed by Baluchistan.

The highest Male TEA rates based on necessity entrepreneurship are reported in Baluchistan. Sindh reports highest Female TEA rates based on necessity entrepreneurship.

Table 16: Male and Female Total early stage Entrepreneurial Activity in Pakistan Regions, 2012 based on opportunity entrepreneurship

Province	Opportunity TEA	
	Male	Female
Sindh	5.40%	0.80%
Punjab	8.70%	0.20%
Baluchistan	10.20%	-
Khyber Pakhtoon khowa	25.80%	-

Table 17: Male and Female Total early stage Entrepreneurial Activity in Pakistan Regions, 2012 based on necessity entrepreneurship

Province	Necessity TEA	
	Male	Female
Sindh	8.90%	2.40%
Punjab	11.50%	0.50%
Baluchistan	20.30%	-
Khyber Pakhtoon khowa	11.70%	-

2.4 Entrepreneurial Aspirations

Research shows that higher levels of entrepreneurial aspirations such as for firm growth and/or job creation are likely to lead to positive results, which implies that efforts intended to increase growth aspirations and associated abilities will most likely succeed[21]. The potential of entrepreneurial activity to promote growth and new jobs also reflects the types of businesses being pursued such as in new industries and/or markets, which possess greater potentials.

Across the world, the majority of businesses expect little or no growth. According to the 2009 GEM Global Report, expectations of high growth are rare among nascent and new entrepreneurs. Across 47 economies, only 70% of all start-up attempts expected any job creation at all. Only 14% of all start up attempts expected to create 20 or more jobs.

To identify individuals who expected to create a relatively high number of jobs, GEM created a variable which measures the percentage of all early stage entrepreneurs who have created more than ten jobs and who expect more than 50% of growth in jobs in the next five years. The

results are illustrated in Table 18 for early stage entrepreneurs and established business owner managers. Among the innovation driven countries Singapore, Taiwan, Japan, Ireland, Korea, and France have the highest percentage of early stage entrepreneurs who have created more than ten jobs and who expect 50% growth in the next five years. Singapore, Slovenia, and Sweden have the highest number of established business managers who have the above mentioned attributes. In the efficiency driven countries, Latvia, Colombia, Romania, Lithuania, and Turkey have the highest percentage of early stage entrepreneurs who have created more than ten jobs and who expect 50% growth in the next five years. Romania, Namibia, and Latvia have the highest number of established business managers who have the above mentioned attributes. In the factor driven countries, Botswana, Egypt, and Pakistan have the highest percentage of early stage entrepreneurs who have created more than ten jobs and who expect 50% growth in the next five years. Nigeria, Botswana, and Egypt have the highest number of established business managers who have the above mentioned attributes.

Table 18 also shows the proportion of early stage entrepreneurs and established business owner managers who state that they operate in new product markets. In the Innovation driven economies, European countries like France, Denmark, Slovenia, Ireland, and Belgium have the highest TEA who operate in new product markets. On the other hand Denmark, Italy, Greece, Slovenia, and United States have the highest EBO who operate in new product markets. In the efficiency driven economies, Chile, South Africa, Colombia, and Ecuador have the highest TEA who operate in new product markets. Chile, Namibia and South Africa have the highest EBO who operate in new product markets. In the factor driven economies, Malawi, Pakistan and Botswana have the highest TEA who operate in new product markets. Malawi, Botswana and Nigeria have the highest EBO who operate in new product markets.

The third variable in Table 18 illustrates the percentage of early stage entrepreneurs and established business owner managers who were active in high or medium tech sectors. Slovenia, Italy, and Sweden have the highest percentage of TEA who are active in medium and high tech sectors. Sweden, Switzerland, Denmark, and Germany have the highest percentage of EBO who are active in medium and high tech sectors. Estonia, Lithuania, Latvia, and Argentina have the highest percent of TEA and Hungary, Uruguay and Estonia have the highest percent of EBO who are active in medium and high tech sectors among the efficiency driven economies. Algeria and Palestine have the highest percentage of TEA and Palestine and Pakistan have the highest percent EBO who are active in medium and high tech sector's among the factor driven economies.

The final variable shows the proportion of early stage entrepreneurs and established business owners who have more than 25% of their customers from outside the country. US, Singapore, Switzerland, and Belgium have the highest percentage of TEA and Singapore, US, Switzerland, and Portugal have the highest EBO who have more than 25% of their customers from outside the country among the innovation driven economies. Chile, Poland and Macedonia have the highest percentage of TEA and Chile, Estonia, and Latvia have the highest percentage of EBO who have more than 25% of their customers from outside the country among the efficiency

driven economies. Zambia and Botswana have the highest %age of TEA as well as the EBO who have more than 25% of their customers from outside the country among the factor driven economies.

Table 18: Measures of entrepreneurial aspiration in GEM participating countries, 2012

Country	Percentage of entrepreneurs who have created > 10 jobs and expect 50% growth in 5 years		Percentage of early stage entrepreneurs and established business managers who operate in new product markets		Percentage of early stage entrepreneurs and established business managers active in medium and high tech scores		Percentage of early sta entrepreneurs and established business managers with one in four foreign customer	
	TEA	EBO	TEA	EBO	TEA	EBO	TEA	EBO
Innovation driven								
Austria	7.58	1.45	33.55	14.79	10.32	9.67	39.06	47.06
Belgium	16.93	0.00	36.83	3.70	2.63	0.00	51.86	44.14
Denmark	17.73	3.48	44.41	36.63	9.87	11.18	21.09	49.16
Finland	14.11	3.17	28.49	11.78	7.49	4.35	24.07	33.41
France	21.88	0.13	44.90	13.38	10.88	8.76	28.72	36.13
Germany	21.69	4.22	31.77	9.63	8.17	10.06	44.01	49.30
Greece	7.62	0.74	23.33	20.13	5.39	2.10	28.07	31.54
Ireland	25.88	4.77	37.33	10.95	9.19	5.75	37.64	33.34
Israel	17.95	4.37	29.15	8.99	3.94	3.42	38.06	42.86
Italy	6.52	4.33	29.34	22.35	13.90	5.18	24.37	40.76
Japan	27.47	6.34	21.73	11.45	8.81	6.09	38.97	26.35
Korea	22.43	6.03	26.53	15.97	8.23	9.22	32.15	38.06
Netherlands	8.69	1.93	27.51	10.45	4.92	2.35	31.93	33.45
Norway	8.89	1.74	22.96	4.35	7.41	8.70	19.70	18.75
Portugal	16.13	0.69	31.57	9.73	3.82	1.58	48.82	55.18
Singapore	33.85	11.12	21.79	17.78	5.49	8.15	55.71	72.34
Slovakia	19.65	3.05	27.29	10.66	7.61	8.37	44.36	34.88
Slovenia	19.21	7.36	37.75	18.90	13.96	7.39	29.08	46.46
Spain	6.23	1.22	30.58	7.28	9.92	6.98	11.47	11.56

Sweden	9.73	6.61	21.15	16.79	11.96	16.24	18.37	24.87
Switzerland	8.56	2.98	31.89	17.16	10.65	11.95	52.36	61.85
Taiwan	31.77	5.80	18.85	13.04	7.40	6.97	35.03	34.94
United Kingdom	17.43	3.98	30.54	15.80	9.37	4.38	45.33	50.67
United States	21.12	5.10	34.10	18.02	8.96	8.63	62.49	62.68
Average	**17.04**	**3.78**	**30.14**	**14.15**	**8.35**	**6.98**	**35.95**	**40.82**
Efficiency Driven								
Argentina	15.14	3.52	29.35	16.98	6.22	4.56	13.93	17.05
Barbados	10.49	3.25	13.37	9.33	0.48	2.92	39.16	40.80
Bosnia and Herzegovina	19.44	8.48	13.25	10.40	2.63	2.00	25.27	26.61
Brazil	7.82	1.81	1.20	0.34	2.35	1.52	0.83	0.58
Chile	23.57	4.92	56.23	39.62	5.76	4.80	61.68	58.40
China	14.41	3.25	21.06	15.79	1.60	2.14	18.28	12.96
Colombia	36.25	13.69	41.63	27.29	6.22	4.29	36.54	37.56
Costa Rica	11.73	4.41	13.68	23.53	2.28	1.47	19.74	18.46
Croatia	22.73	4.15	22.58	8.19	2.50	3.12	33.53	40.07
Ecuador	4.88	1.85	40.15	23.75	1.31	1.06	7.74	11.38
El Salvador	17.44	2.59	29.45	26.71	1.39	0.93	12.09	6.64
Estonia	24.16	5.28	37.66	19.27	7.93	5.55	36.67	49.05
Hungary	22.55	2.45	20.76	11.39	5.64	7.62	37.73	43.92
Latvia	40.09	15.71	34.59	16.37	6.46	3.89	45.55	45.14
Lithuania	35.07	9.09	20.90	11.52	6.72	3.64	31.50	39.88
Macedonia	18.60	6.70	20.52	9.45	4.30	1.41	47.34	44.35
Malaysia	8.34	4.79	17.13	15.38	1.42	0.46	20.41	15.43
Mexico	12.11	6.77	21.62	17.80	5.27	1.71	10.61	18.30
Namibia	11.88	18.50	33.31	33.87	1.92	0.00	26.53	33.35
Panama	0.98	0.00	18.13	17.11	0.97	0.00	5.40	13.81

Peru	7.89	6.04	18.36	14.92	0.12	0.00	17.03	7.72
Poland	15.57	6.22	32.15	16.85	2.99	3.30	54.03	44.28
Romania	35.59	19.65	30.66	26.46	4.49	0.00	39.38	42.36
Russia	19.67	2.75	14.44	2.70	3.92	0.00	6.13	1.40
South Africa	18.93	14.06	42.92	29.25	1.47	2.20	30.95	25.57
Thailand	8.83	2.42	19.57	7.61	1.23	0.24	7.68	5.02
Trinidad & Tobago	13.46	5.58	14.74	11.61	2.07	5.50	24.69	25.16
Tunisia	13.65	9.44	25.56	18.33	4.08	3.18	14.36	25.03
Turkey	31.14	15.31	24.89	9.65	4.58	1.04	22.87	29.90
Uruguay	13.36	4.02	24.65	13.42	4.01	5.56	17.86	15.68
Average	**17.86**	**6.89**	**25.15**	**16.83**	**3.41**	**2.47**	**25.52**	**26.53**
Factor Driven								
Algeria	6.27	2.39	20.16	15.44	5.53	1.99	26.00	24.19
Angola	12.52	7.81	21.49	13.53	1.15	0.00	21.84	20.67
Botswana	25.04	10.33	22.72	17.31	2.29	0.00	35.67	29.77
Egypt	22.54	8.90	12.27	11.17	1.90	1.68	18.75	17.95
Ethiopia	8.69	4.40	13.72	6.91	0.75	0.69	4.22	4.00
Ghana	10.47	5.05	10.20	3.39	0.72	0.09	15.45	10.43
Iran	11.55	1.49	7.95	2.35	3.44	2.51	8.53	2.86
Malawi	0.63	0.56	36.61	30.03	0.65	0.00	2.91	5.48
Nigeria	13.44	11.05	19.86	15.88	1.30	0.45	23.26	20.79
Pakistan	19.49	2.52	28.49	7.92	2.02	2.74	22.96	25.10
Palestine	19.28	1.57	21.48	12.63	4.61	7.12	12.93	26.99
Uganda	2.41	2.94	9.53	4.47	0.28	0.27	12.41	11.04
Zambia	5.13	4.15	14.90	1.83	0.59	0.00	59.43	66.67
Average	**12.11**	**4.86**	**18.41**	**10.99**	**1.94**	**1.35**	**20.34**	**20.46**

There is some degree of overlap between these measures of aspiration. For example entrepreneurs with significant foreign trade are more likely to be engaged with new product-market combinations, and to have high job growth expectations. However there appears to be

no association between whether an entrepreneur was working in a high or medium technology sector and the other measures of aspiration in Table 18.

Appendix 2 consists of various tables describing the change in various entrepreneurial measures from 2010 through to 2012.

2.5 The Environment for Entrepreneurship in 2012

In 2012, 57 experts in different aspects of the socio-economic environment for entrepreneurship were interviewed across Pakistan using a structured questionnaire. They were selected from different groups: knowledgeable practitioners, resource providers, academics and observers across nine different entrepreneurial framework conditions (EFCs), which serve as the key stakeholders for a well-functioning business environment.

Experts were asked to rate various statements on a 5 point Likert scale that represent different aspects of each entrepreneurial framework conditions (EFCs). Factor Analysis of these expert inputs was conducted on the data to produce a measure of the strength of each underlying EFC.

Figure 10A and 10B shows spider graphs of these conditions. It should be noted that three of the conditions (education, national policy and internal markets) each contain two sub-conditions, and these are broken out in Figure 10A and 10B. Education includes primary/secondary school and post-school training. National policy contains both general policy and regulatory policy. Internal markets refer to both dynamics (the level of change in markets from year to year) and openness (the extent to which new firms are free to enter existing markets). In general, experts in the innovation-driven economies rated the EFCs more highly. This trend is consistent with the fact that foundational factors (basic requirements and efficiency enhancers) are more developed in the innovation-driven economies and EFCs begin to have higher priority. Three entrepreneurship framework conditions stand out for their high ratings in the factor-driven economies: (1) national policy - regulation; (2) internal market dynamics; and (3) cultural and social norms for entrepreneurship. The latter is consistent with the GEM adult population survey's report that individual and societal beliefs tend to be highest in the factor-driven economies.

