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Smart City
MISSION TRANSFORM NATION

Ministry of Housing and Urban Affairs
Government of India

स्वच्छ भारत
एक कदम स्वच्छता की ओर

EASE OF LIVING

INDEX 2020

DAY-NULM
Deendayal Antyodaya Yojana-National Urban Livelihoods Mission

HRIDAY
Rejuvenating the Soul of Urban India

प्रधान मंत्री आवास योजना-शहरी
Pradhan Mantri Awas Yojana-Urban

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HARDEEP S PURI

सत्यमेव जयते

आवासन और शहरी कार्य राज्य मंत्री (स्वतंत्र प्रभार)
नागर विमानन राज्य मंत्री (स्वतंत्र प्रभार)
वाणिज्य एवं उद्योग राज्य मंत्री
भारत सरकार
Minister of State (I/C), Housing & Urban Affairs
Minister of State (I/C), Civil Aviation
Minister of State, Commerce & Industry
Government of India

Message

India's steady economic growth is reflected in the rapid expansion of her cities. India, today is one of the fastest-growing large economies in the world. Our exponential growth is driven by urban centres where a growing proportion of the population gravitates to in search of economic opportunities. With the current urbanisation rate, India is expected to have 50 percent of the country's population residing in cities within the next 30 years.

This rising urbanisation promises more significant innovation and accelerates economic growth. It also puts tremendous pressure on available resources, which can be detrimental to the quality of life in cities. The Central Government is committed to planned urbanisation with the aim of providing a high quality of life for the people. The COVID-19 pandemic has reminded us that people are our most valuable resources. Our cities cannot be prosperous if people do not have access to housing, water and other basic amenities.

Under the leadership of the Hon'ble Prime Minister, Shri Narendra Modi the Central Government has unleashed the most comprehensive agenda for planned urbanisation. The flagship missions such as the Smart Cities Mission, Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Swachh Bharat Mission (Urban) and the Pradhan Mantri Awas Yojana (Urban) will transform the urban landscape.

I am pleased to launch the Ease of Living Index 2020. With its data-driven approach to evaluate the performance of 111 cities, the Index will be a valuable tool for city governments to understand the gaps in implementing the above programmes and tailor their strategies suitably. I urge governmental and non-governmental stakeholders involved in urban development to make the best use of this Index and strengthen the progress of Indian cities towards higher development trajectories.

(Hardeep S Puri)

New Delhi
01 March 2021

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दुर्गा शंकर मिश्र
सचिव
Durga Shanker Mishra
Secretary

सत्यमेव जयते

भारत सरकार
आवासन और शहरी कार्य मंत्रालय
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MESSAGE

Projections reveal that over 60 crore people i.e. 40% of total population are expected to live in urban areas by 2030. This number will increase to over 85 crore i.e. more than 50% of our population will be residing in urban India by 2050.

This swift urban expansion has put the development of urban spaces at the forefront of our policies and programs. Recognising the need to meet these challenges and convert them into opportunities, Ministry of Housing and Urban Affairs, under the vision of Hon'ble Prime Minister, launched a series of initiatives such as Deen Dayal Antyodaya Yojana-National Urban Livelihood Mission (DAY-NULM), Swachh Bharat Mission-Urban (SBM-U), Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Pradhan Mantri Awas Yojana- Urban (PMAY-U), Smart Cities Mission (SCM) Schemes/Projects for Urban Transport. These transformational Programmes/Schemes seek to address poverty alleviation, affordable housing, sanitation, infrastructural challenges, and harnessing technology to drive urban development.

Ministry developed *Ease of Living Index* to help assess urban areas' development and provide insights on how cities perform across sectors. In its second edition, *Ease of Living Index, 2020*, incorporates learning from the previous edition, expanding and refining the scope of the assessment. The Index examines citizens' quality of life in 111 cities across four pillars, 13 categories, and 49 indicators. The pillars comprise of **Quality of Life**, **Economic Ability, Sustainability** and **Citizen's Perception Survey**. These pillars expand across 13 categories: **Education, Health, Housing & Shelter, WASH & SWM, Mobility, Safety & Security, Recreation, Economic Development, Economic Opportunities, Environment, Green spaces & Building, Energy Consumption and City Resilience**. The framework includes a Citizens' Perception Survey, which examines service delivery satisfaction of the people. It allows residents of a city to evaluate their local governance and administration based on their public service delivery performance.

The learnings from this Index will enable cities to build practices that improve ease of living of their citizens and offer economic growth and sustainability in the long run. It will help Indian cities to achieve Sustainable Development Goals' outcomes by identifying local development goals and track their progress.

I want to commend the team Smart City Mission, India Smart Cities Fellows, Institute for Competitiveness, Karvy Data Management Services, and their supporting partners for their effort and hard work in developing the framework for this Index and providing comprehensive insights that guide urban management practices.

I hope this Index will motivate cities to focus their efforts to improve liveability and enhance ease of living to the citizens through concerted efforts.

(Durga Shanker Mishra)

New Delhi
26th February, 2021

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भारत सरकार
आवासन और शहरी कार्य मंत्रालय
निर्माण भवन, नई दिल्ली-110011
GOVERNMENT OF INDIA
MINISTRY OF HOUSING & URBAN AFFAIRS
NIRMAN BHAWAN, NEW DELHI-110011

MESSAGE

India's journey as a young, vibrant nation has been full of successes, with accomplishments in sciences, defence, arts, culture and welfare. While recent efforts to push for sustainable growth are commendable, much of this development is yet to achieve larger inclusion, especially across India's urban centres.

The idea of what constitutes a "good life" has been a point of debate for many philosophers. It has been fundamentally understood that it is **Quality of Life** that matters most to everyone, and public policy's role in achieving the same is paramount. Under **Article 21** of the **Indian Constitution**, the **Right to Life** legally guarantees every person a certain modicum of life that ensures her dignity and personal growth. But it becomes imperative to initiate social and economic changes to help achieve this idea of socially engaging life, not just in letter but in spirit. And thus, access to specific basic amenities such as Housing, Water, Sanitation become imperative in ensuring a good quality of life. The Smart Cities Mission (SCM) has taken a step towards this objective by promoting cities that provide core infrastructure, good quality of life and a clean and sustainable environment through application of 'Smart' Solutions.

The **Ease of Living Index 2020** has been a collaborative effort of the Ministry of Housing and Urban Affairs, city administrations, and other stakeholders. With **four pillars, 13 categories** and **49 indicators** across **111 cities**, the Index has been envisaged in a comprehensive manner. The Index has a **Citizen Perception Survey** component to gauge the citizenry's pulse concerning their Ease of Living. With this, the Ministry has sought to facilitate Smart Cities and other Million+ population cities in assessing their present status, which will eventually lead to better planning and management.

With its **outcome-based approach**, the Index provides several insights into urban liveability standards prevalent in the country. Most cities have emerged as good performers in this Index, adding to the confidence that we are moving in the right direction of improving Ease of Living in Indian cities. That being said, the scope of improvement in the performance of some cities is immense, and the scores also reveal regional disparities across different categories of assessment. The diversity in regional needs must thus reflect in urban development and planning efforts undertaken to improve Ease of Living.

This initiative of the Ministry of Housing and Urban Affairs to help cities assess their ease of living vis-à-vis national and global benchmarks such as the **Sustainable Development Goals (SDGs)** promises to be a transformational endeavour. I am thankful to all stakeholders, for participating in this Index and strengthening the spirit of competitive and cooperative federalism. I firmly believe that this collaborative exercise will allow conversion of challenges into opportunities, that will go a long way in strengthening the practice of urban development in the country.

(KUNAL KUMAR)

New Delhi
01st March, 2021

IFC INSTITUTE for COMPETITIVENESS

Amit Kapoor|
Honorary Chairman

Economic growth is intricately linked with urbanisation. Studies show that nearly all countries that have achieved middle-income status were urbanised by at least 50 percent, and the countries that have attained high-income status were urbanised by about 70-80 percent. It is debatable how the causality flows but economic growth of countries is closely related to the movement of people to cities and the concentration of talent in urban spaces drives productivity, job creation, and economic growth.

So, India's path to higher growth is intertwined with the success of its urban spaces. The country, however, has had a unique relationship with urbanisation. The pace of urbanisation in India has not kept pace with the rate of economic growth. In fact, the rate of urbanisation between 2001 and 2011 was lower than in the second half of the previous century. This trend is surprising given that the opposite was true for economic growth.

While these anomalies in India's urbanisation trends are a subject of extensive research, it has been realised that the development of the urban sprawl in the periphery of cities is a leading cause. Such a nature of urban development has made it crucial to assess the ease of living in Indian cities, which has been placed at the forefront by the Ministry of Housing and Urban Affairs. An assessment of urban living and identification of areas where the cities are lacking can drive impactful change in urban governance.

The Ease of Living index is an effort to work towards these goals. Building on learnings from the previous edition, the Ease of Living Index 2020 presents a revised framework that evaluates 111 cities under three pillars. The index has also been validated by a Citizen Perception Survey to provide insights directly from the residents on the level of development in their cities.

I hope that the findings from the index outlined in this report help decipher the state of urban development in India, and ultimately drive evidence-based policymaking. The primary objective of the Ease of Living Index is to achieve improved development outcomes across Indian cities.

I am pleased that the Institute for Competitiveness was engaged by the Ministry of Housing and Urban Affairs to redesign the methodological framework of the index and analyse the data obtained. I would like to extend my gratitude to Shri Hardeep Singh Puri, Minister of Housing and Urban Affairs, Shri Durga Shanker Mishra, Secretary, MoHUA, Shri Kunal Kumar, Mission Director, Smart Cities Mission, MoHUA Shri Rahul Kapoor, Director, Smart Cities Mission, MoHUA, Smt. Reema Jain, Deputy Director, AMRUT, and everyone in the Ministry of Housing and Urban Affairs who has been a part of this study for enabling its success.

The study would also not have been possible without the tireless efforts of various teams who have been a part of the project including Karvy Data Management Services, National Informatics Centre, the City Data Officers, the Smart City Consultants, and the Smart City Fellows. Finally, I would also like to thank my colleagues at the Institute for Competitiveness – Chirag Yadav, Manisha Kapoor, Aniruddh Duttaa, Sreetama Basu, Disha Sharma, and Harshula Sinha – who have played an indelible role in taking this study to fruition.

1/2/2021

(Amit Kapoor)

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Table of Contents

Marine Drive, Mumbai

List of Figures

List of Tables

Preface

The rapid pace of urban expansion that India is registering has necessitated a greater push for urban development schemes and interventions lately. The Government of India's (GoI) sincere efforts can be confirmed by the slew of programmes launched in the last 6-7 years. Deen Dayal Antyodaya Yojana-National Urban Livelihood Mission (DAY-NULM), Swachh Bharat Mission-Urban (SBM-U), Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Pradhan Mantri Awas Yojana-Urban (PMAY-U), Smart Cities Mission (SCM) Schemes/Projects for Urban Transport, and the Heritage City Development and Augmentation Yojana (HRIDAY) are some of the flagship programmes of the Ministry of Housing and Urban Affairs aimed at improving the quality of life in cities.

The Ease of Living (EOL) Index was born out of the need to measure the outcomes of the aforementioned programmes and verify whether these interventions were effective in ushering progress in urban India. For this purpose, the EOL Index evaluates the well-being of citizens in 111 cities, which comprises cities identified under the Smart Cities Mission, capital cities and cities with a population of over 1 million. As a data-driven evaluation tool that quantifies the performance of cities across several parameters, the index also serves to empower cities to use evidence-based planning and implementation. The metrics used for assessment also align with the Sustainable Development Goals (SDGs), making EOL a convenient means of tracking urban India's progress towards achieving the SDGs in cities.

The first edition of the index was launched in 2018. The framework for the same, launched in 2017, was composed of indicators adapted from various national/international indicator sets and service level benchmarks. It covered 78 indicators across 15 evaluation criteria, viz. governance, identity and culture, education, health, safety and security, economy, affordable housing, land use planning, public open spaces, transportation and mobility, assured water supply, waste-water management, solid waste management, power, and quality of environment.

The latest edition uses a reformed framework built on the learnings derived from the last edition. After the launch of the first edition, the need for greater emphasis on outcomes was recognised for assessing ease of living in cities. Accordingly, the original framework has been split into two- one for assessing outcome indicators and the other for assessing input indicators. The EOL index strictly focuses on assessing outcome indicators as assessing the quality of life of citizens

can be better captured through outcomes rather than inputs. On the other hand, the second framework for assessing input indicators is utilised in preparing the Municipal Performance Index (MPI), which evaluates the performance indicators that are enabling factors contributing to the output.

Therefore, in the latest edition, the EOL index evaluates development outcomes across four pillars — Quality of Life, Economic Ability, Sustainability, and Citizens Perception Survey — covering 49 indicators examined under 14 categories. The Citizens Perception Survey is a new component added to the framework to capture the perception of citizens about the quality of life in their cities. the survey was administered both online and offline and conducted between February and March, 2020.

This report presents a cross-country comparison, region-level analysis, and a pillar-level analysis of the findings of the study. In the subsequent sections, the report also provides key insights derived from the analyses, such as the regional disparities reflected in the index scores, the contribution of metropolitan cities in the average national score, the alleviation of the overall index scores after including the Citizen Perception Scores, and so on. At the end, the report presents policy recommendations that can help stakeholders convert the learnings into actionable plans.

The successful completion of this project is owed to the dedicated efforts of the entities involved, and the cooperation and enthusiasm displayed by the states and cities in participating in this exercise. It is hoped that Indian cities, with the help of this Index, are able to strengthen their urban policies, planning and implementation initiatives, and take India closer to achieving a better quality of life for its citizens and closer to the fulfilling the SDGs.

Learnings from the First Edition of Ease of Living and Non-Comparability of Scores

The Ease of Living Index 2020 carries a revised framework that draws on the learnings from the first edition of the index released in 2018. The scope and parameters of the index were expanded based on the feedback received from key stakeholders and urban experts. A significant revision is in the form of separation of the outcome and input parameters that determine the ease of living of citizens. The latter has been incorporated as the Municipal Performance Index, which accompanies the Ease of Living Index 2020.

For instance, the Governance pillar from the previous edition of the index has now been moved to the Municipal Performance Index while Education and Health have been segregated into both Ease of Living Index and Municipal Performance Index based on the nature of the indicators.

Apart from the segregation of the indicators into input and outcome indicators, there have been significant revisions in the framework of Ease of Living itself. The index carries a 30 percent weightage on the Citizen Perception Survey, for instance, to understand whether the data collected maps with the perception that citizens hold about the city.

Due to these improvements to the index, it is important to note that the scores of the current edition are not comparable with Ease of Living Index 2018.

Executive Summary

The swift pace of urban expansion brings the promise of immense economic growth. It is estimated that Asia, and particularly countries like India will be at the forefront of this expansion. For Indian cities, which comprises of distinct geographies and diverse communities of people, this growth also brings extensive challenges.

The rise in the concentration of urban population vastly outpaces the capacity of local city administration catering to the needs of the people. Inadequate infrastructure, depleting resources, concentration of slums, rising poverty, and environmental degradation coupled with vast social and economic inequalities are just some of the burning issues that require immediate attention.

However, without a diagnostic tool to assess the level of development and extent of issues in India's urban agglomerations, it becomes increasingly difficult to tackle such challenges.

The Ease of Living Index 2020 presents itself as an evaluation tool that reflects the ease of living in Indian cities. It seeks to examine the impact of urban development programs and the quality of life and economic and social opportunities available to the citizens. It measures the ease of living across three pillars: Quality of Life, Economic Ability, and Sustainability. The index is further strengthened by a fourth pillar, the Citizen Perception Survey, which aims

India Gate, Delhi

to obtain and incorporate views of the citizens regarding the services provided by their city administration.

The pillar-wise scores help cities assess their level of development and identify existing gaps that obstruct their growth. The Ease of Living Index promotes healthy competition through rankings and incentivises them to improve further and even emulate the best practices from their peer cities. Moreover, the distinction between cities with more than a million population and those with less than a million population establishes a fair comparison among cities. The measures of this index also align with the Sustainable Development Goals (SDG). It can be utilised to track the progress of cities on the Ease of Living pillars to fulfil the SDG targets set by India.

With the help of the Ease of Living Index 2020 and the release of subsequent editions of the index, policymakers, urban planners and practitioners, and urban local authorities, can use the findings and learnings to implement reforms and measures that propagate urban development, and provide a better quality of life for the people.

01.

Introduction

In the *State of World Population 2007: Unleashing the potential of Urban Growth*, the United Nations Population Fund (UNFPA) argues that,

> **The current concentration of poverty, slum growth and social disruption in cities does paint a threatening picture: Yet no country in the industrial age has ever achieved significant economic growth without urbanisation. Cities concentrate on poverty, but they also represent the best hope of escaping it**

Lower Parel, Mumbai

Perhaps it is this "hope" that drives close to 55 percent of the world population to live in urban settlements. By 2045, the urban population is expected to increase 1.5 times to 6 billion, adding 2 billion more residents. India has one of the highest urbanisation rates. At 37.7 crores, India's urban residents accounted for 31 percent of the population as per the Census of 2011. Estimates project this population share to increase up to 60 crores (40%) by 2030 and over 80 crores (50%) by 2050.

A host of reasons drive this rapid expansion of urbanisation, including better employment and economic opportunities, access to health care facilities, and an expected higher standard of living. Cities have come to play an increasingly important role in driving economic growth, leading to higher per capita income and facilitating innovation, thereby enhancing the quality of life. However, this rapid pace and scale of development are accompanied by a myriad of challenges. The increasing concentration of population and limited resources pose a vital challenge to urban governance. There is an immediate need to meet the increasing population's demands through infrastructural capacity, ensuring provisions for economic opportunities, delivery of services such as affordable housing, clean water, sanitation, etc. Cities with limited resources, ineffective management practices, and unsustainable land-use patterns, further impact the economy and the social fabric. Around 90% of the urban expansion in developing countries is in hazard-prone areas built through informal and unplanned settlements. Furthermore, cities consume over two-thirds of global energy consumption, accounting for more than 70% of greenhouse gas emissions. The burgeoning threat of climate change puts cities at the forefront of this issue.

These factors reiterate the need to build cities that are rooted in sustainability and function effectively. The Government of India took cognisance of this need and launched several initiatives to help develop the urban economy, improve quality of life, and tackle emerging issues.

Several schemes were implemented at all urban local bodies to tackle significant challenges of poverty alleviation, affordable housing, and sanitation. These schemes include Deen Dayal Antyodaya Yojana-National Urban Livelihood Mission (DAY-NULM), Swachh Bharat Mission-Urban (SBM-U), Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Pradhan Mantri Awas Yojana-Urban (PMAY-U), Smart Cities Mission (SCM), Schemes/Projects for Urban Transport, and the Heritage City Development and Augmentation Yojana (HRIDAY).

Fundamental infrastructural issues such as water supply, sewage/septage management, stormwater drainage, non-motorised urban transport, and green parks are addressed through Atal Mission for Rejuvenation and Urban Transformation (AMRUT). Since these sectors require economies of scale, they are implemented in 500 cities with 1,00,000, and above population, covering 65% of the population.
Furthermore, challenges related to ease of liveability are addressed under paradigms of urban governance, keeping communities at the core of all decisions, and perpetuating an increased use of digital technology to improve urban infrastructure, services, and optimum utilisation of resources. The Smart Cities Missions (SCM) is implemented to fulfil this purpose in 100 cities across India.

It has become increasingly crucial to build cities that not only function efficiently but offer sustainability and resilience to their people. Recognising the urgency of this need, several initiatives and programs have been undertaken to develop and transform urban spaces in India. In such a scenario, it is imperative to create an assessment tool that provides cities with an understanding of how they perform across different sectors of development. The data-driven learnings from such evaluations can be utilised as the starting point to initiate better governance outcomes, in compliance with the people's needs.

The Ease of Living Index was developed in 2018 by the Ministry of Housing and Urban Affairs to help facilitate the evaluation of Indian cities. The Ease of Living 2020, presents itself as a second edition of the Ease of Living Index. It was developed after incorporating learnings from the previous study, expanding its scope to further strengthen its framework by incorporating the Municipal Performance Index. While the Ease of Living Index aims to assess the outcomes of local service delivery and the citizens' perception of it, the Municipal Index focuses on assessing the performance of local bodies and their service efficiency.

The Ease of Living Index 2020 incorporated both social and economic elements, that holistically measures the quality of life across parameters of education, health, housing, water and sanitation, waste-management, mobility, safety and recreation. Gauging the economic ability of these cities in providing opportunities, the index also explores how India's urban spaces accesses green spaces while developing resilience.

To further solidify the report's findings, a "Citizen Perception Survey" was carried to gauge service delivery satisfaction among residents of a city. The survey aimed to assess whether the citizens' view of their city corresponds with the service outcome.

Together, the Ease of Living Index (along with the Citizen Perception

Municipal Corporation Building, Mumbai

Survey), and the Municipal Performance Index present a comprehensive view of Indian cities. They measure the ease of living in cities, local governance, administrative efficiency, and citizens' perception based on the outcome of these factors.

The key objections of the Ease of Living Index are to:

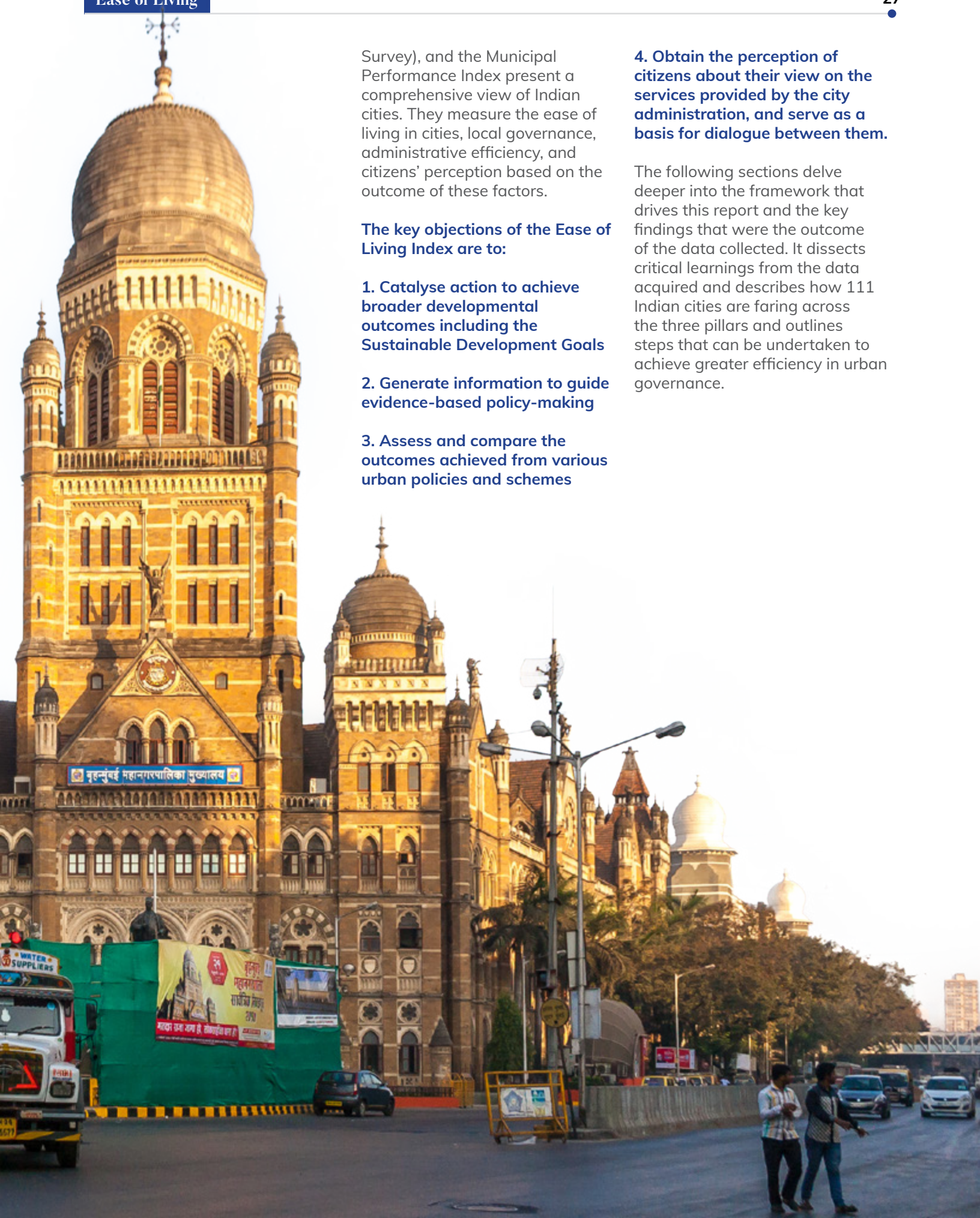
1. Catalyse action to achieve broader developmental outcomes including the Sustainable Development Goals

2. Generate information to guide evidence-based policy-making

3. Assess and compare the outcomes achieved from various urban policies and schemes

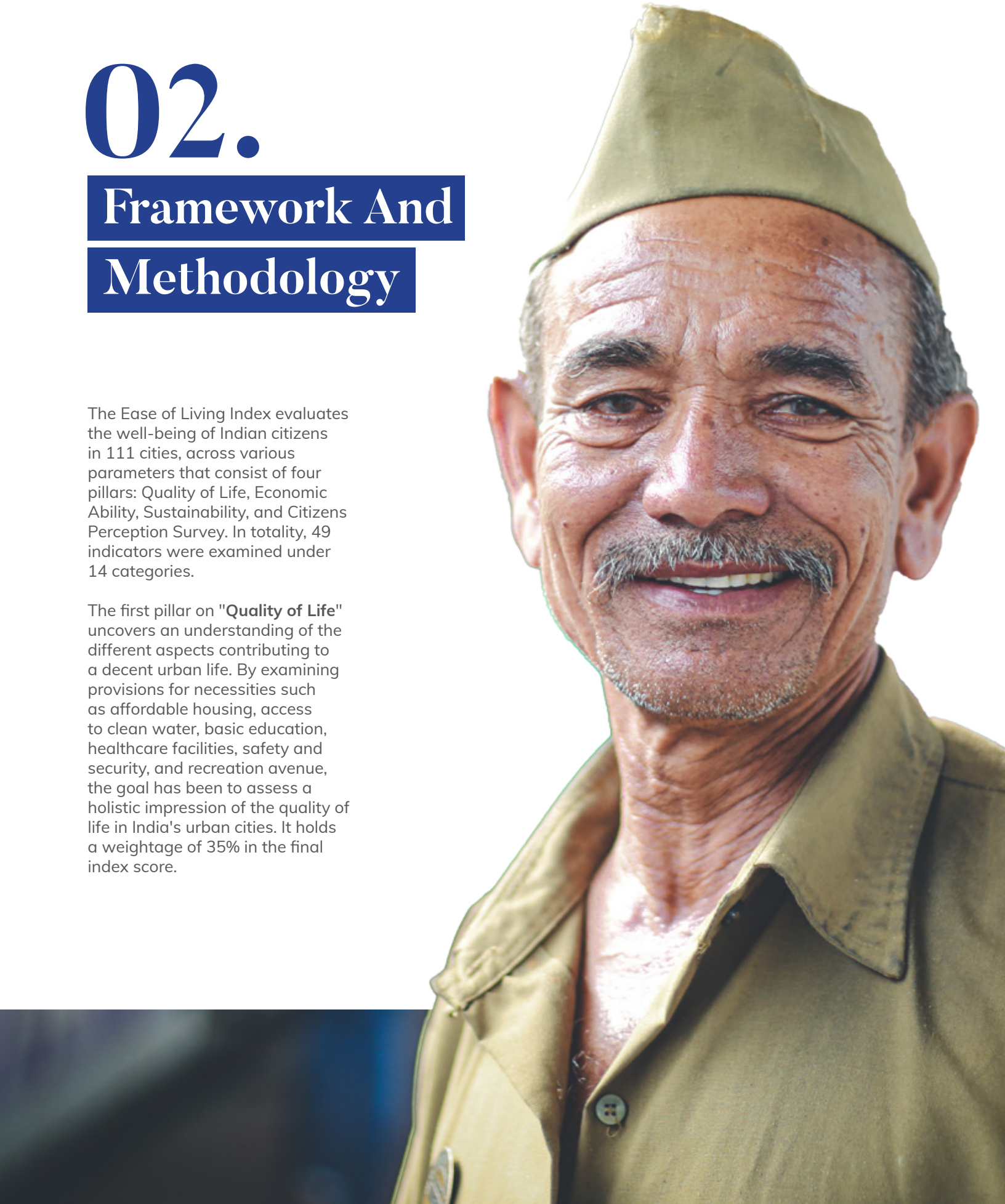
4. Obtain the perception of citizens about their view on the services provided by the city administration, and serve as a basis for dialogue between them.

The following sections delve deeper into the framework that drives this report and the key findings that were the outcome of the data collected. It dissects critical learnings from the data acquired and describes how 111 Indian cities are faring across the three pillars and outlines steps that can be undertaken to achieve greater efficiency in urban governance.



02.

Framework And Methodology



The Ease of Living Index evaluates the well-being of Indian citizens in 111 cities, across various parameters that consist of four pillars: Quality of Life, Economic Ability, Sustainability, and Citizens Perception Survey. In totality, 49 indicators were examined under 14 categories.

The first pillar on "**Quality of Life**" uncovers an understanding of the different aspects contributing to a decent urban life. By examining provisions for necessities such as affordable housing, access to clean water, basic education, healthcare facilities, safety and security, and recreation avenue, the goal has been to assess a holistic impression of the quality of life in India's urban cities. It holds a weightage of 35% in the final index score.

Figure 1: Ease of Living Framework

35% Weightage

Quality of Life

- Education
- Health
- Housing and Shelter
- WASH and SWM
- Mobility
- Safety and Security
- Recreation

15% Weightage

Economic Ability

- Level of Economic Development
- Economic Opportunities

20% Weightage

Sustainability

- Environment
- Green Space and Buildings
- Energy Consumption
- City Resilience

30% Weightage

Citizen Perception Survey

- Citizen Perception Survey

The second pillar on "**Economic Ability**" captures the economic well-being of citizens by evaluating the level of economic development and inequalities that they encounter in a particular city. This pillar holds a weightage of 15% in the final index score.

The third pillar evaluates "**Sustainability**" along the lines of availability of green spaces, promotion of green buildings, level of energy consumption, the quality of natural resources such as air and water, and the city's ability to withstand natural disasters. It holds a weightage of 20% in the final index score.

The index has been calculated through the data provided by cities on these pillars. It has also been validated through secondary sources to ensure a robust methodology and framework. The **Citizen Perception Survey (CPS)** was conducted to strengthen the index further. It provides a perception of the city residents and allows them to evaluate the level and quality of development in their respective cities. Furthermore, the survey acts as a source to validate the findings of the index and examine whether they comply with the results of the data provided by the cities. The CPS pillar holds a weightage of 30% in the overall index score.

It is important to note that all categories are considered equally important in the index and have been given equal weightage. However, since the number of indicators under each pillar varies, the pillars have been allocated different weights.

Methodology

Given the distinct levels of development of cities across India and their varying population size, cities were classified into different tiers to help bring forth better analysis (Table 1). A thorough investigation was conducted, consisting of all cities with a population of greater than 1 million as per the as per the projected population till 2019 (all metropolitan and megapolis cities), and all cities covered under the Smart Cities Mission, (regardless of their population size). Conclusively, a total of 111 cities were selected for evaluation in the Ease of Living Index. These cities have been primarily bifurcated into two categories: 1) "**Million+**" populated cities (with a population of more than a million); and 2) "**Less than Million**" (with a population of less than a million). For the purposes of this report, cities have been referred to as "Million+ cities" and "Less than Million cities", instead of "Million+ populated cities" and "Less than Million populated cities" for greater clarity.

Table 1: Classification of Cities

CLASSIFICATION	POPULATION RANGE*
Less than Million	Population < 1 million
Million+	Population > 1 million

*As per Population Projections for India and States 2011-2036, November 2019

Data was collected from cities and publicly available government sources. The latter aids in invalidating the data provided by city administrative authorities.

In case data from public sources was not available for specific data points city geographies were mapped at the district and state level.

Scoring Methods:

The data collected for the 49 indicators across the Index had been obtained in **various units**. For instance, *professionally trained teachers in schools* is a *percentage* of the total teachers, while *footpath density* is a *ratio* of the *total length of the footpath to the total length of road.* Each of these indicators has had a different scoring mechanism.

Percentage:

Since cities vary in population sizes and economic strength, most indicators need to be **weighed** for comparability. For instance, *the total number of households connected to sewerage network* needs to be weighed against the total number of households in the city. These indicators, therefore, take the form of *percentages*. These do not require any scoring mechanisms but were standardised, as explained below.

Ratio

Similarly, to weigh the data for comparability, some indicators were obtained in the form of **ratios**. For instance, *transport-related fatalities* were weighed by per lakh of population. Again, these did not require scoring mechanisms but were standardised.

Binary Marking

Some indicators take the form of **yes or no questions** to the cities. For instance, the indicator assessing if the *city Incentivises green buildings* takes the form of a question. The response to this is *binary*, with the “yes” answer marked as 1 and the “no” answer marked as 0.

Deviation from Mean

Some indicators have **no fixed benchmarking or optimal value**. For instance, it is difficult to fix the optimal expenditure on health and education by a house. In such cases, the average of all cities was taken as a benchmark, and each city was scored based on the deviation from it. For instance, in *household expenditure on education* as a percentage of total household expenditure, the mean expenditure proportion for all cities was obtained. The *deviation* of each city from it was used to assess its scores. Any positive deviation was considered better in such cases.

In some cases, like *pupil-teacher ratio at the primary level,* where there is a benchmark given by The Right of Children to Free and Compulsory Education (RTE) Act at 30:1, there was a capping benchmark. Cities with a higher pupil-teacher ratio like 25:1 were awarded the same score as the one with 30:1. However, those with a lower pupil-teacher ratio than 30:1 were penalised depending on the deviation from the benchmark.

If Service Level Benchmarks or national norms were not available, the city performance within its group was treated as the benchmark. These city groups are provided in the city classification section.

Data Transformation

The indicator set includes some indicators that are positively correlated with the aspects that are supposed to be examined through the index. In contrast, some other indicators are negatively correlated with the overall index. For example, *public transportation availability* is positively related to citizens' ease of living while *the prevalence of crimes* reflects the challenges faced by the citizens. Therefore, indicators were modified to ensure that greater value means a higher score. An exhaustive list of indicators is provided in the Appendix to the report.

Normalisation

Normalisation is required to make the indicators comparable with each other. It is critical to normalise the data before making any data aggregation as indicators have different units. For example, the *sewerage network coverage* is captured as a percentage of the total road length while the *pupil-teacher ratio* is a proportion. These indicators are not comparable by any standards. The normalisation procedure is carried out to transform all the data into dimensionless numbers. This is done using z-scores that can be placed in a normal distribution. The z-score or the standard score indicates how many standard deviations an indicator value is from the mean. It ranges from -3 standard deviation to +3 standard deviation.

Standardisation

Standardisation helps solve non-comparability by making indicators unitless as it re-scales them with a mean of zero and a standard deviation of one.

It is calculated using the following formula:

$$\mathbf{Z= (X- \mu)/\sigma)}$$

Where Z represents z-score; μ is the mean; X is the indicator value, and σ is the standard deviation.

Aggregation

The **aggregation** methodology of the Ease of Living Index is based on three elements, i.e. indicators, categories and pillars of the index, and the Citizen Perception Survey. The index has 70 percent weightage in the overall Ease of Living Scores, and the Citizen Perception Survey has 30 percent weightage. The category values have been represented by A to M, and pillar values have been represented by O, P and Q (as depicted by the table in the next section on Category Scores).

Category Scores

Each indicator under the category has been given equal weightage. The weights for pillars have been decided based on consultation with experts and proportionality of the said indicators across pillars. The category values are calculated by summing the weighted scores using the following formula:

Category = ∑ (wi * indicator)

For instance, the category *Housing and Shelter* has four indicators, so the weight of every indicator for calculating the score for category *Health* will be 20 percent or 0.2.

This implies that:
Scores of *Housing and Shelter* = (0.2* *Value of households with electrical connections* + 0.2* *Value of average length of electrical interruptions* + 0.2* *Value of beneficiaries Under PMAY*+ 0.2* *Value of Slum Population*)

These scores have been transformed to a 0 to 100 scale. The calculation has been done using the following formula:

(X- Minimum Scores) / (Maximum Score-Minimum Score)

Where X is the city score.

The category values are represented in the form of A to M in the table below.

Pillar Scores:
The scores of the categories under each pillar will be aggregated to arrive at the pillar score.
This will be calculated using the following formula:

Pillar = ∑ (wi * Category Scores).
The table below presents the weights and the complete methodology for each pillar.

Pillar	Category	Score of Pillar
Quality of Life (35%)	Education (A) Health (B) Housing and Shelter (C) WASH and SWM (D) Mobility (E) Safety and Security (F) Recreation (G)	O= (A+B+C+D+E+F+G)
Economic Ability (15%)	Level of Economic Development (H) Economic Opportunities (I)	P= (H+I)
Sustainability (20%)	Environment (J) Green Spaces and Buildings (K) Energy Consumption (L) City Resilience (M)	Q= (J+K+L+M)
Ease of Living Index	**Total Score**	**0.35*O+0.15*P+0.2*Q**

The framework for the Ease of Living Index thus includes the pillar scores and the scores generated from the citizens' survey. The pillar levels scores account for 70% of the Index, whereas the Citizen Perception Survey accounts for 30% of the final Index scores. The following section discusses the findings of the index in expansive detail.

03.

Overall Rankings

The aggregate score of the 111 cities participating in this index comes down to 53.51. The ranking of the cities demonstrates the variation in scores, and gives further insight into the development scenario in the cities of India.

Christ Church, Shimla

Table 2: Million+ category rankings in Ease of Living Index

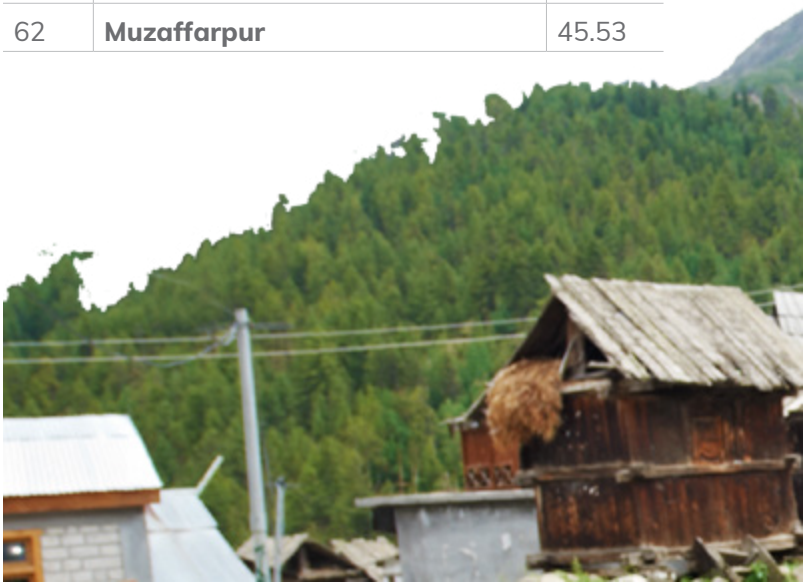
Rank	Million + City	Score
1	Bengaluru	66.70
2	Pune	66.27
3	Ahmedabad	64.87
4	Chennai	62.61
5	Surat	61.73
6	Navi Mumbai	61.60
7	Coimbatore	59.72
8	Vadodara	59.24
9	Indore	58.58
10	Greater Mumbai	58.23
11	Thane	58.16
12	Kalyan Dombivali	57.71
13	Delhi	57.56
14	Ludhiana	57.36
15	Visakhapatnam	57.28
16	Pimpri Chinchwad	57.16
17	Solapur	56.58
18	Raipur	56.26
19	Bhopal	56.26
20	Rajkot	55.94
21	Jodhpur	55.80
22	Madurai	55.78
23	Jaipur	55.70
24	Hyderabad	55.40
25	Nagpur	55.33

Rank	Million + City	Score
26	Lucknow	55.15
27	Varanasi	54.67
28	Kanpur	54.43
29	Chandigarh	54.40
30	Ghaziabad	54.31
31	Gwalior	53.72
32	Prayagraj	53.29
33	Patna	53.26
34	Aurangabad	52.90
35	Agra	52.58
36	Meerut	52.41
37	Hubli Dharwad	51.39
38	Nashik	51.29
39	Vasai Virar	51.26
40	Faridabad	51.26
41	Vijayawada	50.35
42	Ranchi	50.31
43	Jabalpur	49.94
44	Kota	49.52
45	Amritsar	49.36
46	Guwahati	48.52
47	Bareilly	47.73
48	Dhanbad	46.96
49	Srinagar	42.95

Table 3: Less than Million category rankings in Ease of Living Index

Rank	Less than Million City	Score
1	Shimla	60.90
2	Bhubaneswar	59.85
3	Silvassa	58.43
4	Kakinada	56.84
5	Salem	56.40
6	Vellore	56.38
7	Gandhinagar	56.25
8	Gurugram	56.00
9	Davanagere	55.25
10	Tiruchirappalli	55.24
11	Agartala	55.20
12	Ajmer	54.89
13	Puducherry	54.78
14	Diu	54.64
15	Karnal	54.48
16	Panaji	54.44
17	Tirunelveli	54.04
18	Tiruppur	54.03
19	Warangal	54.01
20	Mangalore	53.95
21	Thiruvananthapuram	53.93
22	Karimnagar	53.27
23	Tumakuru	53.06
24	Erode	52.87
25	Sagar	52.86
26	Shivamogga	52.86
27	Jammu	52.49
28	Bihar Sharif	52.42
29	Dehradun	52.41
30	Bhagalpur	52.19
31	Thanjavur	52.18
32	Jalandhar	52.18
33	Ujjain	52.04
34	Jhansi	51.71
35	Shillong	51.65

Rank	Less than Million City	Score
36	Kavaratti	51.58
37	Dharamshala	51.51
38	Moradabad	51.43
39	Kochi	51.41
40	Rae Bareli	51.21
41	Gangtok	51.18
42	Port Blair	51.13
43	Thoothukudi	51.12
44	Saharanpur	50.91
45	Amravati	50.38
46	Tirupati	50.33
47	Belagavi	50.28
48	Udaipur	50.25
49	Kohima	49.87
50	Imphal	49.64
51	Dahod	49.40
52	Bilaspur	49.19
53	Itanagar	48.96
54	Rourkela	48.89
55	Pasighat	48.78
56	Dindigul	48.34
57	Aizawl	48.16
58	Aligarh	47.15
59	Rampur	46.88
60	Namchi	46.46
61	Satna	45.60
62	Muzaffarpur	45.53



Bengaluru has emerged as the top performer with a score of 66.70, followed by Pune (66.27) in the 2nd position and Ahmedabad (64.87) in the 3rd position. India is a diverse country, with varied levels of development and population sizes. Hence, it is critical to take such differences into account while comparing scores. For this purpose, the cities have been bifurcated on the basis of population sizes- cities having over *a million population* (or **Million+ cities**) and cities having *less than a million population* (or **Less than Million** cities). Data shows that Bengaluru has topped in the first category, and Shimla in the second. Since large metropolitans are included in the Million+ cities, it is understandable that scores for that category are comparatively higher.

The bifurcated scores also give a spotlight to cities that are excelling in various areas of development but are overlooked because they are smaller cities or are part of the urban agglomerations that grow around urban centres.

These urban areas are essential to the development journey of India, because they are the bridge between urban and rural economies, which help stimulate rural development by providing market linkages for agricultural produce, access to financial services and social infrastructure like education and healthcare, employment opportunities, and the like. The separate ranking of cities with Less than Million population allows the creation of a separate league, wherein the respective city administrations and planners are encouraged and incentivised to gauge their performance with similar urban agglomerations.

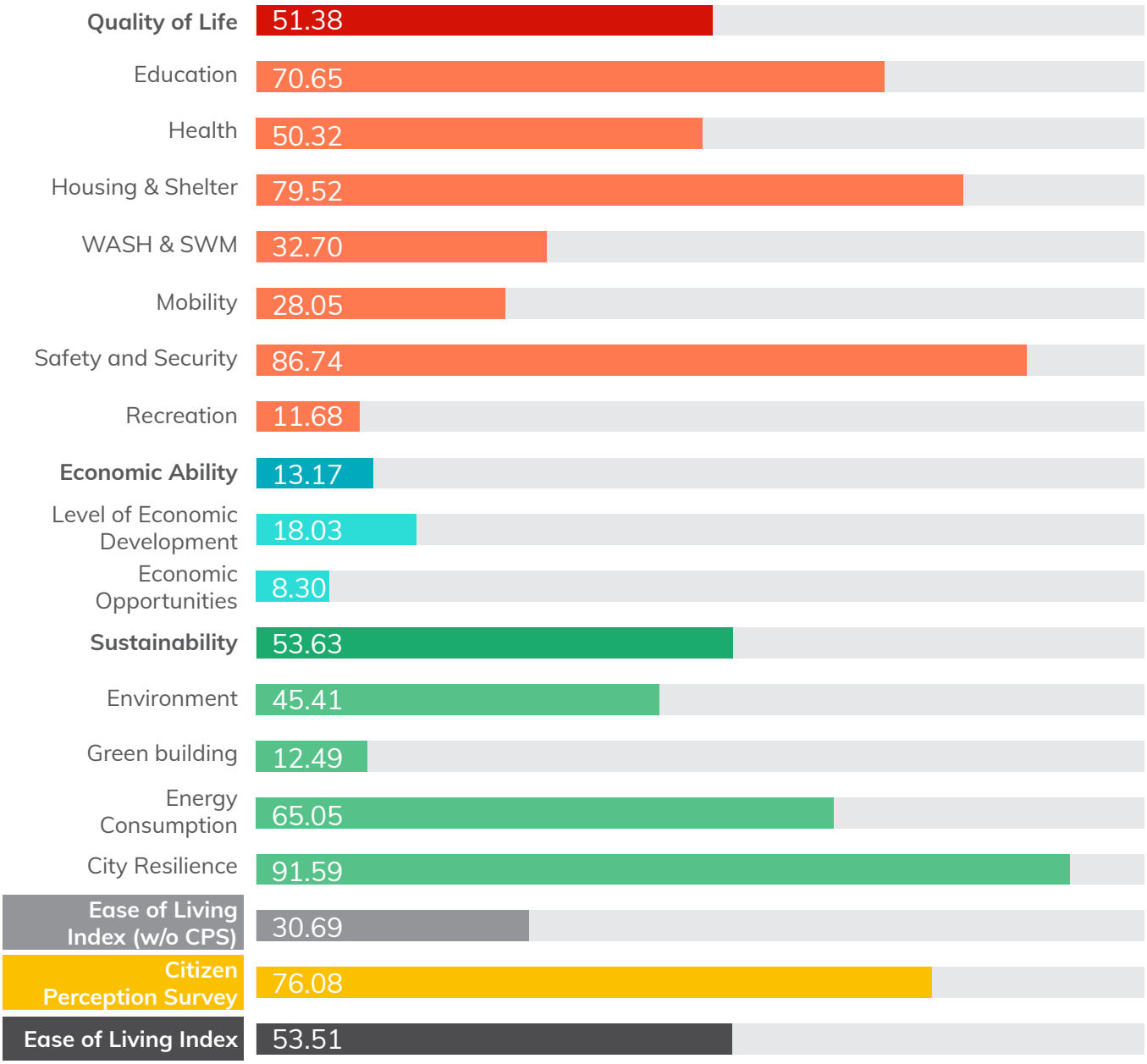
Bengaluru has emerged as the top performer with a score of 66.70, followed by Pune (66.27) in the 2nd position and Ahmedabad (64.87) in the 3rd position.

04.
Analysis

A.
Cross-country Comparison

A country-level analysis provides a macroscopic understanding of the Ease of Living across Indian cities. The analysis presents the strengths and weaknesses of enabling Ease of living in India's urban centers, which could assist in adopting sound practices and policies to improve the same.

Figure 2: National Average scores across pillars and categories in Ease of Living Index



Indian cities have achieved an **average score** of 53.51 in the Ease of Living Index that ranges from a scale of 0 (worst-case scenario) to 100 (best-case scenario). Scope of improvement is thus imminently evident in improving the ease of living in Indian cities. However, it becomes important to analyse the pillar and category scores that can identify the strengths and weaknesses of these cities.

Some factors such as *access to education* (70.7), *Housing & Shelter* (79.5), and *Safety and Security* (86.7) have visibly alleviated the national average

As the urban population grows in the country, the centers of economic activities have been limited to industrial hubs that have traditionally developed as pivots of finance and services. The urban growth thus lags significantly.

score of 51.38 for the **Quality of Life** pillar. While national-level policies such as Sarva Shiksha Abhiyan, Pradhan Mantri Awas Yojana, Beti Bachao Beti Padhao have increased public awareness on these factors, many of these pillars involve components that are dealt with state governments and local administration. A high score on these categories indicates synergy between national and state policies working on a common goal of improving access to quality education and housing.

The low national average scores on **Economic Ability** at 13.17 imply the potential that India's urban centers possess in developing into hubs of economic growth and prosperity, that can provide robust livelihood opportunities and create a thriving cosmopolitan culture in these areas. As the urban population grows in the country, the centers of economic activities have been limited to industrial hubs that have traditionally developed as pivots of finance and services. The urban growth thus lags significantly.

Sustainability observes a high national average at 53.63, as average scores on categories such as *City-Resilience* (91.59) and *Energy Consumption* (65.05) have skewed the average to a positive end. National and state-level policies promoting the usage of renewable energy such as solar power has contributed to the high scores in *Energy Consumption*. Increased urban resilience to natural disasters by involving individuals, communities, and institutions at the city-level by local administrations has further improved the scores of the sustainability pillar.

Worli, Western Dadar, Mumbai

B.
Region-level Analysis

India is a diverse country in terms of geographical distribution, varying levels of development, and population, and the Ease of Living scores reflect that. It is thus important to take into account these differences while comparing scores. For this analysis, cities have been firstly categorised based on their population sizes- cities having over a million population **(Million+)** and cities having less than a million population **(Less than Million)**. Furthermore, the states and union territories have been categorised under six regions, namely:

North: Chandigarh, Haryana, Jammu & Kashmir, NCT Delhi, Punjab, Rajasthan, Uttar Pradesh

South: Andhra Pradesh, Karnataka, Kerala, Lakshadweep, Puducherry, Tamil Nadu, Telangana

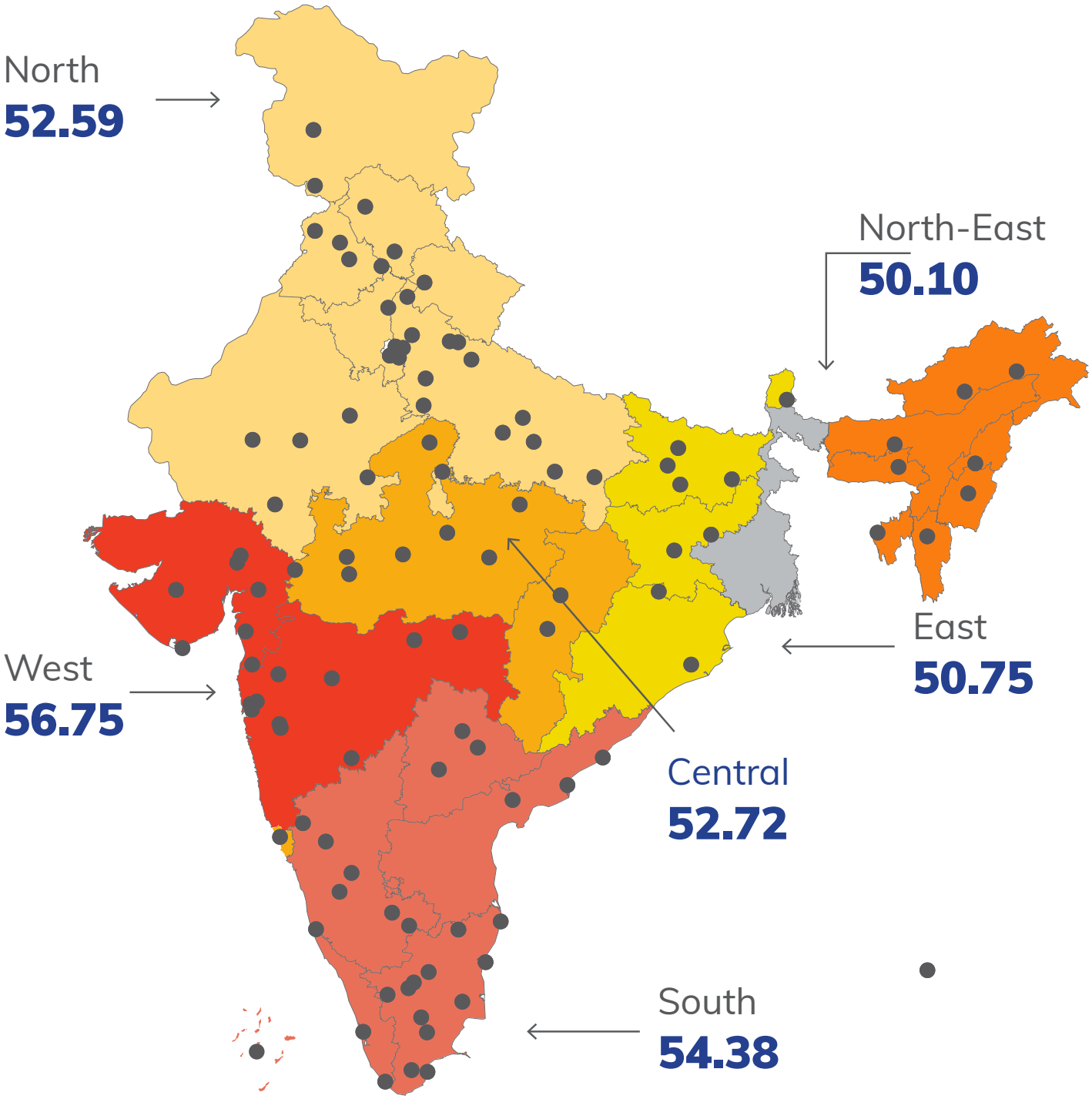
West: Dadra and Nagar Haveli, Daman and Diu, Goa, Gujarat, Maharashtra

Central: Chhattisgarh, Madhya Pradesh

East: Andaman & Nicobar Islands, Bihar, Jharkhand, Odisha, Sikkim
North-East: Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura.

The western region observes the highest aggregate of Ease of Living scores at 56.75, followed by South (54.38), North (52.59), Central (52.72), East (50.75), and finally North-East (50.10) regions.

Figure 3: Regional Distribution of Ease of Living scores



North

With a regional average score of 52.59, most of the 17 Million+ cities in the northern region have an Ease of Living score higher than the national average of 53.51. Some of the top-ranking cities in the Million+ categories have emerged from the northern region such as Delhi (13th), Ludhiana (14th), Jodhpur (21st), and Jaipur (23rd). Most of these cities have attained moderate scores in Quality of Life and Sustainability, but have fallen short in their Economic Ability scores. All Million+ cities in the northern region have secured ranks less than 50, and have thus performed better than more than 50% of the cities participating in this index, as observed in Table 4.

Table 4: Scores of Million+ cities in Northern Region

State	Million+ City	Quality of Life	Economic Ability	Sustainability	Ease of Living (w/o CPS)	Citizen Perception Survey (CPS)	Ease of Living
Chandigarh	Chandigarh	54.42	9.90	60.13	32.56	72.80	54.40
Haryana	Faridabad	45.57	14.10	53.17	28.70	75.20	51.26
Jammu & Kashmir	Srinagar	26.06	3.09	57.61	21.11	72.80	42.95
NCT Delhi	Delhi	51.22	50.73	56.02	36.74	69.40	57.56
Punjab	Amritsar	51.50	9.46	57.05	30.85	61.70	49.36
	Ludhiana	56.00	26.25	55.24	34.59	75.90	57.36
Rajasthan	Jodhpur	52.99	25.08	51.60	32.63	76.90	55.70
	Jaipur	47.66	10.49	57.07	29.67	87.10	55.80
	Kota	46.42	6.03	44.87	26.12	78.00	49.52
Uttar Pradesh	Agra	45.72	7.91	56.52	28.49	80.30	52.58
	Bareilly	45.48	4.98	43.75	25.41	74.40	47.73
	Ghaziabad	54.11	13.81	56.08	32.23	73.60	54.31
	Kanpur	51.33	10.93	52.33	30.07	81.20	54.43
	Lucknow	51.30	10.05	54.81	30.43	82.40	55.15
	Meerut	48.98	7.25	51.98	28.62	79.30	52.41
	Prayagraj	55.33	5.42	63.57	32.89	68.00	53.29
	Varanasi	55.50	5.49	57.51	31.75	76.40	54.67

On the other hand, some Less than Million cities in the northern region (as shown in Table 5) have performed exceptionally well, with top-ranking cities in this category such as Shimla (1st), Gurugram (8th), and Ajmer (12th) emerging from this region. However, three cities from Uttar Pradesh such as Aligarh (58th) and Rampur (59th).

Table 5: Scores of Less than Million cities in Northern Region

State	Less than Million City	Quality of Life	Economic Ability	Sustainability	Ease of Living (w/o CPS)	Citizen Perception Survey (CPS)	Ease of Living
Haryana	Gurugram	53.30	32.50	57.34	35.00	70.00	56.00
	Karnal	51.73	3.88	70.65	32.82	72.20	54.48
Himachal Pradesh	Dharamshala	53.58	2.55	60.77	31.29	67.40	51.51
	Shimla	53.05	23.39	69.16	35.91	83.30	60.90
Jammu & Kashmir	Jammu	54.05	7.47	41.20	28.28	80.70	52.49
Punjab	Jalandhar	50.60	13.48	50.19	29.77	74.70	52.18
Rajasthan	Ajmer	50.23	12.29	53.31	30.08	82.70	54.89
	Udaipur	53.83	6.88	48.71	29.61	68.80	50.25
Uttar Pradesh	Aligarh	51.81	3.77	43.28	27.35	66.00	47.15
	Jhansi	45.35	2.46	60.20	28.28	78.10	51.71
	Moradabad	48.63	6.06	49.45	27.82	78.70	51.43
	Rae Bareli	49.57	3.18	41.54	26.13	83.60	51.21
	Rampur	47.50	3.37	47.64	26.66	67.40	46.88
	Saharanpur	49.02	11.88	49.48	28.83	73.60	50.91
Uttarakhand	Dehradun	49.81	6.65	56.93	29.82	75.30	52.41

South

The southern region observes a higher proportion of Less than Million cities with 22 cities participating in this index. With only 8 Million+ cities emerging from the south, their high ranking in this particular category has elevated the regional average of 54.38. Cities such as Bengaluru (1st), Chennai (4th), Coimbatore (7th), Visakhapatnam (15th), and Hyderabad (24th) have performed well in terms of Economic Ability, with scores above 30 (as shown in Table 6).

Table 6: Scores of Million+ cities in Southern Region

State	Million+ City	Quality of Life	Economic Ability	Sustainability	Ease of Living (w/o CPS)	Citizen Perception Survey (CPS)	Ease of Living
Andhra Pradesh	Vijayawada	50.40	11.57	53.78	30.13	67.40	50.35
	Visakhapatnam	51.93	19.42	65.18	34.12	77.20	57.28
Karnataka	Bengaluru	55.67	78.82	59.97	43.30	78.00	66.70
	Hubli Dharwad	52.53	6.58	53.61	30.09	71.00	51.39
Tamil Nadu	Chennai	60.84	34.16	57.05	37.83	82.60	62.61
	Coimbatore	60.33	32.48	48.25	35.63	80.30	59.72
	Madurai	54.49	11.96	59.96	32.86	76.40	55.78
Telangana	Hyderabad	51.28	30.05	58.69	34.19	70.70	55.40

States such as Karnataka, Kerala and Tamil Nadu have a high proportion of Less than Million cities, (as shown in Table 7) with top-ranking cities such as Kakinada (4th), Salem (5th), Vellore(6th), Davanagere(9th), Tiruchirappalli (10th).

