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INSTITUTE for
COMPETITIVENESS



Confederation of Indian Industry
Northern Region

Liveability Index 2010: The Best Cities in India



The Liveability Index 2010

a mapping of 37 cities of India

A CII – Institute for Competitiveness Report

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Foreword

Cities have strongly emerged as the prime engines of the Indian economy and generators of national wealth... the future is inescapably urban.

With a total urban population of 285 million and 35 metropolitan cities and metropolises, India's urban issues with all their related challenges and opportunities demand their firm place on the national agenda

India is launching her campaign for good urban governance at one of the most radical turning points in the demographic history of mankind. The entire developing world is witness to an unprecedented shift of human settlements to the cities. While India's population remains substantially rural, she is emerging as one of the fastest urbanizing countries in the world, and has already a staggeringly large urban population, around 285 million. It is estimated that by the middle of this century or probably earlier, she would reach the same milestone that the world reached at the beginning of this century - of becoming more urban than rural. The economic base of the nation through expanding industries, trade, commerce and services has already shifted to the urban centres. Cities have strongly emerged as the prime engines of the Indian economy and generators of national wealth. It is evident, looking at the past fifty years of India, and the empirical evidence around the world, that the future of India is inescapably urban. As the National Commission on Urbanization stated, urbanization is the inevitable concomitant of economic change. It is time for us to treat urbanization as a positive, historical force and care for our urban centres. It is time that the nation perforce invests in the destined social and economic functions of cities and ensures that cities deliver a quality of life that would enable them to become national assets and engines of economic growth.

India's overall demographic figures of rural-urban divide do not reveal the fact that a sizeable part of the country has reached levels of urbanization that are much higher than the national average. Among the larger States, the States of Tamil Nadu and Maharashtra are very close to the halfway mark and the States of Gujarat and Karnataka are substantially urbanized. The smaller States of Delhi and Mizoram and Goa are wholly or predominantly urban, and so are some of the Union Territories. Even Uttar Pradesh, West Bengal, Andhra Pradesh, Madhya Pradesh, Rajasthan, Bihar and Punjab that are predominantly rural States have very large urban populations. The graph of metropolitan and mega cities has continued to climb and 35 such cities now dot the Indian landscape. And scores of cities with populations in excess of 100,000 are jostling to join the million-plus city club. These unambiguous facts that stare us in the face clearly demand that the country's urban portfolio is large enough to merit serious concern. India's urban issues with all their related challenges and opportunities demand their firm place on the national agenda and the Nation and urbanized States need to lead in strategizing for cities and their needs.

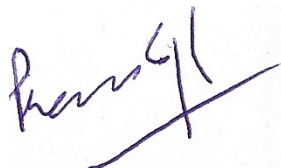
With 30 per cent of India already living in town and cities, it is projected that in the next 2 decades nearly half of India would be living in urbanized areas. A major challenge would be to developing new cities especially tier 2 and 3 cities as alternate hubs for commercial activity and migration. This becomes more important by looking at the fact that the present metros are reeling under severe resource and infrastructure crunch.

In order to gauge a better understanding of the macro environment of the sector, a study was conducted by Knowledge partner – Institute of Competitiveness, India to measure the Liveability Index mapping of 37 Cities of India. The report looks at some of the themes of the Conference. The conference will take the discussion to a new level in what promises to be an event that will have an impact for years to come on the urban debate. Some of the debates would look at urban mobility, diversity, environment, social development, new business models for making impact on liveability of cities et al.

CII has been actively involved with the Infrastructure sector addressing their key issues relating to policy matters and developing a road map for the growth of this sector. As part of its initiatives, CII organises various focused interactions, seminars and conferences to provide a platform for deliberations. International Conference on Competitive Cities is one such initiative.

We thank all data authorities associated with the study for their vital inputs. We not only hope you would find the report enriching and meaningful, but that actionabilities shall arise as triggered by revelations in the Liveability Index 2010 Report.

I look forward to your views on the report.



Pradeep Singh

Chairman, Infrastructure Sub – Committee, CII Northern Region &
Managing Director, IDFC Projects Ltd

It is time to begin asking questions.

And communicating firmly, through all available fora and platforms, that only genuine answering would be appreciated.

Question 1: Why are our cities lagging on liveability standards vis-à-vis international cities?

Question 2: What is the understanding of policy makers and those in governance, of issues besetting our cities? Are they aware of the factual position? Do they have a generic grasp or an analytical insight into state of the cities?

Question 3: What roadmaps are being evolved to excel on global standards?

The Liveability Index 2010 hopes to offer a structured delving into this vital aspect of our living. It focuses on presenting a powerful model that comprehensively maps a city's liveability quality. The multitude of pillars and constituent sub-pillars show the truth, unmasked and measurable.

The onus is now on the accountable to show appreciation in the various sub-indices. And this would happen only with realistic soul searching and acknowledging the uniqueness each city carries in its kernel, in its past and in the expectations of its present denizens.

Happy evolving!



Dr Amit Kapoor

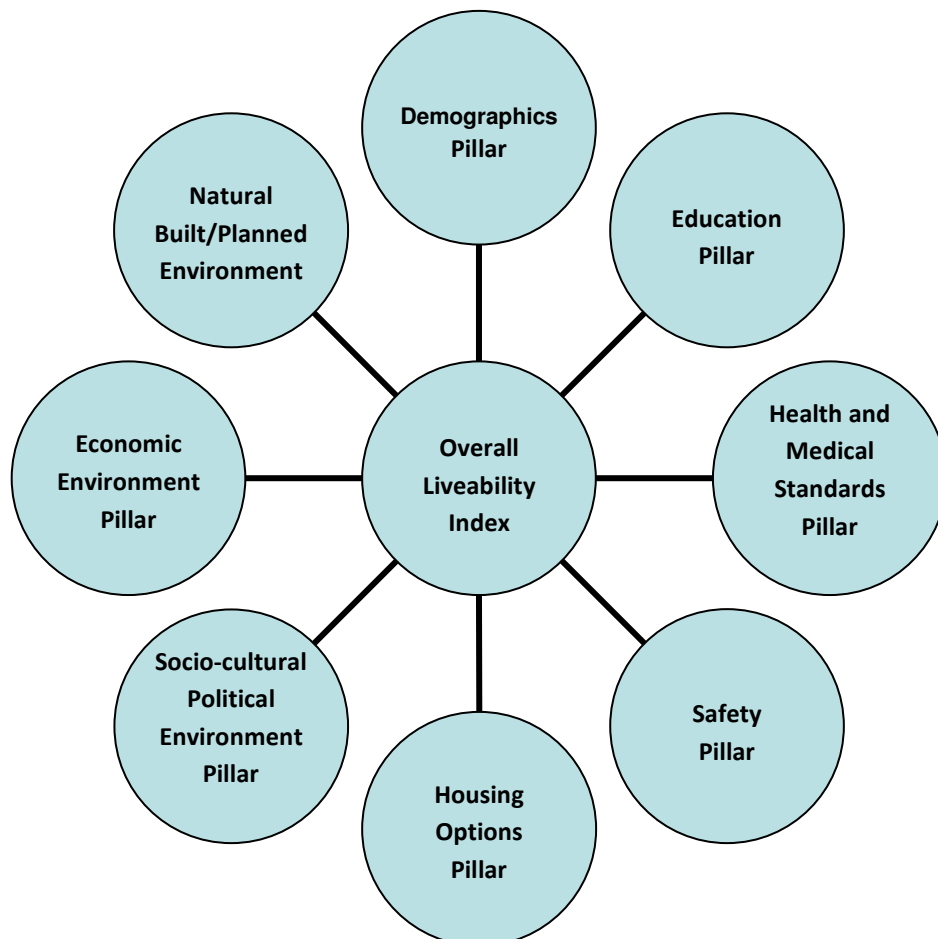
Chairman

Institute for Competitiveness

Executive Summary

The Liveability Index 2010 is a methodical comment on quality of living conditions our cities offer. Rather than approach the issue monolithically, the report undertakes a statistically robust splintering of the liveability into multiple dimensions. It relies on entirely objective analysis, employing more than 300 indicators on a 10 year time line series. It has no prejudice color up the findings as usually happens in survey-based analysis; no subjectivity touches the inputs and processing, even the weights have been computed by application of Principal Component Analysis, eliminating multi-collinearity.

The model is an evolved adaptation of the world renowned diamond model of Prof Michael Porter of Harvard University.



The 37 cities studied here have been ranked on these pillars and their 20 constituent sub-pillars; they can identify nearest performing ones for ameliorating their lot or set truly aspirational benchmarks. This is the path to India's prosperity.

The Liveability Index Report

1.0 Introduction

In the rush to be among the top in the growth race, development loses its scope as regions prosper monetarily but leave behind a crucial aspect of their essence. In the midst of pollution and congestion, cities become the board of machines and industries while the intended residents suffer in environmental and social neglect. The liveability of cities is severely challenged as they trace a path of GDP growth rates forged with a policy that takes the quality of life to extremes leaving little scope for sustaining the development through a disgruntled residence and hence, industry.

The Quality of Life Index is an annual study of key factors that determine the degree of liveability of cities in India. The mission of the Index is to measure significant drivers of the health and wealth of the community that reach beyond the monetary value that drive the economy to the overall health and welfare of the residents. Cities are under constant supervision of people and companies alike. Contrary to popular belief, the four metropolitans are facing stiff competition as residents and people are pacing high standards on their requirements. Residents have the requisite purchasing power at their disposal to look for not just a suitable house but a desirable location.

Quality of life is being given more importance than before as residents and businesses search for alternatives giving them an option to cut costs. Expense needs to be coupled with a good infrastructure and in the Indian cities especially, continued availability of the basic amenities like water, road and power. Cities in India may be charting high growth rates; however, living in these cities is not synonymous to the economic viability of the location. Industries are likewise probing for regions that keep their cost of business low. Lack of power or congestion not only increase their operational costs but lead to dissatisfied employees who need to settle in these regions.

The Index provides insight into the quality of life available to people and provides evidence on the future state of the city in terms of its liveability. The index is a composite measure of the social, environmental, economic and civic factors that directly determine the willingness of a citizen to reside in a city and hence, the potential of the city to attract human resource and consequently industry.

Liveability has received more emphasis lately due to the degrading condition of standards of living in the top metropolitans. While they may be the best cities offered by India, the congestion, pollution, lack of infrastructure, power or even

water undermine the efforts of the cities to scale on global standards. The Index is a tool to first gauge this liveability, and then to guide informed decisions to shape the future of the city.

This index is a novel effort at bringing growth and development into a common perspective and its novelty is no less given its first appearance in the economic literature of India. The 2010 Index is made up of the most recent data sets collected and is reflective of the current state of the economy of the top cities of India. The true value of the Index is in providing clear, statistical evidence of trends. The Index primarily sources data from organizations like CMIE.

It is important to note the difference between indexing and ranking. Both indexing and ranking involve the tracking of consistently measured data. Ranking, however, compares unique data sets to each other periodically, whereas indexing measures the change of comparable data sets to each other over time. It is the change factor of indexing that gives us an accurate view of our position relative to other comparable cities. Indexing is an excellent tool to monitor change and the purpose of the index is to create a set of annual studies.

Two of the features of the Index are that it calculates the absolute change as well as the relative rate of change. This relative rate of change is designed not only to show whether a measurement increased or decreased, but more importantly, how fast it changed in comparison to the rate of change in the other cities.

The goal of using this format is to make the Index simple and understandable. The Index strives to maintain the highest level of data integrity. Behind the charts, there are a variety of mathematical calculations, and innumerable data sources were used in the compilation of this report. The purpose of the study is to provide the residents and the industry with a comprehensive measure to gauge a region on its quality of life to make a more informed decision when choosing their destinations for housing or operations. There are options galore but no single criterion to act discriminator between the various regions. The index is a combination of the various indices and indicators to assess the cities on all the necessary criteria and aid future settlers to evaluate each city objectively.

Businesses understand the necessity to measure whatever you want to improve; and these improvements can be carried on only those factors that are measured. This truism can be applied at the policy level. The Quality of Life Index is first and foremost a unique quantitative and qualitative measurement tool that allows for the measurement of “liveability” annually. It identifies those areas where progress is being made or maintained and areas where we need to be vigilant and allocate

resources to improve. The relative rate of change and where we rank is of significant importance.

2.0 Methodology

People throughout the world expect their local, state, and central governments to improve the social, economic, and environmental conditions within their jurisdictions. To this end, government officials and academic researchers have sought to develop various indices in order to gauge progress, to make comparisons between and among different cities, regions, and countries, and to measure the impact of government policies. A Quality of Life index is a system that monitors quality of life for a given environment using carefully selected social, economic, and environmental indicators. These indicators ultimately help to measure different aspects of society. While there is a consensus that improving quality of life at any geographic scale is a laudable goal, there is no consensus about what constitutes the most appropriate index or set of indices. Consequently, there is now a veritable cottage industry for the development of such quality of life or liveability indices. These indicators must accurately represent the social, environmental, and economic needs of the community. By monitoring these important indicators, policy makers and officials can make better-informed decisions about how to address problems within their domains.