Fig 7AComposite indicators on entrepreneurship institutions

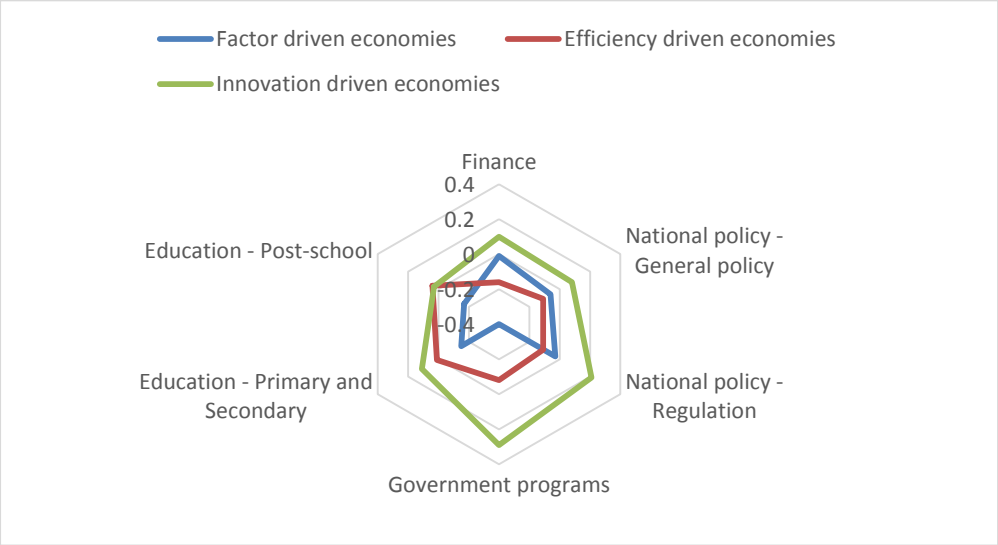
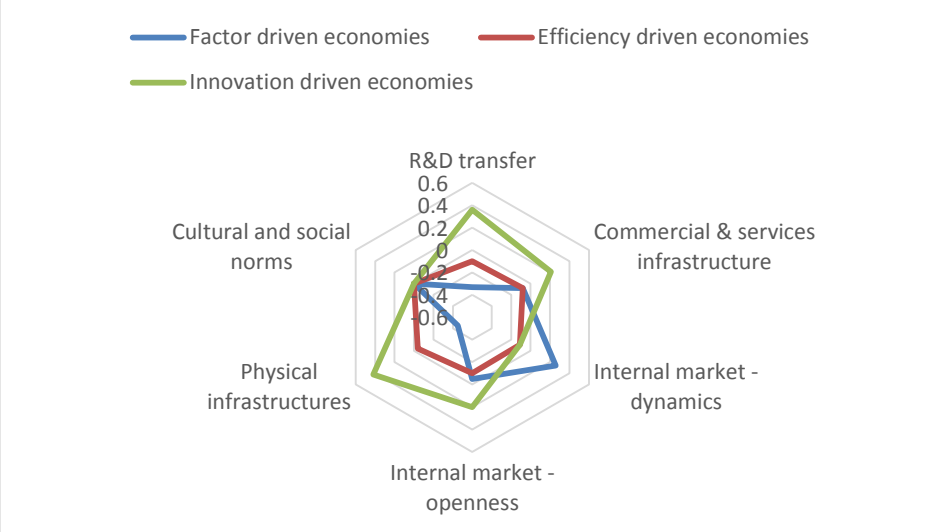


Fig 7B Composite indicators on entrepreneurship institutions



Figures 8 to 10 present the scores for each EFC for Pakistan and compares it with groups of selected countries in the Innovation driven, efficiency driven and factor driven economies, derived from the responses of experts in those countries

Figure 8 A: Mean Scores Awarded by National Experts to Entrepreneurial Framework Conditions in Pakistan as compared to innovation driven economies

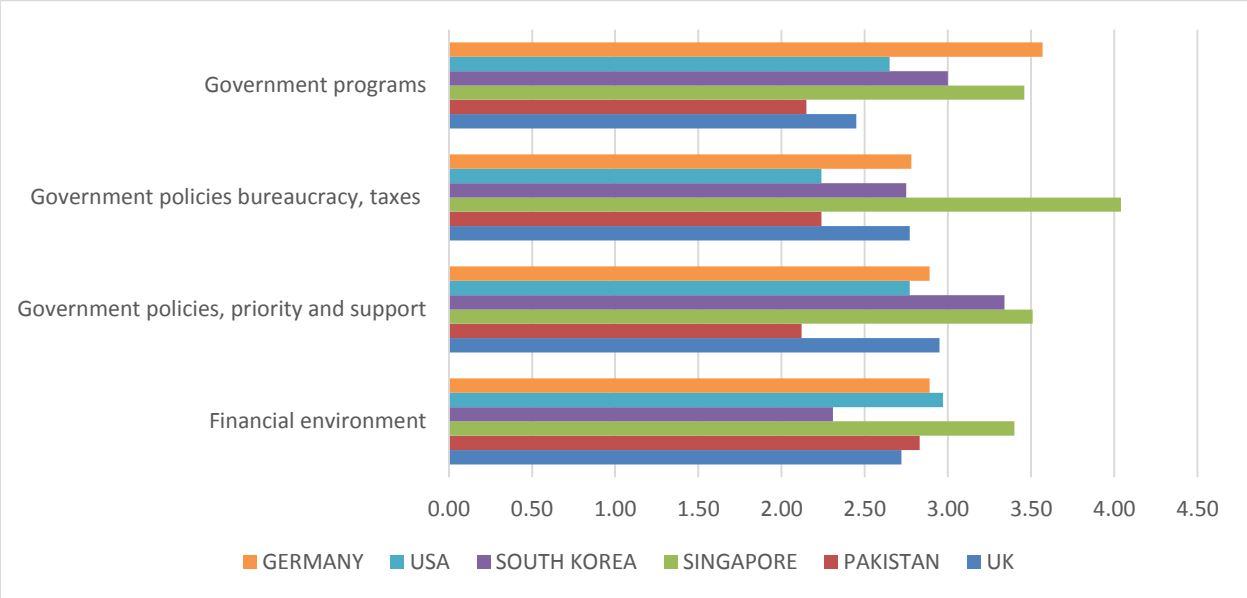


Figure 8 B: Mean Scores Awarded by National Experts to Entrepreneurial Framework Conditions in Pakistan as compared to Innovation driven economies

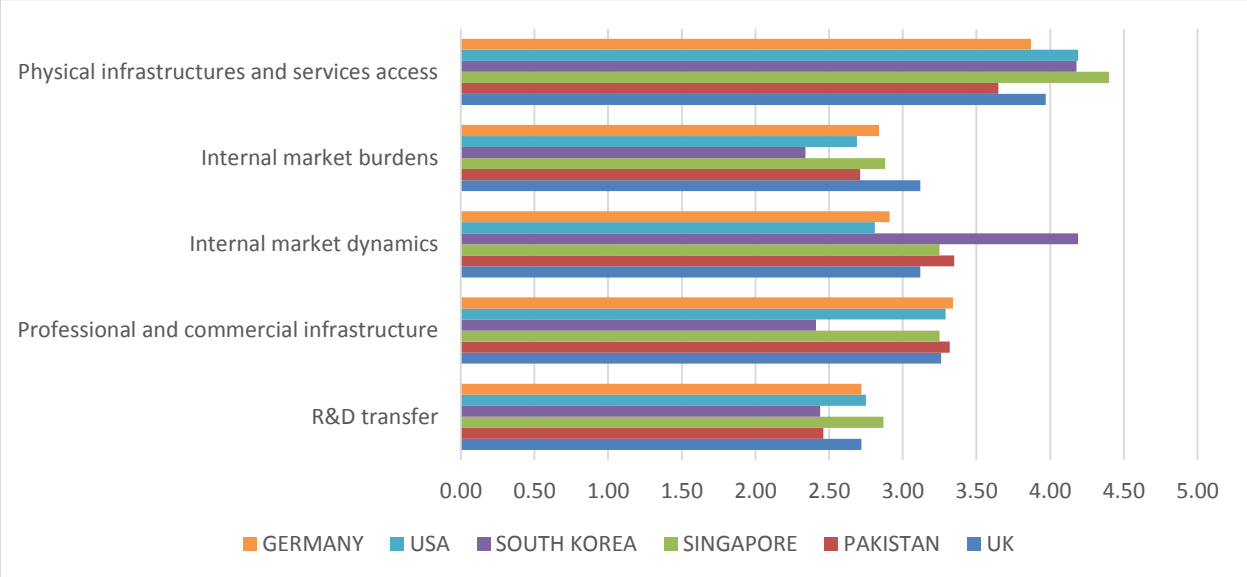


Figure 8 C: Mean Scores Awarded by National Experts to Entrepreneurial Framework Conditions in Pakistan as compared to Innovation driven economies

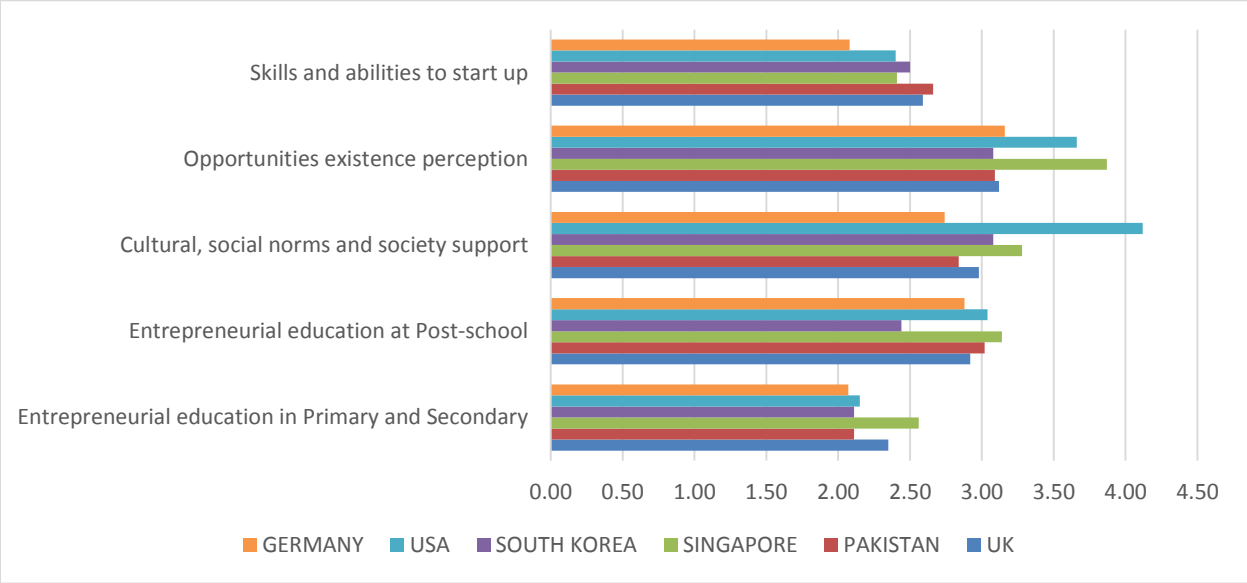


Figure 9 A: Mean Scores Awarded by National Experts to Entrepreneurial Framework Conditions in Pakistan as compared to Efficiency driven economies

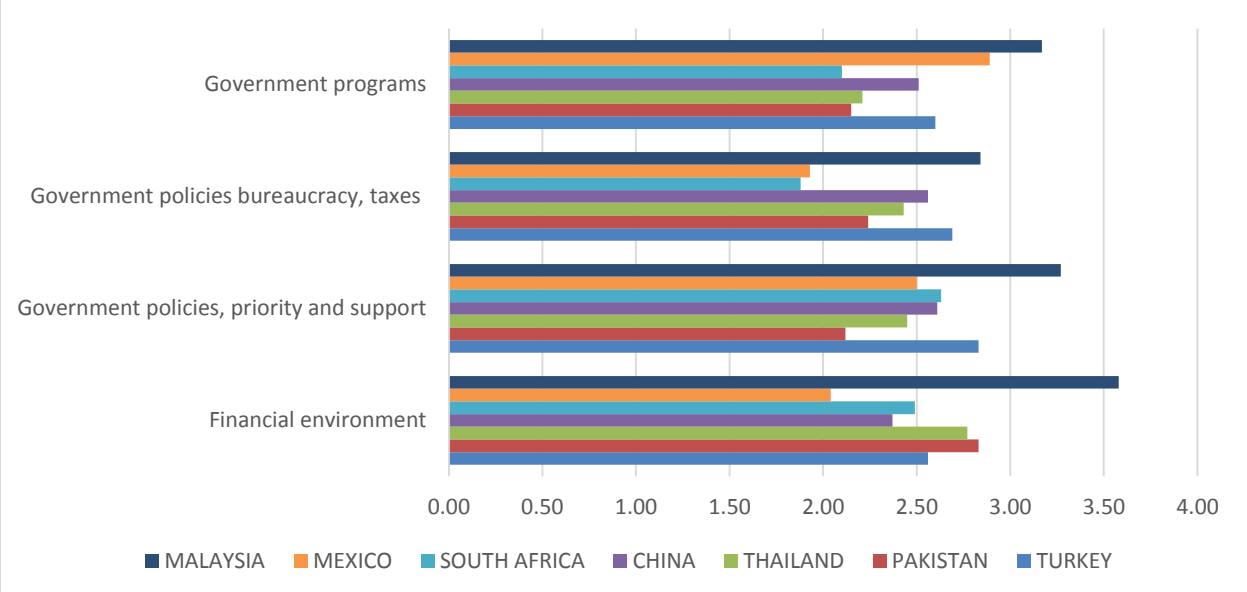


Figure 9 B: Mean Scores Awarded by National Experts to Entrepreneurial Framework Conditions in Pakistan as compared to Efficiency driven economies