Table 7: Scores of Less than Million cities in Southern Region

State	Less than Million City	Quality of Life	Economic Ability	Sustainability	Ease of Living (w/o CPS)	Citizen Perception Survey (CPS)	Ease of Living
Andhra Pradesh	Kakinada	54.53	11.98	51.67	31.22	85.40	56.84
Karnataka	Belagavi	52.48	7.21	56.36	30.72	65.20	50.28
	Davanagere	50.96	2.15	49.70	28.10	90.50	55.25
	Mangalore	54.78	11.96	50.31	31.03	76.40	53.95
	Shivamogga	50.69	3.20	50.16	28.26	82.00	52.86
	Tumakuru	56.52	4.16	50.64	30.53	75.10	53.06
Kerala	Kochi	47.39	28.41	45.69	29.99	71.40	51.41
	Tiruchirappalli	54.75	11.99	58.16	32.59	75.50	55.24
	Thiruvananthapuram	54.74	7.92	57.52	31.85	73.60	53.93
Lakshadweep	Kavaratti	50.63	3.27	53.58	28.93	75.50	51.58
Puducherry	Puducherry	52.53	8.01	50.71	29.73	83.50	54.78
Tamil Nadu	Dindigul	49.55	7.23	47.41	27.91	68.10	48.34
	Erode	47.97	12.50	56.28	29.92	76.50	52.87
	Salem	52.93	9.20	62.93	32.49	79.70	56.40
	Thanjavur	53.40	3.45	45.32	28.27	79.70	52.18
	Tirunelveli	54.63	11.24	60.71	32.95	70.30	54.04
	Tirupati	54.07	11.46	51.96	31.04	64.30	50.33
	Tiruppur	51.40	39.12	51.70	34.20	66.10	54.03
	Thoothukudi	48.13	12.09	53.57	29.37	72.50	51.12
	Vellore	56.49	20.71	53.19	33.52	76.20	56.38
Telangana	Karimnagar	52.50	4.48	53.68	29.78	78.30	53.27
	Warangal	56.45	4.72	59.26	32.32	72.30	54.01

West

The western region has the highest regional average score at 56.75. Of the 15 Million+cities emerging from this region (as shown in Table 8), their exceptional performance in Economic ability has influenced their national rankings and performance, as most cities have secured the top 20 ranks. Cities such as Pune (2nd), Ahmedabad (3rd), Surat (5th), Navi Mumbai (6th), Vadodara (8th), Greater Mumbai (10th), Thane (11th), Kalyan Dombivali (12th) have not only performed well in Economic Ability, but also in Quality of Life and Sustainability pillars.

Table 8: Scores of Million+ cities in Western Region

State	Million+ City	Quality of Life	Economic Ability	Sustainability	Ease of Living (w/o CPS)	Citizen Perception Survey (CPS)	Ease of Living
Gujarat	Ahmedabad	57.46	48.19	64.22	40.18	82.30	64.87
	Rajkot	51.86	13.52	59.55	32.09	79.50	55.94
	Surat	57.96	30.29	62.41	37.31	81.40	61.73
	Vadodara	58.10	24.06	57.22	35.39	79.50	59.24
Maharashtra	Aurangabad	55.50	13.39	50.38	31.51	71.30	52.90
	Greater Mumbai	51.12	32.12	60.74	34.86	77.90	58.23
	Kalyan Dombivali	57.80	19.89	56.11	34.43	77.60	57.71
	Nagpur	50.59	15.35	59.43	31.90	78.10	55.33
	Nashik	53.29	17.25	53.94	32.03	64.20	51.29
	Navi Mumbai	59.93	23.53	61.85	36.88	82.40	61.60
	Pimpri Chinchwad	54.79	30.07	65.09	36.70	68.20	57.16
	Pune	58.10	48.88	75.74	42.81	78.20	66.27
	Solapur	51.79	4.02	56.04	29.94	88.80	56.58
	Thane	55.04	40.52	54.90	36.32	72.80	58.16
	Vasai Virar	51.84	10.89	48.53	29.48	72.60	51.26

A similar performance of Less than Million cities can be observed in Table 9, with cities in the western region with cities such as Silvassa (3rd), Gandhinagar (7th), Diu (14th), and Panaji (16th) performing well in Quality of Life and Citizen Perception Survey pillars.

Table 9: Scores of Less than Million cities in Western Region

State	Less than Million City	Quality of Life	Economic Ability	Sustainability	Ease of Living (w/o CPS)	Citizen Perception Survey (CPS)	Ease of Living
Dadra and Nagar Haveli	Silvassa	55.06	12.54	46.16	30.38	93.50	58.43
Daman and Diu	Diu	55.73	11.30	55.74	32.35	74.30	54.64
Goa	Panaji	62.42	8.90	48.15	32.81	72.10	54.44
Gujarat	Dahod	53.55	3.33	39.34	27.11	74.30	49.40
	Gandhinagar	55.02	15.12	51.99	31.92	81.10	56.25
Maharashtra	Amravati	53.31	3.39	55.12	30.19	67.30	50.38

Central

The central region observes a blend of high-ranking and low-ranking cities, with the former concentrated in the Million+ category and the latter in the Less than Million category. While Million+ cities such as Indore, Raipur and Bhopal have ranked 9th, 18th and 19th respectively (as shown in table 10), Less than Million city such as Satna (Table 11) has secured the second-last position out of the 62 cities in the Less than Million category.

Table 10: Scores of Million+ cities in Central Region

State	Million+ City	Quality of Life	Economic Ability	Sustainability	Ease of Living (w/o CPS)	Citizen Perception Survey (CPS)	Ease of Living
Chhattisgarh	Raipur	54.74	11.73	63.77	33.67	75.30	56.26
Madhya Pradesh	Bhopal	57.92	14.01	51.68	32.71	78.50	56.26
	Gwalior	51.43	5.97	64.17	31.73	73.30	53.72
	Indore	59.86	15.09	61.62	35.54	76.80	58.58
	Jabalpur	50.75	4.41	53.31	29.09	69.50	49.94

Table 11: Scores of Less than Million cities in Central Region

State	Less than Million City	Quality of Life	Economic Ability	Sustainability	Ease of Living (w/o CPS)	Citizen Perception Survey (CPS)	Ease of Living
Chhattisgarh	Bilaspur	37.24	7.16	47.46	23.60	85.30	49.19
Madhya Pradesh	Sagar	46.96	13.21	49.38	28.29	81.90	52.86
	Satna	41.28	5.81	45.21	24.36	70.80	45.60
	Ujjain	50.91	5.27	57.66	30.14	73.00	52.04

East & North-East

The **eastern** region depicts a contrasting performance, as most of the Million+ and Less than Million cities have ranked above 30. A higher proportion of low-ranking cities can be observed in this region, with Ranchi ranking 42nd, Dhanbad ranking 48th among 49 cities in the Million+ category (as shown in Table 12). In the Less than Million category (in Table 13), Rourkela ranked 54th, Namchi ranked 60th and Muzaffarpur ranked last at 62nd, out of 62 Less than Million cities.

Table 12: Scores of Million+ cities in Eastern Region

State	Million+ City	Quality of Life	Economic Ability	Sustainability	Ease of Living (w/o CPS)	Citizen Perception Survey (CPS)	Ease of Living
Bihar	Patna	47.02	24.61	49.32	30.01	77.50	53.26
Jharkhand	Ranchi	51.86	6.88	49.59	29.10	70.70	50.31
	Dhanbad	34.71	6.42	50.90	23.29	78.90	46.96

Table 13: Scores of Less than Million cities in the Eastern region

State	Less than Million City	Quality of Life	Economic Ability	Sustainability	Ease of Living (w/o CPS)	Citizen Perception Survey (CPS)	Ease of Living
Andaman	Port Blair	55.14	5.09	47.77	29.62	71.70	51.13
Bihar	Bhagalpur	49.02	0.67	48.22	26.90	84.30	52.19
	Bihar Sharif	48.71	0.58	59.14	28.96	78.20	52.42
	Muzaffarpur	45.87	1.85	44.31	25.19	67.80	45.53
Odisha	Bhubaneswar	51.79	11.57	57.77	31.41	94.80	59.85
	Rourkela	42.90	8.09	49.76	26.18	75.70	48.89
Sikkim	Gangtok	52.14	16.36	40.50	28.80	74.60	51.18
	Namchi	42.03	15.69	46.80	26.42	66.80	46.46

A similar observation can be drawn in the case of **north-eastern** cities. While Agartala has ranked high in Less than Million category, other cities in the region have secured bottom ranks in both Million+ (Table 14) and Less than Million (Table 15) categories. Their poor performance in economic ability has skewed the results negatively, despite a moderate performance in terms of Quality of Life and Sustainability.

Table 14: Scores of Million+ cities in North-Eastern region

State	Million+ City	Quality of Life	Economic Ability	Sustainability	Ease of Living (w/o CPS)	Citizen Perception Survey (CPS)	Ease of Living
Assam	Guwahati	43.65	8.63	48.31	26.23	74.30	48.52

Table 15: Scores of Less than-Million cities in the North-Eastern region

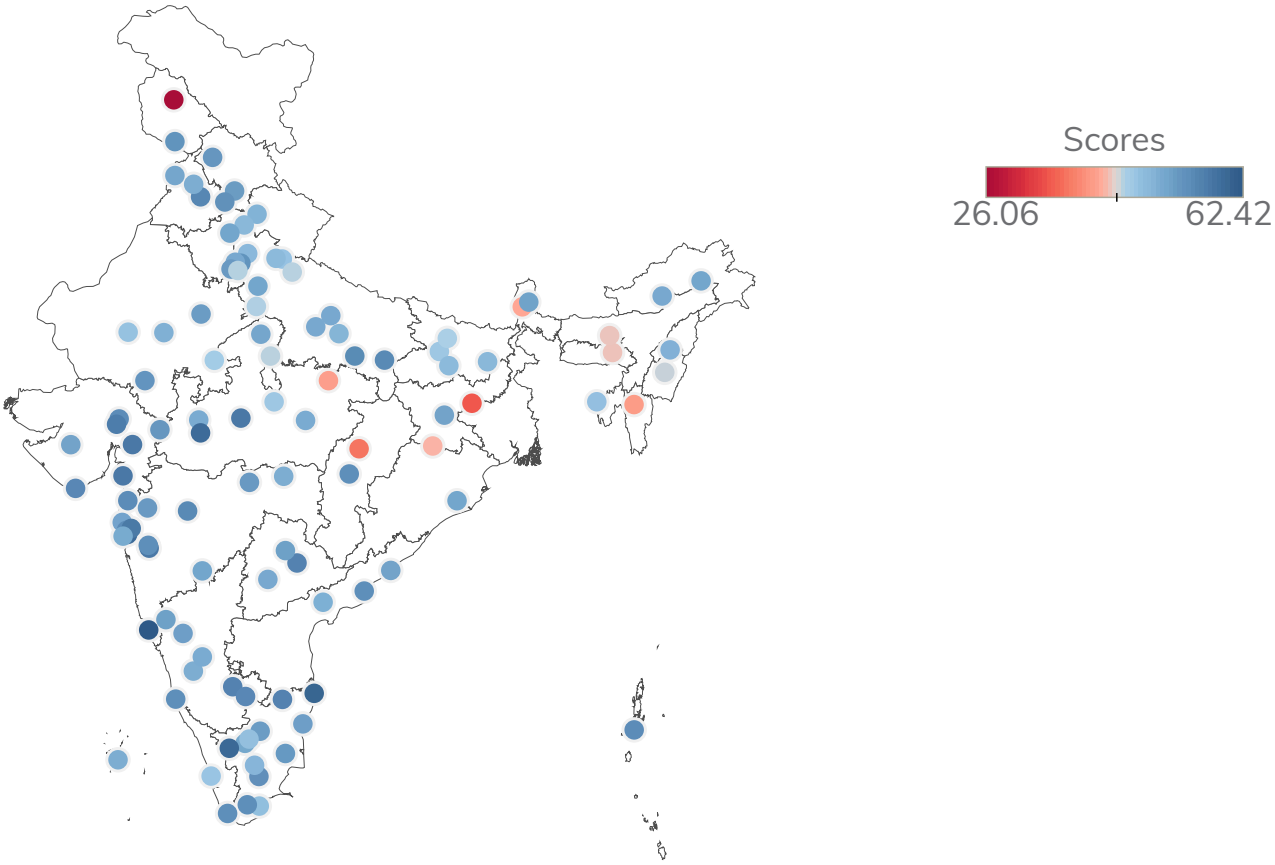
State	Less than Million City	Quality of Life	Economic Ability	Sustainability	Ease of Living (w/o CPS)	Citizen Perception Survey (CPS)	Ease of Living
Arunachal Pradesh	Itanagar	51.19	1.39	40.95	26.31	75.50	48.96
	Pasighat	51.71	4.14	40.51	26.82	73.20	48.78
Manipur	Imphal	45.01	1.14	38.38	23.60	86.80	49.64
Meghalaya	Shillong	43.54	4.74	56.53	27.26	81.30	51.65
Mizoram	Aizawl	41.03	8.41	44.51	24.52	78.80	48.16
Nagaland	Kohima	50.06	0.55	46.87	26.98	76.30	49.87
Tripura	Agartala	47.87	3.17	60.25	29.28	86.40	55.20

C.
Pillar-level Analysis

01.
Quality of Life

The **Quality of Life** pillar evaluates cities on the varied components of what is essentially a comfortable life in an urban space. While *education* and *health* are two important categories that focus on human capital formation and development and are beneficiaries of targeted policy-making, the other components that define an urban life, such as *mobility*, *recreation*, and *safety*, are not often so. Much of a citizen's perception of their quality of life is a symbiosis of all of these categories in varied combinations and plays a significant role in accessing both education and health.

Figure 4: Mapping of Quality of Life pillar scores



The Quality of Life pillar is marked by several categories. The national average is 51.38, with 33 cities scoring above the national average. Panaji, a city with a Less than Million population, is the highest scorer in this pillar at 62.42, closely followed by Chennai at 60.84, Coimbatore (60.33), and Navi Mumbai (59.93), all Million+ cities. Among Million+ cities, the top 10 cities have scored considerably close to one another, while in the case of Less than Million cities, there is some gap between the top scorer Panaji, and the rest of cities such as Tumakuru (56.52), Vellore (56.49), and Warangal (56.45) which are closely tied together.

Table 16: Ranking of Million+ cities in Quality of Life pillar scores

Rank	Million+ City	Score
1	Chennai	60.84
2	Coimbatore	60.33
3	Navi Mumbai	59.93
4	Indore	59.86
5	Vadodara	58.10
6	Pune	58.10
7	Surat	57.96
8	Bhopal	57.92

Rank	Million+ City	Score
9	Kalyan Dombivali	57.80
10	Ahmedabad	57.46
11	Ludhiana	56.00
12	Bengaluru	55.67
13	Aurangabad	55.50
14	Varanasi	55.50
15	Prayagraj	55.33
16	Thane	55.04

Rank	Million+ City	Score
17	Pimpri Chinchwad	54.79
18	Raipur	54.74
19	Madurai	54.49
20	Chandigarh	54.42
21	Ghaziabad	54.11
22	Nashik	53.29
23	Jaipur	52.99
24	Hubli Dharwad	52.53

Rank	Million+ City	Score
25	Visakhapatnam	51.93
26	Rajkot	51.86
27	Ranchi	51.86
28	Vasai Virar	51.84
29	Solapur	51.79
30	Amritsar	51.50
31	Gwalior	51.43
32	Kanpur	51.33
33	Lucknow	51.30

Rank	Million+ City	Score
34	Hyderabad	51.28
35	Delhi	51.22
36	Greater Mumbai	51.12
37	Jabalpur	50.75
38	Nagpur	50.59
39	Vijayawada	50.40
40	Meerut	48.98
41	Jodhpur	47.66
42	Patna	47.02

Rank	Million+ City	Score
43	Kota	46.42
44	Agra	45.72
45	Faridabad	45.57
46	Bareilly	45.48
47	Guwahati	43.65
48	Dhanbad	34.71
49	Srinagar	26.06

Table 17: Ranking of Less than Million cities in Quality of Life pillar scores

Rank	Less than Million	Score
1	Panaji	62.42
2	Tumakuru	56.52
3	Vellore	56.49
4	Warangal	56.45
5	Diu	55.73
6	Port Blair	55.14
7	Silvassa	55.06
8	Gandhinagar	55.02
9	Mangalore	54.78
10	Tiruchirappalli	54.75
11	Thiruvananthapuram	54.74
12	Tirunelveli	54.63
13	Kakinada	54.53
14	Tirupati	54.07
15	Jammu	54.05
16	Udaipur	53.83
17	Dharamshala	53.58
18	Dahod	53.55
19	Thanjavur	53.40
20	Amravati	53.31
21	Gurugram	53.30

Rank	Less than Million	Score
22	Shimla	53.05
23	Salem	52.93
24	Puducherry	52.53
25	Karimnagar	52.50
26	Belagavi	52.48
27	Gangtok	52.14
28	Aligarh	51.81
29	Bhubaneswar	51.79
30	Karnal	51.73
31	Pasighat	51.71
32	Tiruppur	51.40
33	Itanagar	51.19
34	Davanagere	50.96
35	Ujjain	50.91
36	Shivamogga	50.69
37	Kavaratti	50.63
38	Jalandhar	50.60
39	Ajmer	50.23
40	Kohima	50.06
41	Dehradun	49.81
42	Rae Bareli	49.57

Rank	Less than Million	Score
43	Dindigul	49.55
44	Bhagalpur	49.02
45	Saharanpur	49.02
46	Bihar Sharif	48.71
47	Moradabad	48.63
48	Thoothukudi	48.13
49	Erode	47.97
50	Agartala	47.87
51	Rampur	47.50
52	Kochi	47.39
53	Sagar	46.96
54	Muzaffarpur	45.87
55	Jhansi	45.35
56	Imphal	45.01
57	Shillong	43.54
58	Rourkela	42.90
59	Namchi	42.03
60	Satna	41.28
61	Aizawl	41.03
62	Bilaspur	37.24

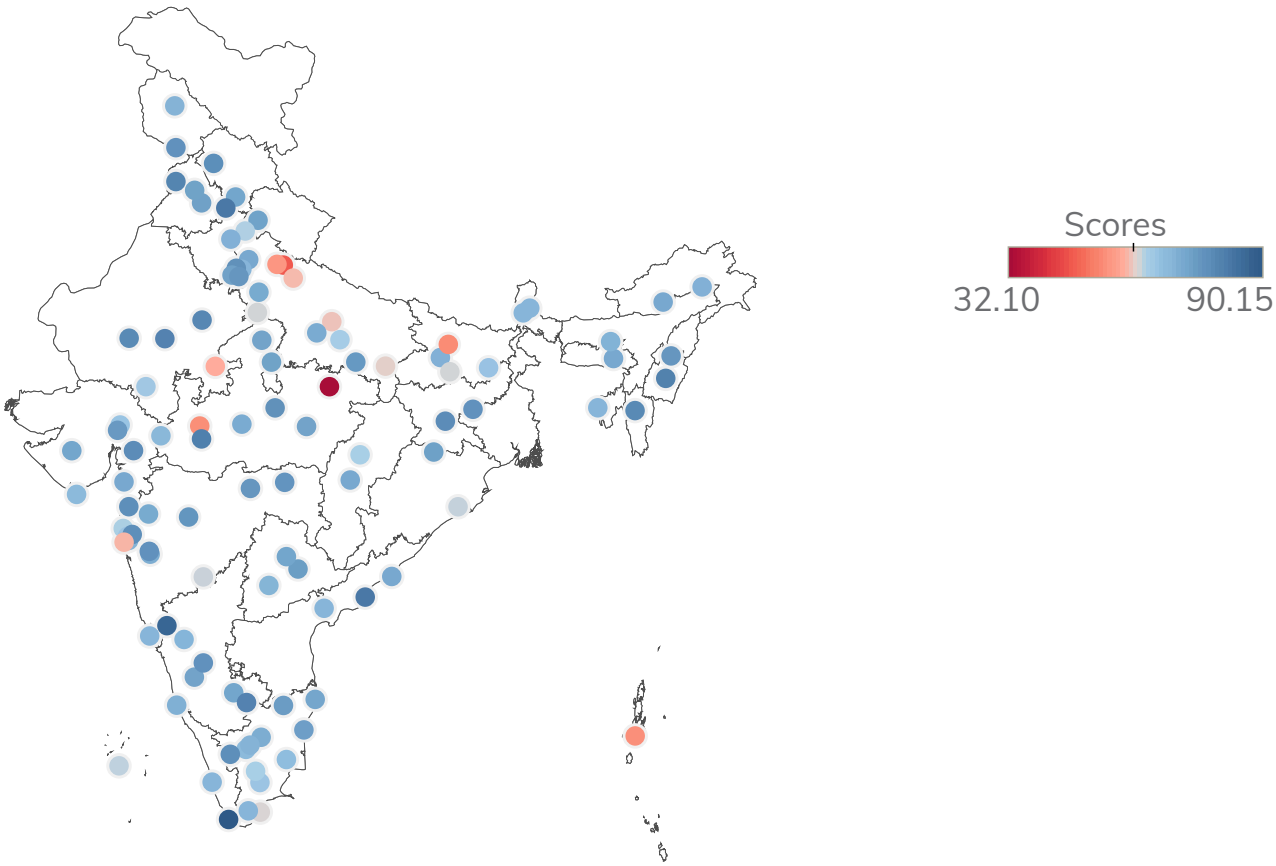
The Quality of Life pillar comprises of seven categories, namely *1) Education; 2) Health; 3) Housing and Shelter; 4) WASH and SWM; 5) Mobility; 6) Safety and Security; and 7) Recreation.* The highest performing category is *Safety and Security* with the highest national average of 86.7, followed by *Housing and Shelter* at 79.5 and *Education* at 70.7. Subsequently, categories such as Health, Housing and Shelter, and Mobility have much lower national average scores, with *Recreation* the worst-performing category.

A.

Education:

Education is an important component of human development, as it is intrinsic to increasing the capabilities and functioning of human beings while serving as an instrument to increasing income and standard of living. With the passage of the Right to free and compulsory education for all (RTE), the quality of education has varied across different regions in the country and witnesses immense inequalities in terms of the infrastructure available in rural and urban areas. Furthermore, continued access to education has also been dependent on social and economic locations of class, caste, and gender.

Figure 5: Mapping of Education category scores



The top-scoring cities emerge mostly from southern states, with Thiruvananthapuram securing the top rank, followed by Belagavi, Chandigarh, Kakinada, Indore, Imphal, Bengaluru, Ajmer, and Amritsar in descending order.

The *Education* category evaluates cities based on eight indicators:

- **Household Expenditure on Education**
- **Literacy Rate**
- **Pupil-Teacher Ratio at the Primary Level**
- **Pupil-Teacher Ratio at the Upper Primary Level**
- **Dropout Rate at Secondary Level**
- **Percentage of Schools with access to Digital Education**
- **Percentage of Professionally Trained Teachers**
- **National Achievement Survey Score**

The top-scoring cities emerge mostly from southern states, with Thiruvananthapuram securing the top rank, followed by Belagavi, Chandigarh, Kakinada, Indore, Imphal, Bengaluru, Ajmer, and Amritsar in descending order. Some of these top-performing cities have emerged as positive outliers in terms of *access to digital education, the share of professionally trained teachers,* and l*ow rates of dropout at the secondary level,* which has accentuated the overall performance of these cities in this particular category.

The *average household expenditure on education* is around 20% of the total consumption expenditure in Indian cities. The top 10 cities with the highest household expenditure on education are all Less than

The average household expenditure on education is around 20% of the total consumption expenditure in Indian cities.

Million populated cities, such as Kavaratti, Pasighat, Panaji, Dahod, Tirunelveli, Dindigul, Aizawl, Rampur, and Rae Bareli. Million+ populated cities, on the other hand, have low levels of household expenditure on education, with cities such as Aurangabad, Bhopal, Varanasi, Prayagraj, and Dhanbad scoring well.

The *literacy rate* in a majority of Indian cities is higher than the national literacy rate of 74%[2]. More than 70% of the cities participating in this Index have an average literacy rate of 87.2%. Interestingly, the top-performing cities in terms of literacy rate have a moderate score across other education indicators.

North-eastern cities such as Aizawl, Imphal, Itanagar, Pasighat, Kohima, and Guwahati have a low *pupil-teacher ratio* at both the primary and secondary level, thus elevating their overall scores in the *Education* category.

More than 50% of the participating cities have less than 1 percent of *dropout rates at the secondary level,* with at least 38 cities emerging as positive outliers. On the other hand, 19 cities, with the likes of Gurugram, Chennai, Bhubaneswar, Bareilly, and Panaji have emerged as negative outliers in this particular indicator. Some of these cities are positive outliers in household expenditure on education, implying that the enrolment in government education institutions is much higher.

At least 34 cities have *all teachers professionally trained,* including Million+ cities such as Bengaluru, Delhi, Chennai, Greater Mumbai, and Chandigarh.

[2] "State of Literacy", under Census of India 2011: Final_PPT_2011_chapter6.pdf (censusindia.gov.in)

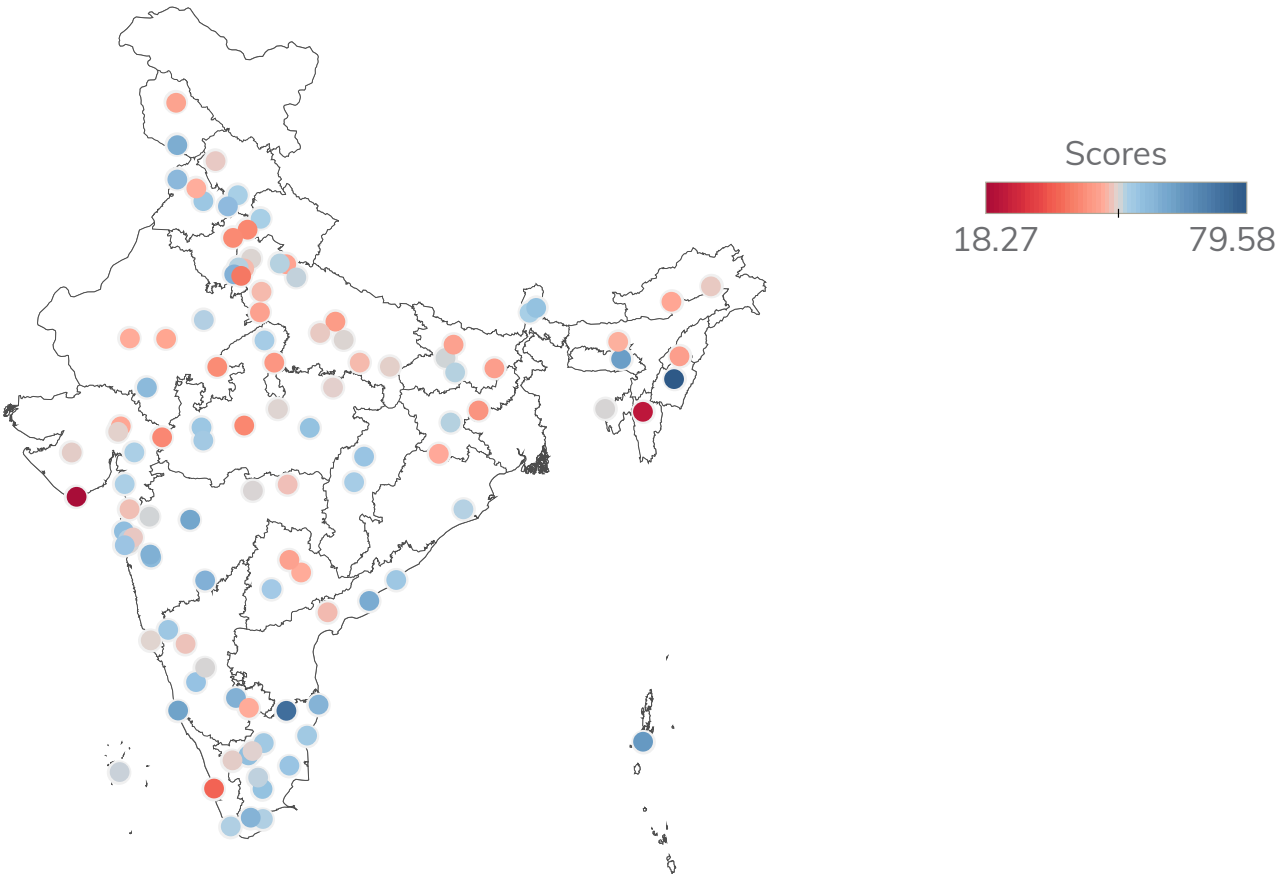
B.

Health

Health plays an important role in the overall well-being of human beings and thus becomes crucial to the quality of one's life. Access to quality and affordable healthcare has been pivotal to debates on human development, and urban areas are blessed with the capital to host health facilities. The *Health* category thus evaluates cities based on the following indicators:

- **Household Expenditure on Health**
- **Availability of Healthcare Professionals**
- **Accredited Public Health Facilities**
- **Availability of Hospital Beds**
- **Prevalence of Diseases**

Figure 6: Mapping of Health category scores



Imphal has scored the highest in the *Health* category, at 79.58, followed by Vellore (74.81), Port Blair (64.41) Shillong (63.13), and Mangalore (62.25). Imphal emerges as the positive outlier in both *availability of healthcare professionals,* and the *prevalence of diseases.*

The *average household expenditure on health* constitutes around 3% of the total household consumption expenditure. While Million+ cities such as Kochi, Karimnagar, Amravati, Warangal, and Gandhinagar account for a higher share in household expenditure in health, the average household expenditure is below 1% of the total household consumption expenditure in more than 80% of the cities participating in this index.

However, the performance of cities has been on the extreme-end while mapping the available health infrastructure. The median score for the *availability of healthcare professionals and hospital beds* are at 348.48 and 474.60 per lakh population respectively.

In terms of *availability of accredited public health facilities,* around 50% of the cities participating in this index have less than 1 percent of their total public healthcare facilities accredited by a standard quality assurance program (NQAS/NABH/ ISO/AHPI), including Million+ cities such as Bhopal (0.0), Thane (0.0), Thiruvananthapuram (0.0), Vadodara (0.4), and Navi Mumbai (0.5). On the other hand, all public healthcare facilities

For most Million+ cities, the household expenditure on health remains on the lower end despite the higher prevalence of diseases.

are accredited in Million+ cities such as Amravati, Bhubaneswar, Chandigarh, Chennai, Gurugram, Hyderabad, Jammu, and Jaipur. This has important implications for the public healthcare system in Indian cities, as the household expenditure on health is also low for these negative outliers, thus taking private healthcare out of the picture. This could imply that while healthcare systems are in place, they operate on informal networks beyond state regulation, and wherein many healthcare facilities may fall short in terms of quality standards, and secondly, the prevalence of private healthcare facilities may be much higher in many of these cities.

Cities with a higher *prevalence of diseases* such as Malaria and Dengue have also scored less in at least one of other health indicators such as availability of healthcare professionals, hospital beds, and accredited public health facilities. For most Million+ cities, the household expenditure on health remains on the lower end despite the higher prevalence of diseases. On the contrary, a higher *prevalence of diseases* in Less than Million cities observes a higher share of health-related expenditure. Several hilly cities such as Gangtok, Imphal, Shimla, and Itanagar have emerged as positive outliers in this particular indicator.

C.

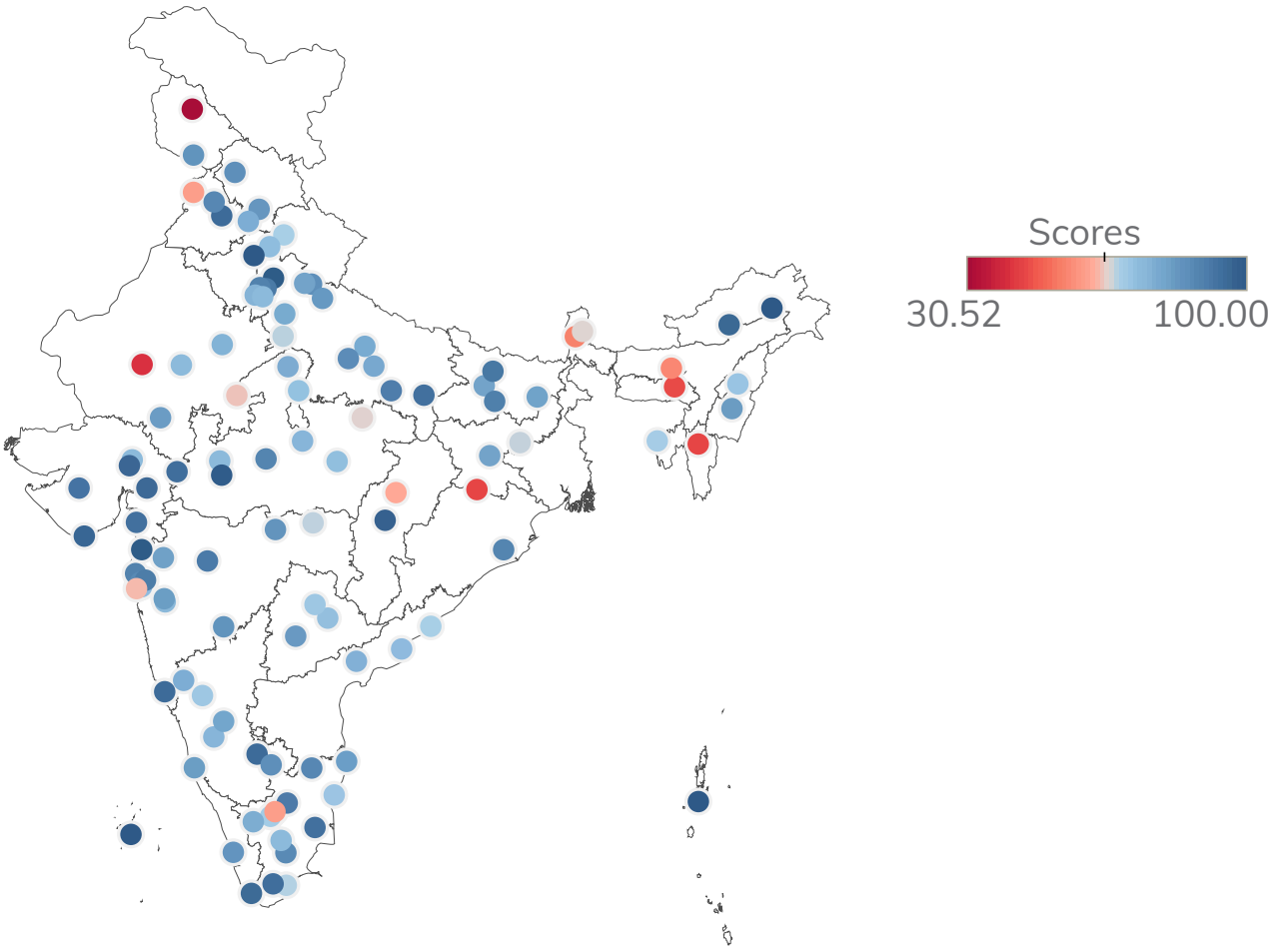
Housing and Shelter

Urban areas are the destination for intra-state migration in India, with the promise of better jobs, livelihood opportunities, quality education, and access to healthcare. As the urban

population continues to grow exponentially in cities, a constraint develops in terms of accessing housing and shelter with limited land and increasing costs of living. Obtaining adequate housing is fundamental to honing an individual's capabilities and exploring their full potential. The growth of cities is thus dependent on providing accessible housing that enables economic and social development. The **Housing and Shelter** category thus focuses on three indicators:

- **Households with electrical connections**
- **Beneficiaries under PMAY**
- **Slum population**

Figure 7: Mapping of Housing and Shelter category scores



In this pillar, 59 cities scoring above the national average of 79.52. The 19 Million+ cities that have scored below this national average include cities such as Pune, Chandigarh, Amritsar, Visakhapatnam, Faridabad, Lucknow, Vijayawada, and Coimbatore. On the other hand, some 33 cities with Less than Million population have scored below the national average, including cities such as Dehradun, Gurugram, and Greater Mumbai.

On the other hand, several big cities have a significant section of their populations residing in slums, including Greater Mumbai (45.7%), Visakhapatnam. Agra, Bhubaneswar, Hyderabad, Lucknow, and Pune. Interestingly, these cities have low coverage of beneficiaries under PMAY.

The *Housing and Shelter* category observes high scores from most cities, with both the mean and median closely placed at 79.52 and 80.31 respectively. Four cities emerge as perfect positive outliers in this category, namely Thiruvananthapuram, Delhi, Puducherry, and Bhopal. All households in these cities have electrical connections, and all identified beneficiaries are covered under PMAY. However, a significant section of the urban population ranging from 10-20%, reside in slums in these cities.

All households have electrical connections in at least 63% of the cities participating in this Index, with 17 cities covering more than 90% of the *households with electrical connections.* Amongst these positive outliers, 39 are Million+, and 49 cities are from Less than Million cities. Cities with less than 90% of their households with electrical connections have emerged from central and northern parts of the country.

Only 31 cities have *all identified beneficiaries covered under PMAY,* including major cities such as Ahmedabad, Gurugram, Thiruvananthapuram, Bhopal, Kavaratti, Indore, Pasighat, Guwahati, and Meerut. More than 50% of the participating cities have less than 20% of *identified beneficiaries covered under PMAY,* including Shillong, along with other metropolitan cities such as Bengaluru, Chandigarh, Greater Mumbai, and Chennai.

Twelve Less than Million cities have emerged as positive outliers in terms of *slum population*, with no section of the population residing in slums. This includes cities such as Gurugram, Varanasi, Meerut, Patna, Dhanbad, Shimla, Indore, and Jammu. Many of these cities have a 100% coverage of PMAY.

On the other hand, several big cities have a significant section of their populations residing in slums, including Greater Mumbai, Visakhapatnam, Agra, Bhubaneswar, Hyderabad, Lucknow, and Pune. Interestingly, these cities have low coverage of beneficiaries under PMAY.

Power plant, Varanasi

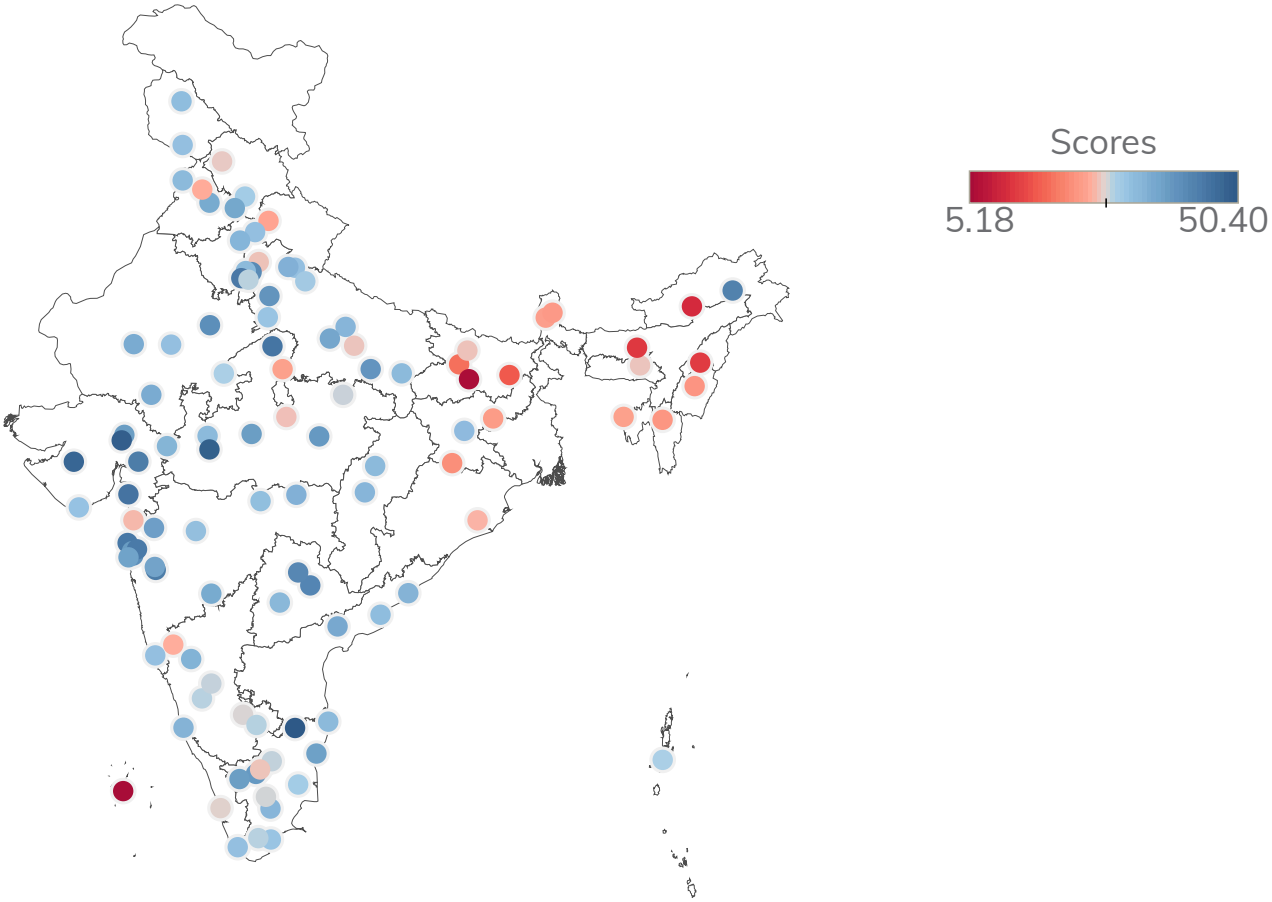
D.

WASH & Solid-Waste Management

Cities show the scope of improvement in the **WASH (Water, Sanitation and Hygiene) & Solid-Waste Management** category, with the average and median category scores at 32.70 and 33.12 respectively.

Vellore has attained the highest score in this category at 50.40, followed by Ahmedabad, Tirupati, Indore, and Rajkot (high scorers in Swachh Survekshan as well). The overall category scores for these cities have been accentuated by their full coverage of *households receiving piped water supply* and *connection to sewerage networks.* Vellore's score has further increased with its high coverage of stormwater drainage networks.

Figure 8: Mapping of WASH & SWM category scores



50% of the cities have around 40% of their households with piped water supply, including Bengaluru, and North-Eastern cities such as Itanagar, Guwahati, and Kohima.

Only 36.9% of the cities participating in this index have more than 90% of their *households receiving piped water supply.* A majority of these cities emerge from western and southern regions of the country, with cities such as Pune, Vellore, Tiruppur, Tirupati, Gurugram, Diu, Vasai Virar, Thane, and Thiruvananthapuram. On the other hand, 50% of the cities have around 40% of their *households with piped water supply,* including Bengaluru, and North-eastern cities such as Itanagar, Guwahati, and Kohima.

Aligarh has scored the highest in *wastewater treatment,* followed by Dhanbad, Vellore, Ajmer, and Surat. 31 cities have emerged as negative outliers in this indicator, including most north-eastern cities.

Ten cities have all *households connected to the sewerage network,* including Million+ populated cities such as Pune, Surat, Ahmedabad, Vadodara, Raipur, and Vasai Virar. On the other hand, 18 cities do not have any *households connected to the sewerage network,* mostly from the northern and north-eastern parts of the country.

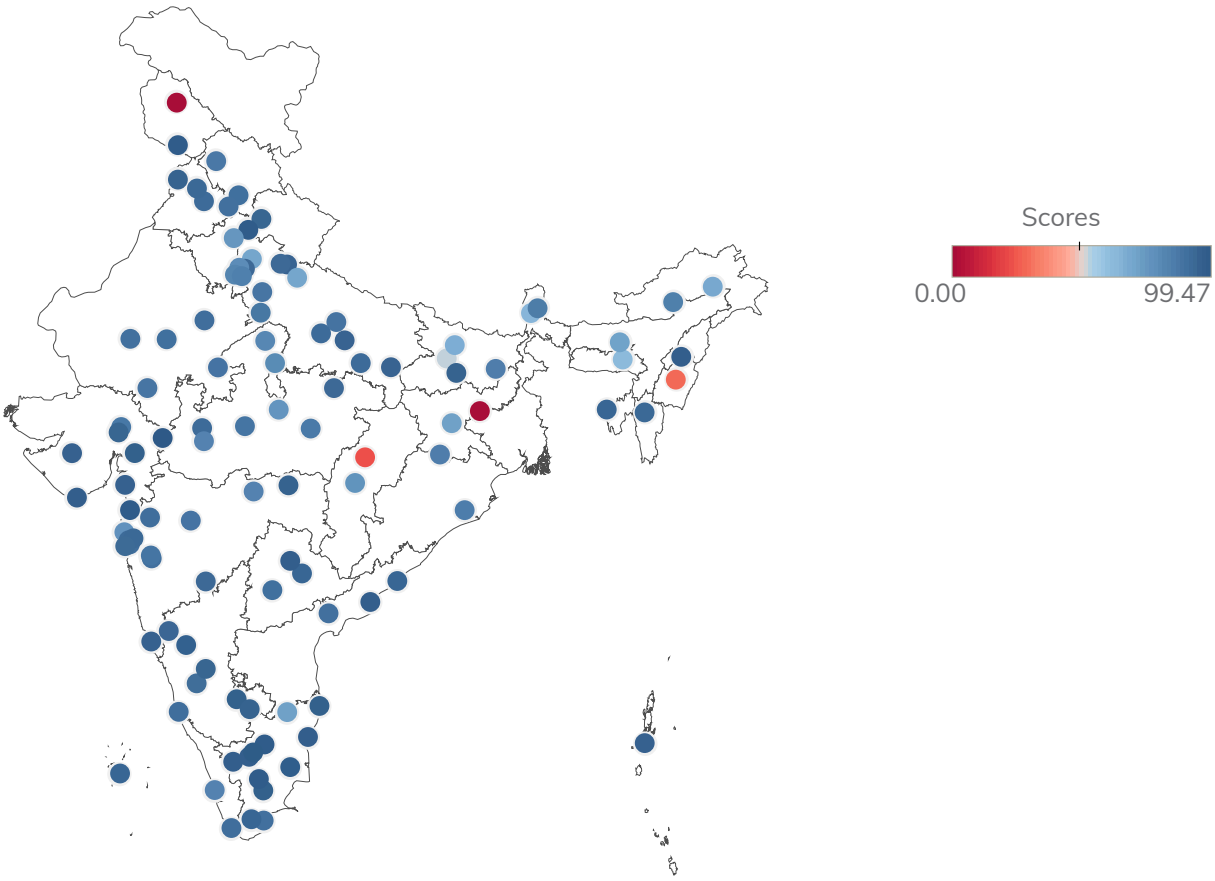
Cities have also scored less in *stormwater drainage networks,* especially major cities such as Greater Mumbai, Hyderabad, Delhi, and Bengaluru.

E.

Safety and Security

Safety and Security is the highest performing category with a national average of 86.74.

Figure 9: Mapping of Safety and Security category scores



Cities observe a higher median score in the number of crimes recorded against women, as compared to the prevalence of violence, and crimes against the elderly and children.

Over 50% of the cities participating in this index have an average score of 95 in this category. Several positive outliers have emerged from the southern and north-eastern states, with *low instances of crimes recorded against the elderly and children.* Cities observe a higher median score in the *number of crimes recorded against women,* as compared to the *prevalence of violence,* and *crimes against the elderly and children.* While most of these cities emerge from the northern parts of the country, even top-performers in the *Quality of Life* pillar such as Indore, Delhi, and Gurugram have recorded a high incidence of *crimes against women.*

Of the 13 Million+ cities that have performed below average in this high-performing category are cities such as Faridabad (84.42), Indore (83.36), Gwalior (82.04), Delhi (79.36), and Vasai Virar (77.26), Raipur (76.49), Ranchi (71.88), Guwahati (71.09), Meerut (69.52) and Bareilly (69.47). Among Less than Million cities, Gurugram (82.61), Kochi (83.36), Bhubaneswar (85.91) have also scores below the national average.

AIIMS roundabout, New Delhi

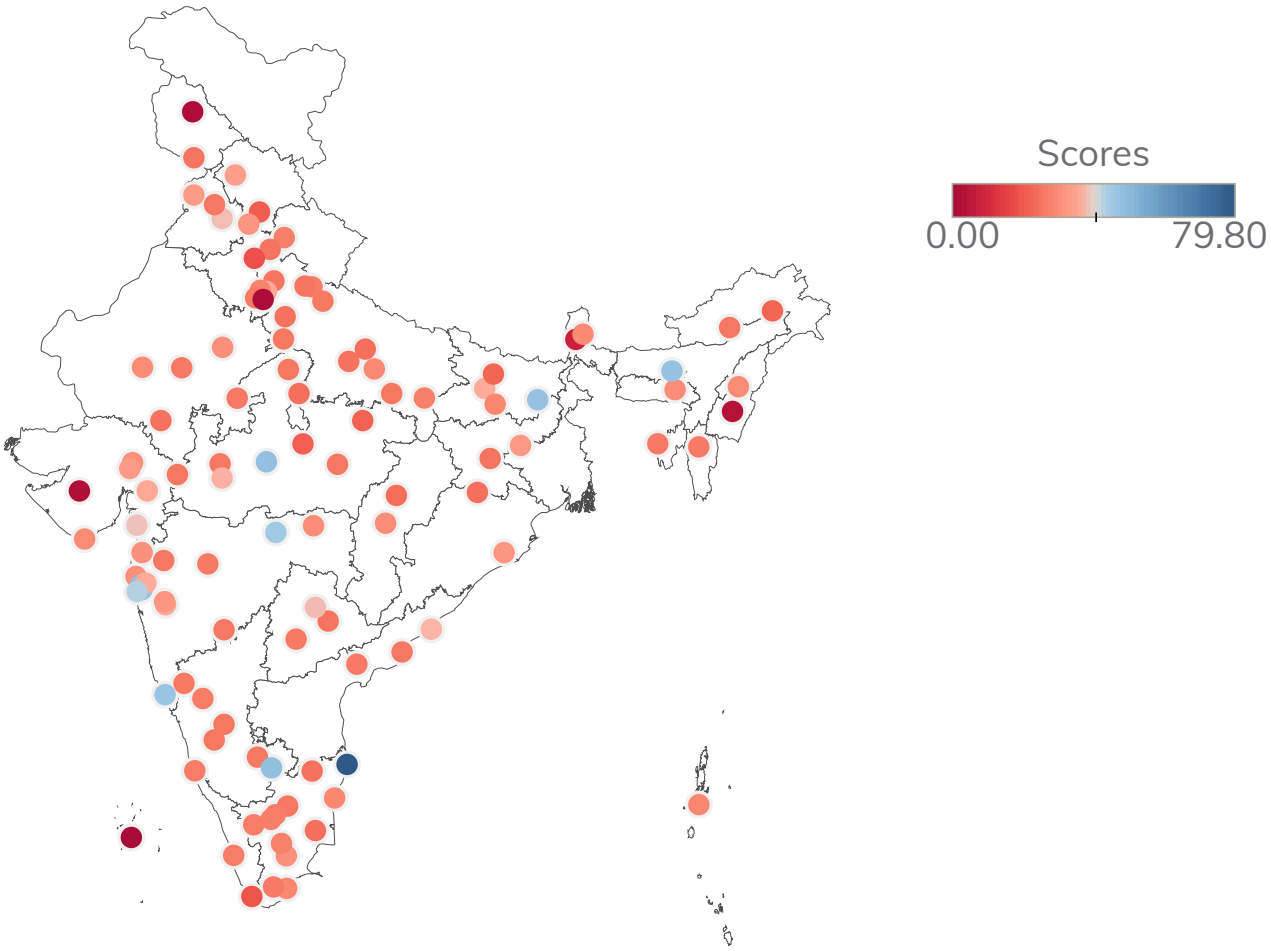
F.

Mobility

Urban mobility emerges as one of the greatest challenges to urbanisation. With growing resources and population, the need for expansion in transportation services arises. The prevalent modes of transportation vary across Indian cities in terms of public and private, but are commonly united in their motorised nature. To understand the mobility standards in Indian cities, the **Mobility** category has three indicators, namely:

- **Availability of public transport**
- **Transport-related fatalities**
- **Road infrastructure**

Figure 10: Mapping of Mobility category scores



The public transport system is not efficient enough to support the growing population in cities such as Bengaluru, Pune, Navi Mumbai, and Ahmedabad.

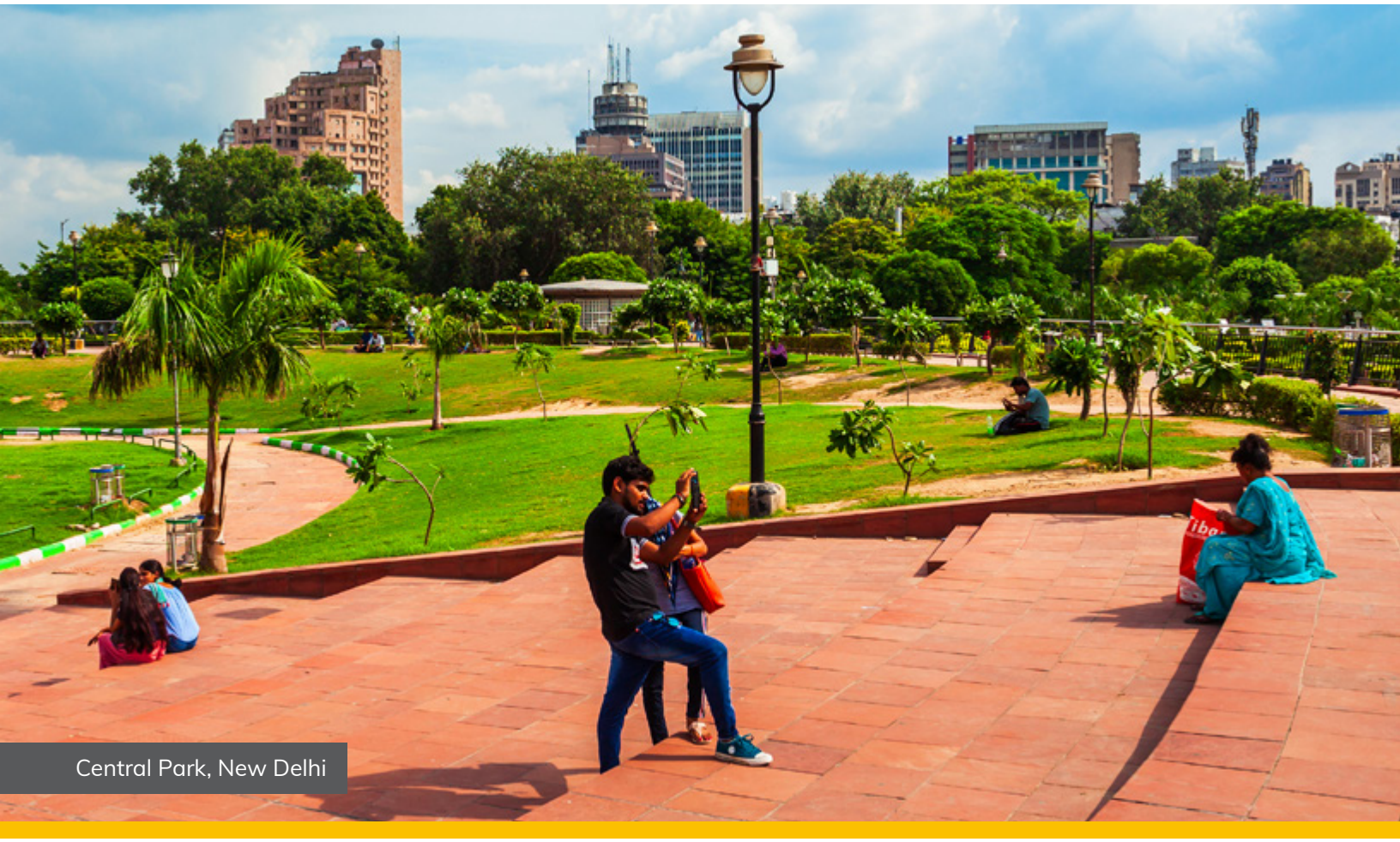
Over 60% of the cities participating in this index have scored below the national average of 28.05. Chennai emerges as the only positive outlier with a score of 79.80, followed by a significant gap by Thane (48.40), Bengaluru (48.40), Bhopal (48.01), and Guwahati (47.73). The high scores in terms of *Road Infrastructure* have positively enhanced the scores of these top-performers in the *Mobility* category. Chennai's performance has however been largely driven by the large presence of its public transport system.

Chennai's figures for the *availability of public transport* is the highest at 92017.96 per lakh population, followed by Visakhapatnam at 21212.92 per lakh population. The low figures for cities such as Bengaluru (4409.62), Pune (2585.54), Navi Mumbai (2037.81), Delhi (1688.50), Ahmedabad (638.63) per lakh population indicate two things: Firstly, the public transport system is not efficient enough to support the population of respective cites; and secondly, these cities may be "*automobile-dependent*"[3] for increased mobility fostered by rapid economic growth that encourages private vehicle ownership.

[3] Many cities can be defined as "automobile-dependent", in order to meet the needs of transportation expansions with growing economic needs, defined through high rates of automobile ownership and mass transit. From "Urban Mobility: A comparative analysis of megacities of India" http://oii.igidr.ac.in:8080/jspui/bitstream/2275/127/1/WP-2010-023.pdf

The incidence of *transport-related fatalities* is much lower in Million+ cities such as Amritsar (4.84), Ahmedabad (5.92), Surat (6.47) Pune (7.12), Bengaluru (7.32) Delhi (12.43) Hyderabad (12.98) per lakh population. On the other hand, Less than Million cities emerging from hilly terrain such as Shimla, Namchi, Pasighat observe higher t*ransport-related fatalities* per lakh population.

Positive outliers in the *Road Infrastructure* indicator also emerge from the top-performing cities in the Ease of Living Index, such as Bhopal, Thane, Navi Mumbai, Bengaluru, Panaji, Shimla, Greater Mumbai, along with Bhagalpur and Lucknow.



