

AN EMPIRICAL ANALYSIS OF URBAN GROWTH POLE AND PRIMACY IN SINDH, PAKISTAN

SHAMSHAD AKHTAR

Department of Geography, University of Karachi, Pakistan

Corresponding: shamshadgeog@yahoo.com

ABSTRACT

Sindh is the second most populated province of Pakistan after Punjab, accounting highest share of urban population. About 52 percent of the population of Sindh live in cities. However, this distribution of urban population is highly skewed. Karachi, which is the largest city of Pakistan, holds 37 percent of the total population and 71 percent of the urban population of Sindh. This indicates a serious repercussion of the policy of growth pole development model resulting in urban primacy and regional backwardness particularly in rural Sindh. Karachi generates 95 percent of total revenue of Sindh and 98 percent of the industries of Sindh are in Karachi. As a result, excluding Karachi, Sindh reflects a picture of socioeconomic backwardness, poverty and rural dominance. This creates a serious dilemma of political and administrative confrontation between urban and rural Sindh when rural political elites hold the administrative power of Sindh.

KEYWORDS: Urbanization, Primate City, Rank-Size rule, Growth Pole, City size

1. INTRODUCTION

The French economist Francois Peroux in 1949 first discussed the idea of growth pole (Jansen, 1970). His idea based upon the economic development of any region by developing economic and industrial cities, which initially act as economic growth poles, which transform peripheral areas economically self-sufficient in generating revenues and socially developed. Regional economic planners used the growth pole concept in the economic and social development of regions. In Italy, the industrial complex at Taranto and Bari was established to create economic growth poles. Similarly, the concept of growth poles was adopted in many developed and less developed countries like France, Germany, Japan, India, China, Bangladesh, Malaysia, Latin American countries, Pakistan etc. However, the main idea of growth poles to achieve economic and social development uniformly in the entire region have not achieved. After developing primary growth pole, secondary growth poles were also established but, in many cases, the primary growth poles have emerged as dominant cities and economic and business hub of the regions like Tokyo, Paris, Beijing, Mumbai, Karachi, Lahore, Faisalabad, Dacca etc. (Manyanhaire, 2019; Ioannou, 2021; Kala, 2023).

In the development of growth poles, many cities of the World have achieved urban primacy. In 1939, Mark Jefferson first used the term primate cities, defined as the country's one or two largest cities dominate decisively over other cities. Urban primacy started in the developed region. In the 19th century when industrialization and urbanization accelerated, countries experienced urban primacy. In Britain, the population of London accounted for 62 percent population of Britain in 1800 and 54 percent in 1900. In the Less developed countries, Thailand is the best example where the largest city Bangkok is 20th times bigger than next city. Similarly, Mexico City is the primate city of Mexico. Manila, Sao Paulo, Lima, Karachi, Dacca are other examples of primate cities. These cities not only dominate in population but also in GDP. Economics in terms of trade, manufacturing and financial business is the key factor of developing urban primacy. Generally, primate cities have political and cultural supremacy because of the administrative capital, high level of education, health and employment opportunities (Conroy, 1970; Zhong, 2020; Karjalainen, 2021).

There is no doubt that primate cities are economic growth engines of the entire country, but such cities create hurdles in the economic and regional development of the peripheral regions because investors, manufacturers, business entrepreneurs prefer such big cities where economic activities are more profitable and viable than other cities. Consequently, other parts of the region remain backward. This has happened in Sindh, which is the second populated province of Pakistan, has highest concentration of urban population and highest sources of revenue in terms of taxes and export trade. Its contribution in national GDP is around 33%. Despite its importance as an economic hub, Sindh is the second poorest province of Pakistan. Except Karachi, which is the largest city of Pakistan, rest of the Sindh has poverty incidence is about 40 percent. This indicates a serious repercussion of the policy of economic growth pole development model resulting urban primacy and regional backwardness particularly in rural Sindh. The primate city of Karachi holds about 37 percent of the total population of Sindh and about 72 percent of the total urban population of Sindh. The city generates 95 percent of the total revenue of Sindh and 98 percent of the industries of Sindh are in Karachi (Akhtar, 2012; Eric, 2024).

2. MATERIAL AND METHODS

Data of population of districts and cities are obtained from population census of Sindh province. These data are used to calculate primacy index and study of growth pole concept. Population data of cities are used to compute polynomial equation of regression model of urban growth of the main cities of Sindh. Statistical graphs are used for temporal analysis of the growth pattern of cities from 1941 to 2023. Data of the amount of tax

revenues collection of districts of Sindh and industrial establishments are obtained from Sindh Statistical reports (Govt. of Sindh, 2020).

Urban geographers use two important theoretical concepts to study urban concentration and city-size distribution, the rank-size rule and the law of primate city. The mathematical approach of rank-size rule developed by George Kingsley Zipf in 1949. It describes a model of the distribution of cities in any region or country having relationship of its population and its rank. The population of a city is inversely proportional to its rank. It means the largest population city is $1/n$ times the population of the n th-ranked city. The relationship is expressed mathematically as $P_r = P / \text{rank}$ or $\text{Rank} = P_i / P_r$. According to this rule second largest city in rank must be half of the population of 1st ranked populated city and 3rd ranked city must be one third of the population of 1st ranked city. The rank-size rule applies in such urban system where administrative power; economic resources are not concentrated in one or two cities but are distributed in many cities. The rank-size rule initially applied on the cities of USA (Parr, 2021; Yang, 2023).

The concept of primate city is opposite of rank-size rule where in an urban system concentration of population, economic resources and administrative power lie in one or two largest cities while other cities are much smaller than other cities. Mark Jefferson introduced it in 1939. In many countries of the world where political power, economic resources are centralized, eventually primate city exist like Bangkok, Mexico city etc. Primacy index is a mathematical expression of calculating intensity of concentration and economic centralization, which represents a ratio of the largest city and combination of the population of three next largest cities (Jefferson, 1939).