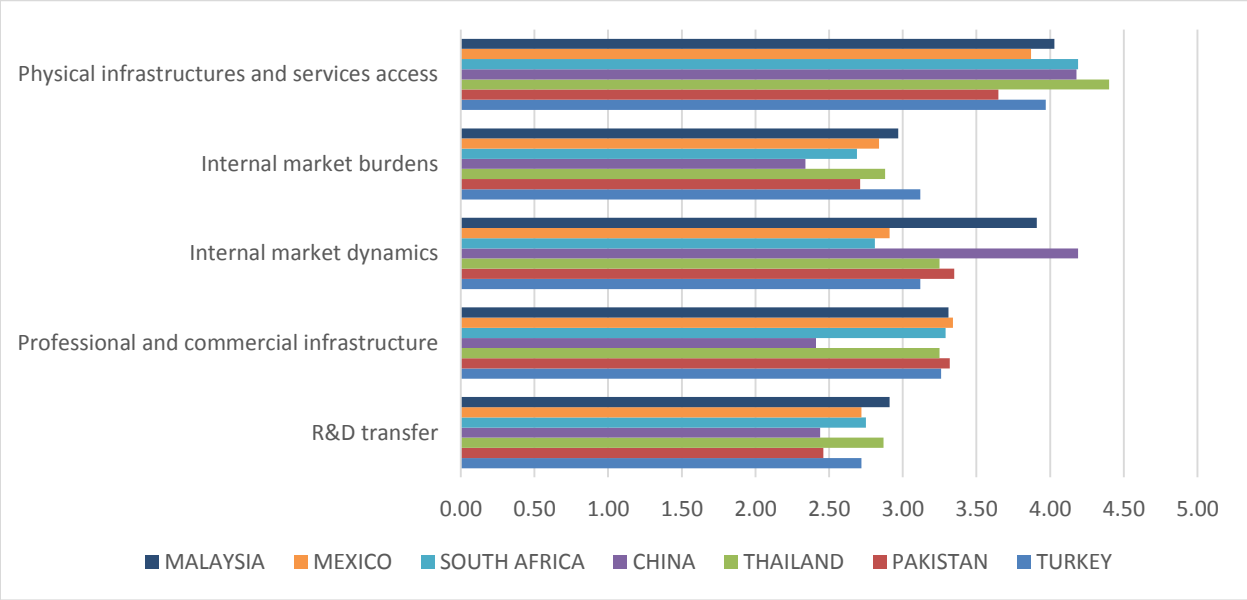


Figure 9 C: Mean Scores Awarded by National Experts to Entrepreneurial Framework Conditions in Pakistan as compared to Efficiency driven economies

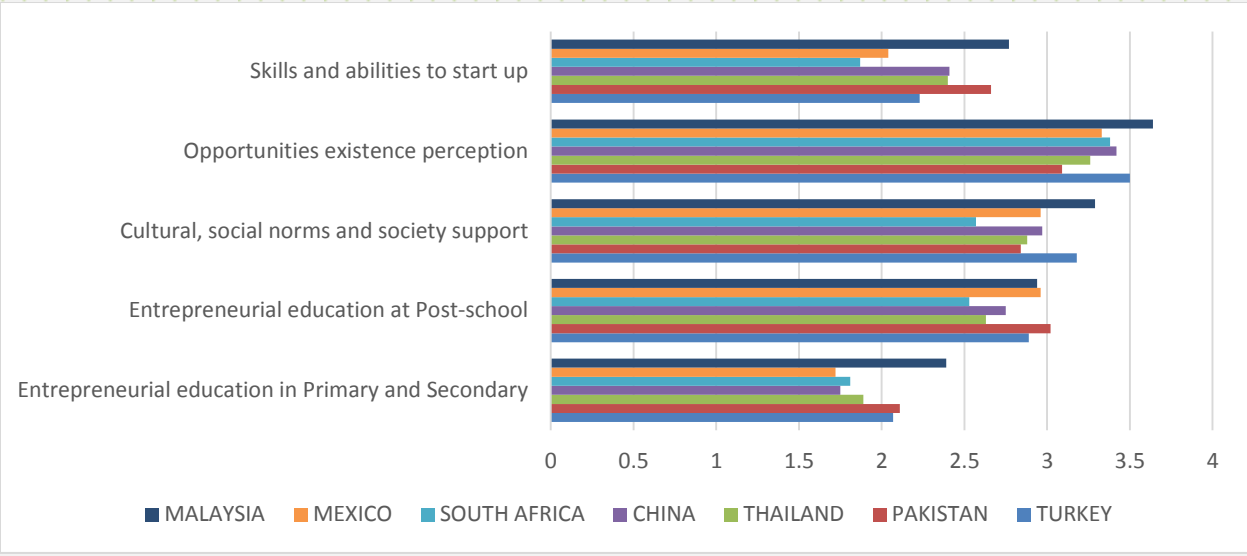


Figure 10 A: Mean Scores Awarded by National Experts to Entrepreneurial Framework Conditions in Pakistan as compared to Factor driven economies

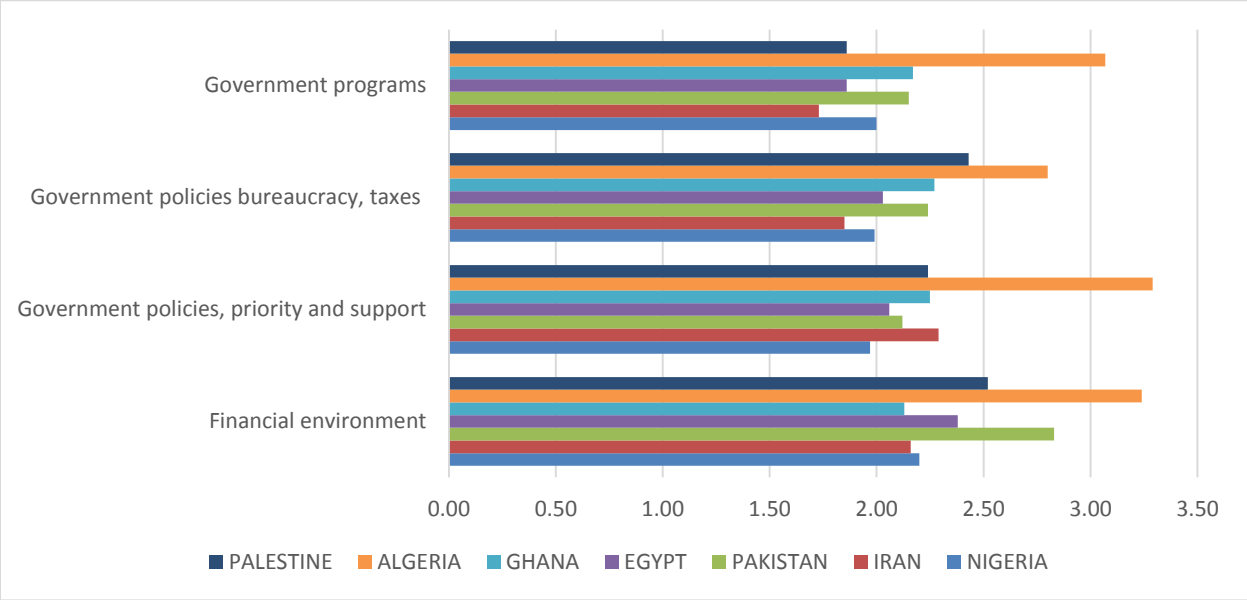


Figure 10 B: Mean Scores Awarded by National Experts to Entrepreneurial Framework Conditions in Pakistan as compared to Factor driven economies

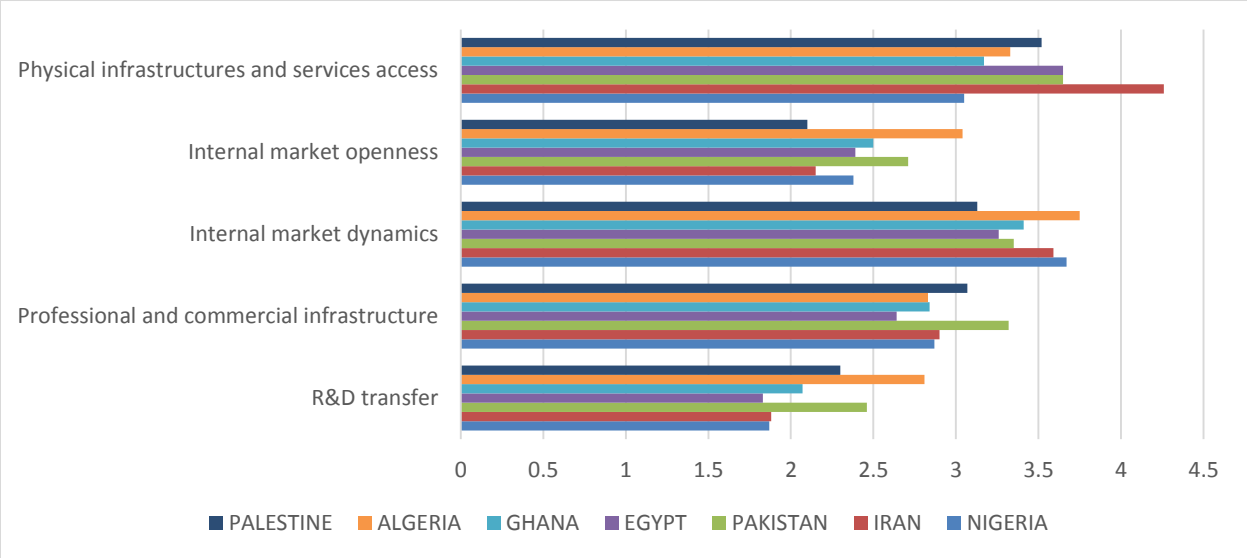
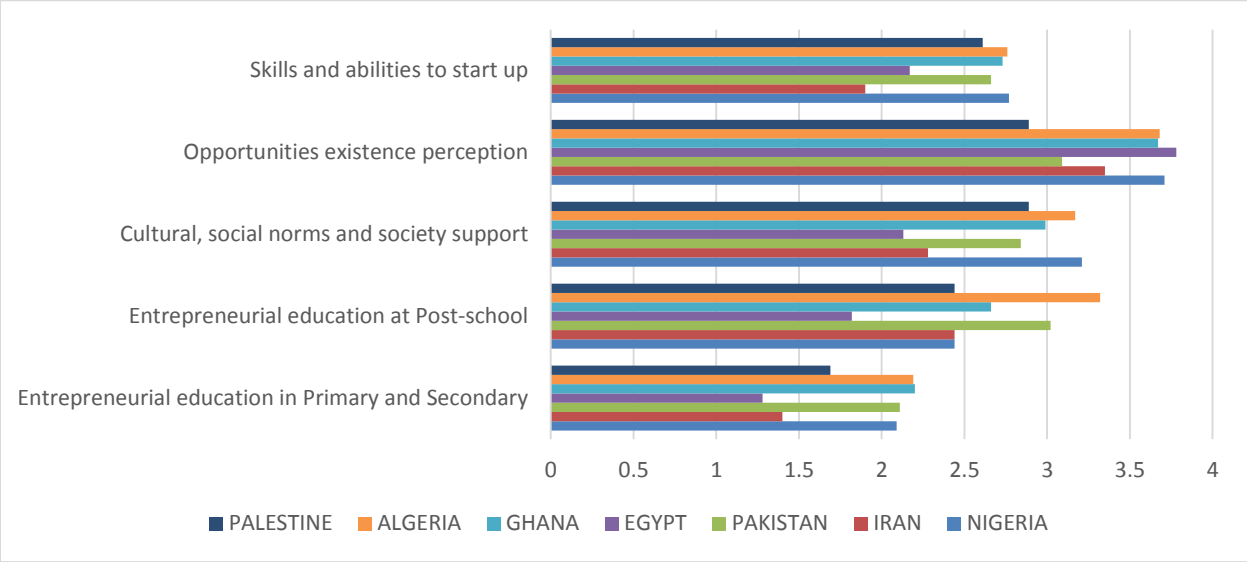


Figure 10 C: Mean Scores Awarded by National Experts to Entrepreneurial Framework Conditions in Pakistan as compared to Factor driven economies



Key findings from these figures are as follows.

- All countries including the developed ones do relatively poorly on entrepreneurship education in primary and secondary schools.
- In the factor driven countries, Pakistan is compared with countries like Iran, Egypt and Algeria. Pakistan scores significantly higher on skills and abilities to startup, internal market openness and post school education. Algeria scores higher on internal market openness and dynamics, R&D transfer, skills and abilities to start up, cultural and social norms, primary and secondary and post-school education, governmental programs, government policies, taxes and government support, and financial environment. Egypt scores high on opportunities existence perception.
- In the efficiency driven countries, Pakistan is compared with countries like, Turkey, Thailand, Malaysia and China. Malaysia scores higher on most parameters except entrepreneurial post-school education, internal market dynamics and openness, commercial infrastructure and physical infrastructure. Turkey scores reasonably high on cultural and social norms, and opportunities existence perception.
- In innovation driven countries, Pakistan is compared with selected set of developed countries. Singapore scores high on government policies and taxes, priority and support, financial environment, physical infrastructure, R&D transfer, opportunities existence perception, post school and primary and secondary entrepreneurial education. Germany scores high on governmental programs and professional and commercial infrastructure. Interestingly, Pakistan scores respectable on professional and commercial infrastructure and the skills and abilities to start a new business.

Chapter 3: Conclusions and Implications

The GEM Pakistan 2012 results offer in-depth review of individual entrepreneurial characteristics of the adult (18-64) population along with the national environmental context in which entrepreneurship takes place.

It is hoped that the GEM research report (the third study) would not only create awareness of the importance of entrepreneurship among the Pakistani youth, policy makers, academics and general public, but will also provide a solid basis to launch new academic and industrial research projects thereby significantly enriching our understanding of the state-of-entrepreneurship in the country and related challenges that need to be overcome. The GEM study results and data sets are now increasingly being employed for the purpose of:

- Investigating changing environmental conditions for entrepreneurship over time
- Assessing regional differences within Pakistan
- Comparing conditions for entrepreneurship among peer countries
- Institutional structures, human and social capital facilitating or blocking entrepreneurship
- Linking GEM data to other data sources
- Arrangement for funding new entrepreneurial venture, developing angle networks
- Supporting nascent entrepreneurship and new business ownership
- Encouraging corporate entrepreneurship

The GEM Pakistan's findings highlight the need to improve the national business climate and entrepreneurial environment by (a) emphasizing the role of government in ensuring security and establishing the rule of law (b) removing the instruments of rent-seeking (c) moving away from the current focus on government planning to a more market- driven approach. The new approach has to be aligned with globalization, creativity, innovation and the application of technology. However, a number of implications and lessons can be drawn from the GEM study results.

Entrepreneurship awareness through Entrepreneurial Centers

Academic beneficiaries belonging to universities and research organizations include centers of excellence in entrepreneurship, academic researchers in business and economics and other social scientists, doctoral and post graduate students. Additionally, business and civic organizations including local chambers of commerce and industry can equally benefit from this work. To promote this activity a consortium of universities comprising of IBA Karachi, IBA Sukkur, UET Peshawar, GIFT University Gujranwala who joined hands to conduct this research, plan to use its findings to create national awareness.