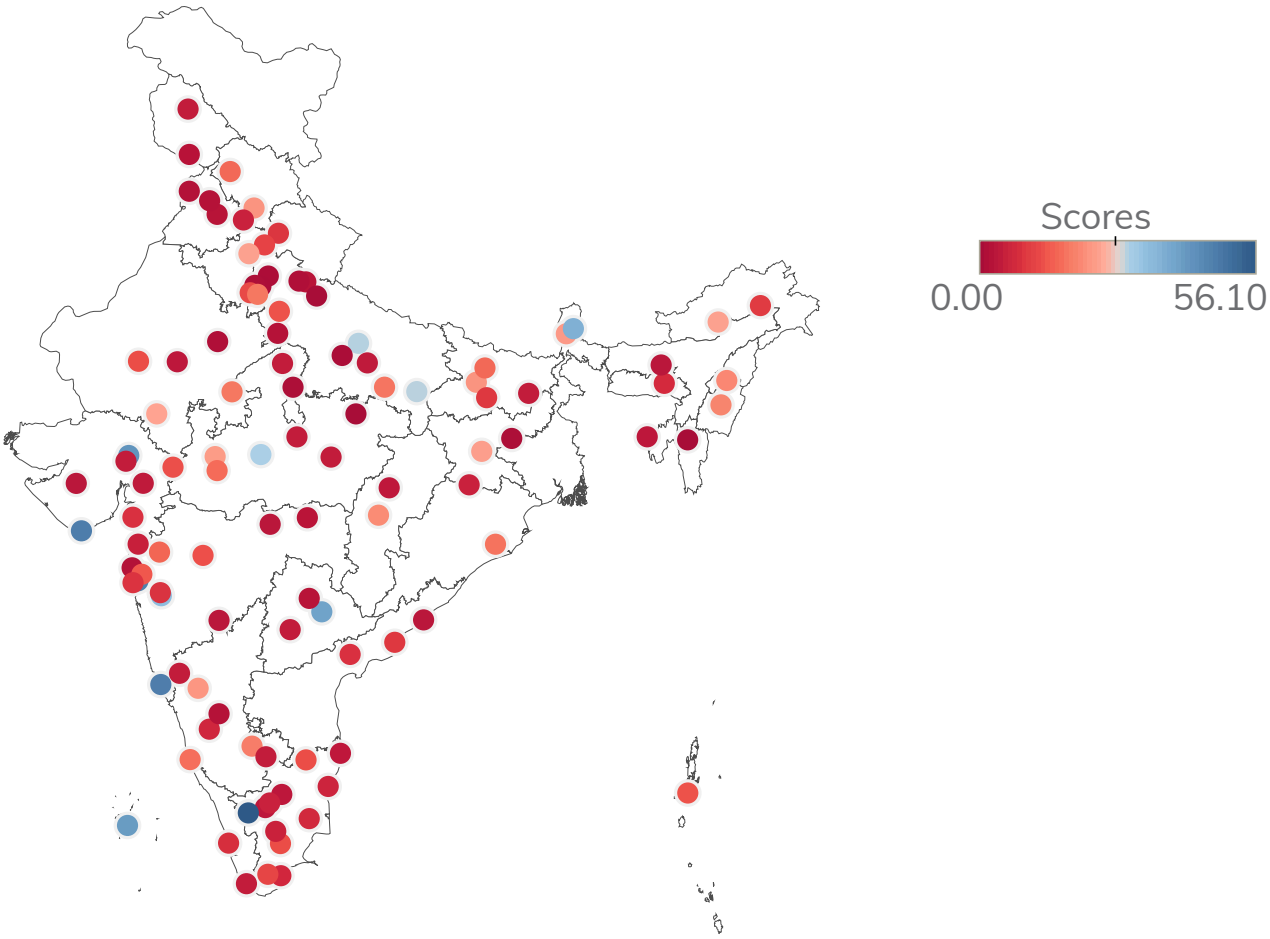
Central Park, New Delhi

G.

Recreation

Recreation is the poorest performing category with an average score of 11.68. Many cities have fallen short in providing *open spaces for public use,* and *lack of entertainment and cultural centres,* which have visibly brought down the overall category scores.

Figure 11: Mapping of Recreation category scores



Some positive outliers emerge with cities such as Coimbatore, Navi Mumbai, Gandhinagar, Warangal, Gangtok, Pune, and Lucknow having a score above 30. Million+ cities such as Amritsar, Agra, Visakhapatnam, Chandigarh, and Vijayawada have scored the lowest, forming negative outliers. Other cities such as Greater Mumbai, Dehradun, Gurugram and Jaipur have also scored considerably lower than the national average.

02.
Economic Ability

Economic Ability is the worst performing amongst all the pillars, with an aggregate score of 13.17. Bengaluru has secured the highest score at 78.82, followed by Delhi (50.73), Pune (48.88), and Ahmedabad (48.19)- all of which are Million+ cities. Tiruppur is the highest scoring Less than Million city at 39.12, followed by Gurugram (32.50), Kochi (28.41), and Shimla (23.39).

Table 18: Ranking of Million+ cities in Economic Ability pillar scores

Rank	Million+	Score
1	Bengaluru	78.82
2	Delhi	50.73
3	Pune	48.88
4	Ahmedabad	48.19
5	Thane	40.52
6	Chennai	34.16
7	Coimbatore	32.48
8	Greater Mumbai	32.12
9	Surat	30.29
10	Pimpri Chinchwad	30.07
11	Hyderabad	30.05
12	Ludhiana	26.25
13	Jaipur	25.08
14	Patna	24.61
15	Vadodara	24.06
16	Navi Mumbai	23.53
17	Kalyan Dombivali	19.89
18	Visakhapatnam	19.42
19	Nashik	17.25
20	Nagpur	15.35
21	Indore	15.09
22	Faridabad	14.10
23	Bhopal	14.01
24	Ghaziabad	13.81
25	Rajkot	13.52
26	Aurangabad	13.39
27	Madurai	11.96
28	Raipur	11.73
29	Vijayawada	11.57
30	Kanpur	10.93
31	Vasai Virar	10.89
32	Jodhpur	10.49
33	Lucknow	10.05
34	Chandigarh	9.90
35	Amritsar	9.46
36	Guwahati	8.63
37	Agra	7.91
38	Meerut	7.25
39	Ranchi	6.88
40	Hubli Dharwad	6.58
41	Dhanbad	6.42
42	Kota	6.03
43	Gwalior	5.97
44	Varanasi	5.49
45	Prayagraj	5.42
46	Bareilly	4.98
47	Jabalpur	4.41
48	Solapur	4.02
49	Srinagar	3.09

Table 19: Ranking of Less than Million cities in Economic Ability pillar scores

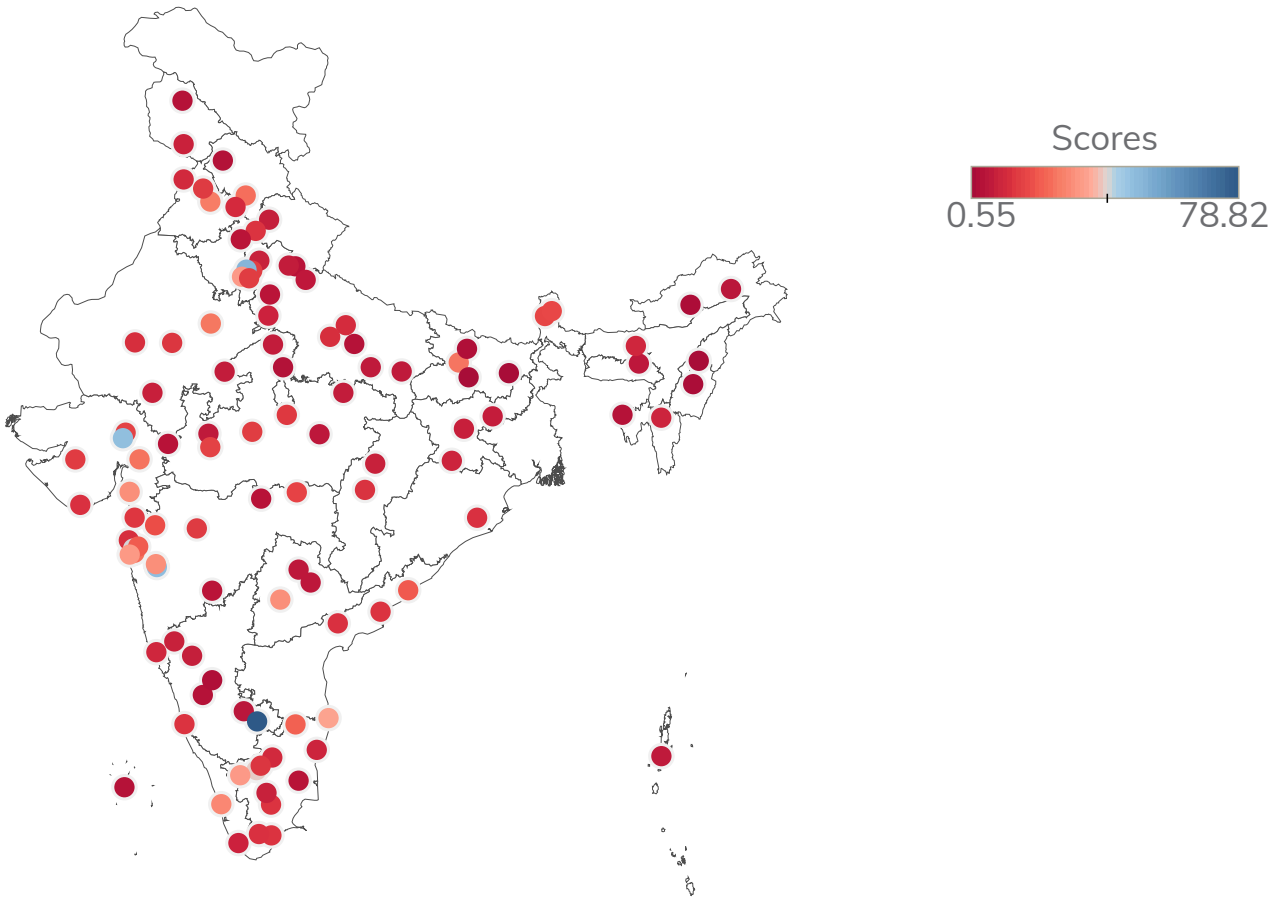
Rank	Less than Million	Score
1	Tiruppur	39.12
2	Gurugram	32.50
3	Kochi	28.41
4	Shimla	23.39
5	Vellore	20.71
6	Gangtok	16.36
7	Namchi	15.69
8	Gandhinagar	15.12
9	Jalandhar	13.48
10	Sagar	13.21
11	Silvassa	12.54
12	Erode	12.50
13	Ajmer	12.29
14	Thoothukudi	12.09
15	Tiruchirappalli	11.99
16	Kakinada	11.98
17	Mangalore	11.96
18	Saharanpur	11.88
19	Bhubaneswar	11.57
20	Tirupati	11.46
21	Diu	11.30

Rank	Less than Million	Score
22	Tirunelveli	11.24
23	Salem	9.20
24	Panaji	8.90
25	Aizawl	8.41
26	Rourkela	8.09
27	Puducherry	8.01
28	Thiruvananthapuram	7.92
29	Jammu	7.47
30	Dindigul	7.23
31	Belagavi	7.21
32	Bilaspur	7.16
33	Udaipur	6.88
34	Dehradun	6.65
35	Moradabad	6.06

Rank	Less than Million	Score
36	Satna	5.81
37	Ujjain	5.27
38	Port Blair	5.09
39	Shillong	4.74
40	Warangal	4.72
41	Karimnagar	4.48
42	Tumakuru	4.16
43	Pasighat	4.14
44	Karnal	3.88
45	Aligarh	3.77
46	Thanjavur	3.45
47	Amravati	3.39
48	Rampur	3.37
49	Dahod	3.33

Rank	Less than Million	Score
50	Kavaratti	3.27
51	Shivamogga	3.20
52	Rae Bareli	3.18
53	Agartala	3.17
54	Dharamshala	2.55
55	Jhansi	2.46
56	Davanagere	2.15
57	Muzaffarpur	1.85
58	Itanagar	1.39
59	Imphal	1.14
60	Bhagalpur	0.67
61	Bihar Sharif	0.58
62	Kohima	0.55

Figure 12: Mapping of Economic Ability pillar scores



There are two categories to the Economic Ability pillar- *Level of Economic Development*, and *Economic Opportunities.* The *Level of Economic Development* category is the best performing of the two, with the highest national average of 18.03. *Economic Opportunities* is the lowest scoring category at 8.30. While the *Level of Economic Development* has been measured based on per capita wages and factories present in these cities, economic opportunities focus on the accessibility to resources, in the form of credit and skills, that can help create livelihoods.

A.

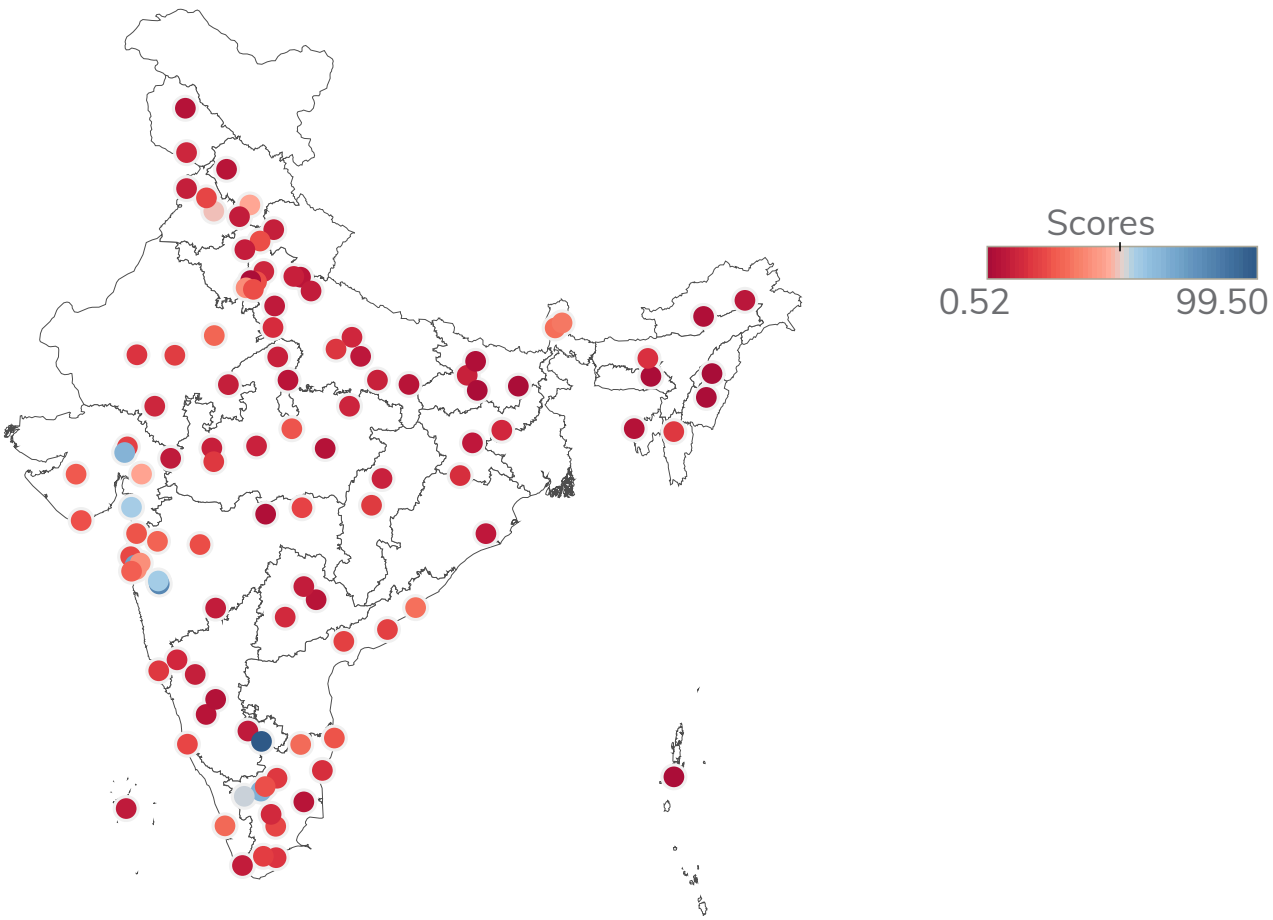
Level of Economic Development

The top scorers in the Level of Economic Development category are Million+ cities such as Bengaluru, Pune, Ahmedabad, Thane and Chennai, cities with a legacy of industrial development that has a higher incidence of per capita factories.

The **Level of Economic Development** category has 41 cities, of which 22 are Million+ cities, and 18 are Less than Million cities, scoring above the national average of 18.03. The top scorers in this particular pillar are Million+ cities such as Bengaluru, Pune, Ahmedabad, Thane, and Chennai. Less than Million cities such as Shimla, Gurugram, Kochi, Jaipur, Greater Mumbai, Diu, Gandhinagar, Kakinada have also scored above the national average. These cities have a legacy of industrial development and have been industrial hubs that could increase the incidence of per capita factories in the specific areas.

Of the 73 cities scoring below the national average, 49 are Less than Million cities and 24 are Million+ cities. Million+ cities such Hyderabad, Indore, Bhopal, Raipur, Lucknow, Chandigarh, are low scores, with Delhi scoring the lowest in this particular category at 1.45. Other Less than Million cities that have scored below include Patna, Bhubaneswar, Salem, and Panaji.

Figure 13: Mapping of Level of Economic Development category scores



B.

Economic Opportunities

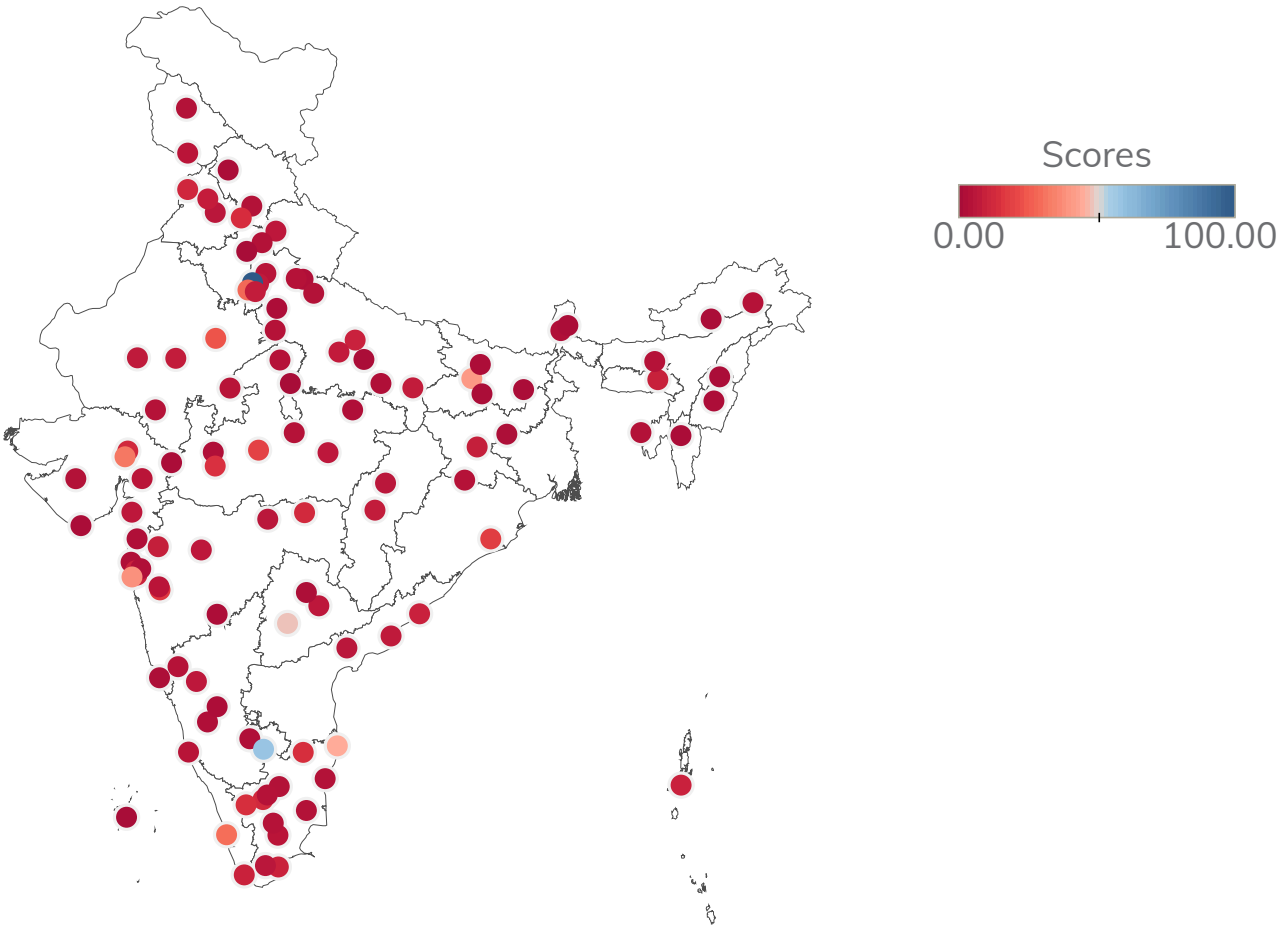
Limited access to credit and skills development in Less than Million cities has brought down their Economic Opportunities score.

Economic Opportunities have 29 cities scoring above the national average, wherein 16 are Million+ and 13 are Less than Million. Delhi is the only positive outlier in this category with a perfect score, followed by Bengaluru at a significant gap at 58.15, Hyderabad (48.06), and Chennai (45.11). These top-scorers are also Million+ cities. The Less than Million cities that have also performed well include Kochi, Gurugram, Bhubaneshwar and Vellore.

Of the 82 cities scoring below the national average, 52 are Less than Million cities, and 30 are Million+. Million+ cities that have performed well in the overall Ease of Living Index rankings such as Surat, Pimpri Chinchwad, Vadodara, and Vasai Virar, have scored significantly less in this particular category.

There remains a high incidence of negative outliers in this pillar, emerging from Less than Million cities such as Kavaratti, Jhansi, Panaji, Silvassa, Shivamogga, to just name a few. The high occurrence of below-average scores, especially for Less than Million cities implies *restricted access to credit and skills development,* which can be attributed to lack of information regarding relevant schemes and programmes, and low levels of institutions that promote the same.

Figure 14: Mapping of Economic Opportunities category scores



03.
Sustainability

Looming threats arising due to climate change have the potential to cause irreversible damage to the world. For India, the impact may be even higher.

Infrastructural capacity, economic opportunities and welfare services are already under tremendous pressure with rapid expansion of urban spaces. Yet, looming threats arising due to climate change have the potential to cause irreversible damage to the world as we know it. For India, the impact may be even higher. The World Risk Index (2020) places India as the fourth most at-risk country in South Asia, after Bangladesh, Afghanistan, and Pakistan. Globally, India ranks 89th out of 181 countries.

Further, the impact of climate change will not be evenly balanced as regions differ in terms of their geography, population, resources, economic development, and social inequalities. The disruption will not be merely physical. The most vulnerable sections of the population will be the most heavily impacted. There is evidence of the social impact of climate change concerning the relationship between climate change, poverty, and livelihood. However, the relationship

between climate change and within-country inequality has not garnered enough attention. (Islam & Winkel, 2017). IPCC's Special Report on Global Warming of 1.5˚ C (2018) states that a temperature rise of 2˚ C will lead to conditions of extreme heat, drought, and vector-borne disease, compared to an increase of only 1.5˚ C. Even half a degree of temperature rise can worsen health conditions and lead to a public health crisis (Balakrishnan, 2018). Thus, essential health care services can be severely impacted. It is imperative that cities build resilience and develop sound infrastructure and services to swiftly tackle emerging environmental issues.

Table 20: Ranking of Million+ cities in Sustainability pillar scores

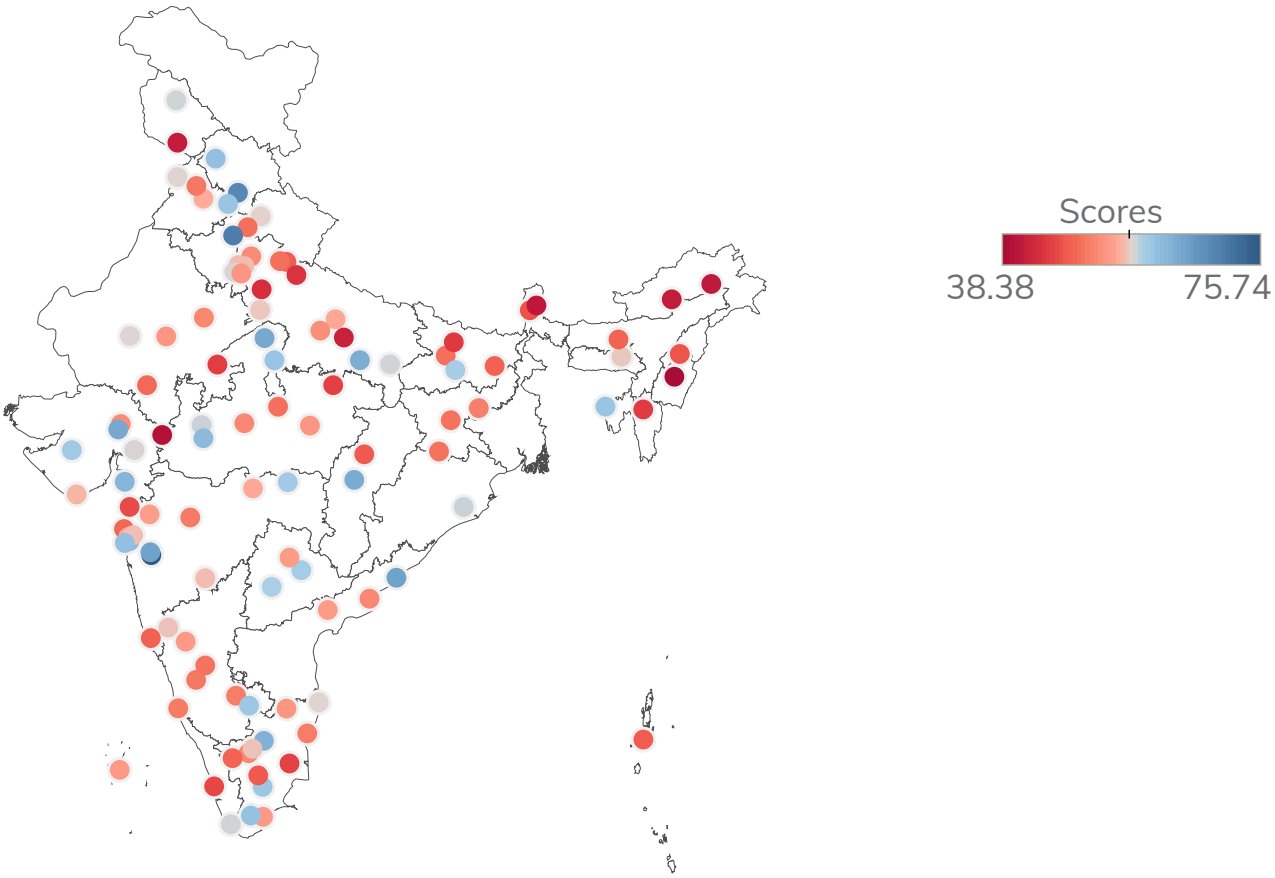
Rank	Million+	Score	Rank	Million+	Score	Rank	Million+	Score
1	Pune	75.74	18	Srinagar	57.61	35	Jabalpur	53.31
2	Visakhapatnam	65.18	19	Varanasi	57.51	36	Faridabad	53.17
3	Pimpri Chinchwad	65.09	20	Vadodara	57.22	37	Kanpur	52.33
4	Ahmedabad	64.22	21	Jodhpur	57.07	38	Meerut	51.98
5	Gwalior	64.17	22	Chennai	57.05	39	Bhopal	51.68
6	Raipur	63.77	23	Amritsar	57.05	40	Jaipur	51.60
7	Prayagraj	63.57	24	Agra	56.52	41	Dhanbad	50.90
8	Surat	62.41	25	Kalyan Dombivali	56.11	42	Aurangabad	50.38
9	Navi Mumbai	61.85	26	Ghaziabad	56.08	43	Ranchi	49.59
10	Indore	61.62	27	Solapur	56.04	44	Patna	49.32
11	Greater Mumbai	60.74	28	Delhi	56.02	45	Vasai Virar	48.53
12	Chandigarh	60.13	29	Ludhiana	55.24	46	Guwahati	48.31
13	Bengaluru	59.97	30	Thane	54.90	47	Coimbatore	48.25
14	Madurai	59.96	31	Lucknow	54.81	48	Kota	44.87
15	Rajkot	59.55	32	Nashik	53.94	49	Bareilly	43.75
16	Nagpur	59.43	33	Vijayawada	53.78			
17	Hyderabad	58.69	34	Hubli Dharwad	53.61			

Table 21: Ranking of Less than Million cities in Sustainability pillar scores

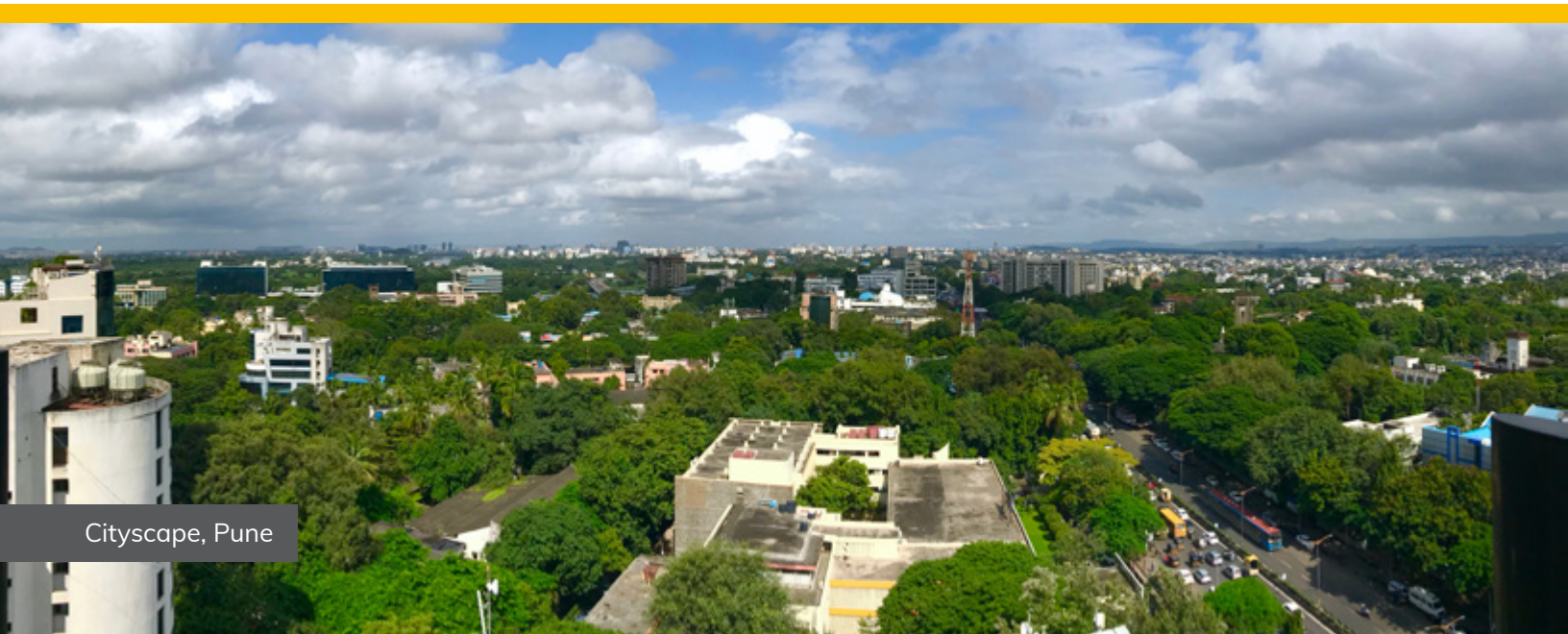
Rank	Less than Million	Score
1	Karnal	70.65
2	Shimla	69.16
3	Salem	62.93
4	Dharamshala	60.77
5	Tirunelveli	60.71
6	Agartala	60.25
7	Jhansi	60.20
8	Warangal	59.26
9	Bihar Sharif	59.14
10	Tiruchirappalli	58.16
11	Bhubaneswar	57.77
12	Ujjain	57.66
13	Thiruvananthapuram	57.52
14	Gurugram	57.34
15	Dehradun	56.93
16	Shillong	56.53
17	Belagavi	56.36
18	Erode	56.28
19	Diu	55.74
20	Amravati	55.12
21	Karimnagar	53.68
22	Kavaratti	53.58
23	Thoothukudi	53.57
24	Ajmer	53.31
25	Vellore	53.19
26	Gandhinagar	51.99
27	Tirupati	51.96
28	Tiruppur	51.70
29	Kakinada	51.67
30	Puducherry	50.71
31	Tumakuru	50.64
32	Mangalore	50.31
33	Jalandhar	50.19
34	Shivamogga	50.16
35	Rourkela	49.76
36	Davanagere	49.70
37	Saharanpur	49.48
38	Moradabad	49.45
39	Sagar	49.38
40	Udaipur	48.71
41	Bhagalpur	48.22
42	Panaji	48.15
43	Port Blair	47.77
44	Rampur	47.64
45	Bilaspur	47.46
46	Dindigul	47.41
47	Kohima	46.87
48	Namchi	46.80
49	Silvassa	46.16
50	Kochi	45.69
51	Thanjavur	45.32
52	Satna	45.21
53	Aizawl	44.51
54	Muzaffarpur	44.31
55	Aligarh	43.28
56	Rae Bareli	41.54
57	Jammu	41.20
58	Itanagar	40.95
59	Pasighat	40.51
60	Gangtok	40.50
61	Dahod	39.34
62	Imphal	38.38

Among the Million+ cities, Pune, Visakhapatnam, Pimpri Chinchwad, Ahmedabad, and Gwalior emerge as the best performers for the pillar of sustainability, whereas Vasai Virar, Guwahati, Coimbatore, Kota, and Bareilly ranked the lowest. In the Less than Million city category, Karnal, Shimla, Salem, Dharamshala, and Tirunelveli were the best-performing cities whereas Pasighat, Gangtok, Dahod, and Imphal had some of the lowest scores.

Figure 15: Mapping of Sustainability pillar scores



The following section evaluates **Sustainability** in cities through four categories of *Environment, Green Spaces and Buildings, City Resilience, and Energy Consumption.*



Cityscape, Pune

McLeod Ganj, Himachal Pradesh

A.

Environment

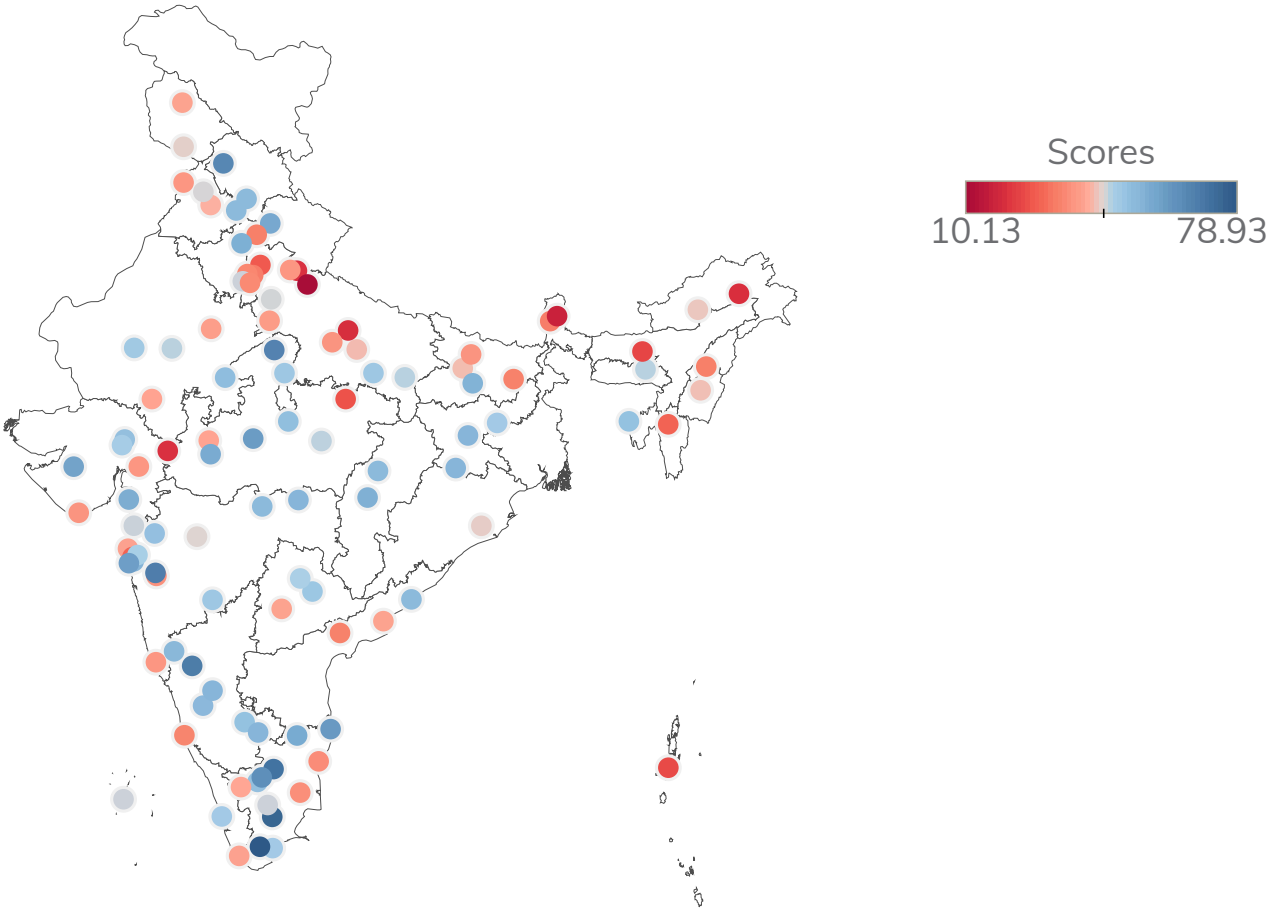
If cities do not integrate environmental sustainability into their action plan for economic development, they will likely fail to ensure consistent progress in the long run.

The analysis for the category of **Environment** constituted indicators including *Water Quality, Total Tree Cover, Households using Clean Fuel for Cooking, Hazardous Waste Generation, Air Quality Index* (measuring SO2, NO2, and PM10). A local environment that falls short in these indicators points to deteriorating local resources, which in turn affects the quality of life and impedes sustainability.

Tamil Nadu had six out of the top ten best performing cities including Madurai, Salem, Tiruchirappalli, Erode, and Chennai, with Tirunelveli taking the lead spot. Initiatives to promote afforestation, and sustainable green buildings, coupled with extensive efforts to support renewable energy have led to favourable results for Tamil Nadu. Other cities that performed well include Hubli Dharwad, Pimpri Chinchwad, Gwalior, and Dharamsala. Five of the best-performing cities in this category emerges from Less than Million cities, albeit with a higher number of laggards (Satna, Port Blair, Dahod, Rampur, Pasighat, among others).

If cities do not integrate environmental sustainability into their action plan for economic development, they are likely to fail in ensuring consistent progress in the long run. Cities have come to be regarded as the means to help acquire better standards of living. Yet, this drive towards progress also leads to concentration and depletion of resources, degradation of the local environment, and governance challenges, given the urgency of climate change.

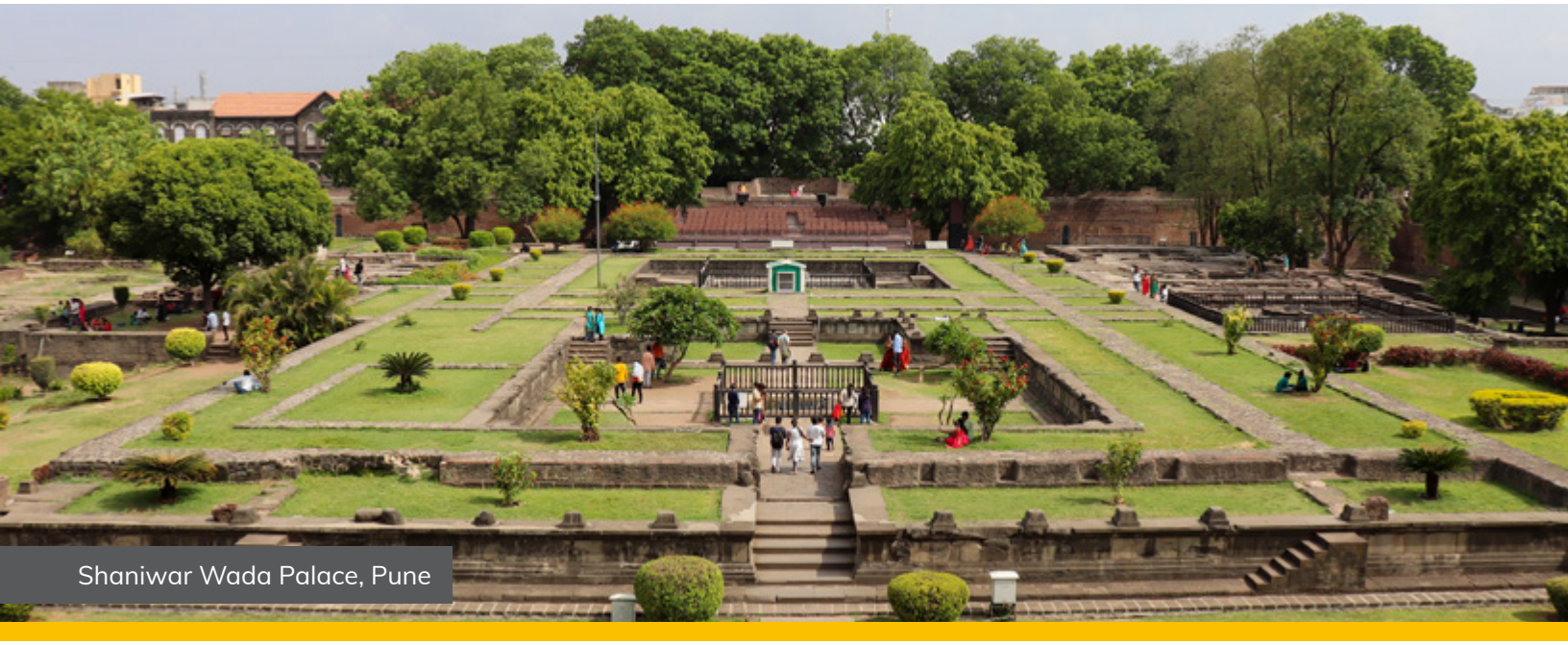
Figure 16: Mapping of Environment category scores



Estimates point to close to 9 lakh deaths caused due to air pollution in 2016. In the same year, various Indian cities gained a reputation for poor air quality. WHO reported that twenty of the world's most polluted cities belonged to India, including Kanpur, Delhi, Lucknow, and Patna.[4] There are also persisting challenges in terms of access to quality water. A NITI report on the Composite Water Management Index (CWMI) (2018) stresses the urgency of water crises's with 600 million Indians facing high to extreme water stress and close to 2 lakh people losing their lives due to lack of access to safe water. These numbers point to the gravity of the situation. Nevertheless, there has been an increased acknowledgment towards building a sustainable environment over the past decade or so, and these efforts need to be strengthened quickly.

There are significant challenges on the horizon as the world tries to decipher the implications of climate change. Increased policy attention at the helm of consolidated data-driven information is highly crucial to arrive at effective solutions.

[4] Jha, R. (2019). Indian Cities and Air Pollution. ORF https://www.orfonline.org/expert-speak/indian-cities-and-air-pollution-51628/



Shaniwar Wada Palace, Pune

B.

Green Spaces and Buildings

By design, green buildings are made to reduce or eliminate adverse effects on the environment, simultaneously promoting positive environmental implications.

Projections reveal that about two-thirds of the world's population is expected to live in cities by 2050, accounting for 70% of emissions further contributing to climate change's adverse effects.[5] By 2050, India will have added 416 million urban dwellers.[6] Crafting solutions that call for a reconceptualisation of urban spaces is, therefore, vital. The category for **Green Spaces and Buildings** includes indicators of *Availability of Green Spaces,* whether the *City Incentivises Green Buildings,* and the *Presence of Green Buildings*.

Findings reveal Pune as the best-performing city in terms of *Green Spaces and Buildings.* The performance swiftly begins to decline significantly after Karnal, as Greater Mumbai, Kochi, Hyderabad, Delhi, Indore, Lucknow, and Thiruvananthapuram do not particularly showcase exceptional performance. These cities fare closer to cities that have fared poorly for this category, i.e., Ujjain, Varanasi, Warangal, Bihar Sharif, Patna, and the like. It indicates a deficiency that has accumulated in urban cities concerning conscious planning to mitigate the risks associated with climate change and the current ecosystem.

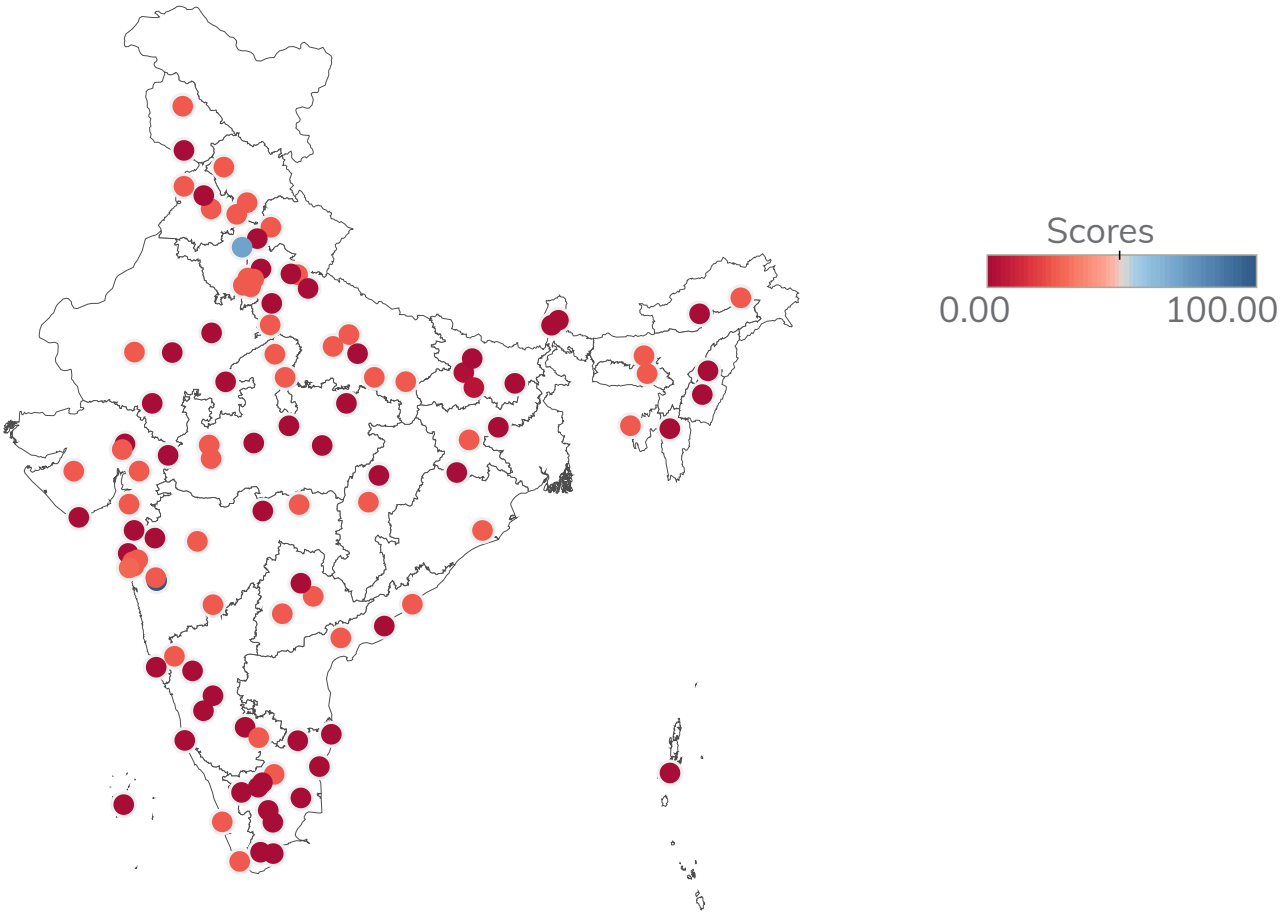
By design, green buildings are made to reduce or eliminate adverse effects on the environment, simultaneously promoting positive environmental implications. Any structure can ensure these aspects, whether they are residential buildings, offices, or schools. For a building to be considered "green" it must comprise of various features:[7]

[5] United Nations Environment Program. (2018). Cities of the Future: the ultimate design challenge. https://www.unep.org/news-and-stories/story/cities-future-ultimate-design-challenge
[6] United Nations, Department of Economic and Social Affairs. 2018 Revision of World Urbanisation Prospects. https://www.un.org/development/desa/publications/2018-revision-of-world-urbanisation-prospects.html
[7] About Green Buildings. https://www.worldgbc.org/what-green-building

A. **Efficient use of resources such as energy and water**
B. **Incorporating renewable energy**
C. **Using measures to help with the reduction in pollution and waste and enabling recycling/ reusing**
D. **Using sustainable materials for building**
E. **Ensuring good quality air environment indoors.**
F. **Providing consideration to the environment and ensuring adaptability to changing conditions**

All these features are contingent on specific local conditions and must be designed and incorporated uniquely. The building sector is considered to have the most amount of potential in lowering emissions compared to all other industries, across countries (TERI n.d.). With its high growth in the construction sector, India has the potential to tap into this sector and make a significant impact.

Figure 17: Mapping of Green Spaces and Buildings category scores



Over the years, attempts have been made to promote energy efficiency and sustainability. From installing solar panels to promoting green buildings has accelerated the path towards sustainability. Subsequently, intensive efforts that are a part of informed planning of urban spaces and ensure adaptability to the swiftly spiraling urban spaces is the need of the hour to meet the urgency of the demand.

Largest wind Mill farms, Kanya Kumari

C.

Energy Consumption

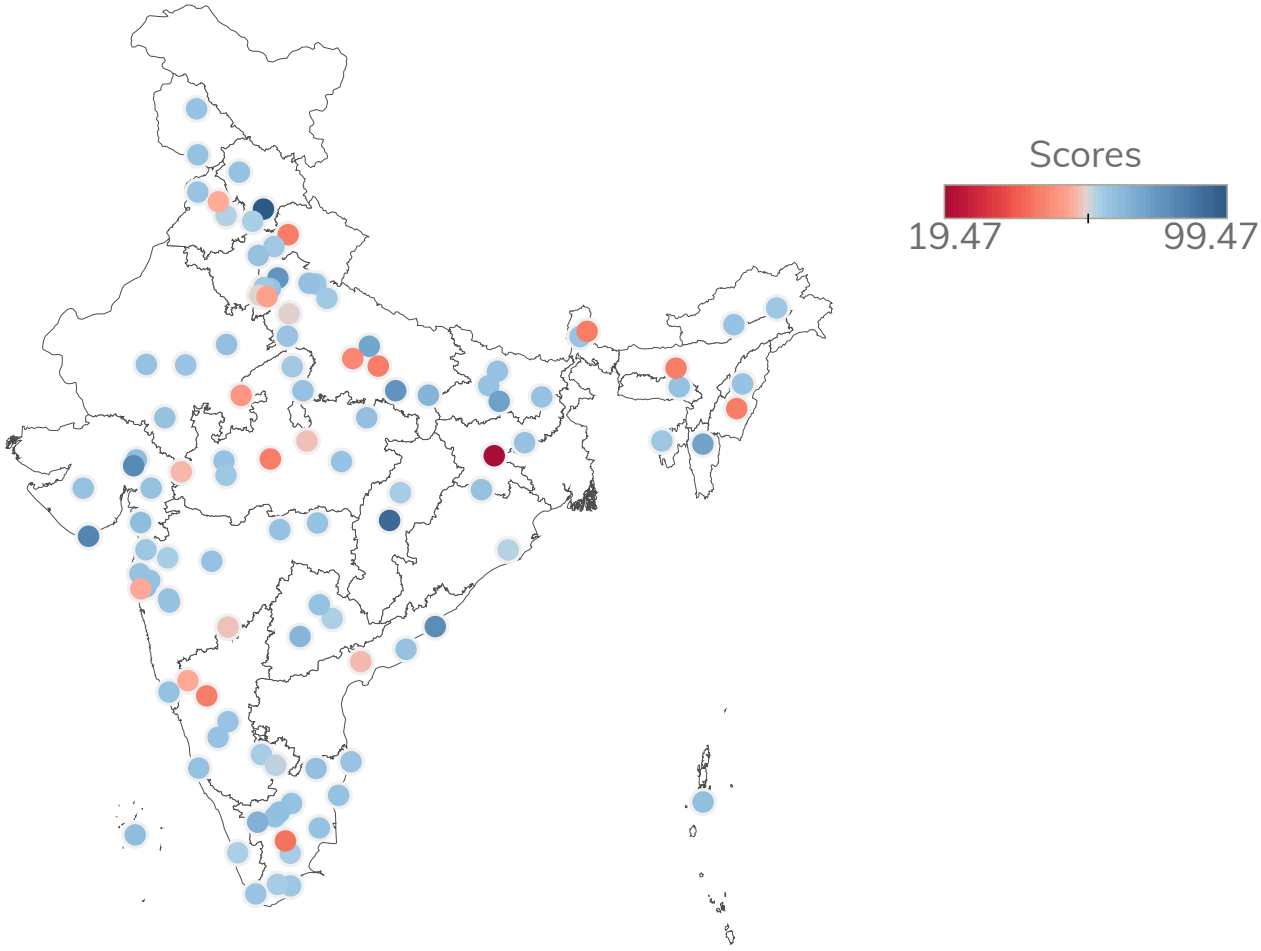
Incorporating energy efficient practices is the need of the hour, with rising urban growth and subsequent energy consumption.

With rising urban growth, energy consumption has also been on the rise. The category for **Energy Consumption** measured *Energy Required Compared to the Energy Supplied, Energy Generated from Renewable Sources,* and *the Number of Energy Parks.*

Cities that performed well in this category include Shimla, Raipur, Diu, Ahmedabad, Visakhapatnam, Meerut, Prayagraj, Bihar Sharif, Aizawl, and Lucknow. The cities that fared worse off were Kanpur, Dehradun, Rae Bareli, Bhopal, Dindigul, and Ranchi. Overall, the performance for the category of *Energy Consumption* remains positive.

In the past few decades, India has made consistent efforts in terms of its renewable energy consumption. India has ranked 4th in the Renewable Energy Country Attractiveness Index (RECAI) (2020), which ranks 40 of the world's top markets based on their attractiveness in renewable energy investment and deployment. The report asserts that India's solar PV capacity increased immensely in the past few years, reaching 35 Gigawatt (GW). At the same time, economic attractiveness led to record-low tariff bids, as India aims to achieve a target of 510GW of installed renewables by 2030.

Figure 18: Mapping of Energy Consumption category scores



Various states have also made tremendous efforts to catapult Renewable Energy Consumption. In the 2019-20 Budget, Rajasthan Government exempted solar energy from electricity duty, focusing on using solar power for agriculture and healthcare sectors. The Delhi government shut down a thermal power plant in Rajghat, aiming to redevelop it into a 5000 Kilowatt (KW) solar park. Initiatives have also been accelerated in increasing energy efficiency. District Energy Systems (DES) use diverse technologies such as combined heat and power (CHP), thermal storage, heat pumps, and decentralised energy that develop collaborations between production and supply of electricity, and other such measures. Incorporating DES in energy usage of city infrastructures such as solid waste management, public transport, and power supply vastly improve energy demand management. It provides energy efficiency at affordable rates while having a positive spillover for the environment. DES systems can reduce CO2 emissions by 58% by 2050. The District Energy Initiative from the UN Environment has identified energy efficiency projects worth $600 million in five cities across India. Subsequently, six rapid assessments of district cooling in Bhopal, Bhubaneswar, Coimbatore, Pune, Rajkot, and Thane have been undertaken to decipher the potential and challenges to the implementation process.[8] These efforts accumulate slowly, contributing to energy efficiency and sustainable practices, ultimately preventing the limitation of resource availability and promising a better future.

[8] Pimpalkhare, A. (2019). Energy use in Indian cities – A case for district energy systems. ORF. https://www.orfonline.org/expert-speak/energy-use-in-indian-cities-a-case-for-district-energy-systems-47506/

D.

City Resilience

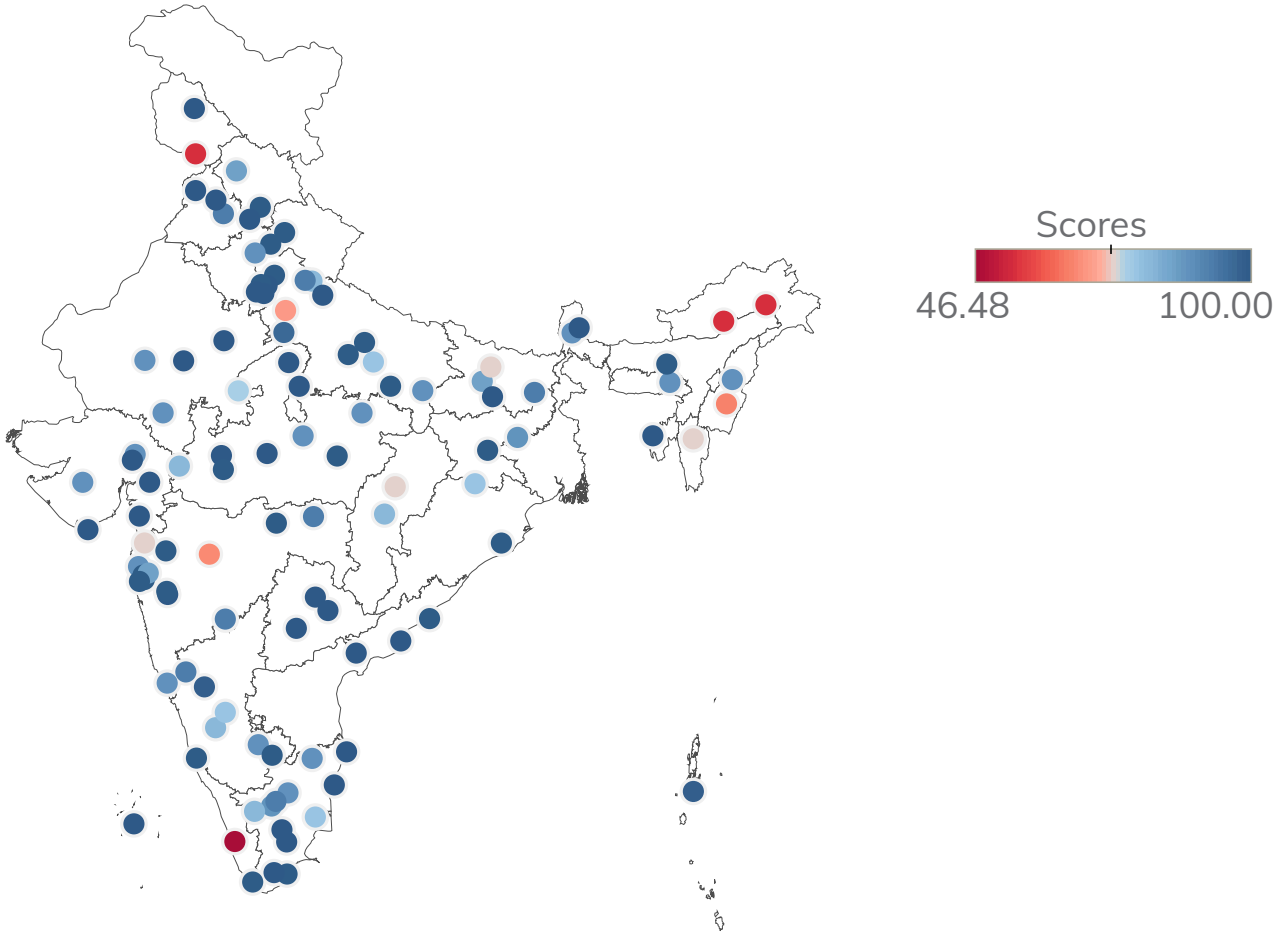
Building concrete city resilience is indispensable, with the onset of hazardous calamities that have a monumental impact on the people and the environment.

The category of **City Resilience** incorporated the following indicators: whether the *City has Implemented Disaster Reduction Strategies* and *the Number of Deaths* and *Directly Affected Persons Attributed to a Disaster.* Addressing climate change challenges, depleting resources, public health constraints, and the high frequency of natural calamities present significant governance challenges. As per the Internal Displacement Monitoring Centre (IDMC), close to 3.6 million people were displaced between 2008 and 2019, with monsoon and flooding accounting for most of the displacement. Additionally, the onset of sudden disasters such as earthquakes, tsunamis, cyclones, storm surges, and drought also leads to destructive results. An estimated average expected number of displacements per year due to natural disasters (earthquake, flood, storm surge, tsunami, cyclonic wind) is about 2.3 million.[9] Since the onset of hazardous calamities is often erratic with a potential for monumental impact on the people and environment, building concrete city resilience is indispensable.

