



**RESEARCH PAPER**

**Trends and Patterns of Temporal Urban Population Growth in Pakistan**

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**ABSTRACT**

Urban population reflects dynamic trends in migration, industrialization, and economic opportunities within a city. This research explores into the urban population dynamics of Pakistan from 1951 to 2017, analyzing census data at the national, provincial, and city levels. Employing both the quantitative and qualitative methods, the study explores trends, patterns, and implications of urbanization as a result of increase in urban population. The urban population has more than doubled over the censuses, growing from 17.8% in 1951 to 36.3% in 2017. The steady, upward and increasing trend is observed over all the last six censuses from 1951 to 2017. Provinces exhibit varying degrees of urbanization, with Punjab consistently leading, followed by Sindh. Major cities, including Karachi and Lahore, have experienced substantial growth, emphasizing their role as urban centers. The findings underscore a nationwide trend of urbanization, urging tailored urban planning strategies for sustainable development.

**KEYWORDS** Census, Population Dynamics, Urbanization, Urban Centers

**Introduction**

Urban population refers to the portion of a country's population that resides in urban areas, which are characterized by higher population density, infrastructure development, and economic activities compared to rural areas (Ali et al., 2013; Bawazir et al., 2019). The definition of urban areas can vary between countries, but it generally includes cities and towns with various administrative and population criteria (Birchenall, 2016). The impact of urban population on a country is multifaceted and can influence various aspects of its social, economic, and environmental dynamics (Dadashpoor & Nateghi, 2017).

Urban areas often serve as economic hubs, attracting businesses, industries, and job opportunities (Alam et al., 2003). The concentration of economic activities in urban centers can contribute significantly to a country's overall economic growth (Furuoka, 2009). The demand for infrastructure, including transportation, housing, water supply, and sanitation, tends to be higher in urban areas (Mushtaq, 2006). Governments may invest in developing and upgrading infrastructure to meet the needs of a growing urban population (Adewole, 2012).

Urbanization is often associated with diverse employment opportunities in sectors such as manufacturing, services, and technology (Essien, 2016). This can lead to increased income levels and improved living standards for urban residents (Ijebu-Ode, 2011). Urban areas typically have better access to education, healthcare, and other essential services (Basit et al., 2018). Governments may prioritize the development of social infrastructure in urban centers to meet the demands of a larger population (Afzal, 2009). Urbanization is also accompanied by internal migration, with people moving from

rural to urban areas in search of better opportunities. This can impact the demographic composition of both urban and rural areas (Shirazi&kazmi, 2014). Urbanization can place stress on the environment through increased pollution, resource consumption, and waste generation. Sustainable urban planning and development are crucial to mitigate adverse environmental effects (Iqbal &Awan, 2015).

Upward trend in urban population may lead to cultural and social changes, with diverse populations interacting and influencing each other (Baffour et al., 2013). Urban areas often exhibit greater cultural diversity, fostering innovation and creativity (Harper & Mayhew, 2012). Rapid urbanization can give rise to informal settlements or slums, posing challenges related to housing, sanitation, and access to basic services for a significant portion of the urban population (Cromley et al., 2010). Urban areas may have distinct political dynamics, with diverse interest groups and a higher level of political engagement. Urban populations may influence political agendas and policies (Hull & Hull, 2006). Understanding and managing the impacts of urbanization are crucial for sustainable development. Effective urban planning, infrastructure investment, and social policies are essential to harness the positive aspects of urbanization while addressing its challenges (Ruggles& Magnuson, 2020).

