URBANIZATION & INDUSTRIALIZATION:
A COMPARATIVE ANALYSIS OF BANGLADESH

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Abstract

   This study examines the process of urbanization and industrialization in Bangladesh between 1991 and 2011 in the six major regions which make up Bangladesh. In particular, we analyze whether industrial factors are more strongly associated with urban development in the main urban centers of Bangladesh. This study uses data from all 64 districts in Bangladesh to look at the factors that drive urbanization of the six major cities in Bangladesh. We examine the weight of industrial location in this study using the Location Quotient (LQ) as a measure. However, this study finds that the textile industry, service industry and small vendors contribute mostly to urbanization in the capital city Dhaka and the second largest city, Chittagong, while the agricultural sector, construction, transportation and communication are the main drivers of urbanization in the other main cities. Moreover, manufacturing industry is also a rising force driving urbanization in Bangladesh.

Key Words: Urbanization, Urban Development, Location Quotient (LQ)

Ⅰ. Introduction

   Urbanization in the developing world is often assumed to follow similar patterns to the historical trends experienced by the developed world. Specifically, migration from rural areas will be a key driver of rapid urbanization, resulting in the majority of employment and services or facilities concentrating in urban areas. Thus, urbanization is seen as a key to development, since cities have economic footprints larger than their boundaries, and they also serve as important hubs for services, goods, and markets.

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For these reasons, urban growth phenomena are most prevalent in the developing world. However, in the developed world, urbanization has changed within the context of globalization, where cities are together through information and communication technologies (Kim, 1999). This has meant that the factors driving urbanization today may be somewhat different from those historically identified as important. Thus, urban development theory may have to be revised in light of the changing circumstances surrounding urbanization in the developing world today. For this reason, we propose examining a special case of urbanization in a developing nation, in order to better understand the drivers of urbanization within this new context. For the purposes of this paper, we will examine the country of Bangladesh.

Like other developing countries, Bangladesh has experienced rapid urban population growth in recent decades, where the urban population has grown from 22.5 million in 1991, to 31.1 million in 2001 and then again to 56.8 million in 2011 (BBS, 2011). However, Bangladesh has the highest population density (1,237.5 people/square kilometer) of countries of the same land area or greater (CIA World Fact Book, 2012). Therefore, the questions of urbanization (how it is defined, how it occurs) are of particular importance there. With such a high rate of competition for land use because of population pressures, we can learn much about what distinguishes an urban area from a rural area by focusing on the case of Bangladesh. The capital city Dhaka, and the second-largest city, Chittagong contain over 50% of the urban population in the country. So there is considerable variation across regions in levels of urbanization.

Urbanization contributes significantly to the national economy in Bangladesh and the industries located in urban areas contribute more than 60 % of the gross domestic product (GDP). Within the six urban regions of Bangladesh (Dhaka, Chittagong, Rajshahi, Khulna, Sylhet and Barisal), there has been a significant upward growth trend of urban population in the regions of Dhaka and Chittagong over the past two decades. The primary reasons behind the fast growing trend of urbanization of Dhaka is largely attributed to its establishment as the capital city, and Chittagong is the industrial core where various government and non-government offices, industrial and commercial organizations, educational institutions are located. Additionally, there are many employment opportunities in the informal sector for unskilled labor, and this has contributed towards this rapid urbanizing trend. The other main cities, Rajshahi, Khulna, Sylhet and Barisal have divisional headquarters, industrial and commercial belts and educational institutions that attract people from different parts of the country for better employment, commerce and educational purposes (Rouf & Jahan, 2001).

The size and nature of the economy of Bangladesh is directly linked to agriculture, but other sectors have been developing rapidly over the past two decades. The service sector has expanded rapidly, and the country's industrial base, which includes some broad areas such as the textile, manufacturing, construction, transportation and communication industries, remains very positive.

Better citizen facilities are available in the urban areas, but the city authority is unable to provide sufficient marketing space for buyers and sellers. As a result, vendors are operating "informally" in the city. A large number of urban dwellers depend on the vendors, and it is an essential part of the urban trade sector. So, this study will consider both formal and informal variables when discussing the driving factors of urbanization in Bangladesh.