Close to thirty-four cities have been positioned as top performers with robust *City Resilience,* including Agartala, Ahmadabad, Ajmer, Amritsar, Bareilly, Bhopal, Bihar Sharif, Chandigarh, and Dindigul. Cities that were in the rear end of the scores include Silvassa, Muzaffarpur, Aizawl, Aligarh, Aurangabad, Imphal, Jammu, and Kochi. The difference in the rankings, however, is not very high. It signifies that cities, both Million+ and Less than Million, have performed well for the majority in ensuring a secure system of resilience.

[9] IDMC Country Information: India https://www.internal-displacement.org/countries/india

Figure 19: Mapping of City Resilience category scores



At its crux, urban resilience refers to the "capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience" (City Resilience Framework 2015). *Resilience* is fostered through innovative solutions, safeguarding against risks and conditions of chronic stress. Cities only survive if they have cultivated practices that ensure adaptability. Various initiatives are undertaken by cities such as the Integrated Disease Surveillance Project (Indore), End to End Early Warning System for Ukai and Local Floods (Surat), Urban community-based micro-resilience model of ward exposed to climate and hydro-meteorological risks (Gorakhpur) helps streamline efforts to strengthen efforts to build resilience in Indian cities (TERI, 2020). Consequently, recognizing the need for such initiatives asserts an understanding of the implications in the present world, which helps cities mitigate risks and unforeseen disasters.

04.
Citizen Perception Survey

The **Citizen Perception Survey** acts as an instrument to validate the citizens' experience in service delivery and assess whether it is congruent with the Ease of Living Index findings. The survey seeks to evaluate the role of administration through performance in public service delivery, providing insights directly from the citizens.

The assessment was conducted along the pillars of *Quality of Life, Economic Ability, and Sustainability,* similar to that of the Ease of Living Index. Citizen ratings were primarily based on their accessibility and availability, affordability, and quality.

In the domain of quality of life, citizens were asked to rate their *Education and Health System, Housing and Shelter Facilities, and Wash and Swm Facilities, Mobility, Safety and Security Services, and Recreational Facilities. Economic Ability* was measured in terms of the availability of job opportunities in the city and women's presence in the workplace. On the other hand, *Sustainability* was measured within the parameters of quality of the *Environment*, government measures, *Availability of Green Spaces, Energy Consumption and Supply,* and efficacy of the *City's Resilience.*

Apart from the three pillars mentioned above, citizens were also asked to evaluate their city on the criterion of public services and governance, wherein they had to rate the efficiency and involvement of their local municipalities.

Table 22: Ranking of all cities under Citizen Perception Scores

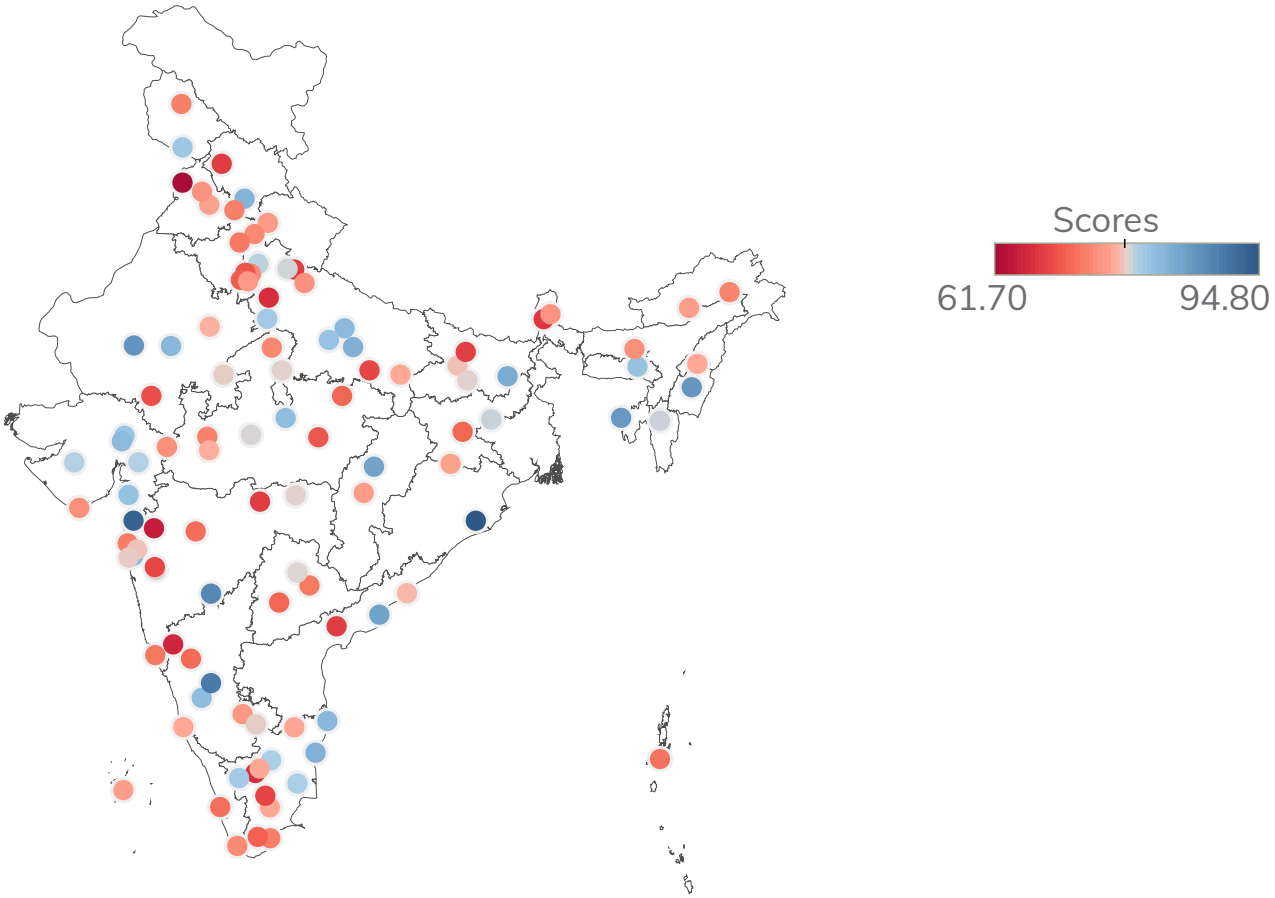
Rank	City	Citizen Perception Score	Ease of Living Index (without CPS)
1	Bhubaneswar	94.80	31.42
2	Silvassa	93.50	30.38
3	Davanagere	90.50	28.10
4	Solapur	88.80	29.94
5	Jodhpur	87.10	29.67
6	Imphal	86.80	23.60
7	Agartala	86.40	29.28
8	Kakinada	85.40	31.21
9	Bilaspur	85.30	23.59
10	Bhagalpur	84.30	26.90
11	Rae Bareli	83.60	26.14
12	Puducherry	83.50	29.73
13	Shimla	83.30	35.91
14	Ajmer	82.70	30.08
15	Chennai	82.60	37.83
16	Navi Mumbai	82.40	36.88
17	Lucknow	82.40	30.42
18	Ahmedabad	82.30	40.18
19	Shivamogga	82.00	28.26
20	Sagar	81.90	28.30
21	Surat	81.40	37.31
22	Shillong	81.30	27.26
23	Kanpur	81.20	30.07
24	Gandhinagar	81.10	31.93
25	Jammu	80.70	28.28
26	Coimbatore	80.30	35.64
27	Agra	80.30	28.48
28	Salem	79.70	32.49
29	Thanjavur	79.70	28.28
30	Vadodara	79.50	35.39
31	Rajkot	79.50	32.09
32	Meerut	79.30	28.63

Rank	City	Citizen Perception Score	Ease of Living Index (without CPS)
33	Dhanbad	78.90	23.33
34	Aizawl	78.80	24.53
35	Moradabad	78.70	27.82
36	Bhopal	78.50	32.70
37	Karimnagar	78.30	29.78
38	Pune	78.20	42.81
39	Bihar Sharif	78.20	28.96
40	Nagpur	78.10	31.90
41	Jhansi	78.10	28.29
42	Bengaluru	78.00	43.30
43	Kota	78.00	26.13
44	Greater Mumbai	77.90	34.86
45	Kalyan Dombivali	77.60	34.43
46	Patna	77.50	30.00
47	Visakhapatnam	77.20	34.11
48	Jaipur	76.90	32.63
49	Indore	76.80	35.54
50	Erode	76.50	29.92
51	Madurai	76.40	32.86
52	Varanasi	76.40	31.74
53	Mangalore	76.40	31.03
54	Kohima	76.30	26.98
55	Vellore	76.20	33.52
56	Ludhiana	75.90	34.59
57	Rourkela	75.70	26.18
58	Tiruchirappalli	75.50	32.60
59	Kavaratti	75.50	28.94
60	Itanagar	75.50	26.32
61	Raipur	75.30	33.68
62	Dehradun	75.30	29.82
63	Faridabad	75.20	28.70
64	Tumakuru	75.10	30.54
65	Jalandhar	74.70	29.77
66	Gangtok	74.60	28.81
67	Bareilly	74.40	25.42
68	Diu	74.30	32.35
69	Dahod	74.30	27.11
70	Guwahati	74.30	26.23
71	Ghaziabad	73.60	32.22
72	Thiruvananthapuram	73.60	31.85
73	Saharanpur	73.60	28.84
74	Gwalior	73.30	31.73
75	Pasighat	73.20	26.83
76	Ujjain	73.00	30.13
77	Thane	72.80	36.32
78	Chandigarh	72.80	32.56
79	Srinagar	72.80	21.11
80	Vasai Virar	72.60	29.48
81	Thoothukudi	72.50	29.38
82	Warangal	72.30	32.32
83	Karnal	72.20	32.82
84	Panaji	72.10	32.82
85	Port Blair	71.70	29.66
86	Kochi	71.40	29.98
87	Aurangabad	71.30	31.51
88	Hubli Dharwad	71.00	30.10
89	Satna	70.80	24.41
90	Hyderabad	70.70	34.20
91	Ranchi	70.70	29.10
92	Tirunelveli	70.30	32.95
93	Gurugram	70.00	35.00
94	Jabalpur	69.50	29.09
95	Delhi	69.40	36.74
96	Udaipur	68.80	29.66
97	Pimpri Chinchwad	68.20	36.70
98	Dindigul	68.10	27.91
99	Prayagraj	68.00	32.89
100	Muzaffarpur	67.80	25.19
101	Dharamshala	67.40	31.29
102	Vijayawada	67.40	30.12
103	Rampur	67.40	26.67
104	Amravati	67.30	30.19
105	Namchi	66.80	26.43
106	Tiruppur	66.10	34.20
107	Aligarh	66.00	27.36
108	Belagavi	65.20	30.72
109	Tirupati	64.30	31.04
110	Nashik	64.20	32.02
111	Amritsar	61.70	30.86

Bhubaneswar took the lead for the *Citizen Perception Survey,* followed by Silvassa, Davangre, Kakinada, Bilaspur, and Bhagalpur. The top-performing cities have a population base of Less than Million. The cities that scored the least include Rampur, Vijayawada, Amravati, Namchi, Tiruppur, Aligarh, Belagavi, Tirupati, Nashik, and Amritsar.

Notably, the cities that hold the top ten ranks according to the citizen perception survey do not necessarily perform highly in the Ease of Living Index. Similarly, the cities that emerged as top performers in the index did not have the highest survey scores. However, there is no linear relationship between the results of the survey and the index.

Figure 20: Mapping of Citizen Perception Survey scores



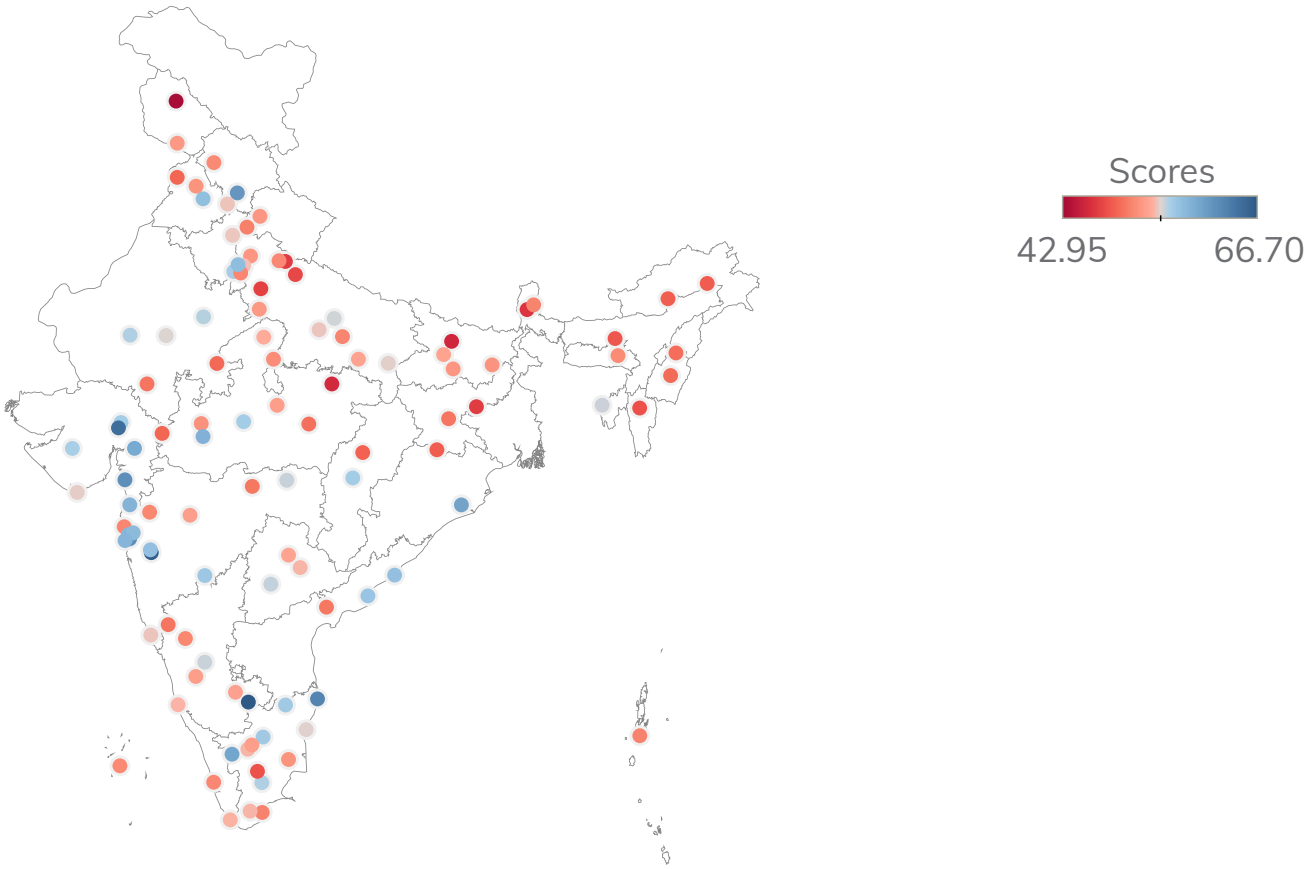
The outcome leaves the impression that the residents of the well-performing cities were stricter in their evaluation compared to other cities. It can be concluded that cities with better accessibility to governance information, facilities, and services are likely to perform well in the survey even if their performance for the index is lower. Alternatively, even if cities excel in their performance across the pillars of the index, but fail to ensure transparency, and accessibility, or had a lower rate of citizen participation, their score in the survey is likely to plummet.

05.
Key Findings

A.
Existing regional disparity reflects in the index scores

The index scores also give an insight into the region-wise status of urban development. The rankings show that most of the **top performers are concentrated in the prosperous states located in western and southern India.** On the other hand, cities in historically backward states that are mostly located in the **northern and eastern parts of the country are featured in the bottom of the ranking.**

Figure 21: Geographical distribution of scores



While low-scoring cities are present in all parts of the country, the map below shows that high-scoring cities are mostly present in the South and the West, with a few in North. The eastern and northern parts of the country have a majority of the low-scoring cities. **This is representative of the regional disparity that exists in the country, which is a cause for concern.**

Since the turn of the century, the northern and eastern regions have lagged behind the rest of the country in terms of economic growth and development. Despite efforts to correct the imbalance, the gap is only widening. To take the example of per capita income, the top five states based on per capita income were 145% richer than the bottom states in the early 2000s. The gap increased to 289% in 2010-11, and to 338% in 2017-18. Urbanisation can be a vehicle for change in these states if the efforts towards the same are accelerated and tailored to their needs, and most importantly, executed in a planned manner. One of the major sources of urban developmental issues is the lack of planning in urbanisation. Cities in India tend to grow organically and haphazardly, which later result in challenges like inadequate access to housing and shelter, shortage in water supply, congestion, air pollution, etc.

The population-wise distribution of scores naturally show a similar pattern. However, the disparity in scores is more pronounced in Million+ cities.

The prevalent regional disparity becomes apparent with the presence of high-scoring cities in the South and West, while low-scoring cities are located in the eastern and north-eastern parts of the country.

Among the cities with Less than million population, some of the southern and western counterparts also report low scores because they consist of small cities and urban agglomerations. Thus, this category does not include the most prosperous cities of the country, which puts the cities in this category on a level playing field to some extent (as shown in Figure 23).

On the other hand, among Million+ cities (as shown in Figure 22), the southern and western parts of the country include majority of the metropolitan cities of the country. Since these cities are leading in urban development, they leave the eastern and northern regions far behind. This is why greater disparity is visible among Million+ cities.

Figure 22: EOL Index scores among Less than million population cities

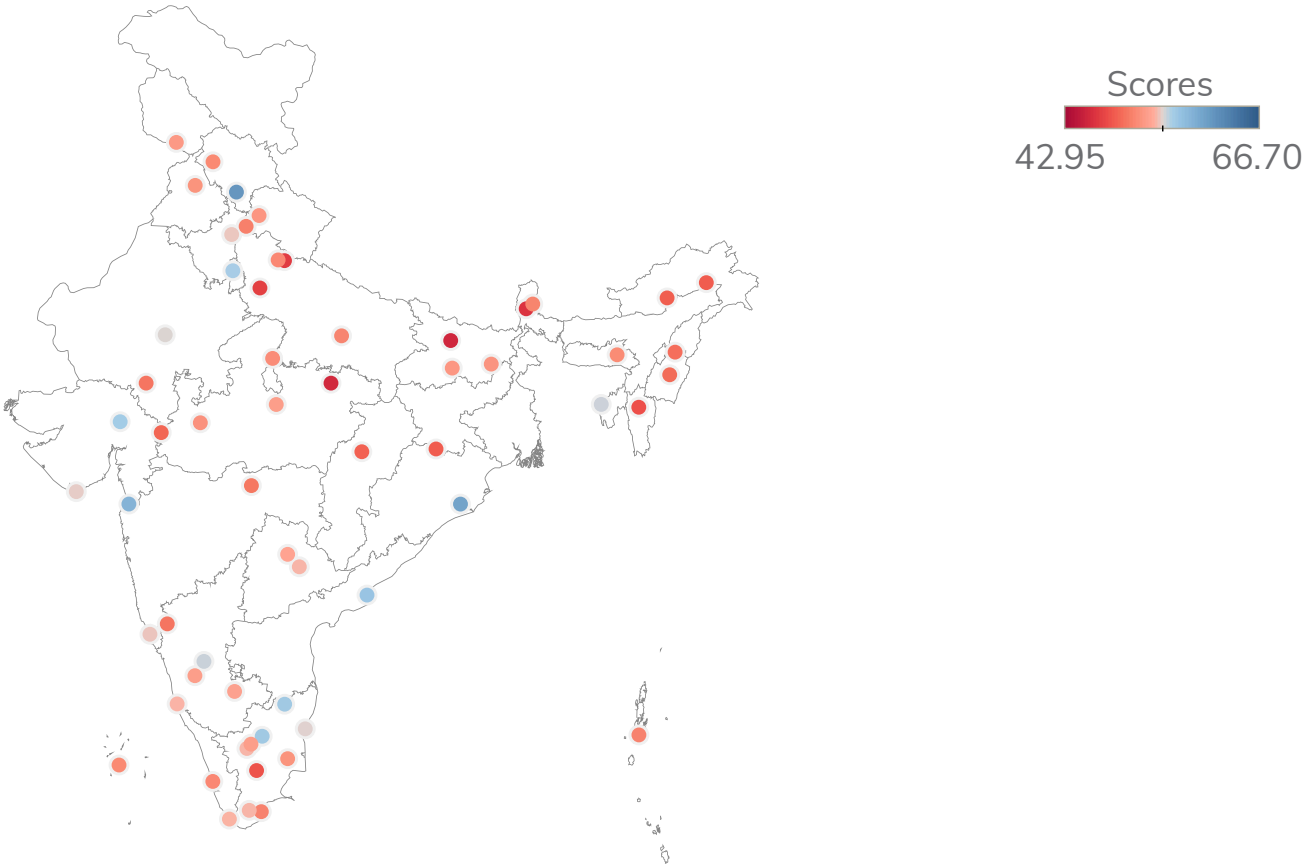
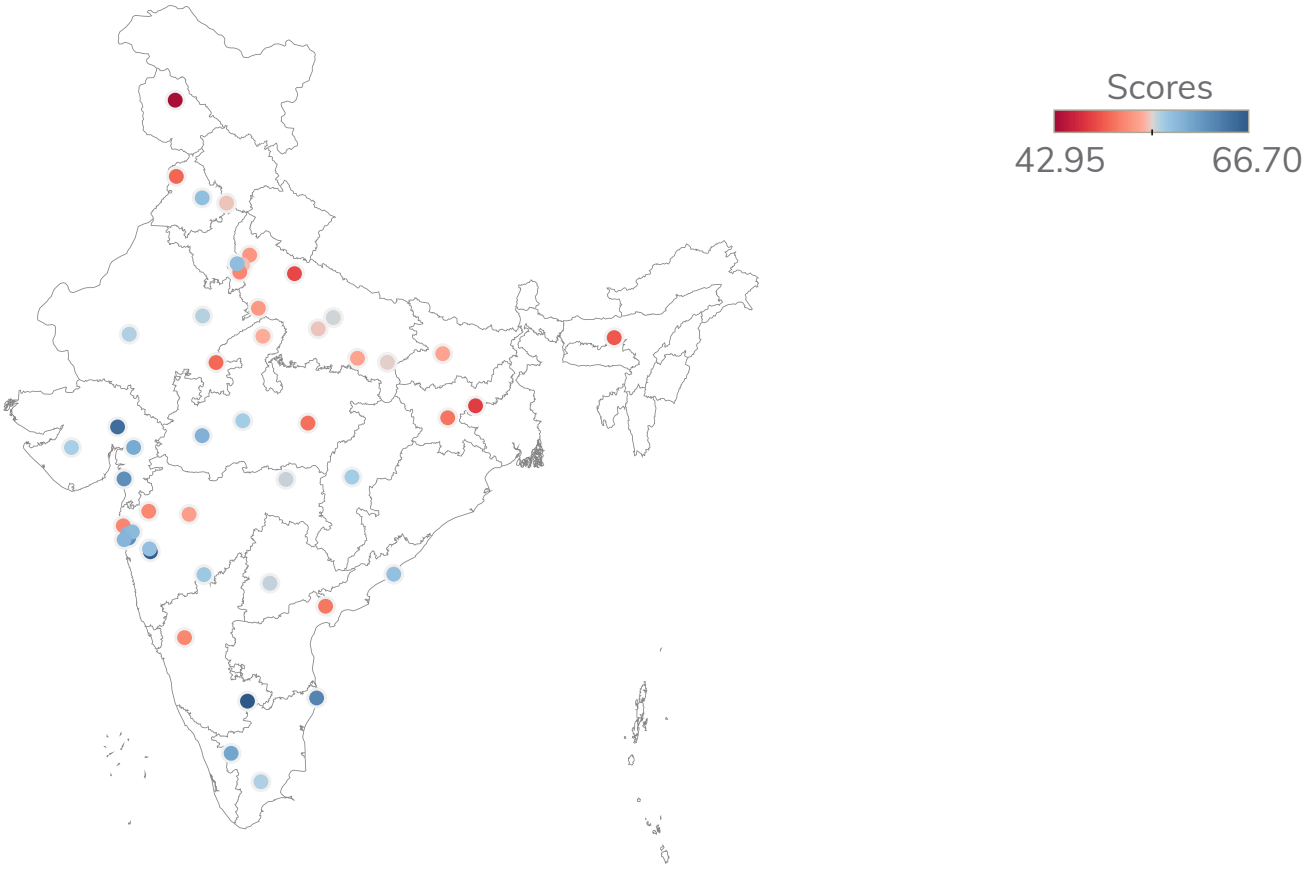


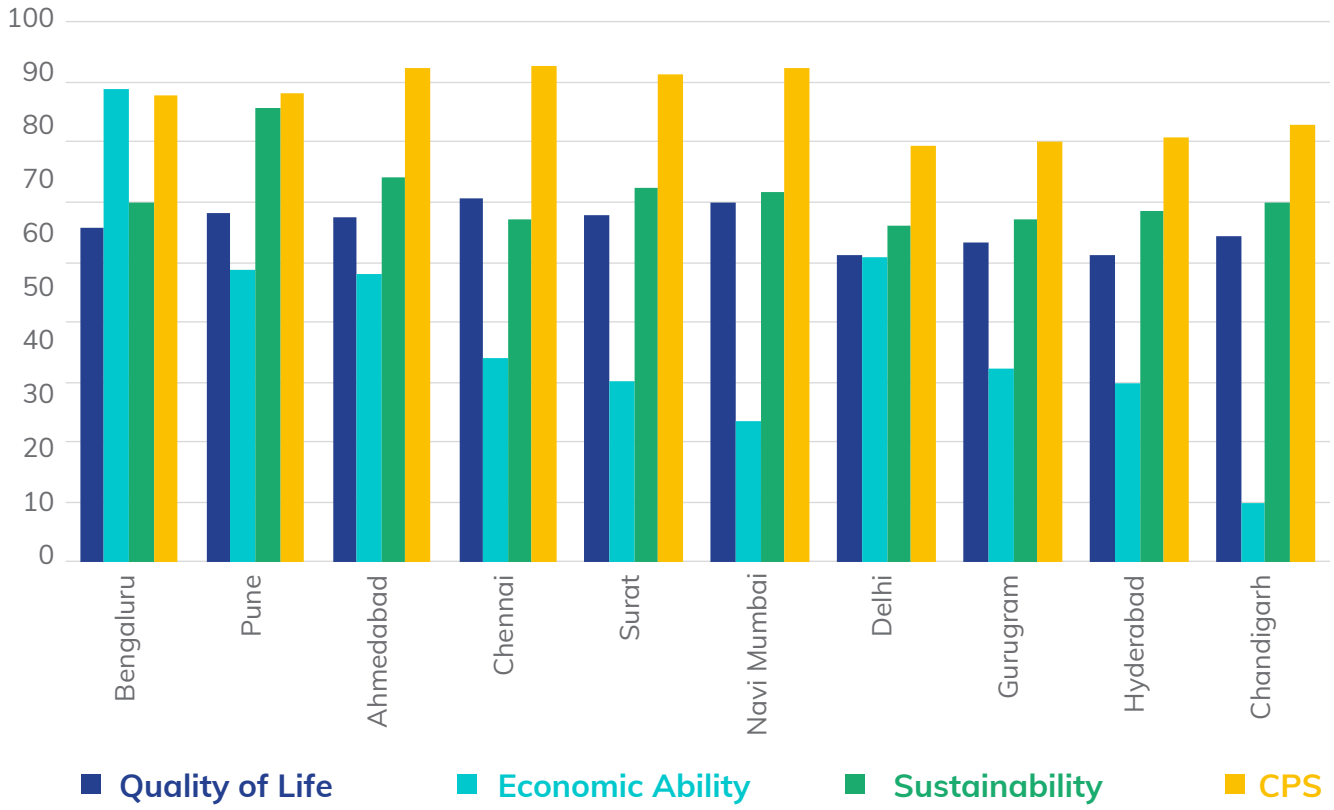
Figure 23: EOL Index scores among Million+ population cities



B.
Performance of select metropolitan cities' has elevated national average scores

Metropolitan cities are the epicentres of economic activity. Having the highest levels of urbanisation, they consequently report the highest rates of economic growth and innovation, and attract migrants seeking better employment opportunities and standard of living from all parts of the country. Hence, their index scores also stand apart from the rest of the cities. Out of the 111 participating cities surveyed, all the major **metropolitan cities have finished within the top 32 positions.** They are also among the positive outliers in some of the pillars and categories, and have, therefore, lifted up the scores for the pillars by significant points. **Bengaluru** has scored the highest in the *Economic Ability* pillar, while **Pune** has taken the lead in the *Sustainability* pillar. **Chennai** has scored the highest in the *Quality of Life* pillar.

Figure 24: Ranking and Scores of major Metropolitan Cities across Ease of Living Index



Chennai, Tamil Nadu

Bengaluru's performance in the Economic Ability pillar is attributable to its conducive investment climate and booming start-up culture.

It should be noted that *Economic Ability* is the worst performing pillar, with a wide score range of 0.55 and 78.82. With a score of 78.82, Bengaluru's performance surpasses the rest by a long distance and raises the average score for the pillar to 13.17. Bengaluru's high score can be particularly ascribed to its performance in the category, *Level of Economic Development*, wherein it has achieved a score of 99.50 and raised the average category score to 18.03. Similarly, cities have performed poorly in the *Economic Opportunities* category, but even the average score of 8.30 is highly influenced by Delhi's perfect score of 100 in that category.

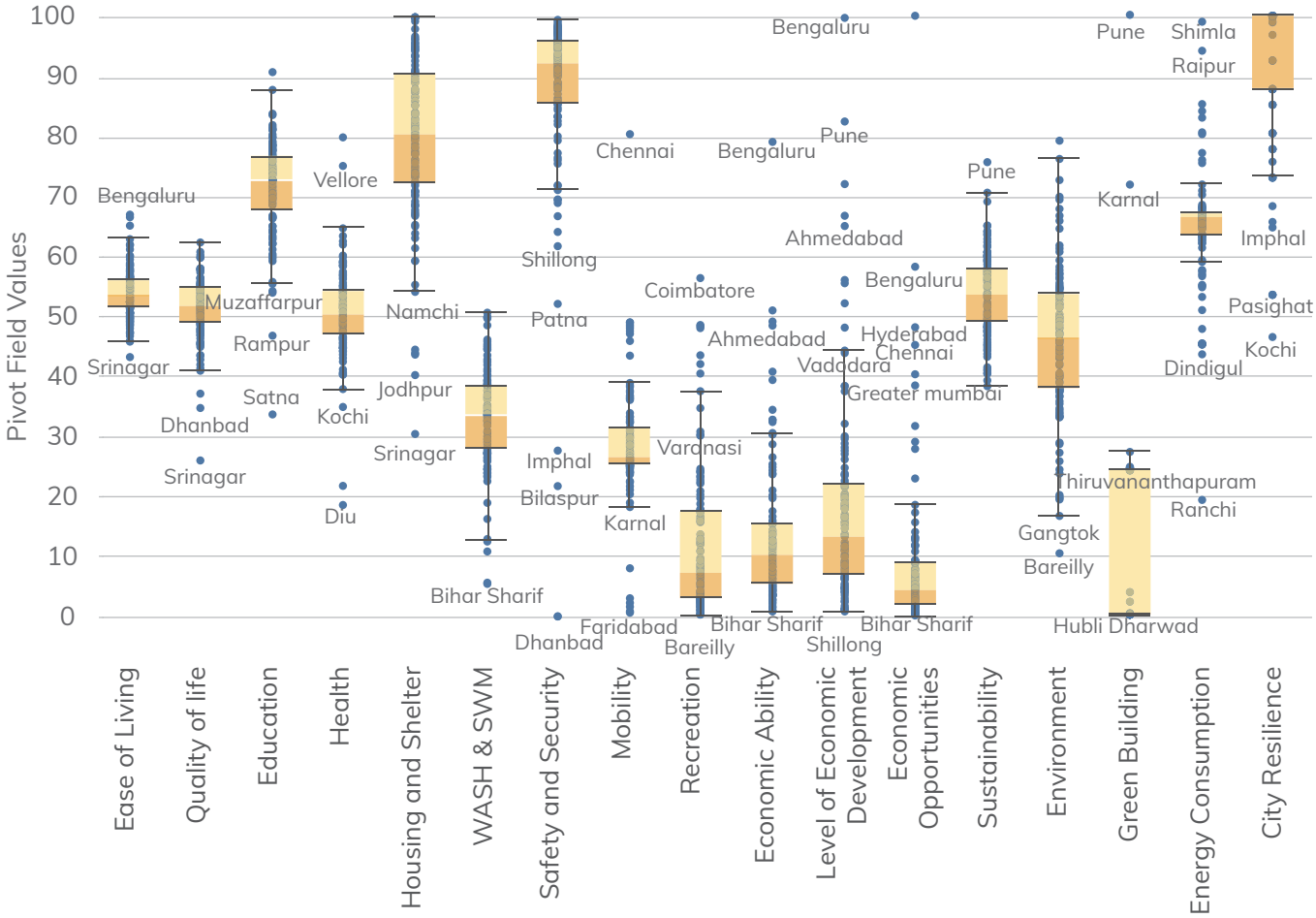
Sustainability is another pillar where a metropolitan city, Pune has emerged as the top performer. While the cities show a fairly balanced performance in this pillar, one of its categories, *Green Building's* average score of 12.49 is highly influenced by Pune's score of 100.

In the *Quality of Life* pillar, the metropolitans have performed well but did not manage to secure the top score. Nevertheless, they have influenced the category score to some extent; *Recreation* is the lowest-performing pillar, where Navi Mumbai's score of 47.75 impacts the overall average of 11.68. *Mobility* is one of the weakest performing pillars, but Chennai's highest score of 79.80, owing to its well-connected and economical public transport system elevates the average score to reach 28.05.

Hence, it can be deduced that metropolitan cities contribute significantly to the overall index scores. Owing to their balanced urban development and excellent performance in select pillars, the CPS scores are also high for these cities.

C.
Observations from Variance of scores

Figure 25: Variance and median scores of cities across pillars and categories



The variance in the scores of the pillars and categories of the Ease of Living Index puts forth some interesting insight with respect to the scores of different cities.

01.

Firstly, the median scores for categories in Quality of Life (such as *Education, Health, Housing and Shelter, WASH & SWM, Safety and Security)* are relatively on the higher side. On the other hand, the median scores for Economic Ability and its categories such as *Level of Economic Development* and *Economic Opportunities* have the lowest median scores, with majority of the cities scoring between 0-20 out of 100. The scores for sustainability and its categories are also on the higher end, except for the scores on green buildings. **This essentially puts forth a high-level of disparity in pillar and category scores across different Indian cities, wherein the sub-components of Ease of Living are essentially not at par (Figure 25).**

02.

Secondly, while delving deeper into economic ability, both its categories have attained low scores (Figure 25). While the indicators measuring *Level of Economic Development* are based on *Factories er Lakh Population,* and the *per Capita Wages,* the low score on this category has been attained by a majority of the cities. Interestingly, the category also has several positive outliers in cities such as Bengaluru, Pune, Hyderabad, Ahmedabad, Vadodara, Thane, Navi Mumbai, etc.

Two things can be observed from this: 1) the positive outliers are situated in industrial hubs, that are focused on manufacturing; and 2) these positive outliers are also metropolitan cities, located in the southern and western parts of the country. One justification for the low scores for majority of the Indian cities can be on the basis of the indicators itself- that economic activity can be driven by activities other than manufacturing, such as trade and services. However, positive outliers also include cities such as Bengaluru that are significantly service-exporting in nature.

03.

But perhaps the most concerning aspect of this variation lies in scores attained in the *Economic Opportunities* category (as shown in Figure 25). With a national average of 8.30, and a median score of 4.32, the indicators that measure *Economic Opportunities* focus on credit accessibility and skill development- essentially the resources that can enable one to be economically productive. Like *Level of Economic Development* category, *Economic Opportunities* also see several positive outliers in major cities such as Bengaluru, Hyderabad, Chennai, Greater Mumbai. **The goal of financial inclusion has clearly not permeated beyond these major cities to rest of Indian cities, and can affect the growth of these cities into potential economic hubs.**

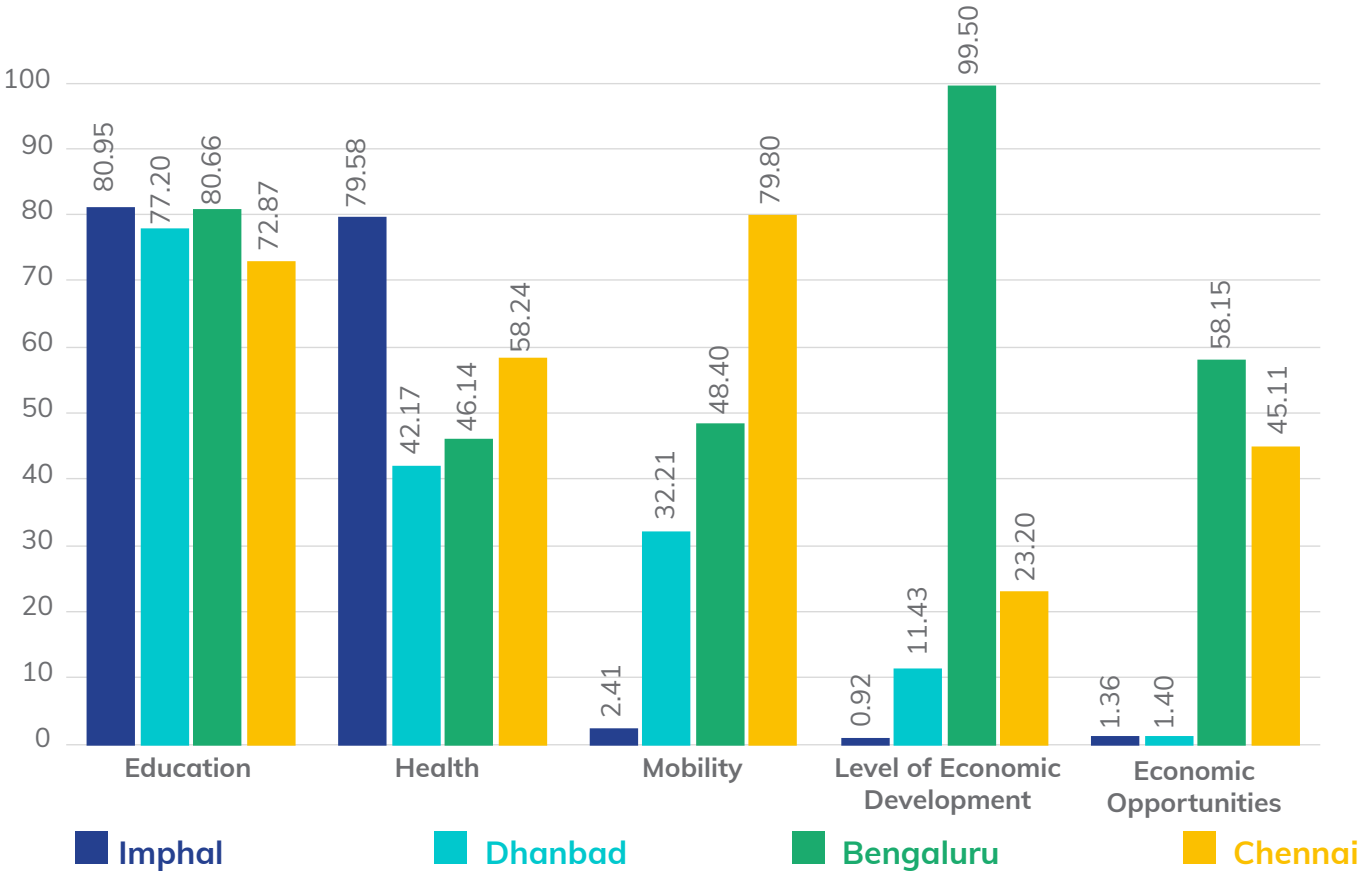
04.

Fourthly, the majority of the negative outliers in all these categories emerge from the cities in northern and north-eastern parts of the country. Certain specific cities such as Srinagar, Dhanbad, Bihar Sharif, Bareilly have consistently emerged as negative outliers in most of the categories. While some of these cities have historically been part of areas known for violence and civic strife, it has evidently permeated into the ease of living in these cities, thereby resulting in lower scores. As urban local self-governments are responsible for functioning of most of these categories, a lack of stable environment essentially affects the mitigations of essential services of these self-governments that create these urban spaces.

05.

Fifthly, the cities that have scored high in categories such as *Education* and *Health*, in the likes of Dhanbad, Imphal, Thiruvananthapuram, Shillong (to just name a few), have attained low scores in *Economic Ability* (as shown in Figure 25). While these categories are focussed on increasing human capital, they have not necessarily contributed economically in these cities. On the other hand, high scores on *Economic Ability* pillar, such as Bengaluru, and Chennai have also attained high scores on *Education* category, but falls significantly short on *Health*, which is a crucial to increasing human-capital.

Figure 25: Comparing Imphal, Dhanbad, Bengaluru and Chennai on Education, Health, Mobility, Level of Economic Development and Economic Opportunities categories



It can be inferred that **major cities, which are known for being destination-cities for internal migration, tends to attract human capital resources from across the country, especially from northern and north-eastern cities.** This attraction can be perhaps accrued to its high performance in ease of living, which positively encourages and enables the growth of a cosmopolitan culture that helps migrants to expand their kinship and communities, while contributing to its economic growth.

06.

Finally, urban agglomerations serve as important tools for market linkages, thereby bridging the gap in an urban-rural divide. But as cities become a focal point for the interaction of myriad cultures, it also paves the way for amalgamation of an urban culture, that reflects its cosmopolitanism, pushed forth by its public mobility, and imagined through recreation in the form of the arts. **The low median scores for categories such as *Recreation* and *Mobility* thus hints at the infancy of this cosmopolitan imagination in India's urban spaces, further reinforcing the divide between its major cities, and the rest of Indian urban centres (as shown in Figure 25).**

D.
Ease of Living vis-a-vis citizen perception

The *Citizen Perception Survey* (CPS) has 30% weight in the Ease of Living Index score for each city. Interestingly, the average score attained by CPS surpasses all other pillars, with a national average score of 76.08. The high scores attained in CPS, however, is not consistent with the scores across various pillars and categories. A high score in CPS essentially indicates that **the residents' evaluation of the performance of cities is better than their actual performance.** Bhubaneswar is the highest scorer with a score of 94.80, followed by Silvassa (93.50), and Davanagere (90.50), all of whom are cities having Less than million population. Solapur (88.80) is the highest scorer among Million+ cities, followed by Jodhpur (87.10).

Table 23: Top performers in Citizen Perception Survey and Ease of Living Index (excluding CPS) respectively

Top Performers in Citizen Perception Survey

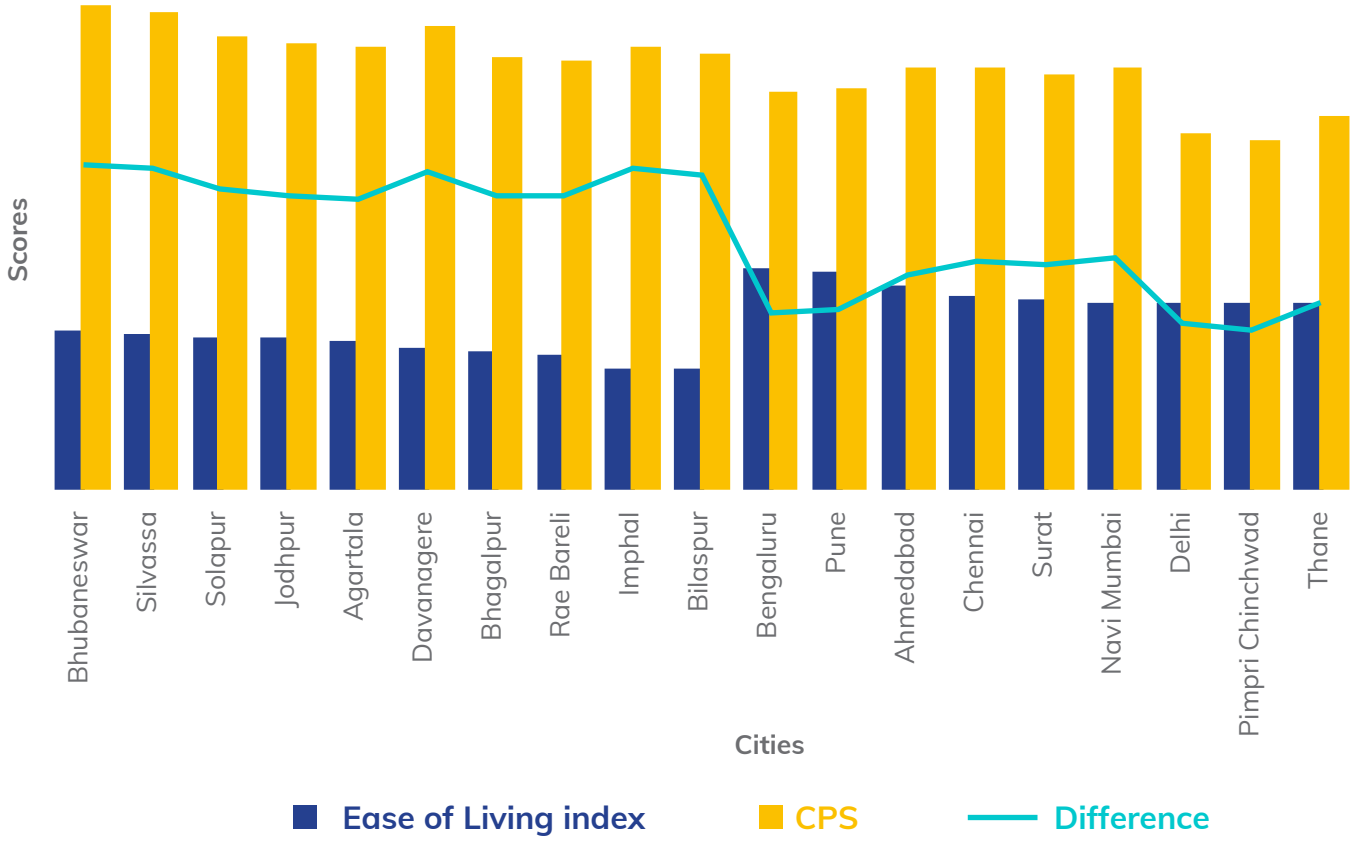
City	Ease of Living Index	CPS	Difference
Bhubaneswar	31.42	94.80	63.38
Silvassa	30.38	93.50	63.12
Solapur	29.94	88.80	58.86
Jodhpur	29.67	87.10	57.43
Agartala	29.28	86.40	57.12
Davanagere	28.10	90.50	62.40
Bhagalpur	26.90	84.30	57.40
Rae Bareli	26.14	83.60	57.46
Imphal	23.60	86.80	63.20
Bilaspur	23.59	85.30	61.71

Top Performers in Ease of Living Index (excluding Citizen Perception Survey scores)

City	Ease of Living Index	CPS	Difference
Bengaluru	43.30	78.00	34.70
Pune	42.81	78.20	35.39
Ahmedabad	40.18	82.30	42.12
Chennai	37.83	82.60	44.77
Surat	37.31	81.40	44.09
Navi Mumbai	36.88	82.40	45.52
Delhi	36.74	69.40	32.66
Pimpri Chinchwad	36.70	68.20	31.50
Thane	36.32	72.80	36.48
Shimla	35.91	83.30	47.39

Interestingly, the top scorers under this pillar have not performed as well in the other pillars. In other words, **the residents are much lenient in their evaluation of performance in cities where the liveability is comparatively lower.** Citizens in well-performing cities on the other hand are relatively stricter in their evaluation; Bengaluru, which scored the highest in the index score excluding CPS could only secure a score of 78.00 in the CPS. Similarly, none of the top 10 scorers in the index could be featured within the top 10 performers under the CPS pillar.

Figure 26: Comparing Ease of Living without CPS scores amongst top 10 scorers respectively



As evidenced in the graph above, the top 10 scorers in CPS have a significantly low score in Ease of Living Index, and thus a higher difference between the two scores. **The top scores in the Ease of Living Index have a comparatively lower CPS score,** and thus the difference between the two scores is significantly low. This could imply two things:

1) A higher CPS score could be attributed to ease of accessing governance and public services from these cities, and availability of information regarding these services. Thus, a lower performance on these categories would still translate into a higher CPS score, as citizens appear to be more aware of the governance processes in their own cities; and

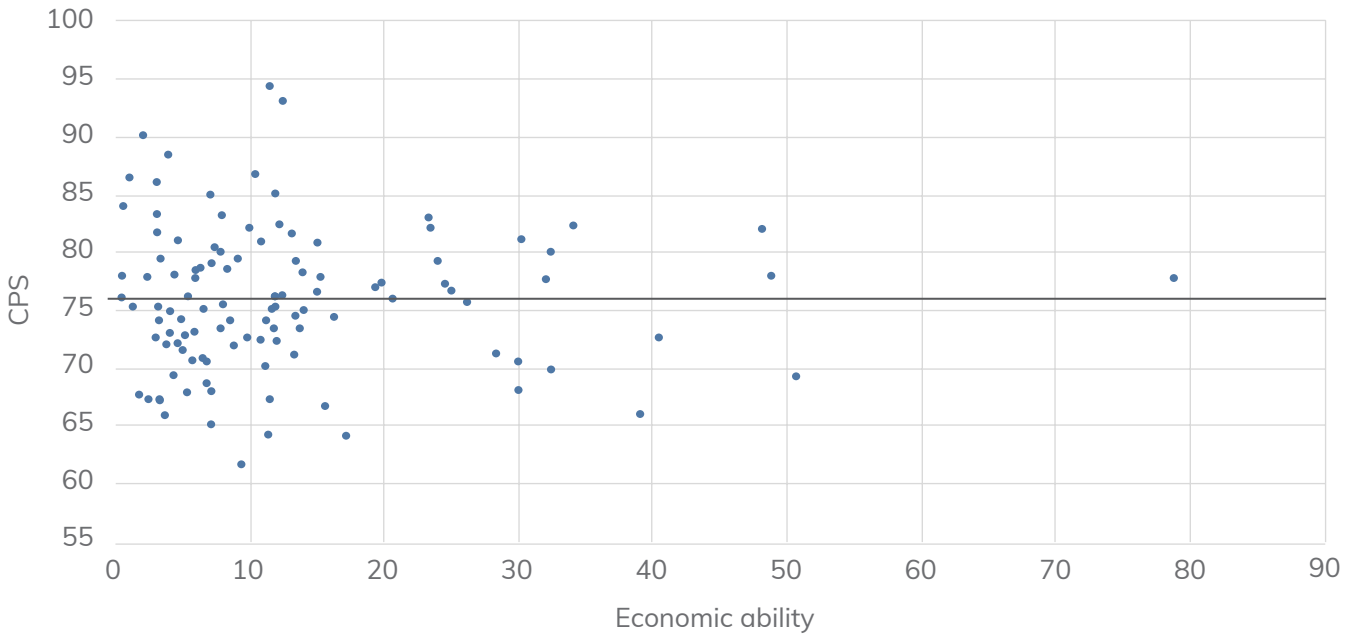
2) a lower CPS score in cities with high EoL scores could contrast with public perception of accessing public services, due to information asymmetry and low citizen participation in public processes.

However, **it does not imply that the CPS scores are perfectly inverse to the actual performance** (EOL scores without incorporating CPS scores) of cities, as the two do not have a linear relationship. Nevertheless, it can be definitely deduced that residents in worse-performing cities have a lower benchmark of evaluation, whereas residents in better performing cities have a higher benchmark and greater demands from the city. Inversely, it can also be said that a higher benchmark of evaluation by citizens push the

city administrations to reform their policies and strive for improvement in developmental outcomes.

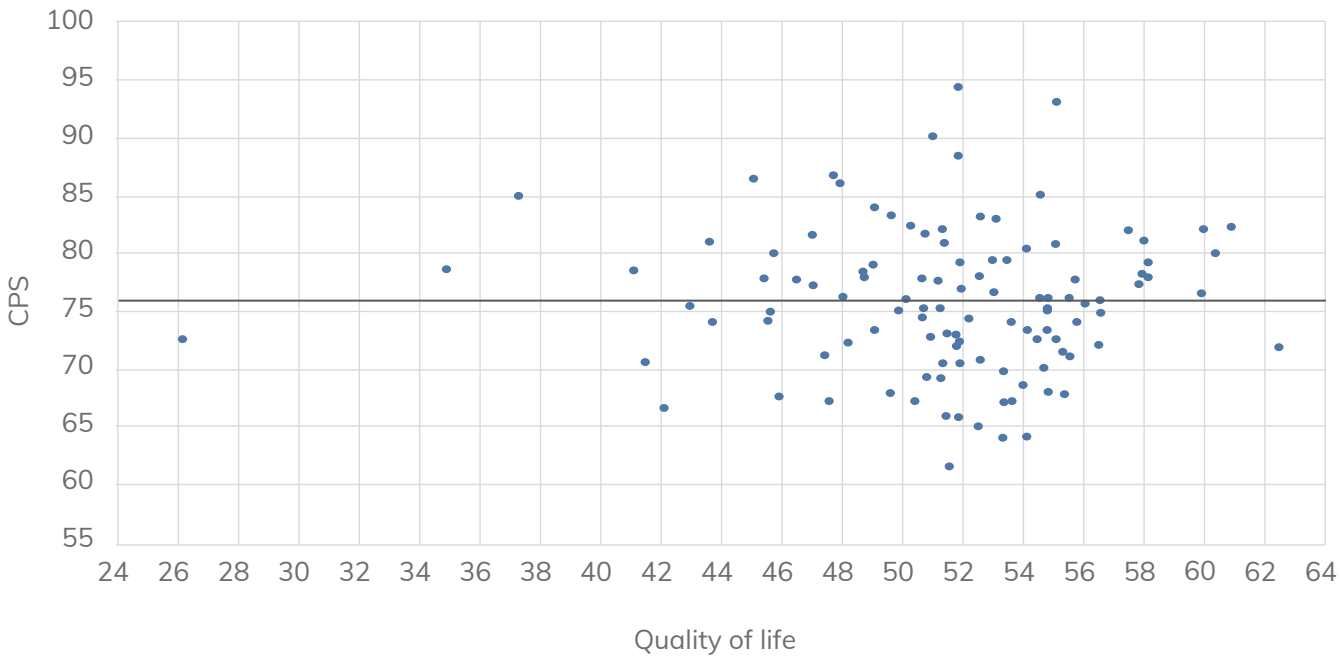
Delving deeper into the CPS scores in accordance with the pillars of EoL, the inverse in CPS and EoL performance is specifically highlighted in the case Economic Ability. The perception of economic well-being is high, as compared to actual performance on these particular indicators, as shown in the graph below. Bengaluru is the only city that has scored significantly well in economic ability, but its citizen's perception is much lower comparatively. On the other hand, cities such as Bhubaneswar have scored much less on economic ability categories, but have an exceptionally good public perception of their performance. This trend has also been evidenced in the case of the top scorers in both CPS and EoL w/o CPS.

Figure 27: Correlation between Economic Ability and CPS scores across cities



On the other hand, the reverse has happened in the case of QOL and CPS scores. In this case, a higher performance in *Quality of Life* pillar has not necessarily translated into a higher score on the Citizen's perception survey. Some top-scoring cities such as Chennai, Indore, Pune, have scored between 80-85 on the CPS. As mentioned above, it could indicate that the benchmark of evaluation is much higher in these cities, wherein there is an improved standard of living, but its citizens may not be of the same opinion. A causation for this might lie in restricted access to these services, in terms of information asymmetry and physically accessing the same. Cities such as Bhubaneswar and Silvassa have scored significantly high on the CPS, but Bhubaneswar does not rank within the top 50 cities in terms of *Quality of Life*. This further indicates that while there might be a dearth of services in these cities, their citizen's perception is higher of the same due to ease of accessibility and widespread information, and lower benchmark of evaluation regarding the same.

Figure 28: Correlation between Quality of Life and CPS scores across cities



06.

Discussion

Achieving Sustainable Development Goals at City Level

One of the key objectives of this report is to stimulate and fulfil the outcomes of sustainable development goals. The framework incorporated in the Ease of Living Index also provides measures for a city's SDG performance.

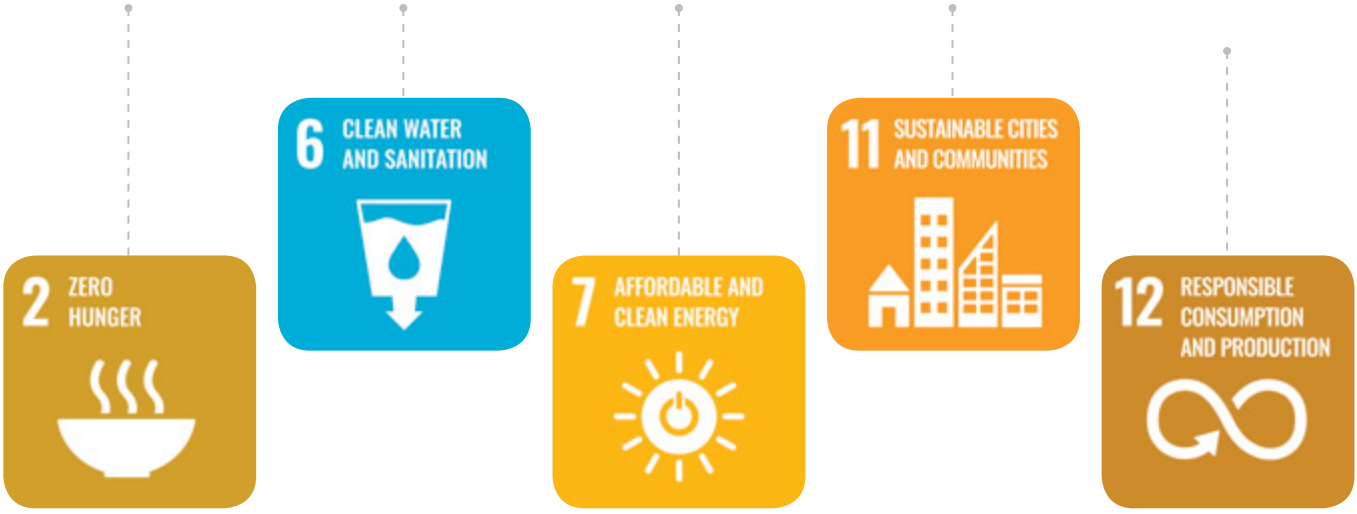
The **Sustainable Development Goals** (SDGs) comprise a set of 17 goals, 169 targets, and 306 national targets to achieve greater human well-being. Through a commitment of "leaving no one behind", the SDGs aim to achieve their targets by 2030. The Government of India has also committed to Agenda 2030 along with the SDGs. While India is far from achieving all these goals, the SDGs bring forth a credible standard of measure to assess a country's progress across vital areas such as eliminating poverty, ensuring good health and well-being, gender equality, clean water and sanitation, economic growth, and sustainable cities and communities.

Moreover, there is a crucial relationship between achieving

the targets set by SDGs and urbanisation. India has one of the fastest rates of urbanisation. How Indian cities manage this sprawling urban expansion will determine their ability to eliminate poverty, ensure sustainability, provide access to clean water and sanitation, and other such targets stated in the SDGs.

