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## CITY COMPETITIVENESS

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### Abstract

By the year 2025 over half of the global growth will be contributed by 577 “middle weight” cities in the top 600 and the vast majority of them will be in emerging economies, and two-thirds from Chinese and Indian cities. Accordingly, “Urbanization and economic growth are strongly associated, hence, urban areas, in general, and cities, in particular, have been identified as the “Engine of Growth”, and “Agent of Change” (Mohan and Das Gupta, 2005). Cities evolve multiplicity of opportunities that allow individuals and communities to come together and exercise multifarious activities. The concept of “creative-cities” is rapidly attracting the interest of academicians and policy makers. By 2020, over 60 percent of the China’s population will be

living in cities. It is estimated, that, by 2050, about 67 percent of the world's population will be city dwellers (6.3 billion people). This would be 8.3 billion people by the early 22nd century. Cities produce over 80 percent of the world's GDP and, 60 percent of the world's GDP is being generated by top 600 cities with 25 percent of the world's population. Such high economic density reflects the vital role of cities as the main source of productivity. There has been no systematic research exists in the country to identify the relative importance of the "Key drivers of city competitiveness. Present endeavor, for the first in Pakistan, an exploration in this direction.

**Keywords:** City Competitiveness, Growth, Urbanization.

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### **Drivers of City Competitiveness in Pakistan**

*"We welcome the economic role of cities and towns in our globalizing world and the progress made in forging public-private partnership and strengthening small enterprises and microenterprises. Cities and towns hold the potential to maximize the benefits and to offset the negative consequences of globalization. Well-managed cities can provide an economic environment capable of generating employment opportunities, as well as diversity of goods and services". United Nations Declaration on Cities and Other Human Settlements in the New Millennium, 2001.*

Cities remain the centre of all great civilization and empires. In all times, throughout the human history the most important, creative and dominating city remains part of any great empire. Since millennia people have been moving to cities from countryside. In contemporaneous world, urbanization is expanding unprecedentedly. First time in history, cities are home of about 50 percent of the world's total population. By 2020, over 60 percent of the China's population will be living in cities. It is estimated, that, by 2050, about 67 percent of the world's population will be city dwellers (6.3 billion people). This would be 8.3 billion people by the early 22nd century. Cities produce over 80 percent of the world's GDP and, 60 percent of the world's GDP is being generated by top 600 cities with 25 percent of the world's population. Such high economic density reflects the vital role of cities as the main source of productivity.

Furthermore, such rapid urbanization will be exclusively a developing world phenomenon: about 94 percent of those moving from countryside in next few decades will be from developing world. In 2007, top 600 cities contained 220 from developing countries, and, it is estimated that the number will be doubled to 443 in 2025. These cities will be contributing about half of the global GDP growth and 18 percent of global GDP (McKinsey Global Institute, 2013). For the foreseeable future, all new mega-cities with population of 10 million and above will be located in emerging economies. By the year 2025 over half of the global growth will be contributed by 577 "middle weight" cities in the top 600 and the vast majority of them will be in emerging

economies, and two-thirds from Chinese and Indian cities. Accordingly, “Urbanization and economic growth are strongly associated, hence, urban areas, in general, and cities, in particular, have been identified as the “Engine of Growth”, and “Agent of Change” (Mohan and Das Gupta, 2005). Cities evolve multiplicity of opportunities that allow individuals and communities to come together and exercise multifarious activities. The concept of “creative-cities” is rapidly attracting the interest of academician and policy makers. The issue is how to bring together and manage efficiently the creative industries and cultural diversity of a city to harness the so-far unexploited potential of productivity of urban population so that it could contribute significantly to the national economy. Cities must be competitive in their ability to attract business, if their role as “Engine of growth” is to be realized. That is, cities must generate an environment to be conducive for all business-public private.

### **Why City Competitiveness?**

With more people now living in urban areas than in rural and with the breakneck pace of urbanization for the first time in human history. About two-thirds of the world’s population is likely to be residing in cities by 2025. Therefore, it would not be surprising to say that the future will be won or lost in the world’s cities. Thus, success or failure of every development policy will be based on the “density of cities”. There is renewed interest in the economic roles of “Cities” and “Comparison between Cities Performance”. Cities have enormous potential for improving people’s lives, with urban areas offering better access to health, education, basic infrastructure, information, knowledge and opportunity. Cities accelerate economic growth/development of a nation in variety of ways. Proximity and relatively high density-population and economic activity – create large markets for goods and services. Social capital formation development is the outcome of large markets, which enhance entrepreneurship, high level interactivity and, nurture innovations. Consequently, specialization spurs and efficiencies enhanced. Now relatively higher per capita income of urban is being considered as an outcome of higher city productivity rather than a failure of national distribution policies. Hence, city’s competitiveness becomes an important aspect of macroeconomic policy and goal of national economic development. Thus wealth and poverty of nations, regions and the world, significantly being based on the competitiveness of cities. Therefore, any empirical investigation pertaining to the strength and significance of drivers of city competitiveness must be one of the important enquiries for national government development policy. Thus it would be more beneficial if focus on all development policy discourse on cities rather than regions and countries to understand the dynamics of urban agglomerations.

Despite relatively rapidly growing population Pakistan is among those countries that have a young population – a potential demographic dividend. To take-out benefits from these Pakistan needs productive and efficient cities. Since, it is the ability of thriving cities in Pakistan they could generate about two-thirds of new jobs and produce 70 percent of the nations GDP. Further,

cities in Pakistan could increase two-fold per capita income (MGI, 2005), Thus, Pakistani cities will be a powerful magnet of growth and employment for the nation. Though the pace of urbanization in Pakistan not fast as per international standard, but still would add more than double of its current rate of urbanization in nearly two-decades. Urbanization in Pakistan will spread out almost in every region, and for the first time in Pakistan's history, the province of (Sindh) will have experience more of its population living in urban areas than in villages in 2035. Consequently, with expanding cities, Pakistan's economic make-up will also be changing. In 2000, Pakistan's GDP split almost evenly between its rural and urban economies. At present, urban GDP accounted for 53 percent of overall GDP. By 2035, MGI estimates that urban areas will generate nearly 60 percent of Pakistan's GDP. At present over 60 percent of total tax revenue is being generated by urban economy in Pakistan and such trend will continue to grow.

### **Objective of the Study:**

Pakistan is a country with diversified culture and society, geography, cuisine, and environment/climate. The city investment climate varies significantly in Pakistan. In this section the objective is to address the variation in the city investment competitiveness within Pakistan. In particular, the data of 13 cities is used to analysis the city competitiveness. Variation across the Pakistan's city is quite extensive, with coastal belt area and eastern generally having developed more rapidly and create more attraction for capitalist and producers than the Western and mid-areas. There are several different factors that contribute, for example, distinction in natural endowments, skills of the workers, access to ports, and the quantity and quality of infrastructure. The specific nature of how the Pakistan economic structure has been composed, systematize and policy making is organized. The modification in tax arrangements, initial endowments, city discretion in policy making, and also a several further aspects have all led to strong city modifications in city competitiveness.

### **Methodology**

The new economic development paradigm has shifted the policy emphasis from spatial targeted fiscal incentives for employment creation and business development to an increased awareness towards agglomeration economies, clustering and knowledge spillovers. Indeed, as contended by the new economic geography, "Countries do not compete against each other in any real sense, rather companies and cities do" (Krugman, 1991a, 1991b, Fujita, Krugman and Venable, 1999). Hence, knowledge and agglomeration economies have the key role in driving development outcomes. The relevant empirics and literature emphasized that competitive advantages result from the capacity of cities, as a platform for a global strategy, a place where the activities of most companies take place. Therefore, knowledge about the conditions/drivers that make a city competitive is very much essential for economic development planners to make them understandable about the relative importance of each driver for city productivity/efficiency. Such analytical framework would provide foundations to the sustainability of growth momentum in an

economy at national level. Economic development planners must therefore identify the activities that will give their city an advantageous niche, no matter how small in the future. There has been no systematic research exists in the country to identify the relative importance of the “Key drivers of city competitiveness. Present endeavor, for the first in Pakistan, an exploration in this direction.

### **Drivers of City Competitiveness**

#### City Competitiveness – International Assessments of the Key Drivers

The OECD’s 2006 study “Competitive Cities in the Global Economy” ranks productivity as the primary factor in determining urban performance. It found that labor productivity explains the most variation in GDP per capita between the 78 cities examined. A high quality stock of human and physical capital endowments are noted as boosting city productivity levels. To a lesser degree, the structure of the labor market impacts on GDP per capita in cities<sup>1</sup>.

The “State of European Cities” report summarizes the drivers of urban competitiveness under four broad headings; talent, innovation, connectivity and entrepreneurship. The European Commission argues that the particular combination of these elements determine a city’s industrial structure and productivity and from this grows employment and income, profits and investment and taxes. A competitive city also flourishes when social inclusion, citizen welfare and sustainability have been established<sup>2</sup>.

Parkinson<sup>3</sup> (Competitive European Cities: Where does the Core Cities Stand?) has assessed the competitiveness of a range of UK cities. He lists the existence of innovation in firms and organizations, a skilled workforce, internal and external connectivity, economic diversity and strategic decision-making capacity as ‘critical’ drivers, while social cohesion is noted as an important driver. Soft location factors such as a distinctive city centre, cultural facilities and quality housing are listed as other drivers.

Begg<sup>4</sup>, in “Cities and Competitiveness,” categorizes the four determining factors of city competitiveness as the structure of economic activity, company characteristics, innovation and learning and the business environment<sup>5</sup>. He also argues that social and environmental factors, for example the city’s crime rate, the quality of residential accommodation and the availability of civic amenities play a significant part in persuading investors and senior managers to select a city to invest in. The level of social cohesion also affects the attractiveness of a city to outside investment.

<sup>1</sup>OECD, “Competitive Cities in the Global Economy”, Territorial Review, 2006.

<sup>2</sup>European Commission, “State of European Cities”, 2007

<sup>3</sup>Parkinson M et al, “ Competitive European Cities: where do the core Cities stand?” 2004.

<sup>4</sup>Begg I., “Cities and Competitiveness”, 1999.

**Empirical Results:**

A progression of measures on the distinctive aspects of city competitiveness is employed for present study, rather than a one-dimensional indicator of “integrity of city competitiveness.

