FORMATION OF AGGLOMERATION AT THE LEVEL OF URBANIZATION IN DEVELOPING COUNTRIES

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Annotation. In developing countries, urbanization has become a significant aspect of socio-economic development. The rapid growth of cities and the concentration of economic activities within them have led to the formation of agglomerations. Agglomerations refer to the clustering of industries, businesses, and people in a specific geographical area. These agglomerations arise due to various factors such as economies of scale, knowledge spillovers, and infrastructure development. [Belsky et al., 2001] Agglomerations can have both positive and negative effects on a country's economic growth and development. This essay aims to explore the formation of agglomeration at the level of urbanization in developing countries and delve into the implications and challenges it presents.

Keywords: urbanization, economic, social, cultural relations, social sphere, economy of the region, economic growth, innovation cluster, infrastructure, innovative ecosystems, business services.

LITERATURE REVIEW. Formation of agglomeration at the level of urbanization in developing countries has profound implications for economic growth, social development, and environmental sustainability. Agglomeration, defined as the concentration of economic activities and population in an urban area, has been a key factor driving economic development in these countries [Henderson, 2003]. It enhances productivity and innovation through knowledge spillovers, facilitates specialization and division of labor, and attracts foreign direct investment (FDI) [Henderson, 2003; Todaro & Smith, 2014]. Moreover, agglomeration promotes social development by offering better job opportunities, improved access to education and healthcare services, and increased social interactions [Portes, 2010; Todaro & Smith, 2014]. However, the rapid growth of agglomerations also poses significant challenges to environmental sustainability due to increased pollution, resource consumption, and infrastructure strain [Angelsen et al., 2011; World Bank, 2012]. Thus, understanding and managing agglomeration dynamics becomes crucial for policymakers in developing countries to balance the benefits of urbanization with the need for sustainable development.

The formation of agglomeration at the level of urbanization in developing countries has been characterized by various factors. One important factor is the presence of economies of scale, which allows firms to reduce costs and increase productivity by operating in close proximity to each other [Lall, 2001].

Additionally, the concentration of infrastructure and services in urban areas attracts both domestic and foreign investments, leading to economic growth and job creation [Cowan, 2002]. Furthermore, the agglomeration process is often driven by agglomeration economies, such as knowledge spillovers and labor market pooling, which foster innovation and increase competitiveness [Fujita and Thisse, 2003]. Overall, the formation of agglomeration at the urban level in developing countries is influenced by a complex interplay of factors that contribute to economic development and spatial concentration of economic activities. Agglomeration in developing countries has significant economic implications. Firstly, agglomeration can lead to increased labor productivity and efficiency due to the presence of skilled workers and knowledge spillovers [Rosenfeld, 2019]. Secondly, agglomeration economies can attract foreign investments and create a favorable environment for industrial development and technological advancement [Petrovic, 2018]. Finally, agglomeration can result in economies of scale and scope, lowering production costs and enhancing competitiveness [World Bank, 2017]. These economic benefits are crucial for developing countries to boost their economic growth and reduce poverty levels.

RESULTS AND ANALYSIS. Urbanization and population growth . In developing countries, rapid urbanization and population growth have led to the formation of agglomerations. According to Sassen (2001), these agglomerations are characterized by the concentration of economic activities and the migration of people towards urban areas. The process of urbanization has been driven by various factors like industrialization, rural-urban migration, and natural population growth [Satterthwaite, 2007]. This phenomenon has resulted in the overcrowding of urban areas and the emergence of informal settlements [Habitat III, 2016]. The growth of cities in developing countries is often disproportionate to their capacity to provide basic services and infrastructure, leading to challenges in housing, transportation, sanitation, and healthcare [World Bank, 2014]. As a result, these agglomerations face significant social, economic, and environmental issues that need to be addressed in order to ensure sustainable urban development [United Nations, 2015].

1. Rural-urban migration and demographic changes. The phenomenon of rural-urban migration has led to significant demographic changes in developing countries, particularly in the formation of agglomerations at the level of urbanization. As mentioned by Williams (2012), the push and pull factors associated with rural-urban migration, such as unequal economic opportunities, inadequate social services in rural areas, and the allure of urban amenities, have contributed to the rapid growth of cities. This influx of migrants into urban areas has resulted in a shift in population dynamics, with the rural population declining while urban population surges [Smith, 2016]. Moreover, the age structure of these

urban agglomerations is also impacted, as younger individuals are more likely to migrate in search of employment and educational opportunities in cities, resulting in an aging rural population [Johnson, 2010]. This demographic shift not only poses challenges for urban infrastructure and services but also has broader implications for the social and economic development of these countries.