Several Pakistani universities and institutes have initiated entrepreneurship centers to complement and promote entrepreneurial skills in their partner technological departments in

the past couple of years. Their objective is to nourish and prepare their graduates for the entrepreneurial journey. In Pakistan, IBA Karachi followed by NUST, Islamabad have already created entrepreneurship centers. This is followed by others including University of Central Punjab, UET Peshawar and IBA Sukkur. The entrepreneurial centers at Lahore University of Management Sciences (LUMS) and Baluchistan University of Information, Technology, Management and Sciences (BUITMS) are in the early phase of development.

Entrepreneurship awareness through entrepreneurship education
One of the key components of an entrepreneurial activity is to teach entrepreneurship while simultaneously developing an entrepreneurial mindset of the students. Pakistani universities have only recently started teaching entrepreneurship courses to their business and non-business students. Only a limited variety of courses are being taught with few universities offering a full portfolio of entrepreneurship courses i.e. entrepreneurial marketing, entrepreneurial finance and innovation and creativity. The GEM study can also provide useful global data and teaching material for this purpose.

Some of the potential users of GEM Pakistan and other GEM Global and national reports are the government organizations such as Planning Commission of Pakistan, Ministry of Youth Affairs, Ministry of Economic Affairs, Ministry of Rural Development, SMEDA, National Productivity Organization, and the Export Promotion Bureau among others.

Regional entrepreneurial policy support:
There are 72 geographic districts in Pakistan and more than 50 percent of entrepreneurial ventures are concentrated in only 10 districts namely, Karachi, Lahore, Faisalabad, Multan, Hyderabad, Sialkot, Gujrat, Gujranwala, Quetta and Sheikhupura. Our GEM research reveals a widespread entrepreneurial propensity in various districts of Pakistan. Therefore, by improving the entrepreneurial framework conditions of each district and linking them to their respective manpower potential will lead to a country- wide entrepreneurial activity resulting in well-spread economic growth

Youth entrepreneurship and employment:
With a bulge in youth population and an urgent social need for job creation when viewed in light of several positive entrepreneurial and pro-business attributes of the population identified in this research, a new cadre of young entrepreneurs needs to be developed. On the basis of our GEM findings we advocate a strong need for entrepreneurship education programs starting from pre-high school and particularly in the engineering and science programs in the polytechnic institutes and universities of the country. Interestingly, specialized entrepreneurship courses have already been initiated in some engineering and agricultural universities of Pakistan, which need to be expanded to bring youth into self-employment and entrepreneurial business activities.

Facilitate necessity entrepreneurship and encourage opportunity entrepreneurship
Pakistan scores high on perception of new opportunities and the skills and abilities to start a new business. However, there is a need to promote entrepreneurial mindset across the population at all levels. As a factor driven economy there is a huge scope in the area of agro based entrepreneurship i.e. in livestock agronomy, and forestry. Other important areas are: halal food business, value addition in the textile products and in the light and medium engineering sector. Pakistani universities are producing thousands of IT and engineering graduates and there is a great opportunity to follow the footsteps of Taiwan, India and China to promote IT based entrepreneurship among the graduating students by providing an enabling environment.

Pakistan is country bestowed with a huge population and natural resources. Entrepreneurship can be used to tap the talent of the youth by inculcating an entrepreneurial mindset and promoting the youth to start their own ventures. The GEM findings will help the policy makers, educators, and the students in the long run to promote an entrepreneurial culture in the country.

GEM Pakistan Team

Dr. Sarfraz A. Mian, GEM Pakistan Head and Principal Investigator, is Professor of Entrepreneurship and Management Policy, and Chair Marketing & Management Areas in the School of Business, State University of New York- Oswego, USA. He obtained his MS in Management Sciences from Northwestern University, an MBA and PhD from George Washington University. He has taught at University of Maryland, Osnabruck University, Germany, LUMS Lahore, and lectured at universities in Europe, South America, and South Asia. He has served as Chair, Institute for Operations Research & Management Sciences Technology Management area (2002-04) and was Executive Officer of the Academy of Management TIM Division (2000-05). He is the co-founder and US Coordinator of North American Innovation Research Network (NAIRNet). He has published more than 50 scholarly articles and made 100 international conference presentations and invited speeches. He is the Associate Editor of *JSBM,* and served as Guest Editor of *Technovation, Journal of Technology Transfer, Small Business Economics*. His recent scholarly work includes: two books – 'Building Knowledge Regions in North America" and 'Science & Technology Based Regional Entrepreneurship (Edward Elgar). Prof. Mian's *Journal of Business Venturing* and

Research Policy articles on university business incubation are among the most cited. His published work was ranked among top 13 worldwide in academic entrepreneurship by Rothaermel et al. *Industrial & Corporate Change*, 2007, 16:4, pp 691-791. He has 30 years of experience with international bodies, governments, industry and academia. He is currently advisor to the Center of Entrepreneurial Development (CED) at IBA (Email: mian@oswego.edu, Web: www.oswego.edu/~mian)

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Appendix 1: Glossary of GEM Measures and Terminology

Measure	Description
Entrepreneurial Attitudes and Perceptions	
Perceived Opportunities	Percentage of 18–64 age group who see good opportunities to start a firm in the area where they live
Perceived Capabilities	Percentage of 18–64 age group who believe to have the required skills and knowledge to start a business
Entrepreneurial Intention	Percentage of 18–64 age group (individuals involved in any stage of entrepreneurial activity excluded) who intend to start a business within three years
Fear of Failure Rate	Percentage of 18–64 age group with positive perceived opportunities who indicate that fear of failure would prevent them from setting up a business
Entrepreneurship as Desirable Career Choice	Percentage of 18–64 age group who agree with the statement that in their country, most people consider starting a business as a desirable career choice
High-Status Successful Entrepreneurship	Percentage of 18–64 age group who agree with the statement that in their country, successful entrepreneurs receive high status
Media Attention for Entrepreneurship	Percentage of 18–64 age group who agree with the statement that in their country, they will often see stories in the public media about successful new businesses
Entrepreneurial Activity	
Nascent Entrepreneurship Rate	Percentage of 18–64 age group who are currently a nascent entrepreneur, i.e., actively involved in setting up a business they will own or co-own; this business has not paid salaries, wages or any other payments to the owners for more than three months
New Business Ownership Rate	Percentage of 18–64 age group who are currently an owner-manager of a new business, i.e., owning and managing a running business that has paid salaries, wages or any other payments to the owners for more than three months, but not more than 42 months
Total Early-Stage Entrepreneurial Activity (TEA)	Percentage of 18–64 age group who are either a nascent entrepreneur or owner-manager of a new business (as defined above)
Established Business Ownership Rate	Percentage of 18–64 age group who are currently owner-manager of an established business, i.e., owning and managing a running business that has paid salaries, wages or any other payments to the owners for more than 42 months
Business Discontinuation Rate	Percentage of 18–64 age group who have, in the past 12 months, discontinued a business, either by selling, shutting down or otherwise discontinuing an owner/management relationship with the business. Note: This is *not* a measure of business failure rates.
Necessity-Driven Entrepreneurial Activity: Relative Prevalence	Percentage of those involved in total early-stage entrepreneurial activity (as defined above) who are involved in entrepreneurship because they had no other option for work
Improvement-Driven Opportunity Entrepreneurial Activity: Relative Prevalence	Percentage of those involved in total early-stage entrepreneurial activity (as defined above) who (i) claim to be driven by opportunity, as opposed to finding no other option for work; and (ii) who indicate the main driver for being involved in this opportunity is being independent or increasing their income, rather than just maintaining their income
Entrepreneurial Aspirations	
High-Growth Expectation Early-Stage Entrepreneurial Activity: Relative Prevalence	Percentage of total early-stage entrepreneurs (as defined above) who expect to employ at least 20 employees five years from now Weak measure: expects at least *five* employees five years from now
New Product-Market	Percentage of total early-stage entrepreneurs (as defined above) who indicate that

Oriented Early-Stage Entrepreneurial Activity: Relative Prevalence	their product or service is new to at least some customers *and* indicate that not many businesses offer the same product or service Weak measure: product is new *or* not many businesses offer the same product or service
International Orientation Entrepreneurial Activity with International Orientation	Percentage of total early-stage entrepreneurs (as defined above) with more than 25% of the customers coming from other countries Weak measure: *more than 1%* customers coming from other countries

Appendix 2: Charts describing changes in various entrepreneurial measures from 2010 to 2012.

Figure 11: Entrepreneurial attitudes in Pakistan (%age ALL respondents aged 18 -64 expressing an opinion and agreeing with the statement)

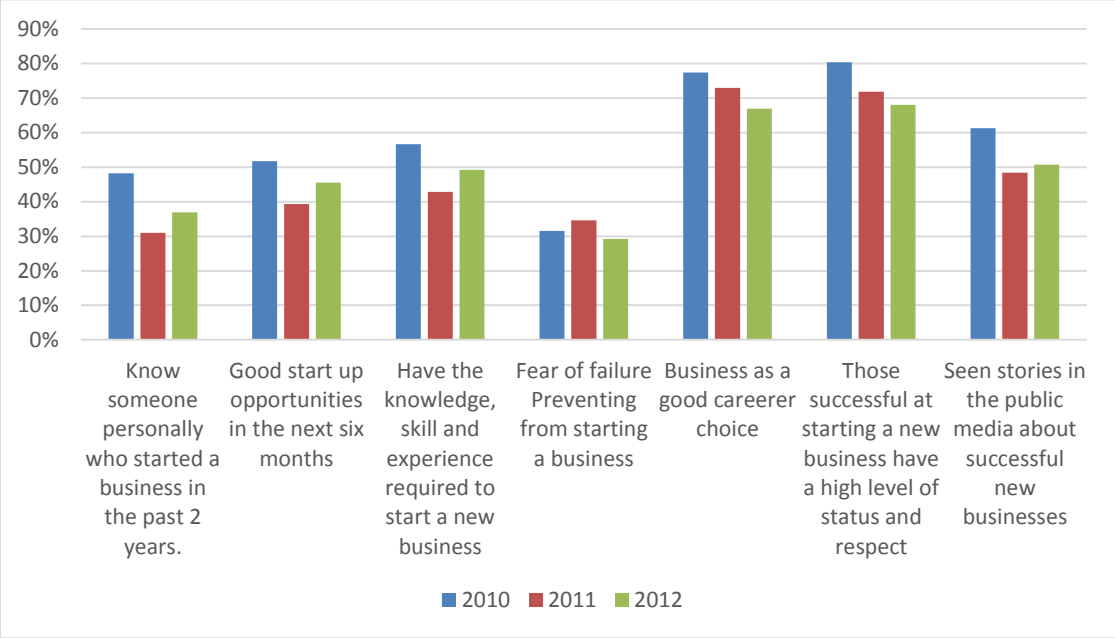


Figure 12: Entrepreneurial attitudes in Pakistan (%age MALE respondents aged 18 -64 expressing an opinion and agreeing with the statement)

Figure 13: Entrepreneurial attitudes in Pakistan (%age FEMALE respondents aged 18 -64 expressing an opinion and agreeing with the statement)

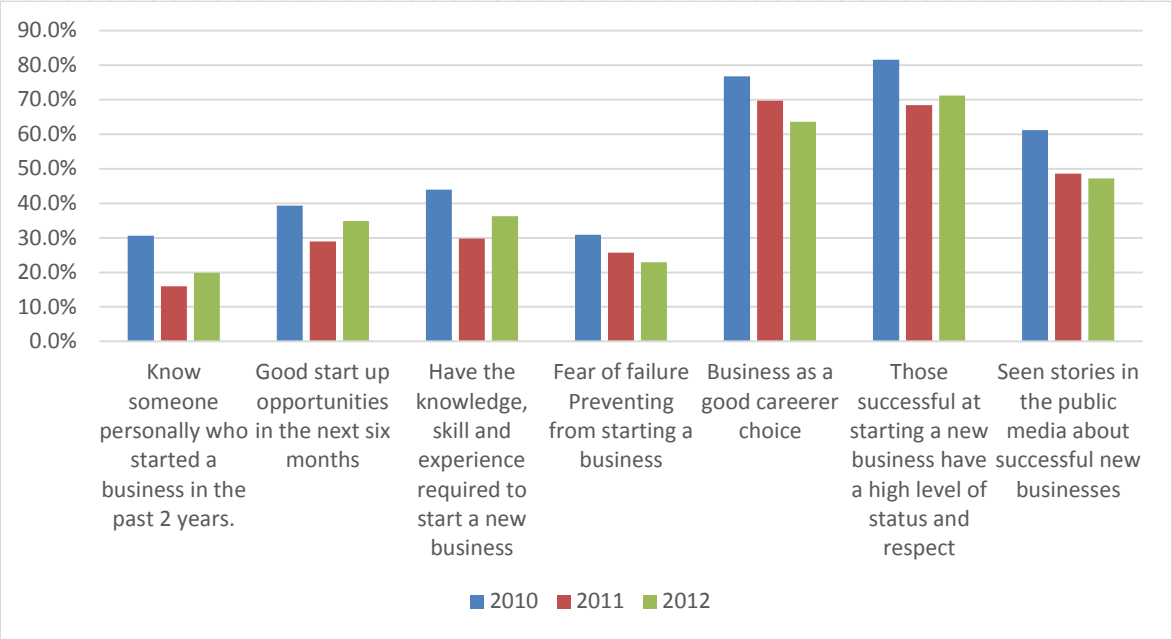


Figure 14: Perceptions of entrepreneurship among non-entrepreneurially active working age population towards entrepreneurship in various provinces of Pakistan (Know someone personally who started a business in the past 2 years.)