An indicator is “a measurement that reflects the status of some social, economic, or environmental system over time. Generally, an indicator focuses on a small, manageable, tangible, and telling piece of a system to give people a sense of the bigger picture”. Meaningful and useful indicators reflect both desirable and measurable outcomes. Indicator creators expect the indicators to simplify complex data sets and provide a clear perspective of the bigger picture. Indicators communicate trends in a community and provide an opportunity for a community to make essential changes. Without indicators, quantitatively measuring the progress of a community and make the necessary changes to improve the council’s services is impossible.

Indicators must be relevant to measure a community’s quality of life. The index’s ability to communicate trends enables the production of positive changes through public actions and decision-making. The community should be able to alter the underlying variable or condition that the indicator measures, through such changes as innovative laws, altered distribution of funds, or public action. A high-quality indicator should monitor city conditions in order to aid city officials in anticipating and accommodating for future trends in the attributes index. With strong indicators, a government has the ability to create positive change. Indicators must have the ability to communicate quality of life issues to the majority of citizens. People of the

community need to be able to relate indicator trends to their own lives that allow them to make constructive changes.

When collecting data for indicators, one must consider the availability and consistency of the data. The levels of availability and validity of data can often limit which indicators a community can use. Weak data sources can inhibit indicators from aiding a government in monitoring important trends. When an indicator meets all the guidelines, one considers the indicator as a valid measure of quality of life for a given community. The study uses hard data collected from reliable sources to eliminate the possibility of personal bias or a sampling error obscuring the reality and giving a coloured picture based on faulty human perception. To uphold reliability and validity, the data was collected from public organizations and institutes engaged in the collection of statistics, information and summations. CMIE and CSO a few noteworthy names that bring confidence in our assessment of competitiveness. The conditions of quality of life change from community to community due to diversity. Therefore, it is important for the community to have the ability to readjust and change the indicators periodically.

The cities were studied over a decade and where required, the time line series of the last 6-8 years was utilized to extrapolate and interpolate to plug the gaps in the absence of data. Gaps in the data line are natural given the proclivity of the city governance in lacking in the prerequisite databases on the facets of administration and cities. Also, cities being a narrowly understood region may not receive the right amount of attention and resources to maintain the requisite data. Some cities have risen in economic and political prominence recently owing to an inadequate amount of data present for the studies. The breaks in the data structure were however, filled with similar size or character entity's data to prevent the undue bias, due to either favourable or negatively correlated data being introduced in the conclusion.

Hard facts have allowed robustness and standardization of data across all cities backed with normalization ensuring consolidation of data across the varied units of measurement. The myriad of parameter were developed into comprehensive indices with care to prevent multicollinearity from obstructing the use and the results of the data. Moreover, even small quantum changes and their effects are easily discernible on the factors influencing competitiveness if the data follows the hard path. From the purview of strategy formulation and policy execution, the measure thus ascertained provides reliability and clarity in the choice of the factors deemed to determine liveability of a city: the bird's eye for those targeting to enhance liveability.

The selection of the parameters and the framework are to serve the purpose of capturing the overt and the covert dynamics that determine the liveability of any

city. Inspired by the framework adopted by the leading global units like Mercer, the Economist Intelligence Unit (EIU), Monocle and several others, it captures the essence of liveability from a microeconomic perspective to fully gauge the factors that make a city liveable. The various methodologies have been amalgamated and modified to suit the Indian context. The measure for liveability is supported by ten pillars or dimensions that assess the residential potential of a city.

2.1 Measurement of index

The identification of liveability in any city would follow a few steps or a process that standardise the procedure and the evaluation of liveability for future comparative endeavours.

Step1: Identification of parameters

It is imperative for a framework for liveability to be developed as the factors affecting the measure are innumerable but the impact is specific to certain dimensions. The sub indices evolve out of the effects of the various factors on the final measure. Every sub index would hence be a function of constituent factors. Before the data collection, the requisite framework needs to be developed. For the purpose the model uses data under 10 major domains/dimensions along with their sub-dimensions, and possible indicators.

Step2: Collection of data

Secondary data from reliable government sources was utilized in developing the skeleton of the competitiveness model. The data is collected over a period of stipulated time period to gauge the trends and patterns in the performance of the various cities. It is imperative for the data to be over a long run period to analyse the historical trajectory of progress or degeneration and identify the issues and concerns for the city.

Step3: Identify economic strength of the city

An index on the related and supporting industries and the context for rivalry are developed to complete the measure of competitiveness. These would include the activities that the city specializes in and the processes through which the local endowments of the city are utilized to give it a distinct competitive advantage.

Step4: Identify threats and opportunities

There are external as well as internal dynamics that determine the performance of the cities. The threats and opportunities are a function of the external dynamics and

their amalgamation with the internal possibilities and endowments of the city. We need to identify these factors when finally interpreting the indices and data at hand. The internal dynamics are subject to the local control of the cities but the external factors are required to be utilized to the best advantage of the city.

Step5: Calculate the Quality of Life index and the measures to enhance the potential of the city

The indicators gathered thus need be grouped under various categories to measure the level and direction of influence on liveability. Most of the grouping is self evident and hence summated together. However, a few other are categorized based on discretion and judgement. Some of the indicators cast a negative impact on liveability and the other pose a positive influence. Hence, understanding the indicators is consequential for the index to give a realistic picture of the current condition of the cities.

2.2 Identifying and Grouping Indicators

Identifying the right indicators to gauge a qualitative aspect of life requires economic intuition and a Herculean effort. A robust study on the quality of life in Indian cities is still lacking. Indices across the world have adopted multiple approaches to gauge liveability and the quality of life. This report however, modifies the popular approaches to suit the Indian context better. For instance, majority of the people around the world will look for a low crime rate and good schools in the locality they want to settle, but perhaps only an Indian will consider the presence of a sabzi mandi where you can get fresh seasonal fruits and vegetables at a reasonable price or look into the availability of abundant water supply in the area. Thus, while the general definition of quality of life does not vary a great deal, the Indian definition will demand slight modifications. Appropriately, these peculiar indicators have also been selected and given suitable weights to effectively assess quality of life for the above.

The selection of the factors is based on the impact that these factors have on the liveability. A direct or an indirect influence on these factors qualifies the factor as an indicator of liveability. Appropriately, the index is derived from an integrated approach on meticulous academic constructs and objective empiricism. The expanse of data was intended to provide fine granularity to the results. The indicators subsequently provide a vast assessment on the particulate formation and significance of potential emanating from the ground level. Quality of life in a city is not a growth concept only covering the city as a whole but a function of various other factors that aggregate from the basal to the visible. Thus, scores emanate for ten pillars of liveability with each pillar factored at sub-index levels.

Each of the sub indices are developed based on the indicators, grouped together on theoretical constructs as well as self evident inclination. Each of the ten pillars has sub indices that aggregate to formulate the more overt phenomenon of competitiveness for each city.

2.3 Calculating and interpreting the index

Every indicator was pivotal in determining the final index for liveability. However, every indicator does not play an equitable role in the productive potential of the city. Calibrated weights have been attached to each indicator to generate a value for each category as well as the final score. Competitiveness hence becomes an amalgamation of various factors influencing liveability and the mere size of a city would not ensure a higher measure of liveability.

The purpose of the index is to gauge liveability as a measure of prosperity and development for the state and hence, per capita figures ensure that the relative size of each figure is taken as an indicator rather than the absolute number. It focuses on the quality of the factors rather than just the quantity and hence provides a more comprehensive measure of hitherto misunderstood concept of development.

3.0 Defining Liveability

Quality of life is a subjective notion. People differ in their notion with different incomes, influences and cultures governing their decisions. Nevertheless, the basic notion behind a good lifestyle must fulfil certain necessary though not sufficient conditions. For all residents, a city must offer basic amenities and infrastructure at a cost that makes living convenient and hassle free. The best of cities will attract more people and congestion and distances will increase for the residents. However, severe water shortage in Pune makes living a nightmare as residents contend with no water supply for days together.

Liveability has been an important aspect of the western cities or the regions in the developed world for long now. To the residents, good educational systems, spacious and safe environment and convenience of markets and stores is important. The regions compete therefore, to improve the quality of life offered to make the city or the regions more liveable for the people. India is fast following the same trend. Urbanization and increase in the disposable income of the people has brought alive options for people. It is no longer adequate for cities to be mere employment rounds. There are multiple options available for people to choose from. Residents seek value for money as they look for costs that conform to the convenience and luxury that the city has to offer. Hence, the first aspect is to define liveability.

A liveable city is not just an urbanized area in an urbanized region defined by the presence of a municipality. Certain elements compose a liveable city and become the prerequisites for a city to become a desirable place to live in. The quality of life experienced by citizens living in a city is tied to their ability to access infrastructure (transportation, communication, water, and sanitation); food; clean air; affordable housing; meaningful employment; and green space and parks. The differential access of people within a city to the infrastructure and amenities highlights questions of equity. For the purposes of this paper, liveability will be defined as 'quality of life' as experienced by the residents within a city or region. In this context sustainability is the ability to sustain the quality of life we value or to which we aspire. In operational terms it is often viewed as enhancing the economic, social, cultural and environmental well-being of current and future residents.

Liveability refers to an urban system that contributes to the physical, social and mental well being and personal development of all its inhabitants. It is about delightful and desirable urban spaces that offer and reflect cultural and sacred enrichment. Key principles that give substance to this theme are equity, dignity, accessibility, conviviality, participation and empowerment. The Indian context however, differs from the conventional sense of quality of life.

The developed cities take certain things as given while the presence of the same becomes important for the Indian cities. A suburb in USA does not expect a grocery store within walking distance of their houses. It is assumed that people have cars and prefer large grocery stores like Wal-Mart to take care of their needs rather than a kirana (mom and pop store) around the corner who would be willing to even come personally to your house to deliver the goods. A vegetable haat or mandi is a necessity near the houses and would greatly influence the perception of the people, raising issues concerning the liveability of the area in case of no vegetable vendor within walking distance of the housing colony.

Therefore, liveability in India is a far more comprehensive and diverse issue than the western definition of liveability. The Indian context offers diverse religions, cultures and people in the same region. Therefore, to fully gauge liveability, the index needs to measure not just the apparent but the latent aspects of quality of life as well. The intention of the report is to judge how people would perceive liveability and make a measure for future decision makers to assess. Hence, its important when measuring liveability, certain key elements are kept in mind.

In a liveable city, people can see and hear each other. People cannot be segregated and isolated and put with miles from each other as dialogue is important. A city

cannot be liveable in India or any other part of the world if people do not have the avenue to talk to each other. The public realm offers many activities, celebrations, festivals that bring all of its inhabitants together, events that bring opportunities for its citizens to be together, not in the specialized roles and functions that they usually occupy. A good city is not dominated by fear, not by a conception of fellow human beings as evil and subhuman. It offers the public realm as a place of social learning and socialization that is indispensable for children and young people. All of the inhabitants of the community serve as models and teachers. Cities must meet many functions – economic, social and cultural. In so doing, however, there has been a trend for the modern city to over-specialize in one or two functions; other functions are being sacrificed. All inhabitants confirm and value each other. Aesthetic considerations, beauty, and meaning of the physical environment must have high priority. The physical environment and social environment are two aspects of the same reality. Just as it was a mistake to think that city inhabitants can have a good civic and social life in an ugly, brutal and physically inhospitable city. Finally, the wisdom and knowledge of all inhabitants are appreciated and used. People are not intimidated by experts, whether architects or planners, but show a sense of caution and distrust of those who make decisions about their lives.

Accessibility to basic amenities is a central factor in achieving liveability. Instead of urban sprawl that separates housing from other functions, complete communities mix housing with other uses such as shops, businesses, restaurants, public spaces, offices, schools, parks, libraries, police stations, and entertainment venues. The ability for people to live a well-rounded life without having to travel distances in a vehicle is essential for creating strong communities with local character. By placing these amenities within walking distance, streets become social spaces that enable easy regular human contact in addition to the usual role of streets for moving people and goods. Through building structures such as shop/houses, the shops on the ground floor provide public space for interaction, while the inclusion of private housing on the floors above ensures that there are ‘eyes on the street’ that monitor and encourage appropriate social behaviour. The neighbourhoods are decentralized units that are vital for weaving people’s public and private lives together. When complete communities are designed to be safe, healthy and liveable for all, the city (and larger region) becomes a community of communities.

3.1 Economic Environment and Standard of Living

The average per capita income of cities as a larger per capita income represents a stronger economy. The employment levels that the city can offer apart from the local business environment and the economic growth patterns make the city a more attractive place to reside. Cost of living makes a big difference to the decision of the people and the industry as the costs are an important aspect of people's lifestyle now. The industry would also prefer to keep its operational costs low and a city providing the same would also be easy to attract the target skill set to. The four metropolitans in India are largely expensive. Mumbai may offer a wide arena for jobs and opportunities. However, living in Mumbai is far too expensive.

There is typically an inverse relationship of labour and income sources, especially in resort-based economies. For example, high-labour demand in service industries traditionally reflects lower paying positions. Therefore, it is necessary to track these two indicators independently to isolate the elements, which have an impact on income and industry distribution.