Primacy Index = Population of largest city/ total population of three next largest cities

The urban growth model of cities is used in the study to explain pattern of the growth of cities of Sindh. The model can be expressed graphically as well as in mathematical form of polynomial regression model. It extends linear and curved relationship between variables, fitting the data with polynomial equation like parabola or other curves (Alonso, 1969). It is useful when a simple linear relationship does not explain pattern. The general formula of polynomial regression model is as under:

$$Y = b_0 + b_1X + b_2X^2 + b_3X^3 \text{ where } y \text{ and } x \text{ are variables and } b_1, b_2 \text{ and } b_3 \text{ are coefficients.}$$

3. RESULT AND DISCUSSION

3.1. Historical Perspective

The province of Sindh was occupied by British forces in 1839 and annexed as a part of Bombay presidency till 1936 when it was declared as the Muslim majority province of Sindh. However, it was a historical fact that Hindu population dominated in the urban population of Sindh, mostly were business merchants. The other urban communities were Parsi and Indian Gujrati business communities, mostly settled in Karachi city. In the last census of British India, conducted in 1941, the total population of Sindh was 4840795, out of which 28 percent was urban (Akhtar, 2012).

In 1941, 64 percent of urban population of Sindh was Hindu while overall 73 percent population of Sindh was Muslim and about 26 percent was Hindu. About 74 percent of population of Hyderabad, 71 percent population of Larkana, Sukkur and Mirpurkhas, 65 percent population of Shikarpur and Nawabshah, 50 percent population of Jacobabad and Karachi were Hindus. Because of their business and trade activities, they were rich and politically influential, supported Indian National Congress. Muslim Sindhi population were generally poor tenant farmers, worked on the lands of feudal, politically controlled by British governor of Sindh. Industrial activities were negligible. Karachi, Hyderabad and Sukkur had few small scale and cottage industries owned by Parsi, Hindu and Gujrati traders. Because of seaport, Karachi was the main business and trade Centre of Sindh and well connected with Bombay through ships and ferries. Therefore, Karachi emerged as the largest city of Sindh. According to 1941 census, Karachi had a lion share of 48 percent in the total urban population of Sindh, followed by Hyderabad (17.5 percent), Sukkur (7.8 percent) and Shikarpur (7.5 percent). It means Karachi even before creation of Pakistan was about 3 times greater than the next city Hyderabad and 7 times greater than third city Sukkur (Govt. of Pakistan, 2024).

After the creation of Pakistan in 1947, demographic change took place in Sindh. Majority of urban Sindhi Hindu population migrated to Indian Gujrat state and Bombay city. Karachi was declared as a Federal Capital of Pakistan, therefore Muslim population of the minority province of India mostly Urdu speaking population migrated to Karachi. Hyderabad and Sukkur were other cities where they settled in large number while Nawabshah, Mirpurkhas and Larkana were other small cities where they also settled in small number. They replaced Sindhi Hindu population of urban Sindh and engaged in business activities. They were mostly educated and belonged to the Indian cities; they were employed in government offices replaced Hindu educated population who left Sindh.

The Sindh Muslim population at that time were mostly uneducated, engaged in farming, therefore the requirement of administrative offices was fulfilled by migrated Urdu speaking population.

3.2 Urban Growth Pattern

Sindh is the most urbanized province of Pakistan where 52 percent of the population live in cities. Before creation of Pakistan in 1941 share of urban population in Sindh was 28 percent. After the creation of Pakistan its share increased to 38 percent in 1961 and in 2017 it was 51 percent. The Urban population in Sindh is extremely unevenly distributed. Karachi division comprised of seven districts is highly urbanized. Even before the creation of Pakistan, in 1941, 85 percent population lived in urban areas while after creation of Pakistan in 1951, 90 percent and in 2023, 95 percent of its population lived in urban areas. Hyderabad is another district where according to 2023 census 84 percent population live in urban areas. Sukkur and Larkana are such districts where urban population has significantly increased up to 45 percent. The remaining 20 districts have about 25 percent population live in urban areas whereas district Tharparkar is least urbanized, only 8 percent population live in urban areas. This shows clearly a picture of social and economic

backwardness and slow pace of socioeconomic transition of rural to urban (Figs 1,2,3, and 4).