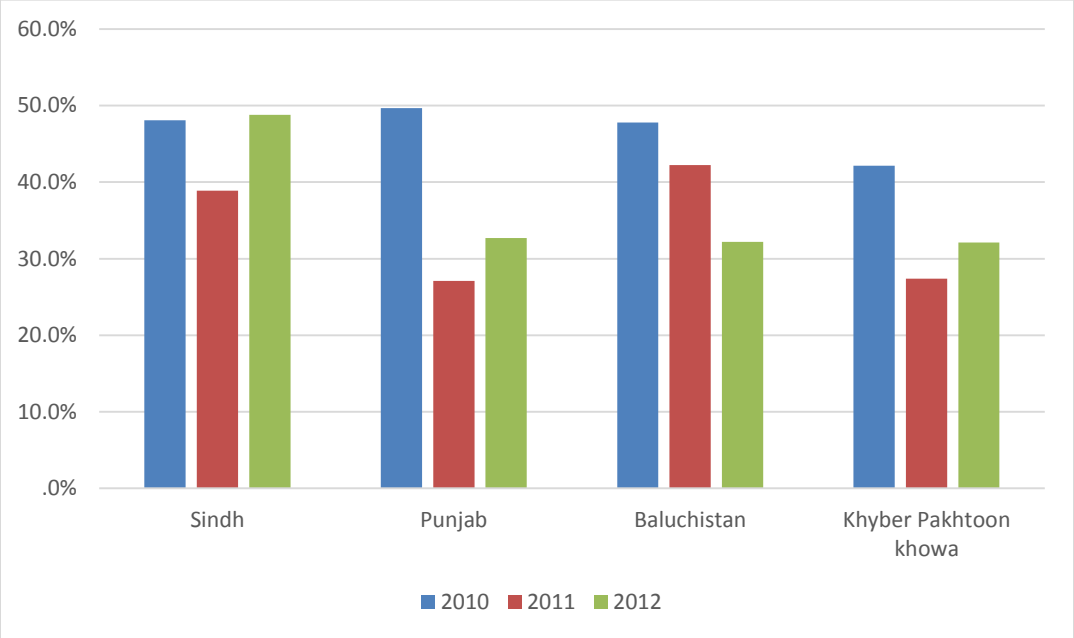


Figure 15: Perceptions of entrepreneurship among non - entrepreneurially active working age population towards entrepreneurship in various provinces of Pakistan (Good start up opportunities in the next six months)

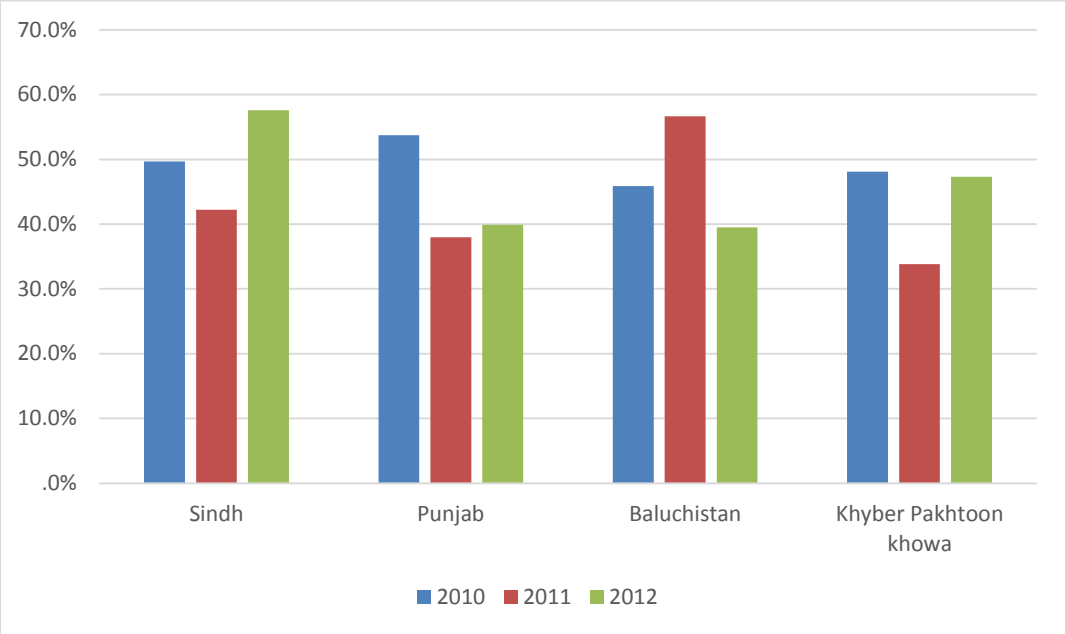


Figure 16: Perceptions of entrepreneurship among non - entrepreneurially active working age population towards entrepreneurship in various provinces of Pakistan (Have the knowledge, skill and experience required to start a new business)

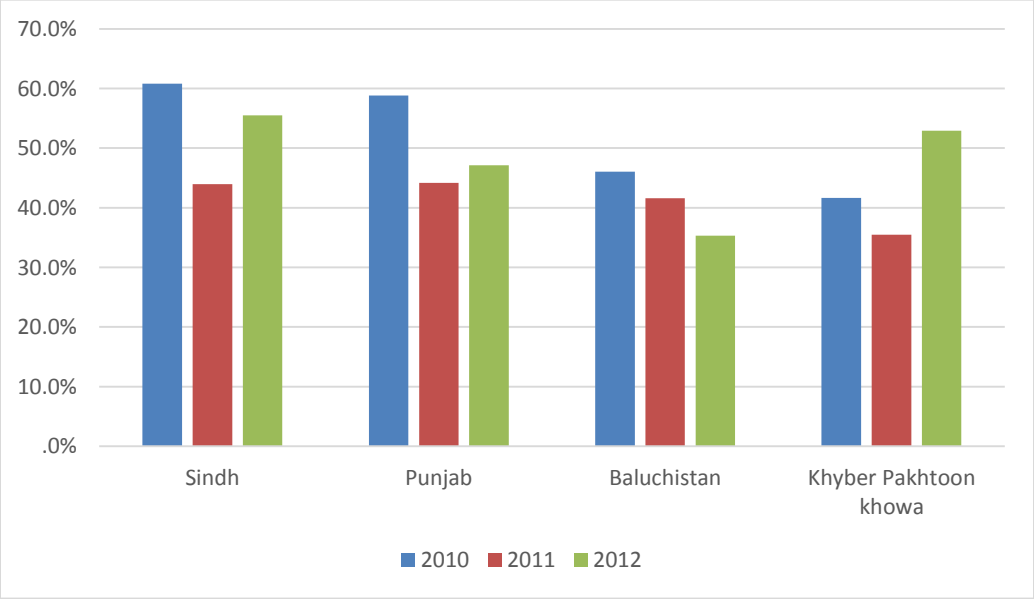


Figure 17: Perceptions of entrepreneurship among non-entrepreneurially active working age population towards entrepreneurship in various provinces of Pakistan (Fear of failure Preventing from starting a business)

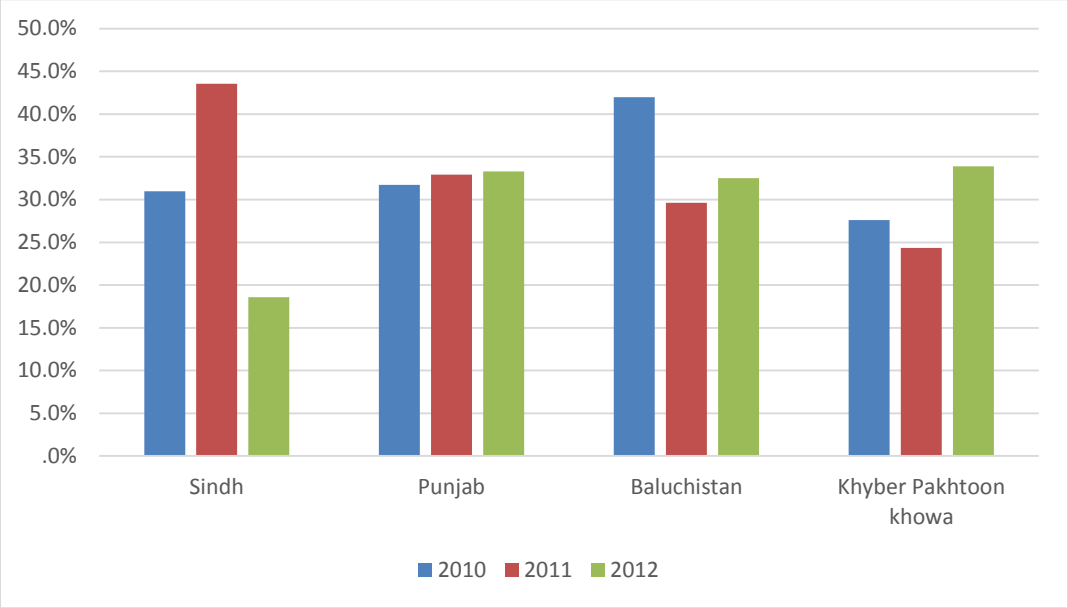


Figure 18: Perceptions of entrepreneurship in various cities of Pakistan (Know someone personally who started a business in the past 2 years.)

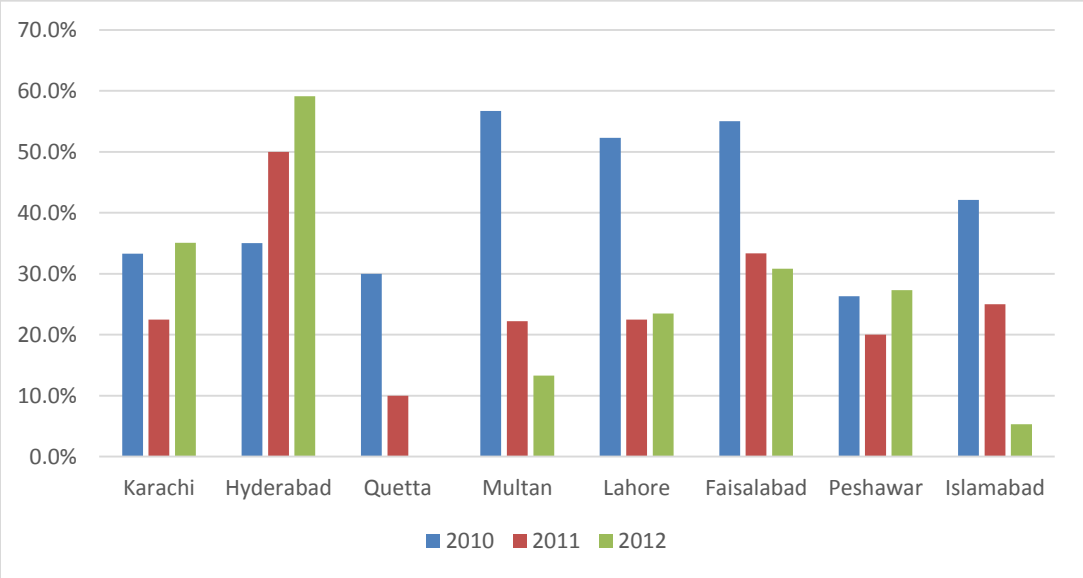


Figure 19: Perceptions of entrepreneurship in various cities of Pakistan (Good start up opportunities in the next six months)

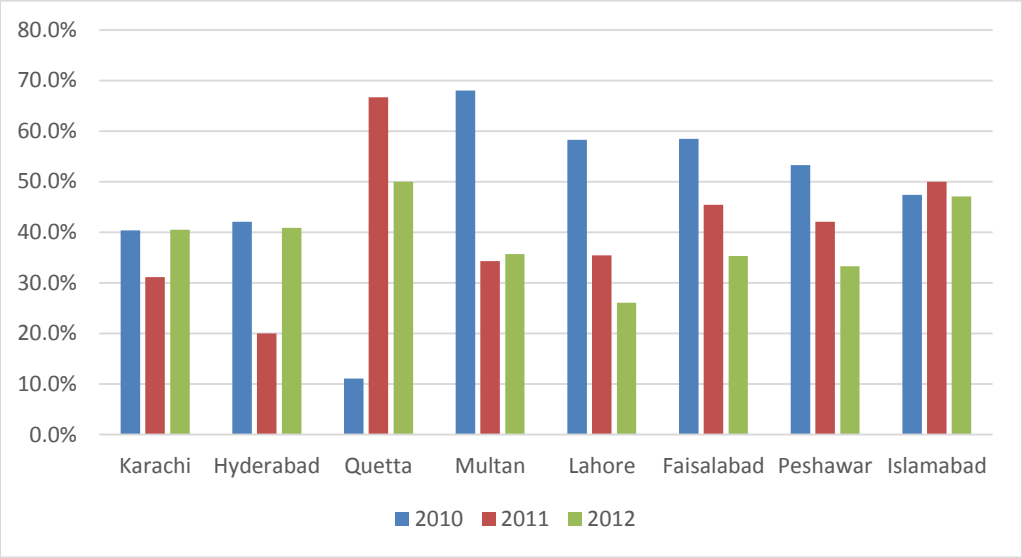


Figure 20: Perceptions of entrepreneurship in various cities of Pakistan (Have the knowledge, skill and experience required to start a new business)

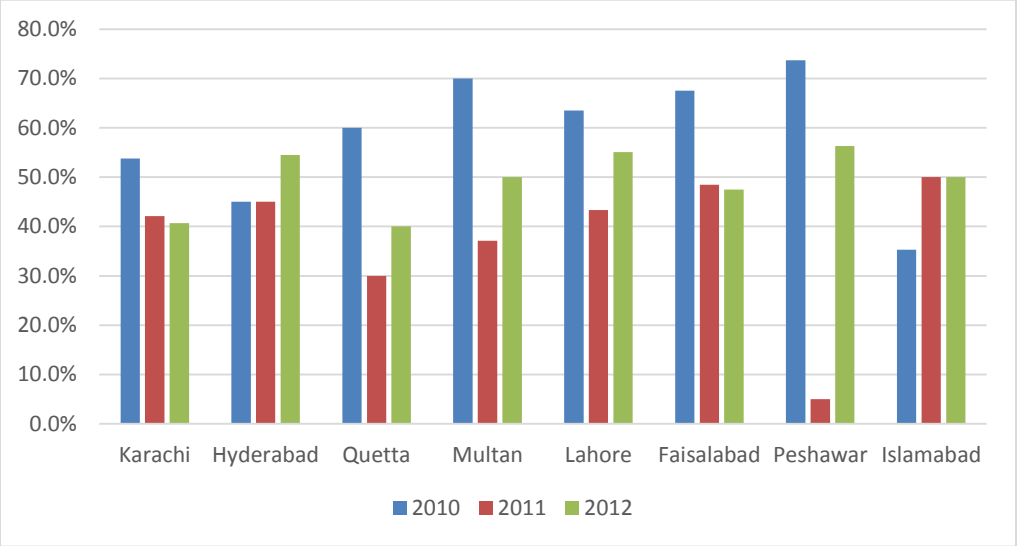


Figure 21: Perceptions of entrepreneurship in various cities of Pakistan (Fear of failure preventing from starting a business)