3.2 Socio-Cultural Environment

India is unique on this indicator as Indian cities see a wider mix of ethnicity and cultural mix than most other countries. For a city to be liveable, acceptance of this diversity becomes a crucial aspect. The freedoms of the people are curbed when religious functions or cultural festivals find no space in the paradigm of the city. People need to express themselves freely, in the language they want and the way they choose. Any city that shows low tolerance for diversity would either become a dictatorial setup for anarchy and internal clashes and disturbances between groups of different ethnicities. Therefore, through media related exchanges or multicultural function, cities need to portray a more secular set up that welcomes people and not religions.

3.3 Education

The indicator may seem cliché but proves to be an important consideration for all residents. The future of their families and their career growth are dependent on the number of schools, colleges and universities in and around the city. Industries are attracted to cities with a readymade work force available rather than depend on migrants from other regions to fulfil the needs. It is important for the city as well as it would mean less congestion. People from within the region can supply the human resource requirements and little scope and space is left for migrants looking for housing and share in amenities.

3.4 Health and Medical Standards

The indicator asserts all residents should have access to health care options. However, the number of beds available per person, hours required to reach a hospital and distance between the nearest health professional cast a major influence on the people and the liveability of the city. The life expectancy and mortality of the people apart from incidents of infectious diseases have a major effect on the productivity of the people and a city cannot prosper within the confines of lack of medical attention or low productivity due to a high incidence of diseases.

3.5 Natural environment

As population growth and the availability, use and consumption of our energy impact our global environment, the Index attempts to answer the question: What makes a county the place that it is through an ecological eye?

The Index uses the history of natural calamities and general climate conditions as a measure to track effectiveness at reducing pollution in general. Lower numbers reflect a lower amount of environmental misbalance. Global warming, carbon footprint and energy conservation are often daily news topics nationwide. The Index attempts to raise the question: What are we doing on a daily basis in our communities to improve our environmental liveability?

Ambient Conditions are defined by traffic, noises, light and any other human-generated elements emitted into our atmosphere that might impact the enjoyment of our community. A common term associated with ambient conditions is “night sky viewing,” or being able to see stars at night without light pollution. Cities usually lack in the natural ambience as the pollution increases. The increasing number of natural disasters and the break in the seasonal patterns has far flung effects on the sustainability of the city.

3.6 Public Service

The number of hours of power per person, cost of electricity in cities and even the amount of water available per person has huge implication on the cost of living of the people. Cities suffer as the basic civic amenities are available scantily to the people owing to large immigration and density of population in the cities. Employment opportunities are proportionate to the human resource entering the city. However, the intake of the city is limited by the resource and infrastructure constraints and the liveability for the residents is adversely affected. Apart from just power and water, modern cities require a stable communication system and well connected transportation network to ensure business and residential convenience.

3.7 Recreational possibilities

All work and no play, makes Jack a dull boy. Cities need a recreational break from their activities and restaurants, music and theatre options and sports and leisure alternatives are important for the economy of the city as well as the sustenance of the people. These are revenue generating avenues for the city, increasing employment and growth and have a positive influence on the productivity of the people. A person would go rejuvenated to office or back home after a weekend of activities of his/ her choice.

3.8 Consumer Goods

Every city in this world would require a basic market for shopping for daily consumption items and durables. Indian context differs as the shopping alternative needs to be present in different retailing formats. A grocery store near the house is a necessity while a huge mart for the same would not be considered convenient at a distance. Small cities sometimes fail to provide for an automobile market or even an electronics items store in close proximity.

3.9 Housing Option

The indicator depicts the relationship between household incomes and housing prices, which reflects the ability for the average wage earner to afford or rent a home. Every community must have the ability to house its work force. Lower values represent greater housing affordability. Urban planning and development play a major role to prevent crowding. Also a modern city requires that the housing option includes household appliances and maintenance and hence, the availability of markets and the labour force for household chores is important.

The development of complete communities is important and a balance needs to be struck at the regional level between the effectiveness and efficiency of decentralization and maintaining certain amenities in a centralized location within a city. Although cultural spaces can be created at the neighbourhood level, art galleries, symphony halls, sports stadiums and museums are better suited to be centralized. Similarly, a centralized downtown economic core of activity is important for the development of a liveable city. Economic development in a city may also require certain industrial activities to be clustered. The provision of energy at the neighbourhood scale may be less efficient than centralizing an energy system within a region. In order to be resilient to possible problems and malfunction, these centralized energy systems will need to build in a level of redundancy to ensure that if there are problems with the main energy infrastructure the region has back-up systems to supply energy. The tension between decentralization and centralization is

one of the balancing acts facing the cities. Part of resolving this tension lies in creating nodes or organs within the region in the form of growth concentration areas and compact communities.

4.0 Cities: A Current Case

Through our research of the databases within different Cities, many of these databases are inconsistent and difficult to relate. The inconsistency and the complexity are due to the various indicators used or very few indicators being actually measured. The assorted departments often collect their data over different time intervals and geographical areas. The data may also be difficult to obtain, acquirable only by request, and incomplete. Furthermore, some of the databases are difficult to function and filter, leaving only experts to operate the systems.

This lack of a central information system affected the development of our composite index. The report has provided cities with a foundation for creating a composite liveability enhancement plan. The construction of the composite index modelling our sub-indices will not only enhance communication in the council but also improve the city services. Moreover, the flexibility of our model has provided a means for the policy makers to change aspects of the index in order to meet the changing demands and concerns of the public.

5.0 Results and recommendations:

In Overall quality of life, Delhi outscores on Mumbai, Chennai, Bengaluru, Kolkata, Hyderabad, Ahmedabad, Pune, and Gurgaon which take up respective ranks 2nd to 9th. Faridabad (32nd), Ludhiana (33rd), Lucknow (34th), Patna (35th), Vishakhapatnam (36th) and Jamshedpur (37th) are last five ranked cities on Overall quality of life. Chandigarh is a surprising 14th on this, proving that a city needs much more than apparent beauty to be truly liveable.

The Demographic advantage is held by Mumbai, followed closely by Kolkata, Chennai, Coimbatore, Hyderabad, Ahmedabad and Delhi in order. The last five laggards are Jammu, Srinagar, Patna, Chandigarh and Indore (37th). Bengaluru is 12th.

On education, the winners are Delhi, Mumbai, Bengaluru, Chennai, Pune, Gurgaon, Kolkata, Hyderabad, and Chandigarh. Hyderabad, much touted for its education access is 8th. Bhubaneswar though growing in this regard, is 34th followed by

Kanpur, Lucknow and Patna (37th). Apparently having one IIT alone to showcase isn't enough for Kanpur to win the battle.

Health and Medical Standards are most notable for Kozhikode, Trivandrum and Kochi; a straight win for Kerala. Mumbai is 12th while this is Delhi's Achilles heel (17th) with Bengaluru 18th. Lucknow, Noida and Patna (37th) are the last three ranked cities.

On Safety, contrary to negative press against Delhi, it turns out to be the safest; followed by Bhopal, Bengaluru, Mumbai, Chennai, Hyderabad and Pune in sequence. Jammu (33rd), Srinagar (34th), Dehradun (35th), Gurgaon (36th) and NOIDA (37th) have the worst record. Jammu and Srinagar could be so ranked since terrorism is a major cause of concern. Delhi could be a simple victim of devils like Gurgaon and Noida bearing proximity.

Despite real estate spirals, Gurgaon leads in costs and availabilities; with Delhi, Bengaluru, Chandigarh, Chennai, Hyderabad, and Ahmedabad coming next. Surat (34th), Coimbatore (35th), Nagpur (36th), and Vishakapatnam (37th) have the most dismal record in this pillar on liveability.

The Socio-cultural Politico environment is healthiest, in order, for Mumbai, Delhi, Kolkata, Goa, Chennai, Bengaluru, Pune and Hyderabad. Ludhiana (36th) and Faridabad (37th) come up at the tail. Oddly, Chandigarh is a poor 19th on this showing its hyped image appeals only to one particular culture.

Delhi wins against Mumbai on Economic environment, with 3rd ranked Bengaluru, 4th ranked Kolkata, 5th ranked Chennai, 6th ranked Pune following with 7th ranked Hyderabad. Patna and Vishakhapatnam are the 36th and 37th cities.

Natural-Built/Planned Environment crown goes to metros: Mumbai, Chennai, Delhi, Bengaluru, Hyderabad, and Kolkata (6th). Attention is deserved by Faridabad (34th), Jammu (35th), Dehradun (36th) and 37th ranked Jamshedpur. Gurgaon is a painful 24th on this pillar.

Best Facet Of Pride:

As many as 10 cities have shown their best rank on Safety (Bengaluru, Bhopal, Delhi, Faridabad, Jaipur, Jamshedpur, Kanpur, Lucknow, and Patna).

9 have done it on Demographics (Ahmedabad, Coimbatore, Hyderabad, Kolkata, Mumbai, Mysore, Nashik, Vadodra, and Vishakhapatnam) and on Housing options (Bengaluru, Bhubaneswar, Chandigarh, Dehradun, Gurgaon, Guwahati, Jammy, Noida, and Srinagar).

Naturally, the recommendation for these cities would be to build on these strengths.

Worst Ranks:

Health and Medical Standards are issue of gravest concern for 11 cities: Ahmedabad, Bengaluru, Bhopal, Chennai, Delhi, Hyderabad, Jaipur, Mumbai, Noida, Patna and Pune.

8 cities have their lowest ranks on Housing issues – Coimbatore, Jaipur, Kochi, Kolkata, Nagpur, Nashik, Vadodara, and Vishakhapatnam); 7 have it on Education (Bhubaneswar, Guwahati, Jaipur, Kanpur, Lucknow, Patna, and Vadodara).

It would take intense soul-searching for these cities to redress this malperformance; and be prepared to take courageous and right steps for moving upwards.

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Appendices

Quality of Life – Overall Liveability Index

City	Score	Rank
Ahmedabad	27.03	7
Bengaluru	32.06	4
Bhopal	23.72	13
Bhubaneshwar	20.36	25
Chandigarh	23.45	14
Chennai	32.91	3
Coimbatore	20.41	24
Dehradun	20.42	23
Delhi	42.15	1
Faridabad	19.58	32
Goa	24.90	10
Gurgaon	25.42	9
Guwahati	19.99	29
Hyderabad	27.83	6
Indore	19.65	31
Jaipur	22.09	18
Jammu	20.86	20
Jamshedpur	17.30	37
Kanpur	20.08	28
Kochi	23.89	12
Kolkata	30.57	5
Kozhikode	23.12	15
Lucknow	19.25	34
Ludhiana	19.38	33
Mumbai	41.21	2
Mysore	22.35	17
Nagpur	22.05	19
Nashik	19.98	30
NOIDA	20.13	27
Patna	18.06	35
Pune	26.28	8
Shimla	24.14	11
Srinagar	20.63	22
Surat	20.81	21
Trivandrum	22.65	16
Vadodara	20.34	26
Vishakapatnam	17.73	36

Pillar Demographics & Constituents

City	Demographics		Population		Migration		Labor Participation Rate	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Ahmedabad	28.84	6	60.96	8	-47.14	5	62.00	16
Bengaluru	25.26	12	62.68	5	-65.61	32	66.26	7
Bhopal	26.88	9	54.16	24	-34.46	1	51.86	22
Bhubaneshwar	19.03	30	55.38	21	-57.14	17	46.73	26
Chandigarh	15.30	36	53.73	25	-68.05	34	47.40	25
Chennai	31.18	3	57.10	18	-51.18	8	78.97	2
Coimbatore	30.94	4	59.68	11	-55.42	16	78.97	2
Dehradun	18.11	32	53.29	27	-57.14	17	46.47	27
Delhi	28.58	7	79.97	1	-54.97	12	43.61	35
Faridabad	19.06	29	59.39	12	-61.29	28	45.65	31
Goa	19.00	31	52.95	29	-66.21	33	58.94	19
Gurgaon	19.42	27	57.17	17	-57.14	17	45.65	31
Guwahati	19.23	28	53.70	26	-57.57	24	50.08	24
Hyderabad	28.96	5	61.41	6	-55.06	13	69.73	5
Indore	11.30	37	57.43	15	-90.79	37	51.86	22
Jaipur	21.49	20	60.01	10	-61.49	29	53.12	21
Jammu	17.29	33	52.84	30	-57.14	17	44.34	33
Jamshedpur	19.64	26	54.30	23	-45.09	4	38.16	36
Kanpur	20.09	24	57.28	16	-55.32	14	45.92	28
Kochi	24.99	13	47.60	36	-43.57	3	63.41	13
Kolkata	32.40	2	64.06	4	-43.42	2	66.02	8
Kozhikode	20.57	23	46.73	37	-57.14	17	63.41	13
Lucknow	19.70	25	56.32	19	-55.35	15	45.92	28
Ludhiana	21.15	21	54.72	22	-60.48	27	58.00	20
Mumbai	34.70	1	77.65	2	-52.32	11	64.45	9
Mysore	27.73	8	53.26	28	-57.57	24	78.97	2