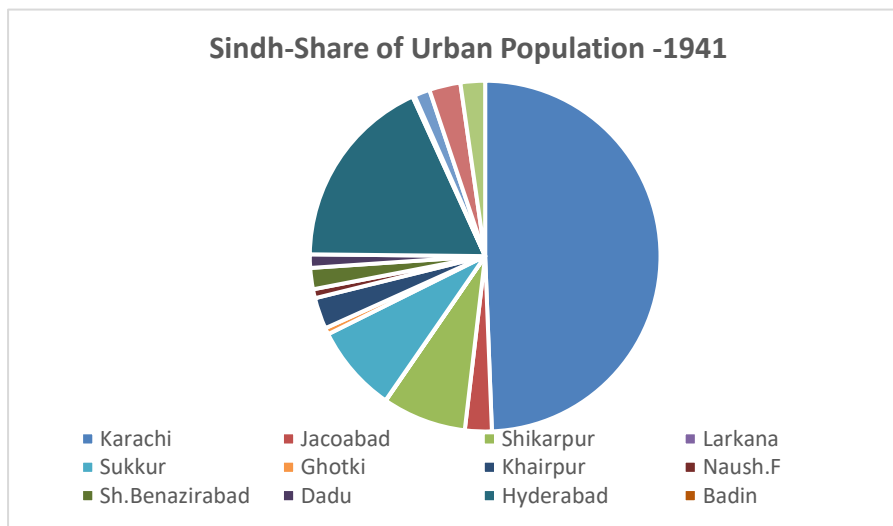


Figure 1: Shares of urban population in Sindh in 1941

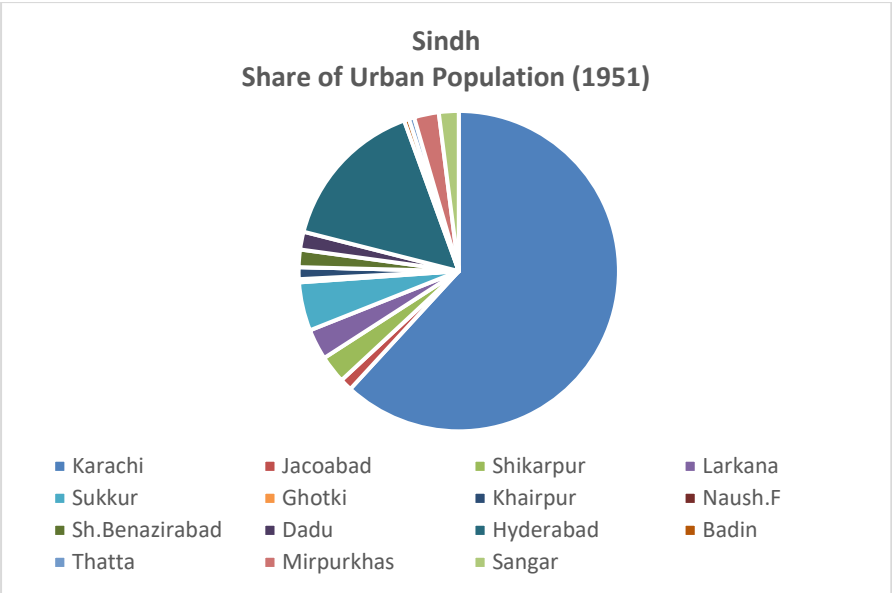


Figure 2: Shares of urban population in Sindh in 1951

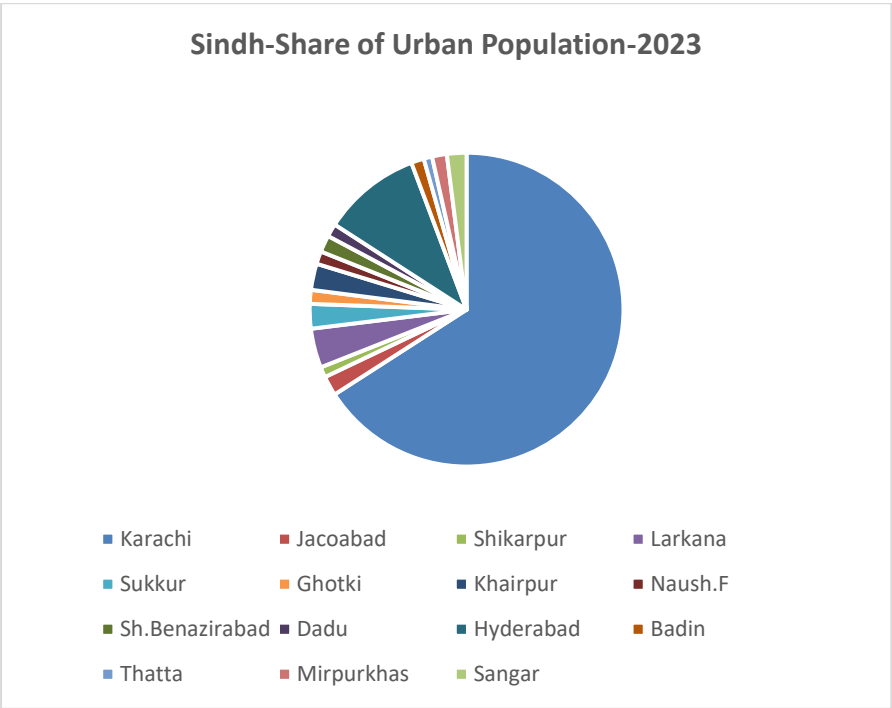


Figure 3: Share of Urban Population in Sindh in 2023

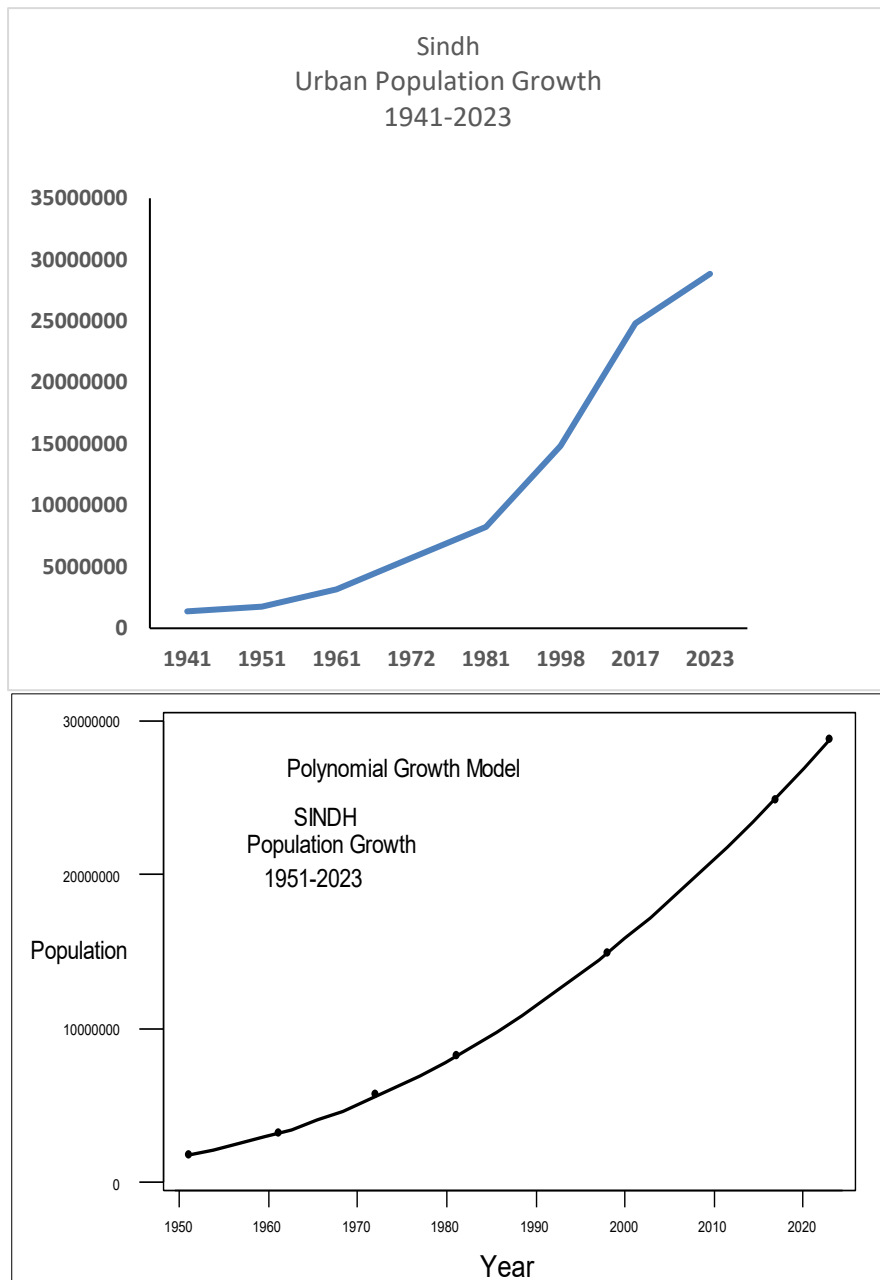


Figure 4: Urban population growth and regression curves of Sindh

Polynomial Regression

$$Y = 1.43E+10 - 14719683X + 3798.03X^{**2}$$

$$R-Sq = 1.000$$

3.4 Urban Primacy of Karachi

An interesting picture has emerged in the analysis of the of population of the cities of Sind. Karachi is the largest city of Sindh. Its share in the total urban population of Sindh was in 1941 (before creation of Pakistan) 48 percent while in 1951(after creation of Pakistan) was 64 percent and in 2023 was 71 percent (Fig. 6) The next largest city Hyderabad has share of only 11 percent while no other cities of Sindh have share more than 5 percent (Table 3). The city-size distribution in Sindh can be explained with two important rules used by urban geographers, rank-size rule and law of primate (Akhtar, 2012).

According to rank-size rule the second largest city Hyderabad should have population 10191440 while its actual population in 2023 was 3144628. As per rule population of Hyderabad must be half of largest city Karachi. Infact Karachi is 6 times larger than second largest city of Sindh while third largest city Larkana is 16 times smaller than Karachi. The fourth largest city Khairpur is 24 times smaller than Karachi. Similarly, the fifth largest city Sukkur is 25 times smaller than Karachi. This is the urban primacy which reflects the financial, economic and urban dominance of Karachi Figure 4 & 5, (Table 1).