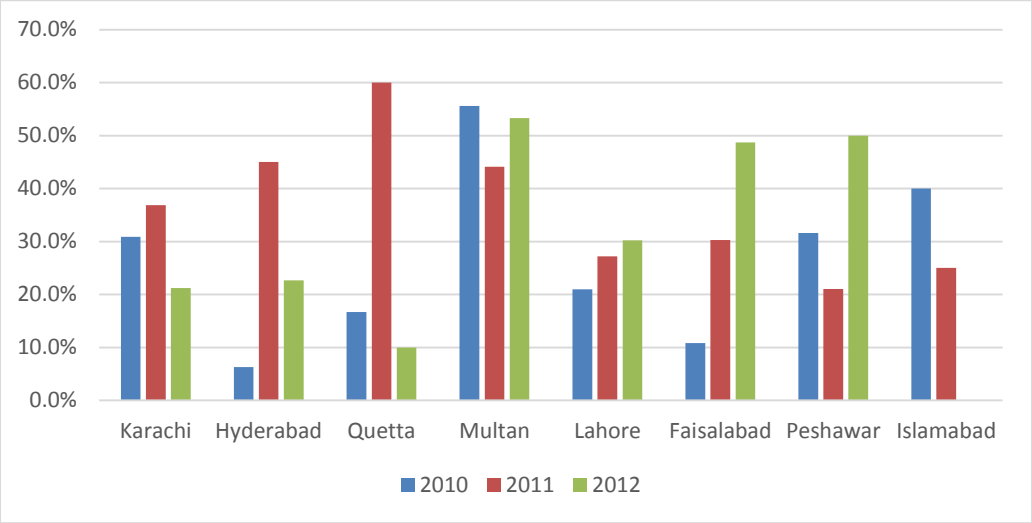


Figure 22: Proportion of respondents by stage of entrepreneurial activity in Pakistan

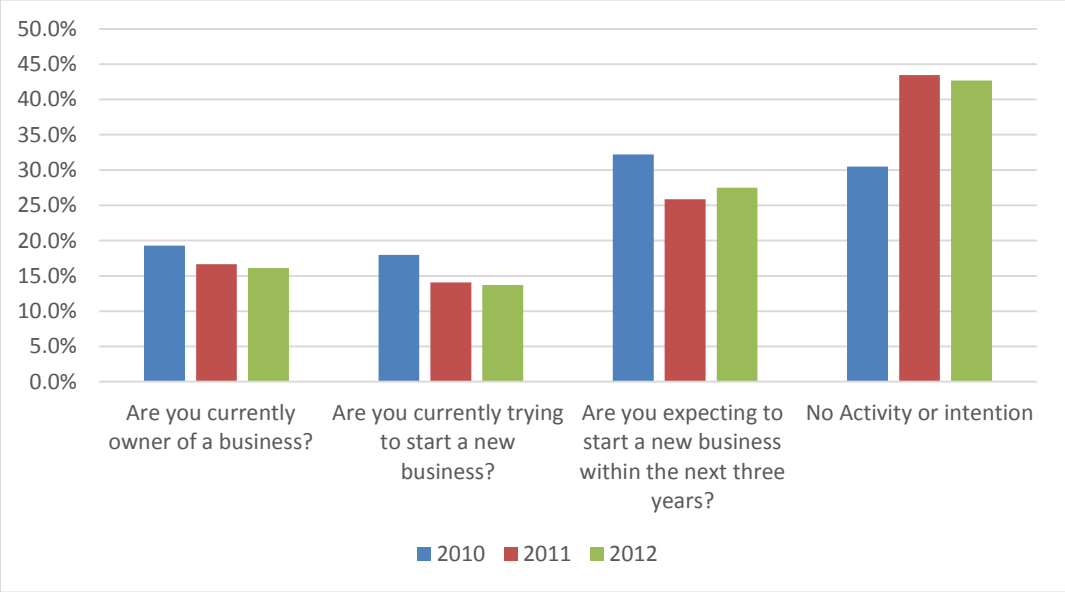


Figure 23: Different measures of entrepreneurial activity in various regions of Pakistan ("Expects to start a business in the next 3 years (future)")

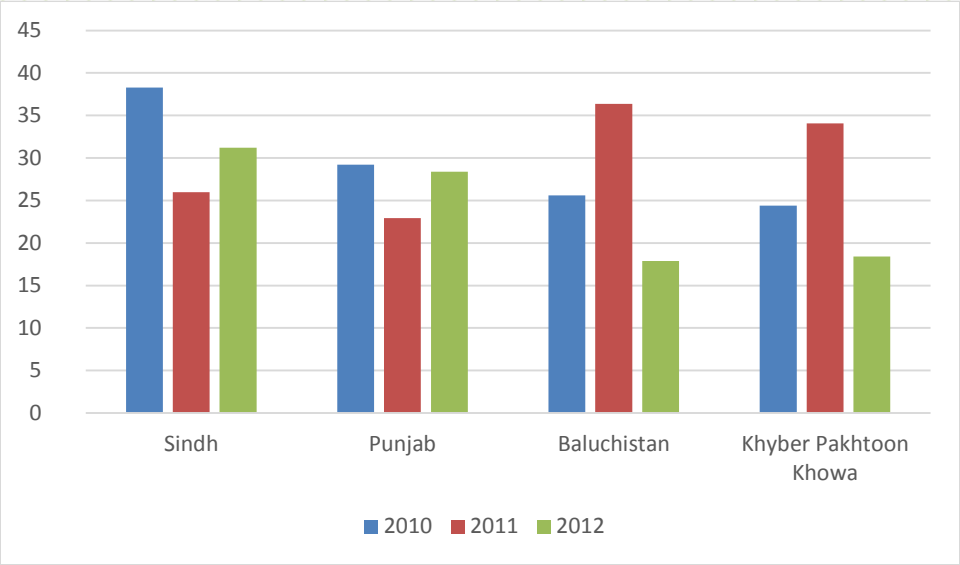


Figure 24: Different measures of entrepreneurial activity in various regions of Pakistan (Nascent Entrepreneurial Activity Rate (Actively involved in start-up effort, owner, no wages yet))

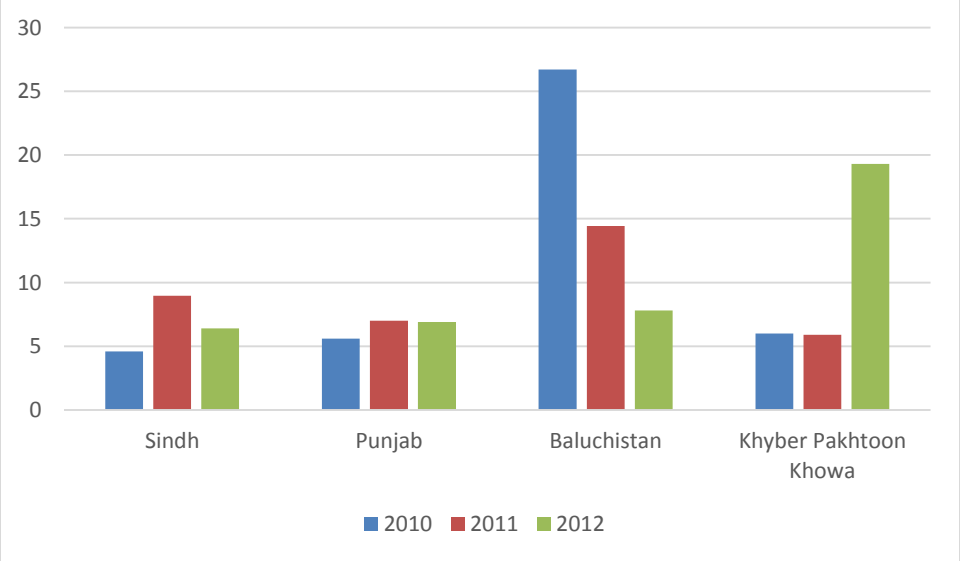


Figure 25: Different measures of entrepreneurial activity in various regions of Pakistan (New Business Owner-Manager Rate (Manages a business that is up to 42 months old))

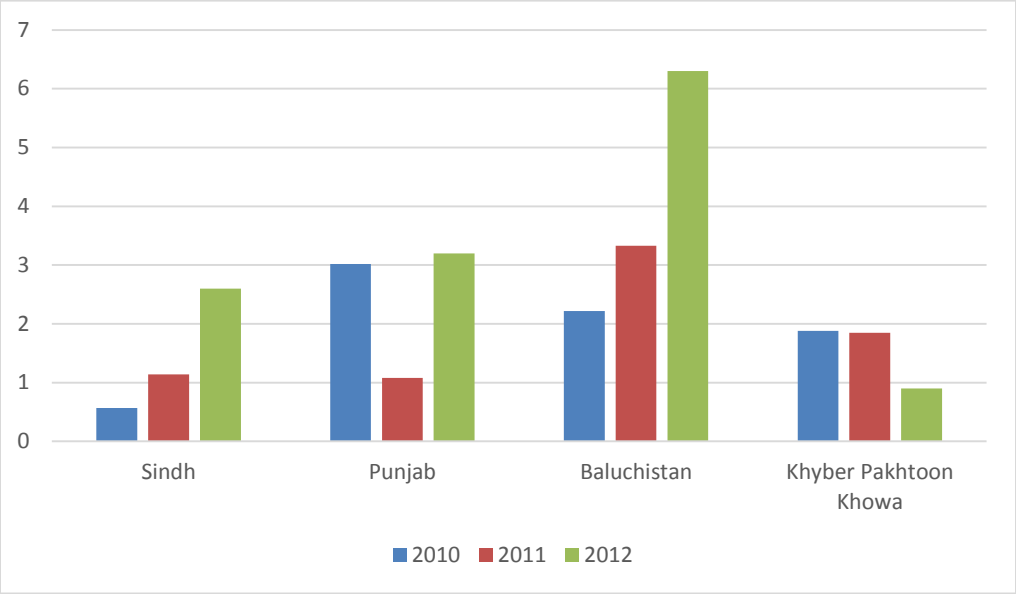


Figure 26: Different measures of entrepreneurial activity in various regions of Pakistan (Nascent + New Business Owner Manager Rate)

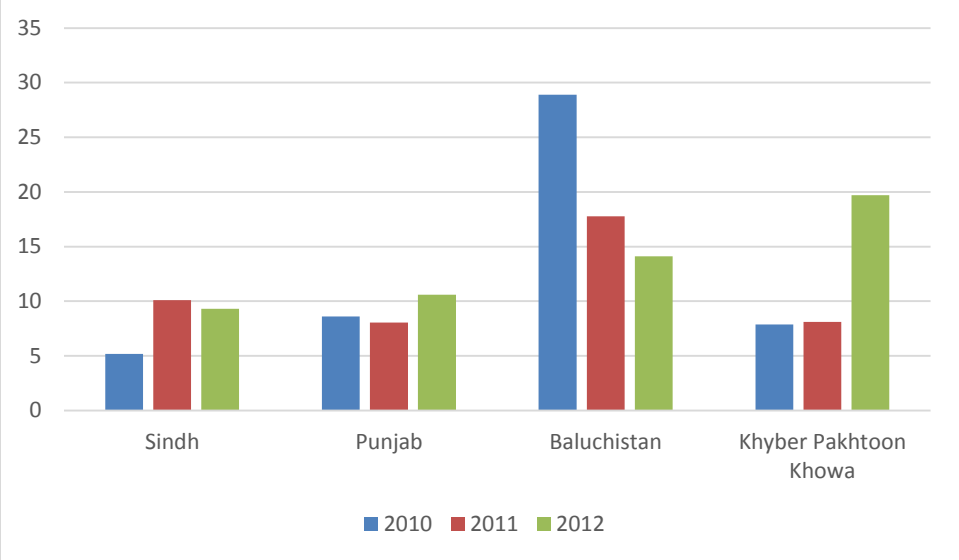


Figure 27: Different measures of entrepreneurial activity in various regions of Pakistan (Established Business Owners (>42 months))

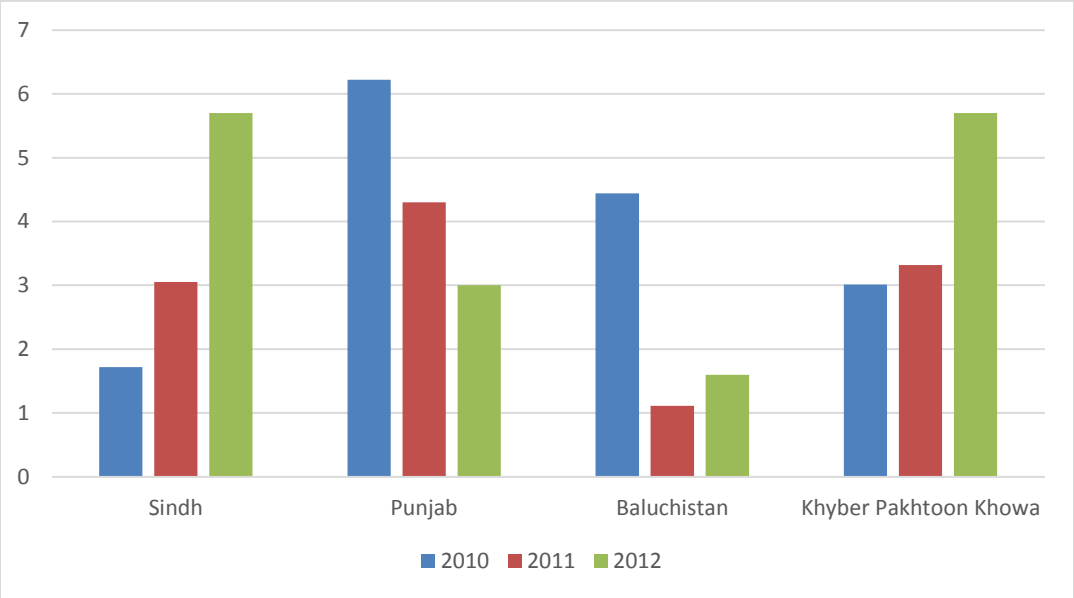


Figure 28: Different measures of entrepreneurial activity in various regions of Pakistan (Business Closure rate (Discontinued a business in the past 12 months))