The administration of Bangladesh is divided into six major regions, all of which are included in this study. The objective of the study is to provide a general understanding of urbanization within Bangladesh, and to use different variables to discuss the reality of industrialization over the last couple of decades in its six major regions. Also this study tries to outline an answer in the contemporary Bangladeshi context to the question of which factors are important to drive urbanization, with a particular focus on whether industrial factors are more associated with urban development in these main cities of Bangladesh. This study uses data from all 64 districts in Bangladesh from the years 1991, 2001 and 2011. To examine the concentration of industry, this study uses the Location Quotient (LQ) as a research measure which can reveal what makes a particular region unique in comparison to the national industrial location average and the ratio that compares a region to a larger reference region according to some characteristic or asset. So, this LQ method is used in order to make the study more informative, analytical and useful for the users. In view of this, secondary data were collected from various agencies of the government in Bangladesh, including the Bangladesh Bureau of Statistics (BBS). In addition, relevant data were also collected from non-governmental organizations (NGOs), and other reliable sources.

Meanwhile, many papers have been published on urbanization in Bangladesh. Most of these studies have focused on specific case studies of urbanization and urban development with little comparison across urban districts. As a result, this study provides an analysis of urbanization and industrialization in Bangladesh as a whole, and offers the opportunity to examine different models of urbanization across different regions. Further, this study also considers a variety of measures of urban development that are most suitable in the case of Bangladesh.

Ⅱ. Literature Review

1. Urban Development Factors

Urbanization is viewed as cause and effect in economic development. Economic indicators are considered to be the most important aspects of urbanization. Economic prosperity is generally concentrated in large cities with good access to international markets. In 2011, Feng and Ji utilized the Location Quotient and stated that metropolitan areas are home to socioeconomic institutions and

major industries, and in the largest cities, urbanization has amplified economic progress (Lall & Hyoung, 2011). Rouf & Jahan, (2001) put forward the theory and stated that indeed urbanization and economic development have been closely linked ever since the industrial revolution of the seventeenth and eighteenth centuries. Migration from rural areas has been a key driver of this rapid urban growth as a result of concentrating maximum employment and service facilities in the cities of Bangladesh (Rahman & Hasan, 2011).

Historically, the major Bangladeshi urban centers developed around concentrations of cotton and silk production and processing. However, the urbanization of Bangladesh is interlinked with the intense development of Dhaka (Hossain, 2008). In 2013, Lee & Hasan pointed out that industrialization contributes mostly to urbanization in Dhaka while cultivation or agricultural labors are decreasing. So there has been a shift in the driving factors for urbanization over the past few decades. This shift seems to have amplified growth, because Dhaka City has experienced its highest rate of physical and population growth in recent decades, so much so that it has been transformed into a megacity.

Other cities in Bangladesh also experience a close relationship between economic development and urbanization (Kawsar 2012). For example, Chittagong has the highest urban population and also the highest GDP in the coastal zone of Bangladesh. The textile industry has bulk of the share in employment, particularly in Chittagong (Ahmad, 2005). Industrialization, which greatly improved urban productivity, is commonly believed to trigger modern urbanization. It is seen as a pull force that motivates people to move from rural to urban areas. Higher industrial productivity is associated with higher urbanization levels (Xiaofei, Raymond, Florax, Brigitte, 2014).

Zaman, Alam and Islam (2010) stated that ninety percent of workers in the garments sector are migrants from rural areas in Bangladesh. When there are opportunities for unskilled labor in urban areas, the pull factors from rural areas will increase. For example, public investment in infrastructure such as roads can be a less discriminatory and most useful way to open new income and employment opportunities for landless households (Garrett, & Chowdhury, 2004). In 1999, Afsar pointed out the migration to Dhaka city provides greater scope for occupational diversification and upward mobility than rural areas. It also improves their economic condition and provides greater scope for diffusion of education among adolescents, compared to the rural areas. However, urban areas are often characterized by industrial and service activities. Cities with a higher extent of urbanization are also more industrialized in terms of sector share of GDP.