### **Literature Review**

Growth in urban population is the progressive transformation and deliberation of population in urban unit. It refers to the explosive increase in the percentage of total population living in the urban centers Population (Riley, 2004). The process of urbanization starts expanding in the developing countries in the end of 20th century (Pannell, 2003). Urbanization is generating problems with every passing day and creating an alarming situation in 1900 only 15 percent of world population was urbanite, but in 20th century it changes the map of world by rapid urbanization in 1950 causing industrial revolution. After sixty years approximately 50% of the world population is living in the urban areas (Li and Yeh, 2004)

Urbanization is considered as a key for the development and modernization of a country (Fan, 2005). Although the urbanized world has grown faster than the less urbanized world, urbanization has now become the major issue for the basic problems such as social and environmental issues which are being faced in mega cities of the world (Lavelly, 2001). Due to urbanization, the world is facing severe environmental problems mainly at local scales in form microclimatic changes and is contributing in global warming directly and indirectly (Eicher&Bewer, 2001). Urban areas have become the centre of pollution as a result of congested and dense traffic (Liu and Diamond, 2005).

Pakistan is a country where majority of the population is based and where the largest industries are ensconced (Shirmeen et al., 2007). Pakistan is urbanizing at an annual rate of 3%, the fastest pace in South Asia (Mahsud-Dornan, 2007). Metropolitan cities are facing rapid urbanization as the population of Karachi alone has raised 80 % from 2000-2010, the biggest rise of any municipality in the world (Kotkin& Cox, 2013).

The United Nations Population Division estimates that, by 2025, nearly half the country's population will be living in cities as compared to one third of the population at present (Feeney &Alam, 2004). Other estimates – which use density-centered rather than administrative/governmental classifications of urbanization, and take into account “peri-urban” regions that lie separate from official urban boundaries – state that the urban population has already reached 50%. Pakistan is at the threshold of a major demographic transition (Zakria& Muhammad, 2009).

Pakistan is one of the main leading urbanizing countries of world with the fastest urbanization in south Asia. The annual growth of urbanization in Pakistan is more than 3% with the expanding mega cities, urban centers and city areas (Mustafa and Sawas, 2013). The phenomenal increase in urbanization in Pakistan may be attributed to two major causes which include natural growth in population and internal migration/relocation According to the current statistics Pakistan's total population is rising 3 percent every year and if the trend continues it will increase from 180 million today to 380 million people by 2050 (Arif & Hamid, 2009).

One of the main factors of growth in urban population is factor is rural-to-urban migration. Much of this movement has been driven by war and conflict. At the time of Indo-Pak partition in 1947, millions of Indian Muslims entered Pakistan, and many established roots in urban areas of Sindh and Punjab provinces. Similar influxes occurred during wars with India in 1965 and 1971 (Ahmad & Ahmad, 2016). At the same time, many Pakistanis particularly farmers and fishermen afflicted by rural water shortages and natural disasters including flooding and earth quakes are relocating to cities to seek better livelihoods (Aslam et al., 2022). Others are doing so to have access to better-quality healthcare, employment and education opportunities more often available in urban areas (Pappas et al., 2001).

### **Material ad Methods**

To analyze the urban population change in Pakistan a comprehensive and systematic approach is adopted, focusing on census data from 1951 to 2017. The research aimed to understand the trends, patterns, and implications of urbanization at the national, provincial, and city levels in Pakistan. The official census data of urban population provided by the Pakistan Bureau of Statistics for the years 1951, 1961, 1972, 1981, 1998, and 2017 are acquired. The census data is specified on urban population figures, urban population percentages, and demographic details at both the provincial and city levels. A detailed analysis of the urban population trends over the specified census years is conducted and urban population percentages to assess the degree of urbanization at each census point are calculated. The urbanization patterns among provinces, highlighting variations and trends are also compared and contrasted. The urbanization trajectories of Punjab, Sindh, Khyber Pakhtunkhwa (KPK), Balochistan, and Islamabad are separately identified along with the determination of key factors contributing to the urban growth in each province, considering historical, economic, and social aspects.