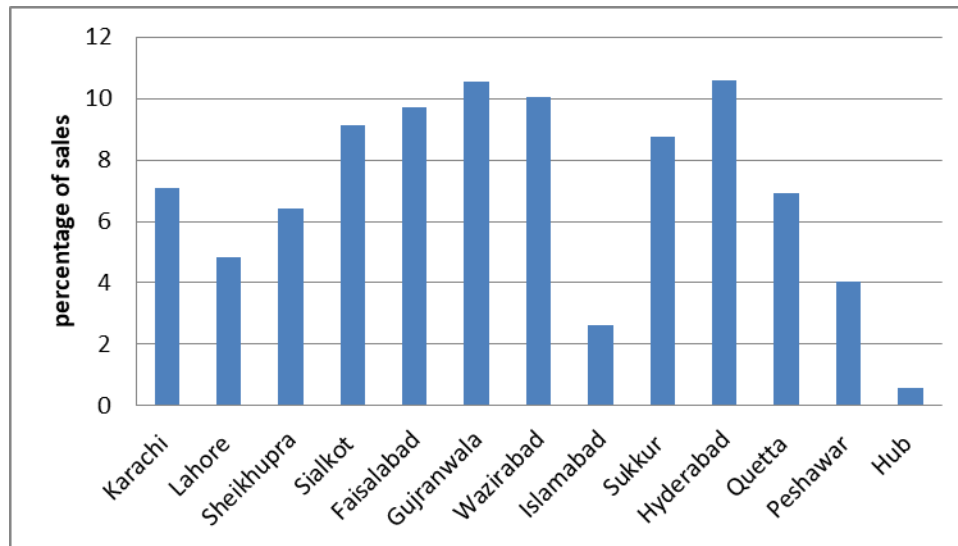
This dynamic approach highlights the complexity of the nature of how city competitiveness influences firms, additionally accentuates that a city can exceed expectations in a few regions & areas, while lagging in others. To facilitate discussion, the expansive cluster of indicators is assembled into 17 categories. The choice of the indicators introduced here is based on empirical analysis of the most critical determinants of cities performance and from the findings of different analysts in the literature. However, analysis is limited to those measures that were the most significant major determinants of cities performance. In present study of city a larger catalog of indicators are classified into the following accompanying categories:

City Competitiveness Indicators	
❖ Infrastructure	❖ Domestic Entry and Exit Barriers
❖ Skills and Technology Endowment	❖ Labor Market Flexibility
❖ Government effectiveness	❖ Finance
❖ Regulation’s Burden	❖ Crime
❖ Innovation and Technology	❖ Paying Taxes And Trading Across Borders
❖ Value Added per Sales (profitability)	❖ Unit Labor Cost
❖ Labor Productivity	❖ Capital Productivity
❖ Investment Rate	

**Infrastructure**

Accessibility to the developed infrastructure is a significant factor to enhance manufacturing firm’s productivity and subsequently the efficiency of city performance where firms are located (World Bank 1994). Therefore, simply the quantity and quality of infrastructure constitute a significant component of the city investment climate: new companies and firms will decide to locate in the areas with developed infrastructure, is available. Since, availability of required level of power is the major component of infrastructure. Present analysis activities and firm’s losses in-term of sales value to measure the impact of level of infrastructure on the firm’s productivity.

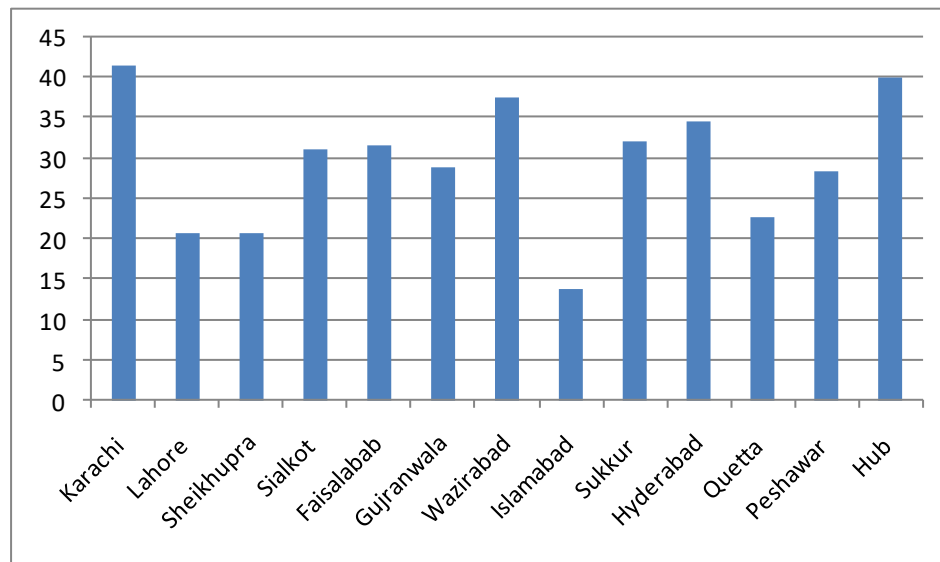
**Figure 1: Share of Loss due to Power Outages (%) 2007**



Source: Authors' illustration (ICS 2007)

According to the results Hub and Islamabad/Rawalpindi are the cities where the share of losses due to power outage is lower while Gujranwala and Hyderabad suffer higher losses as compared to other cities. That is also showing that hub and Islamabad/Rawalpindi one more competitive cities as compared to other cities. High share of losses due to power outage means high cost of doing business; Gujranwala and Hyderabad are less competitive because the cost of doing business is higher in these cities. (figure 1)



**Figure 2: Firms Service (as Poor) 2007**

Source: Authors' illustration (ICS 2007)

To evaluate the quality of physical infrastructure the state of power supply, Telecommunication services, transport, and water supply. World Business Investment Climate Survey (WBICS) explored both the overall quantity in delivering service and the quality of individual services.

The cities where firms indicated highest level service quality are those where firms enjoy relatively better quality and quantity of overall infrastructure service. These are located in Lahore and Islamabad/Rawalpindi (A+), whose percentage of firms ranking service as poor is 13-20 percent. The city with a score of A in ranking service as less poor is Sheikhpura (20.8 percent). The city with a score of A- is Quetta (22.8percent). Two cities have a score of B+: are Gujranwala (28.4 percent) and Peshawar (28.8percent). The firms located in Sialkot and Faisalabad reported relatively higher level as poor services and ranked B. while firms located in Hyderabad and Wazirabad ranked C due to higher level of poor quality infrastructure. Whereas firm located in Karachi and Hub faced the worst quality of infrastructure service (D). The results shows that Lahore and Islamabad/Rawalpindi are more competitive cities and Hub & Karachi are less competitive cities according to percent of firms ranking service as poor.

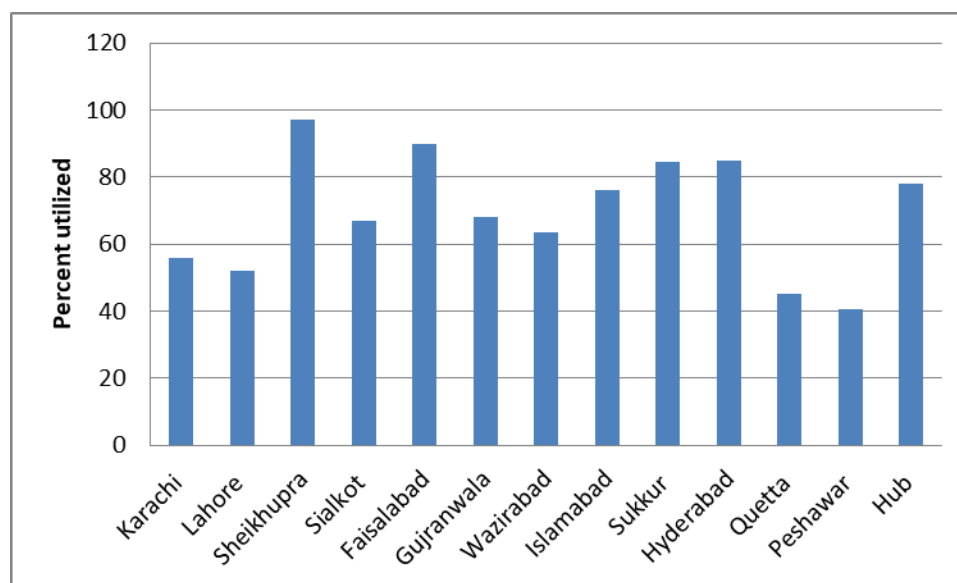
Present analysis demonstrates that Lahore and Islamabad/Rawalpindi are more competitive cities than other cities of Pakistan. Sustainable provision of infrastructure services appeared to be the major factor for the efficient utilization of investment resources at city level in the country.



### Domestic Entry and Exit Barriers

Presence of strong domestic barriers to entry and exist for manufacturing sector have been empirically established in Pakistan. (GoP, 2000). Presences of such barriers significantly restrict investment opportunities in an economy. For present analysis two indicators have been estimated to gauge the presence and intensity of these barriers for the country's manufacturing sector in sample cities of Pakistan. Firstly, share of total sale to other province have been taken as measure for entry barriers by the importing province on the exporting firm located in a particular province. Though this indicator may not be real effective indicator but does reflect an important ingredient of entry barriers being faced by the exporting firms. Due to lack of information in ICS 2007, it could not be estimated. However, information on exit barriers was available in the ICS 2007 and level of unutilized capacity is taken as a measure of exit barriers. Share of unutilized capacity at one location indicate the intensity of the exit barriers, because, firm with low level of capacity utilization remained at same location might be facing higher level of transaction cost to move to other location.