Nagpur	26.11	11	56.12	20	-52.26	10	64.45	9
Nashik	23.16	16	57.72	14	-64.22	31	64.45	9
NOIDA	20.90	22	60.67	9	-57.14	23	45.92	28
Patna	15.35	35	58.21	13	-49.90	7	23.45	37
Pune	23.16	17	61.38	7	-69.10	35	64.45	9
Shimla	26.41	10	49.24	34	-61.79	30	84.17	1
Srinagar	16.37	34	50.52	32	-57.14	17	44.34	33
Surat	22.56	19	66.51	3	-75.50	36	62.00	16
Trivandrum	24.25	14	49.60	33	-48.71	6	63.41	13
Vadodara	23.77	15	51.95	31	-52.02	9	62.00	16
Vishakapatnam	22.84	18	48.62	35	-58.44	26	69.73	5

Pillar Education & Constituents

City	Education		Education Level Distribution		Occupation Level Distribution	
	Score	Rank	Score	Rank	Score	Rank
Ahmedabad	61.13	10	57.00	20	63.88	6
Bengaluru	65.51	3	62.70	9	67.39	3
Bhopal	56.08	16	59.30	17	53.94	18
Bhubaneshwar	51.76	34	49.56	35	53.23	24
Chandigarh	61.98	9	63.49	6	60.97	9
Chennai	64.62	4	65.73	3	63.88	7
Coimbatore	56.26	14	58.43	18	54.81	16
Dehradun	54.25	25	56.42	22	52.81	26
Delhi	79.72	1	73.53	1	83.86	1
Faridabad	54.25	24	57.21	19	52.29	30
Goa	57.92	13	61.32	11	55.64	12
Gurgaon	63.24	6	59.65	15	65.64	4
Guwahati	52.54	33	53.12	28	52.16	31
Hyderabad	62.36	8	64.60	4	60.87	10
Indore	53.36	28	52.49	32	53.93	19
Jaipur	52.88	30	53.54	27	52.43	28
Jammu	58.90	11	62.52	10	56.48	11
Jamshedpur	53.70	26	52.68	31	54.38	17
Kanpur	51.52	35	50.93	34	51.92	35
Kochi	56.21	15	62.73	7	51.86	36
Kolkata	62.62	7	59.30	16	64.84	5
Kozhikode	55.12	20	59.90	14	51.93	34
Lucknow	50.76	36	48.89	36	52.00	32
Ludhiana	53.50	27	55.08	26	52.45	27
Mumbai	75.52	2	70.70	2	78.73	2
Mysore	54.59	23	55.67	25	53.87	20
Nagpur	55.73	17	56.96	21	54.90	14

Nashik	55.20	19	55.72	24	54.86	15
NOIDA	52.60	32	52.99	29	52.33	29
Patna	49.85	37	45.26	37	52.92	25
Pune	64.00	5	64.40	5	63.73	8
Shimla	55.05	21	60.91	12	51.15	37
Srinagar	58.34	12	62.72	8	55.42	13
Surat	52.64	31	51.17	33	53.62	22
Trivandrum	55.34	18	60.45	13	51.93	33
Vadodara	53.31	29	52.75	30	53.69	21
Vishakapatnam	54.59	22	56.18	23	53.53	23

Pillar Health & Constituents

City	Health and Medical Standards		Health Parameters		Health Support Infrastructure	
	Score	Rank	Score	Rank	Score	Rank
Ahmedabad	41.45	12	47.67	15	32.13	14
Bengaluru	39.63	18	46.45	22	29.39	20
Bhopal	35.38	31	36.91	33	33.07	9
Bhubaneshwar	37.18	28	39.85	30	33.18	8
Chandigarh	42.05	10	50.05	11	30.06	19
Chennai	44.73	6	52.66	6	32.84	11
Coimbatore	43.00	9	50.49	10	31.76	15
Dehradun	37.22	27	45.51	25	24.79	27
Delhi	39.80	17	50.05	11	24.43	28
Faridabad	37.61	25	47.51	18	22.76	29
Goa	44.04	7	49.11	13	36.45	2
Gurgaon	36.98	29	47.51	18	21.17	33
Guwahati	38.84	20	42.49	28	33.35	7
Hyderabad	37.28	26	41.13	29	31.51	16
Indore	43.81	8	51.11	9	32.87	10
Jaipur	36.96	30	42.66	27	28.41	23
Jammu	37.97	23	51.62	7	17.50	36
Jamshedpur	31.91	32	38.56	32	21.94	31
Kanpur	31.09	34	36.83	34	22.47	30
Kochi	47.56	3	56.76	2	33.77	6
Kolkata	46.63	4	58.97	1	28.12	24
Kozhikode	49.20	1	56.76	2	37.84	1
Lucknow	30.71	35	36.83	34	21.52	32
Ludhiana	31.32	33	39.40	31	19.21	35
Mumbai	41.52	11	47.74	14	32.19	13
Mysore	40.94	13	46.45	22	32.68	12
Nagpur	40.87	14	45.54	24	33.87	5

Nashik	39.53	19	46.54	20	29.02	22
NOIDA	29.85	36	36.83	34	19.36	34
Patna	27.81	37	29.42	37	25.38	26
Pune	38.83	21	46.54	20	27.27	25
Shimla	45.51	5	53.01	5	34.26	4
Srinagar	37.97	23	51.62	7	17.50	36
Surat	40.65	16	47.67	15	30.12	18
Trivandrum	48.10	2	56.76	2	35.09	3
Vadodara	40.85	15	47.67	15	30.63	17
Vishakapatnam	38.78	22	45.14	26	29.23	21

Pillar safety & Constituents

City	Safety		Crime		Cyber Crime		Road Accidents	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Ahmedabad	-48.11	9	-53.27	7	-60.09	14	-31.54	9
Bengaluru	-35.99	3	-37.11	2	-45.37	2	-27.88	4
Bhopal	-33.68	2	-53.62	8	18.73	1	-35.37	17
Bhubaneshwar	-55.08	28	-64.20	28	-60.65	15	-36.17	19
Chandigarh	-55.11	29	-64.60	36	-59.33	10	-36.47	20
Chennai	-39.37	5	-40.96	3	-56.69	6	-25.16	3
Coimbatore	-54.07	24	-61.30	24	-60.65	15	-37.64	26
Dehradun	-55.99	32	-64.20	28	-60.65	15	-39.19	31
Delhi	-30.69	1	-26.81	1	-53.86	3	-21.70	2
Faridabad	-52.24	18	-57.36	16	-60.65	15	-38.09	28
Goa	-53.09	22	-63.77	27	-60.65	15	-30.24	7
Gurgaon	-55.99	32	-64.20	28	-60.65	15	-39.19	31
Guwahati	-54.08	25	-63.76	26	-60.65	15	-33.54	12
Hyderabad	-45.38	6	-47.81	5	-60.65	15	-31.15	8
Indore	-51.69	16	-57.17	15	-60.65	15	-36.59	21
Jaipur	-50.01	11	-55.67	11	-60.65	15	-33.48	11
Jammu	-55.99	32	-64.20	28	-60.65	15	-39.19	31
Jamshedpur	-52.98	21	-58.58	18	-60.65	15	-38.53	30
Kanpur	-48.04	8	-53.92	9	-60.65	15	-29.83	6
Kochi	-52.49	19	-60.77	22	-57.73	9	-35.19	16
Kolkata	-51.27	14	-59.39	21	-56.41	5	-34.31	14
Kozhikode	-55.99	32	-64.20	28	-60.65	15	-39.19	31
Lucknow	-51.29	15	-55.89	12	-60.65	15	-37.39	24
Ludhiana	-53.26	23	-59.27	20	-60.65	15	-38.33	29
Mumbai	-36.69	4	-45.20	4	-56.69	6	-9.17	1
Mysore	-54.29	27	-60.80	23	-60.65	15	-39.19	31
Nagpur	-49.11	10	-55.46	10	-57.24	8	-33.10	10

Nashik	-51.88	17	-57.67	17	-59.52	11	-37.12	23
NOIDA	-55.99	32	-64.20	28	-60.65	15	-39.19	31
Patna	-50.61	13	-56.34	14	-60.65	15	-34.36	15
Pune	-46.30	7	-52.55	6	-55.63	4	-29.65	5
Shimla	-55.21	30	-64.20	28	-60.65	15	-36.61	22
Srinagar	-55.99	32	-64.20	28	-60.65	15	-39.19	31
Surat	-50.25	12	-56.14	13	-59.52	11	-34.26	13
Trivandrum	-55.25	31	-64.61	37	-60.65	15	-36.05	18
Vadodara	-54.18	26	-61.93	25	-59.90	13	-37.44	25
Vishakapatnam	-52.97	20	-58.97	19	-60.65	15	-37.86	27

Pillar Housing Options & Constituents

City	Housing Options		Housing Costs and Availability		Urban Household Crowding	
	Score	Rank	Score	Rank	Score	Rank
Ahmedabad	-54.32	7	-57.27	10	-49.90	18
Bengaluru	-43.45	3	-31.77	4	-60.97	29
Bhopal	-59.08	26	-63.43	11	-52.55	21
Bhubaneshwar	-57.44	10	-63.43	11	-48.47	1
Chandigarh	-50.33	4	-51.58	8	-48.47	1
Chennai	-51.26	5	-47.94	6	-56.23	25
Coimbatore	-66.55	35	-63.43	11	-71.24	33
Dehradun	-57.44	10	-63.43	11	-48.47	1
Delhi	-35.09	2	-24.70	3	-50.67	19
Faridabad	-57.91	23	-63.43	11	-49.63	16
Goa	-57.44	10	-63.43	11	-48.47	1
Gurgaon	-32.24	1	-21.42	2	-48.47	1
Guwahati	-57.44	10	-63.43	11	-48.47	1
Hyderabad	-53.93	6	-54.30	9	-53.37	22
Indore	-60.40	28	-63.43	11	-55.87	24
Jaipur	-60.58	30	-63.43	11	-56.32	27
Jammu	-57.44	10	-63.43	11	-48.47	1
Jamshedpur	-62.21	31	-63.43	11	-60.38	28
Kanpur	-58.01	24	-63.43	11	-49.89	17
Kochi	-59.81	27	-63.43	11	-54.38	23
Kolkata	-62.94	32	-50.33	7	-81.86	35
Kozhikode	-57.44	10	-63.43	11	-48.47	1
Lucknow	-58.95	25	-63.43	11	-52.22	20
Ludhiana	-57.67	22	-63.43	11	-49.03	15
Mumbai	-55.42	9	-14.62	1	-116.62	37
Mysore	-57.44	10	-63.43	11	-48.47	1
Nagpur	-67.43	36	-63.43	11	-73.43	34

Nashik	-63.07	33	-63.43	11	-62.52	30
NOIDA	-57.44	10	-63.43	11	-48.47	1
Patna	-57.57	21	-63.43	11	-48.78	14
Pune	-54.95	8	-47.84	5	-65.63	32
Shimla	-57.44	10	-63.43	11	-48.47	1
Srinagar	-57.44	10	-63.43	11	-48.47	1
Surat	-64.20	34	-63.43	11	-65.35	31
Trivandrum	-57.44	10	-63.43	11	-48.47	1
Vadodara	-60.57	29	-63.43	11	-56.30	26
Vishakapatnam	-74.49	37	-63.43	11	-91.08	36

Pillar Socio-cultural Political Environment & Constituents

City	Socio-cultural Political Environment		Supporting Infrastructure	
	Score	Rank	Score	Rank
Ahmedabad	58.96	9	58.96	9
Bengaluru	65.95	6	65.95	6
Bhopal	49.58	24	49.58	24
Bhubaneshwar	57.14	10	57.14	10
Chandigarh	56.80	19	56.80	19
Chennai	71.97	5	71.97	5
Coimbatore	45.61	34	45.61	34
Dehradun	57.14	10	57.14	10
Delhi	95.73	2	95.73	2
Faridabad	45.07	37	45.07	37
Goa	72.93	4	72.93	4
Gurgaon	57.14	10	57.14	10
Guwahati	49.05	26	49.05	26
Hyderabad	60.50	8	60.50	8
Indore	46.79	32	46.79	32
Jaipur	54.85	21	54.85	21
Jammu	57.14	10	57.14	10
Jamshedpur	46.14	33	46.14	33
Kanpur	47.13	31	47.13	31
Kochi	55.81	20	55.81	20
Kolkata	79.97	3	79.97	3
Kozhikode	57.14	10	57.14	10
Lucknow	50.94	23	50.94	23
Ludhiana	45.32	36	45.32	36
Mumbai	97.11	1	97.11	1
Mysore	57.14	10	57.14	10
Nagpur	52.04	22	52.04	22

Nashik	47.77	30	47.77	30
NOIDA	57.14	10	57.14	10
Patna	48.10	29	48.10	29
Pune	61.25	7	61.25	7
Shimla	57.14	10	57.14	10
Srinagar	57.14	10	57.14	10
Surat	45.51	35	45.51	35
Trivandrum	49.36	25	49.36	25
Vadodara	48.12	28	48.12	28
Vishakapatnam	48.25	27	48.25	27

