

## Metropolitan Lahore – Economic Geography, Labour Markets and Growth

*This policy brief is based on the report “Metropolitan Lahore – Economic Geography, Labor Markets and Growth” authored by Dr. Mir Anjum Altaf (provost at Habib University and former dean of the School of Humanities and Social Sciences at LUMS.).*

China and India’s urban plans reflect the promise of cities as engines of economic growth. This argument rests, *ceteris paribus*, on the premise that economic growth is positively correlated with the size of the labour market. Research has shown that a doubling of the size of the labour market, other things remaining the same, leads to a statistically significant increase in output per worker<sup>1</sup>. This positive outcome is due to the increased density of population, which leads to a higher number of economic interactions per unit of area, a characteristic of well-functioning cities.

However, it is quite possible for a city to have all the disadvantages of a large population (congestion, pollution, slums, and poor services) without having any of the advantages of a large labour market in terms of increased economic activity. Lahore, the second largest city in Pakistan and the 40th largest in the world based on its estimated population of approximately 9 million is examined in this light<sup>2</sup>. This is done keeping in mind the critical role of mobility, which affects the size of the labour market and is therefore essential to the prospects of economic dynamism in a city.

Mobility in the metropolitan region as well as in Lahore itself is analyzed to yield recommendations for increasing the size and efficiency of labour markets and as a guide for planning to do so effectively. The analysis also includes examining fragmentation that causes the area to function below its economic potential, which translates into a lower standard of living for its residents. The first order impact on the labour market of an infrastructure investment like the recent Bus Rapid Transit (BRT) is also estimated.

<sup>1</sup> Au, C. and Henderson, J. 2006. Are Chinese Cities Too Small? *Rev Econ Studies*, 73(3), pp.549-576.

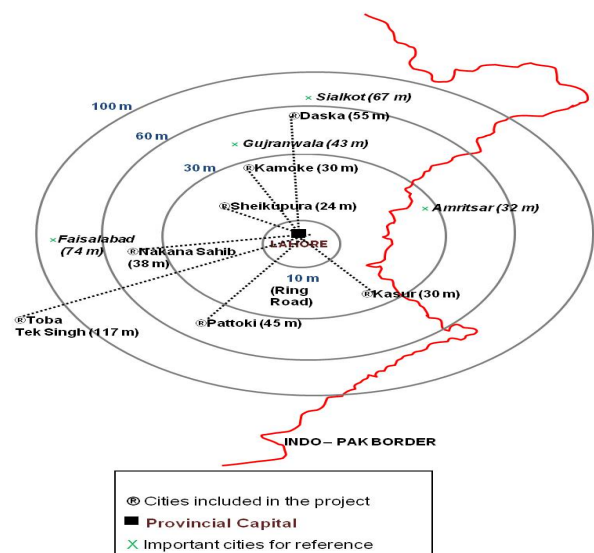
<sup>2</sup> Worldatlas.com. 2014. City Populations, Largest Cities of the World - Worldatlas.com.

Japanese International Cooperation Agency. 2011. *Lahore Urban Transport Master Plan in the Islamic Republic of Pakistan*. [report] Lahore.

### Investigation of Labour Markets in the Lahore Metropolitan Region

Labour markets in the Lahore metropolitan region are analyzed using a simple proxy indicator for the effective size of a labour market - the population resident in a one-hour commuting circle around a designated node using the most accessible means of public transport. This indicator effectively controls for congestion effects and can therefore be compared across cities. This measure has also been used successfully in China, both as an indicator of progress and as a planning tool to identify optimal investments and to monitor them easily over time<sup>3</sup>. Using this indicator, the labour markets of the three cities close to Lahore - Sheikhpura, Kasur, and Pattoki - are investigated to study their integration with the labour market of Lahore.

**Figure 1. Orientation of cities in the Lahore Metropolitan Region**



<sup>3</sup> Chreod. 2007. *Metropolitan Dynamics in Shanghai and the Yangtze Delta*. [report] Washington, Dc: World Bank

Kan, T. 2007. *New city group in the making*. [online] Chinadaily.com.cn. Available at: [http://www.chinadaily.com.cn/cndy/2007-11/09/content\\_6241880.htm](http://www.chinadaily.com.cn/cndy/2007-11/09/content_6241880.htm).

### ***Sheikhupura***

Daily commuting between Sheikhupura and Lahore is limited both because of the excessive time required (close to two hours one-way during peak hours) and the cost (Rs. 80 per day, one-way). This erodes the wage differential to be expected from employment in Lahore as compared to Sheikhupura. However, creating divergences around two locations (Yadgaar and Do-Mori Pul) to improve traffic flow between Lahore Railway Station and Shadhara could reduce travel time. A non-stop Lahore Transport Company<sup>4</sup> service would further reduce travel time. Travel time within cities, however, remains a barrier, but the cost of travel is the main binding constraint standing in the way of integration of the Sheikhupura and Lahore labour markets.