In 2000, Mandal stated that urbanization generally refers to an increasing shift from agrarian to industrial services and distributive occupations. Therefore, cities have both positive and negative dimensions. Positively, it is a central place of modernization and communication, and an engine for a country's economic development (Girard, 1999). Moreover, cities provide agglomeration benefits of the riches, economic activities, and modern technological advancement and opportunities

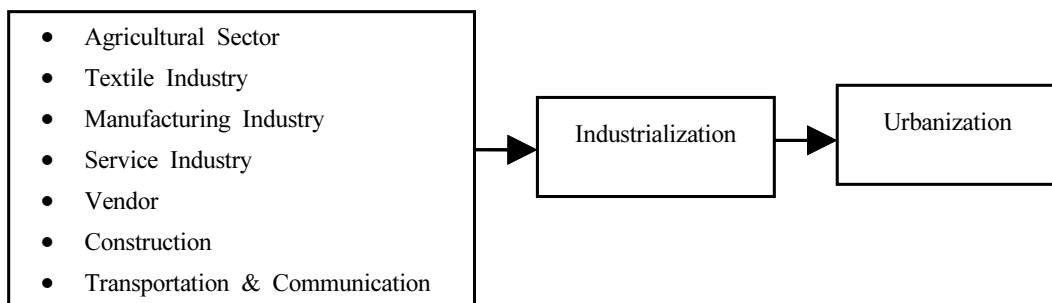offered by proximity (Kleniewski, 2006).

In 1996, Islam stated that global economic conditions are an influential factor in changing the urban system of any region. For example, in Bangladesh, due to the global demand for textile products, Dhaka is still a major area of labor intensive industries. Rapid urbanization in the cities of developing countries has been a dilemma of economic development and environmental suffering (Rana, 2011; Hasan & Lee, 2014). However, urbanization is generally accepted as a positive process of development (Islam 1999).

From the above literature review, we can see that there have been a number of studies on urban migration in Bangladesh. The majority of these studies looked at migration behavior and survival strategies of the poor, a few even focusing specifically on urban industrial growth. However, this study discusses whether industrial factors are the factors most commonly associated with urbanization in all the main cities of Bangladesh. In particular, we try to provide an answer, in the contemporary Bangladeshi context, to the question of whether industrialization is important to drive urbanization in Bangladesh, and whether this has been accomplished in Dhaka and Chittagong as well as the four other main cities.

2. Urbanization Trends & Research Framework

Industrialization and subsequent urbanization is the development of processes that extensively enhance human productivity. Historically, urbanization has been closely connected with industrialization. The remarkable speed of urbanization in Korea, for example, was driven by rapid industrialization of the economy.

Figure 1: Model of Factors Driving Urbanization

- Agricultural Sector
- Textile Industry
- Manufacturing Industry
- Service Industry
- Vendor
- Construction
- Transportation & Communication

→ Industrialization → Urbanization

The rapid increase in the manufacturing sector and its employment triggered a massive rural to urban migration in the 1960s and 1970s. The export-oriented growth strategy also favored the development of urban centers in Korea (Kim, 1999). Following industrialization, surpluses increased in both agriculture and industry. Economic forces were such that cities became the ideal places to

locate factories and the workers and larger proportions of a population live in cities. The number of people living in urban areas tends to increase if a country industrializes and urbanization also shows a result for being driven by industrialization in the context of Bangladesh.

Ⅲ. Level of Urbanization

Urbanization refers to the proportion of total population who are living in urban areas. The urbanization rate is indicated by an increase in urbanization over a period of time. However, urbanization levels are measured as the urban population expressed as a share of the total population. The level of urbanization may be calculated as:

$$Un = \frac{Up}{Tp} \times 100$$

Here,

Un = Level of Urbanization

Up = Total Urban Population

Tp = Total Population

From Table 1, we can see that between 1991 and 2011, the urbanization level had increased by 18%, while the total population increased by 35% over its 1991 levels. This may indicate in increase in push factors since land scarcity is an issue, and almost all arable land in Bangladesh is already heavily farmed. Urban areas provide the only place to go.

Table 1: Urbanization Levels in Bangladesh

Year	Total National Population	Urbanization Level
1991	106.31 (million)	21.11%
2001	124.35 (million)	25.01%
2011	142.31 (million)	39.91%

Source: BBS (Bangladesh Bureau of Statistics), 1991, 2001 & 2011

Table 2 clearly shows that the level of urbanization of all the major cities is growing from 1991 to 2011, but especially in Dhaka, Khulna, and Chittagong. These three cities all have urbanization levels that comprise well over half the population of their surrounding regions. Of the three, however, Chittagong has experienced the most dramatic increase.