Applying an urban-nexus approach to achieve SDG targets will help accelerate efforts to achieve India's development goals. This approach calls for optimal utilisation of resources by recognising the interdependencies between water, energy, agriculture, and food, instead of limiting these resources into sectoral management without any coordination. Failure to manage interactions between various urban sectors can lead to inefficiencies, failure to optimise cost savings, and lost opportunities to capture and utilise potential synergies across sectors.[10] The urban nexus approach directly addresses the sustainable development goals of zero hunger, clean water and sanitation, affordable and clean energy, sustainable cities and communities, and responsible consumption and production (Figure 29) Subsequently, inter-linkages with other SDG targets can also be traced in the urban nexus approach.

Figure 29: Important Sustainable Development Goals in the context of Ease of Living Index



India's commitment to achieving the SDG targets is also reflected in the alignment of the National Development Agenda with SDGs, while the policy paradigm of India demonstrates the focus towards urban development through the implementation of various programs. For example, the Ayushman Bharat (Pradhan Mantri Jan Arogya Yojana) which aims to provide healthcare to 500 million people corresponds with SDG 3 (health and well-being) and SDG 10 (reducing inequalities).

Nevertheless, implementing and tracking SDGs on the city level may prove to bring more lucrative results. Notably, cities that exhibit better urban management also prove to be more capable of achieving a better quality of life for their people.

The Ease of Living Index helps discern the ability that Indian cities and their governance structure possess. It helps identify the capacity of these cities to achieve broader development objectives and sustainable development goals. The data presented in the study elucidates specific areas which showcase best practice, sectors that need to be improved, and existing trends that must be taken into consideration before policymakers take decisive measures. Perhaps a city-level implementation and monitoring system for achieving SDG targets that incorporates the urban-nexus approach can significantly jumpstart urban development.

[10] UNESCAP, 2020. Applying Urban Nexus Approach for Achieving Sustainable Development Goals (SDGs)

07.

Recommendations- Index To Action

Cities across the globe encounter a range of socio-economic challenges to development. Such challenges are more pronounced and acute in developing countries like India, where rapid urban and demographic expansion occurs without a robust governance framework.

The findings of the Ease of Living Index provide a data-driven assessment of the city residents across three pillars of quality of life, economic ability, and sustainability. Effective urbanisation can take place within the purview of this index as it sheds light on critical challenges to urban development that impedes growth and predominantly impacts the lives of city dwellers.

Some key actions that authorities can undertake are discussed below.

Local Initiatives for locally defined problems:

Given the complexity of urban areas and the factors that shape its existence- political economy,

the agency of vulnerable groups, the prevalence of economic opportunities, access to resources- there cannot be an all-encompassing model of urban development. Local solutions to locally defined issues prove to be more successful when it generates a supportive environment from local actors and community stakeholders. A diverse range of indicators and findings that arrive at varying strengths and weaknesses for each city indicates a need for implementing specific programs, unique to each city. Thus, drawing from the findings of the Index, cities can strategise and implement initiatives best suited for them.

Enhancing the capacity of municipalities:

Efficient urban governance must ensure that municipalities are strengthened to better plan and manage local institutions and resources to accelerate urban growth. Building the capacity of municipalities and providing them with better financial management is imperative, especially since many municipalities lack the skills, capacity, and resources to function effectively.

Furthermore, promoting efforts to achieve sustainable development goals at the city level can potentially garner more successful results and ensure a better quality of life for the people. Capacity building sessions that propagate SDG targets and remove complexities in the implementation of programs in urban local bodies is one such way of achieving better development outcomes.

Improving Governance and Services:

Access to resources including affordable housing, waste management, clean water, sanitation, etc. cements the foundation for quality of life. Despite the common perception that urbanisation inevitably leads to better access to quality service delivery, stark inequalities present in society prevent sections of the population from accessing these services. Constraints in governance may lead to problems that manifest itself in poor service delivery.

Table 24: Key Common Governance Constraints

Governance Constraint	Definition
Political market imperfections	Political logistics often based on patronage or clientelistic relationships, contributing to short-term, populist policies and biases to visible outputs.
Policy incoherence	Insufficient performance regulation and weak accountability contributing to users exiting from the provision
Levels of performance oversight or monitoring	Weak capacity of actors to coordinate their activities and work together productively
Moral hazard	Availability of aid or other resources that insulate the state (or others) from the consequences of their actions or inaction

Source: Adapted from Wial et al., 2014 in Jones, Cummings, and Nixon (2014)

Consequently, it is essential to recognise and build on "sector characteristics" and "common constraints" and include specific considerations of urban characteristics that influence services (Jones, Cummings, & Nixon, 2014). It, therefore, becomes increasingly important to review the political economy and governance factors across the urban environment in question, local municipal governance arrangements, and sector-specific characteristics across the entire services production cycle.

Peer-learning for better development outcomes:

The index identifies how cities across India perform in different, equally vital pillars of quality of life, economic ability, and sustainability. The results of the index indicate cities that perform impressively across these pillars and may serve as role models to those cities that emerged at the rear end of the spectrum with scope for improvement. The cities of Bengaluru, Pune, Ahmedabad, and Chennai demonstrate better living conditions in the category of Million+ city. In contrast, Shimla, Bhubaneswar, Silvassa, Kakinada, and Salem showcase enhanced quality of life in the Less than Million city category. By the same token, cities that excel in specific pillars or even categories can serve as a source of learning for their peers. For example, Panaji excels in the pillar for *Quality of Life*, and Tirunelveli emerges as the best performer for the category of the *Environment*.

Making Urban Spaces as Economic Units:

Estimates from 2011-12[11] reveal, urban areas in India contribute somewhere between 52.6 percent and 64.9 percent of the national output despite accounting for a lower share of the population compared to its rural sections of the population. Increasing productivity levels that drive economic growth have led to an expansion of urban areas. However, for urbanisation to lead to greater economic gains,

[10] Kumar, Debroy & Kapoor (2020). India's revival plan must focus on cities. https://www.livemint.com/news/india/india-s-revival-plan-must-focus-on-cities-11589475051709.html

Kolkata, West Bengal

there must be an increased accumulation and aggregation of productive knowledge to enhance technological progress and overall development. The migrant crisis has also highlighted the need to develop India's urban spaces and focus on regional development. It has spelled out the need for informed policy decisions driven by extensive data. But a major impediment in this is the dearth of regional or state-level data, since most data sets are only available at the state or national level. Additionally, the data sets are often developed in isolation and may not be complementary to each other. The policies and programmes implemented must also take place in harmony with each other to ensure the best outcome. Sector-specific policies may be undertaken, but they must not be incompatible with each other. Similarly, state governments must refrain from classifying cities into different economic contexts, and prevent obstructive competitive environment. Such ideas stem from the belief that urbanisation leads to definite economic gains.

Nevertheless, the constitutional status given to Urban Local Bodies must be practiced mindfully to avoid overwhelming the local governance structure. Nations generate prosperity only when their cities can function effectively, as economic development enterprises ensure inclusive development, especially in the face of widening inequalities.

Gender-sensitive governance:

Efficient urbanisation practices can facilitate better outcomes for women by recognising disparities and providing solutions to the same. Cities promise improved living conditions for women. It provides access to all levels of education, with a better rate of transition to higher education, i.e., secondary and tertiary levels of education; access to better economic and work opportunities and lower levels of social and cultural constraints. However, the lack of substantial efforts to curb disparities and equip women with autonomy often restricts their growth. It is fundamental to incorporate gender-sensitive governance practice. Such a practice provides for women's representation and participation in policy decisions. It also ensures the overall well-being of women by addressing gender-specific issues such as violence against women, and incorporating inclusive elements such as gender-budgeting.

08.

Conclusion

Today, urban expansion is rooted at the heart of development. The rapid pace of its growth further emphasises the need for efficient urban governance. Since the economic and social development of urban areas is highly dependent on local governance structures and administration, it becomes increasingly important to aid and guide local administration through data-driven information that identifies key issues and facilitates better reforms.

The Ease of Living Index 2020 attempts to assess and highlight the ability of cities to improve the living standard of their residents by mapping various aspects to living standards across different urban areas in the country. A notable conclusion derived from this study points to the existing disparities in the conception of ease of living itself.

The cities that emerged as the best performers across pillars are metropolitan cities with a legacy of industrialisation and finance. Consequently, these cities already enjoy the historical advantage of being urban centres, further allowing them to expand networks of urban governance and improving their performance

across other pillars of Quality of Life and Sustainability. However, the Ease of Living in such cities remains unequal compared to other Indian cities, particularly those in eastern and north-eastern regions. An average score of 76.08 in the Citizen Perception Survey indicates that despite variance in scores across all pillars and categories, citizens showcase a positive perception of their cities. In fact, the CPS scores have contributed to significantly elevating the ranking of various cities, even if they had low scores in the pillars. This fact alludes to the divergence between actual municipal performance in the delivery of services that enable ease of living and the public opinion, formed from the end-usage of such services and governance.

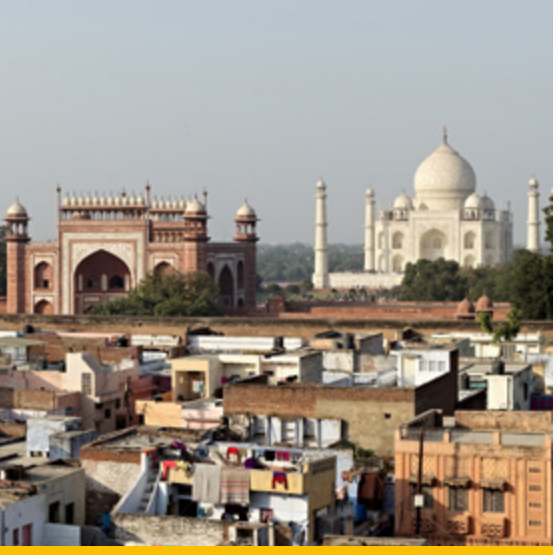
Essentially, this report aims to not only highlight the strengths of city administrations in assuring a certain standard of quality of life, but also the weaknesses that obstruct local governance in its daily functionalities. With the help of this index, city administrations will generate and share good practices that can improve the quality of life. The Ease of Living Index 2020, thus hopes to catalyse the vision of the 74th Amendment Act, 1992, which proposes to constitute a uniform structure of Municipal Corporations, Municipal Councils, and Nagar Panchayat, based on the population and grants them a constitutional status through universal adult franchise. Thus, it is hoped that this index enables an improved standard of Ease of Living for these urban bodies as they function as effective units of Local Self Government.

09.

City Profiles

Million+

(cities with ***more than a million*** population)

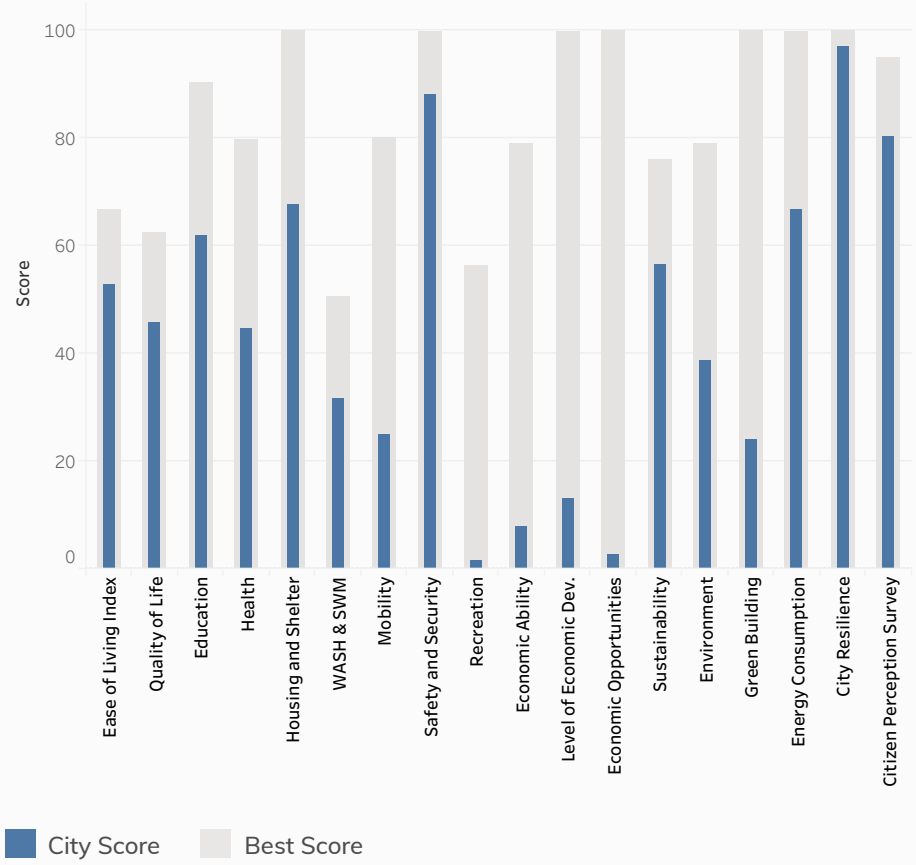


Rank
35

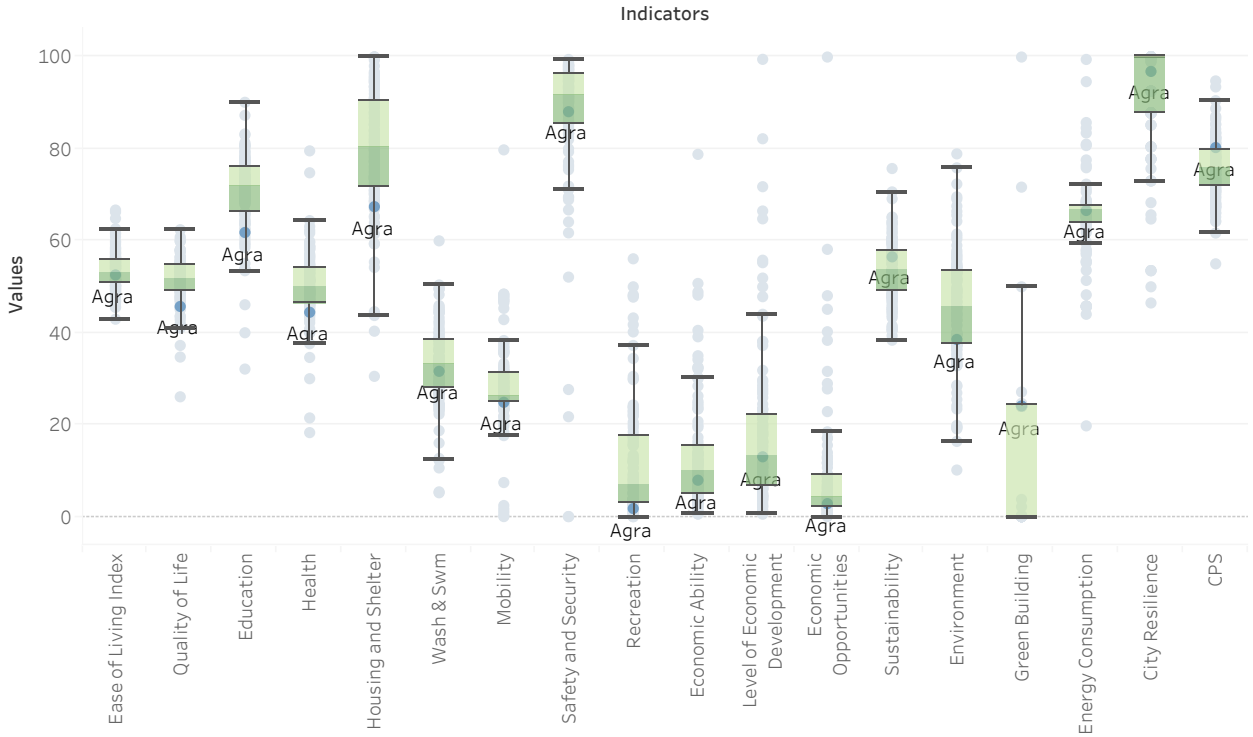
Agra

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

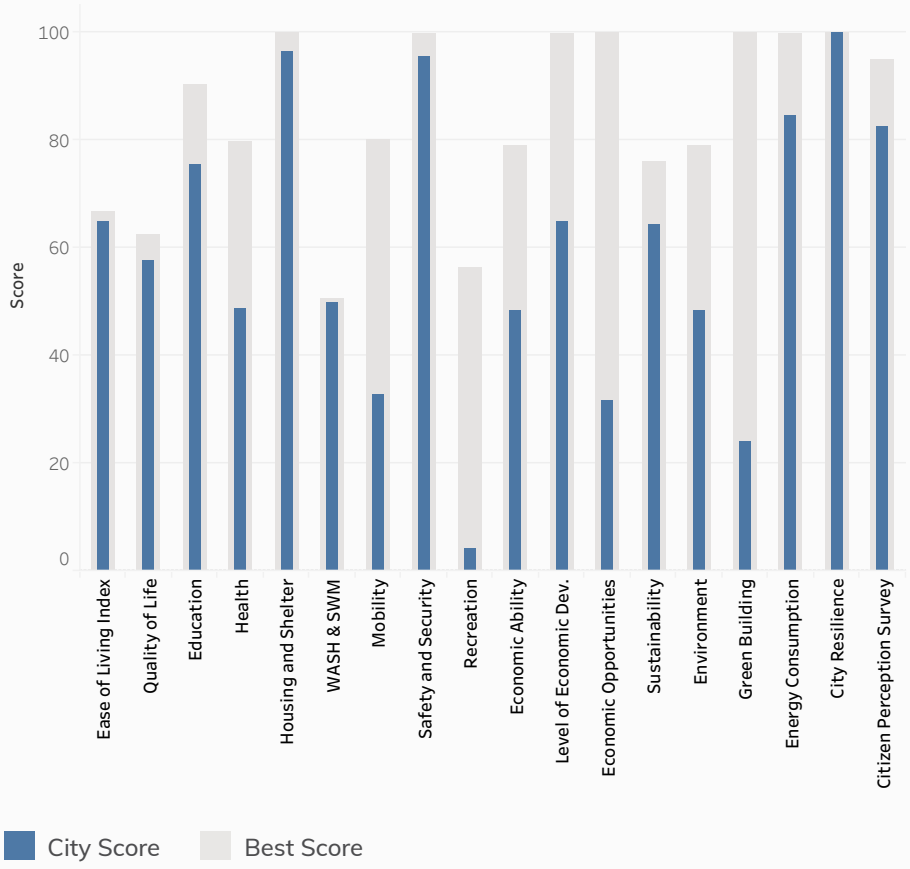


Rank
03

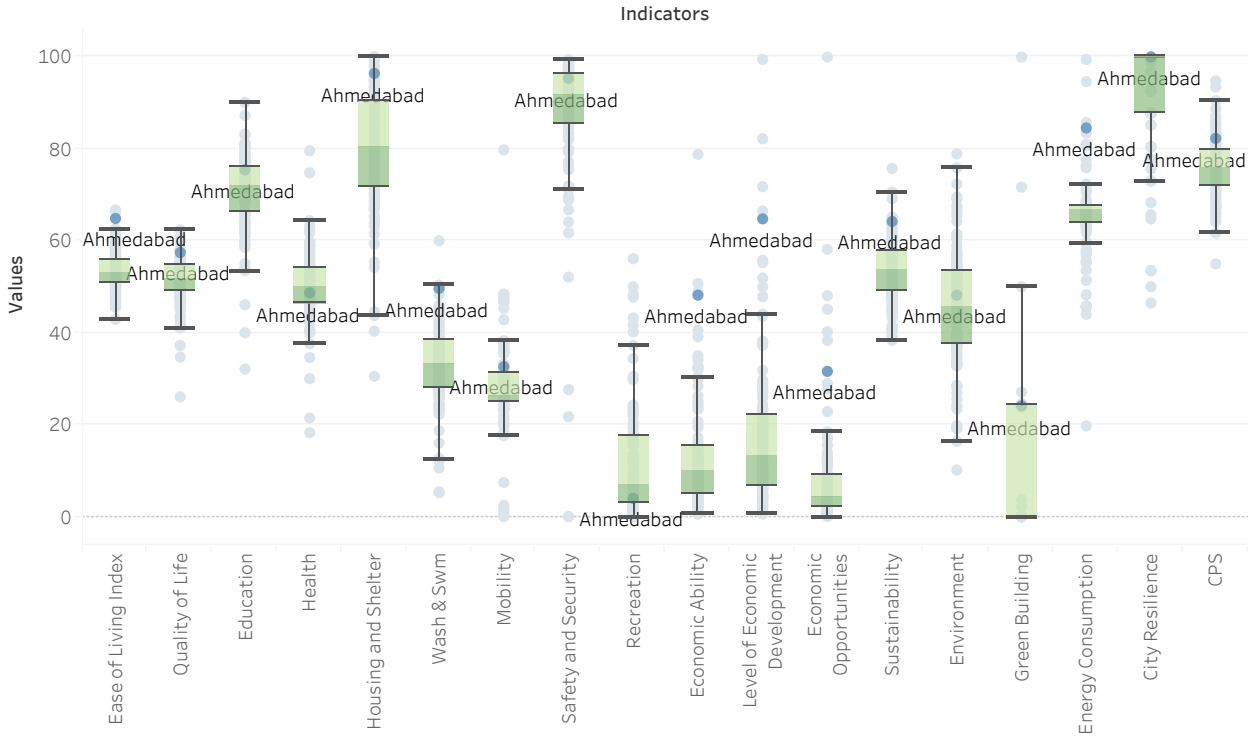
Ahmedabad

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

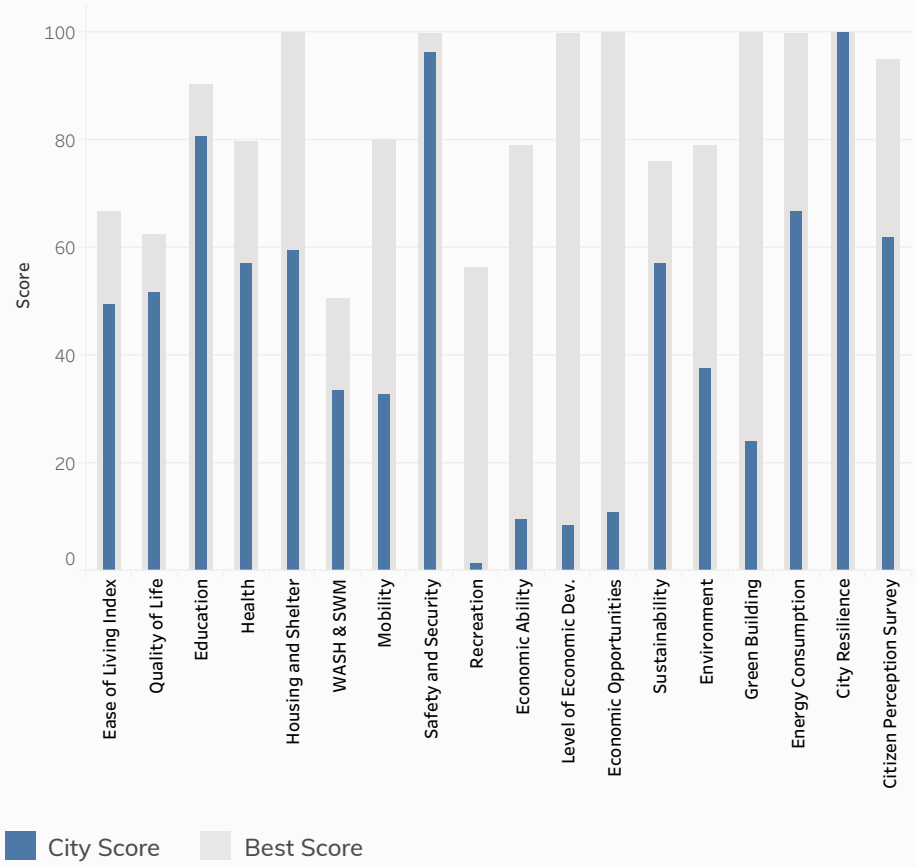


Rank
45

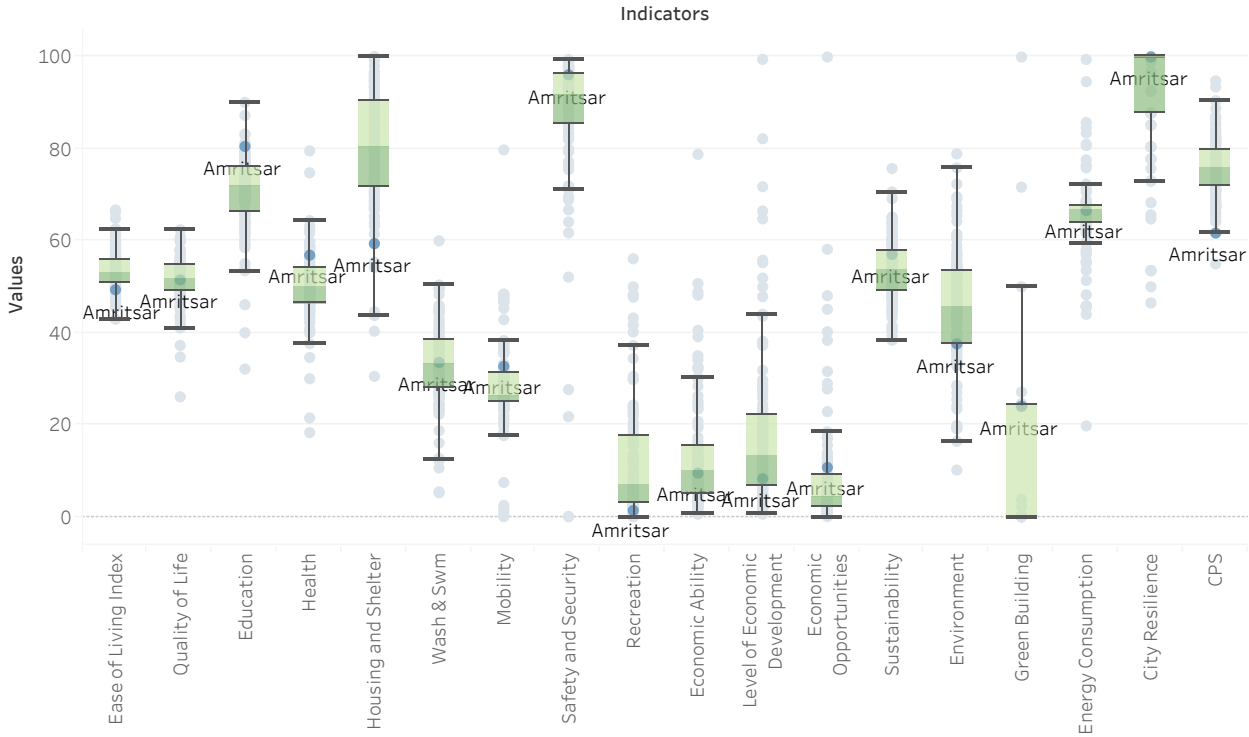
Amritsar

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

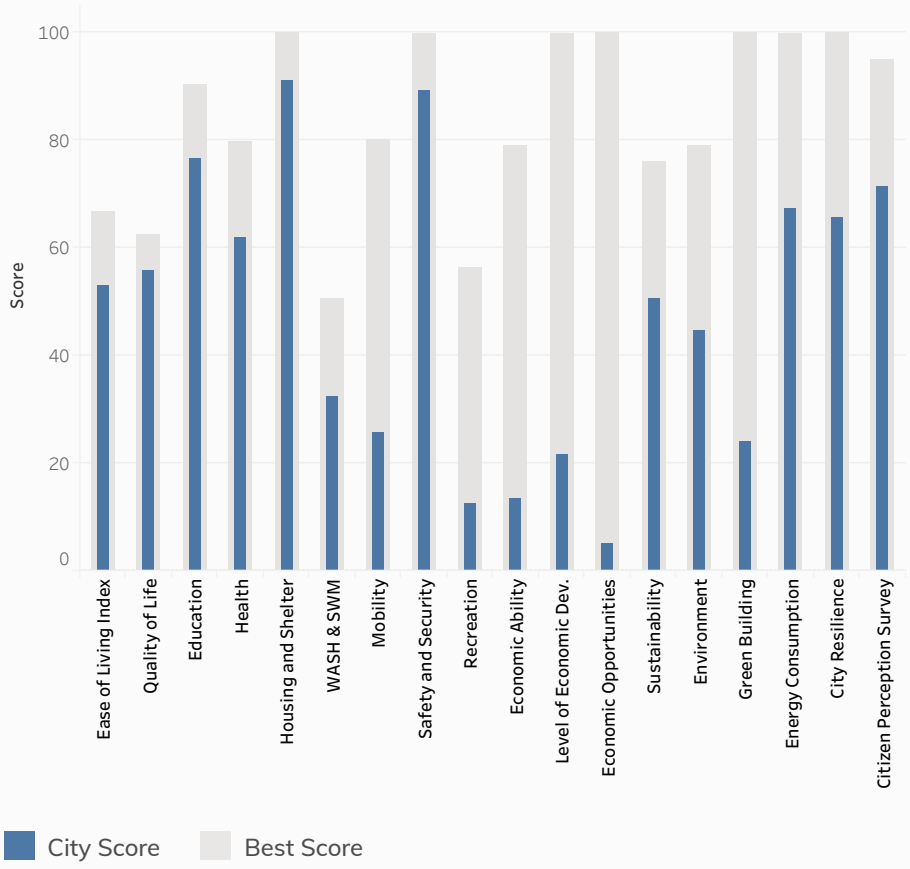


Rank
34

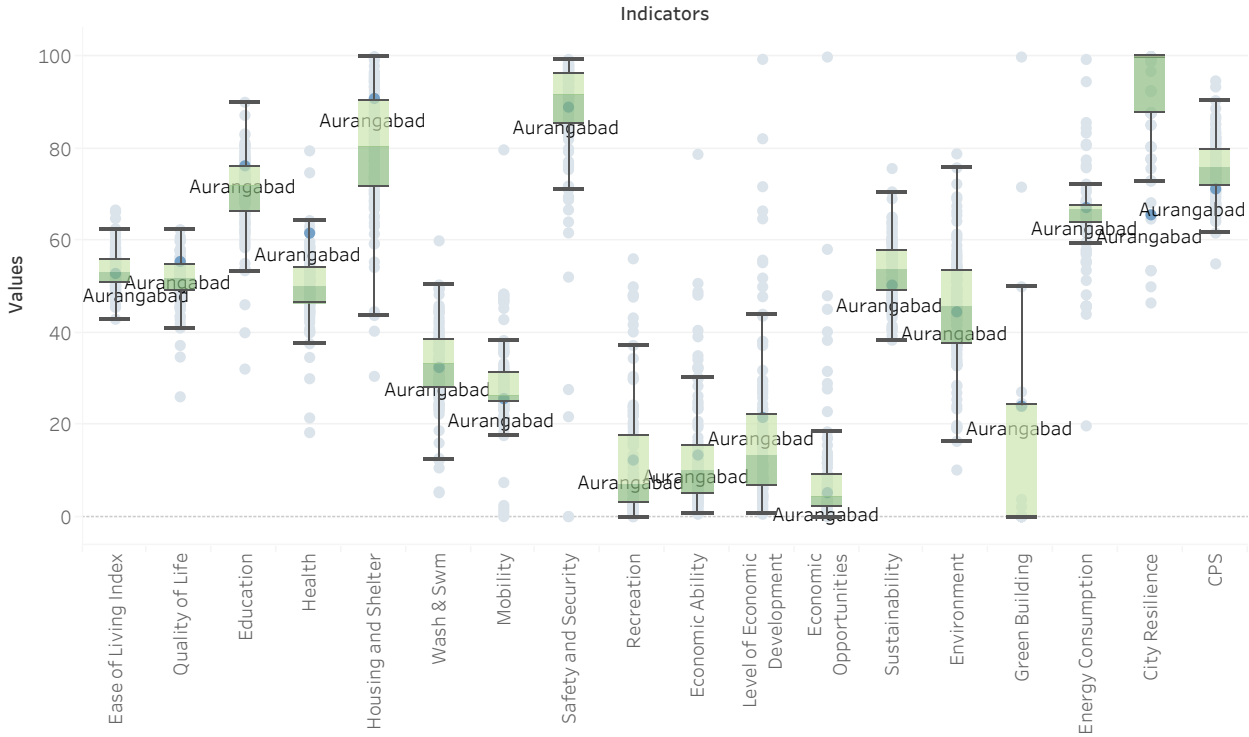
Aurangabad

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

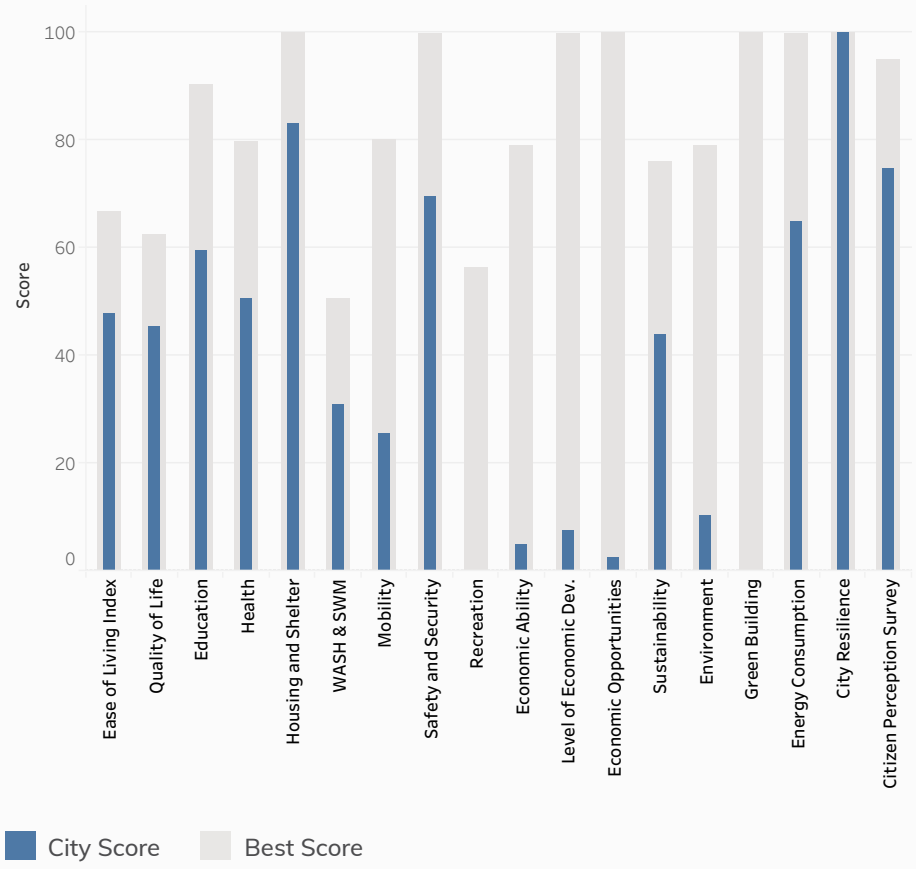


Rank
47

Bareilly

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

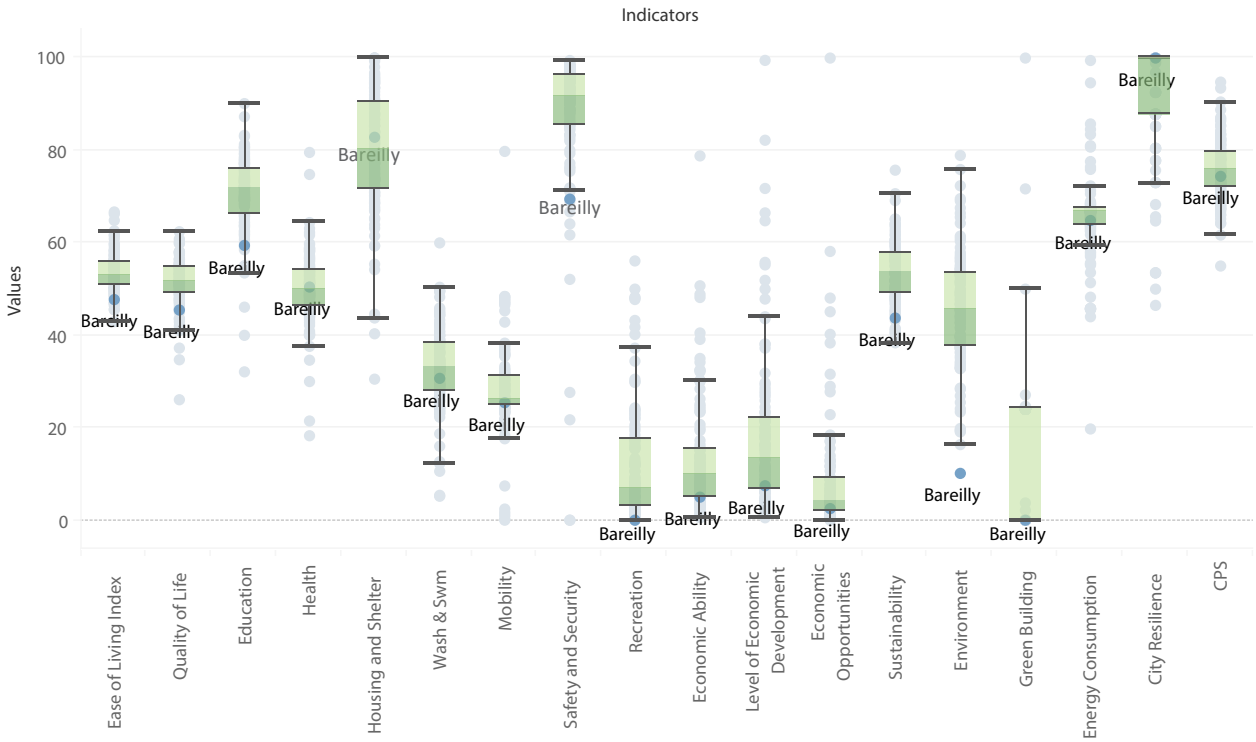


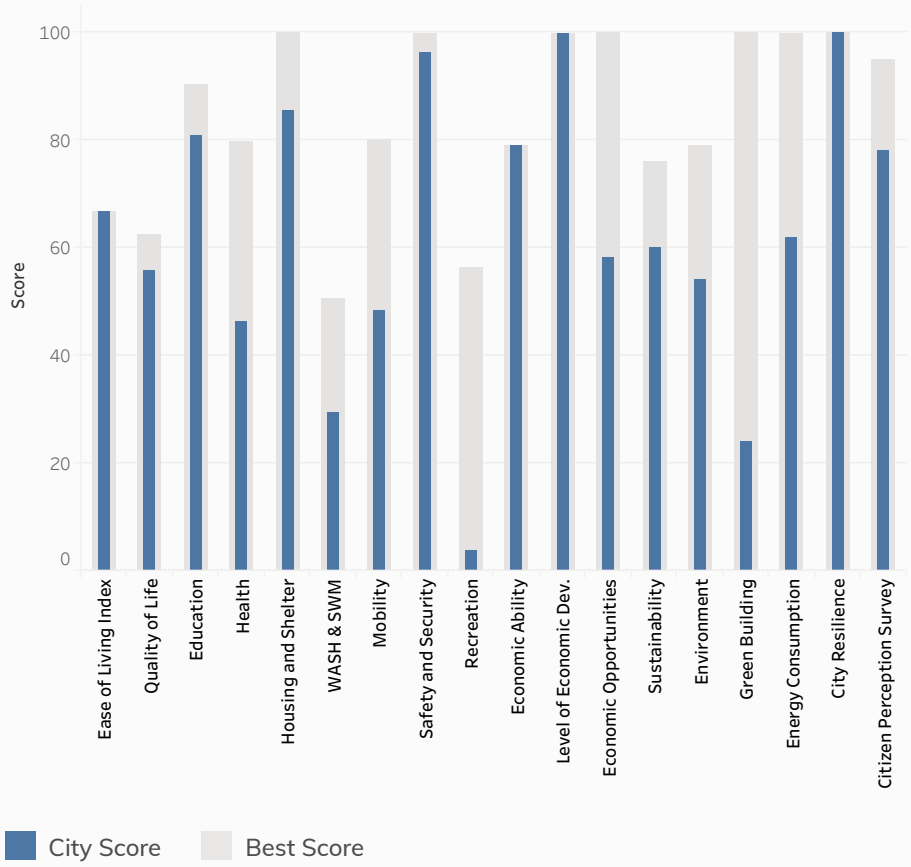
Image Source: https://en.wikipedia.org/wiki/File:Bareillyjunctionb249373.jpg