### ***Kasur***

In case of Kasur, the length of the commute time (approximately 2 hours during peak times) and the cost (Rs. 70 one way) prevents the integration of the Kasur-Lahore labour markets for employment or educational purposes. However, people from intermediate locations like Kahna are increasingly commuting for work to Lahore as some parts of the latter can be accessed within an hour while the cost via local buses is also lower. If an integration of the Lahore-Kasur labour markets is desired, the feasibility of extending the BRT to Kasur may be considered.

### ***Pattoki***

There are no established bus companies operating on a regular schedule on the route between Lahore and Pattoki. Buses and vans depart only when filled to capacity, which results in varying waiting times for passengers at the Thokar Bypass. There is a scheduled LTC service from the Lahore Railway Station but this is away from the direction of Pattoki. Both travel time (2 hours 44 minutes) and cost (Rs. 140) suggest that Pattoki is unlikely to be integrated into the Lahore labour market for purposes of employment, although various efficiencies could reduce the travel time to some extent. It is worth noting that a major component of the commute time is within Lahore city.

### ***Policy Implications of Labour Market Integration***

Using the one-hour commute circle as the relevant indicator, the study findings suggest that none of the labour markets of the cities included in the analysis are integrated with the labour market of Lahore. This is true even for Sheikhupura, which, at a distance of 24 miles, is very close to the metropolis.

The lack of integration presents a special conundrum for nearby cities. While daily commuting is ruled out, these cities are close enough for an occasional trip to Lahore. Thus, while the lower income groups cannot benefit from an integrated labour market, the affluent spend all their discretionary income in the metropolis, squeezing the economic development of the satellite city from both ends.

However, the relevant variable for whether investment to integrate these markets is warranted, would be travel cost rather than travel time. At existing levels of per capita income, the incremental gains from employment in the metropolis would not outweigh the incremental increase in travel costs.

The results of the investigation demonstrate that a significant proportion of the commuting time is consumed within Lahore. Thus, a focus on Lahore should have a higher priority than on faster inter-city links, as it would serve both the city and the metropolitan area. One feasible proposition is the use of fast commuter rail services with existing infrastructure. In addition, low-cost improvements such as strategic traffic divergences and operation of non-stop buses would also reduce commuting time.

The outsourcing of business activities does provide an opportunity to partially integrate the metropolitan market. With appropriate measures, a number of business functions and processes currently being undertaken in-house by firms in Lahore can be outsourced to subsidiaries or vendors in nearby cities. If the three cities are made to fall within the two-hour commute circle, which is considered the relevant indicator for business-to-business interactions, such relocation could work as it has in Greater Shanghai.

<sup>4</sup> Lahore Transport Company is a dedicated public bus transit system for the city of Lahore.

Furthermore, introducing transparency in land policy and minimizing the risks of outsourcing would be important if metropolitan economic growth is to be promoted in this manner.

### Effective Size of Labour Markets in Lahore

While it is established that the labour markets of nearby cities are not integrated with that of the metropolis, the integration of the labour market of the city itself is also questionable. This is based on the observation that often the offer of a better paying job in another part of the city has to be declined for reasons of accessibility. To avail such an opportunity, the individual has to shift to a residence closer to the offered job, i.e., move, as if to a new city.

To test the proposition, four key locations were identified in the city to represent centres of services and industry and low- and middle-income residential areas. One-hour commute circles around these points at peak hours were constructed, using the most commonly employed and least expensive public transport options accessible to the majority of workers because over half the population of Lahore does not own private means of transport<sup>5</sup>.

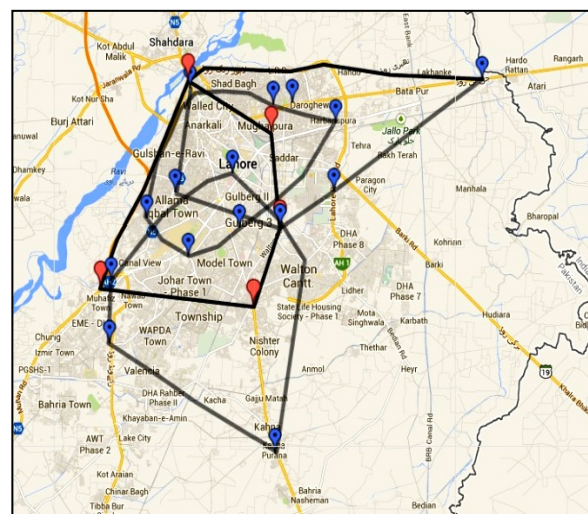
The four locations selected as nodal points in Lahore were the following: a) General Post Office (GPO) on Mall Road (Services Hub), b) The intersection of Maulana Shaukat Ali Road and PECO Road at Kot Lakhpat (Industrial Hub), c) A point near Shalimar Garden in Baghbanpura (Low-Income Residential Hub) and d) The intersection of Multan Road and Main Boulevard at Scheme Morr (Middle-Income Residential Hub).