**Figure 3: Share of Utilized Capacity**



Source: Author's illustration based on (ICS 2007)

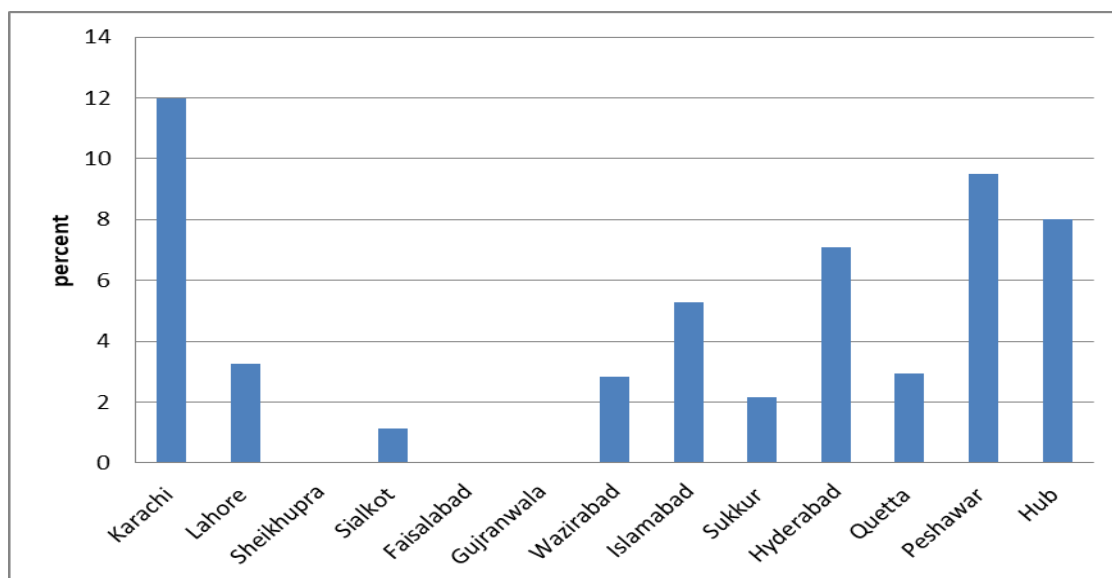
Two cities with the highest Level of utilization of facilities (“A+”) are Faisalabad (98.8 percent) and Sheikhupura (97 percent); followed by Hyderabad at 84.7 percent (“A”); “A-“ is justifiably given to Sukkur (84.6 percent), (“B+”) encompass with a Level of utilization of facilities is

Islamabad/Rawalpindi (76 percent). “B” cover city with a Level of utilization of facilities 68 percent, including Gujranwala. The city with a score of (“B-”) in level of utilization of facilities is Sialkot 66.8percent. Wazirabad (63 percent) has a score of C+: C is justifiably given to Karachi (55.8 percent), The C- city is Lahore. The D score is earned by Peshawar and Quetta.

### 1.1.Skills and Technological Endowment

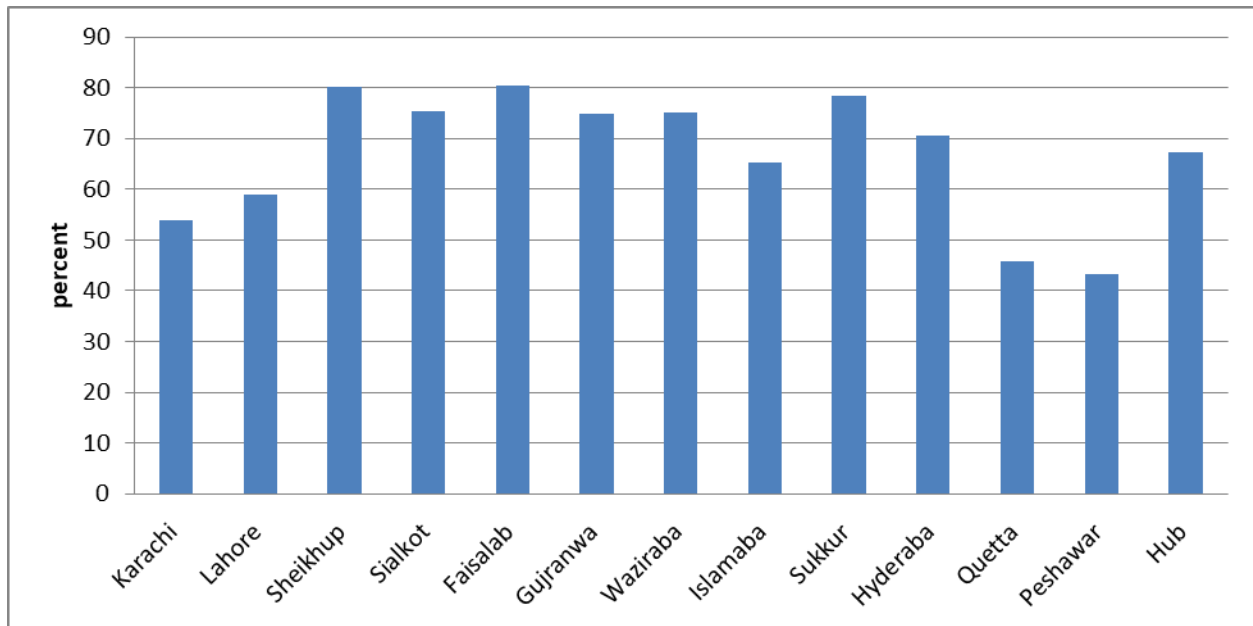
Appropriate availability of qualified skilled workers and relatively easy access to advanced technology at a one particular location is considered as “pull factor” for higher level investment, and significantly affecting the competitiveness of firms. Though skill and technology are considered as firms’ choices, but abundance of these variables at one location could significantly increase the efficiency of the respective firms, thus affecting cost of investment and the level of city’s competitiveness, at that location. With the given information obtained from ICS 2007 survey three indicators reflecting the level of skill and technology were constructed for present analysis; (a) share of worker with “formal” training (b) share of “technical” worker in a firm’s total employment, and (c) share of “skilled” workers in total employed workers. Finally, with the interaction of all these measures, a “skilled technology” score was estimated, a weighted average of all indicators. It has been an established phenomenon that formal education, high skills and technology form a conducive environment for higher productivity resulting in higher level of city competitiveness.

**Figure 4: Share of Trained Workers**



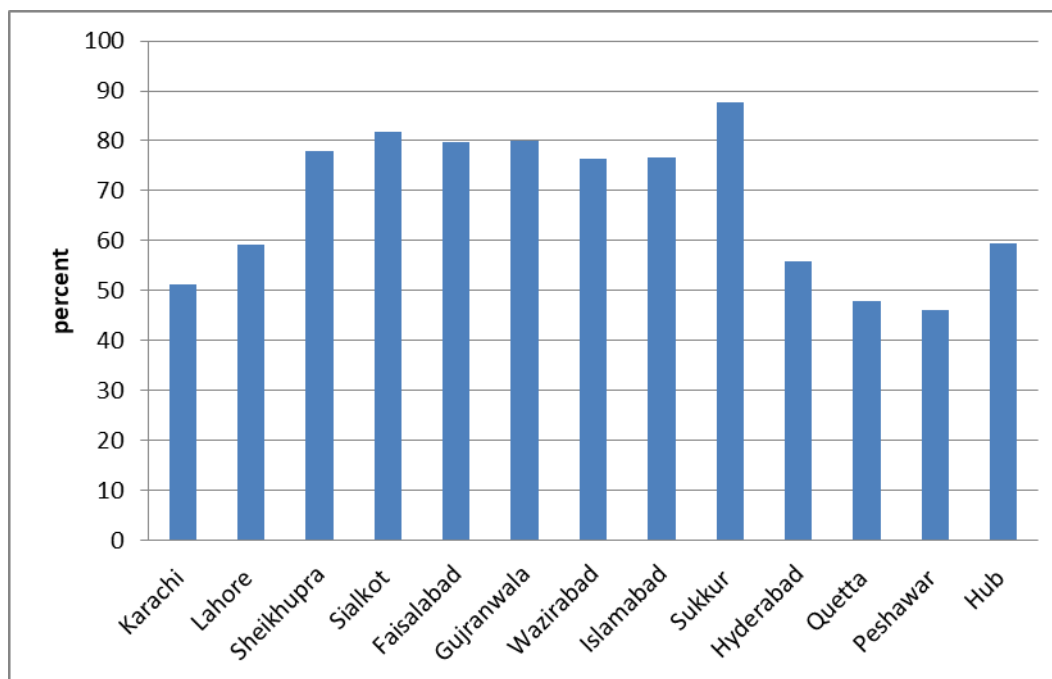
Source: Authors’ illustration (ICS 2007)

**Figure 5: Share of Technical Workers**

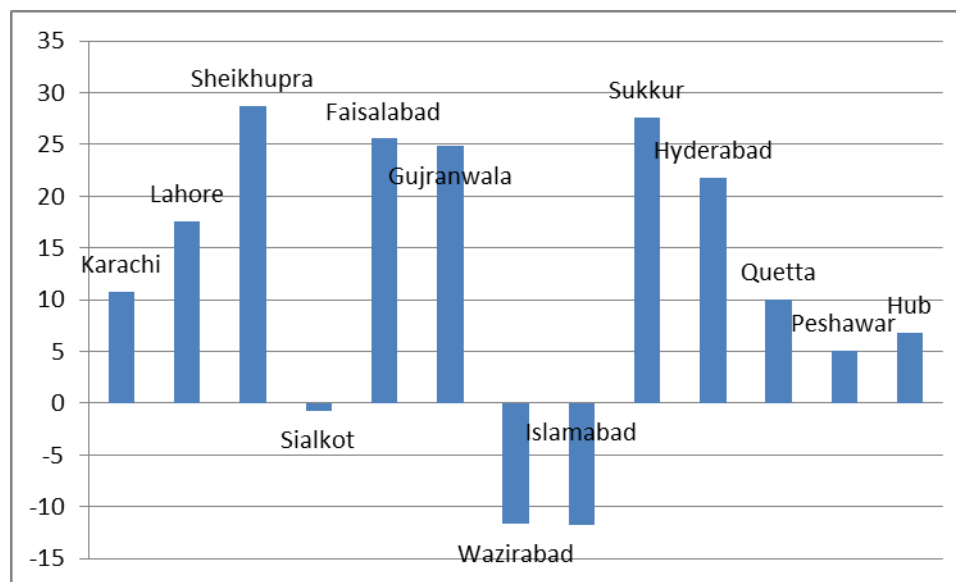


Source: Authors' illustration (ICS 2007)

**Figure 6: Share of Skilled Workers**



Source: Author's illustration based on (ICS 2007)

**Figure 7: The Skill-Tech score**

Source: Author's illustration based on (ICS 2007)