Pillar Economic Environment & Constituents

City	Economic Environment		Income and Employment		Economic Infrastructure		Business Environment		Purchasing Power	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Ahmedabad	57.95	9	58.98	8	55.91	19	56.31	9	59.88	9
Bengaluru	63.96	3	64.82	4	60.12	10	74.17	3	59.64	10
Bhopal	50.79	26	49.82	20	52.66	29	45.83	32	53.35	21
Bhubaneshwar	48.99	32	47.87	34	56.74	14	46.97	16	44.82	34
Chandigarh	58.30	8	52.46	16	59.53	11	55.47	10	64.02	3
Chennai	61.79	5	59.52	7	61.98	6	69.81	4	58.17	14
Coimbatore	49.67	31	57.47	10	44.89	37	50.96	12	46.28	33
Dehradun	52.45	20	48.23	32	60.59	7	46.62	22	53.07	23
Delhi	79.35	1	89.06	1	74.03	2	84.46	1	72.29	1
Faridabad	52.91	18	53.65	12	55.09	22	47.23	15	54.25	17
Goa	54.59	14	48.71	26	55.95	18	46.71	20	63.61	4
Gurgaon	55.30	13	48.56	30	60.16	9	61.96	6	52.43	27
Guwahati	48.44	33	48.65	28	55.37	21	45.77	33	44.28	35
Hyderabad	59.85	7	58.27	9	60.57	8	60.75	7	59.96	8
Indore	53.56	17	49.84	19	56.72	15	46.59	23	58.66	13
Jaipur	55.40	12	53.08	14	57.26	13	46.90	17	61.46	6
Jammu	50.64	27	48.61	29	51.81	32	46.57	25	54.08	19
Jamshedpur	48.43	34	48.01	33	52.39	31	45.91	30	47.15	32
Kanpur	52.35	21	52.62	15	52.94	28	46.05	29	55.83	15
Kochi	52.51	19	49.48	21	59.48	12	47.24	14	52.75	25
Kolkata	63.84	4	71.89	3	64.59	4	67.06	5	54.37	16
Kozhikode	48.28	35	47.12	36	49.93	35	46.56	26	49.01	31
Lucknow	52.19	22	53.55	13	53.74	24	45.57	35	54.17	18
Ludhiana	52.01	23	51.68	17	53.01	27	51.03	11	52.11	28
Mumbai	77.76	2	82.42	2	84.65	1	83.71	2	64.15	2
Mysore	50.31	28	48.86	24	50.90	34	46.67	21	53.45	20
Nagpur	54.53	16	54.27	11	55.76	20	46.09	28	59.36	11

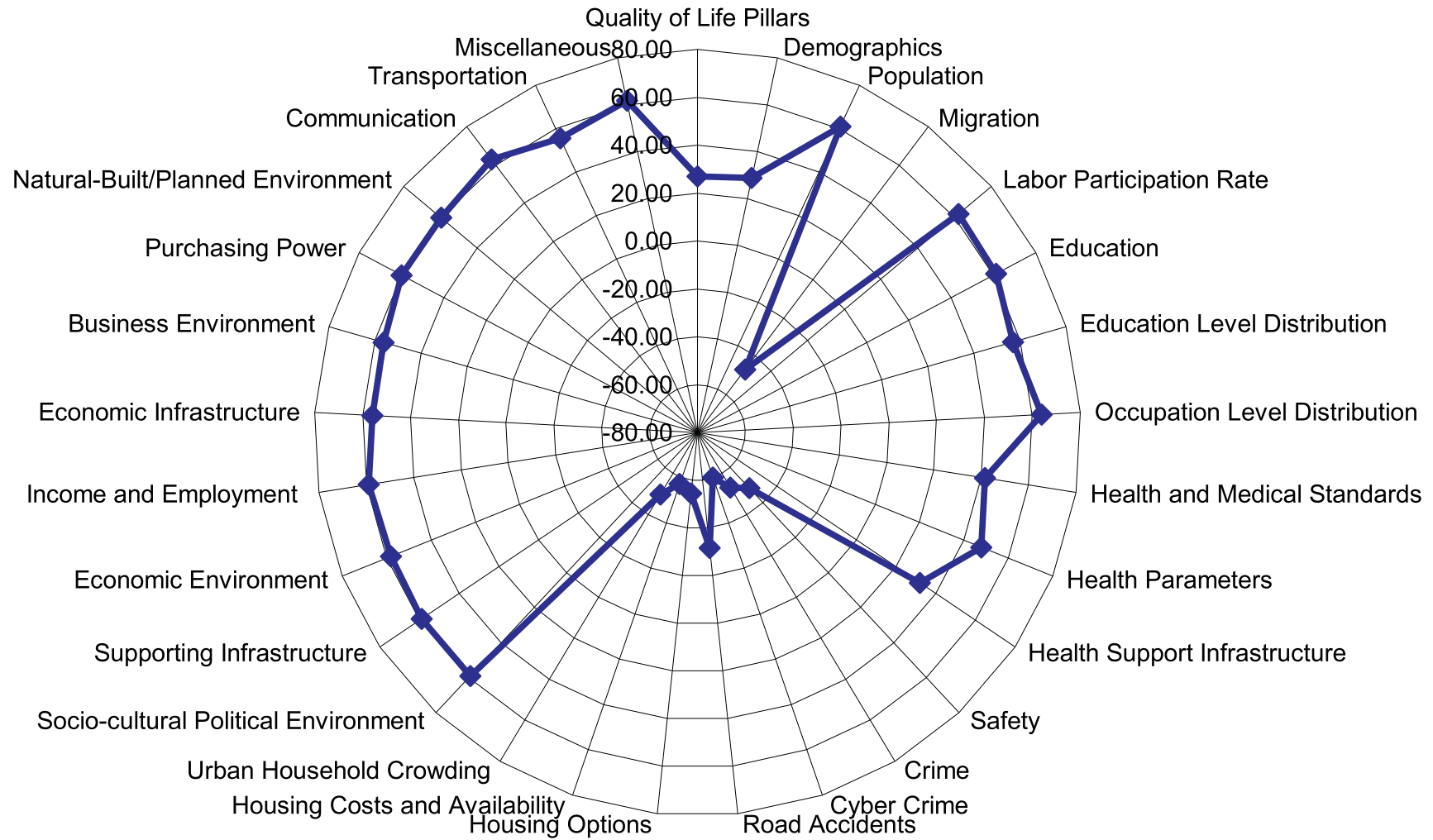
Nashik	50.00	29	49.44	22	52.40	30	45.87	31	51.24	29
NOIDA	56.09	10	48.54	31	71.35	3	50.92	13	53.13	22
Patna	47.47	36	48.68	27	54.43	23	45.35	37	42.07	36
Pune	60.26	6	61.89	5	56.45	16	58.98	8	62.92	5
Shimla	54.54	15	47.11	37	63.17	5	46.58	24	58.86	12
Srinagar	49.86	30	47.66	35	51.35	33	46.54	27	52.65	26
Surat	55.98	11	60.68	6	53.72	25	46.73	19	60.11	7
Trivandrum	51.20	24	48.84	25	56.04	17	45.56	36	52.88	24
Vadodara	50.90	25	51.42	18	53.45	26	46.83	18	51.05	30
Vishakapatnam	45.28	37	49.36	23	45.14	36	45.74	34	41.68	37

Pillar Natural-Built/Planned Environment & Constituents

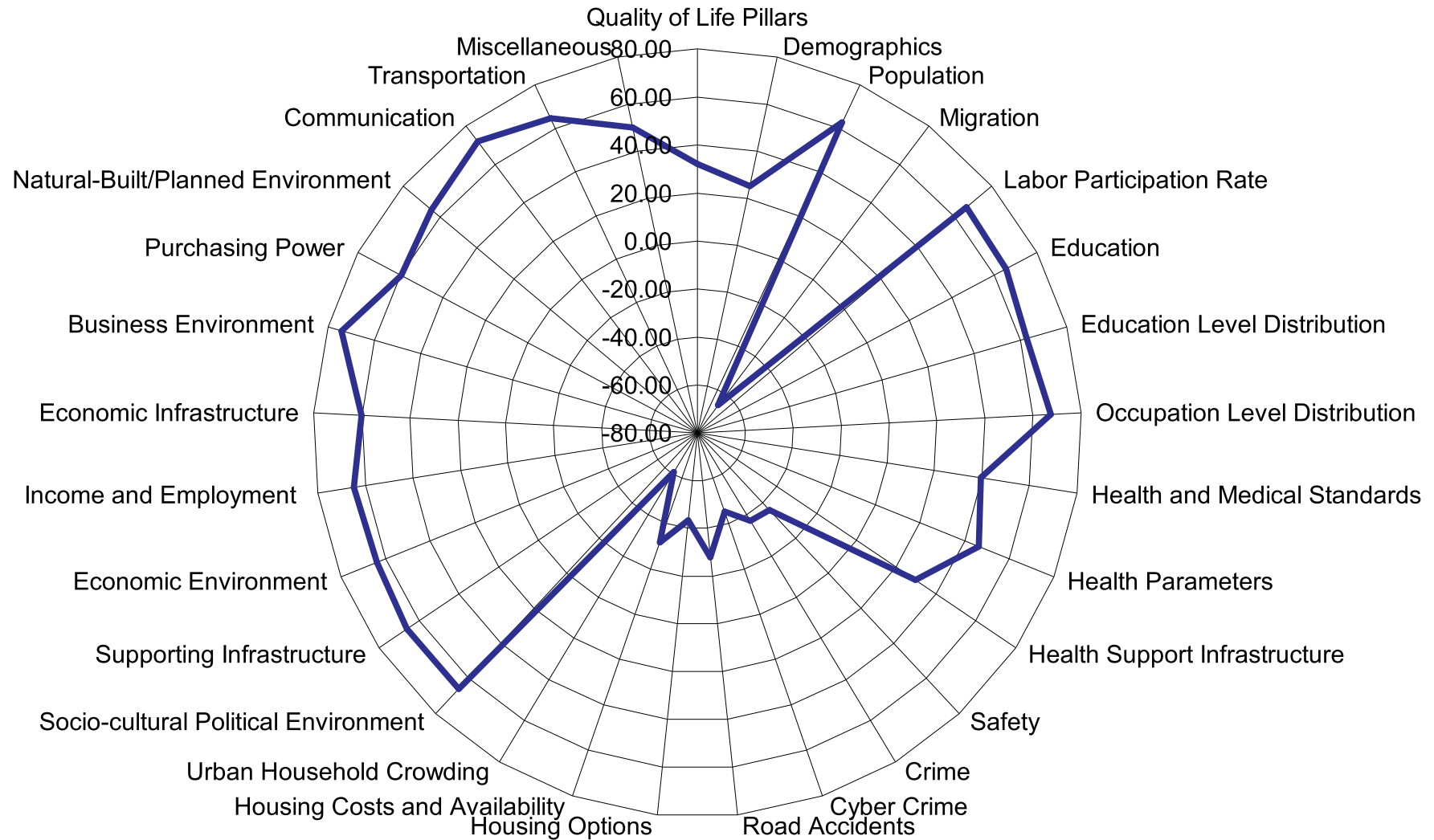
City	Natural-Built/Planned Environment		Communication		Transportation		Miscellaneous	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Ahmedabad	59.74	7	62.78	9	55.72	7	61.68	2
Bengaluru	64.67	4	72.02	3	64.62	3	50.07	22
Bhopal	54.53	13	57.83	14	52.48	17	52.02	19
Bhubaneshwar	50.66	21	52.32	22	51.36	20	45.95	32
Chandigarh	48.26	32	41.05	36	53.76	12	51.67	20
Chennai	68.14	2	83.54	2	60.68	5	52.28	17
Coimbatore	49.16	30	51.21	28	47.14	25	49.10	26
Dehradun	47.03	35	45.42	34	47.57	23	49.14	25
Delhi	66.93	3	68.73	5	69.35	1	58.50	6
Faridabad	48.18	33	51.37	27	45.75	34	46.65	29
Goa	49.82	25	41.05	36	54.54	9	57.92	7
Gurgaon	49.92	24	54.52	18	45.99	32	48.58	28
Guwahati	53.23	19	54.92	17	53.17	14	49.98	23
Hyderabad	62.01	5	68.58	6	57.06	6	58.78	4
Indore	50.30	23	51.49	24	47.16	24	54.19	13
Jaipur	54.72	12	57.26	15	52.64	16	53.81	16
Jammu	48.02	34	51.68	23	46.89	27	42.94	35
Jamshedpur	44.14	37	43.09	35	46.33	31	41.88	37
Kanpur	54.14	14	58.67	11	52.08	19	49.21	24
Kochi	56.03	10	58.49	12	53.52	13	56.13	10
Kolkata	60.77	6	62.87	8	62.93	4	52.25	18
Kozhikode	57.65	8	69.44	4	46.44	30	56.50	9
Lucknow	49.39	29	50.06	32	48.11	22	50.63	21
Ludhiana	52.48	20	62.43	10	45.69	36	46.16	31
Mumbai	80.55	1	98.62	1	69.16	2	67.21	1
Mysore	49.82	26	54.18	19	45.88	33	48.96	27