Table 2: Urbanization Levels of Major Cities Compared to the Surrounding Region

CITY	1991	2001	2011
Dhaka	88.16	91.53	93.18
Chittagong	22.45	51.13	63.23
Rajshahi	27.94	37.01	38.26
Khulna	50.09	53.98	70.73
Barisal	14.99	16.75	18.44
Sylhet	15.44	16.96	17.56

Source: BBS (Bangladesh Bureau of Statistics), 1991, 2001 & 2011

Ⅳ. Analysis of Industry Using the Location Quotient (LQ)

Like other developing countries, urbanization and economic development in Bangladesh have contributed to the entire nation's economic well-being. For example, currently the GDP of Dhaka is 354,240 million taka (BDT) and the city share comprises 19% of the national economy. The economic development associated with the boom in textile industry since the 1980s has had a significant impact on the expansion of the city area. In addition, Dhaka supports more than 40% of all industry in Bangladesh (BBS, 2011). So, the economic development and industrialization has led to a higher rate of urban expansion. Chittagong is the second largest city, a thriving sea port, and the heart of major commercial and business activities for Bangladesh. Already, the government of the country has declared Chittagong as the commercial capital of the country. Chittagong has earned the significant status of the second most important city because of the sea port, diversified economic activities, and industrial activities, and because of its suitable geographical location factor in the region. It has also been contributing to the national economy since the independence of the country, and the major economic establishments or resources are sea port, lots of textile industries, a huge numbers of medium and heavy industries are also playing a significant role.

The LQ (Location Quotient) Analysis may be calculated as:

$$LQ = \frac{\text{Employee by Sector within City}}{\text{Total Population of City}} \Big/ \frac{\text{Employee by Sector for Bangladesh}}{\text{Total Population of Bangladesh}}$$

Using the LQ, one can simultaneously calculate the relative concentration of a particular industry within a city in comparison to other industries, and the relative presence of that industry compared to the national proportion. In this fashion, we can see both which industries are important in which cities, and whether industry concentration is rising or falling over time. This gives us a picture of the relationship between different sectors of the economy and urbanization for the different regions of Bangladesh.

1. LQ (LOCATION QUOTIENT) OF DHAKA

According to the adjusted population of the 2001 census, the size of Dhaka's population is more than 10 million and this makes Dhaka a megacity. It is the largest urban agglomeration in Bangladesh. Dhaka has emerged as a fast growing megacity in recent times. Now the population of the city reached to 12.5 million in 2011 and the population growth of Dhaka has been very high for the last twenty years (BBS, 2011). Dhaka has recorded high growth due to its importance as the provincial capital and because of industrialization.

According to the LQ figure 2, the share of industry taken by the agricultural sector of Dhaka has declined from 0.18% in 1991 to 0.14% in 2001, and still further to 0.11% in 2011. Here we can see that decline illustrated in Figure 2.

Figure 2: LQ (Location Quotient) of Dhaka
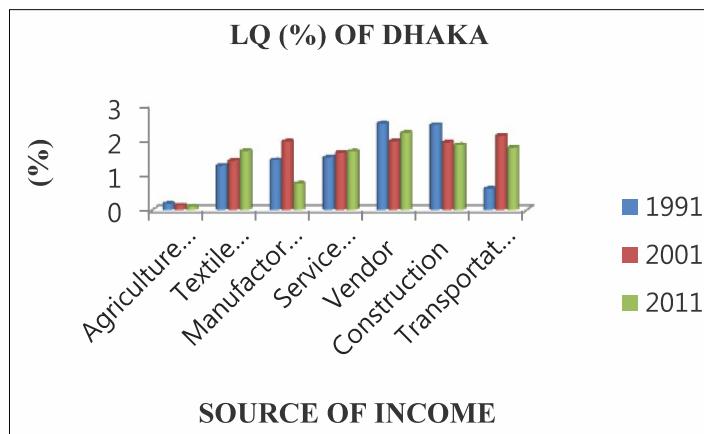
Source: BBS (Bangladesh Bureau of Statistics), 1991, 2001 & 2011

On the other hand, textile industry increased which is 1.27% and 1.42% in 1991 and 2001 while 1.69% in 2011. Islam (1996) stated due to the global demand of garments product, Dhaka is still a major area of labor intensive industries in Bangladesh. Dhaka has a disproportionately large concentration of industrial and various public sector investments. For instance, more than 75% of the 4,107 export oriented textile industries in the country are located in Dhaka (Islam, 2005) also stated. However, the manufacturing industry increased from 1991 to 2001 and it is 1.43% and 1.96%. Meanwhile, the share also decreased in 2011 and it is 0.76%. The percentage of service industry also increased and it is 1.51%, 1.64% and %1.68. In 1999, Afsar also pointed that Dhaka city provides greater scope for occupational diversification and upward mobility than rural areas. In 1991, vendor is 2.48%, in 2001 it is 1.97% and in 2011 it is 2.21% which is much higher than other sectors. In the case of construction, it decreased consequently. In addition, the percentage of

transportation and communication increased from 1991 to 2001 which is 0.61% and 2.13% respectively and it decreased from 2001 to 2011 which is 1.79% of Dhaka. To recap, according to the LQ, the share of industry held by agriculture decreased while the share of industry held by services and vendors increased sharply.