2. Pressure on infrastructure and public services. As urbanization continues to accelerate in developing countries, one of the major challenges that arises is the pressure exerted on infrastructure and public services. The rapid influx of people into urban areas puts a strain on existing transportation networks, water and sanitation systems, healthcare facilities, and educational institutions [Nishat, 2015]. The limited capacity of these systems to meet the growing demand can lead to overcrowding, increased congestion, and inadequate access to essential services [World Bank, 2018]. This can have detrimental effects on the quality of life for urban dwellers and hinder sustainable development efforts [Singh, 2016]. Therefore, addressing the pressure on infrastructure and public services is crucial in ensuring the successful formation of agglomerations in developing countries.

Concentration of industries and economies of scale

In developing countries, the concentration of industries can lead to economies of scale, which refers to the cost advantages that arise when production increases. This concentration can occur within a specific industry or across multiple industries in a region. For example, in the textile industry in India, the cluster effect results in lower costs due to shared infrastructure and specialized labor [Mitra, 2008]. Similarly, the concentration of electronics manufacturing in Shenzhen, China has led to significant economies of scale through the proximity of suppliers, skilled labor, and technological innovation [Lafraniere, 2010]. These agglomerations of industries promote efficiency and productivity, attracting more firms and leading to further economic development [Mitra, 2008].

1. Attraction of foreign direct investment (FDI)

One major factor that contributes to the formation of agglomeration at the level of urbanization in developing countries is the attraction of foreign direct investment (FDI). FDI plays a crucial role as it not only brings capital and technology to the recipient country but also stimulates local economic activities and enhances the country's competitiveness in the global market. According to Suyanto et al. (2016), FDI inflows can promote industrial clustering and increase the productivity of firms, leading to higher levels of economic growth and employment opportunities. Additionally, FDI can also create spillover effects, such as knowledge and technology transfer, which can further enhance the competitiveness of local firms [Suyanto et al., 2016]. Thus, attracting FDI is essential for developing countries to promote urbanization and agglomeration.

2. Creation of job opportunities

The creation of job opportunities is a crucial factor in the formation of agglomeration at the urbanization level in developing countries. As mentioned by

Johnson and Henriquez (2018), the concentration of economic activities in urban areas leads to the generation of new jobs. These job opportunities can arise from various sectors such as manufacturing, services, and trade. Additionally, the agglomeration effect, as discussed by Ahlfeldt and Pietrostefani (2017), further enhances the job creation process as urban areas attract more investments and businesses, leading to an increased demand for labor. Therefore, the formation of agglomeration at the level of urbanization plays a significant role in creating employment opportunities, which contributes to the overall economic development of these developing countries.

In recent years, the importance of climate change adaptation and disaster risk reduction has become increasingly evident. Developing countries, in particular, are vulnerable to the impacts of climate change due to their limited resources and inadequate infrastructure. A study by Gautam et al. (2019) highlights the need for effective strategies to mitigate the risks associated with climate change and disasters in urban areas. These strategies should include measures such as improving early warning systems, enhancing urban planning and land-use policies, and promoting community-based approaches to resilience building. Without such adaptation and risk reduction efforts, the impacts of climate change in developing countries could exacerbate existing social, economic, and environmental challenges.

The formation of agglomeration at the level of urbanization in developing countries is a complex phenomenon influenced by various factors. Economic growth, population density, and transportation infrastructure play significant roles in shaping the spatial concentration of economic activities. As stated by Henderson (2010), agglomeration economies arise from the benefits of firms locating in close proximity to one another, which leads to increased specialization, knowledge spillovers, and economies of scale. Moreover, a study conducted by Duranton and Puga (2014) highlights how agglomeration can generate positive externalities through improved labor market matching and increased innovation. However, it is important to consider that the formation of agglomeration can also lead to negative consequences, such as congestion, pollution, and inequality [Venables, 2017]. Overall, understanding the dynamics of agglomeration is crucial for policymakers in developing countries as it can inform strategies for promoting sustainable and inclusive urban development.

Conclusion. In conclusion, the formation of agglomeration at the level of urbanization in developing countries is a complex process influenced by various factors. Urbanization drives economic growth and development, attracting businesses and investment. However, it also poses challenges such as inadequate infrastructure and social inequality [Li et al., 2016]. To address these issues, policymakers must adopt integrated and sustainable urban planning strategies that consider the unique contexts of developing countries [Borén et al., 2019].

Additionally, promoting inclusive growth, improving living conditions, and providing equal access to services are crucial for ensuring equitable development and reducing the disparities that often emerge in agglomerated areas [World Bank, 2020]. Therefore, a comprehensive approach that combines economic, social, and environmental considerations is essential for the successful formation of agglomeration in developing countries and the realization of sustainable urbanization.

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