The urban population dynamics of major cities, including Karachi, Lahore, Faisalabad, Rawalpindi, Gujranwala, Peshawar, Multan, Hyderabad, Islamabad, and Quetta are also investigated. This investigation delved into various influencing factors, including industrialization, economic development, and migration patterns. The study also explored the implications of urbanization on governance, infrastructure, and the quality of life in major cities and provinces. Recommendations for policymakers were provided based on the identified trends, emphasizing the necessity for tailored urban planning and development strategies. All data and statistical information were meticulously attributed to the Pakistan Bureau of Statistics, ensuring the reliability and credibility of the research. This structured approach facilitated a thorough examination of urban population dynamics, offering valuable insights into the multifaceted factors contributing to urbanization over the decades and contributing to a comprehensive understanding of the subject matter.

## Results and Discussion

The population of Pakistan has exhibited substantial growth over the census years, reflecting dynamic demographic changes. In 1951, the population stood at 33,740,000, and by 2017, it had surged to 207,774,000. This significant increase indicates a consistent upward trend in population size over the decades. The period from 1951 to 2017 witnessed a nearly six fold population expansion, highlighting the demographic dynamism of the country (Figure, 1).

The census data reveals notable milestones in population growth. Between 1951 and 1961, there was an increase of approximately 9.4 million people. The subsequent decade (1961-1972) experienced a more substantial rise of around 22.5 million. The 1972-1981 periods witnessed a further increase of about 18.3 million. From 1981 to 1998, the population surged by approximately 48.1 million, marking a significant acceleration in growth. The latest period from 1998 to 2017 recorded an additional surge of about 75.4 million (Figure, 1).

This demographic analysis underscores the intricate interplay of factors such as birth rates, mortality rates, and migration patterns shaping Pakistan's population landscape. The accelerating growth rate, particularly in the later decades, emphasizes the importance of effective population management and sustainable development policies. The data provides a comprehensive overview of Pakistan's population dynamics, aiding policymakers in understanding the evolving demographic trends for informed decision-making.

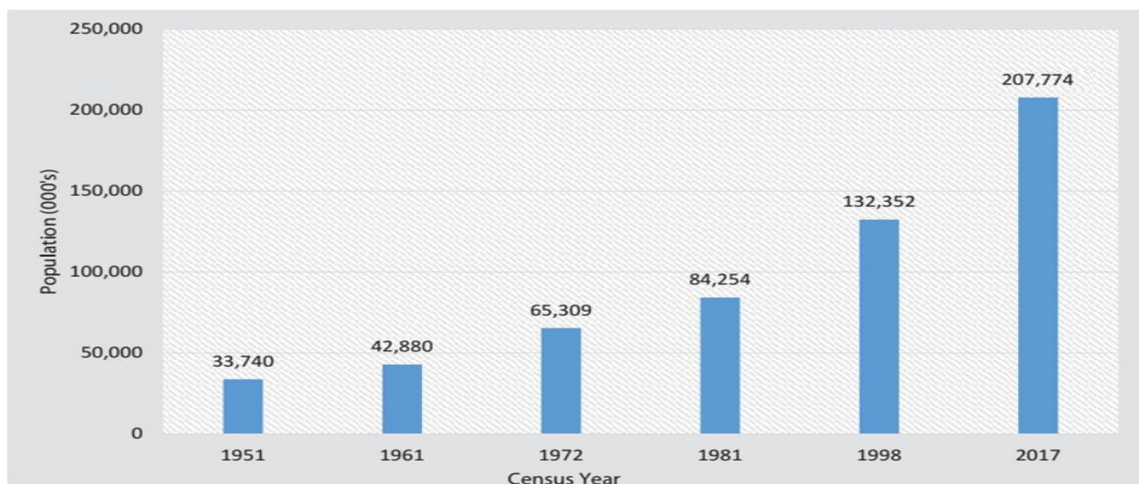


Fig. 1 Census Based Population of Pakistan Source: Pakistan Bureau of Statistics, 2017

The urban population of Pakistan has experienced significant growth over the decades. The numbers have more than doubled from 1951 to 2017, indicating a substantial urbanization trend. The urban population percentage has consistently increased from 17.8% in 1951 to 36.3% in 2017 (Table, 1). This upward trend suggests a continuous shift of the population from rural to urban areas. The pace of urbanization has accelerated, as evidenced by the notable increase in urban population percentages in successive census years. This acceleration may be indicative of factors such as industrialization, economic opportunities, and lifestyle changes drawing people towards urban centers.