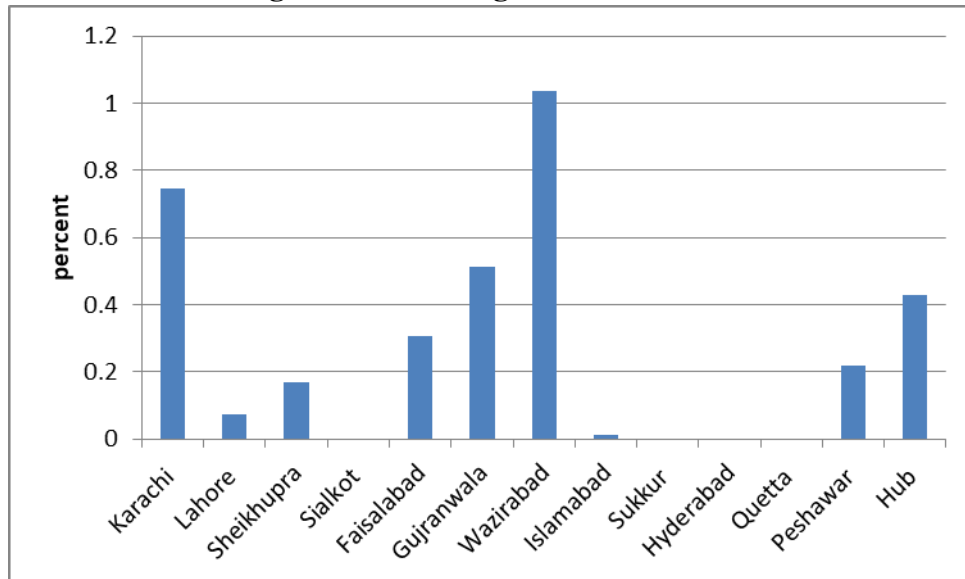
The cities with a score of A+ in Skill-Tech Score (STS) are Sheikhupura and Sukkur, with scores of 28.7 and 27.5, respectively. The cities with a score of A in STS are Faisalabad Gujranwala; their scores are from 25.5 to 24.8. The city with a score of A- is Hyderabad. The score for the A-class 21.8. The B+ city is Lahore. The cities with a score of B are Karachi and Quetta scoring from -10.8 to 10. The cities with a score of B- are Hub and Peshawar.

### Labor Market Flexibility

An efficient and developed market for labor in an economy is pre-requisite for investment competitiveness of firms located at one location. Efficiency of labor market is being characterized by its flexibility in terms of low exit barriers for labors for job searching for relatively better paid job elsewhere. For the case of entrepreneurs it entails lowest level of transaction cost to lay-off the redundant workers and/or hiring optimal amount of required labors, without delay. In other words, with minimal level of pecuniary and non-pecuniary governments e.g. regulations on hiring and firing of labor by the entrepreneurs. With the provided existing information of ICS 2007 survey two measures indicating labor market flexibility can be constructed; (a) share of non-permanent employee in total employed workers and (b) share of redundant workers (level of overstaffing) with no associated cost of laying off the worker. Consequently, both high share of non-permanent labors and low share of redundant worker are considered to be the important ingredient of labor market flexibility. Results presented in figure 8 and figure 9 reveal a relatively more flexible labor markets in Wazirabad, Gujranwala, and Karachi compared to remaining ten sampled cities. Consequently labor cost is

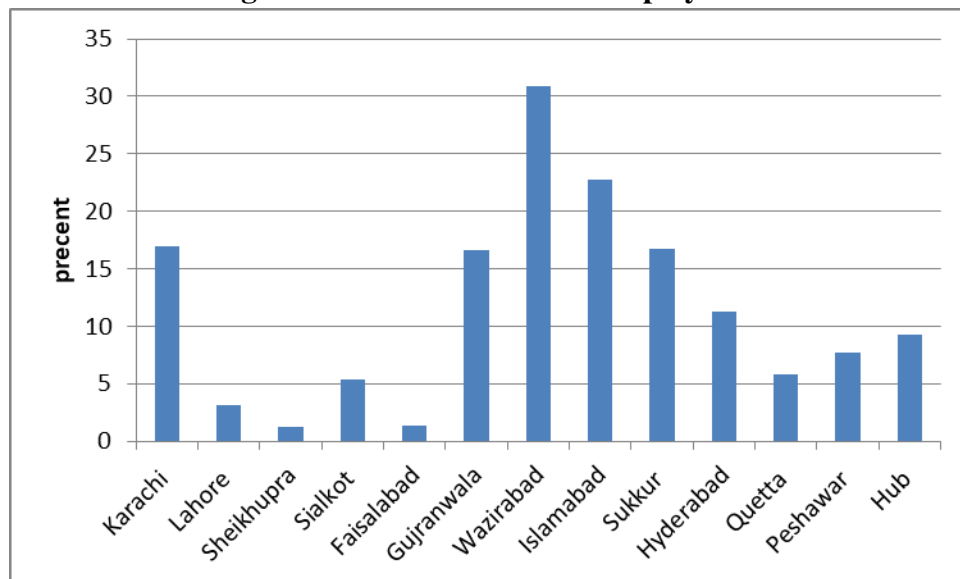
much lower for the firms located in the indicated cities than their counter part in the remaining cities.

**Figure 8: Percentage of Fired Labor**



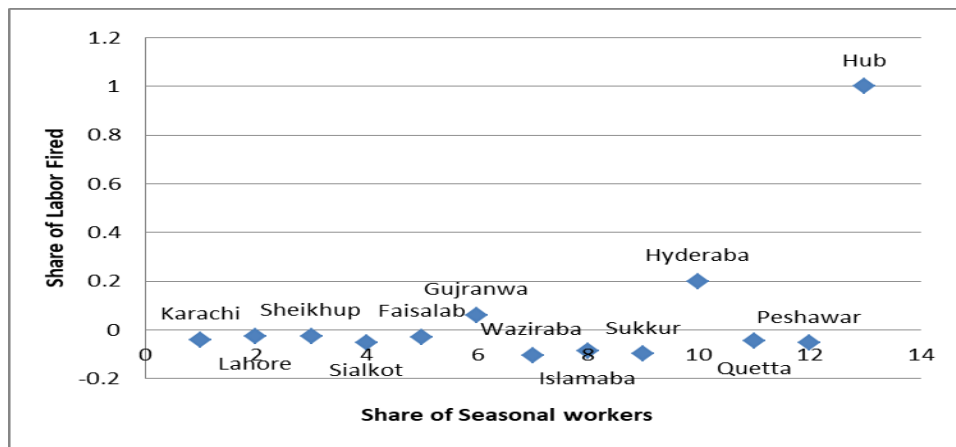
Source: Author's illustration based on (ICS 2007)

**Figure 9: Share of Seasonal Employment**



Source: Author's illustration based on (ICS 2007)

**Figure 10: Correlation between Share of Labor Fired & Share of Seasonal Workers**

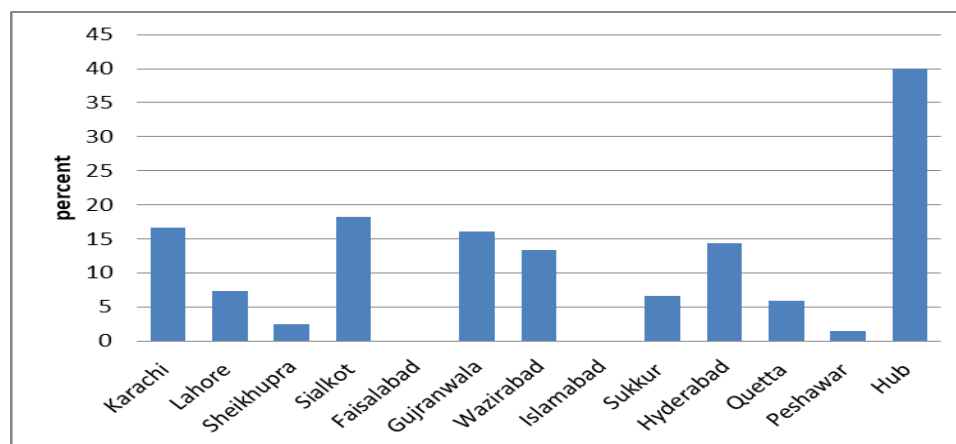


Source: Author’s illustration based on (ICS 2007)

Figure 10 giving the correlation between the share of labor fired and the share of seasonal workers is plotted. The important aspect to observe is that the two aspects of labor market flexibility (share of labor fired and the share of seasonal workers) is closely related. The estimation shows a negative and close relationship between the two. Ten cities out of thirteen are negatively and closely correlated with labor market flexibility are Wazirabad (-0.10), sukkur (-0.09), Islamabad/Rawalpindi (-0.08), Peshawar (-0.053), Sialkot (-0.052), Quetta (-0.044), Karachi (-0.041), Faisalabad (-0.029), Lahore (-0.026), Sheikhupura (-0.025). Only three cities are estimated to be positive correlated Gujranwala (0.06), Hyderabad (.199) and Hub (1).

**Government Effectiveness**

**Figure 11: Informal Payments**



Source: Author’s illustration based on (ICS 2007)

Cost of doing business (CODB), including cost of capital, is the most powerful variable affecting city competitiveness, particularly for the manufacturing sector of an economy. One of the most

important indicators which change the level of COBD might be the level of “informal payment” to both government and non-government entities. In the case of Pakistan it become a common feature in most of the country’s manufacturing areas. ICS survey 2007 provides information on these payments being made by the enterprises included in the sample, to locate across the sampled cities. Enterprises located in Karachi and Wazirabad are more prone to such payments, in-terms of sales value, following by Peshawar, Islamabad/ Rawalpindi and firms located in central west Punjab.