Table 1: Rank-Size Population Distribution of cities in Sindh in 2023

Cities	Rank	Actual Population (2023)	Theoretical Population $Pr=P/\text{rank}$	$r=Pi/Pr$
Karachi	1	20382881	20382881	----
Hyderabad	2	3144628	10191440	6.48
Larkana	3	1253742	6794293	16.25
Khairpur	4	839003	5095720	24.29
Sukkur	5	787151	4076576	25.89
Jacobabad	6	626095	3397147	32.55
Sanghar	7	623286	2911840	32.70
Sh.Benazirabad (Nawabshah)	8	538456	2547860	37.80
Mirpurkhas	9	470788	2264764	43.29
Ghotki	10	443152	2038288	45.99
Badin	11	408887	1852989	49.84
Shikarpur	12	332719	1698573	61.26
Thatta	13	269148	1567914	75.73

The primacy index is another important measurement, which indicates how Karachi dominates over other cities of Sindh. It is evident that primacy index is very high throughout all population censuses (1951-2023) that is 70. The ratio of first largest city Karachi and second largest city Hyderabad was in about 3.9 in 1951 while in 2023 it has increased to 6.4 (Table 2 & Fig 5).

Table 2: Indices of Primacy in city-size distribution in Sindh

Year	Ratio between population of largest city (Karachi) and second largest city (Hyderabad)	Primacy Index	Population of largest city (Karachi) as percent pf the total urban population of Sindh
1951	3.9	72.4	61.8
1961	4.1	73.9	61.9
1972	4.8	76.5	62.9
1981	7.2	79.3	65.9
1998	6.7	79.8	66.4
2017	5.2	76.1	60.0
2023	6.4	70.6	70.6