The rise in urbanization rates emphasizes the need for strategic urban planning and infrastructure development to accommodate the growing urban population. Urban planning policies should address challenges related to housing, transportation, healthcare, and other essential services. The increasing urban population has implications for governance structures, requiring effective management and service delivery in urban areas. Policymakers need to consider the demand for urban services and the impact on the quality of life in cities. The data reflects changing socioeconomic dynamics, with more people being drawn to urban centers for economic opportunities and improved living standards. Understanding these dynamics is crucial for formulating policies that foster sustainable urban development.

**Table 1**  
**Urban Population of Pakistan according to census**

S. No.	Census	Urban Population	Urban Population Percentage
01	1951	5985497	17.8
02	1961	9654572	22.5
03	1972	16593651	26.5
04	1981	23841471	28.3
05	1998	43036404	32.5
06	2017	75,584,989	36.3

**Source:** Pakistan Bureau of Statistics, 2017

The urban population growth trend in Pakistan over the years indicates a gradual and steady increase, reflecting the country's ongoing urbanization. All the last six censuses from 1951 to 2017 highlighted upward and increasing trend in urban population growth. In 1951, the urban population constituted 17.8% of the total population. Over the next decade, from 1951 to 1961, there was a noticeable increase, with the urban population percentage rising to 22.5%. This suggests a significant shift towards urban areas during that period (Figure, 2).

The trend continued in the subsequent decades, with the urban population percentage reaching 26.5% in 1972 and 28.3% in 1981. This indicates a steady growth in urbanization, although the pace may have slowed compared to the previous decade. By 1998, the urban population percentage had further increased to 32.5%, marking a substantial rise over the preceding years. This suggests that urbanization continued to be a prominent demographic trend in Pakistan. The most recent data in 2017 shows a continued upward trajectory, with the urban population reaching 36.3%. This implies that urbanization has persisted as a significant trend, and the proportion of the population living in urban areas has continued to grow (Figure, 2).

Overall, the trend analysis indicates a consistent and gradual increase in the urban population of Pakistan over the years, reflecting a broader process of urbanization. Factors such as rural-to-urban migration, industrialization, and economic opportunities in urban centers may have contributed to this ongoing shift in population distribution (Figure, 2).