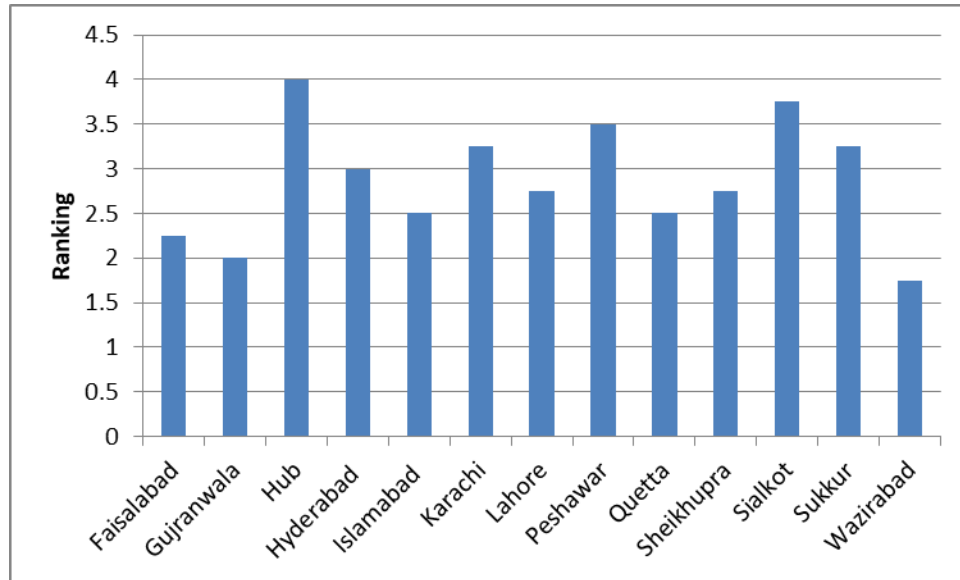
The assessment of information reveal firms spent as little as 0.00014 percent to 0.0017 percent of its sales in informal payments (to government officials). The A city is Sukkur, paying 0.064 percent of their sales. The A- city is Sheikhpura. Firms in that city paid 0.11 percent of their sales. The B+ cities are Quetta and Faisalabad; their Payments ranged from 0.16percent to 0.17 percent. The B city is Lahore. Firms in this city paid 0.18 percent. The B- city is Hub, paying 0.2 percent. The worse city in our sample is Gujranwala, paying 0.22percent, and earns a score of C+ The city with a score of C in informal payments is Peshawar, paying 0.3, respectively. The C- city is Karachi, paying 0.7 percent of their sales. The D cities are Islamabad/Rawalpindi and Wazirabad. Firms in these cities paid between 0.7 percent to 1.2 percent.

### **Finance**

Efficient financial market facilitates savers to earn highest return on their savings while reducing the cost of capital for investor through minimizing the “Transaction” and “Agency” costs. It has been empirically established that developed and efficient financial market is the most important supporting institution to attain higher level city competitiveness, through access to finance at the competitive prices. Such easy access significantly reduces the cost of capital and risk being faced by the entrepreneurs in manufacturing sector. In order to measure the accessibility of required finance with minimum transaction cost availability of financial service index is estimated from the information provided by ICS survey 2007, viz;(a) sampled firms has an account with the bank, (b) amount of the recent loan/ credit from banking sector and (c) share of collateral value in total loan value. Figure 12 shows that Hub is clearly the leader in financial service index. Sialkot is second. Sheikhpura and Lahore are in the middle, while Wazirabad lags behind.



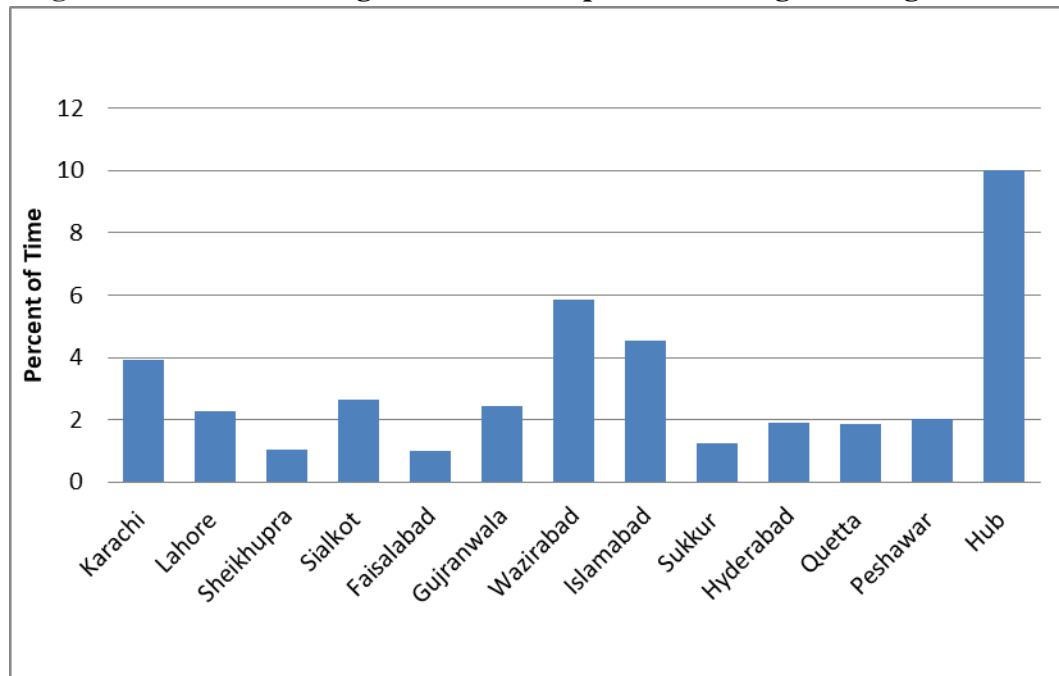
**Figure 12: Financial Services Index**



Source: Author's illustration based on (ICS 2007)

### Regulations' Burden

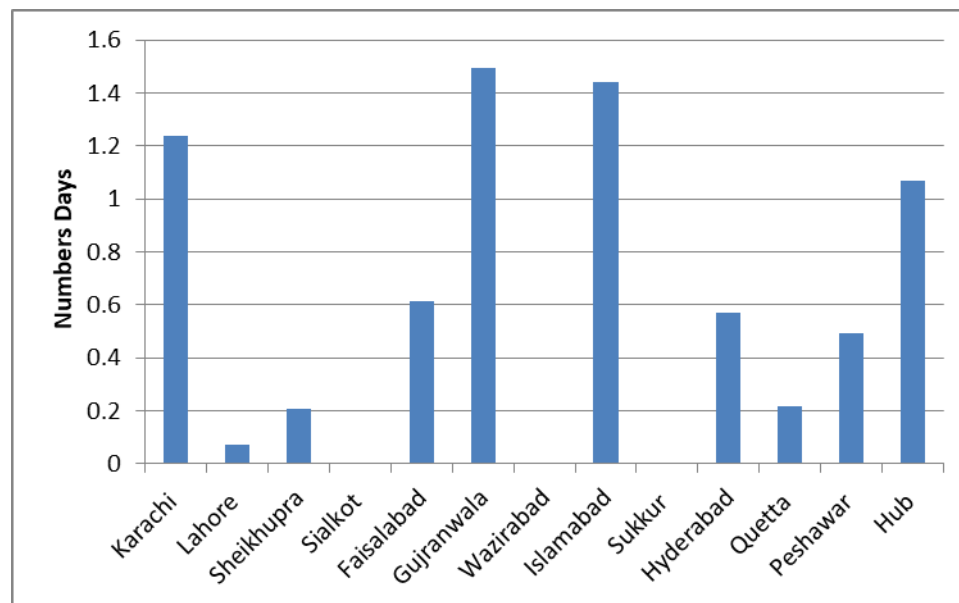
**Figure 13: Senior Management's Time Spent in Dealing with Regulations**



Source: Author's illustration based on (ICS 2007)

Efficient and effective management entails cost effectiveness in-terms of least time spent by the senior management of firm dealing with government regulations. The present ICS survey 2007, provide information on the indicated aspect of business through enquiring average time spent which is being lost by the senior management of firm in dealing with government regulations. High value time cost is the highest in Hub, Wazirabad, Karachi, and Islamabad/ Rawalpindi cities. While such losses are one-fourth of these losses by the firms located in remaining sampled cities of the country. The A+ cities in Senior Management's Time Spent in Dealing with Regulations are Faisalabad and Sheikhpura. The A city include only one city Sukkur. Quetta is given A<sup>-</sup> for time tax imposed by regulations. The B+ cities are two, Hyderabad and Peshawar. The B and B- score cities are Lahore and Gujranwala. The C+, C and C- cities include Sialkot (C+), Karachi (C), and Islamabad/Rawalpindi d (C-). The two cities at D ranking are Wazirabad and Hub (figure 13).

**Figure 14: Business Licensing and Permits Delays Number of Days**



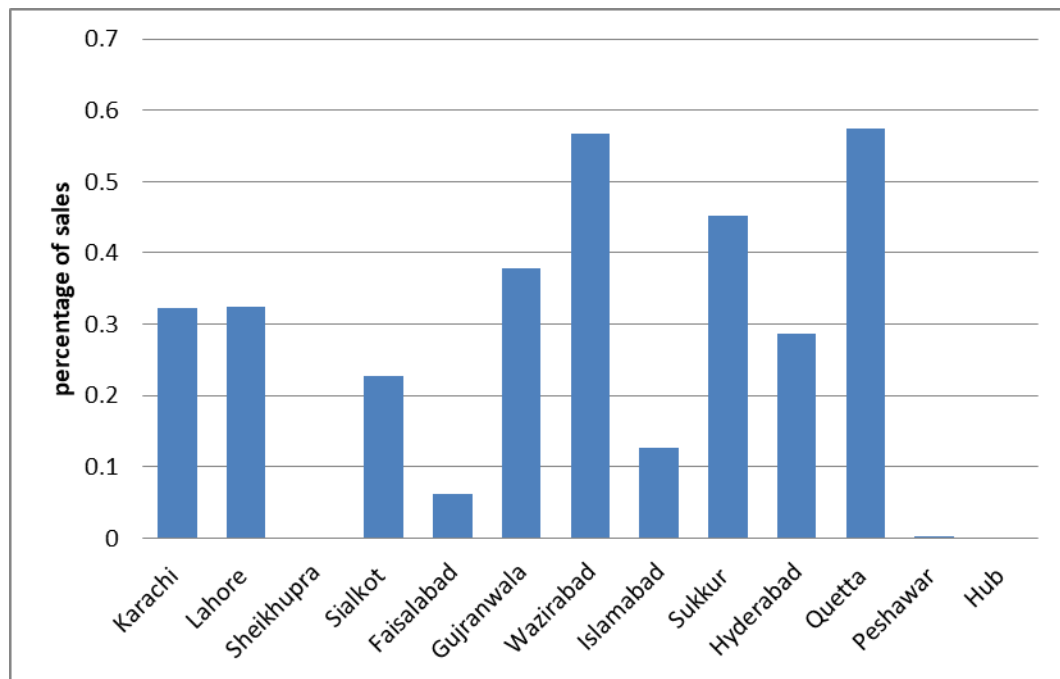
Source: Author's illustration based on (ICS 2007)

The Enterprise Survey also provides qualitative and quantitative measures of taxation, regulations, and business licensing. The second set of indicators focus on the efficiency of business licensing and permit services. The indicators evaluate the delays faced when demanding these services. Gujranwala, Islamabad/Rawalpindi, Karachi and Hub cities are at highest ranking in Business Licensing and Permit Delay Days. Faisalabad, Hyderabad, Peshawar, Quetta, Sheikhpura, and Lahore are mid ranking cities. Wazirabad, Sukkur and Sialkot are at lowest point in Business Licensing and Permit Delay Day (figure 14).