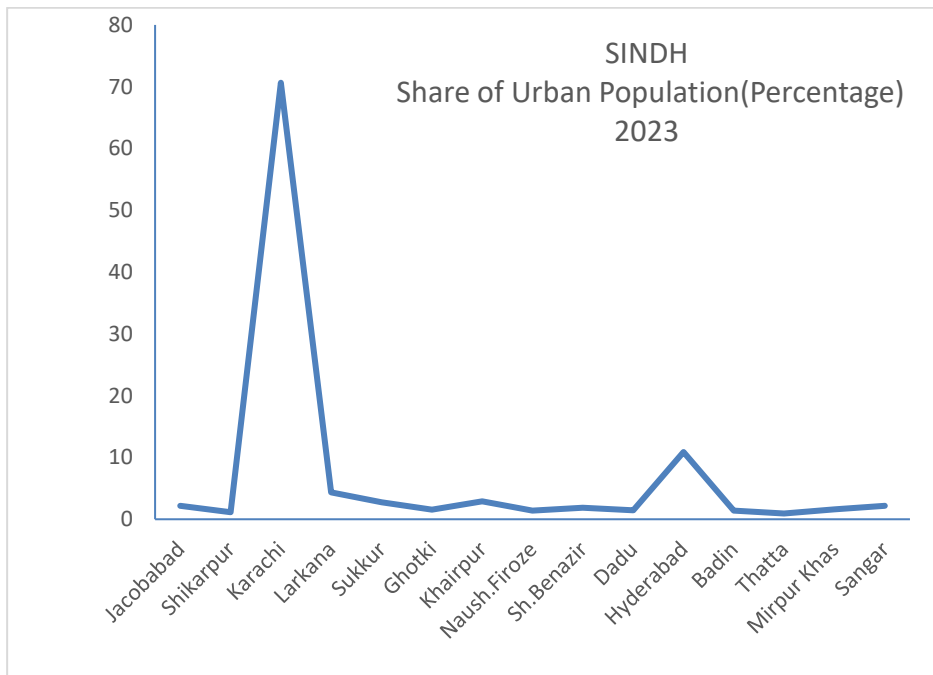


Figure 5: Population growth of cities of Sindh

3.3 Economic Primacy of Karachi

Economic and financial dependency of Sindh on Karachi is another challenge and cause of backwardness and poverty of Sindh. Karachi generates 94 percent of the total revenue of Sindh while the rest of Sindh generates only 6 percent (Fig. 6). During last 78 years of Pakistan period, Sindh has failed to decentralize economic and financial growth. As a result, economic and financial growth are concentrated on the single primate city. Therefore, people of Karachi claims that despite its contribution of 94 percent in the provincial revenue and 60 percent of Federal revenue including income tax, custom duties etc. the mega city is deprived from basic infrastructure, amenities and safe city project. Proper roads, transport, traffic management, water supply, sewerage, solid waste disposal and crime control are main demands of the mega city of about 2.5 million population (Fig 7).

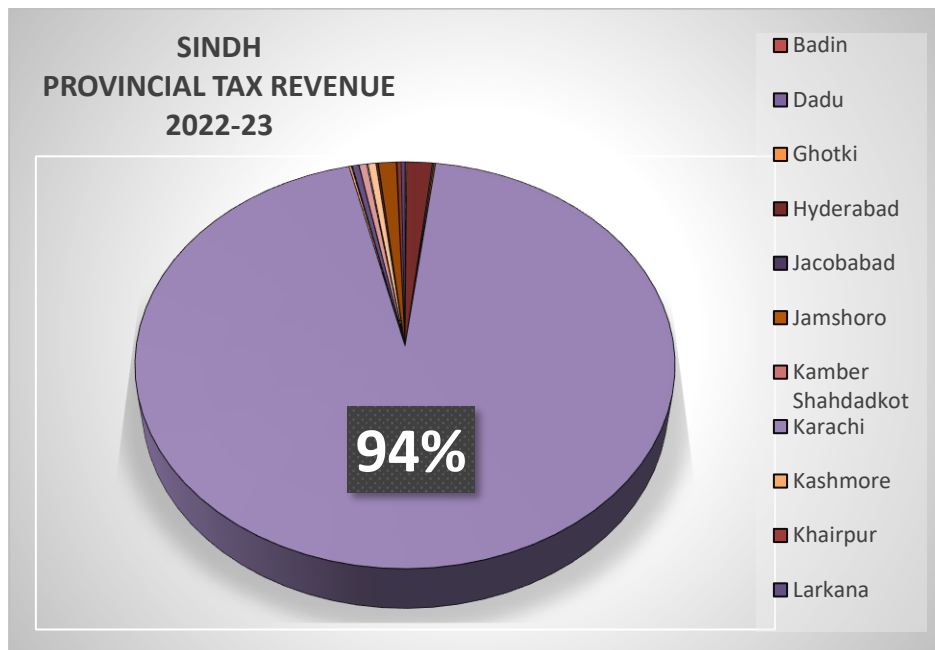


Figure 6: Provincial Tax Revenue 2022-23

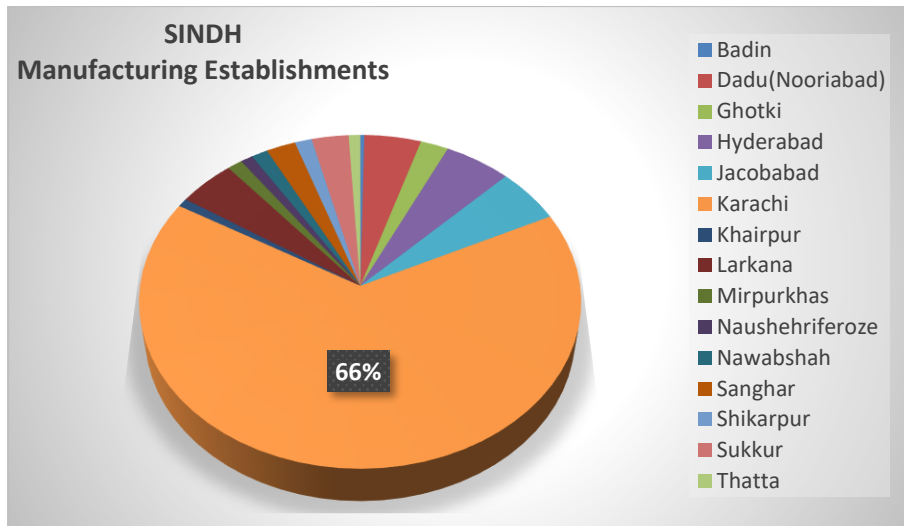


Figure 7: Districts 'share of tax revenues and manufacturing establishments in Sindh