2. LQ (Location Quotient) of Chittagong

Chittagong is the second largest city of Bangladesh and is the commercial capital of the country. It has the country's main seaport close by and the existence of the port meant that the city has been a gateway to the Bay of Bengal for traders. Initially Chittagong is expanding its port activities. An Export Processing Zone (EPZ) has been developed near the port. As a result, people become attracted of port activities and flourishing trade, business activities in this region. However, the Chittagong port and EPZ flourished gradually with involvement of local people who engaged themselves in the overall port and EPZ activities for earning their living afterwards.

The LQ figure 3 shows that the share of industry held by the agricultural sector of Chittagong has, like Dhaka, declined from 0.48% in 1991 to 0.31% in 2001 and still further to 0.29% in 2011. On the other hand, the share held by the textile industry increased from 0.13% to 0.55% between 1991 and 2001, and again to 0.62% in 2011. However, the share held by the manufacturing industry decreased from 1991 to 2001 from 1.28% and 0.83%, and still further in 2011 to 0.62%. The service industry presence also increased from 1.06% to 1.08% between 1991 and 2001. In 2011 it is same as in all the years and the percentage is 1.06. Ahmad (2005) also stated urban areas are often characterized by industrial, and service activities.

Figure 3: LQ (Location Quotient) of Chittagong
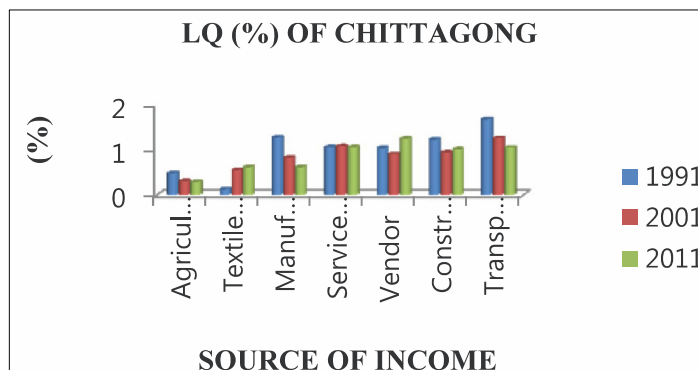
Source: BBS (Bangladesh Bureau of Statistics), 1991, 2001 & 2011

However, the vendors' percentage does not show a consistent trend, going from 1.04% in 1991, to 0.91% is in 2001 and then rising again to 1.25% in 2011. In this last year, vendors are more

visible than any of the other sectors. In the case of construction, it decreased in 2001 and increased in 2011. In addition, the percentage of transportation and communication decreased consequently from 1991 to 2001 and 2001 to 2011which is 1.68%, 1.26% and 1.05% of Chittagong. In conclusion, according to the LQ the share of agriculture industry decreased with the manufacturing industry and transportation and communication while the share of textile industry and vendor greatly increased. Moreover, Chittagong has the highest percentage of urban population in the coastal zone and also has the highest amount of GDP. Specially, the textile industry has the bulk of the share in employment (Ahmad, 2005).

3. LQ (Location Quotient) of Rajshahi

According to the LQ figure 4, the share of agriculture industry of Rajshahi is 1.04% in 1991 and 0.91% in 2001 whereas the proportion is 1.14% in 2011. On the other hand, textile industry increased from 1991 to 2001 which is 0.26% and 0.81% while in 2011 it decreased and the percentage is 69%.