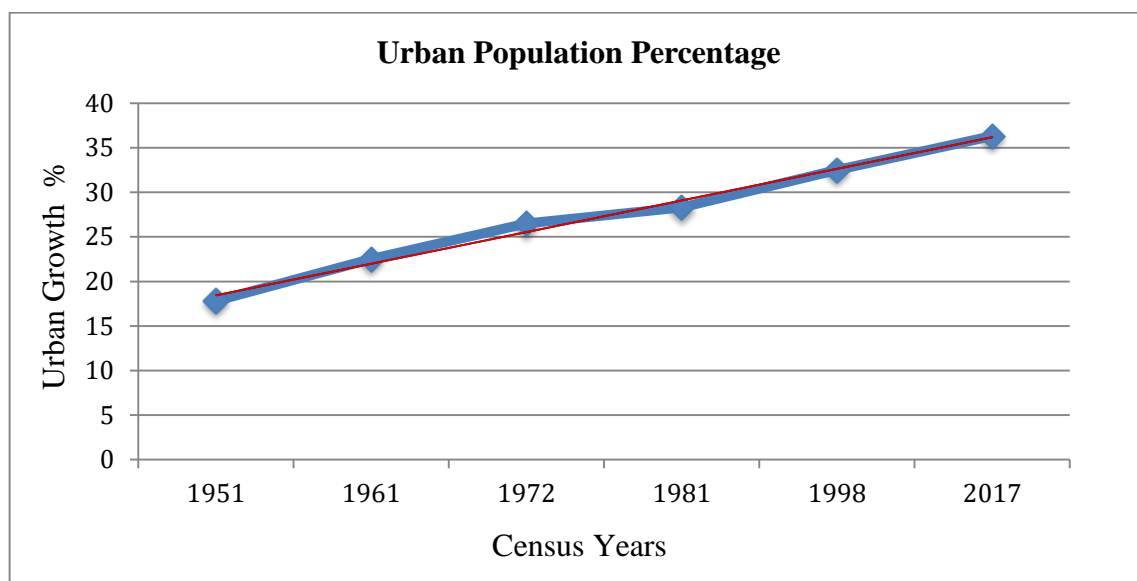


Fig. 2 Urban Population Trend (1951 - 2017)

Punjab consistently maintains the highest urban population among the provinces. The urban population has steadily increased from 3,568,076 in 1951 to 40,387,298 in 2017, reflecting sustained urbanization. Sindh follows Punjab in terms of urban population, with Karachi being a major contributor. The urban population has seen substantial growth, from 1,768,127 in 1951 to 24,910,458 in 2017. Khyber Pakhtunkhwa, (KPK) exhibits a gradual increase in urban population across census years. While the urban population is comparatively lower than Punjab and Sindh, there is a consistent upward trend. Balochistan shows a notable increase in urban population, although the numbers are lower than other provinces. The urban population has risen from 144,549 in 1951 to 3,400,876 in 2017. Islamabad, as the capital territory, has witnessed significant urbanization. The urban population has grown substantially from 76,641 in 1972 to 1,014,825 in 2017 (Table, 2).

Punjab and Sindh, being more populous provinces, contribute significantly to Pakistan's overall urbanization. The rate of urbanization is highest in Islamabad, reflecting the urban-centric development of the capital. Balochistan, while showing growth, has a lower urban population compared to other provinces (Table, 2).

All provinces and Islamabad have experienced consistent growth in urban population across census years. The data suggests a nationwide trend of urbanization, with varying degrees of intensity in different regions. The increase underscores the ongoing shift of the population from rural to urban areas. The provincial variations highlight the need for region-specific urban planning strategies. Policymakers should consider the distinct challenges and opportunities posed by urbanization in each administrative unit. Understanding the census-wise increase aids in projecting future urbanization trends and informs policy decisions for sustainable development. This provides insights into the dynamic urbanization landscape across Pakistan's administrative units, emphasizing the importance of tailored policies for each province and Islamabad (Table, 2).

**Table 2**  
**Urban Population of administrative units of Pakistan**

S. No.	Census/ Province	1951	1961	1972	1981	1998	2017
01	Punjab	3,568,076	5,475,922	9,182,695	13,051,646	23,019,025	40,387,298

02	Sindh	1,768,127	3,167,018	5,725,776	8,243,036	14,839,862	24,910,458
03	KPK	504,745	758,516	1,195,655	1,665,653	2,994,084	5,729,634
04	Balochistan	144,549	228,468	399,584	676,772	1,568,780	3,400,876
05	Islamabad	-	-	76,641	204,364	529,180	1,014,825

Source: Pakistan Bureau of Statistics, 2017

The urban population of major cities in Pakistan has witnessed significant growth between the 5th population census in 1998 and the 6th population census in 2017. Karachi experienced substantial urban growth, with the population rising from 9,339,023 in 1998 to 14,910,352 in 2017. Lahore demonstrated remarkable urbanization, with the population increasing from 5,143,495 in 1998 to 11,126,285 in 2017. The urban population of Faisalabad Metropolitan Corp. grew significantly from 2,008,861 in 1998 to 3,203,846 in 2017. Rawalpindi experienced notable urban expansion, with the population increasing from 1,409,768 in 1998 to 2,098,231 in 2017. Gujranwala Metropolitan Corp. witnessed substantial urban growth, with the population rising from 1,132,509 in 1998 to 2,027,001 in 2017.