Karachi is the hub of business and industrial activities. About 66 percent industries of Sindh are in Karachi, which generate 68 percent of industrial employment of Sindh. Similarly, Karachi is the main centre of formal and informal employment. As a result, it is estimated that every week more than 200,000 people come to Karachi from rest of Pakistan in search of employment. This has created problem of housing, amenities and governance.

3.5 Emergence of Growth Pole and Primacy

Before the British occupation of Karachi in 1839, it was a small fishing village. British General defeated Talpur ruler of Sindh in the battle of Miani near (Neroon Kot) present Hyderabad fort city in 1843. British annexed Sindh as a Bombay presidency while capital of Sindh was shifted from Hyderabad to Karachi due to coastal location of port, pleasant climate and much safer place against the enmity of local population. British developed Karachi city up to 1900 the only well-planned city of Sindh connected through ships with the port of Bombay. Karachi started to develop as a trade city. The Indian Gujrati merchants like Parsi, Agha Khani, Khoja, Memon and Hindu Sindhi businessman settled in Karachi. British constructed Jetties and harbor at Kimari around 1880s and connected Karachi port through railway with Sindh and Punjab, the main grain growing region. After the First World War Karachi started to develop the only port, city of Sindh and Punjab where industrial activity started like first cement factory known as Dalmia cement factory built in 1924. The only civil port of Sindh was built in Karachi in 1924 while the cantonments

and military airport were also established. In 1936 when Sindh became a province, separated from Bombay, the business and trade activities triggered particularly during World War II when trade activities increased at Karachi port. As a result, in 1941 Karachi had already emerged as a primate city of Sindh while its business and trade activities had dominated over all other cities of Sindh (Rosen, 1980; Akhtar, 2012). Hyderabad, Shikarpur and Sukkur had potential to emerge as other important trading centres because Hindu merchants dominate in these cities and involved in trading of grains, dates and cotton but they did not have advantage of international seaport like Karachi.

After the creation of Pakistan in 1947, a massive migration of Hindu population from the cities of Sindh, mainly from Karachi, Hyderabad, Sukkur, Shikarpur etc. took place to India. Muslim population of Indian cities filled this gap of Hindu educated population of Sindh. On the other hand, many Muslim Gujrati business families like Adam Jee, Bawani, Hashwani, Gul Ahmad, etc. and industrialists of Bombay and Surat shifted to Karachi and established their business and industries because Karachi became the first Federal capital of Pakistan. Because of its Federal status, attribute of single international seaport and international airport of Pakistan. The political elites and planner focused Karachi to develop as trade and industrial hub of Pakistan. They adopted policy of developing Karachi as economic growth pole through establishing concept of industrial estate and industrial areas (Lashari, 2024).

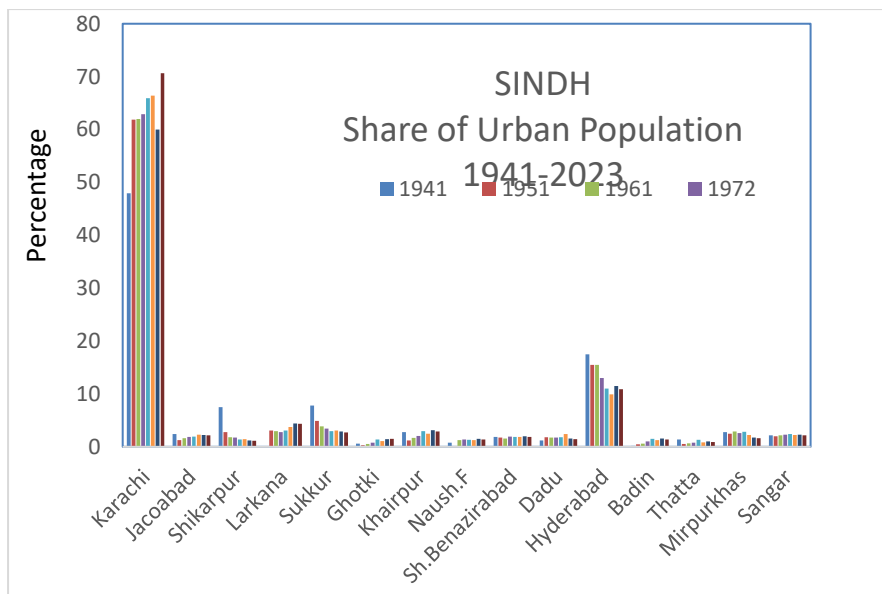


Figure 8: Share of population growth of the cities of Sindh (1941-2023)