Figure 4: LQ (Location Quotient) of Rajshahi
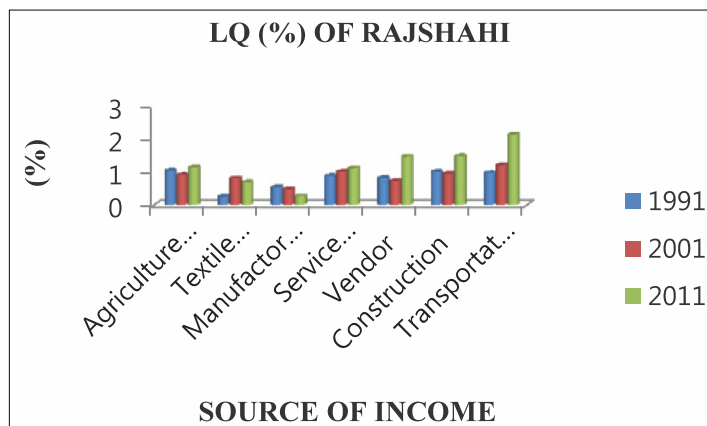
Source: BBS (Bangladesh Bureau of Statistics), 1991, 2001 & 2011

However, the manufacturing industry decreased in all the decades. The percentage of service industry increased and it is 0.88%, 1.01% and %1.12%. However, vendor is 0.82% in 1991, 0.73% in 2001 and in 2011 it is 1.47%. Mortuza (1992) also did a detailed analysis of socio demographic features of the migrants, reason for their migration and the consequence of migration in terms of survival strategies. In the case of construction 1.01% is in 1991, 0.95% is in 2001 and 1.48% is in 2001. In addition, the percentage of transportation and communication increased from 1991 to 2001 and 2001 to 2011 which is 0.97%, 1.21% and 2.13% of Rajshahi. From the above LQ figure,

it can be said that the share of manufacturing industry decreased while the share of transportation and communication increased sharply.

4. LQ (Location Quotient) of Khulna

The LQ figure 5 shows that the share of agriculture industry of Khulna is 0.65% in 1991 and 0.75% in 2001 whereas the proportion is 0.77% in 2011. Here we can see that the percentage of agriculture industry increased sharply in all the years. However, textile industry also increased which is 0.47% and 0.69% in 1991 and 2001 while 1.46% in 2011. On the other hand, the manufacturing industry increased and it is 1.28%, 1.83% and 2.03 in 1991, 2001 and 2011. Hossain (2008) also pointed out the major urban centers developed around industrial concentrations of cotton and silk production processing.

Figure 5: LQ (Location Quotient) of Khulna
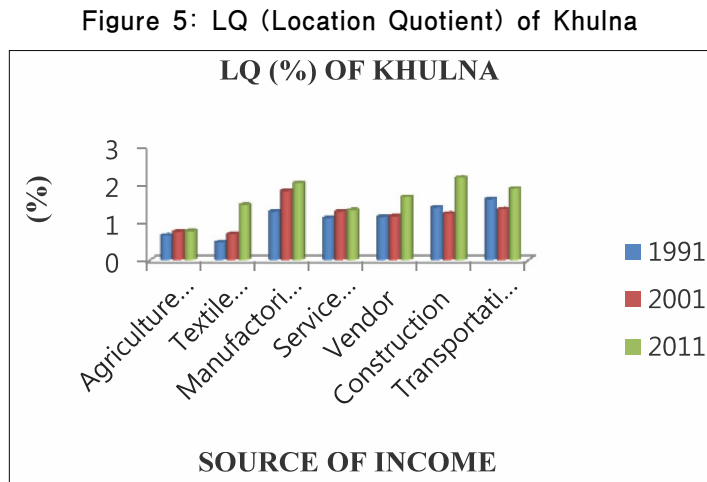
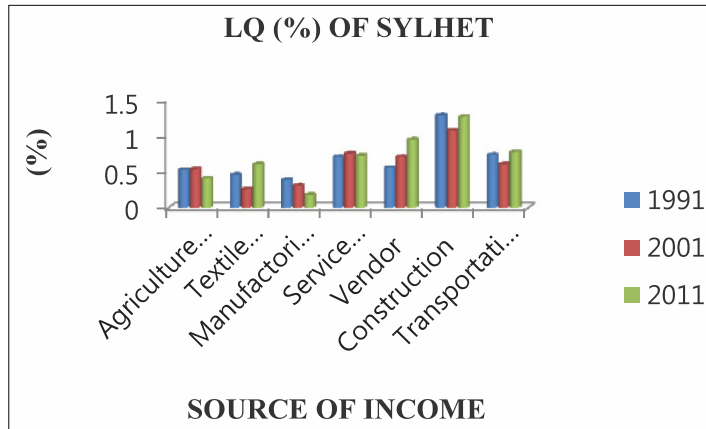Source: BBS (Bangladesh Bureau of Statistics), 1991, 2001 & 2011

In the same year, the percentage of service industry also increased and it is 1.11%, 1.28% and %1.32. Meanwhile, vendor is 1.14% in 1991, 1.16% is 2001 and 1.67% is 2011. In the case of construction, it decreased from 1991 to 2001 and increased from 2001 to 2011. In addition, the percentage of transportation and communication decreased from 1991 to 2001 which is 1.61% and 1.34% respectively while it increased in 2011 which is 1.89% of Khulna. From above the LQ we can see that the share of all variables increased sharply in 2011.