It was found that the labour market in Lahore is indeed fragmented. At least four distinct though overlapping markets can be identified with the overlaps shown in figure 2. Depending on where

one resides in a particular market, an individual could have access to more than one market within a one-hour commuting time.

The constraints limiting the size of these labour markets are the obvious ones – insufficient road network, the transport modal mix, inadequate traffic management, and the absence of rapid transit. Based on the contours of the travel-circles around the four nodes considered in this study, some strategic measures and investments that would yield improvements and enlarge the size of the labor markets have been suggested. For example, in the area around GPO, skywalks would be candidates for consideration in addition to the usual traffic management measures. In Kot Lakhpat, low-cost, high-density, housing for workers would help, while in Baghbanpura, locating industry along the Grand Trunk Road would extend the market.

**Figure 2. The overlap of all four one-hour circles**



The findings on the size of the one-hour commute circles also suggest that although road investments have increased the area of the one-hour circles over time, their population densities have gone down significantly. The affluent move out to less-dense suburbs and begin to use private cars, while infrastructure investments are made to facilitate their commutes back to the city center (e.g., Canal Bank and Ferozpur Roads). The influx of cars further congests the center. Meanwhile the mobility of the lower-income majority that resides within the dense quadrants of the city continues to be neglected.

<sup>5</sup> Japanese International Cooperation Agency. 2011. *Lahore Urban Transport Master Plan in the Islamic Republic of Pakistan*. [report] Lahore.

This suggests that existing infrastructure investment strategy caters to the convenience of the affluent and does virtually nothing for economic growth. Such a strategy is unable to stay ahead of demand for road space because of the rapid growth in the number of private vehicles, each moving one or two individuals per trip. A strategy that is focused on urban economic growth needs to reorient itself to infrastructure and traffic management investments that positively impact the speed of movement in the dense areas themselves, rather than in facilitating access to the dense areas. This draws attention to issues of land use efficiency and how to enhance it using standard planning tools such as Floor Area Ratios (FAR), Transferable Development Rights (TDR), and Urban Growth Boundaries (UGB). These tools are currently not being used in Lahore's urban planning.

This inference also raises the question of whether cities in Pakistan at their present levels of economic development and per-capita incomes should aspire to be compact or connected. For Lahore, this issue has not received adequate attention and the city has spread out (sprawled) without adequate connectivity. It has become an automobile-centric city despite the reality that less than ten percent of the population owns automobiles and with little investment in public transport to compensate. While it is too late for Lahore to undo its sprawl, the question should be taken seriously for smaller cities that are urbanizing rapidly but still have time for intelligent spatial design interventions.

### **The Impact of BRT on the Size of the Labour Market**

The impact of BRT as defined by the one-hour commute circle indicator, is estimated by comparing with otherwise similar routes without the BRT. Qartaba Chowk Bus Station and Qainchee on Ferozpur Road were chosen as the starting points for regions serviced by the BRT while Chowk Yateem Khana and Bhekewaal Morr were chosen as starting points for comparator routes without the BRT. The populations within the nodes served by the BRT are around 4 million while that of the comparator routes without the BRT are around 3 million. Thus, as a rough

measure, it can be stated that the BRT has resulted in a 33 percent increase in the size of the labour market. (This analysis does not address issues of the cost effectiveness of the BRT.)

The finding confirms the observation that a dense network of roads by itself is not sufficient, due to traffic congestion, to yield a large labour market. A mode of transport with dedicated lanes like the BRT can overcome the congestion barriers and extend the labour market. However, to have a citywide impact, a public transport program should cater for at least 20 percent of total ridership. At present the Lahore Metrobus provides 180,000 trips per day or just 3.3 percent of the total. There is need to expand the network<sup>6</sup>.

### **Conclusions**

The metropolitan labour market is not integrated and the labour market of Lahore city itself is fragmented because of lack of mobility. This imposes a significant loss of potential for the local economy.

The existing infrastructure policy is geared to facilitating automobile travel and is not growth oriented. For the latter, the strategy needs to focus on increasing mobility in the dense quadrants of the city. The BRT is a good first step in this direction but the network needs considerable expansion to have citywide impact. It is also an opportunity to promote outsourcing of business activities from Lahore to smaller cities in its neighborhood.

There is one policy question that needs urgent attention – whether cities in Pakistan should aim to be compact or allow sprawl followed by investments in connectivity. At present levels of income, the former option is recommended. While it is too late for Lahore to reverse its sprawl, smaller cities still have time to benefit from policy interventions that promote compact urban development.

---

<sup>6</sup> Hasan, A. 2007. Just how 'Fit for Purpose' are the Metrobus projects?. *Dawn*. [online] Available at: <http://www.dawn.com/news/1136612/just-how-fit-for-purpose-are-the-metrobus-projects>