Therefore, after creation of Pakistan Karachi Port Industrial area at West Warf and Sindh Industrial Estate (SITE) were established. State Bank of Pakistan, Stock exchange and head offices of all local and international banks were established. Karachi had become the centre of employment for the people all over Pakistan. Therefore, it adopted exponential growth of population while its contribution in national income is dominated over all cities of Pakistan. The policy maker adopted policy of growth pole to other cities particularly in Punjab Lahore and Faisalbad while in Sindh Hyderabad. Kotri Industrial Area was established near Hyderabad city and about 200 km. from the Karachi. Tax incentives and infrastructure facilities were given. As a result, Kotri started to grow as a 2nd important textile industrial city of Sindh after Karachi. In 1951 Hyderabad was the 3rd largest city of Pakistan after Karachi and Lahore but it lost its position after 1961. However, it has retained its status of 2nd largest of Sindh but its share in the urban population of Sindh is quite low as compared to Karachi mainly because of the government nationalization policy of industries, poor law and order situation and lack of incentives and infrastructure facilities. Government has initiated several policies of rural industrialization and establishment of industrial zones in other areas of Sindh like Larkana, Sukkur, Shaheed Benazir Abad, Dadu, Khairpur, Mirpurkhas etc. but failed. Except few sugar mills and cotton ginning factories industrialization is not successful. In Jamshoro district, Nooriabad Industrial estate located 120 km from Karachi on main highway was established in 1980s. but not successful due to security issues and lack of incentives. Thus, it can be concluded that the policies of growth pole and industrial decentralization have failed.

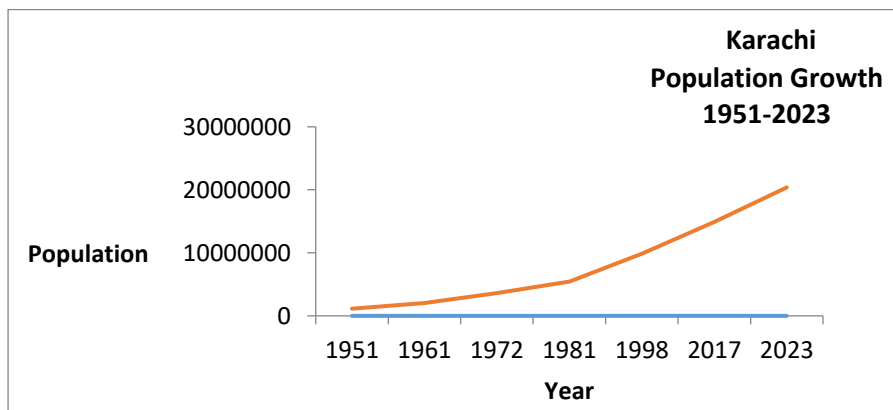


Fig 9: Population growth of Karachi (1951-2023)

status of 2nd largest of Sindh but its share in the urban population of Sindh is quite low as compared to Karachi mainly because of the government nationalization policy of industries, poor law and order situation and lack of incentives and infrastructure facilities. Government has initiated several policies of rural industrialization and establishment of industrial zones in other areas of Sindh like Larkana, Sukkur, Shaheed Benazir Abad, Dadu, Khairpur, Mirpurkhas etc. but failed. Except few sugar mills and cotton ginning factories industrialization is not successful. In Jamshoro district, Nooriabad Industrial estate located 120 km from Karachi on main highway was established in 1980s. but not successful due to security issues and lack of incentives. Thus, it can be concluded that the policies of growth pole and industrial decentralization have failed.

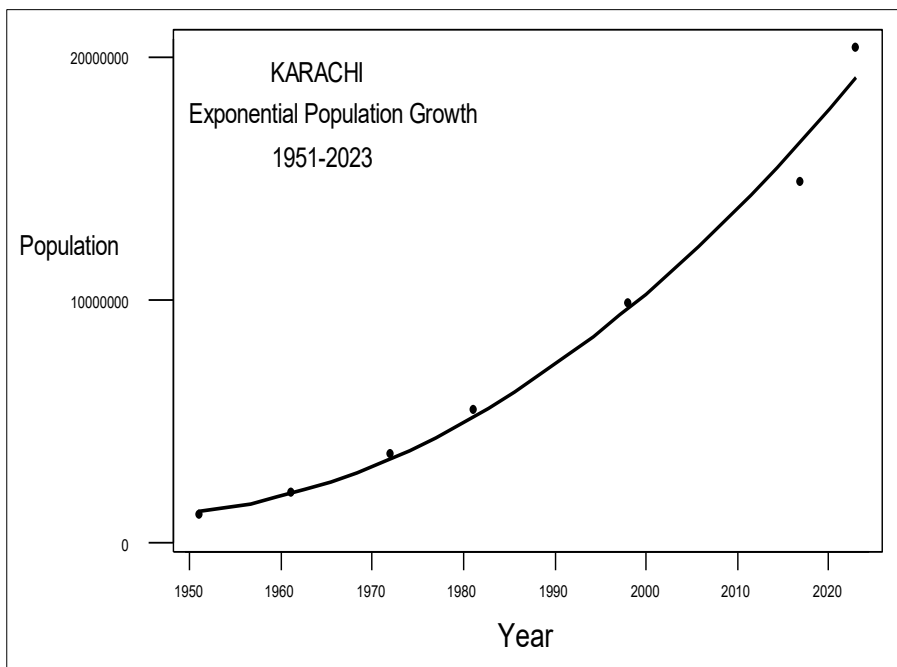


Fig 10: Karachi Exponential Population Growth 1951-2023

Polynomial Regression

$$Y = 1.05E+10 - 10851257X + 2792.92X^{**2}$$

$$R^2 = 0.986$$

3.6 The adverse impact of the policies of growth pole and primacy

The Urban primacy and economic growth pole of Karachi was initiated by British when port cities of British India were developed as economic growth poles. Mumbai (Bombay), Kolkata (Calcutta), Chennai (Madras) and Karachi were developed as hinterland and economic growth poles