Peshawar demonstrated considerable urbanization, with the population increasing from 982,816 in 1998 to 1,970,042 in 2017. Multan showed significant urban growth, with the population rising from 1,197,384 in 1998 to 1,871,843 in 2017. Hyderabad experienced notable urban expansion, with the population increasing from 1,166,894 in 1998 to 1,732,693 in 2017. Islamabad Metropolitan Corp. witnessed substantial urban growth, with the population rising from 529,180 in 1998 to 1,014,825 in 2017. Quetta demonstrated considerable urbanization, with the population increasing from 565,137 in 1998 to 1,001,205 in 2017 (Table, 3).

All major cities experienced significant urban population growth between the two census years, reflecting nationwide urbanization trends. Karachi and Lahore, being the most populous cities, showed substantial increases, emphasizing their role as major urban centers. The growth of metropolitan corporations like Faisalabad, Rawalpindi, Gujranwala, and Hyderabad underscores the urban expansion in various regions. The urbanization trend in the major cities aligns with the broader demographic shift towards urban areas observed in the overall provincial and national data. This table provides a holistic view of the urban population dynamics in major cities of Pakistan, indicating a consistent trend of urbanization and demographic changes over the specified period (Table, 3).

**Table 3**  
**Population of major cities of Pakistan**

S. No.	Name of cities	Population Census 2017	Population Census 1998	Difference
01	Karachi	14,910,352	9,339,023	+5,571,329
02	Lahore	11,126,285	5,143,495	+5,982,790
03	Faisalabad Metropolitan Corp.	3,203,846	2,008,861	+1,194,985
04	Rawalpindi	2,098,231	1,409,768	+688,463
05	Gujranwala Metropolitan Corp.	2,027,001	1,132,509	+894,492
06	Peshawar	1,970,042	982,816	+987,226
07	Multan	1,871,843	1,197,384	+674,459
08	Hyderabad	1,732,693	1,166,894	+565,799
09	Islamabad Metropolitan Corp.	1,014,825	529,180	+485,645

10	Quetta	1,001,205	565,137	+436,068
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Source: Pakistan Bureau of Statistics, 2017

## Impact of Urban Population Growth

The impact of urban population change in Pakistan is multifaceted and extends across various aspects of society, economy, and governance (Kirby, 2022). Here are key impacts associated with the urban population change in the country:

### Economic Transformation

Urbanization often accompanies economic development and industrialization. The shift from agrarian to urban economies brings about changes in employment patterns, with more opportunities arising in non-agricultural sectors. Urban areas become hubs for commerce, trade, and services, contributing significantly to the national economy. The growth of businesses and industries in urban centers can lead to increased productivity and economic output (Freckleton et al., 2006; Tsen&Furuoka, 2005).

### Infrastructure Challenges

The rapid influx of people into urban areas puts immense pressure on infrastructure. Issues such as housing shortages, inadequate transportation, and insufficient public services become prevalent, requiring substantial investments in urban planning and development (Li et al., 2003).

### Social Dynamics

Urbanization often leads to changes in social structures and lifestyles. Increased diversity, exposure to different cultures, and the formation of cosmopolitan communities are common in urban settings. Social challenges, including issues related to crime, public health, and education, may emerge due to the concentrated population in urban areas (Iqbal et al., 2015).

### Governance and Service Delivery

The increased demand for services in urban centers necessitates effective governance structures. Local authorities must adapt to manage the complex needs of a growing urban population. Challenges related to waste management, water supply, and healthcare becomes more pronounced, requiring innovative and sustainable solutions (Lee, 2003).

### Environmental Impact

Urbanization often results in environmental challenges such as air and water pollution, deforestation, and increased energy consumption. Balancing urban growth with environmental sustainability becomes a critical consideration (Rehman&Deyuan, 2018).