## Crime

Crime imposes costs on firms when they are forced to divert resources from productive uses to cover security costs. Both foreign and domestic investors perceive crime as an indication of social instability, and crime drives up the cost of doing business. Also, commercial disputes between firms and their clients occur regularly in the course of doing business. Resolving these disputes can be challenging when legal institutions are weak or nonexistent.

**Figure 15: Cost of Crime**  
**Sum of Percent of Total Annual Sales for Security & Losses from Theft as Percent of Total Annual Sales**



Source: Author's illustration based on (ICS 2007)

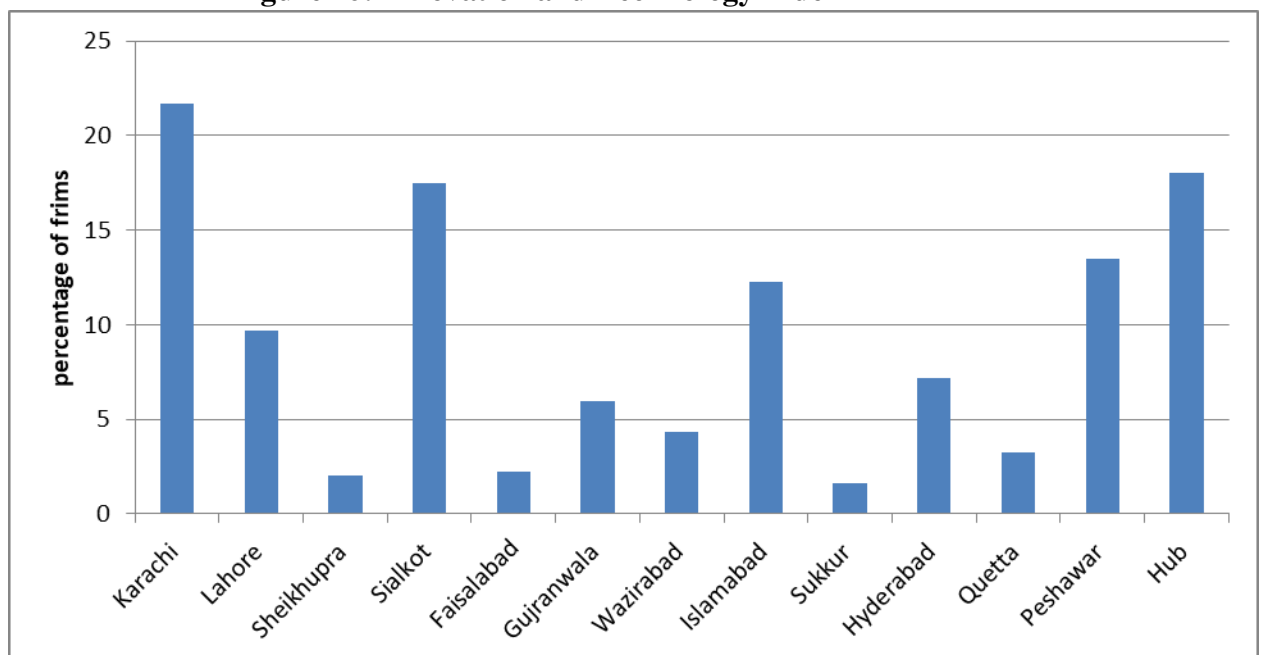
Percent of sale lost to insecurity measures the direct costs incurred by firms as well as their direct losses due to crime. These resources represent an opportunity cost since they could have been invested in productive activities.

Two cities with the lowest total annual sales for security & losses from theft as percent of total annual sales (“A+”) are Hub and Sheikhpura, followed by Peshawar at (“A”). A- is defined losses from theft as percent of total annual sales, it cover only one city Faisalabad. B+ covers cities with losses from theft as percent of total annual sales including Islamabad/ Rawalpindi. B and B- are justifiably given to Hyderabad and Karachi. The C+ city is Lahore. The C score is earned by Gujranwala. The C- city is Sukkur. Finally, the D team consists of Quetta and Wazirabad.

### Innovation and Technology

The Enterprise Surveys provide indicators that describe several dimensions of technology use and innovation. These indicators measure the extent to which firms invest in obtaining recognized certificates of production and accounting practices. Obtaining international quality certifications may support creating more efficient or effective operations and improve employee’s motivation, awareness, and morale. They also provide a sign of high quality that may help reduce waste and increase productivity. Additionally, these indicators demonstrate the use of information and communications technologies (ICT) in business transactions. ICT, such as the Internet, are important tools for all firms because they provide even the smallest of enterprises with the ability to reach national and international markets at lower cost.

**Figure 16: Innovation and Technology Index**



Source: Author’s illustration based on (ICS 2007)

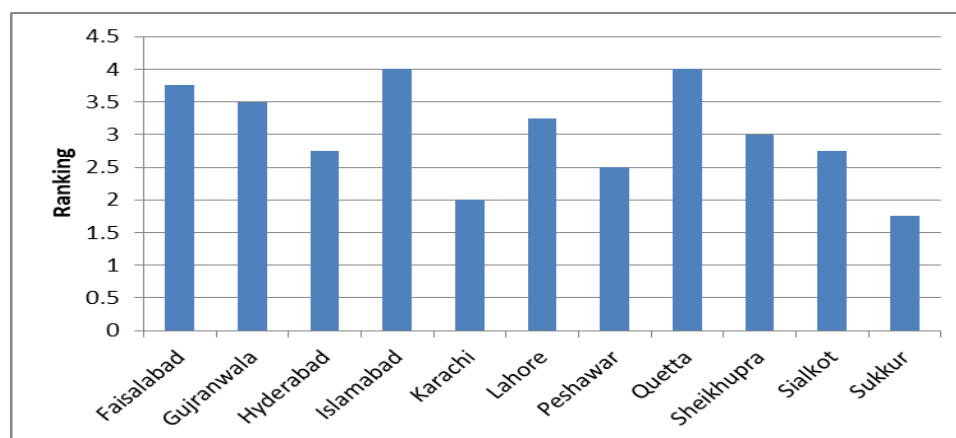
The cities with a score of A+ in innovation and technology index are Karachi and Hub, with scores of 21.7 and 18, respectively. The city with a score of A in innovation and technology index is Sialkot; with the score of 17. The city with a score of A- is Peshawar. The score for the B+ Islamabad/ Rawalpindi and Lahore class ranges from 12 to 9. The B city includes Hyderabad. The city with a score of B- is Gujranwala, scoring 5. The cities with a score of C+, C and C- are Wazirabad, Quetta and Faisalabad. The cities with a score of D in innovation and technology index are Sheikhpura and Sukkur. 2 score in number like 3.

### Paying Taxes and Trading Across Borders

Information on Payers taxes and trading across borders is taken from Business Survey of World Bank. Taxes are the essential source for development expenditure. Without tax collection government would not be able to build roads, hospitals, courts, schools, or other public infrastructure. These facilities help the organization/businesses and society to be more productive, dynamic and better off. Still there are good approach and bad approach to collect taxes at different rates. Two economies in Asia region made it easier to pay taxes in 2005-06: namely Pakistan and India. Corporate tax rate lowered from 39 percent to 37 percent in Pakistan. The corporate income tax rate then further declined/decreased to 35percent in the end of December 2006. Pakistani government improved its revenue system more friendly for taxpayer by introducing electronic filing and one-stop shops for taxpayers.

Doing business survey measures the time and cost (excluding duties/tariffs) linked with the importing and exporting a standardized cargo of product by shipment to other countries. The time and cost important to complete each official process for trading (importing and exporting) the products are recorded; though, the time and cost for sea transport are excluded. Complete report required by the trader to import or export the products across the border is likewise recorded.

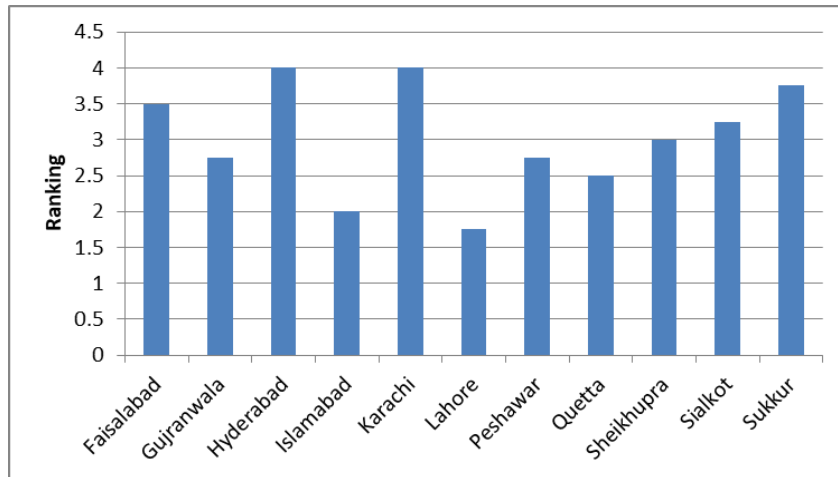
**Figure 17: Paying Taxes**



Source: Doing Business Survey 2007

The cities with a score of A+ in paying taxes are Islamabad/ Rawalpindi and Quetta, scores of 4, respectively. The city with a score of A in paying taxes is Faisalabad; their score is 3.75. The city with a score of A- is Gujranwala. The B+ city include Lahore. The cities with a score of B- are Hyderabad and Sialkot, with scoring 2.75. The C+, C and C- cities are Peshawar (2.5), Karachi (2) and sukkur (1.75).