Rank
01

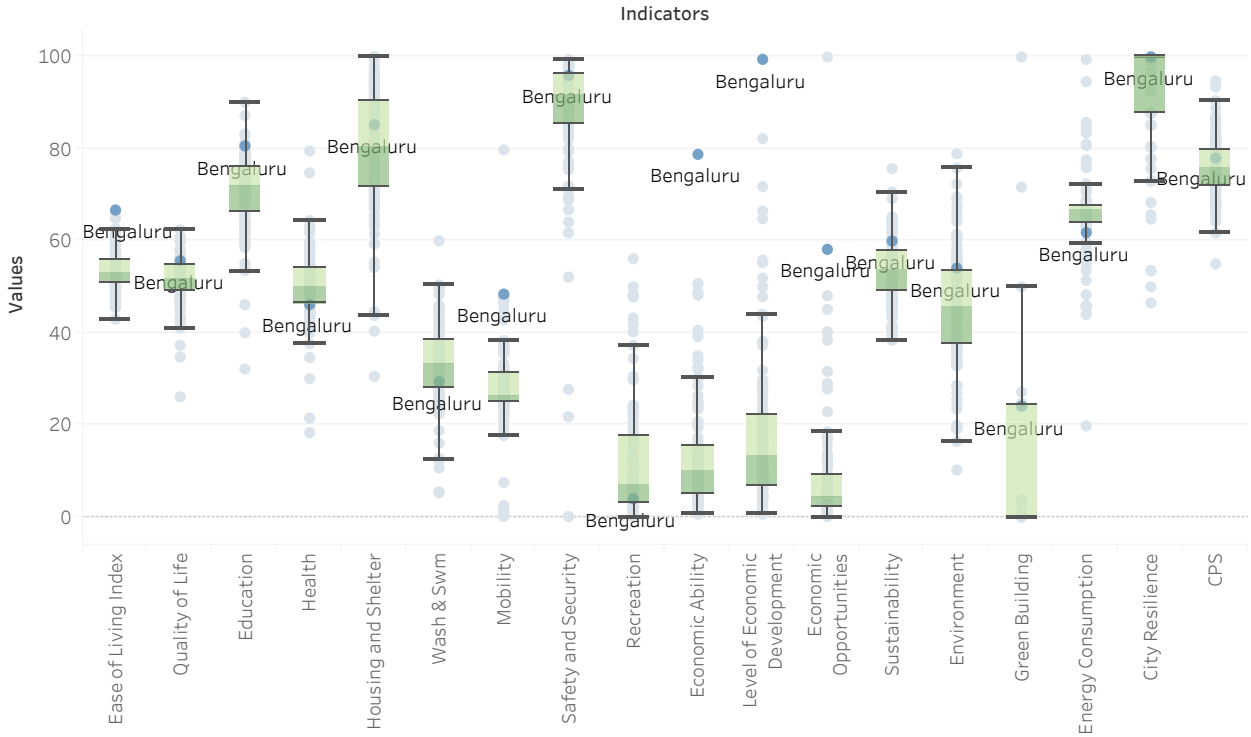
Bengaluru

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

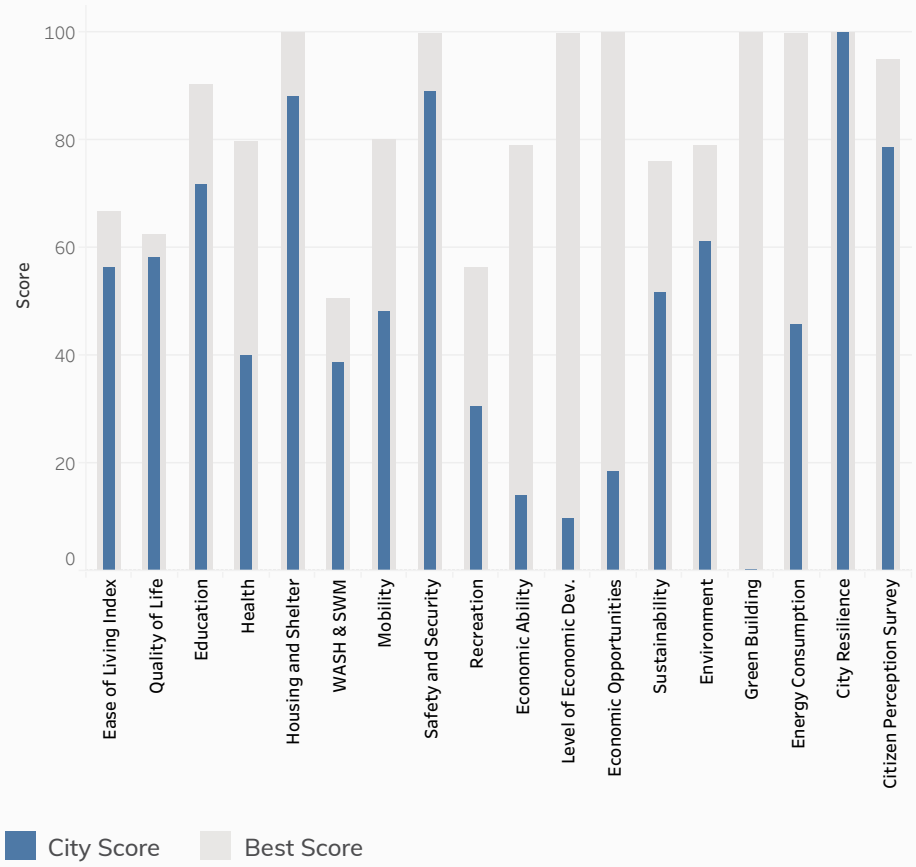


Rank
19

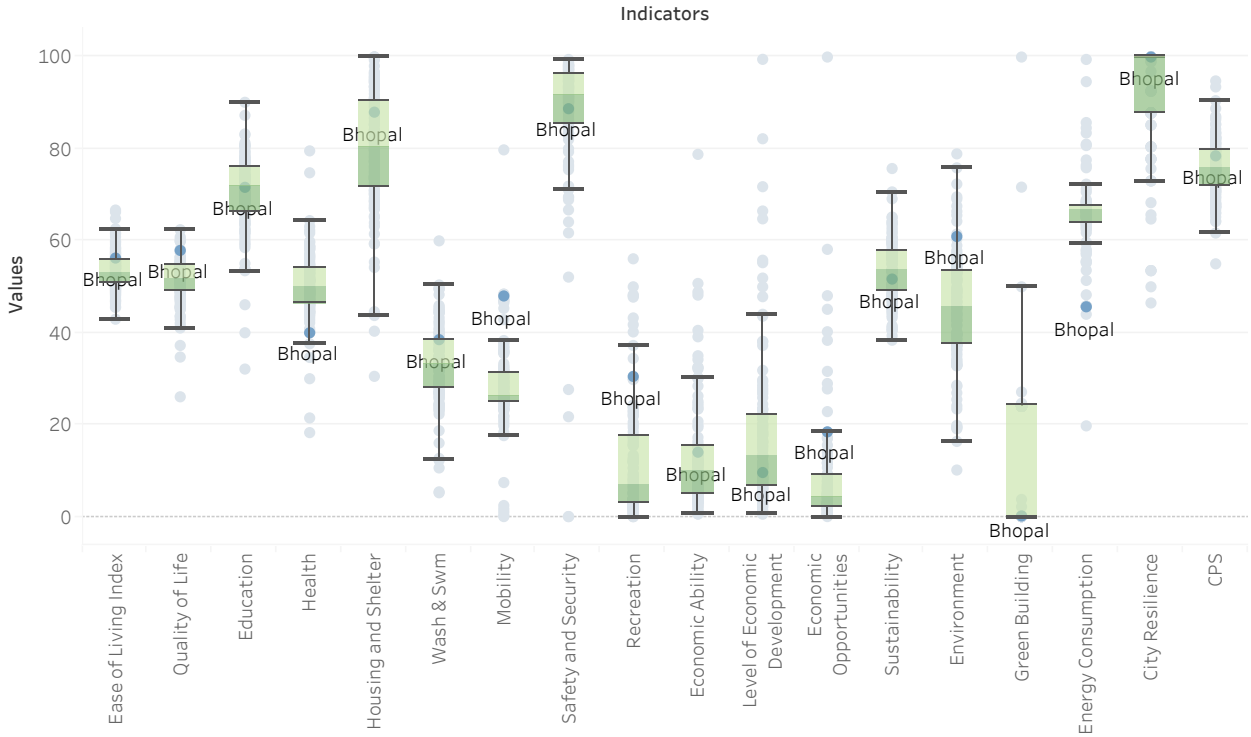
Bhopal

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

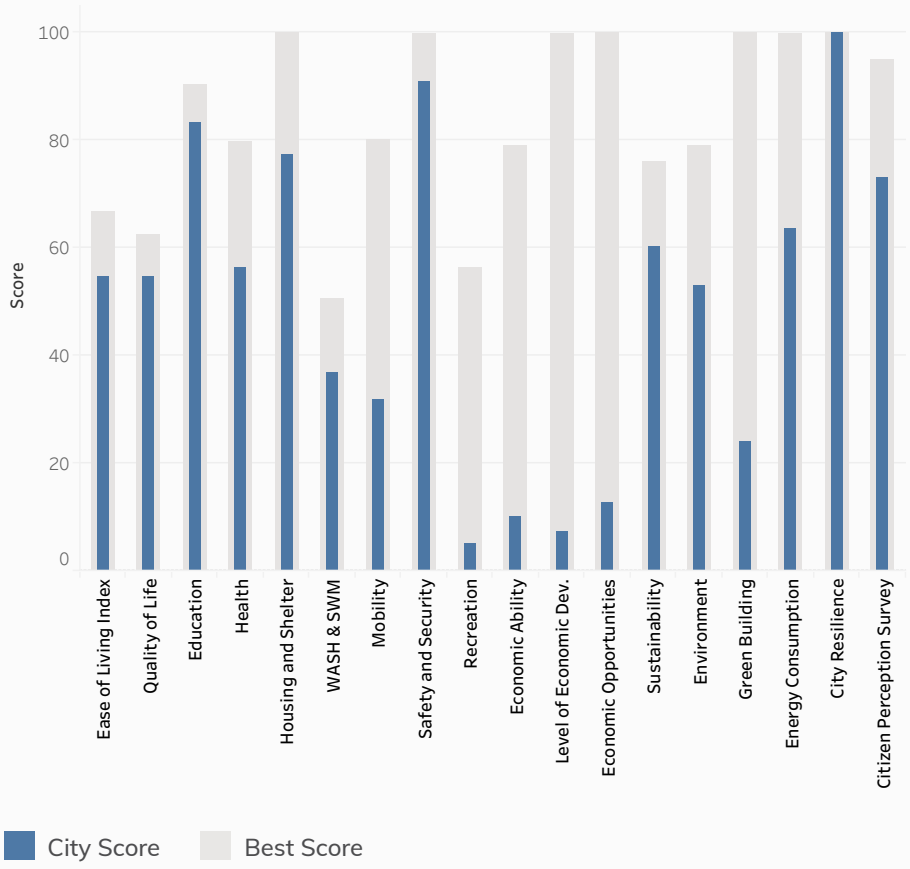


Rank
29

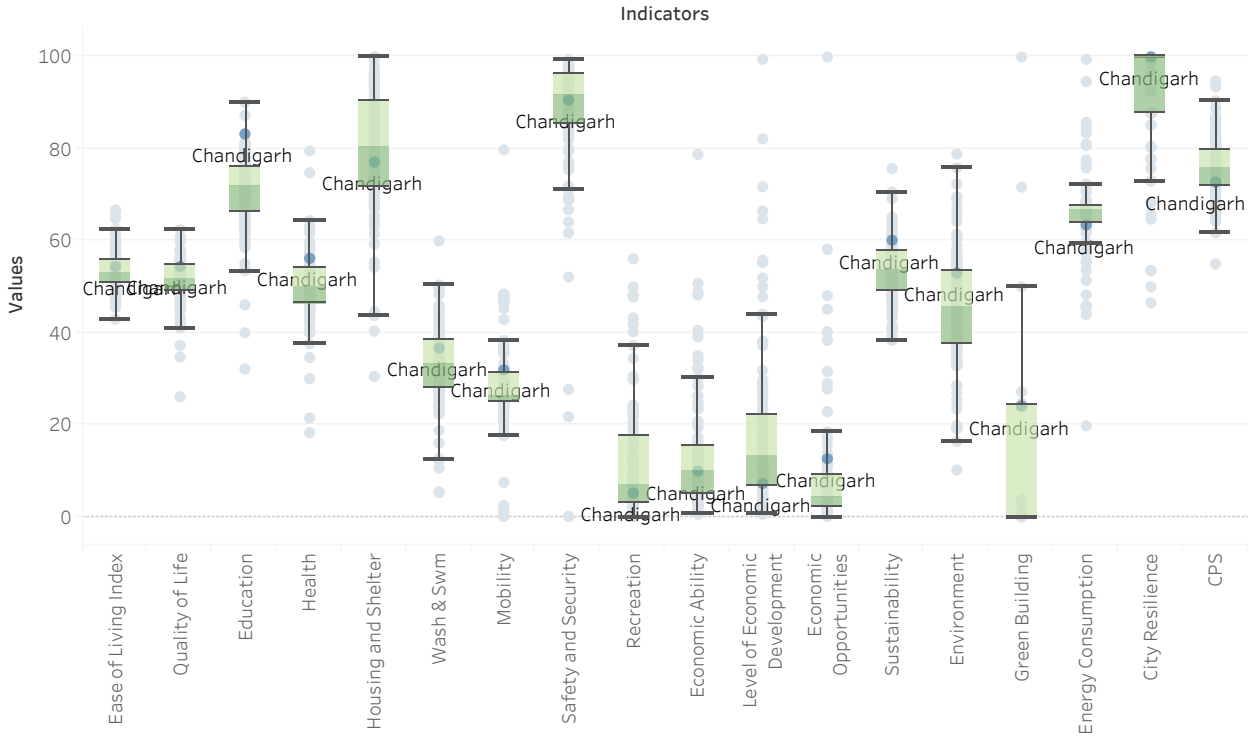
Chandigarh

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

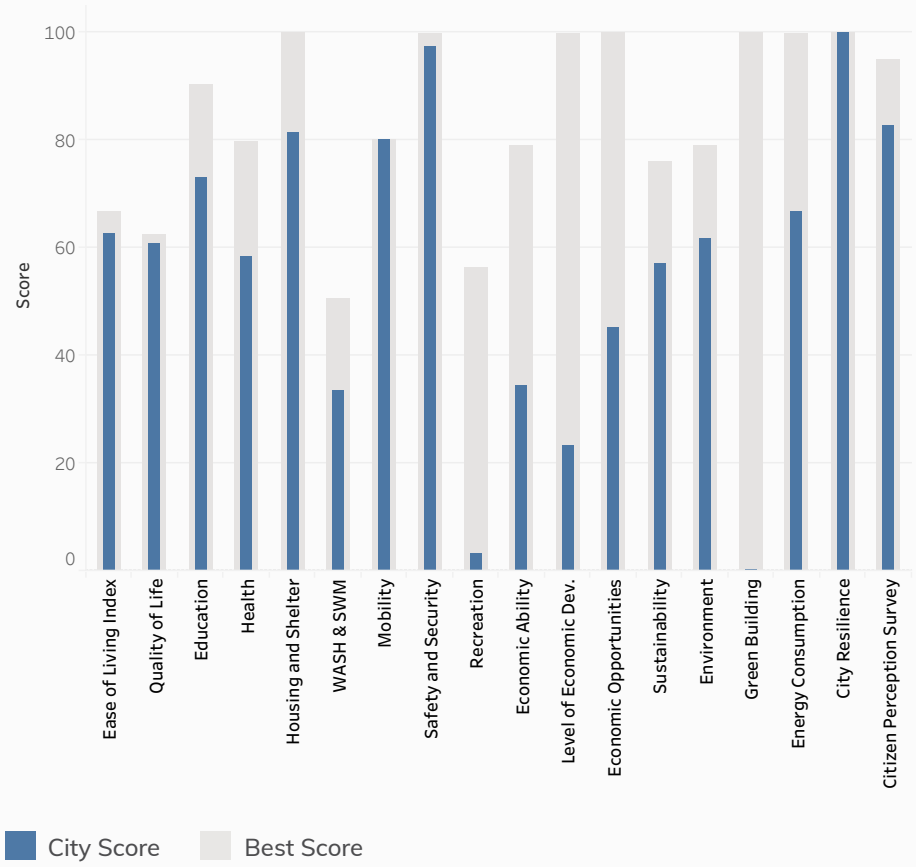


Rank
04

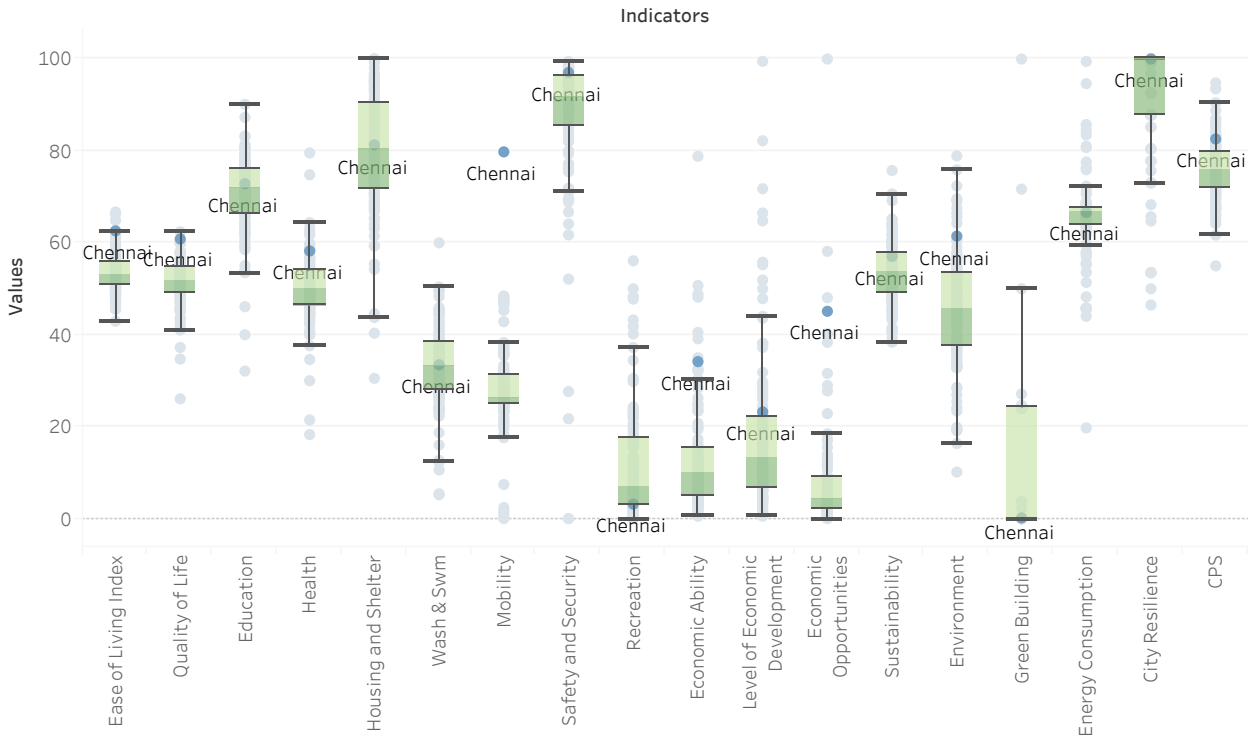
Chennai

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

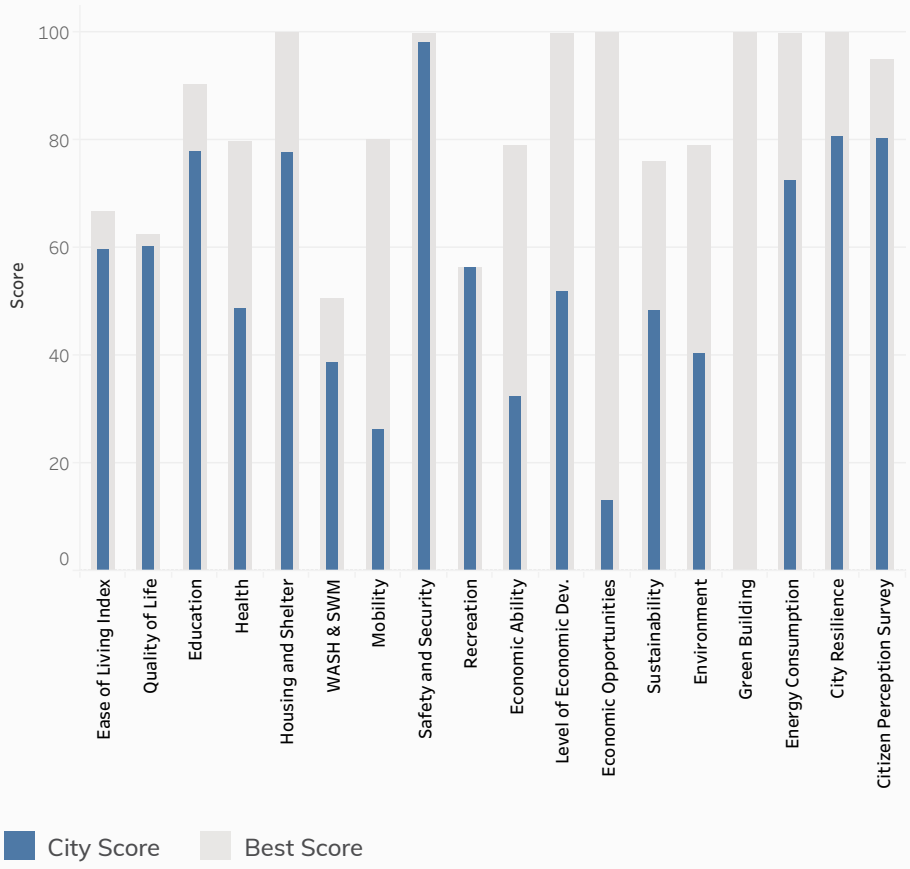


Rank
07

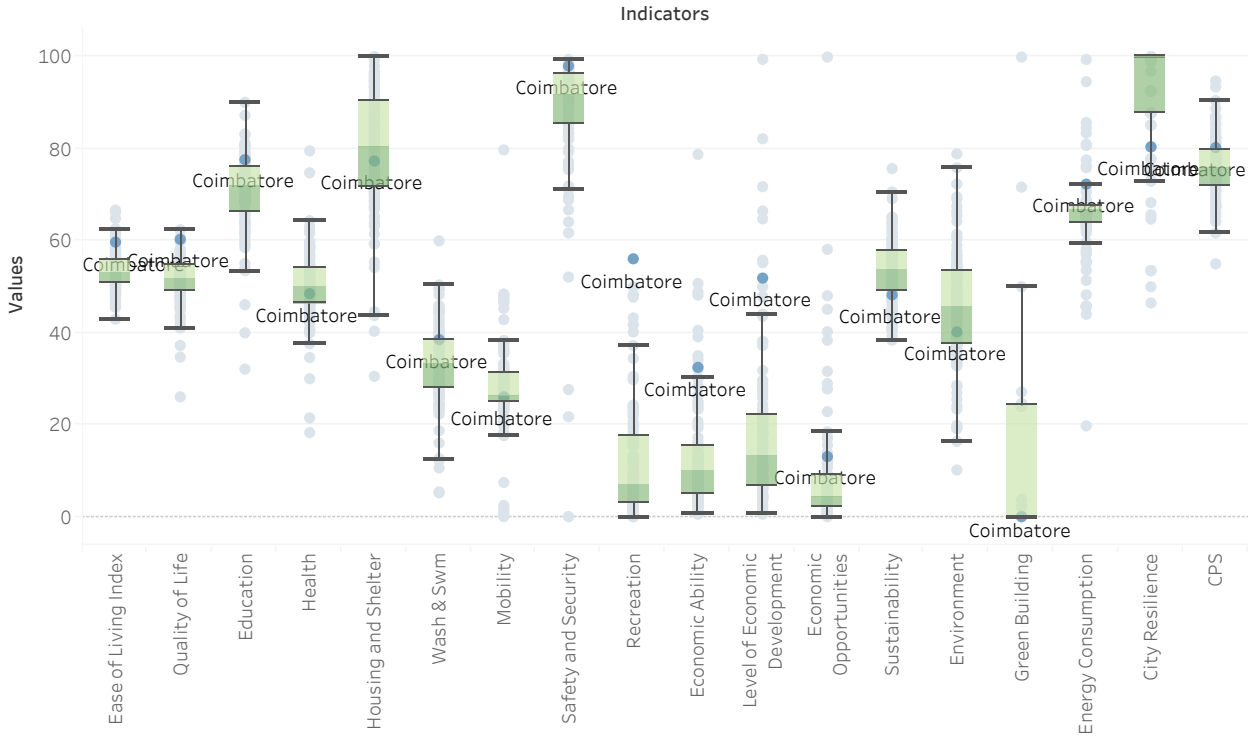
Coimbatore

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

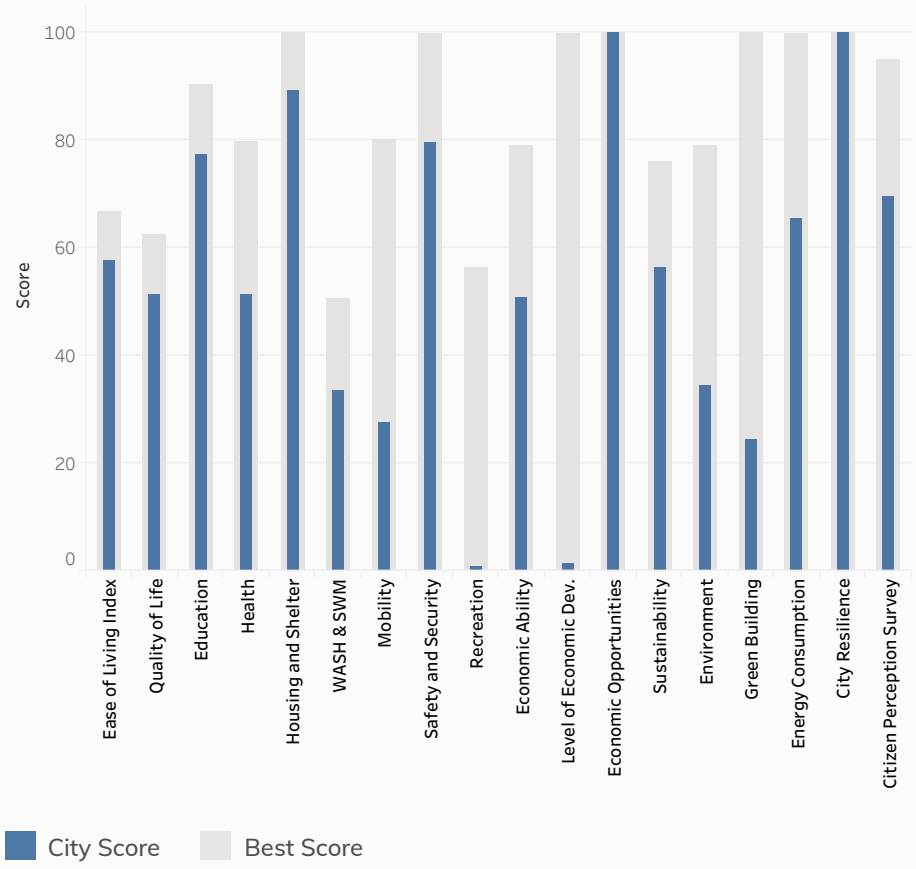


Rank
13

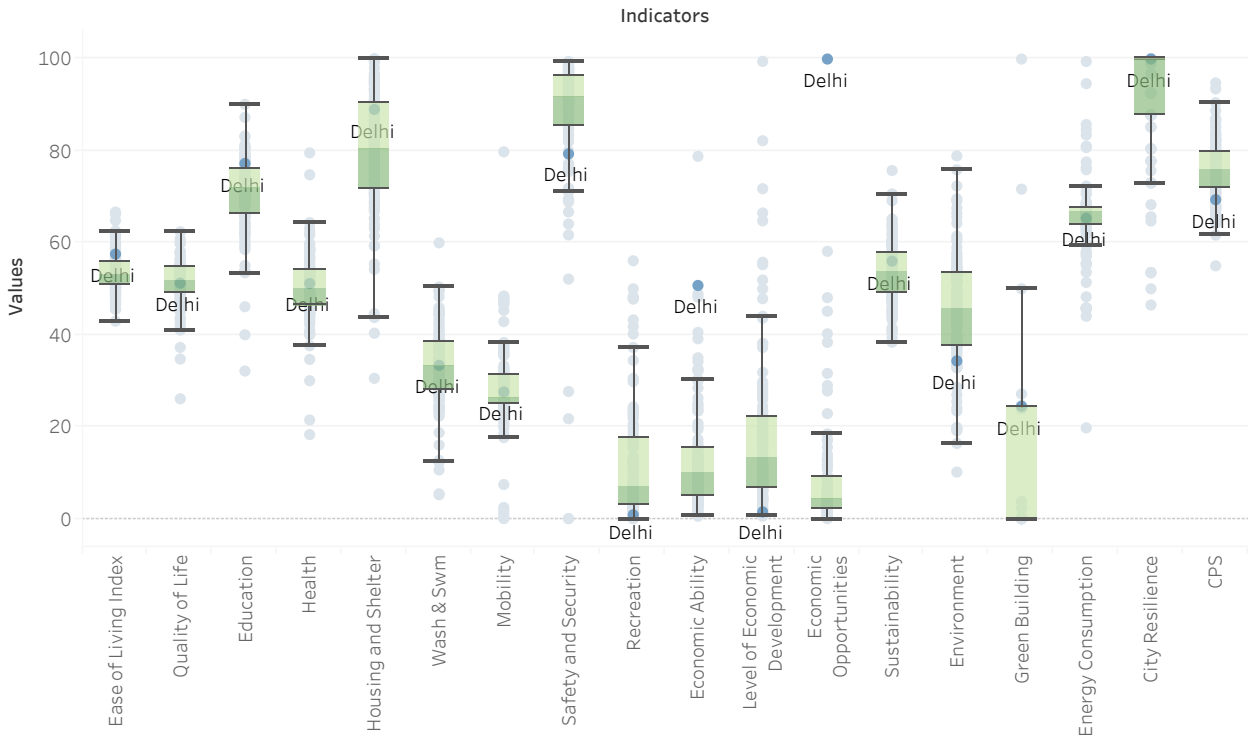
Delhi

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

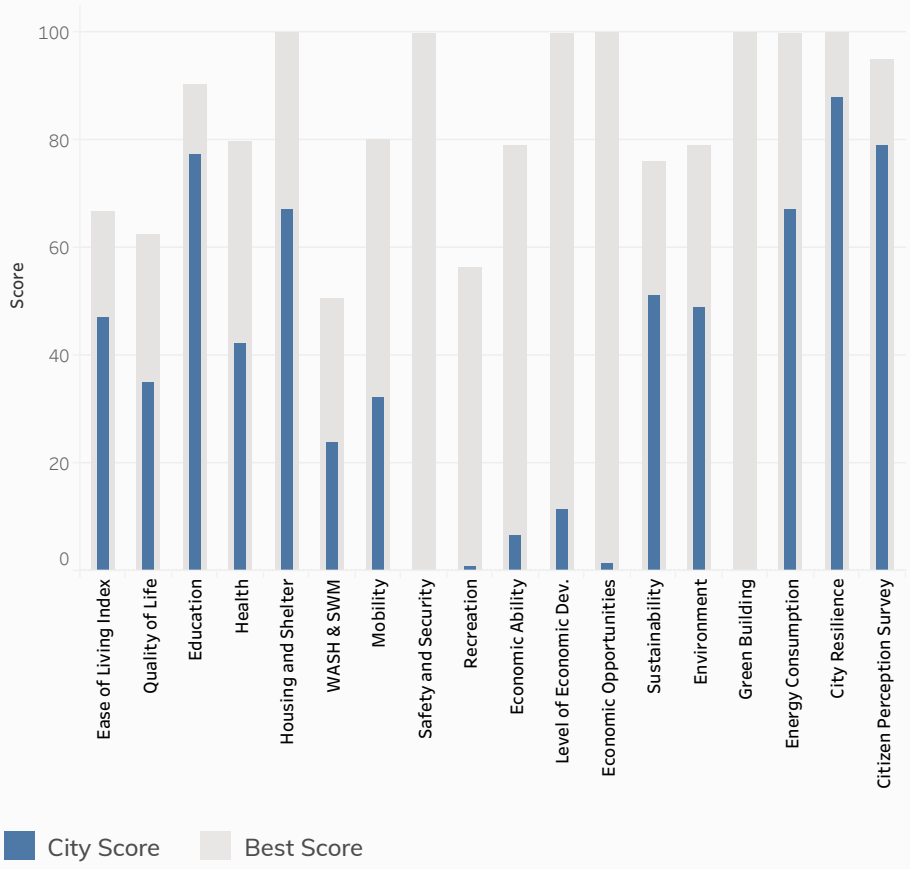


Rank
48

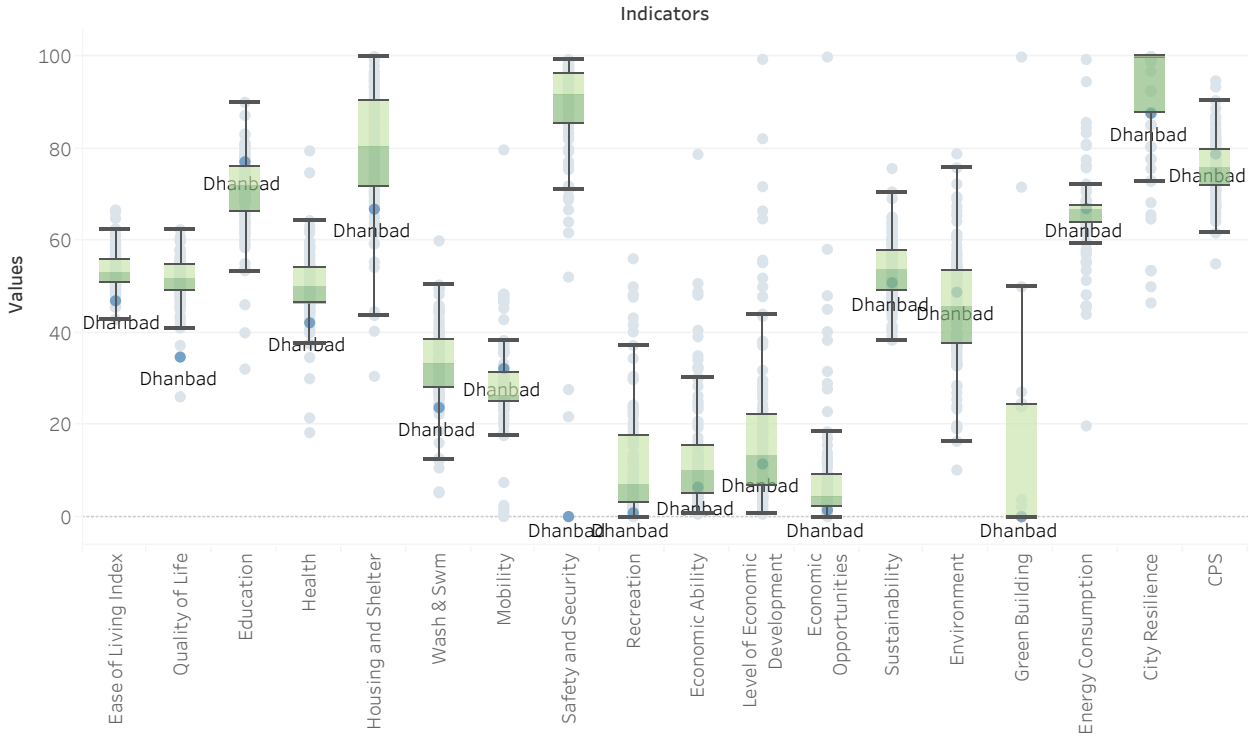
Dhanbad

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

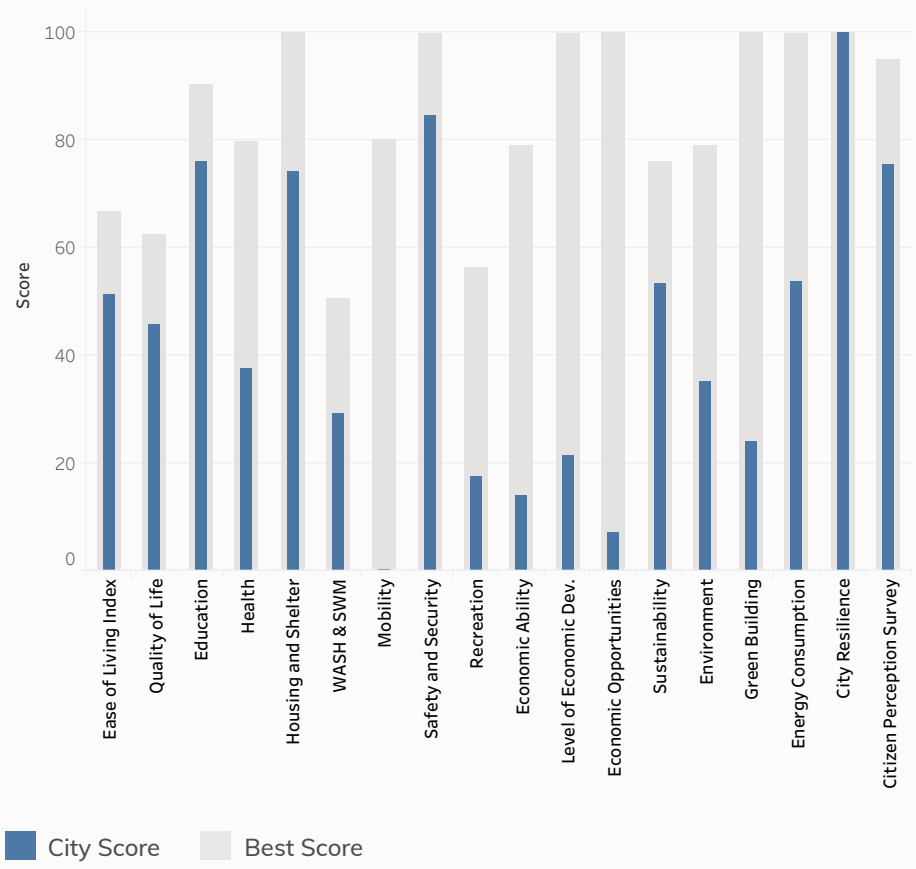


Rank
40

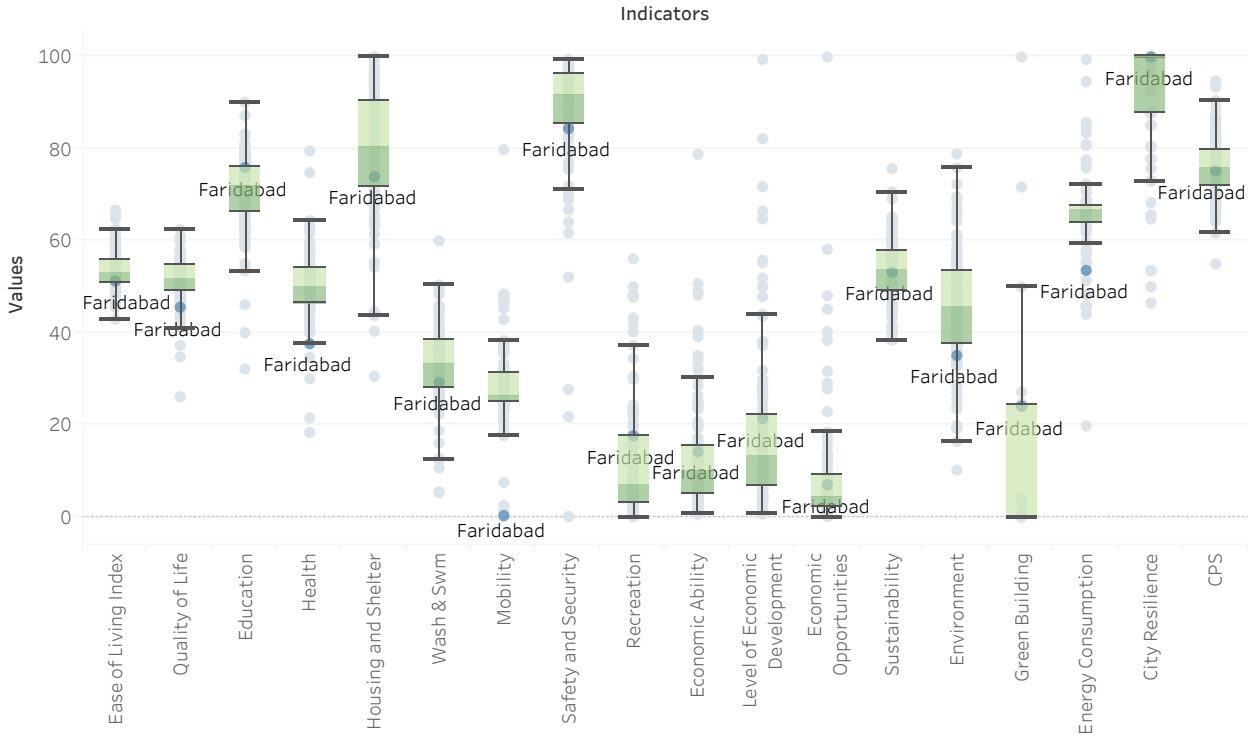
Faridabad

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

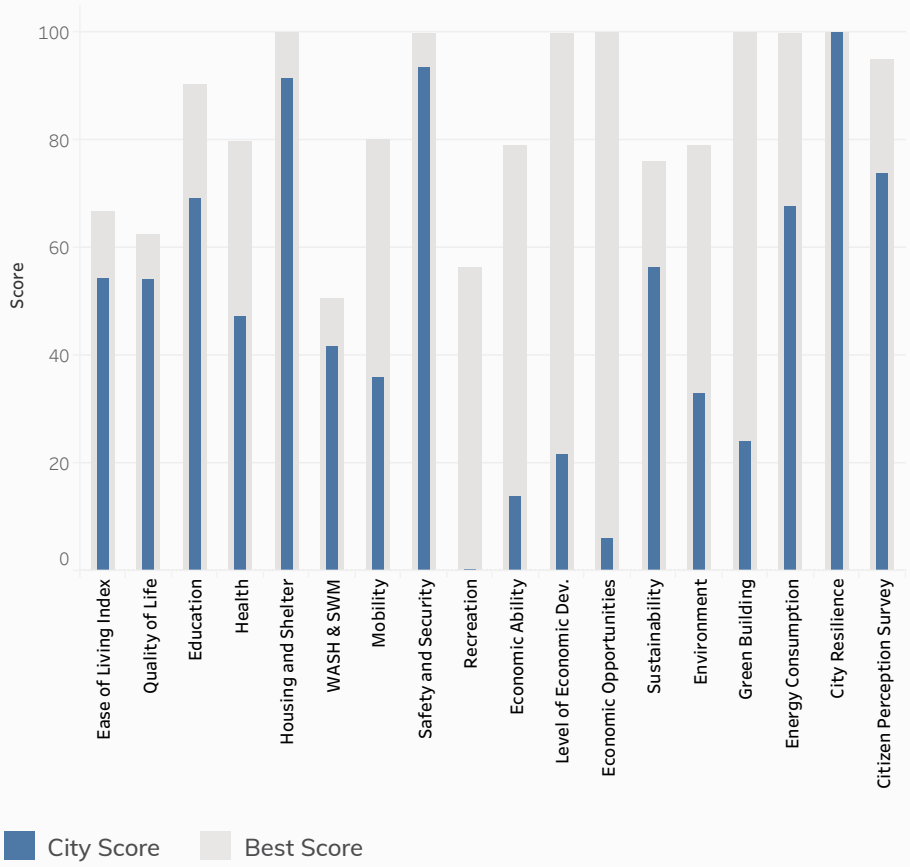


Rank
30

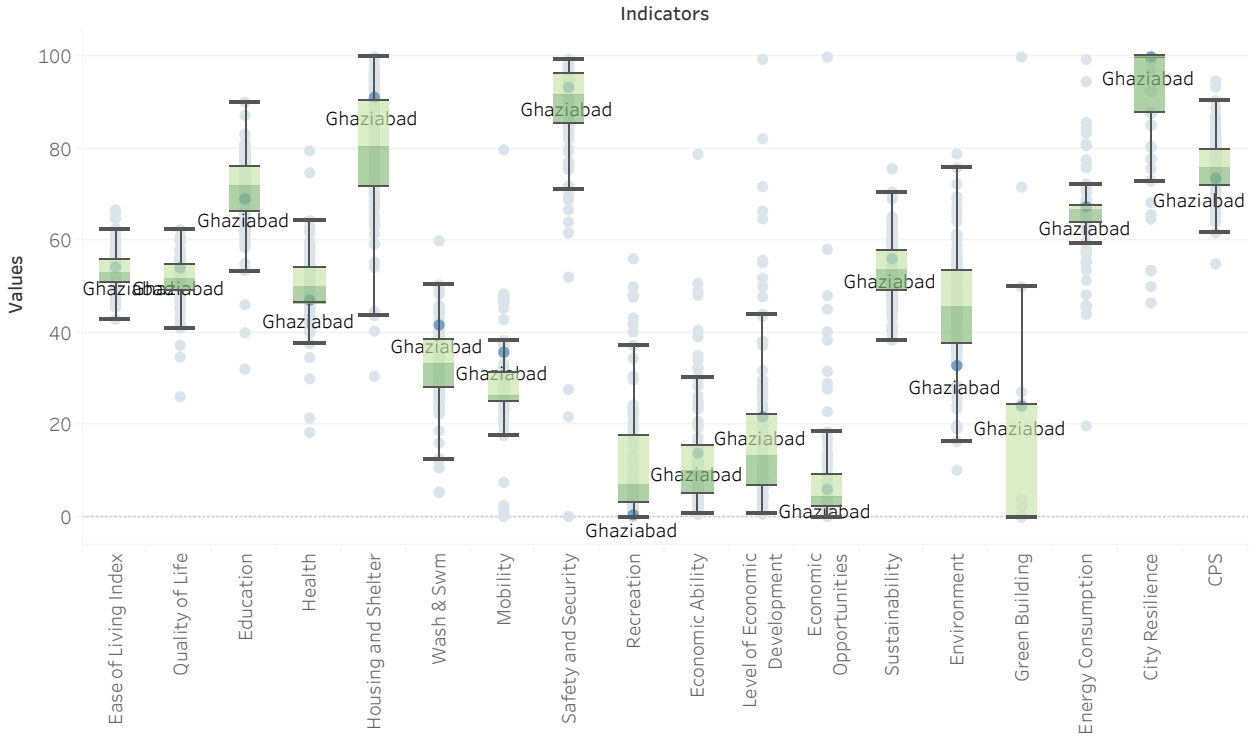
Ghaziabad

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

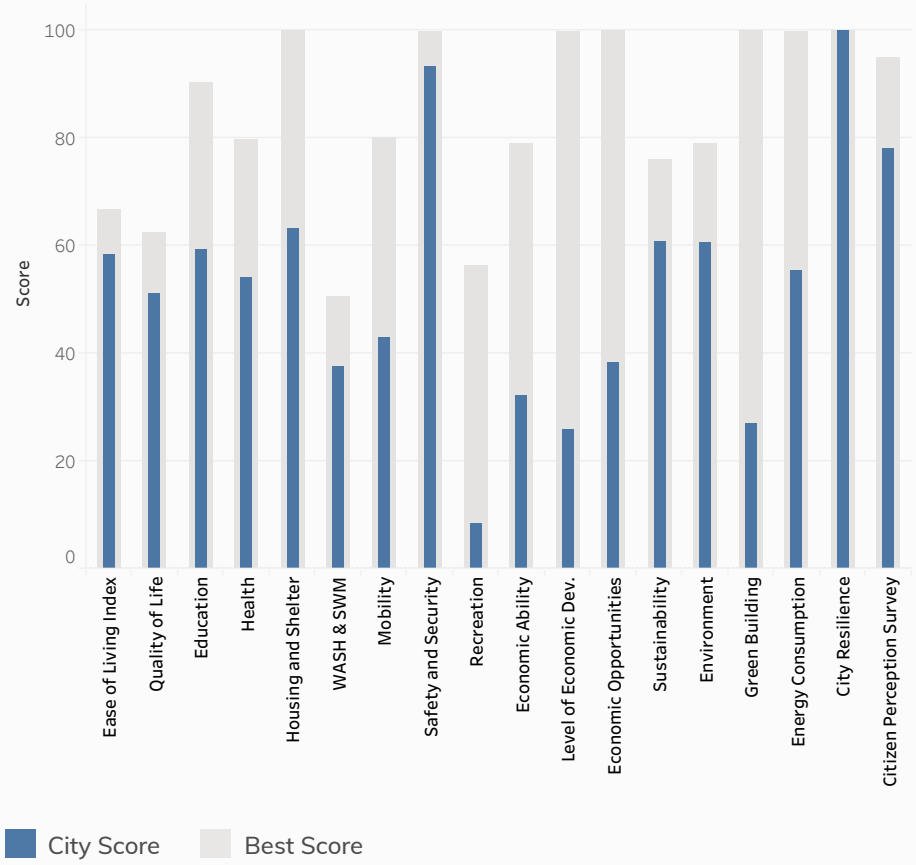


Rank
10

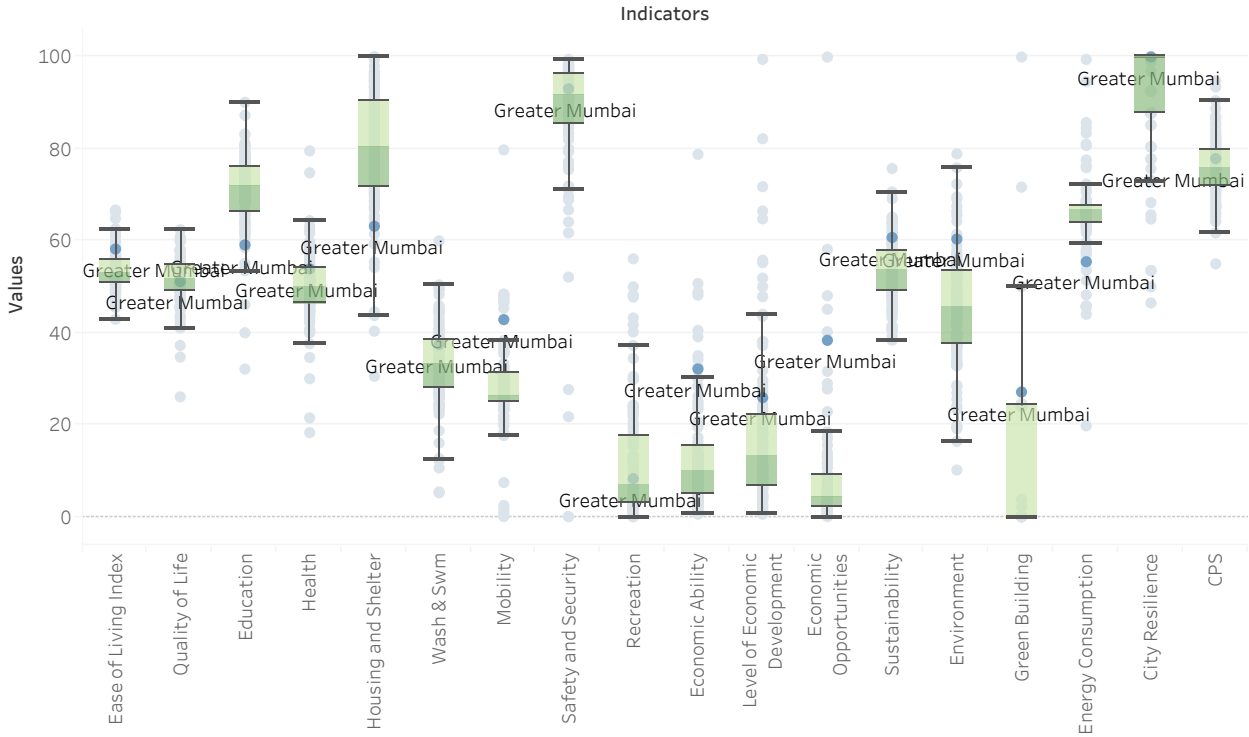
Greater Mumbai

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

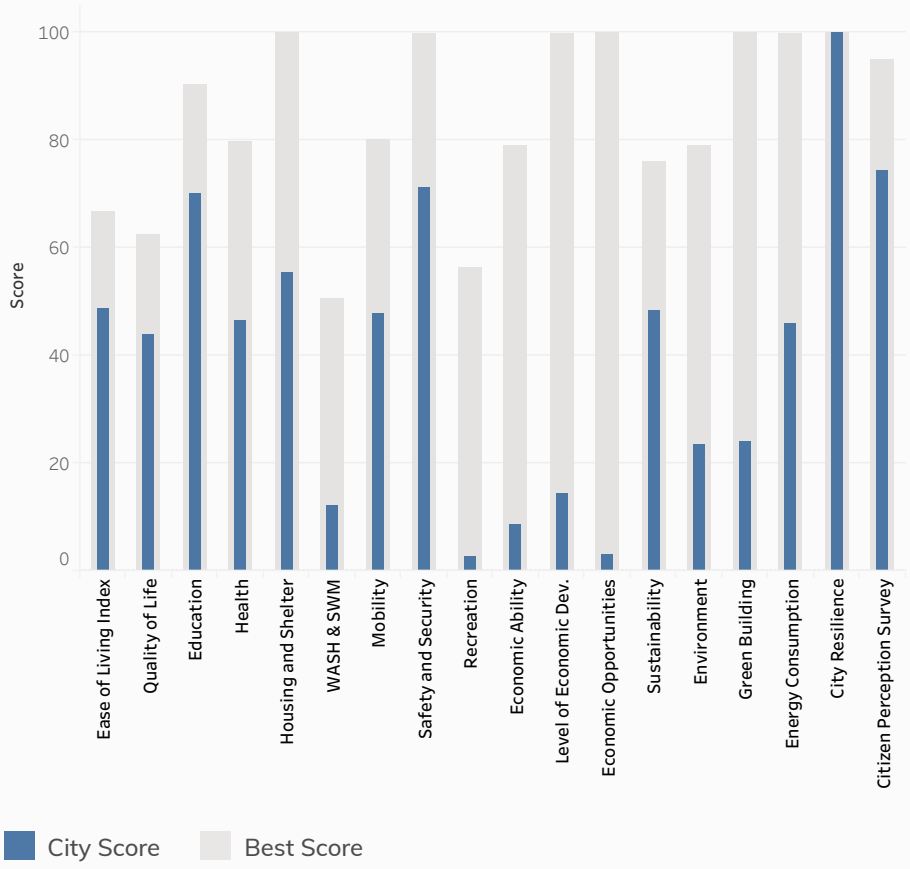


Rank
46

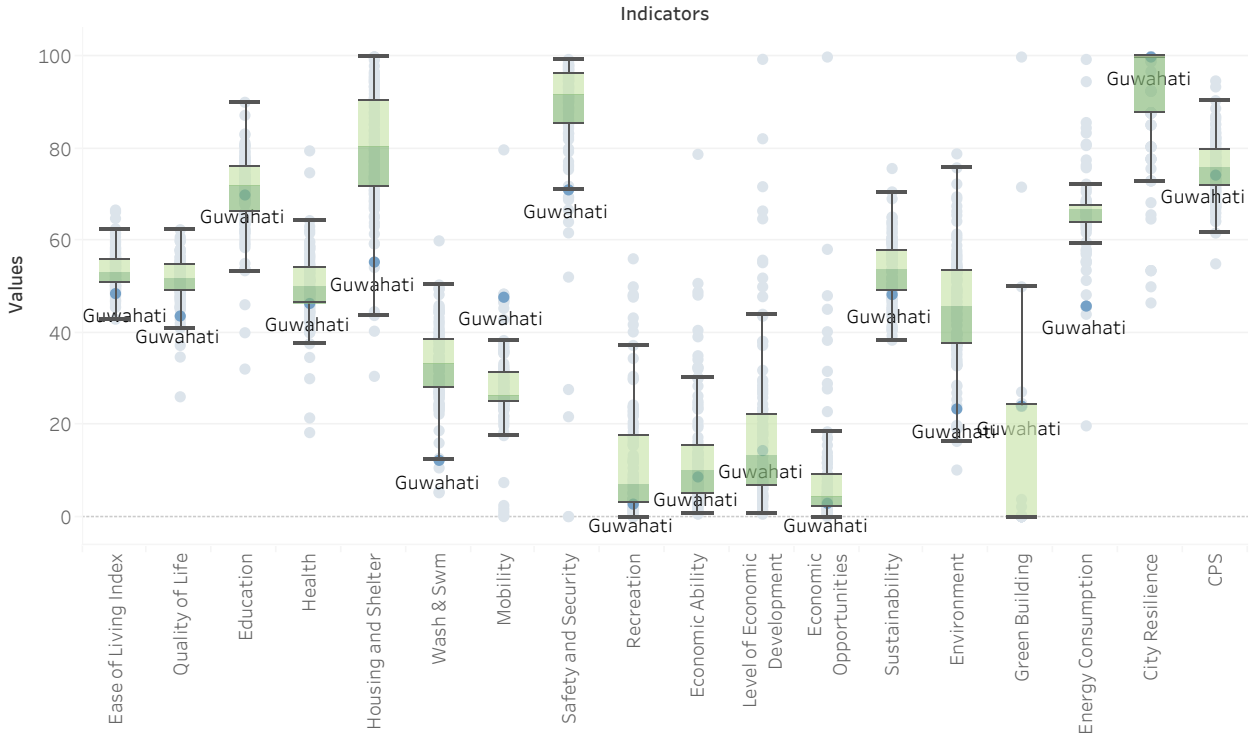
Guwahati

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

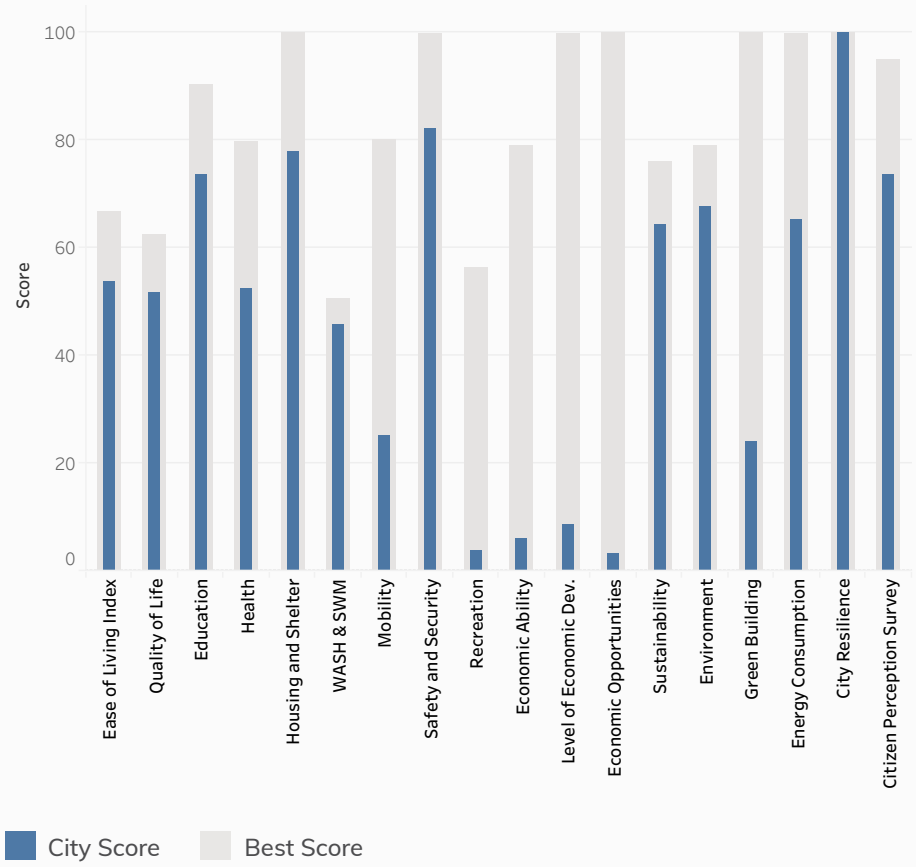


Rank
31

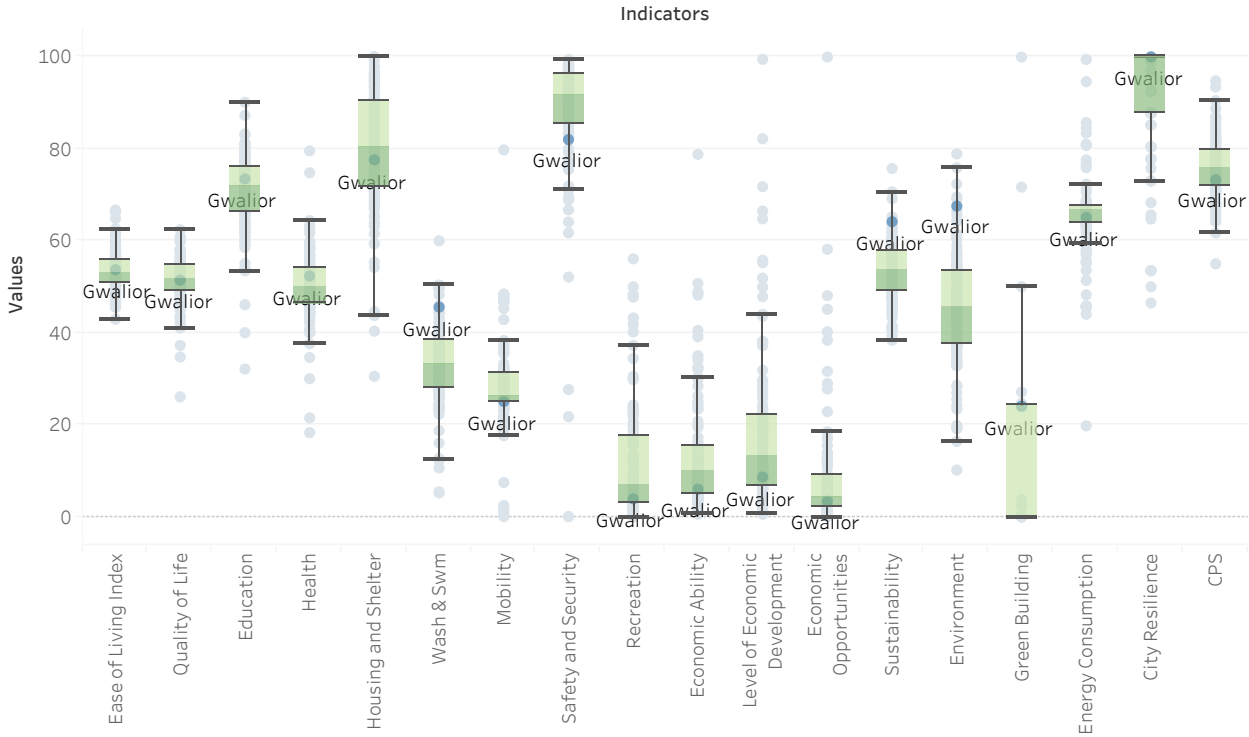
Gwalior

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

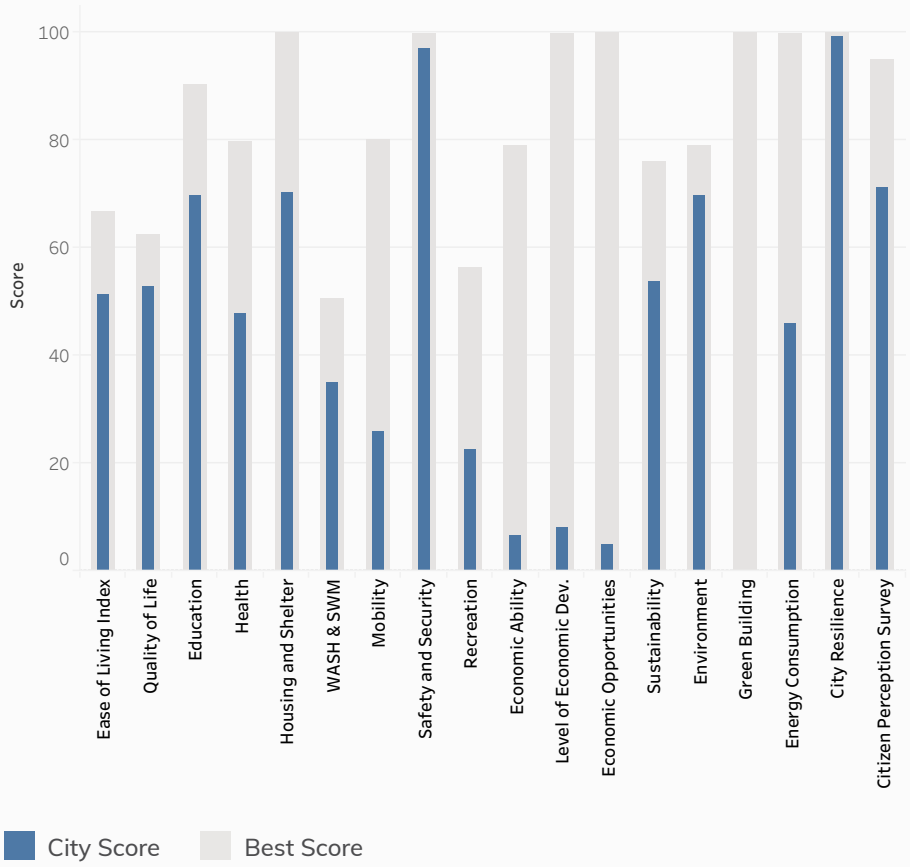


Rank
37

Hubli Dharwad

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

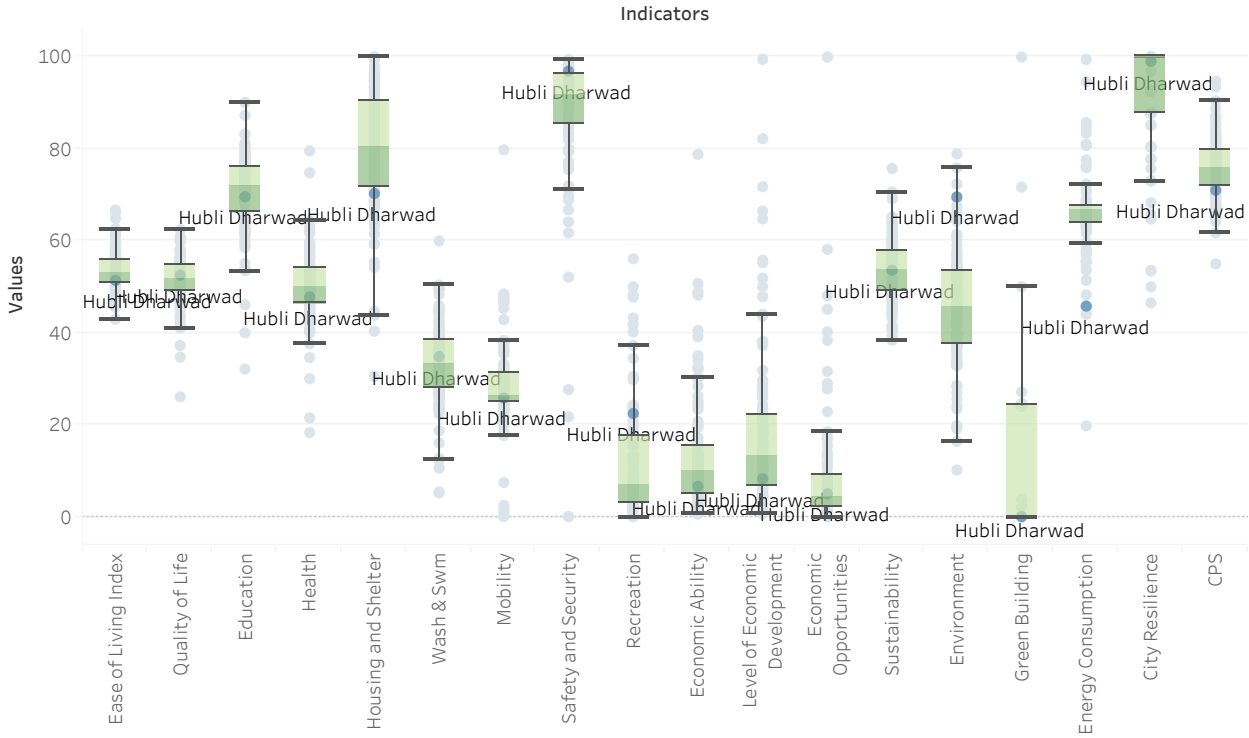


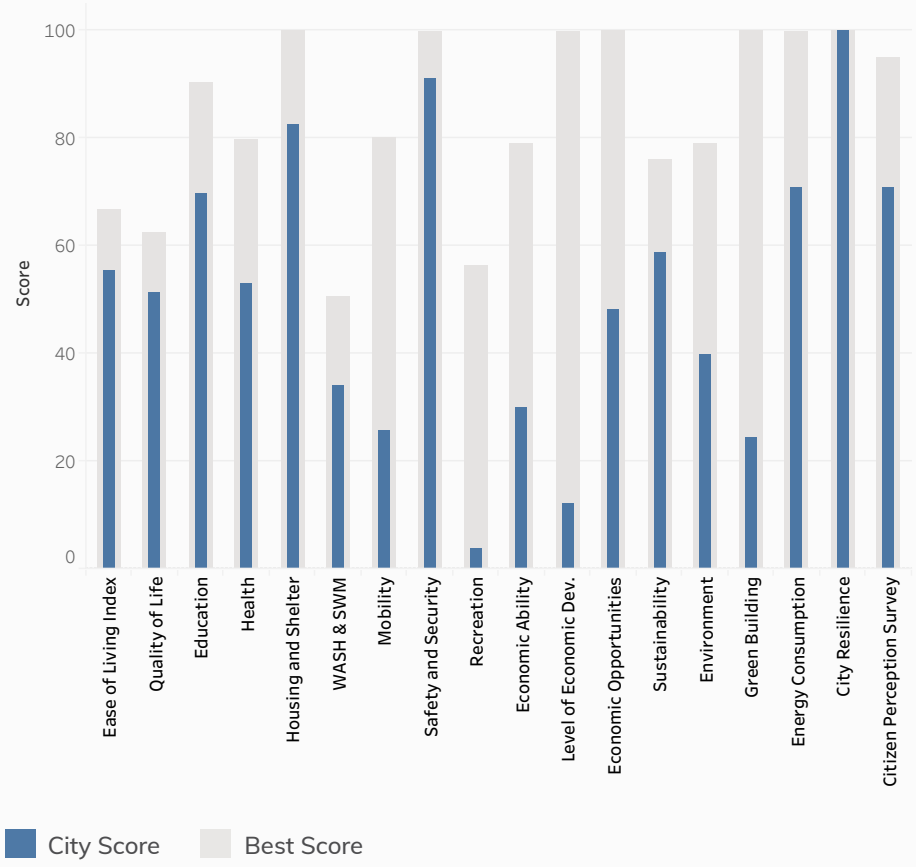
Image Source: https://en.wikipedia.org/wiki/File:Hubballi_Airport_new_Terminal.jpg

Rank
24

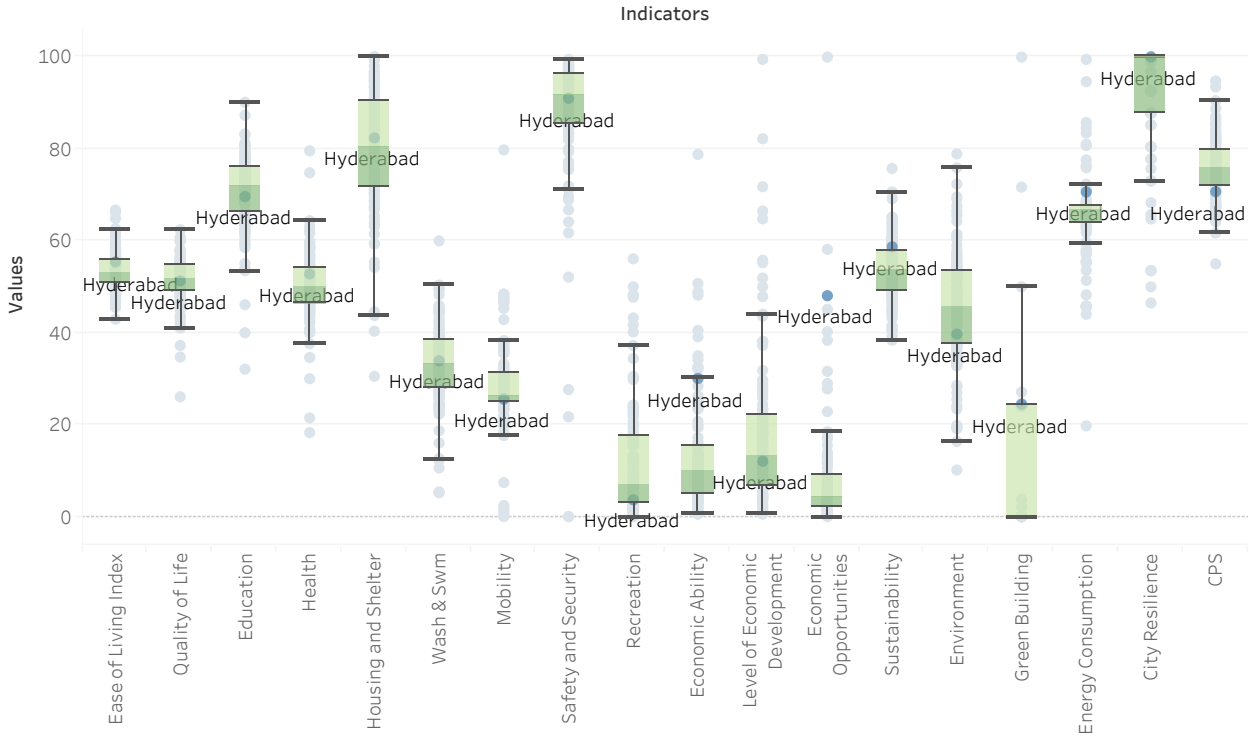
Hyderabad

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

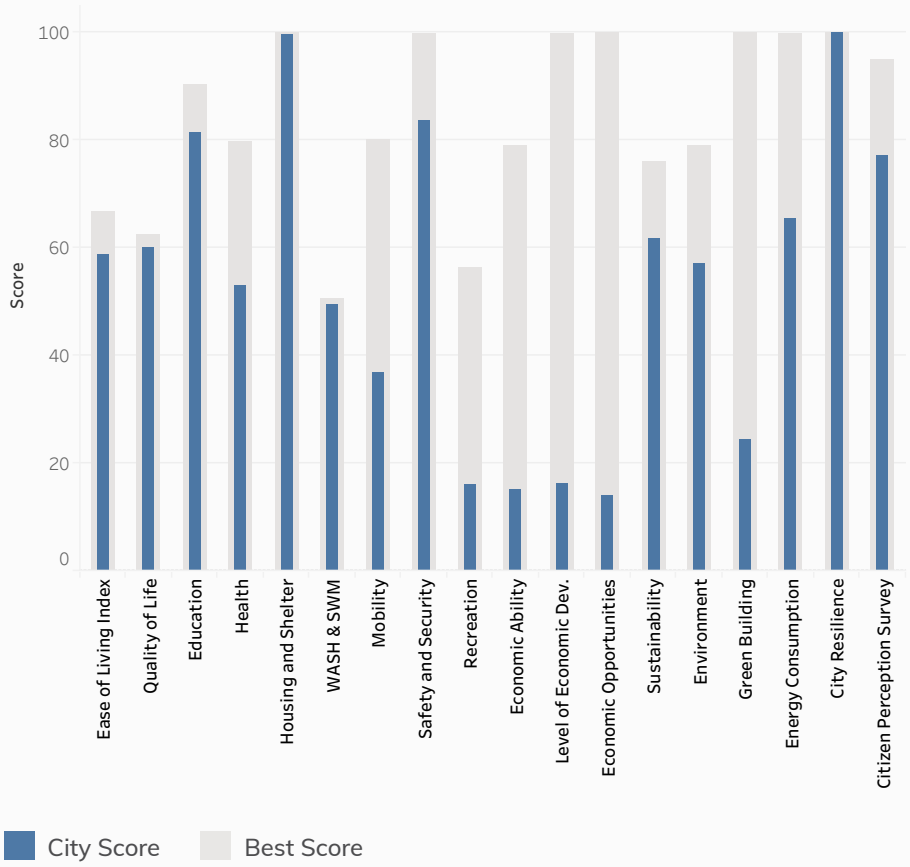


Rank
09

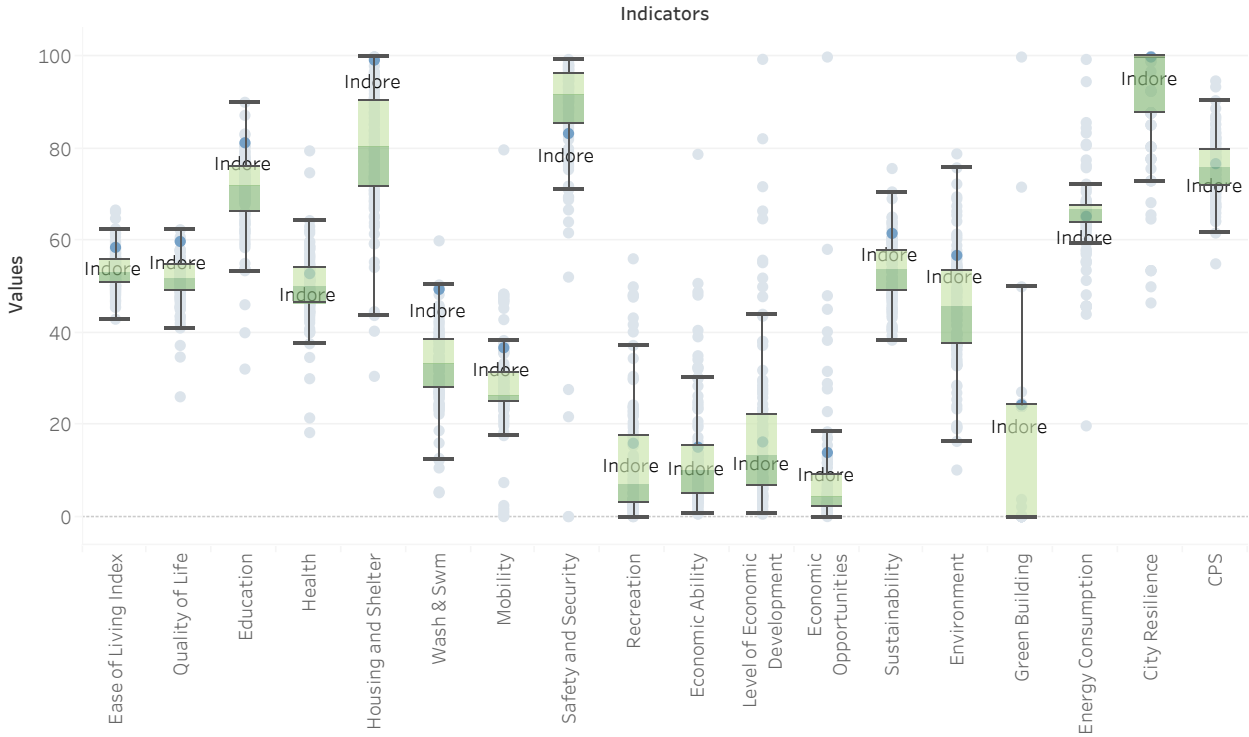
Indore

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

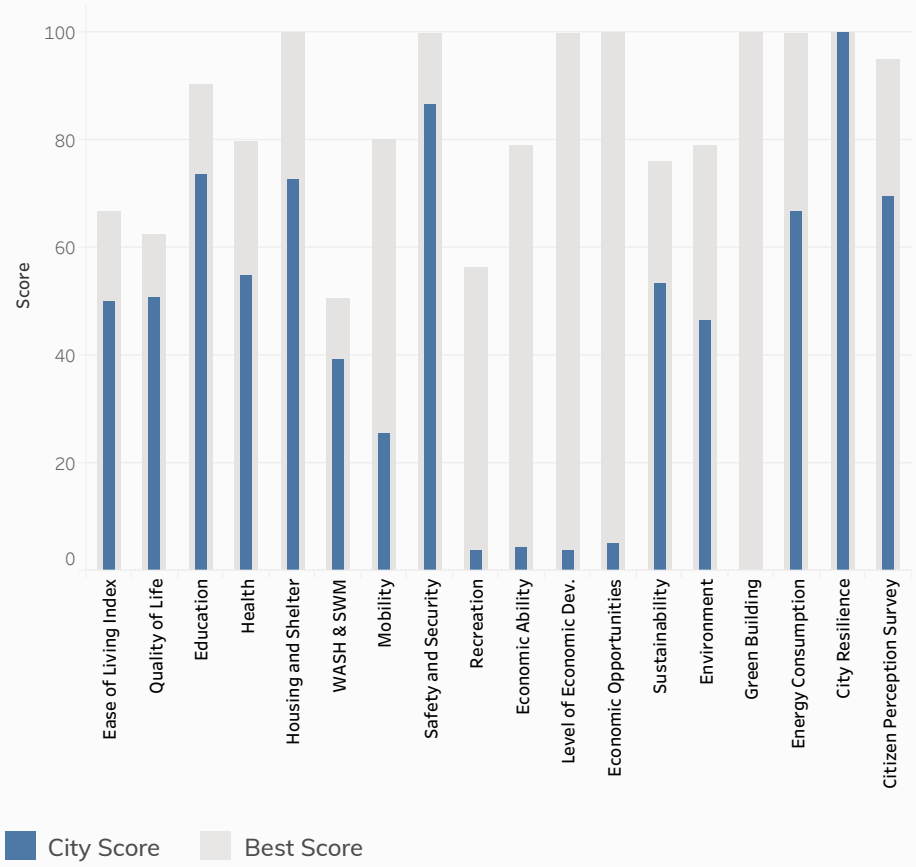


Rank
43

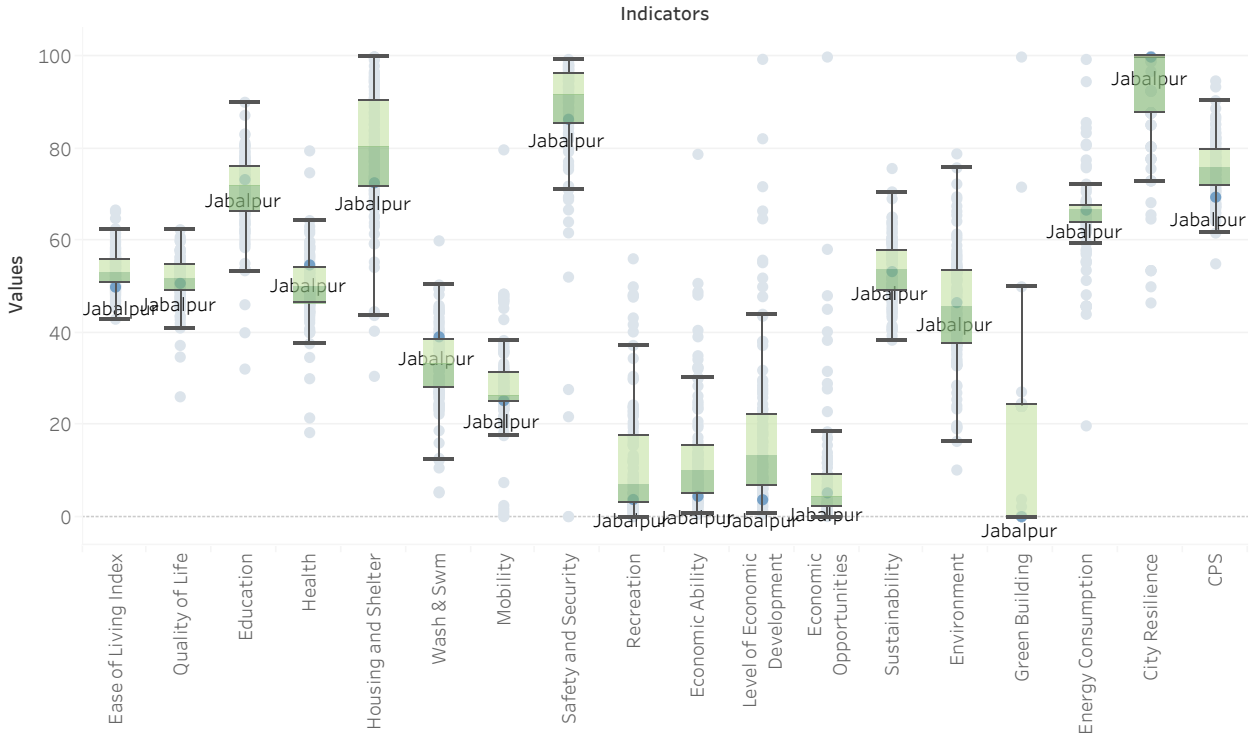
Jabalpur

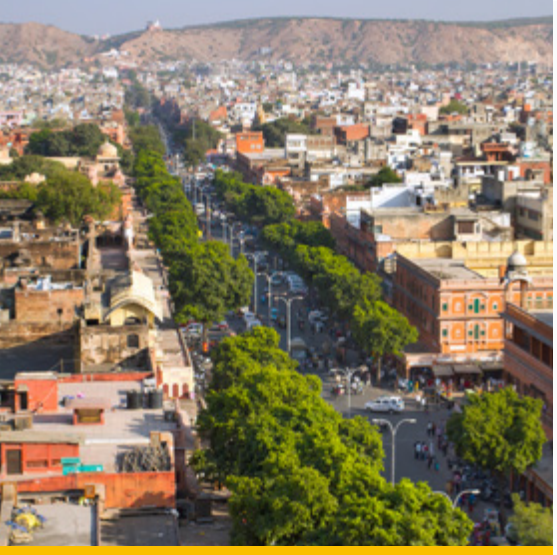
Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities



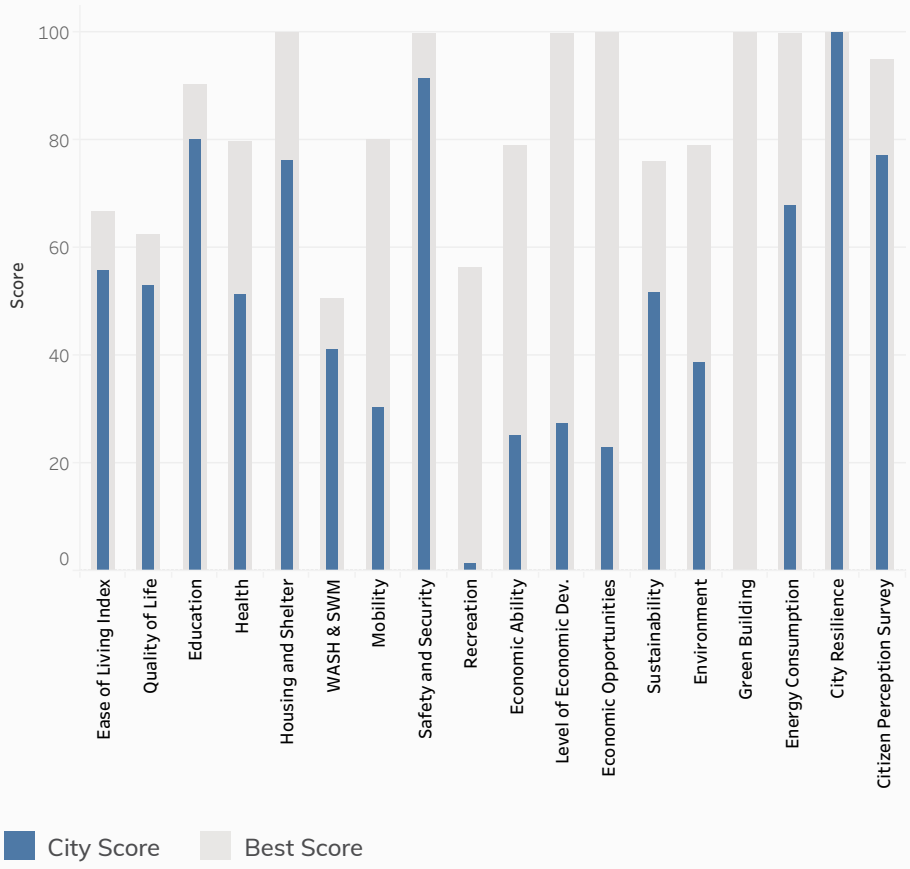


Rank
23

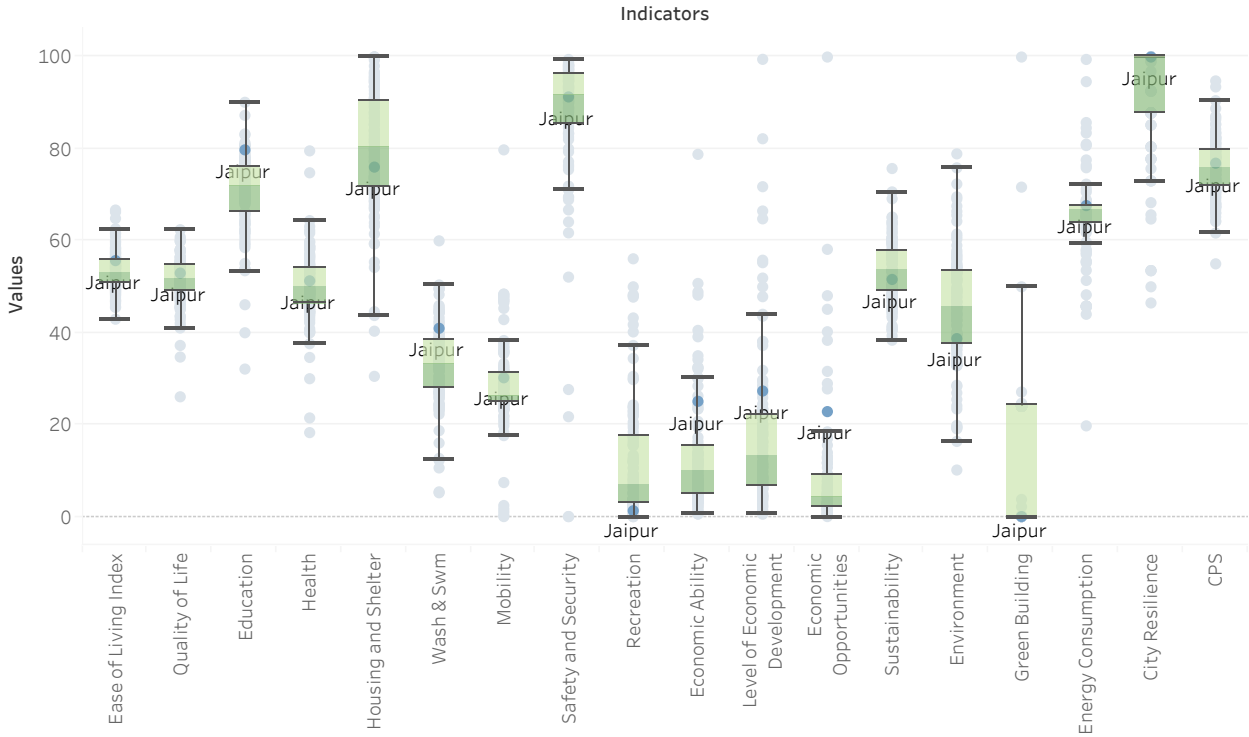
Jaipur

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

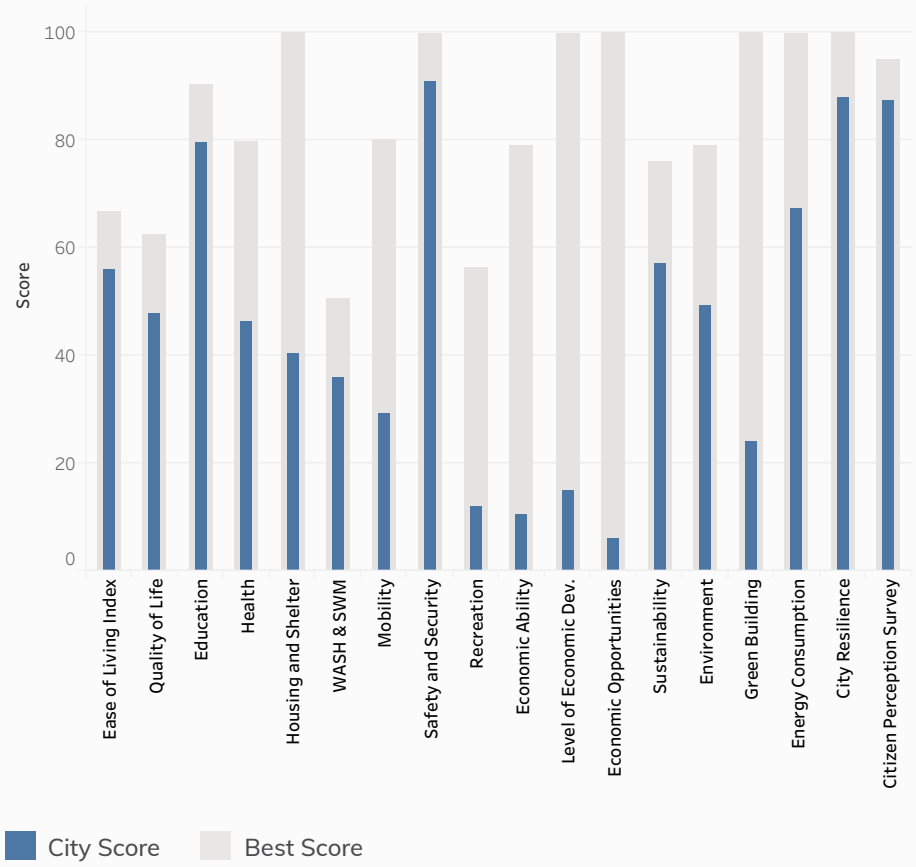


Rank
21

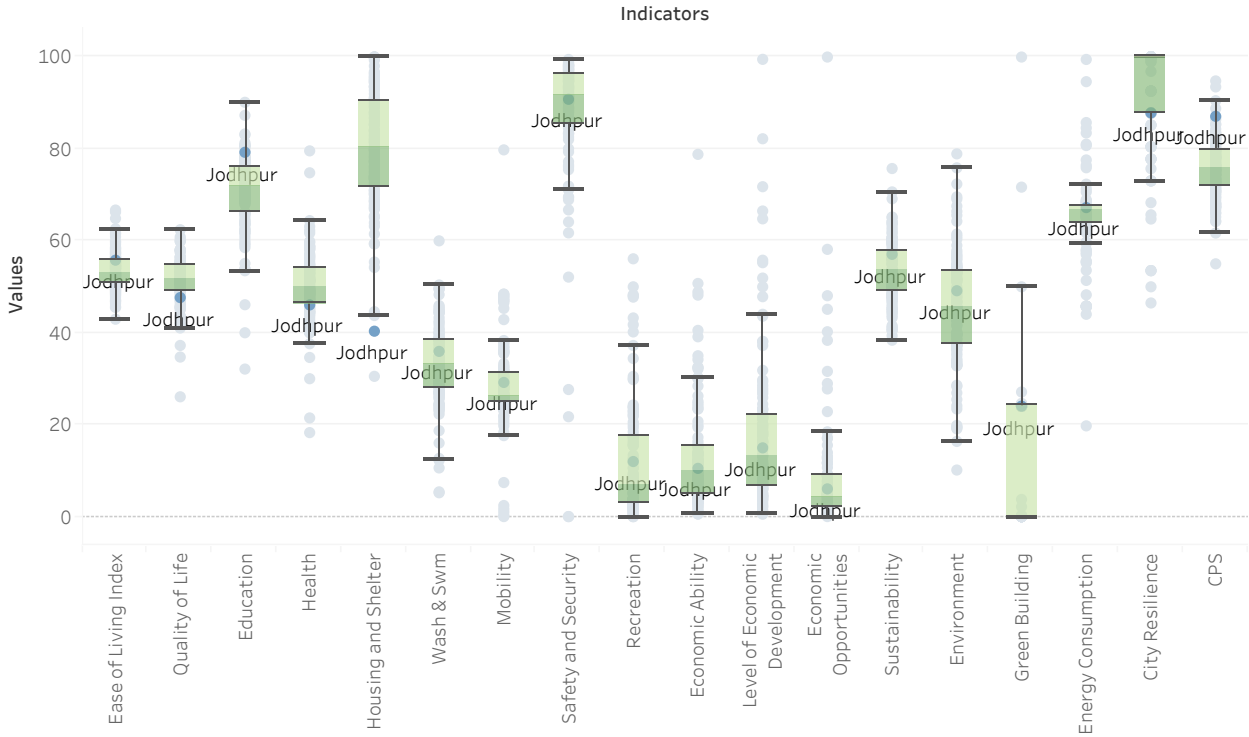
Jodhpur

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

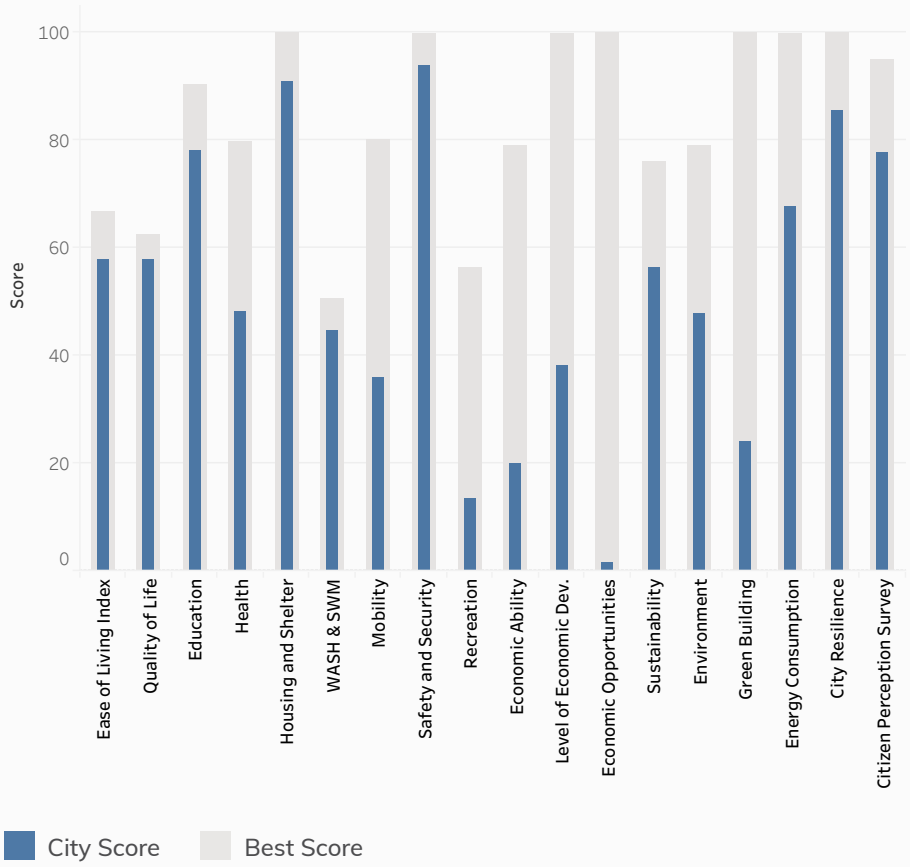


Rank
12

Kalyan Dombivali

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

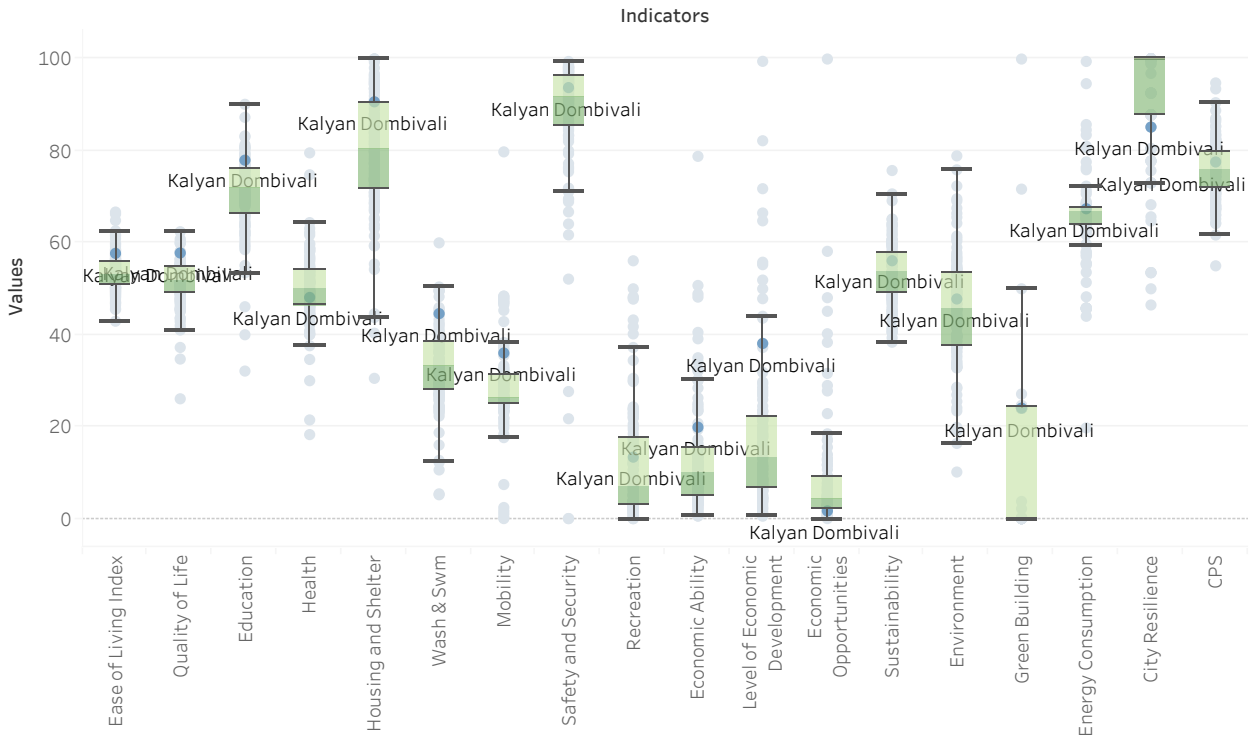


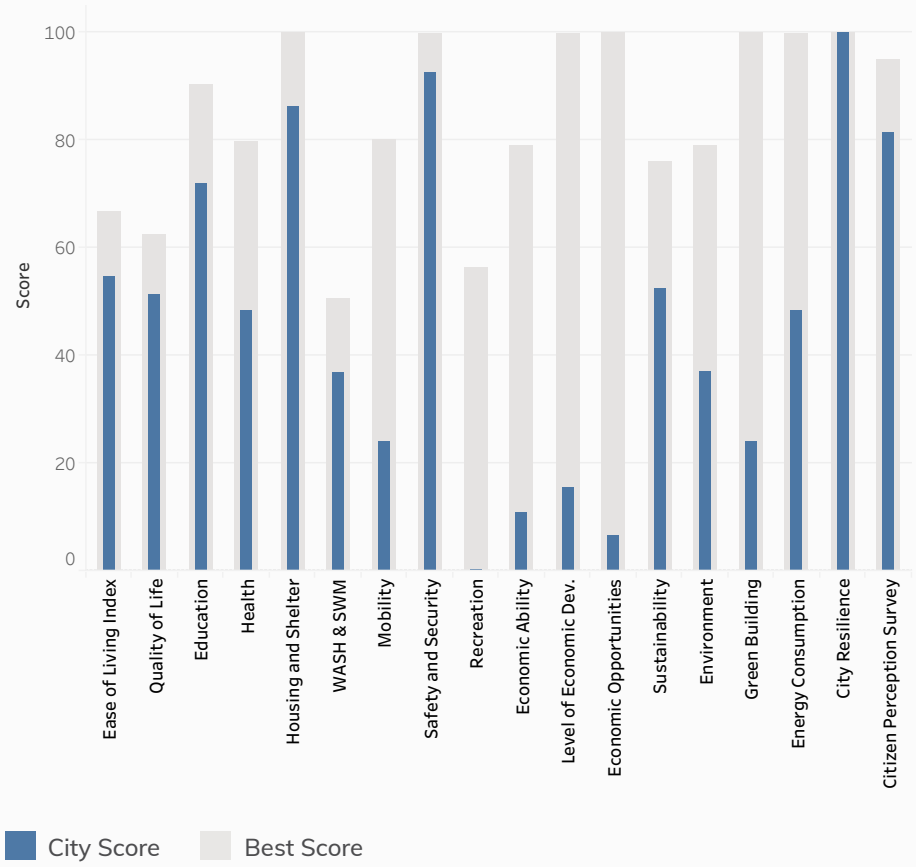
Image Source: https://en.wikipedia.org/wiki/File:Headquarter_Of_Kalyan_Dombivli_Muncipal_Corporation.jpg

Rank
28

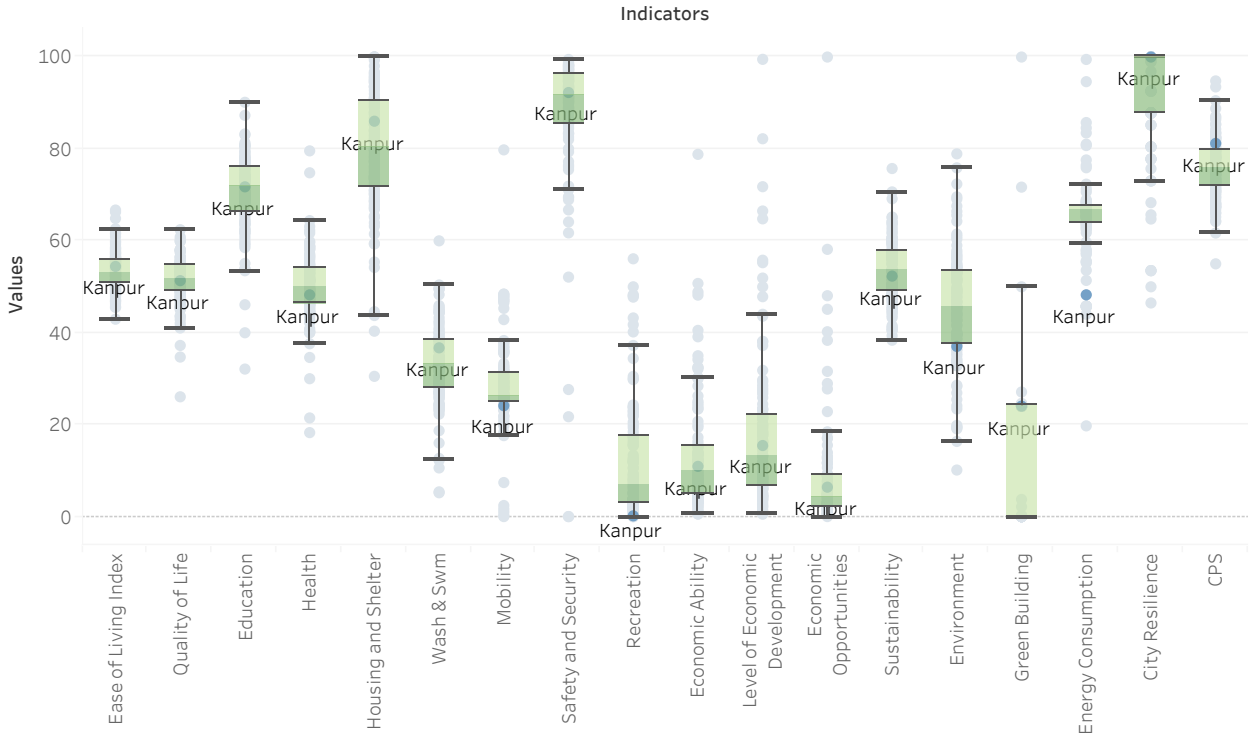
Kanpur

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

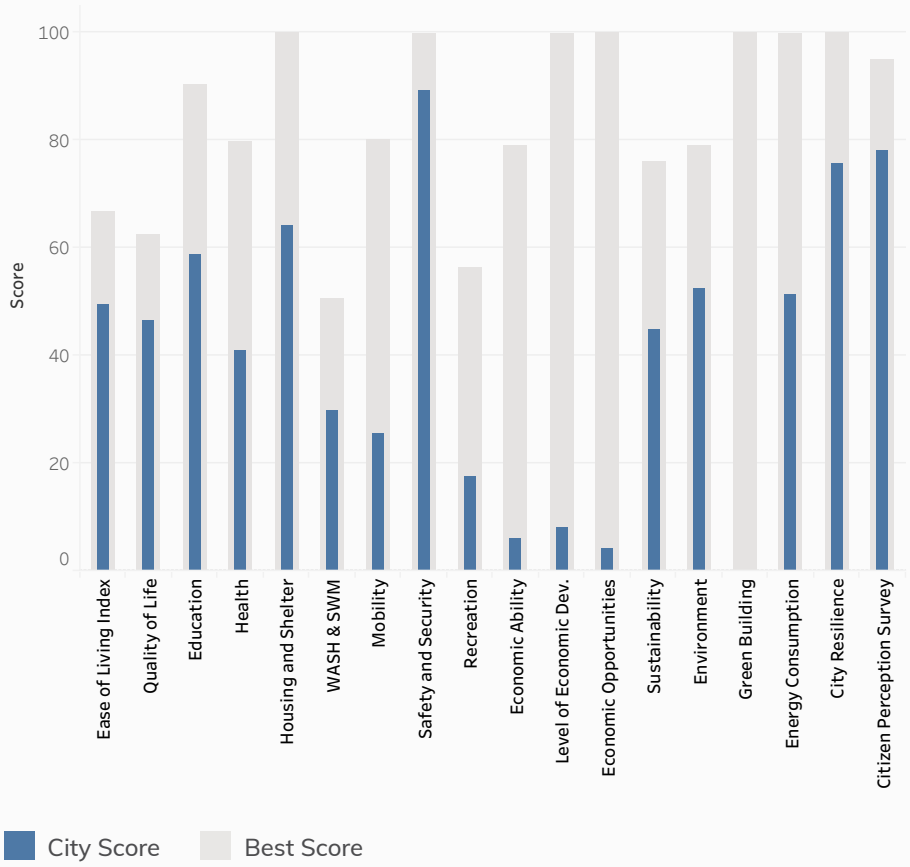


Rank
44

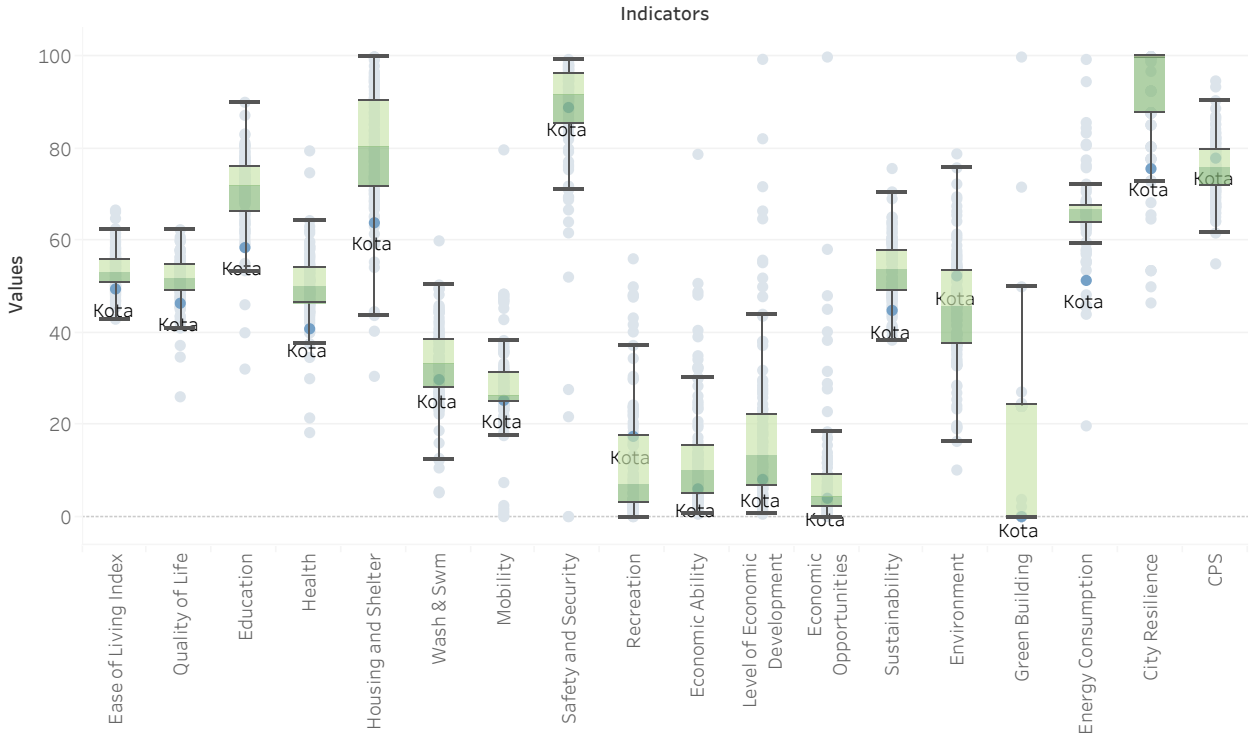
Kota

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

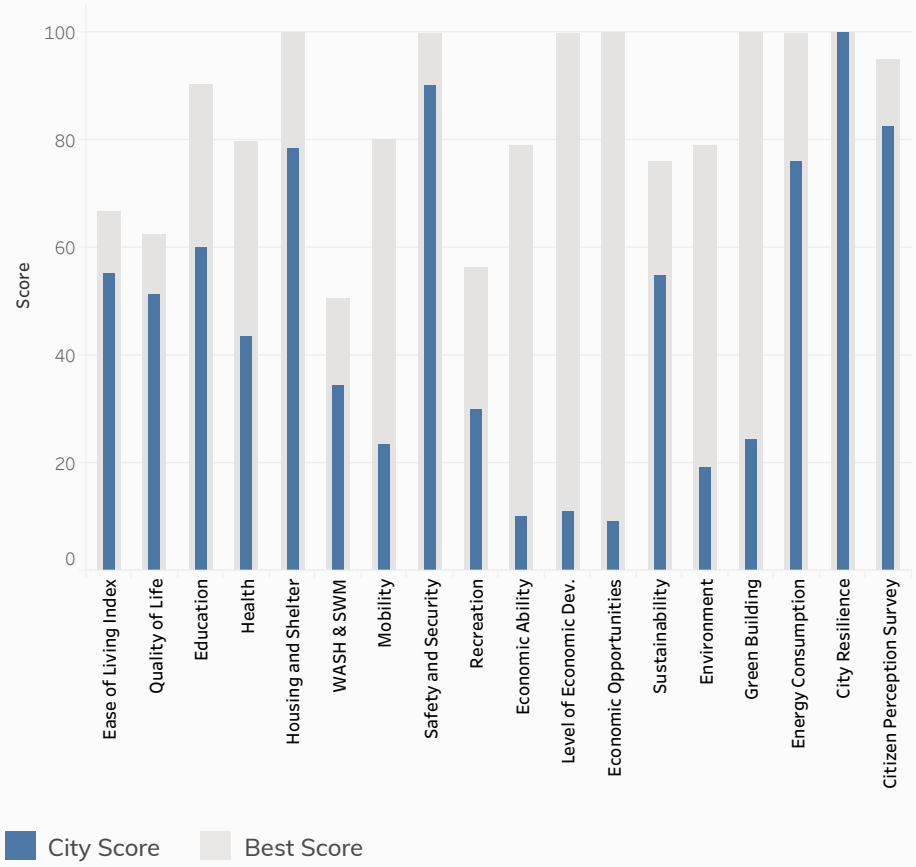


Rank
26

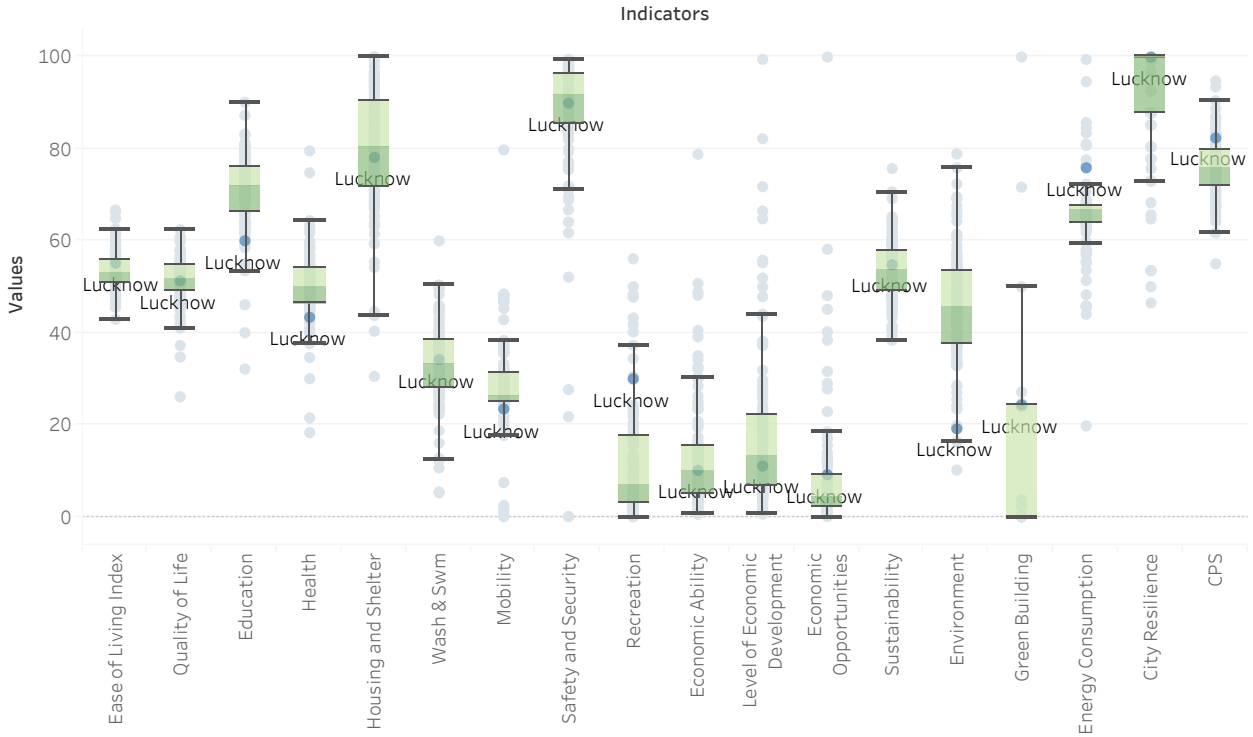
Lucknow

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

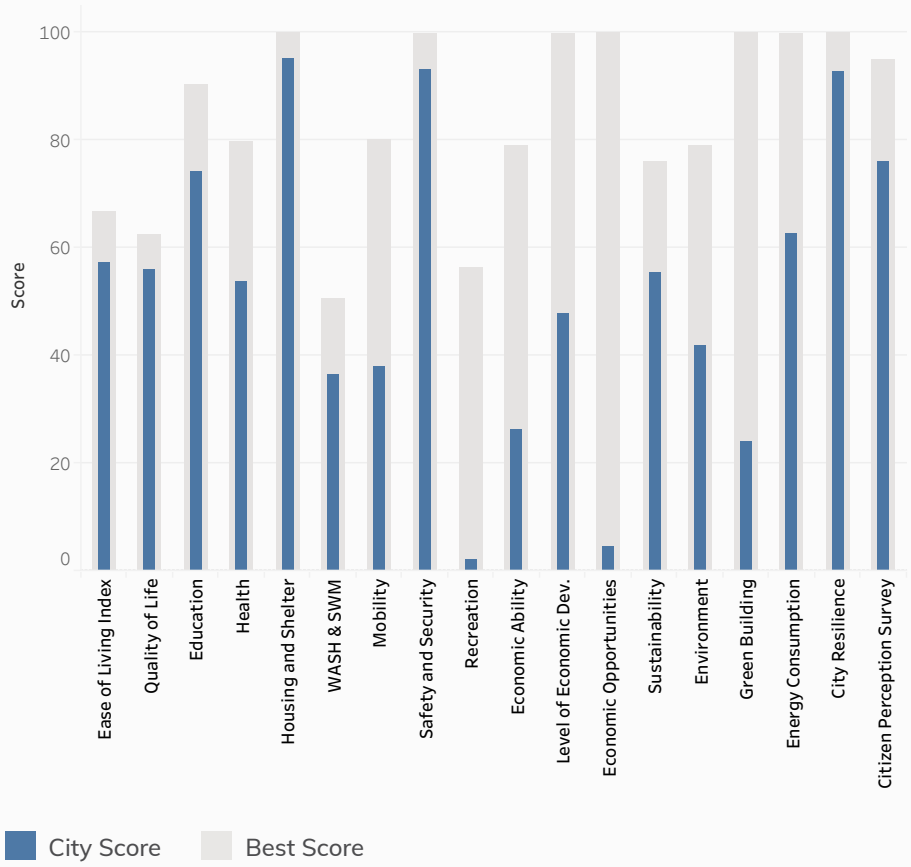


Rank
14

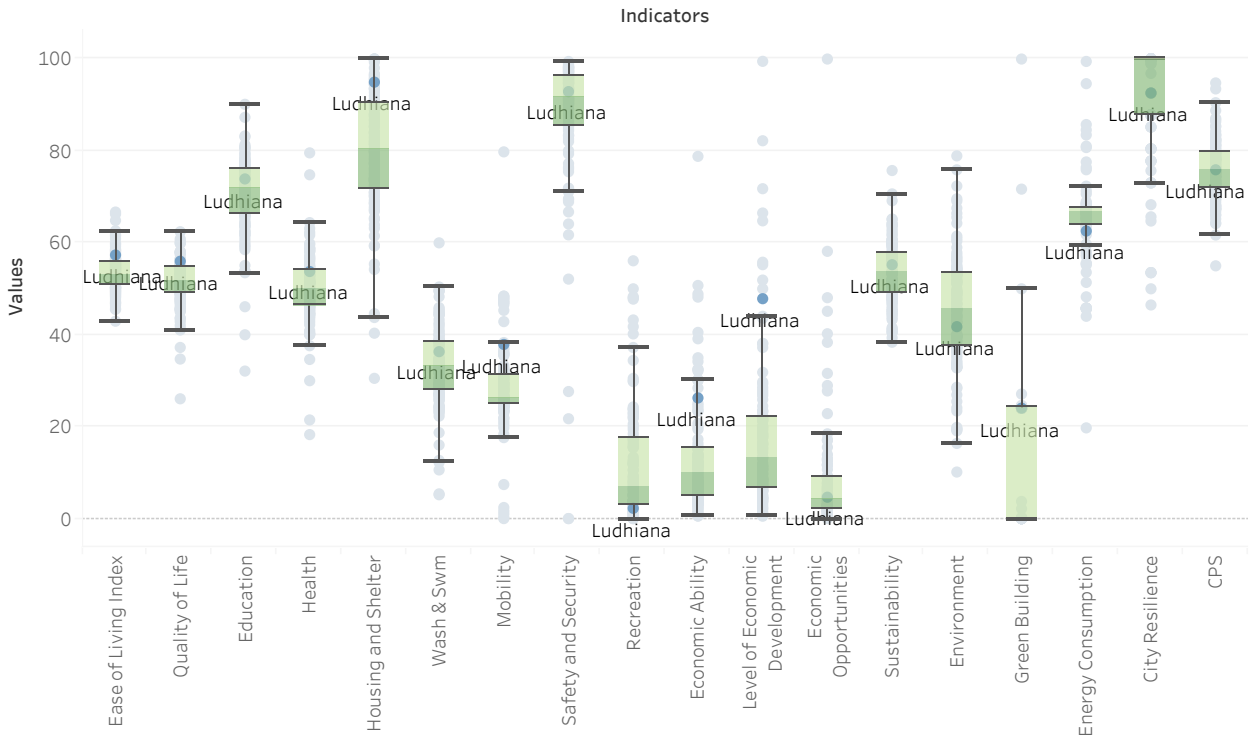
Ludhiana

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

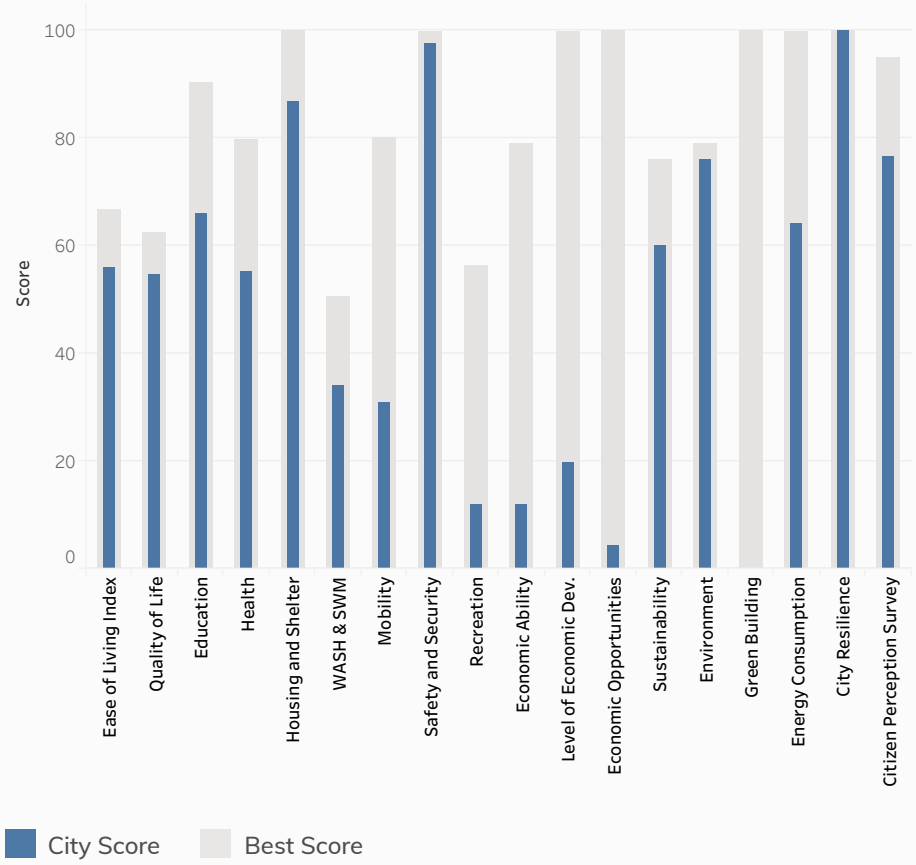


Rank
22

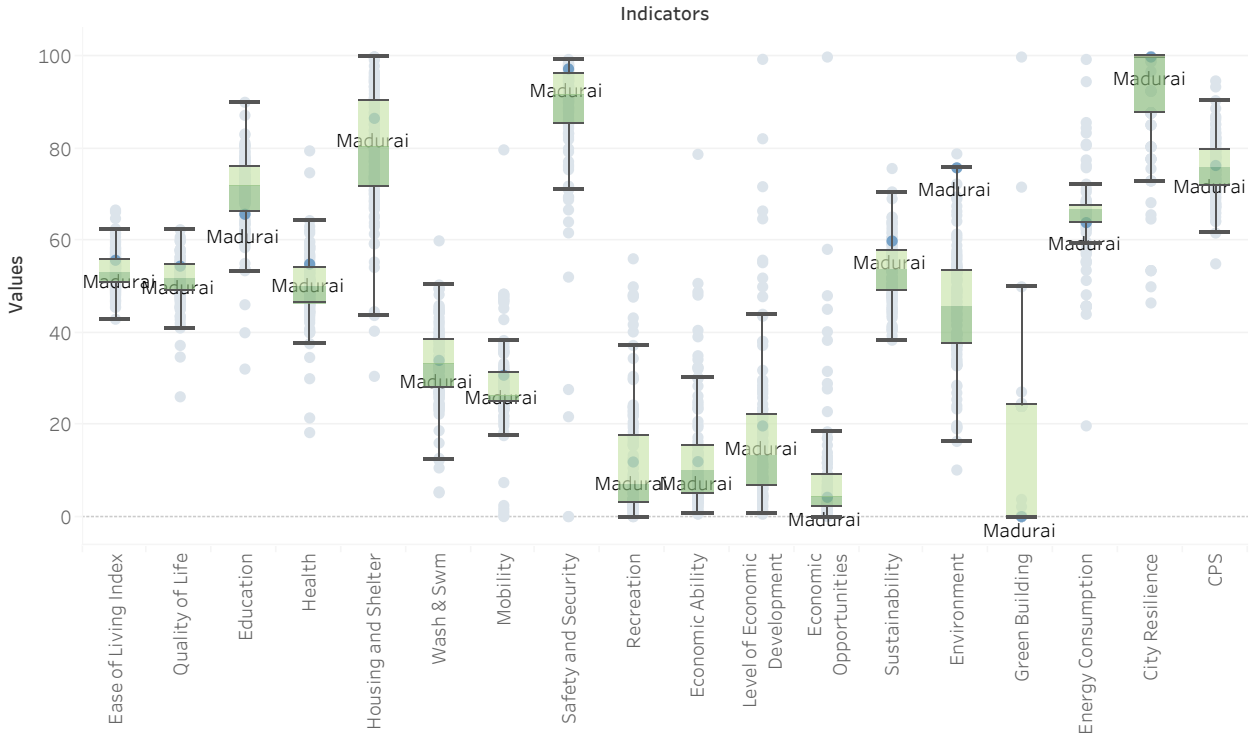
Madurai

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

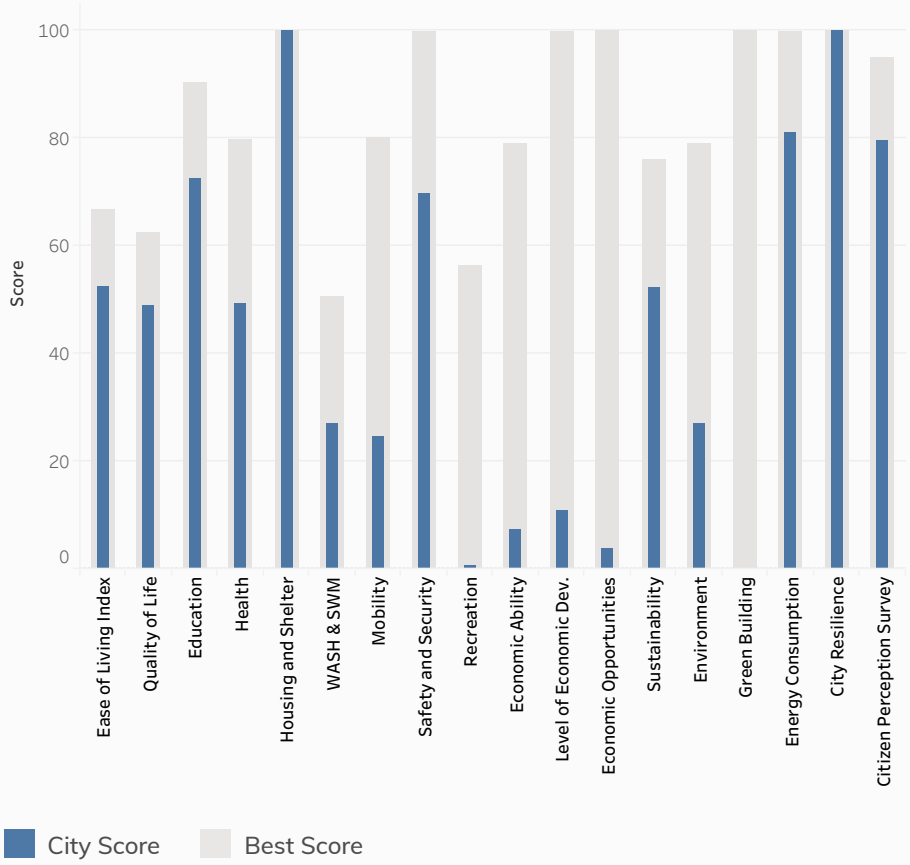


Rank
36

Meerut

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

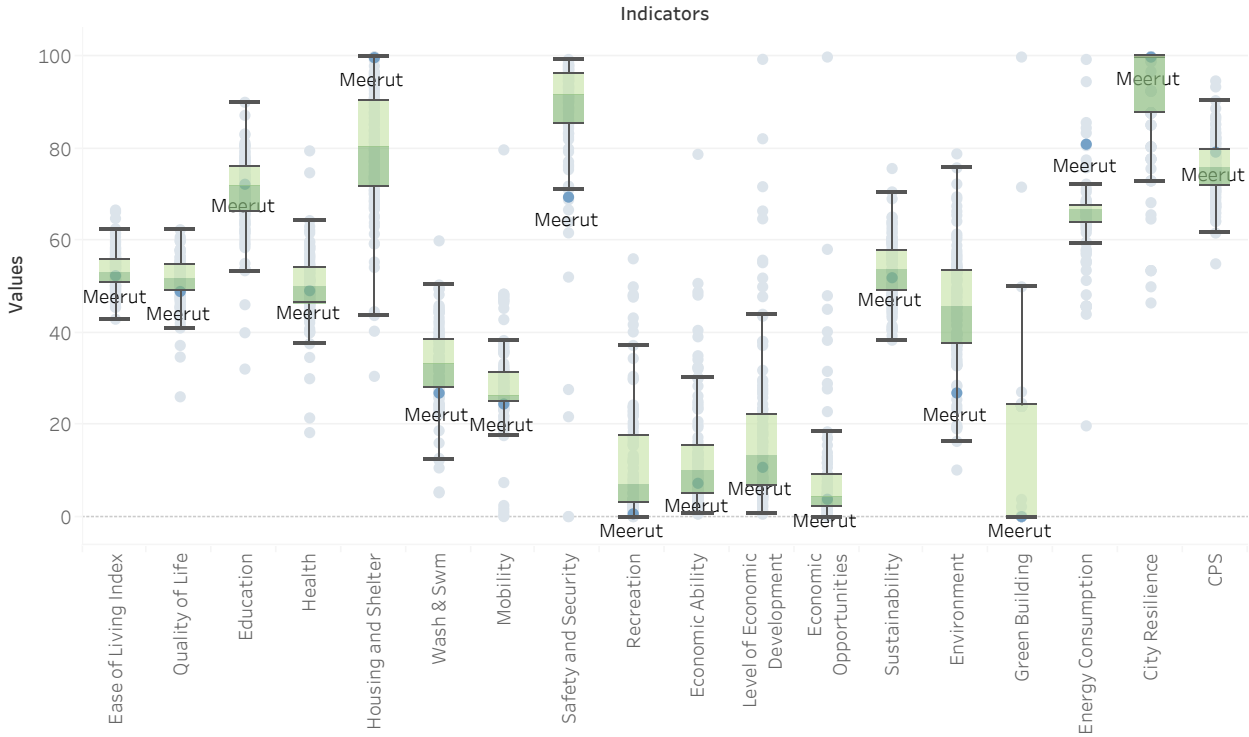


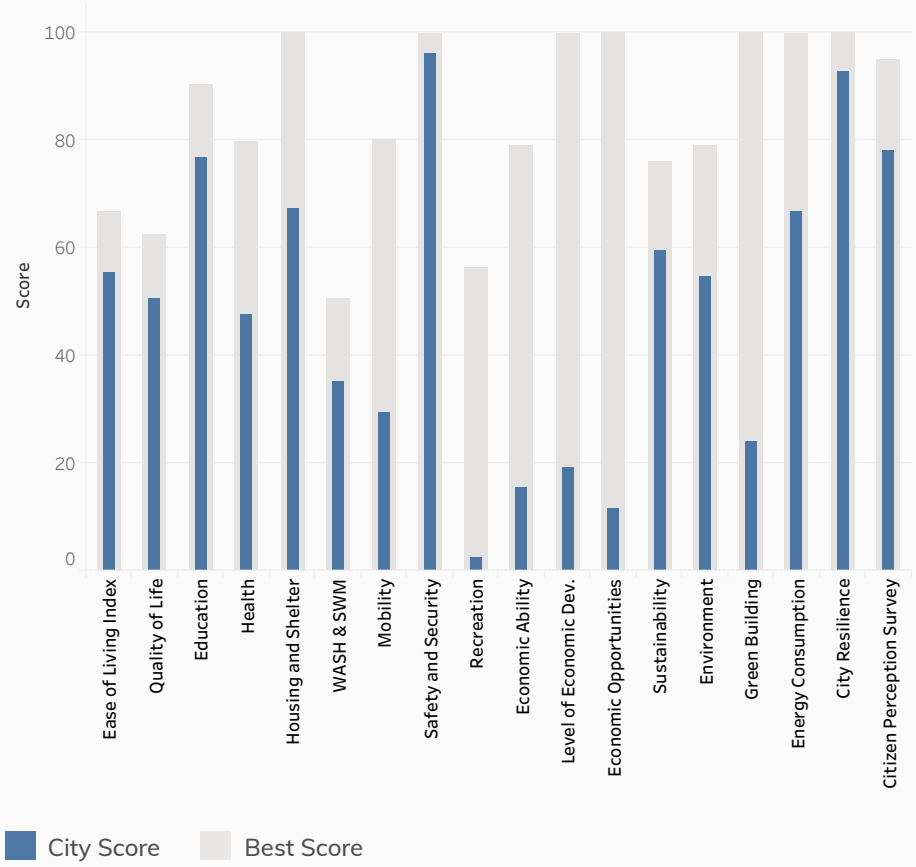
Image Source: https://en.wikipedia.org/wiki/Meerut#/media/File:NAUCHANDI_GATE_MEERUT.jpg