Nagpur	53.27	18	50.92	29	52.99	15	58.53	5
Nashik	49.42	28	50.92	29	45.61	37	54.04	14
NOIDA	46.85	36	50.06	32	45.75	34	42.64	36
Patna	53.57	15	57.00	16	54.28	10	45.28	33
Pune	53.34	17	50.92	29	55.44	8	54.00	15
Shimla	56.51	9	62.87	7	50.65	21	55.51	11
Srinagar	48.43	31	52.55	21	46.91	26	43.23	34
Surat	53.36	16	51.46	25	52.39	18	59.09	3
Trivandrum	55.84	11	58.49	12	53.86	11	54.49	12
Vadodara	50.65	22	51.46	25	46.73	29	56.87	8
Vishakapatnam	49.57	27	54.01	20	46.80	28	46.22	30

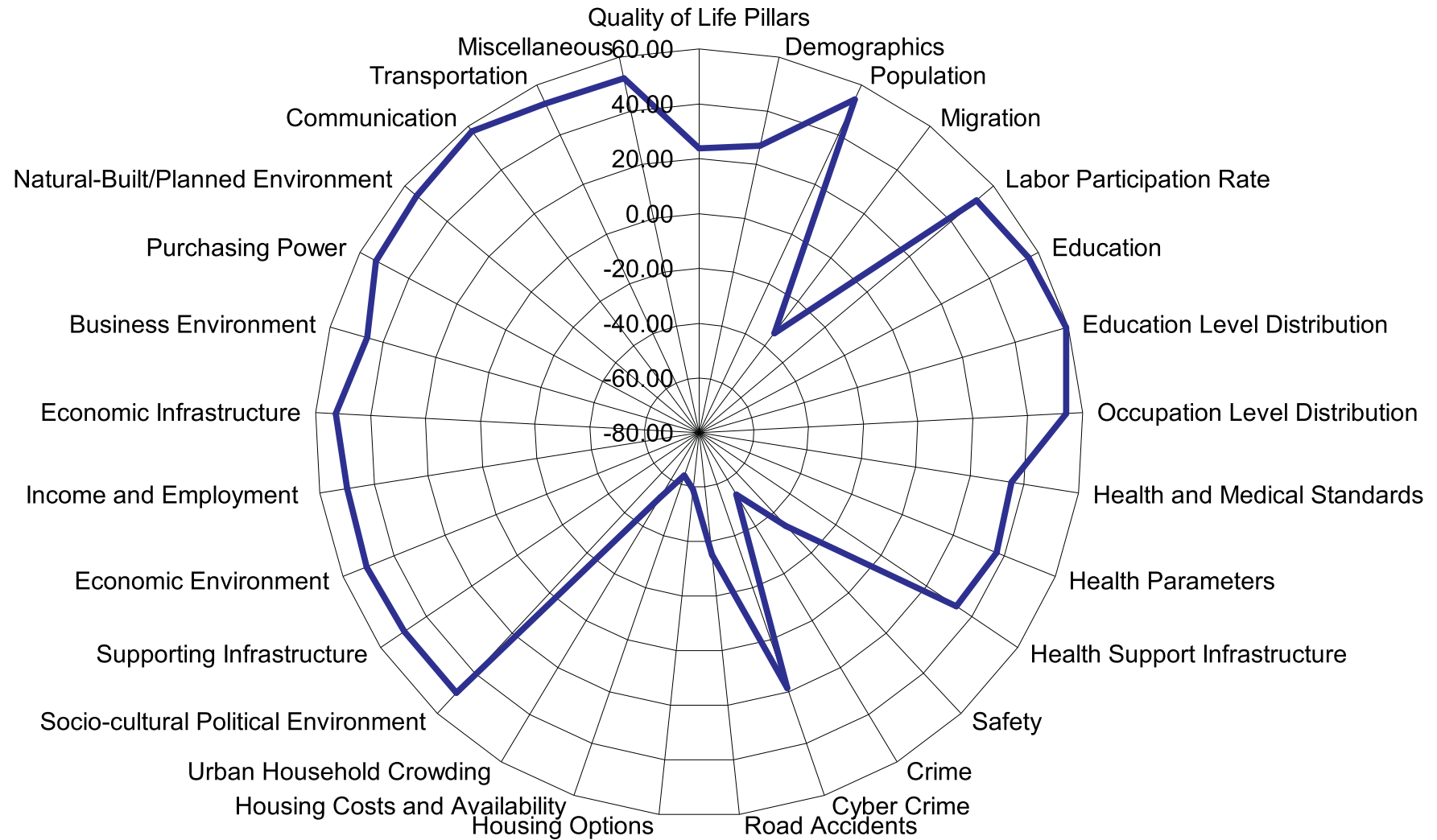
Ahmedabad - Overall Profile



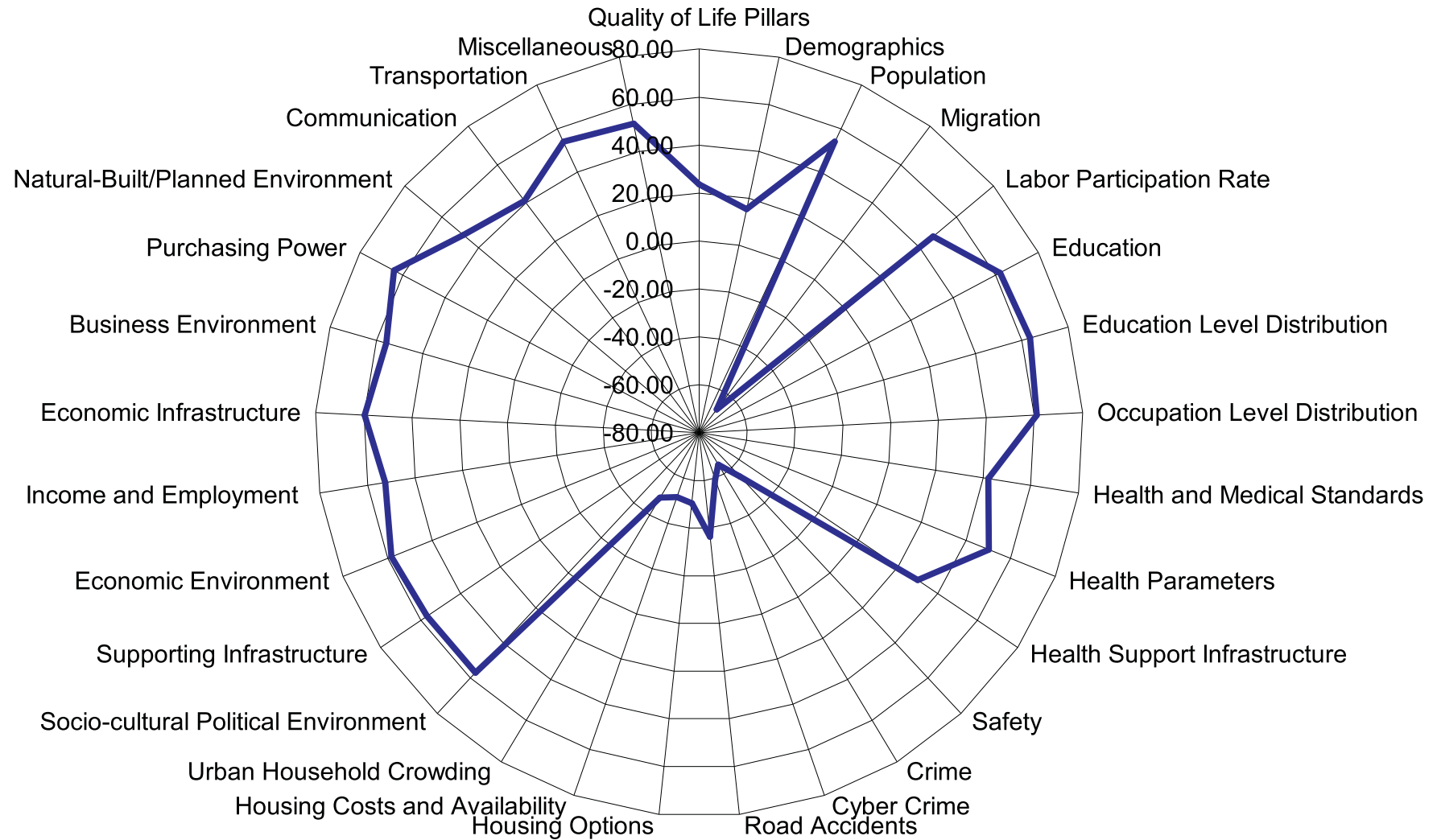
Bengaluru - Overall Profile



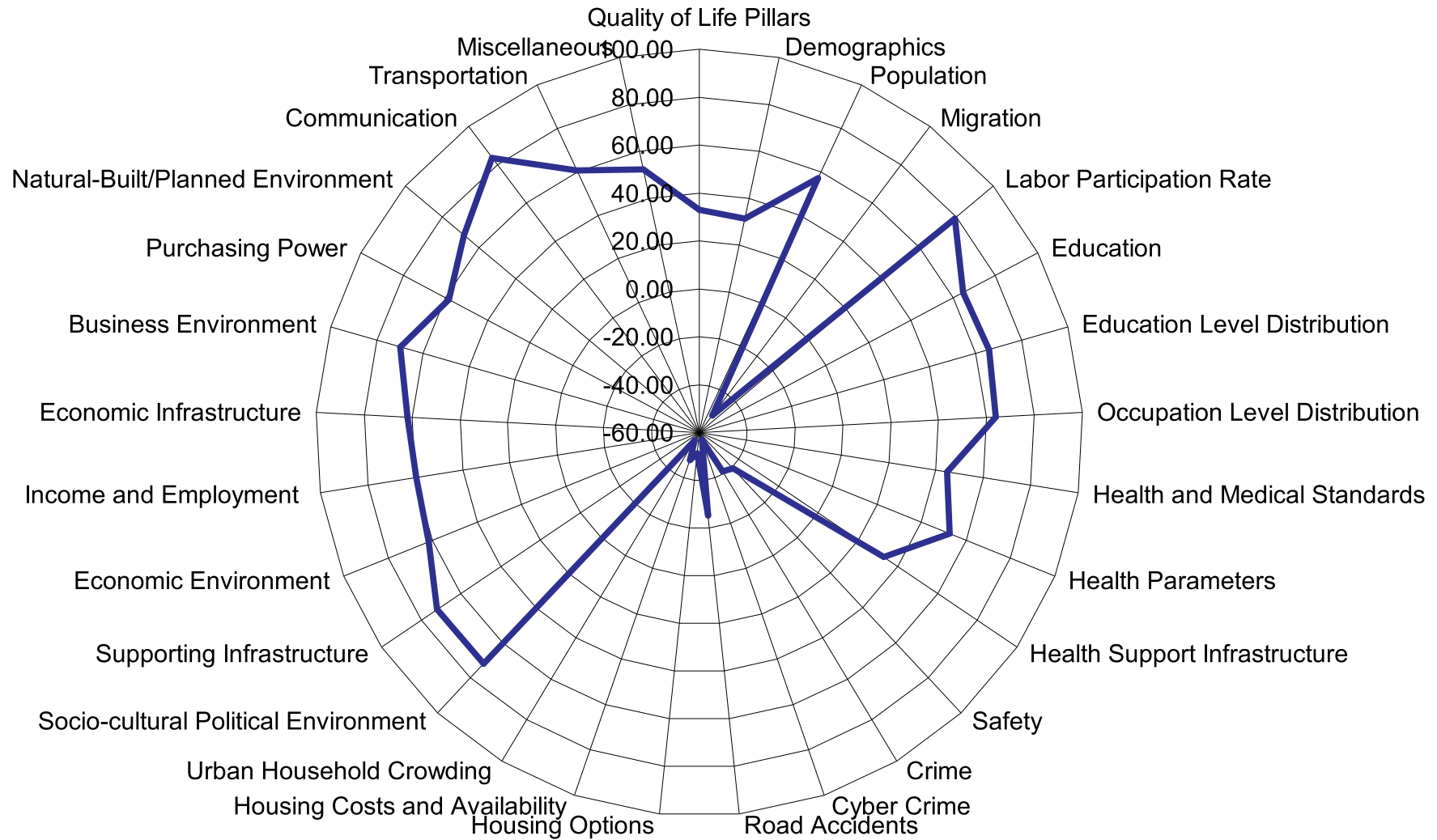
Bhopal - Overall Profile



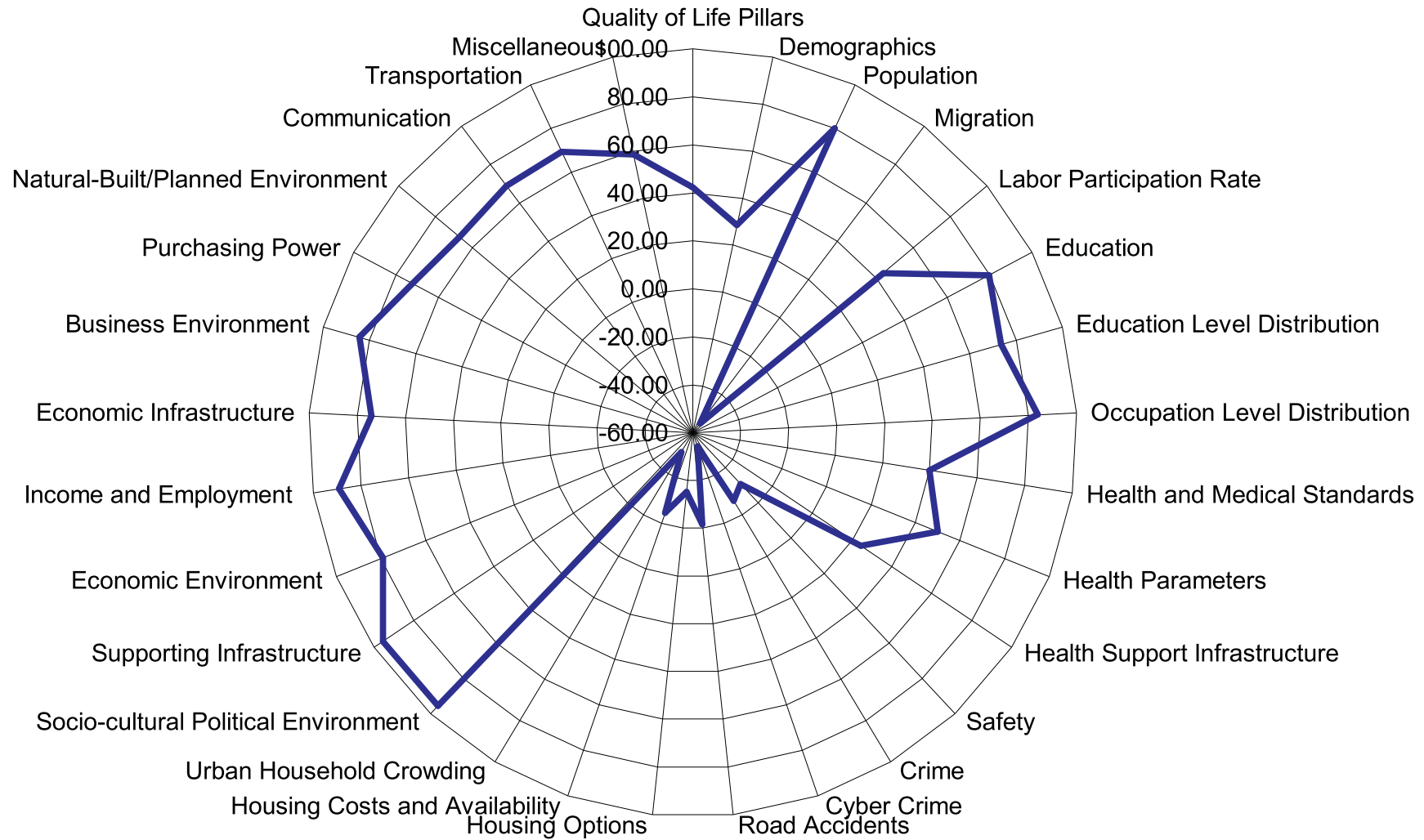
Chandigarh - Overall Profile



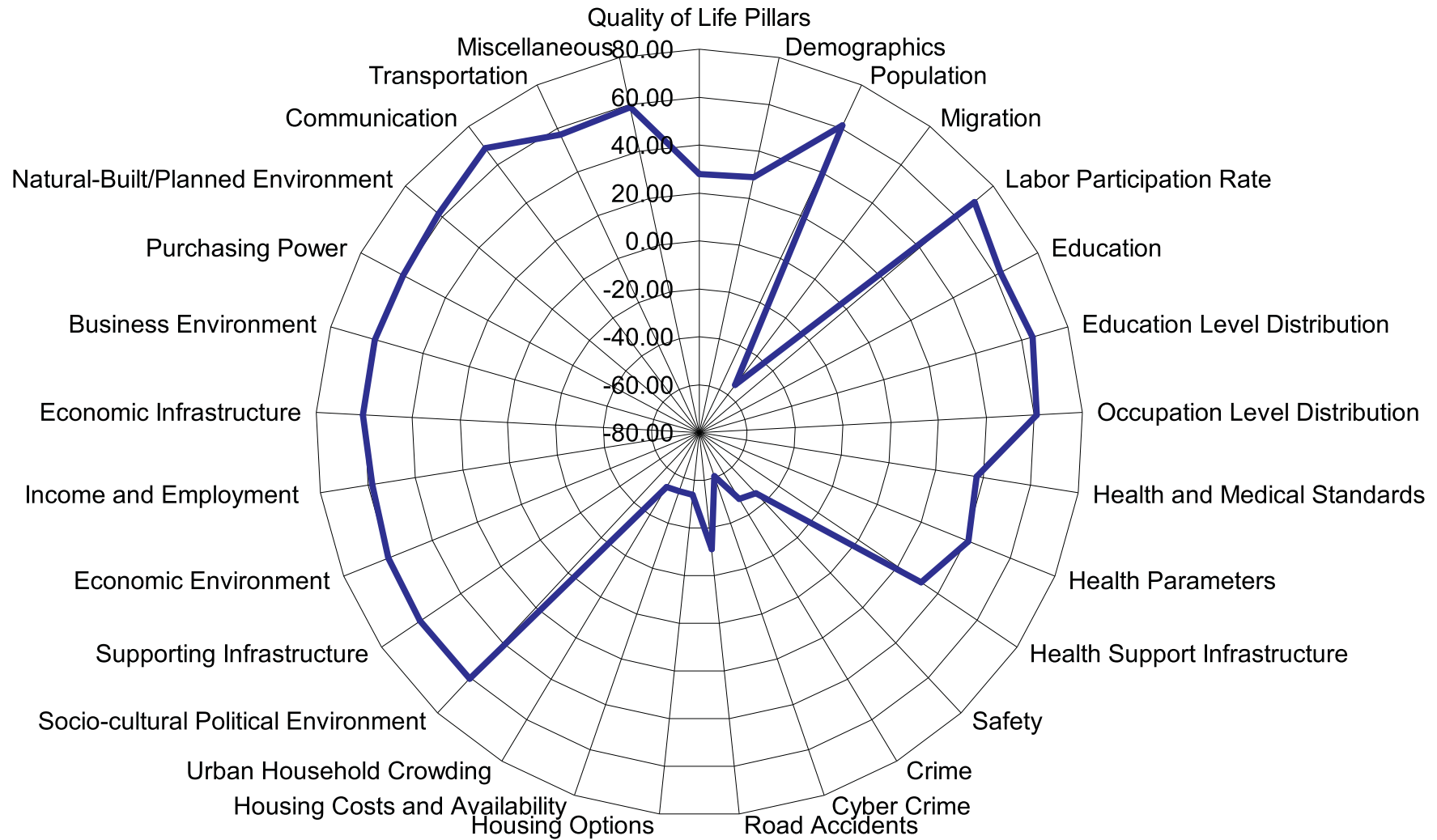
Chennai - Overall Profile



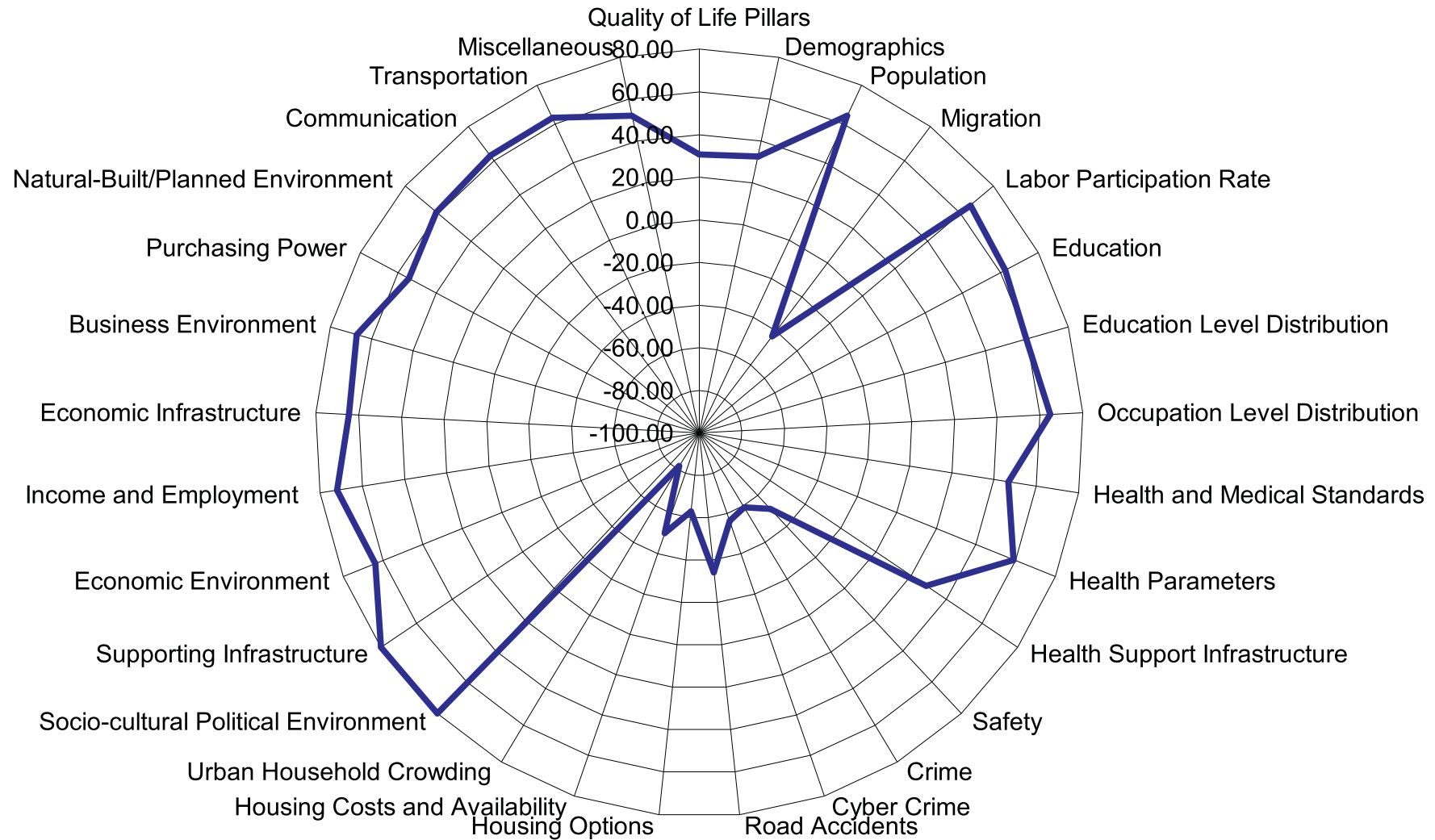