**Figure 18: Trading with other Countries**

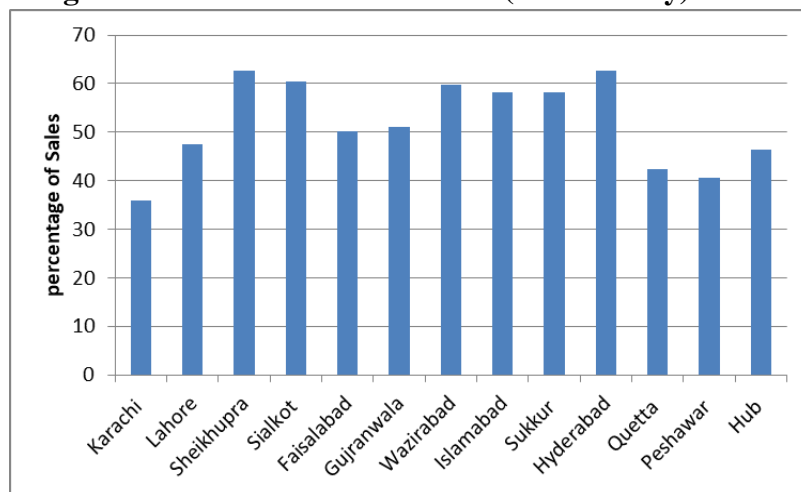


Source: Doing Business Survey 2007

The A+ cities in trading across borders are two Hyderabad and Karachi. The A and A- cities in trading across borders is Sukkur and Faisalabad. The B+ and B scoring city is Sialkot and Sheikhupura. B- Cities are Gujranwala and Peshawar. The C+, C and C- cities in trading across borders is Quetta, Islamabad/Rawalpindi, and Lahore.

**Value Added Per Sales (Profitability)**

**Figure 19: Value Added Per Sales (Profitability)**



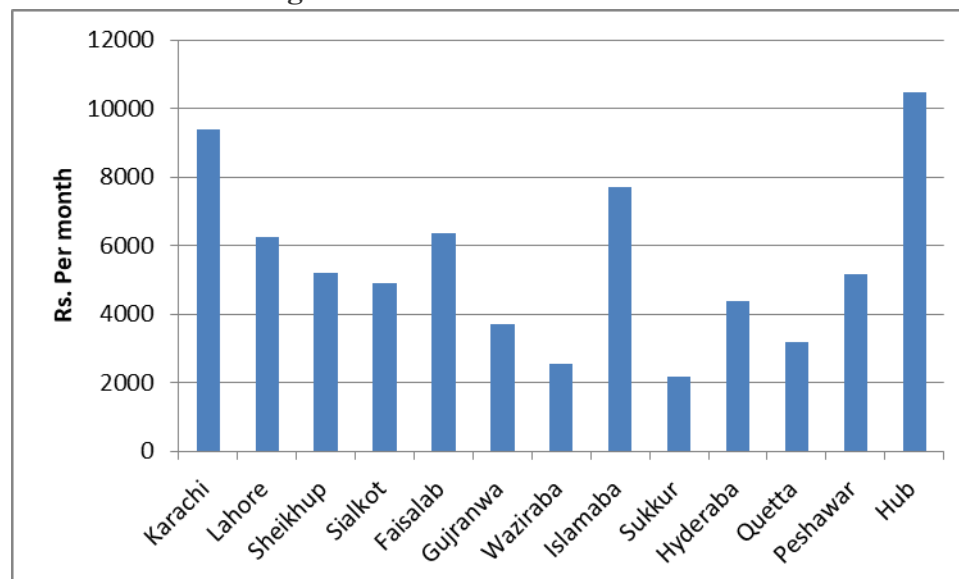
Source: Author’s illustration based on (ICS 2007)

Figure 19 depicts the value added per sales among the firms located in the sample cities. The front-runners for value added per sales city are Hyderabad and Sheikhpura, with a percentage of 62, and therefore earns a score of A+. There is only one A, Sialkot, with a percentage of 60. We give A- to one city (59percent) Wazirabad. Two cities earn a B+, with value added per sales 58percent: Sukkur and Islamabad/Rawalpindi d. B goes to one city, Gujranwala, with a share of around 51percent. The B- city is Faisalabad. In these cities firms value added per sales is 50percent. The C- city is just one Quetta (42percent). The C+ category only has one city, Lahore with 47percent. The C rank city is Hub (46percent). The D group includes Peshawar and Karachi, with a percentage between of 40percent to 35 percent.

### Unit Labor Cost

The firm productivity and competitiveness also related with unit labor cost. The story is more complicated, as average wages (e.g., ratio of total wages to the number of firm employees) that represents the nominal remuneration of the labor input can be in line with its productive performance. By combining all the relevant information, the relative Unit Labor Cost gives a better idea of sector-based competitiveness.

**Figure 20: Unit Labor Cost**



Source: Author's illustration based on (ICS 2007)

The cities whose firms enjoyed lower Unit Labor Cost for their firms (“A+”) are Sukkur and Wazirabad, whose firms’ paying Unit Labor Cost roughly 2177 to 2548 rupees per month. The cities with a score of A and A- in Unit Labor Cost are Quetta and Gujranwala, and their firms paying Unit Cost Labor between 3184 3688 t rupees per month. The cities with a score of B+ are Hyderabad and Sialkot, which face per month Unit Labor Cost around 4381 to 4906 rupees. Peshawar and Sheikhpura are B and B- scoring cities, and roughly 5162 and 5182 rupees pay as



Unit Labor Cost. The C-, C and C- cities are Lahore, Faisalabad and Islamabad/Rawalpindi. The firms in these cities pay 6203, 6358 and 7702 Unit Labor Cost per month. Two cities with a score of D are Karachi and Hub. Their firms pay highest amount in term of Unit Labor Cost around 9405 to 10478 rupees per month.

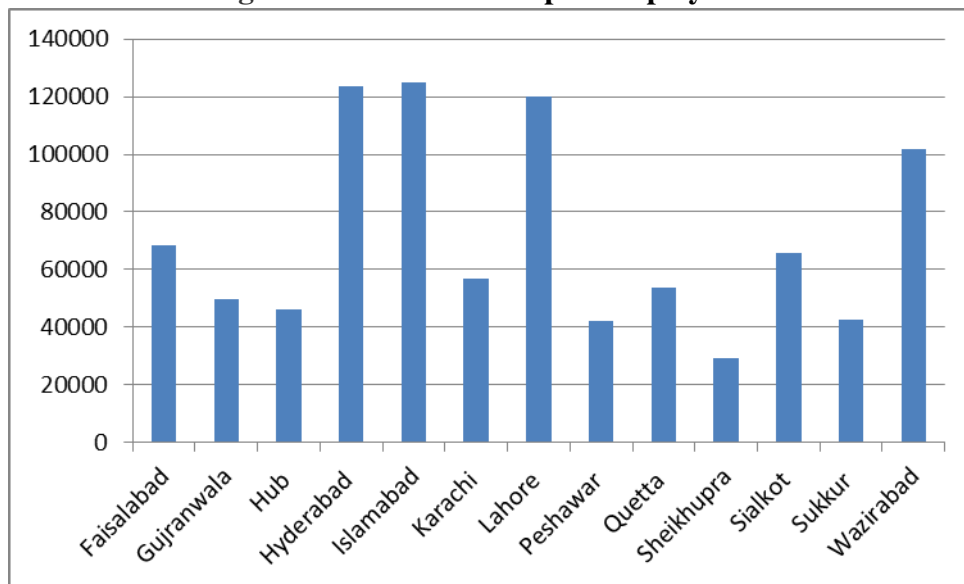
**Labor Productivity**

Many options are available to appraise firm productivity, having their own strengths and weaknesses. Partial labor productivity (LP), as defined by the ratio of the value added (Y) to the number of employees (L), is a common indicator. In the formula below i/j denotes the enterprise and country index, respectively.

$$LP_{i,j} = Y_{i,j} / L_{i,j} \text{-----(1)}$$

Compared to alternative partial productivity measures, such as capital productivity, this ratio is less affected by the error in measurement of the denominator. Indeed, the capital stock refers to the value of machinery and equipment bought in different periods. Each transaction is accounted at the historical value. In addition, labor is the main productive input, generally contributing from 40 percent to 80 percent of the value added (Y) according to the industrial sector. Counterbalancing these advantages the LP ratio suffers some deficiencies.

**Figure 21: Value Added per Employment**

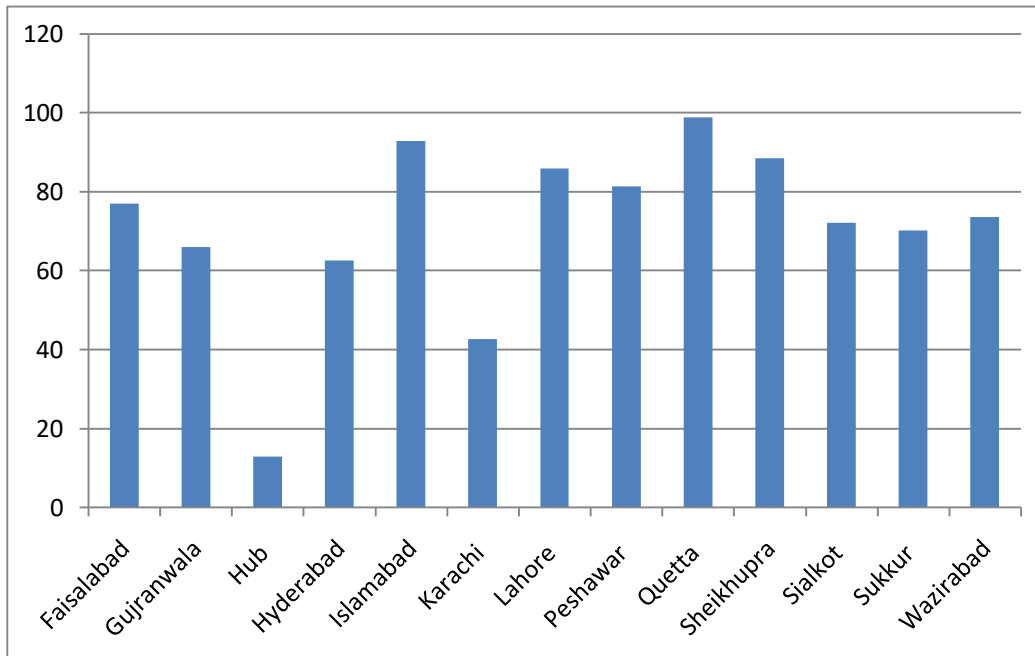


Source: Author’s illustration based on (ICS 2007)

The A+ city in Value Added per Employment is only one city Islamabad/Rawalpindi. The A cities in Value Added per Employment are Hyderabad and Lahore. The A- city in Value Added per Employment is Wazirabad. Sialkot and Faisalabad are rank B+, B and B- cities are Karachi

and Quetta. There is only one C+, Gujranwala. Firms located in that city are rank C due to lowest level of value added per labor. While firm located in Sukkur are ranked C-. D goes to two cities, Sheikhupura and Peshawar.