5. LQ (Location Quotient) of Sylhet

The LQ figure 6 assesses that the share of agriculture industry of Sylhet is 0.53% in 1991 and 0.54% in 2001 whereas the proportion is 0.41% in 2011. On the other hand, textile industry decreased

1991 to 2001 which is 0.46% and 0.26% while 0.61% is in 2011. The manufacturing industry decreased in all the year. Meanwhile, the share of service industry also almost same in 1991, 2001 and 2011.and it is 0.71%, 0.76% and %0.73.

Figure 6: LQ (Location Quotient) of Sylhet

Source: BBS (Bangladesh Bureau of Statistics), 1991, 2001 & 2011

In 1991, vendor is 0.56%, in 2001 it is 0.71% and in 2011 it is 0.95%. Here we can see that the percentage of vendor increased sharply in all the years. In the case of construction, it decreased from 1991 to 2001 and increased in 2011. In addition, the percentage of transportation and communication also decreased from 1991 to 2001 which is 0.74% and 0.61% and it increased in 2011 which is 0.78% of Sylhet. According to the LQ, the share of vendor increased sharply in all the decades. However, in the literature review, Kawsar (2012) pointed out there is a close relationship between economic development and urbanization.

6. LQ (Location Quotient) of Barisal

The LQ figure 7 shows that the share of agriculture industry of Barisal is 0.91% in 1991 and 0.97% in 2001 whereas the proportion is 1.03% in 2011. Textile industry also increased sharply in all the decades which is 0.24% and 0.28% in 1991 and 2001 while 0.61% in 2011. The manufacturing industry increased from 1991 to 2001 and it is 0.55% and 0.61%.

Meanwhile, the share also decreased in 2011 and it is 0.22%. The percentage of service industry also increased and it is 0.96%, 1.11% and 1. However, vendor is 0.98% in 1991, 0.81% is in 2001 and 1.88% is in 2011. In the case of construction, it increased in all the decades and it is much higher than other sectors in all the year. The percentage of transportation and communication also

increased consequently which is 0.69%, 0.71% and 1.06% of Barisal. In conclusion it can be said that the share of construction highly increased than the other variables in all the decades.

Figure 7: LQ (Location Quotient) of Barisal
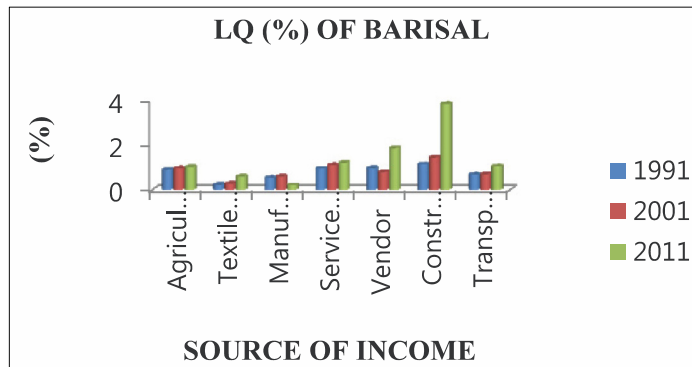
Source: BBS (Bangladesh Bureau of Statistics), 1991, 2001 & 2011

V. Discussion and Conclusion

According to the analyses above, there are different patterns of industry concentration for the different urban regions of Bangladesh. For the two largest cities, Dhaka and Chittagong, the relative importance of agriculture has been declining. This is not necessarily the case for the remaining cities. Additionally, the manufacturing sector has also declined in importance in all urban areas except for Khulna. This may be because of the growing strength of the textile industry in Bangladesh, where the country may have a comparative advantage as global trade becomes more commonplace. All cities showed growth in this area of industry, several dramatically so.