Delhi - Overall Profile



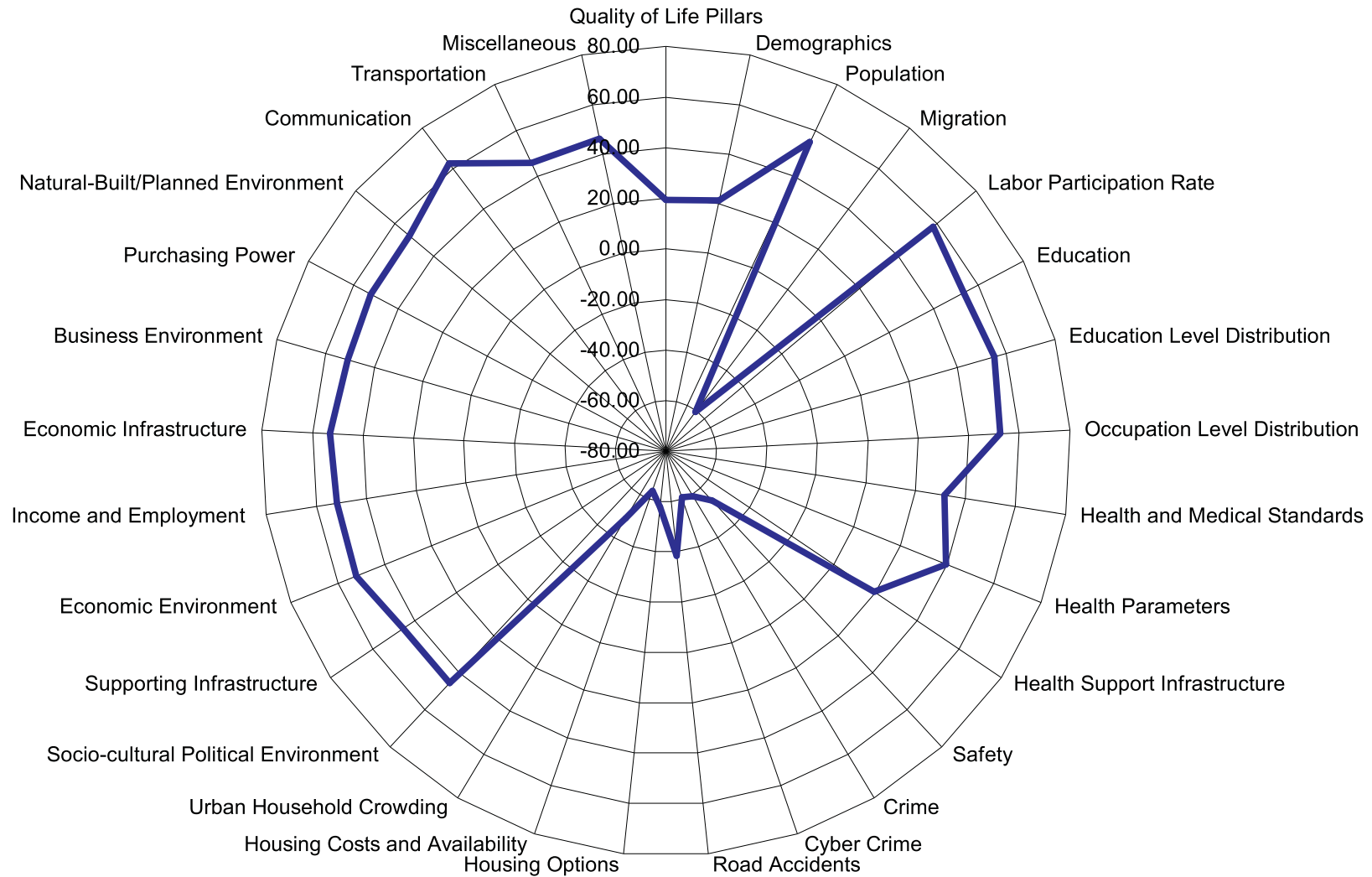
Hyderabad - Overall Profile



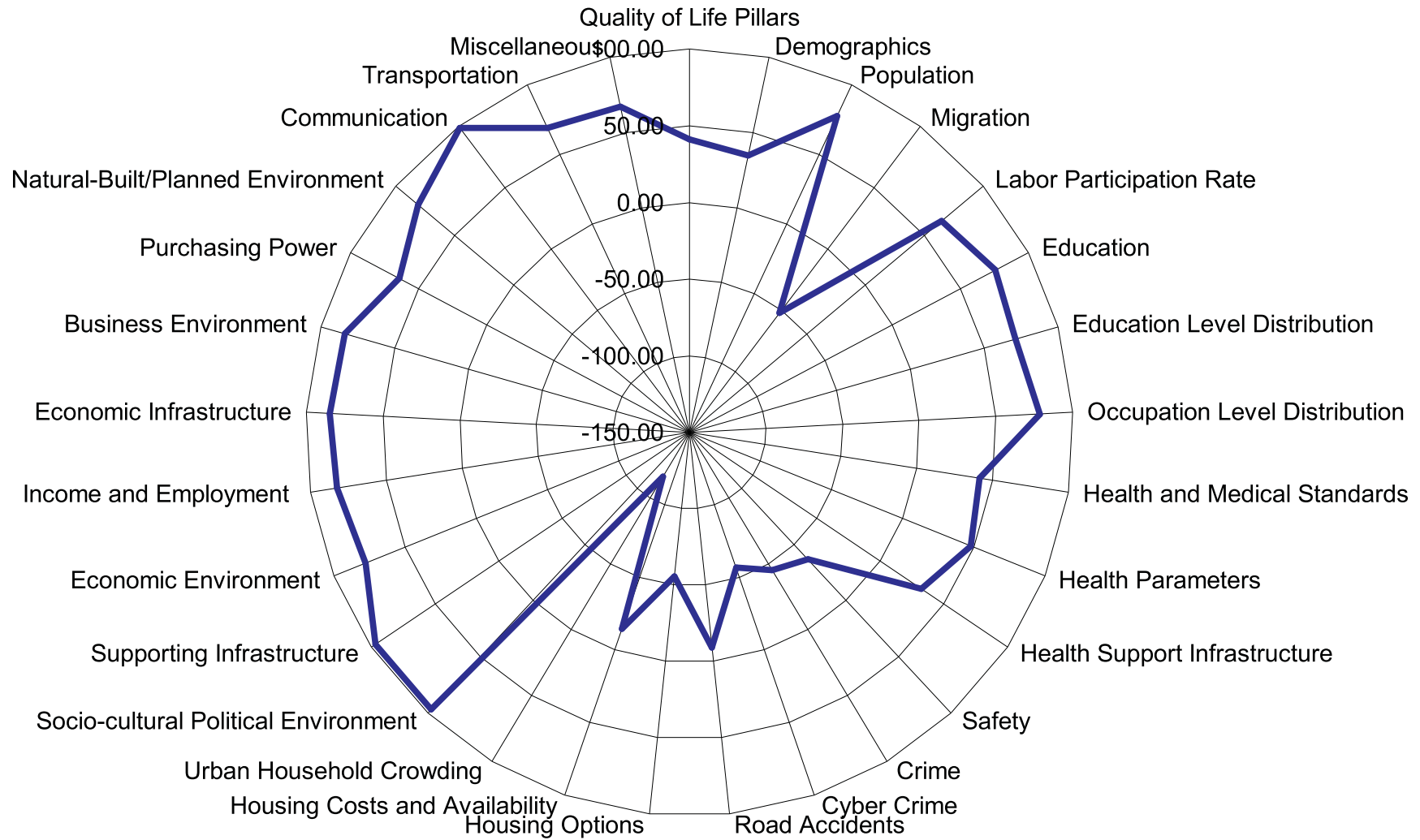
Kolkata - Overall Profile



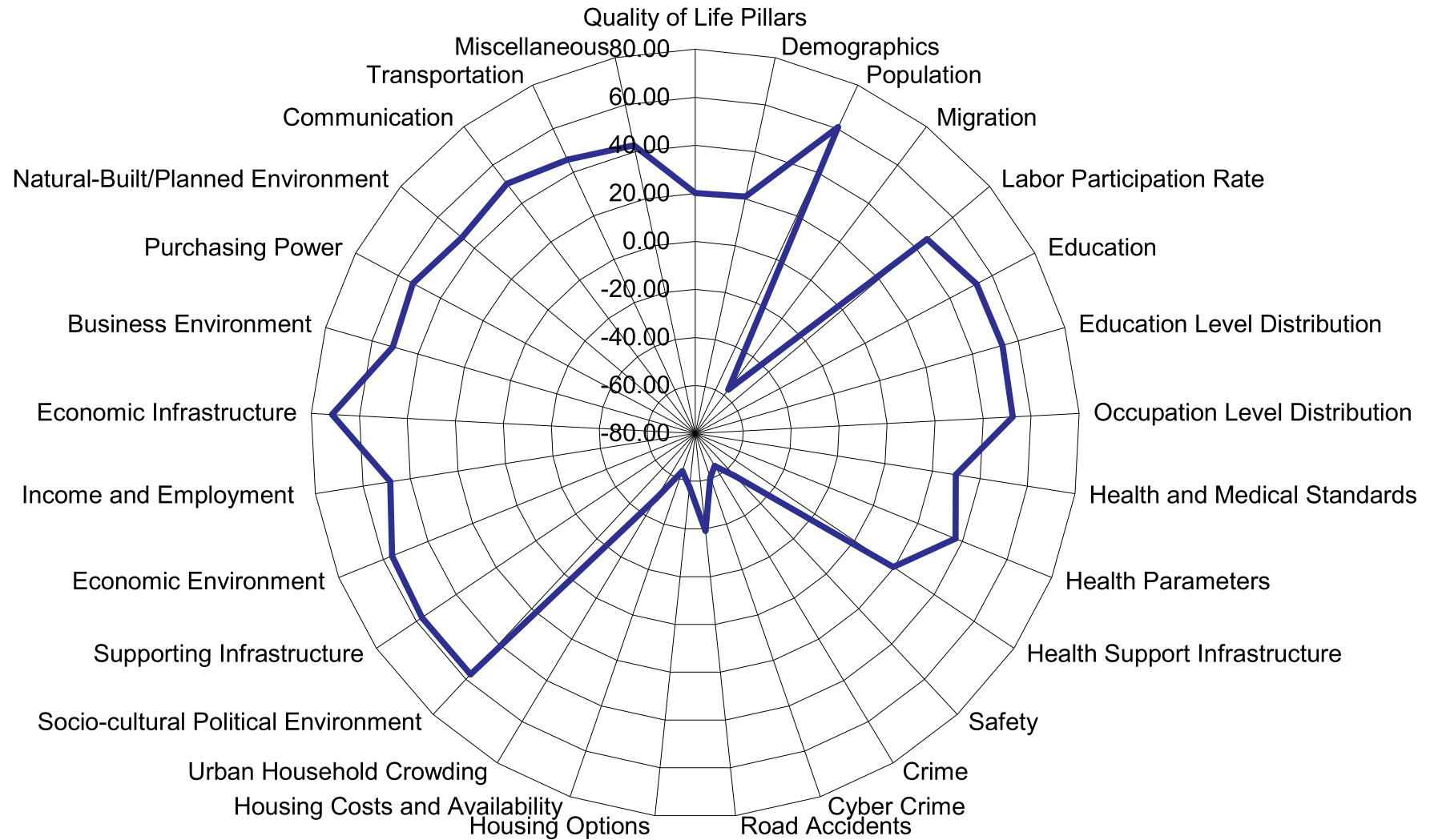
Ludhiana - Overall Profile



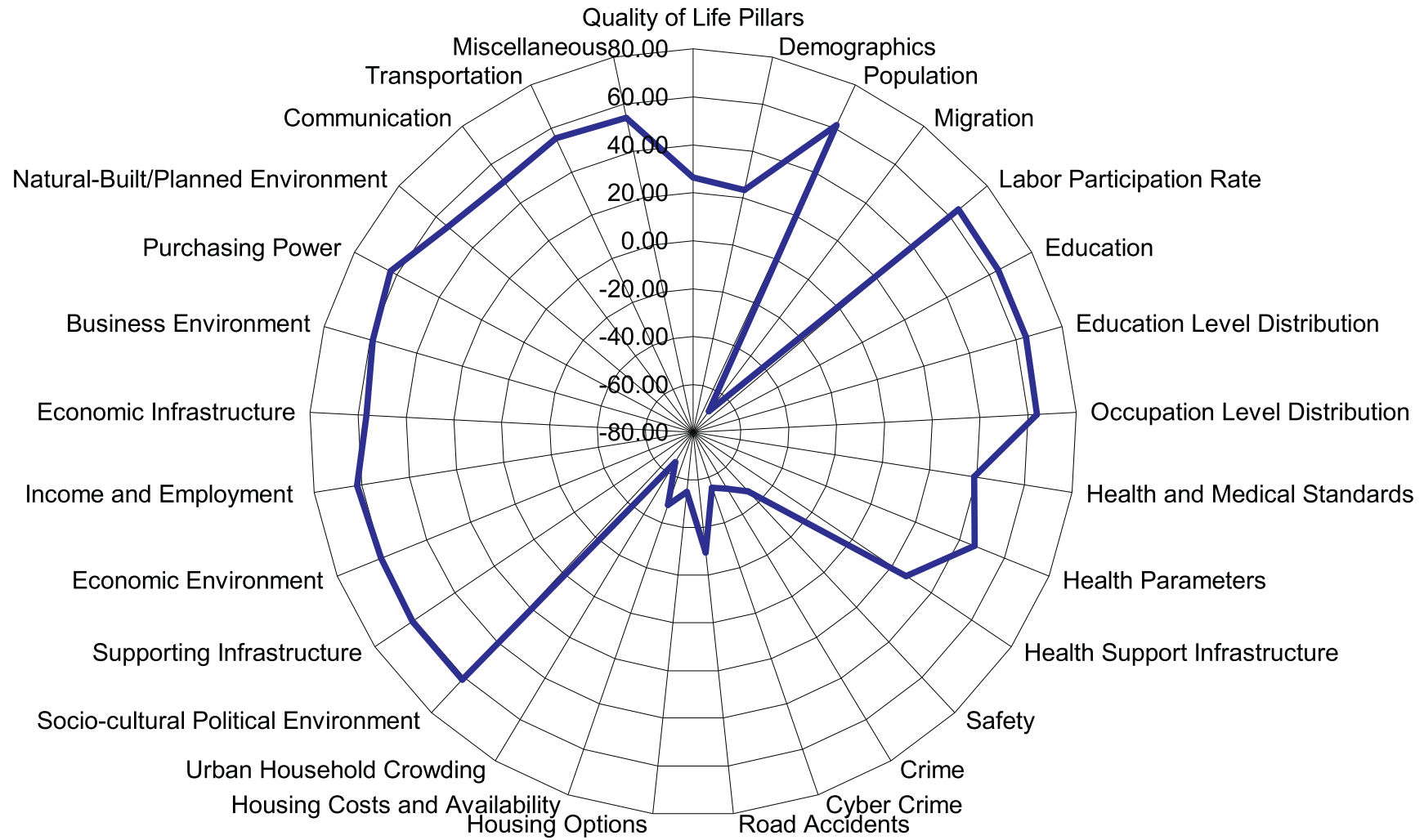
Mumbai - Overall Profile



NOIDA - Overall Profile



Pune - Overall Profile



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