**Figure 22: Value Added per Capital**

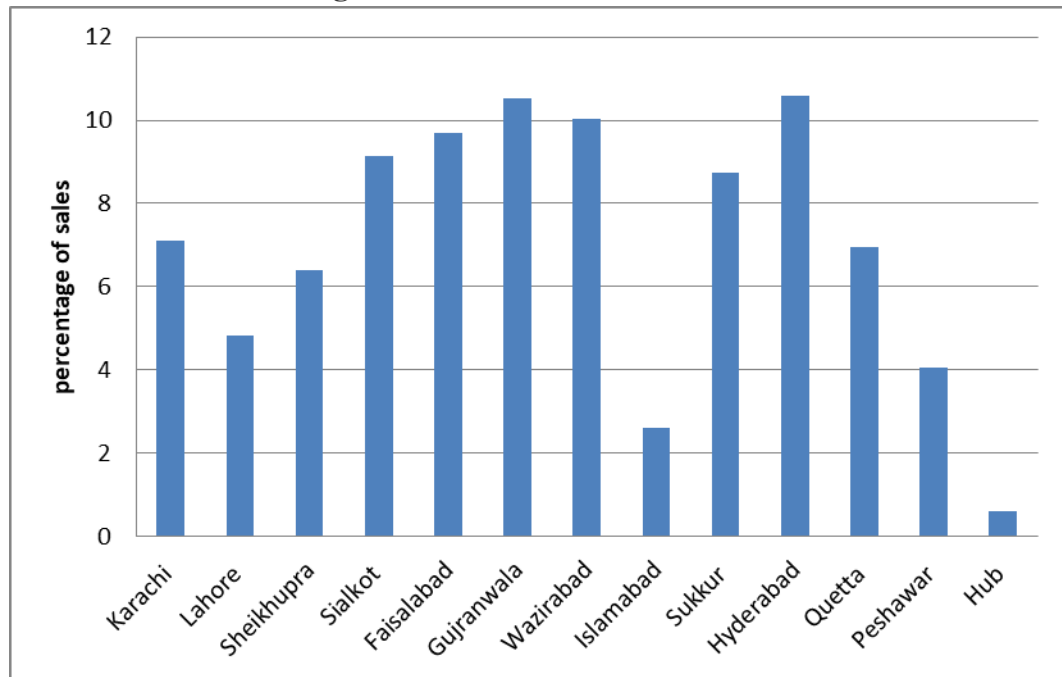


Source: Authors' illustration (ICS 2007)

The A+ cities in value added per capital are two cities Quetta and Islamabad. The A scoring cities are in Value Added per capital Seikhupura and Lahore. The A- city is Peshawar. There is only one A score city, Faisalabad. Wazirabad rank B+ and Sialkot B.. There is only one B-, Sukkur. We give C+, C and C- to Gujranwala, Hyderabad and Karachi cities. D goes to one city, hub in value added per capital.

**Investment Rate**

**Figure 22: Investment Rate**



Source: Author’s illustration based on (ICS 2007)

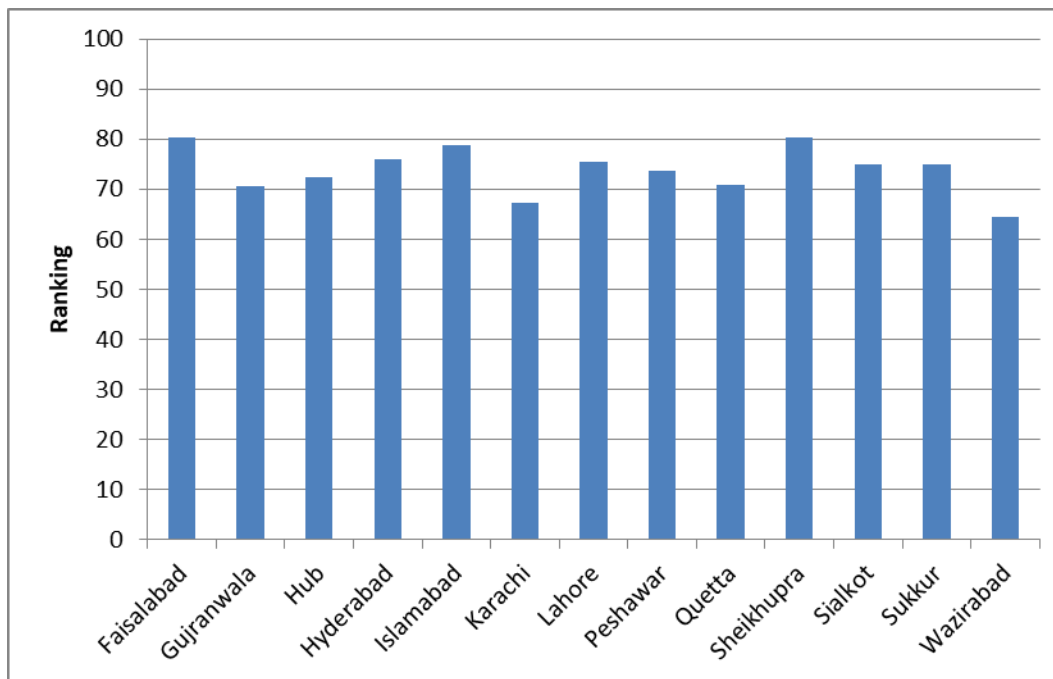
Investment decisions are based and determined by productive earnings (profits), which are associated with the investor expectation to achieve by investing in specific cities (competitive city). Profit depends on some variables like price of inputs, and local wage rates, as well as quality and quantity of the city’s infrastructure. Investment climate differs greatly in Pakistan cities. Investment rate for each city is composing as investment over capital stock (as proxy by the original value of fixed assets). Hub, sukkur, Islamabad/Rawalpindi, Hyderabad and Karachi are those cities where the investment rate is high and they are more competitive with respect to investment rate. While less competitive cities with respect to investment rate are Sialkot, Quetta and Sheikhpura.

City Efficiency Index													
Cities	Faisalab ad	Gujranw ala	Hub	Hyderab ad	Islamab ad/ Rawalpi ndi	Karachi	Lahore	Peshawa r	Quetta	Sheikhu pura	Sialkot	Sukkur	Wazirab ad
Infrastructure	2.25	1.75	4	1.75	4	3	3.5	3.75	3.25	3.25	2.5	2.75	2
Overall Service Quality	3.75	3.25	1.75	2.75	4	1.75	4	3.25	3.5	3.75	3	2.5	2
Domestic Entry and Exit Barriers	4	3	3.25	3.7	3.25	2.75	2	1.75	1.75	4	2.75	3.5	2.5
Skills and Technology Endowment	3.75	3.75	2.75	3.5	1.75	3	3.25	2.75	3	4	2.75	4	1.75
Labor Market Flexibility	3.25	3	3.25	1.75	4	2.75	4	3.5	1.75	3.75	1.75	1.75	2.5

Corr. b/w share of labor fired & share of Seasonal Employment	3.75	2	1.75	1.75	3.75	3	2.5	3.5	3.25	2.75	3.25	4	4
Informal payment	3.25	2.5	2.75	4	1.75	2	3	2.75	3.25	3.5	4	3.75	1.75
Finance index	2.25		4	3	2.5	3.25	2.75	3.5	2.5	2.75	3.75	3.25	1.75
Regulations Burden	4	2.75	1.75	3.25	2	2.75	3	3.25	3.5	4	2.5	3.75	1.75
Crime	3.5	2.75	4	3	3.25	2.75	2.5	3.75	1.75	4	3.25	2	1.75
Innovation and Technology	2	2.75	4	3	3.25	4	3.25	3.5	2.75	1.75	3.75	1.75	2.5
Paying Taxes	3.75	3.5		2.75	4	2	3.25	2.5	4	3	2.75	1.75	

Value Added per sales (Profitability)	3.75	3	2.75	4	3.25	1.75	2.5	1.75	2	4	3.75	3.25	3.5
Unit Labor Cost	2.25	3.5	1.75	3.25	2	1.75	2.5	3	3.75	2.75	3.25	4	4
Labor Productivity	3.25	2.5	2.75	3.75	4	3	3.75	1.75	2.75	1.75	3.25	2	3.5
Capital Productivity	3.25	2.75	1.75	2	4	1.75	3.5	3.25	4	3.75	2.75	2.5	3
Investment Rate	2.25	2.5	4	3.5	4	3.25	3.25	2.75	1.75	2	1.75	3.75	3
City Efficiency Index	3.21	2.82	2.89	3.04	3.15	2.69	3.01	2.94	2.83	3.21	3	3	2.58

Figure 22: City Efficiency Index



Source: Author's illustration based on (ICS 2007)

## Conclusions

This research has provided a composite indicator of the city competitiveness in 13 Pakistani Cities to identify in order of priority among the most important bottlenecks to city competitiveness in Pakistan. The analysis of competitive variables show that physical

infrastructure, corruption, regulations and theft remain the major bottlenecks policymakers need to address in order to improve the city productivity in Pakistan. This conclusion is confirmed by the evidence that infrastructure is particularly binding to states that present a low level of investment and growth.

The most important finding of the study is that city growth and productivity in Pakistan are being hampered by three major factors namely, labor market rigidity, excessive burden of industrial regulations and serious deficiencies in the provision of physical infrastructure. Excessive regulation and poor infrastructure is grouped under less competitive cities, including Wazirabad, Karachi and Gujranwala. Clearly there are a host of factors other than excessive regulatory burden and problems with infrastructure that contribute to the growth gap between business in “less competitive” cities and those in other cities. However, relaxing the two bottlenecks alone would reverse the contraction of the average manufacturing business in less competitive cities into one of growth at a modest but nonetheless positive rate. Reducing the burden of business regulation alone to the level of what is currently in force in high competitive city would increase the average business sales growth rate in a poor- competitive city.

The same kind of reforms would also increase manufacturing growth in other cities, though not to the extent they would in less competitive cities. The burden of industrial regulation is significantly higher in high competitive city than it is in best competitive cities. Lowering this burden to the level of the best competitive city would raise the average business growth rate of high competitive cities from the current level. Nevertheless, the best competitive cities are not, the best with respect to every aspect of competitive investment. Indeed the mean productivity is much lower in these cities than in those grouped as high competitive city. The main reason for this is the loss due to power outages and telecommunication services are significantly worse in the best competitive city as seem to be the case with overall quality also. Improving power supply and physical infrastructure in the best competitive cities to the level of high competitive cities alone would increase significantly the average business growth rate in best competitive cities.

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