### Rural-Urban Migration Patterns

The shift of population from rural to urban areas reflects changing migration patterns. While urbanization offers economic opportunities, it can also lead to depopulation and challenges in rural regions, affecting agriculture and traditional livelihoods (Lucas, 2004; Ahmad et al., 2013).



## **Educational and Healthcare**

Urban areas generally offer better access to educational institutions and resources. However, the demand for quality education may outstrip the available facilities, leading to educational challenges. Urbanization may improve access to healthcare facilities, but it can also strain the existing health infrastructure. Urban health challenges, including higher rates of certain diseases, may arise (Baker et al., 2011). Understanding and addressing these impacts are crucial for policymakers to formulate strategies that promote sustainable urban development, improve living standards, and mitigate challenges associated with rapid urban population change in Pakistan (Akram et al., 2009; Jaffri et al., 2012).

## **Conclusion**

The comprehensive analysis of urban population change in Pakistan spanning from Census of 1951 to 2017 has provided profound insights into the multifaceted dynamics of the country's urbanization. Adopting a systematic approach, this research meticulously examined census data, unraveling trends, patterns, and implications at the national, provincial, and city levels. The demographic landscape of Pakistan has undergone substantial transformations, with the overall population surging nearly six-fold from 33,740,000 in 1951 to 207,774,000 in 2017. Noteworthy milestones in population growth underscore the intricate interplay of birth rates, mortality rates, and migration patterns, emphasizing the need for effective population management and sustainable development policies.

The urbanization trend in Pakistan is particularly striking, as reflected in the significant growth of the urban population, more than doubling from 1951 to 2017. The acceleration in urbanization rates, indicated by the rise in urban population percentages, suggests a continuous shift from rural to urban areas. This urban expansion has implications for governance, infrastructure, and the quality of life in major cities and provinces. Punjab consistently leads in urban population, followed by Sindh, while Islamabad exhibits the highest rate of urbanization, emphasizing the capital's pivotal role in the country's urban development.

Major cities, including Karachi, Lahore, and others, experienced substantial urban growth, aligning with nationwide urbanization trends. This underscores the role of these cities as major urban centers and necessitates strategic urban planning to accommodate the burgeoning population. The research provides a nuanced understanding of the regional variations in urbanization trajectories among provinces, emphasizing the importance of tailored policies for sustainable development.

The attribution of all data to the Pakistan Bureau of Statistics ensures the reliability and credibility of the research. In essence, this comprehensive study contributes significantly to the body of knowledge on Pakistan's urbanization dynamics, offering a foundation for evidence-based policymaking to address the challenges and harness the opportunities associated with rapid urban population change. The insights gained are pivotal for formulating strategies that promote sustainable urban development and elevate living standards across the diverse landscape of Pakistan.

## **Recommendations**

The recommendations for policymakers emphasize the necessity for customized urban planning and development strategies, considering the unique challenges and opportunities in each administrative unit.

### **Urban Planning and Infrastructure Development**

Invest in comprehensive urban planning and infrastructure development to accommodate the growing urban population throughout the urban centers in Pakistan. This includes the construction of affordable housing, efficient public transportation systems, and the provision of basic amenities such as water, sanitation, and healthcare. Well-planned cities can mitigate the challenges associated with rapid urbanization, enhance quality of life, and promote sustainable urban growth.

### **Economic Diversification and Job Creation**

Implement policies that promote economic diversification in all the provinces. This can help reduce rural-to-urban migration driven by the search for employment opportunities. Encouraging the development of industries, technology hubs, and small businesses in urban centers can provide residents with viable employment options, ultimately contributing to a more balanced and sustainable urban population growth.

### **Social and Educational Initiatives**

Prioritize social and educational initiatives within urban centers especially in the big cities to address the needs of the urban population. Enhance access to quality education and healthcare services.

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