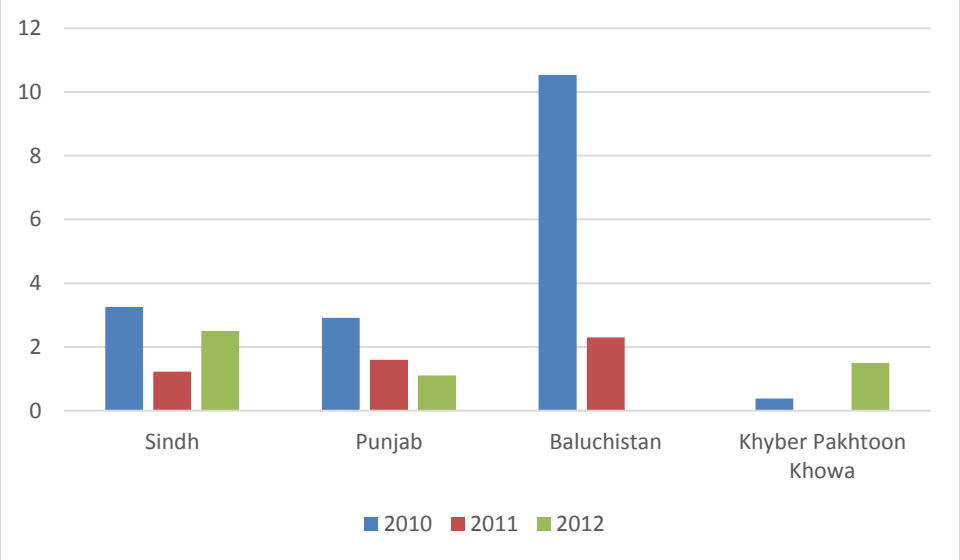


Figure 29: Total early stage entrepreneurial activity in Pakistan

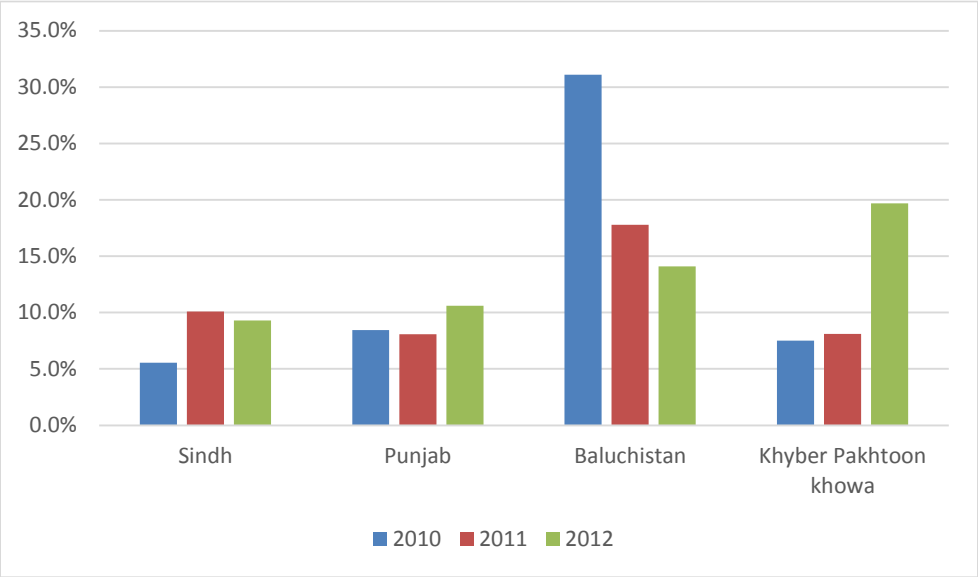


Figure 30: Early stage entrepreneurial activity in Pakistan, Male

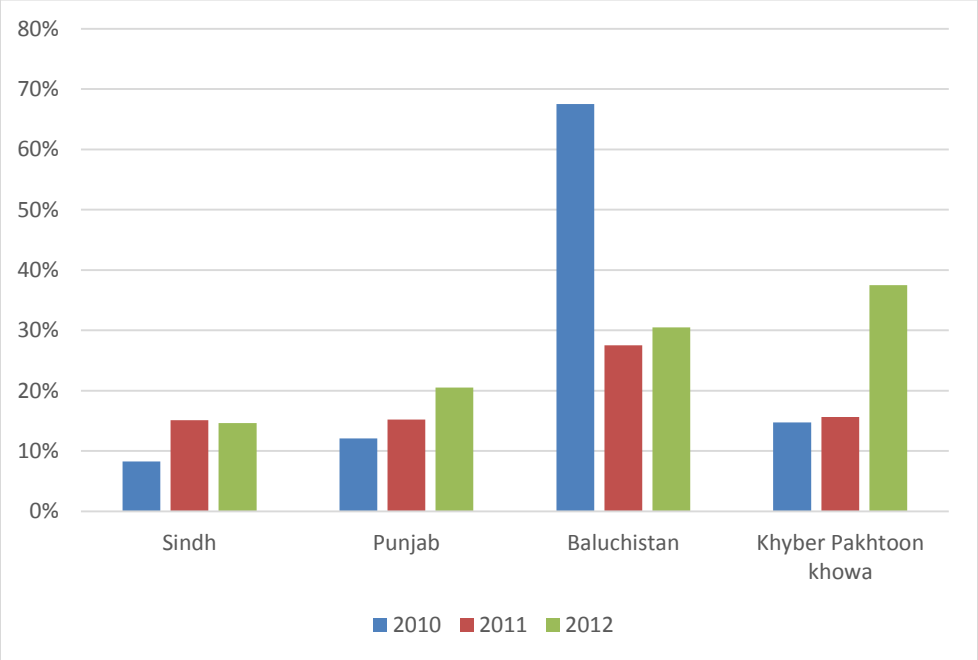


Figure 31: Early stage entrepreneurial activity in Pakistan, Female

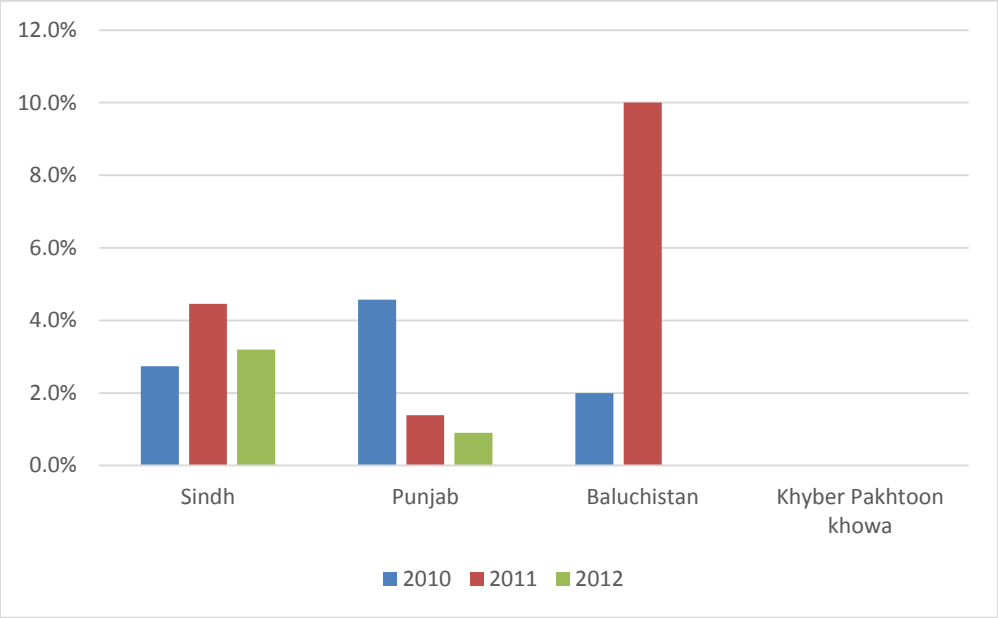


Figure 32: Total early stage Entrepreneurial Activity in Pakistan Regions based on opportunity entrepreneurship, Male

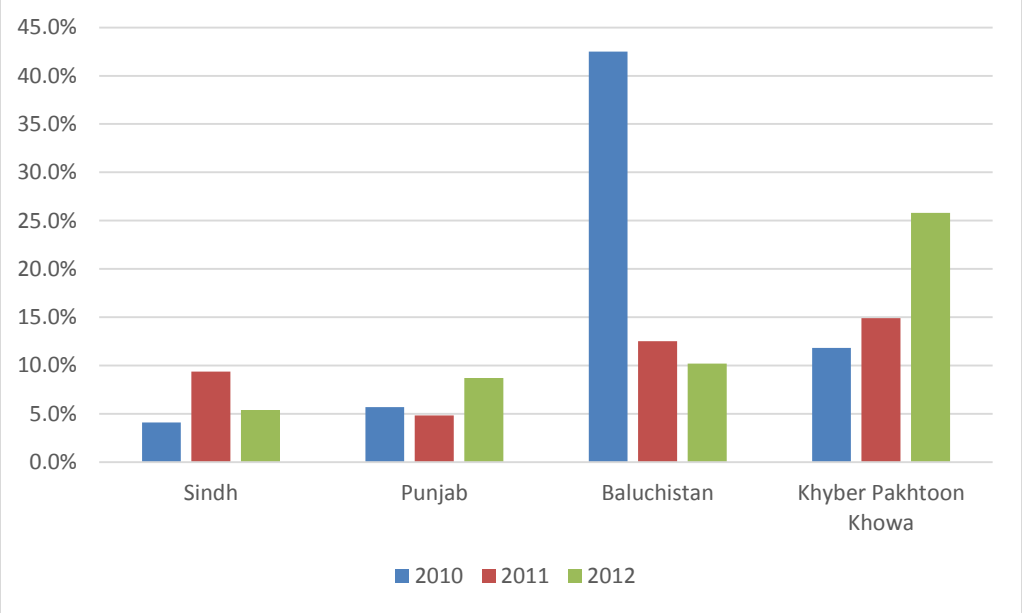


Figure 33: Total early stage Entrepreneurial Activity in Pakistan Regions based on opportunity entrepreneurship, Female

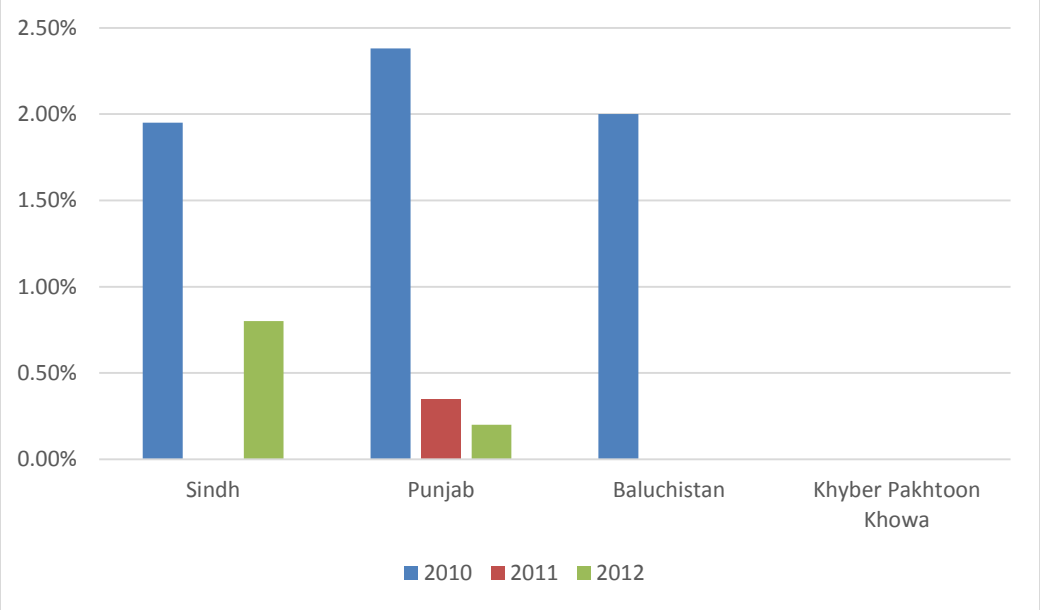


Figure 34: Total early stage Entrepreneurial Activity in Pakistan Regions based on necessity entrepreneurship, Male