(Alperovich, 1992). During the British period, Sindh and Punjab were developed as grain and cotton farming region, which export wheat, and cotton to Europe. Therefore, cities along the railway routes developed as market centre of farming products mainly wheat and cotton which were exported to Europe through Karachi port. Hindus and Sikh mostly controlled the trade business. After the creation of Pakistan, Hindu and Sikh left. Feudalism in Punjab and Sindh resisted industrialization. British politically controlled Punjab and Sindh through big landlords, loyal to British. After the creation of Pakistan, the feudal tribal leaders of Sindh resisted any policy of social and economic development and industrialization (Henderson, 1996). Because they did not want to lose their control over illiterate peasant who worked on their agriculture lands. The feudal grabbed the political power of Sindh. The investors of Karachi were reluctant to establish their industries in other areas of Sindh. Mainly due to lack of infrastructure and skilled workers as well as threat of insecurity and ransom from local dacoits supported by feudal. Therefore, even during the period of Military ruler Ayub Khan, industrialization and urbanization concentrated to Karachi and expanded only to areas near to Karachi like Kotri (Hyderabad) and Dhabeji. As a result, the urban and economic primacy of Karachi has been increasing (Figs 8 & 9), holding 70 percent of the urban population of Sindh and generating 95 percent of the tax revenue of Sindh. This has created serious economic and development challenges where Sindh depends on Karachi for their development while due to growth pole and economic primacy, its population of 25 million are deprived from transport, water supply, urban amenities and implementation of Urban plan. On the other hand, poverty level in Sindh has increased and percentage of government income supporting program has increased. Industrial activities are limited to few sugar mills owned by political elites of Sindh. Therefore, excluding Karachi, the pace of urban growth and socio-economic development in Sindh is quite slow. This is a backlash of the policies of growth pole concept in which Provincial and Federal government have given priorities to Karachi rather than other cities of Sindh due to its attributes of port and capital city. The feudal political elites who are reluctant to implement any socio-economic development plan which reduce poverty in Sindh is another reason of the decentralization of urbanization and industrialization (Conroy, 1973; Chandio, 2023).

4. CONCLUSION

The concept of economic growth pole was introduced in urban planning and economic development just after the World War II, to develop one or two cities, which have potential to lead economic development of country through generating national income. It is hypothesized that ultimately

economic development and urbanization would be decentralized to other areas of region. The adverse effect is that if the decentralization of economic growth pole has failed than the single developed growth pole would become an urban and financial primate city and the rest of the region face backwardness, dependent on the primate city. This policy was also introduced in Karachi which was developed by British the only port city of Pakistan. Due to its international trade potential, industrialization was planned as a growth pole. Because of business, finance and trade hub, the city attracted people all over the country in search of employment. Eventually it has become the primate city of Sindh as well as Pakistan. The backlash of this policy is industrialization and urbanization are not dispersed in other areas and cities of Sindh. The feudal political elites have settled in the expensive residential areas of Karachi like D.H.A and Clifton while their poor peasants and common people have no option to live in backwardness and poverty. On the other hand, because of the concentration of population in Karachi, the primate city is unmanageable and ungovernable, crying for ownership and improvement.

REFERENCES

- Akhtar, S. and Dhanani, (2012). City- Size distribution in Pakistan, Sindh University Research Journal, 44(4), 699-702.
- Alonso, W. (1969). Urban and regional imbalance in economic development¹, *Economics*, 27(1), 351-55.
- Alperovich, G. (1992). Economic Development and Population Concentration, *Economic Development and Cultural Change*, 41(2), 63-74.
- Government of Pakistan (2024). Population Reports (1951-2023), Islamabad.
- Chandio, A. (2023). A Survey Report on Industrial growth in Sindh, Indus Publication, 124-145.
- Conroy, M. E. (1973). On the rejection of growth center policy in Latin American regional development planning, *Land Economics*, 49(3), 317-380.
- Darwent, D. (1969). Growth poles and growth centers in regional planning- a review, *Environment and Planning*, 5 (1), 5-32.
- Eric, C. (2024). An overview of Economic backwardness in Sindh, Indus Publication, 23-35.
- Government of Sindh (2020). A Report on the Poverty Reduction policy in Sindh, 123-134.
- Ioannou S. and Dariusz W. (2021). Finance, globalization, and urban primacy. *Economic Geography*, 97(1), 34–65.

*An Empirical Analysis of Urban Growth Pole and Primacy in Sindh,
Pakistan*

- Jansen, A. C. M. (1970). The value of growth pole theory for economic geography, *Tijdschrift voor Economische en Sociale Geografie*, 61(1),67-76.
- Jefferson, M. (1939). The law of the primate city, *Geographical Review*, 29(2), 226-32.
- Kala, S. (2023). Is your city too big? Causes of Urban Primacy in India, *Environment and Urbanization in India*, 14(2), 121-132.
- Karjalainen, L. and Juhola, S. (2021). Urban transportation sustainability assessments: A systematic review of literature. *Transport Reviews*, 41(5), 659–684.
- Manyanhaire, I. O. (2019). A Theoretical Overview of the Growth Centre Strategy: Perspectives for Reengineering the Concept in Zimbabwe, *Journal of Sustainable Development in Africa*, 13(4), 1520-5509.
- Parr, J. B. (2021). Growth Pole Strategies in Regional Economic Planning, *Urban Studies*,36(4), 1195-1215.
- Rosen, K. (1980). The Size Distribution of Cities, *Journal of Urban Economics*, 8(2), 165-186.
- Lashari, Y. (2024). *Cities of Sindh*, Saga Publication, 23-43.
- Yang. C. (2023). Informality as an approach to claiming the right to resettlement and achieving inclusive rural to urban resettlement for landless villagers: The case of Hangzhou, China, *J. Urban Affair*, 47(4), 215-2239.
- Zhong, S. (2020). *Urban-rural relations in the context of new urbanization*, Routledge, London, 138-165.