In the one area that demonstrates some investment by the public sector in infrastructure, transportation, there is an interesting story described by the data. The construction sectors in Dhaka, Sylhet and Barisal are all claiming greater concentrations of industry than the transportation sector. This is not the case for the remaining cities. As a capital city and headquarters, the rate of urbanization is very high in Dhaka. Thus the influx of new immigrants has outstripped the government's ability to provide planned infrastructure. However, the pattern seems to only be replicating itself in the smaller cities of Sylhet and Barisal, but not in Chittagong or Rajshahi. In Khulna, it is more difficult to say, since the levels seem to be almost even. Thus the difference between these cities would indicate that a closer examination and comparison of Dhaka and Chittagong might lead to some interesting conclusions about ways in which pseudo-urbanization trends can be mitigated.

Urbanization has the crucial role to play in the economic development of Bangladesh. Here, urban dwellers constitute about 26 percent of the total population with a contribution to GDP of more than 45 percent and a total urban population of over 36 million. Moreover, the urban population in the country is growing at rate of nearly 4 percent per annum. As a result, urban areas in Bangladesh have exceptionally high population density. The high levels of urbanization may not be sufficient to ensure higher levels of economic welfare in Bangladesh. So, cities in Bangladesh are faced with the challenges of rapid population increase characterized by crises such as lack of economic dynamism, governance failure, severe infrastructure and service deficiencies, inadequate land administration, massive slums and social breakdown. Some problems and issues, such as lack of sanitation, traffic congestion, power shortages, lack of piped water supply, and haphazard dwellings are common to all urban centers. As a result, unplanned and haphazard urban growths of slum areas are taking place at different locations within cities, leading to environmental, social, and health problems. This is why an analysis using the LQ can be useful. It demonstrates that not all cities grow in the same way, and that indeed, some may be more successful than others at mitigating the detrimental effects of rapid urbanization.

Dhaka is an excellent example of a city where pseudo-urbanization has gotten beyond the capacity of the government to plan. Since proper urban planning guide lines could not be implemented in the city, the city could not be developed in accordance with the related necessary civic infrastructure, such as housing developments, appropriate roads and transportation, zoning for commercial and industrial developments, provision of potable water, electricity and gas supply system, solid waste management, expansion of recreational facilities, could not be ensured accordingly. However, the urban development is the direct consequence of economic and social development in Bangladesh. The country's public sector must help to attain a balance between the urban development and industrialization. So, Bangladesh should take steps to move some government or private organization outside of the major cities, especially from Dhaka. Besides, a comprehensive and pragmatic policy should be adopted by the government which will expedite urban development and interlink the economic and social factors. As this study analyzes the role of different forms of industrialization on urbanization in Bangladesh, a set of urban development policies need to be implemented both at the national as well as the local levels, to ensure that the people of Bangladesh can benefit from the development of their urban areas.

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국문요약

도시화와 산업화: 방글라데시의 비교연구

Hasan, Md Golam Mehedi
이 종 열

    본 연구는 1991년부터 2011년까지 약 20년 기간의 방글라데시 도시화와 산업화의 과정을 분석하였다. 분석의 대상은 방글라데시를 대표하는 6개 주요 지역을 포함하였다. 특히 이 분석과정에서 방글라데시 주요 지역의 도시발전에서 산업적 요인들이 어떠한 영향을 미치는가를 중점적으로 분석하고자 하였다. 이러한 요인들의 영향을 분석하기 위하여 본 연구는 6개 주요 지역의 64개 구역을 분석의 단위로 삼아 입지상(LQ) 방법을 사용하여 영향요인을 분석하였다. 방글라데시 도시화는 지역에 따라 큰 차이를 보이고 있는데 Dhaka시의 경우 93%의 도시화를 보이고 있는 반면 다른 일부 도시들은 18%정도의 낮은 도시화를 보이는 도시들도 있다. LQ 방법을 통하여 특정 지역에서의 산업의 상대적 중요도를 알아보려고 하였는데, 분석의 결과 흥미로운 점은 수도인 Dhaka시와 두 번째 큰 도시인 Chittagong시에서는 섬유산업, 서비스산업, 노점상이 가장 중요한 영향요인으로 나타났다. 한편 다른 도시들에서는 도시화의 주요 요인으로서 농업, 건설업, 교통·통신업이 주요한 요인으로 나타났다. 또한 제조업이 전 도시에 걸쳐 중요한 요인으로 작용하는 것으로 나타났다.

주제어: 도시화, 도시발전, 입지상(LQ)