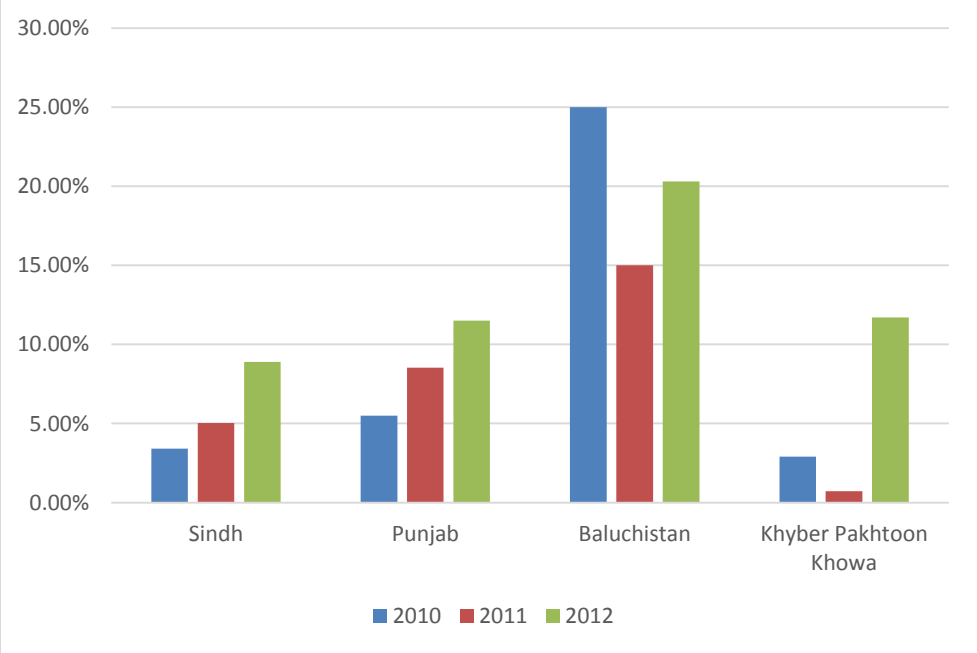
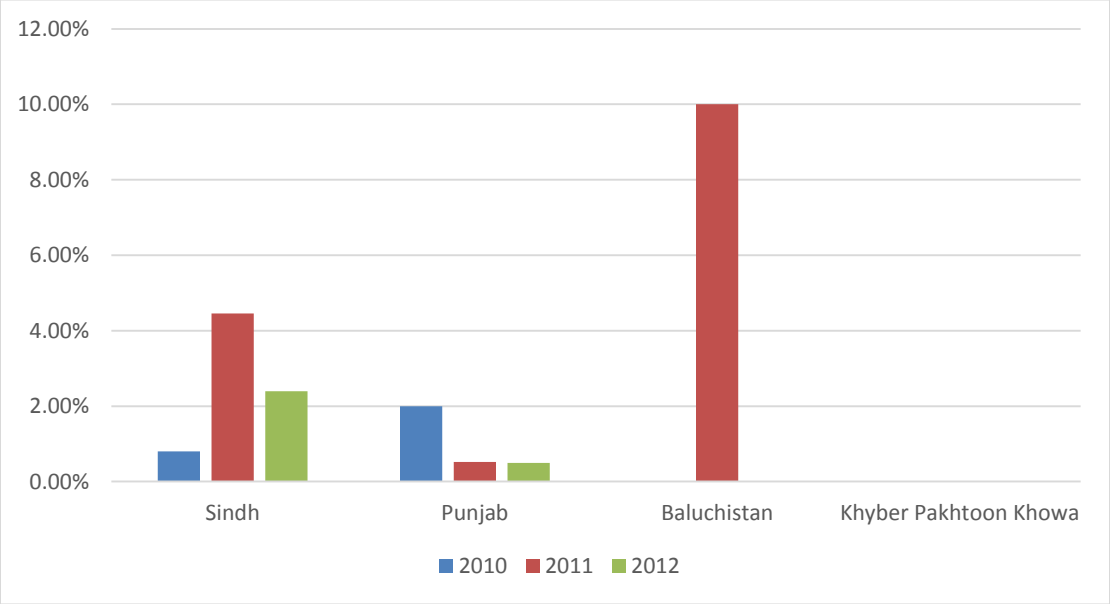


Figure 35: Total early stage Entrepreneurial Activity in Pakistan Regions based on necessity entrepreneurship, Female



Appendix 3: GEM Pakistan 2012 Sampling and Weighting Methodology

Population

	Male					Female					
2012	18-24	25-34	35-44	45-54	55-64	18-24	25-34	35-44	45-54	55-64	Total
Pakistan Urban	3345676	3482633	2388961	1590506	935163	2995832	2903214	2017348	1349833	772798	21781964
Pakistan Rural	5749262	5628159	3795752	2970230	1988339	5991340	5546795	3710033	2800919	1718062	39898891
Total	9094938	9110792	6184713	4560736	2923502	8987172	8450009	5727381	4150752	2490860	61680855

Population%

	Male					Female					
2012	18-24	25-34	35-44	45-54	55-64	18-24	25-34	35-44	45-54	55-64	Total
Pakistan Urban	5.42%	5.65%	3.87%	2.58%	1.52%	4.86%	4.71%	3.27%	2.19%	1.25%	35.31%
Pakistan Rural	9.32%	9.12%	6.15%	4.82%	3.22%	9.71%	8.99%	6.01%	4.54%	2.79%	64.69%
Total	14.75%	14.77%	10.03%	7.39%	4.74%	14.57%	13.70%	9.29%	6.73%	4.04%	100.00%

Sample count

	Male					Female					
2012	18-24	25-34	35-44	45-54	55-64	18-24	25-34	35-44	45-54	55-64	Total
Urban	132	150	109	72	55	135	141	116	68	36	1014
Rural	142	135	91	74	49	153	145	88	68	41	986
Total	274	285	200	146	104	288	286	204	136	77	2000

Sample %

	Male					Female					
2012	18-24	25-34	35-44	45-54	55-64	18-24	25-34	35-44	45-54	55-64	Total
Urban	7%	8%	5%	4%	3%	7%	7%	6%	3%	2%	51%
Rural	7%	7%	5%	4%	2%	8%	7%	4%	3%	2%	49%
Total	14%	14%	10%	7%	5%	14%	14%	10%	7%	4%	100%

Weight Factors

	Male					Female					
2012	18-24	25-34	35-44	45-54	55-64	18-24	25-34	35-44	45-54	55-64	Total
Urban	0.82	0.75	0.71	0.72	0.55	0.72	0.67	0.56	0.64	0.70	0.70
Rural	1.31	1.35	1.35	1.30	1.32	1.27	1.24	1.37	1.34	1.36	1.31
Total	1.08	1.04	1.00	1.01	0.91	1.01	0.96	0.91	0.99	1.05	1.00

Weighted Sample

	Male					Female					
2012	18-24	25-34	35-44	45-54	55-64	18-24	25-34	35-44	45-54	55-64	Total
Urban	108	113	77	52	30	97	94	65	44	25	706
Rural	186	182	123	96	64	194	180	120	91	56	1294
Total	295	295	201	148	95	291	274	186	135	81	2000

Appendix 4:

AMAN Center for Entrepreneurial Development (AMAN-CED):

Introduction: The Centre for Entrepreneurial Development at IBA has been recently created to promote entrepreneurship in the country. The objective of CED is to create wealth and value for Pakistan by promoting entrepreneurship and helping entrepreneurs to build successful businesses by helping them to develop the required entrepreneurial talent and skills and to network with the right business leaders, mentors and investors. IBA CED has partnered with Babson Business School, US for faculty development and exchange.

The CED at IBA aims to become a regional center of excellence to promote entrepreneurship and foster a new culture of enterprise in Pakistan. The mission of CED is to be a leader in training, nurturing, advocacy and research on entrepreneurship that advances the creation, growth and success of new, innovative enterprises in Pakistan. The emphasis will be to enable new generations of Pakistani entrepreneurs to translate their ideas into new business ventures. The CED will be creating new companies that add substantial jobs, incomes and revenues to the Pakistani economy. A new program, BBA in entrepreneurship has been initiated with the aim of producing entrepreneurs and managers with an entrepreneurial mindset.

The various functional areas of CED are as follows:

Education and Training

The Education and Training component is focused on promotional seminars as well as efforts to popularize entrepreneurship and reduce societal biases to promote entrepreneurship as a career option. It will help build linkages and networks with stakeholders in the enterprise ecosystem. Short duration workshops and training programs are being conducted in addition to a full time BBA in Entrepreneurship Program which started in 2011, for example a 6-month diploma in entrepreneurship. An M.Sc. in Entrepreneurship and Family Business is also on the plan and will be offered in the coming months.

Research

The Research component is focused on developing case studies on Pakistani entrepreneurs and investigating various challenges faced by them simultaneously studying key success factors among the successful ventures. Various areas identified for research are as follow:

* Key success factors for Pakistani new businesses
* Family business: Issues and opportunities
* Agriculture business opportunities in Pakistan
* Technology Entrepreneurship
* Women entrepreneurship
* Social Entrepreneurship

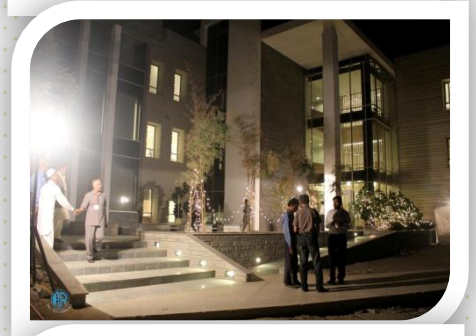
Entrepreneurship Advisory Services

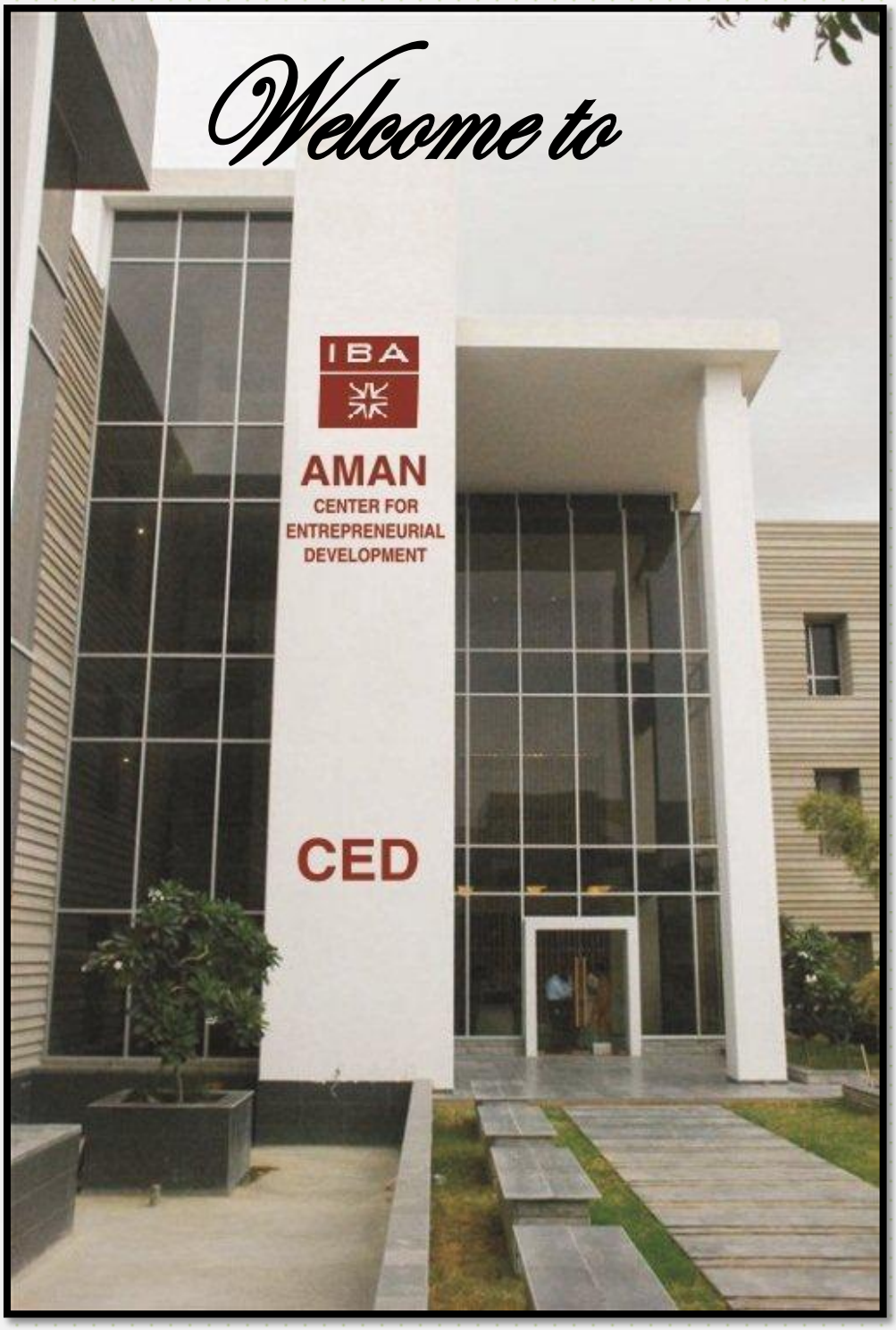
This component is focused on helping with business idea generation, support for commercializing the ideas forming a company, obtaining intellectual property rights (IPR), and facilitating advisory services such as access to finance. CED provides these services with the help of existing service providers like the Small and Medium Enterprise Development Authority (SMEDA), SME banks and other investors. CED has also established a business incubator to support the young entrepreneurs.

The student entrepreneurs also work as individuals and teams to help local businesses to solve their problems. This involves their engagement on as needed basis in areas like market analysis, assessment of commercial potential for new technologies, new product launches and feasibility studies. CED has also initiated nationwide student entrepreneurship promotion activities like INVENT (business plan activity), startup weekend with the help of Kauffman foundation, SPARK, Entrepreneurs Club, Guest speaker series and Women Entrepreneurs Club etc.

Women entrepreneurship is also an important area for the CED due to the low level of women entrepreneurship in Pakistan. Women focused programs and CED activities on women's entrepreneurship are also being conducted.

In addition to this CED IBA has partnered with universities from all over Pakistan to make a consortium of universities to work together to promote entrepreneurship in Pakistan. The partner universities are NED University of Engineering and Technology, KHI, Indus Valley School of Arts, IBA Sukkur, GIFT University, Gujranwala, BUITMS, Baluchistan University of Information Technology and Management Sciences, NUST, Islamabad and UET Peshawar.





Aman Center for Entrepreneurial Development at IBA, Karachi

REFERENCES AND FOOTNOTES

www.gemconsortium.org

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[1] This section is excerpted from the GEM 2012 Global Report by Siri Roland Xavier et al, available at www.gemconsortium.org

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[3]The World Bank.*Doing Business 2011*. Washington, D.C.: The International Bank for Reconstruction and Development/The World Bank, 2011.

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[5]Gries, T. and W. Naude. (2011). "Entrepreneurship and Structural Economic Transformation," In *Small Business Economics*, 34(1): 13–29.

[6]Ibid

[7]Entrepreneurship is the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risks, and receiving the resulting rewards of monetary and personal satisfaction and independence, see Hisrich et al (2013) Entrepreneurship" 9th Ed., McGraw-Hill /Irwin, NY.

[8] A 2007 World Bank Group entrepreneurship survey that measured entrepreneurial activity in 84 developing and industrial countries over the period 2003-2005 showed Pakistan's new registrations of companies as a percentage of total lagged(previous year) registered businesses, was 7 % vs. 10.2 % over the same period in industrialized countries. The absolute entry rate per thousand working age adults was a dismal 0.04, which is 1/4th of India (0.12) and Egypt (0.13) according to the 2008 data. See, http://www.ifc.org/ifcext/sme.nsf/Content/Resources

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[20] The data includes only those respondents who are not entrepreneurially active; they are neither already nascent entrepreneurs nor business owner / managers. It is intended to avoid pro-entrepreneurship biases of those who are already involved in some type of entrepreneurial activity.

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