Rank
25

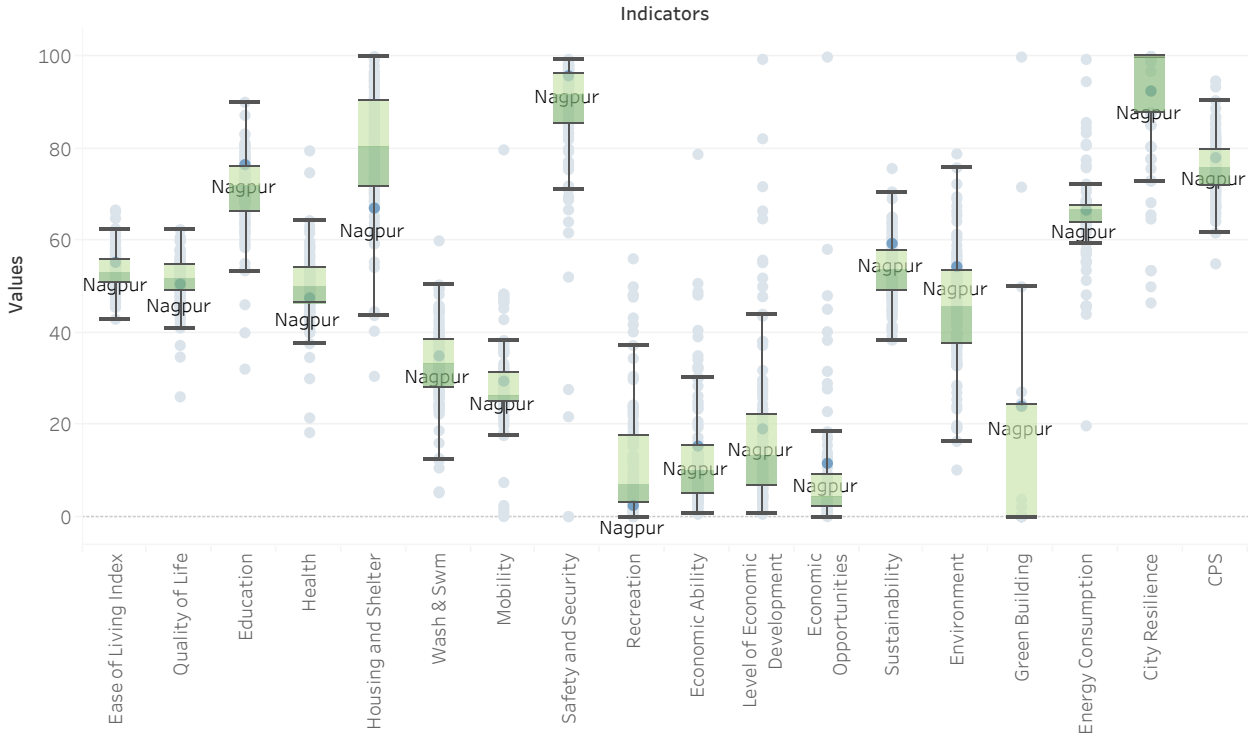
Nagpur

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

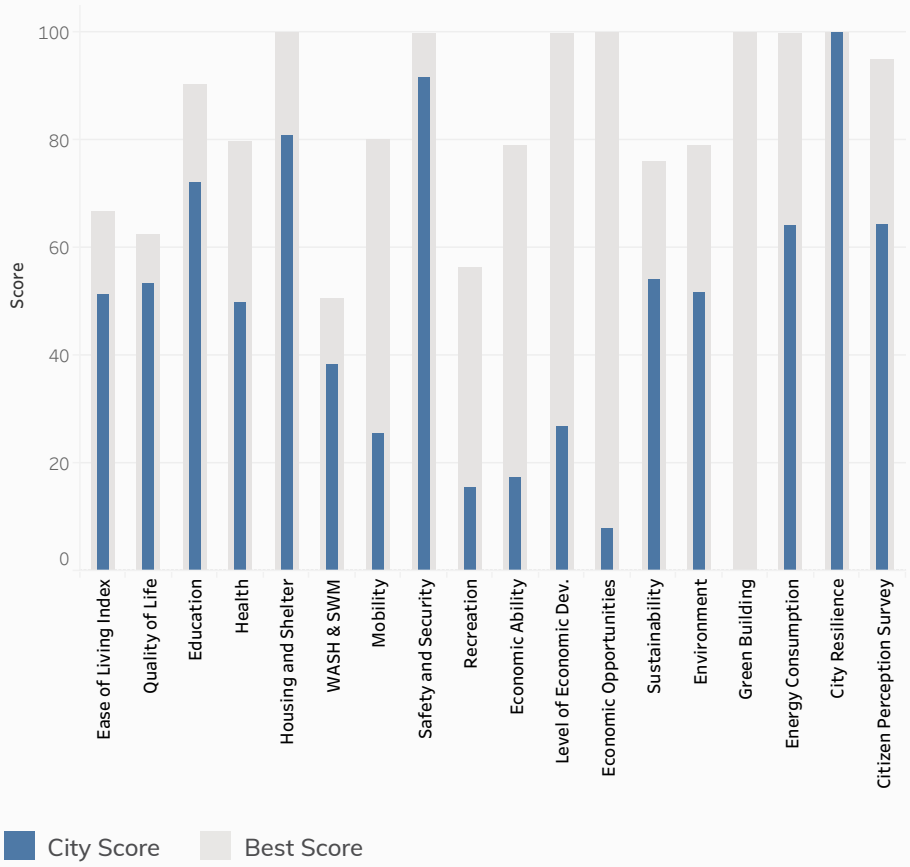


Rank
38

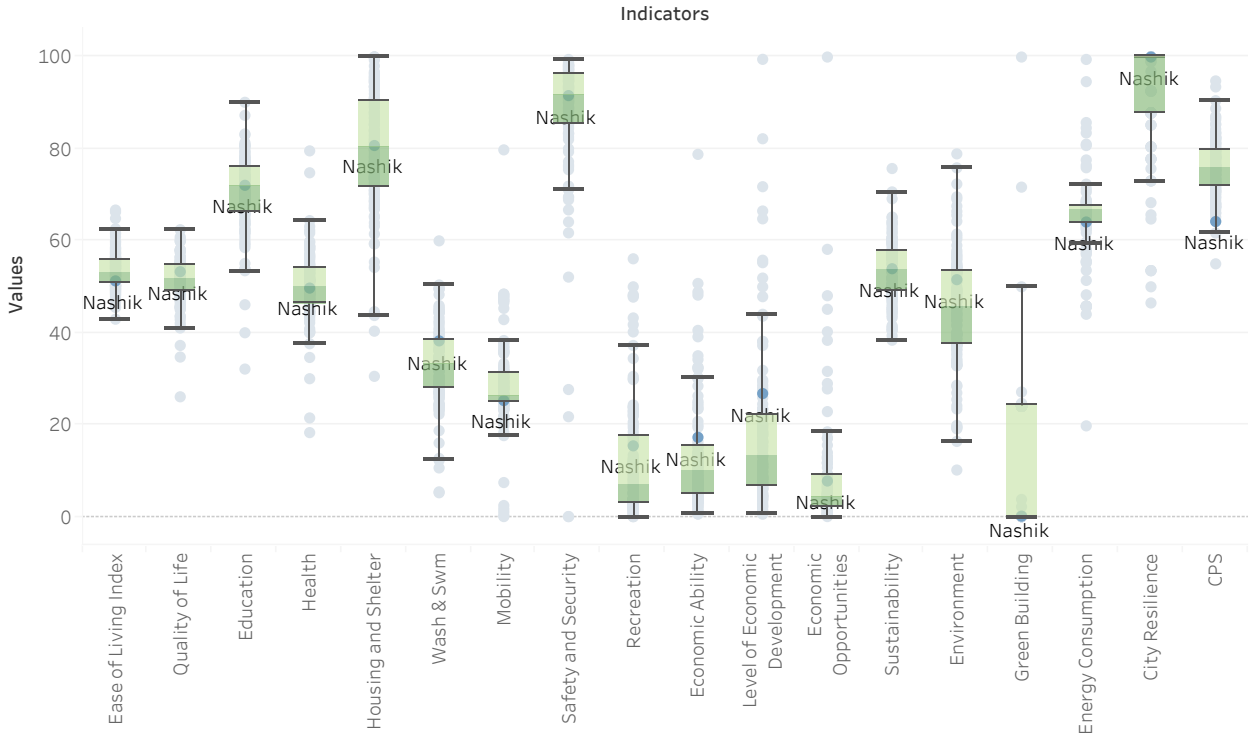
Nashik

Category: Million+

City Scores and Best Score Comparison



Variation Across Cities

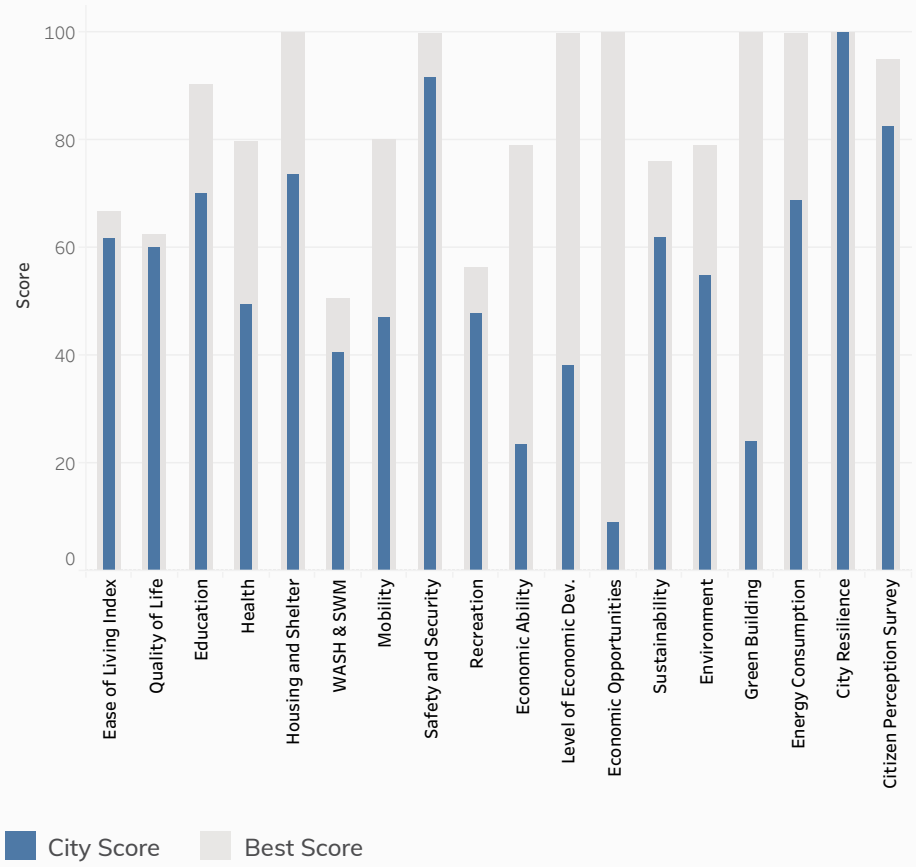


Rank
06

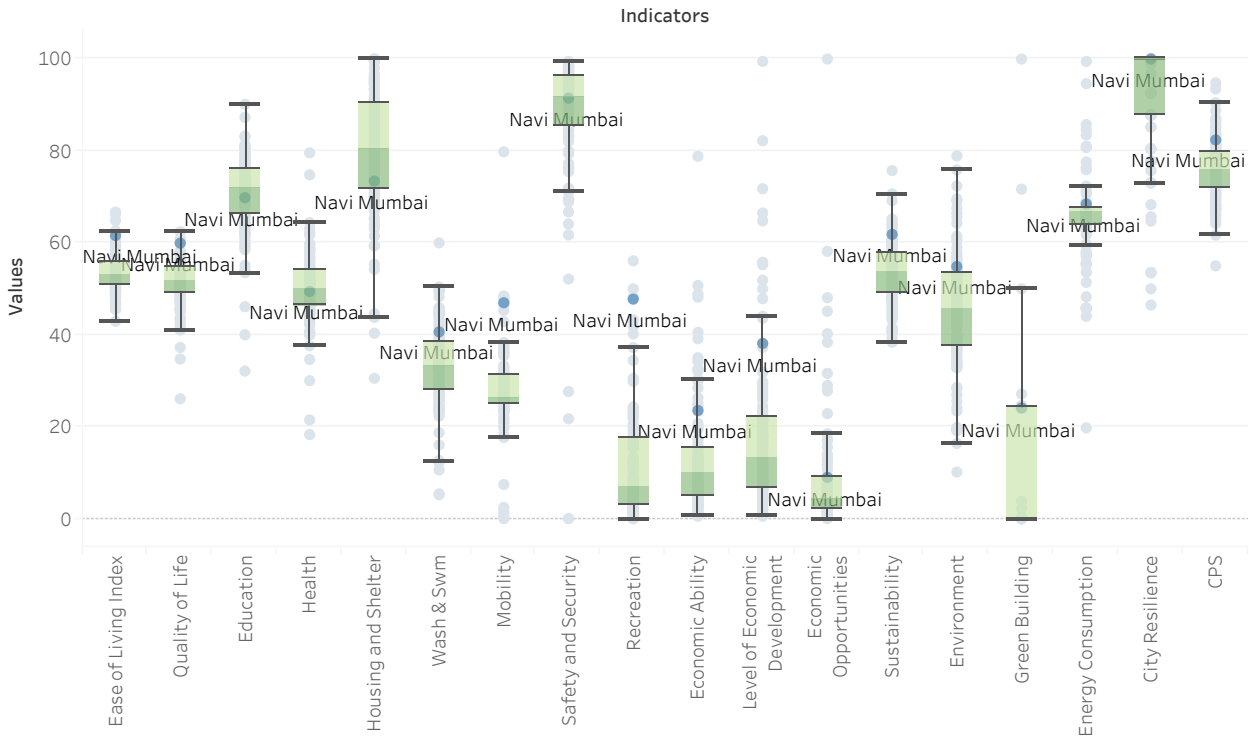
Navi Mumbai

Category: Million+

City Scores and Best Score Comparison



Variation Across Cities

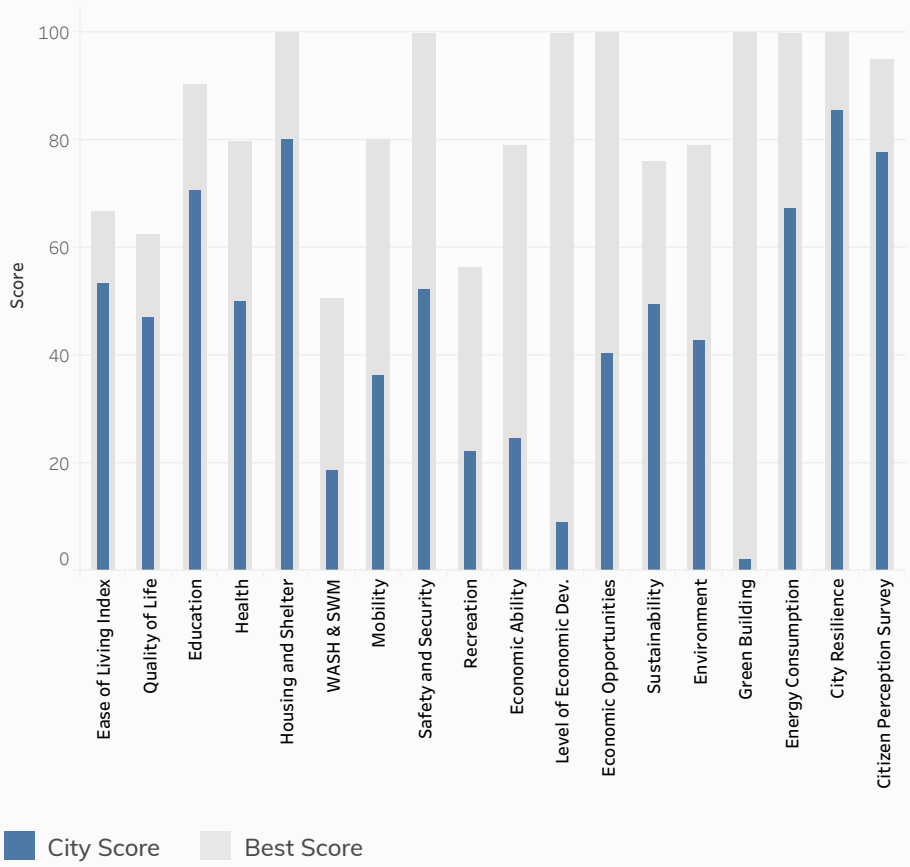


Rank
33

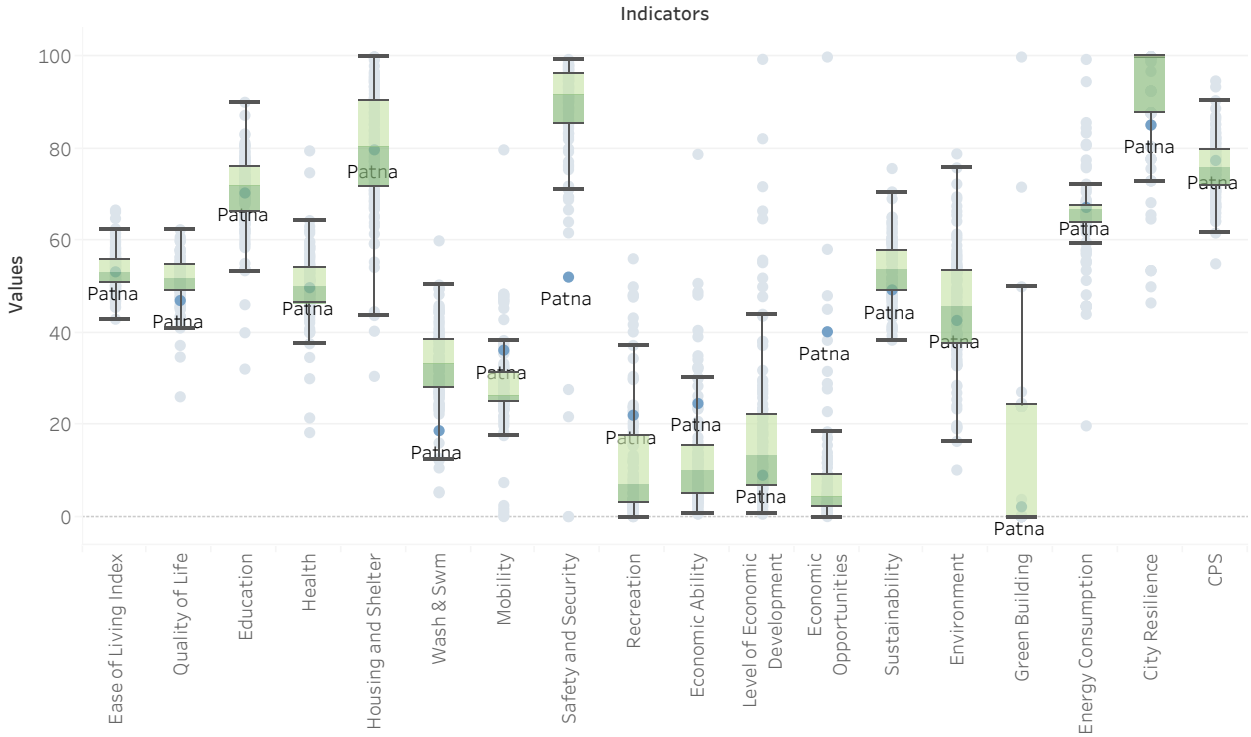
Patna

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

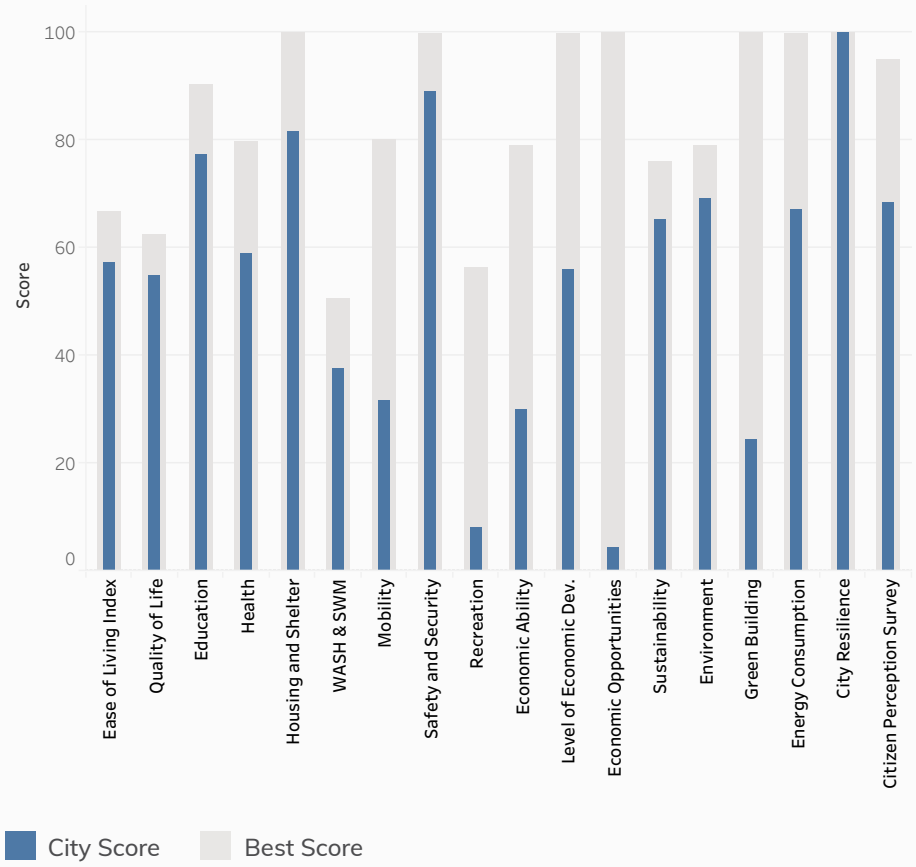


Rank
16

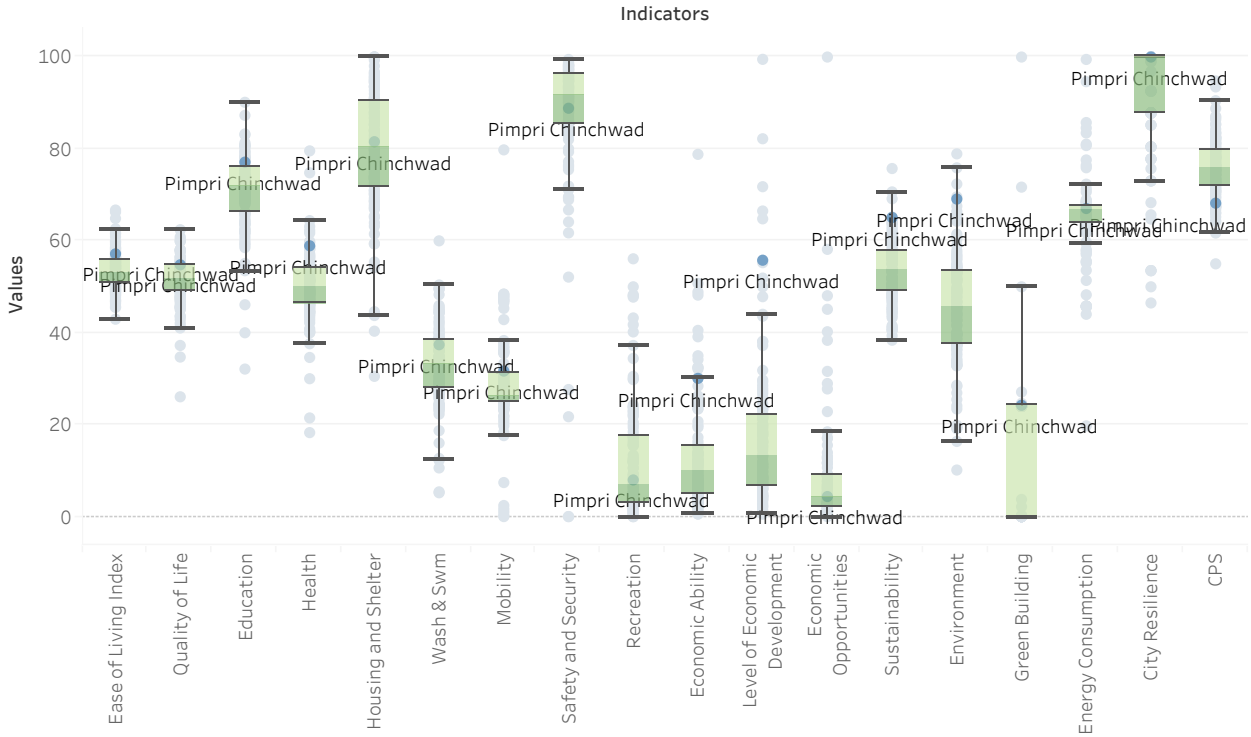
Pimpri Chinchwad

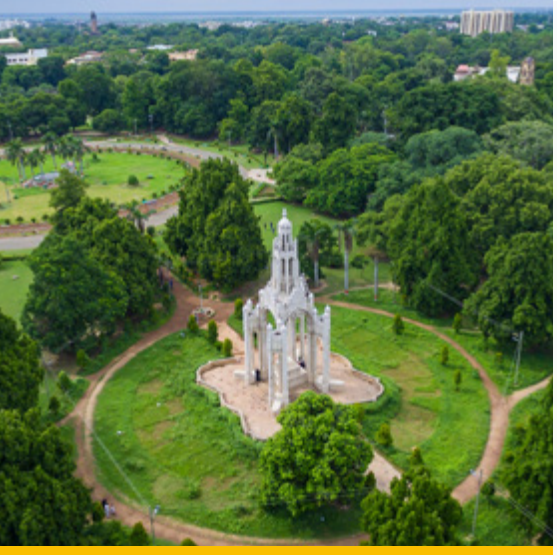
Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities



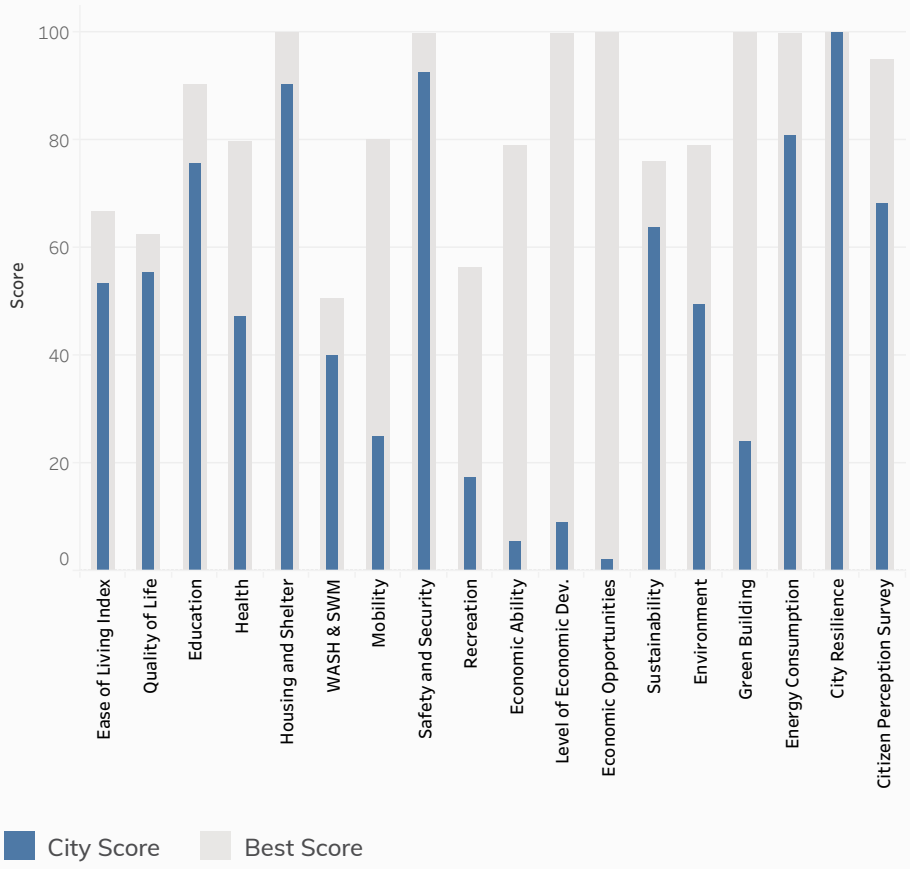


Rank
32

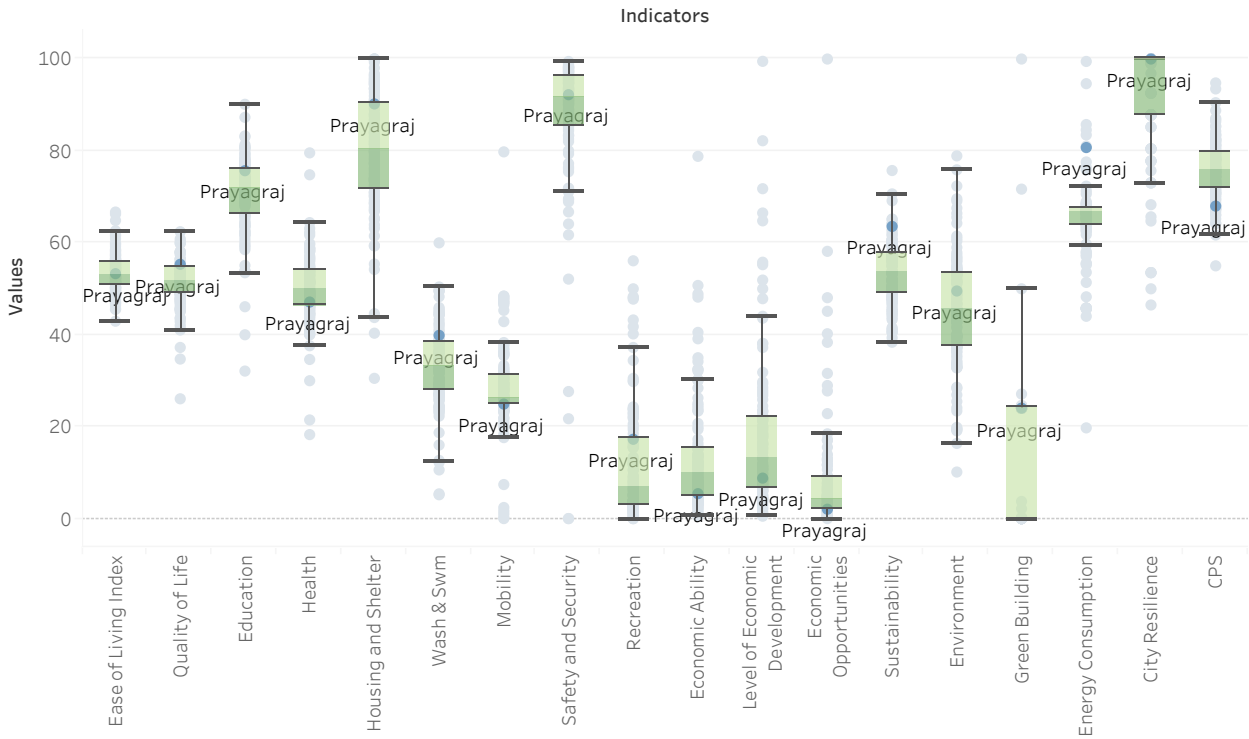
Prayagraj

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

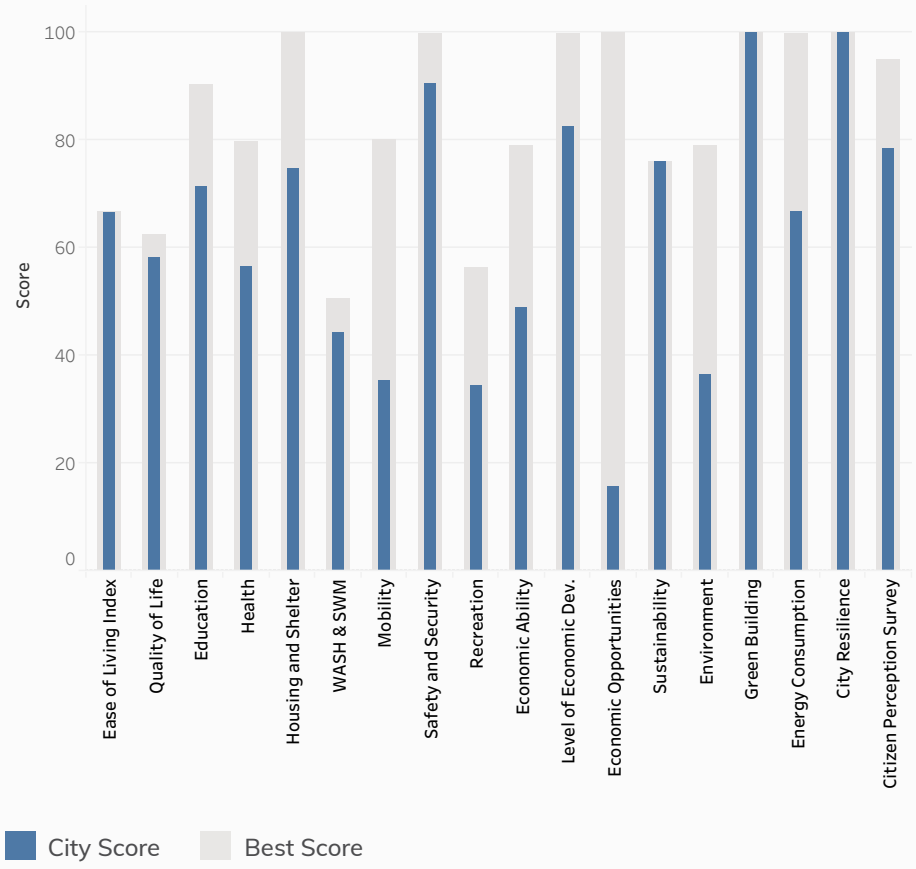


Rank
02

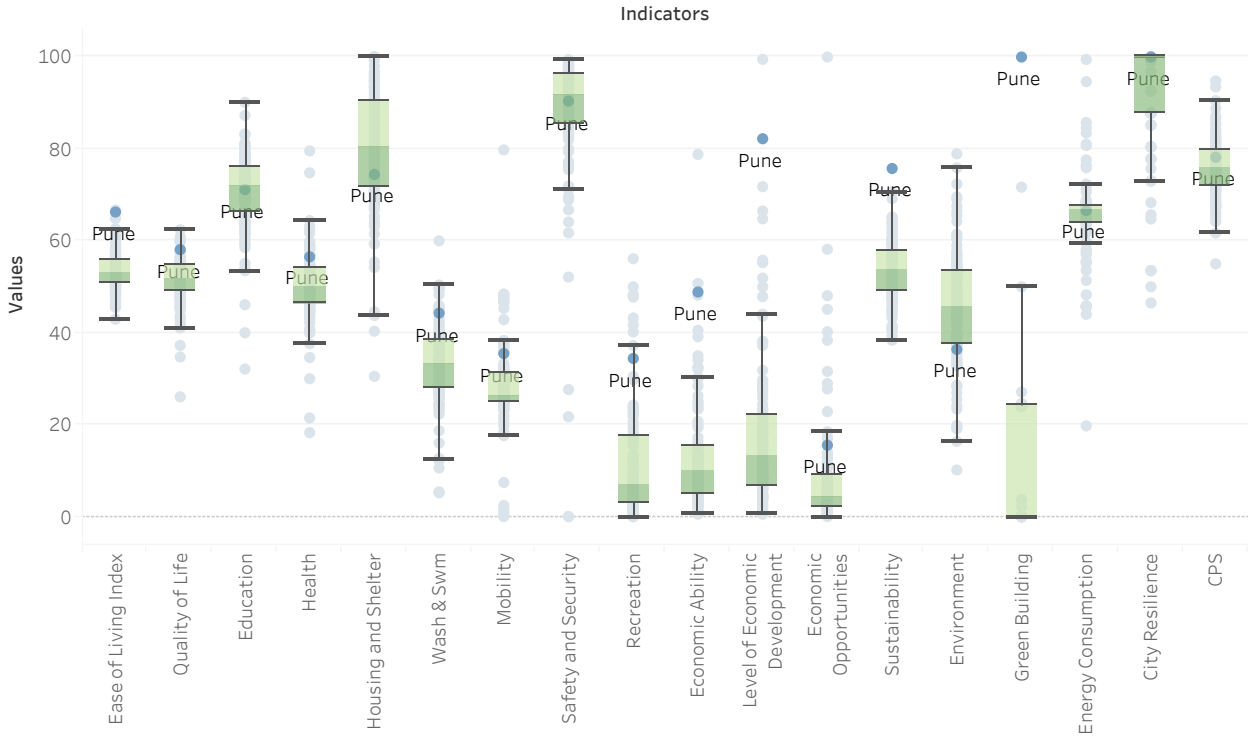
Pune

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

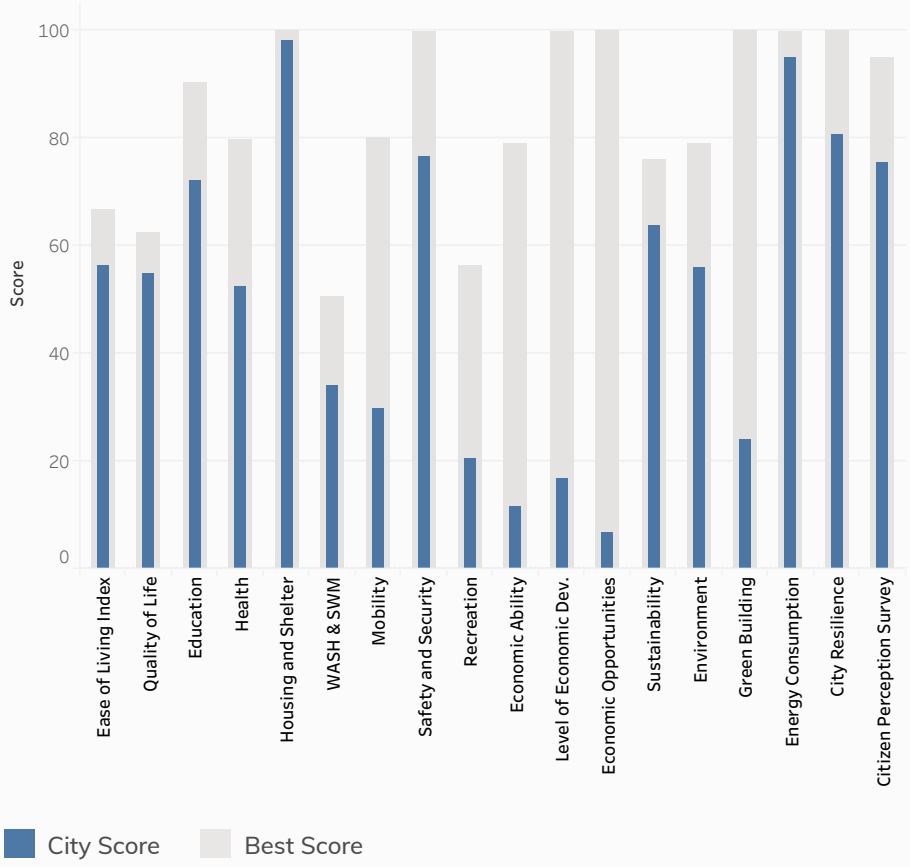


Rank
18

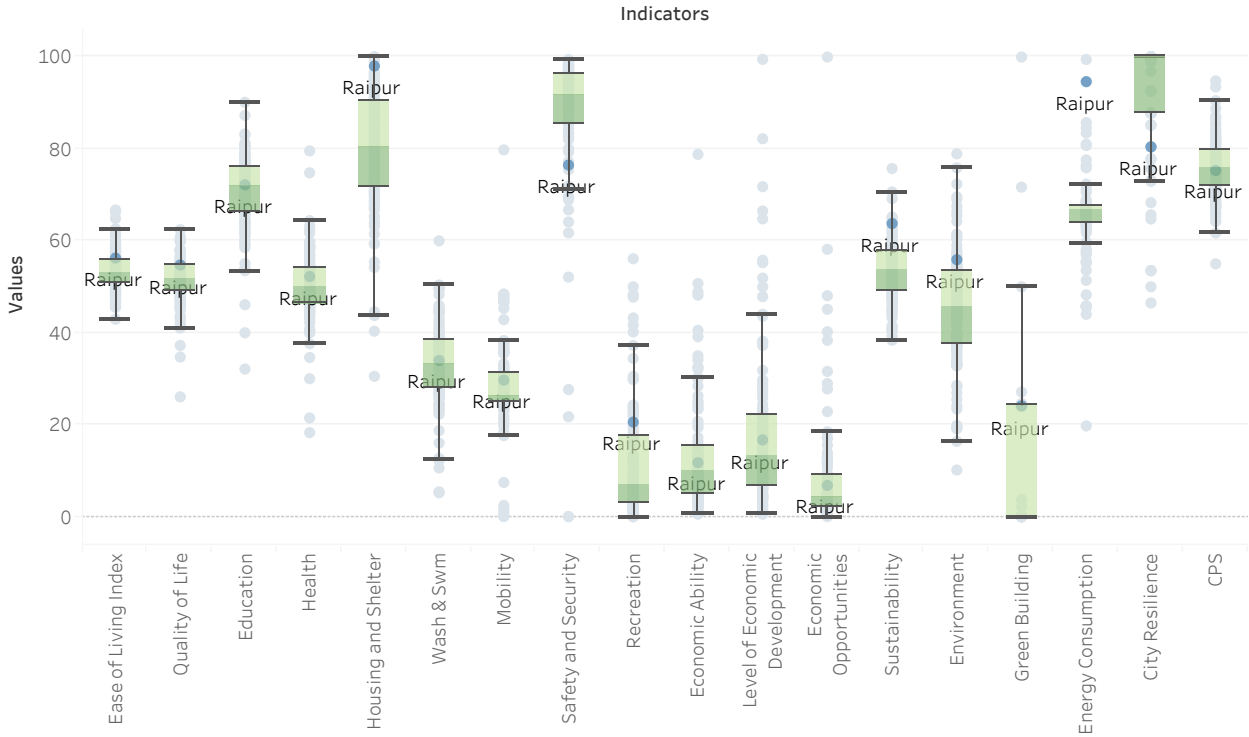
Raipur

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

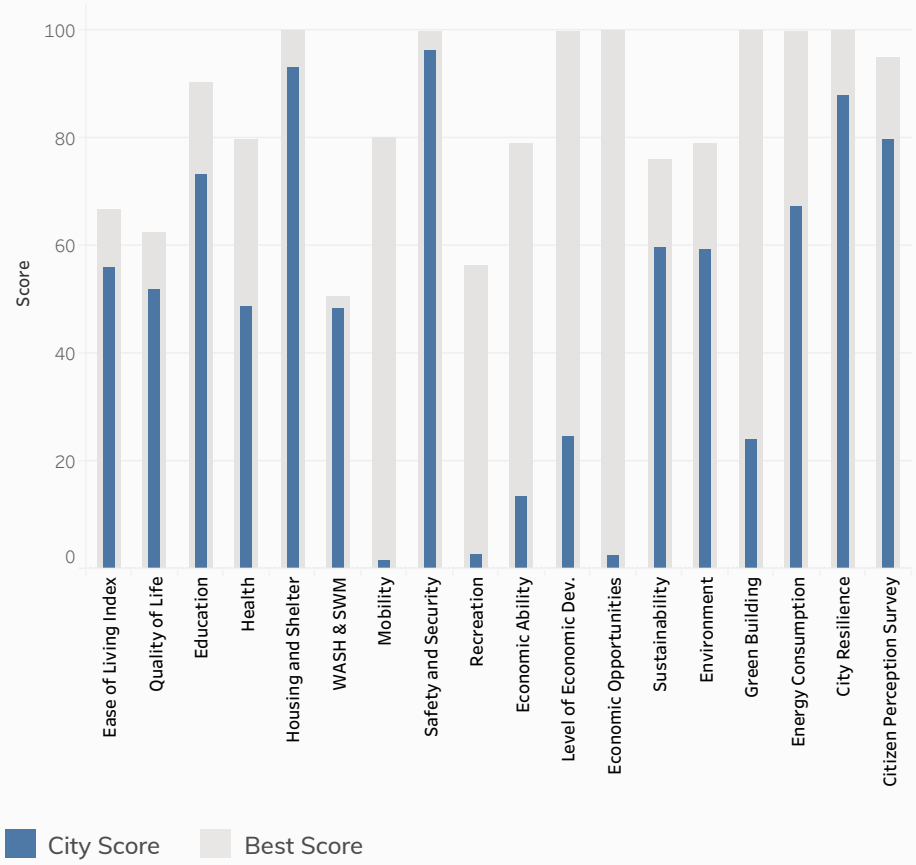


Rank
20

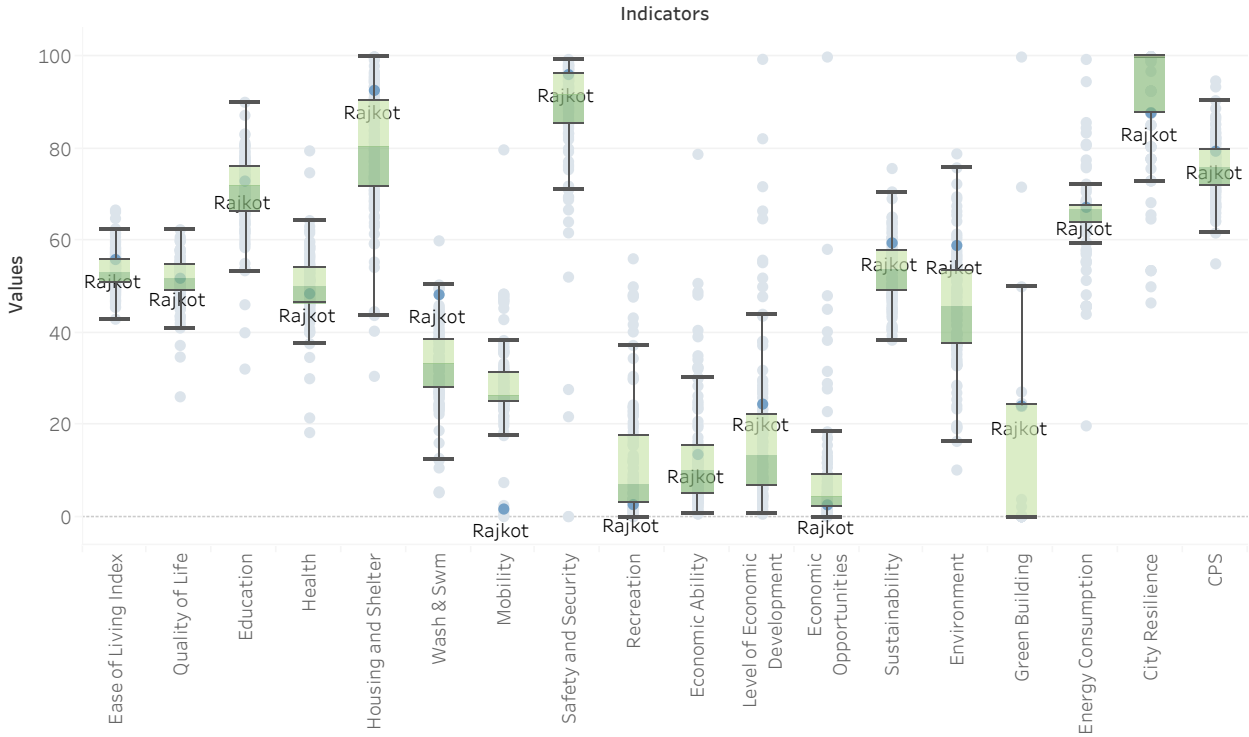
Rajkot

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

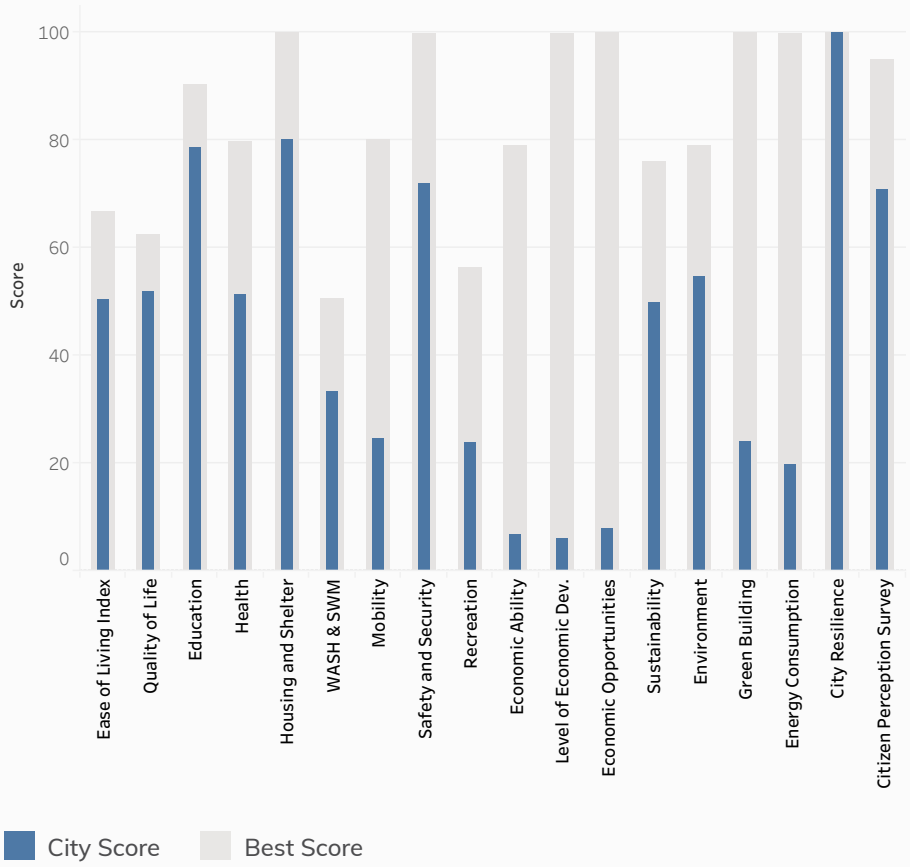


Rank
42

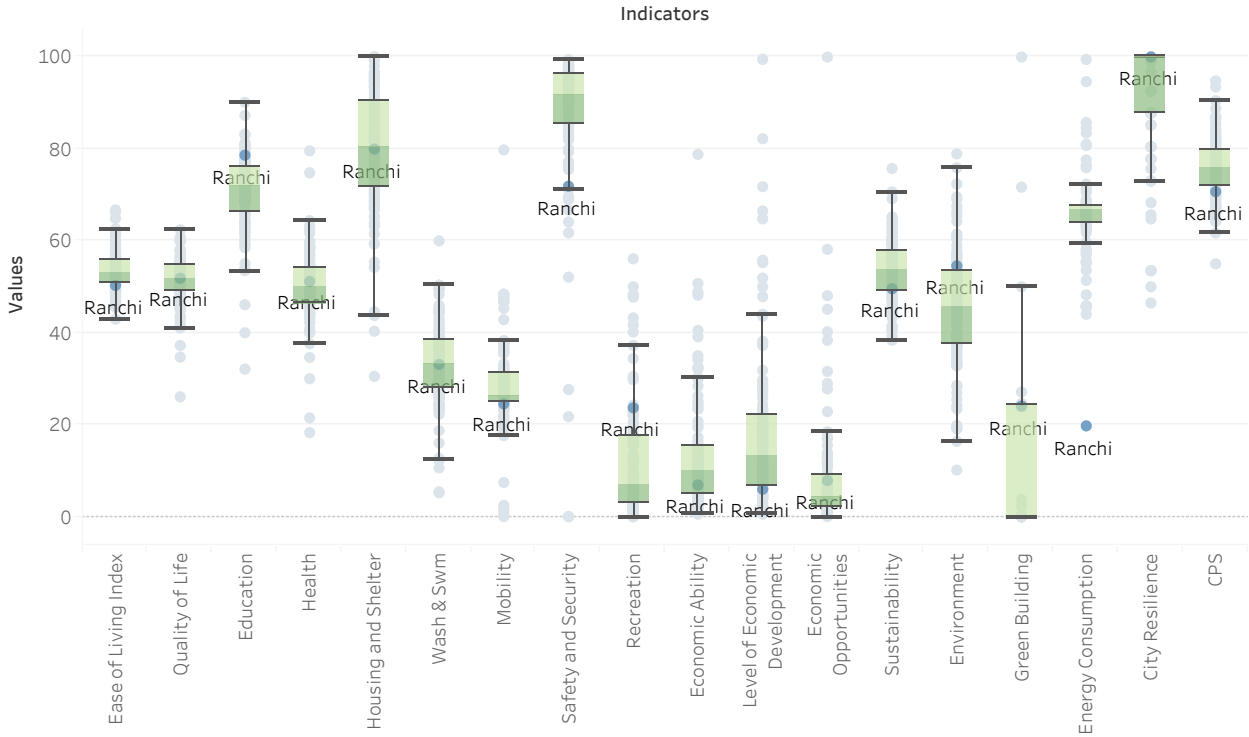
Ranchi

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

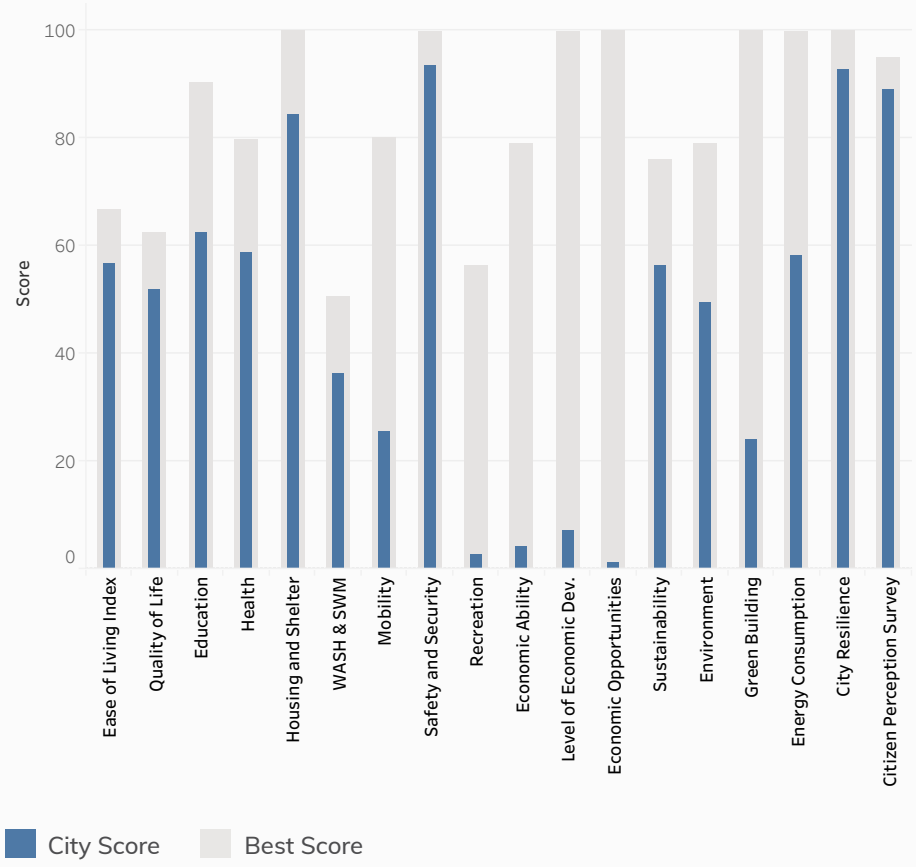


Rank
17

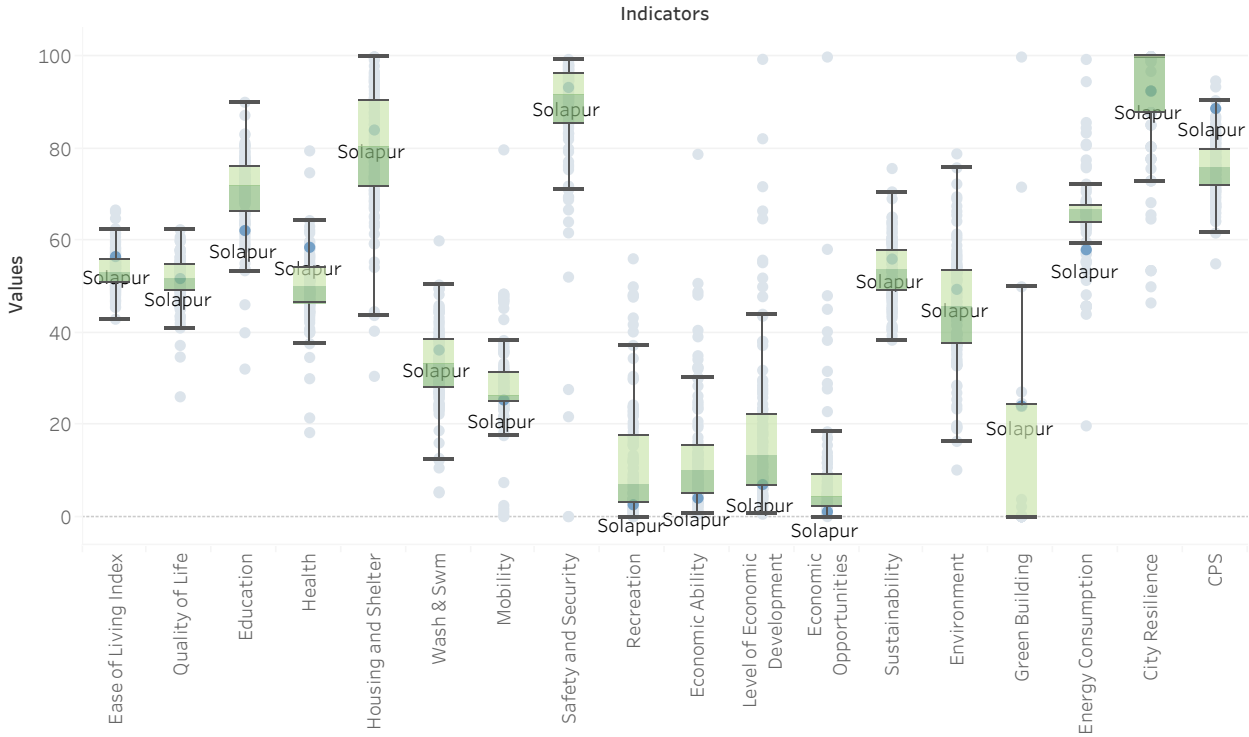
Solapur

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

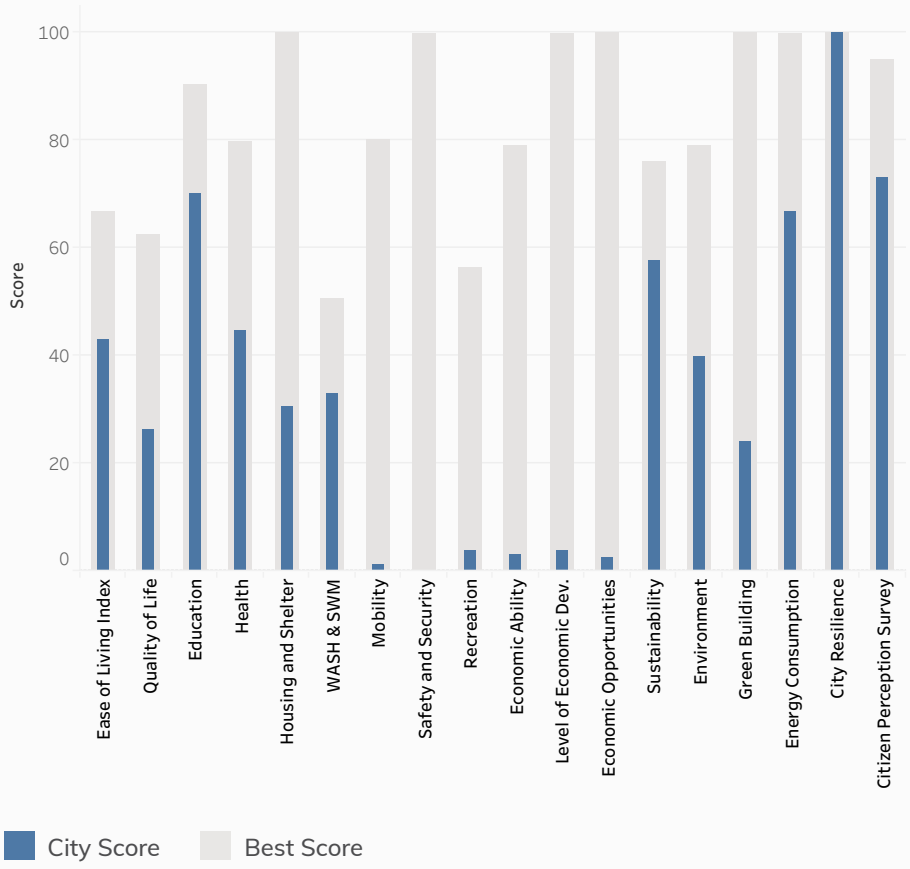


Rank
49

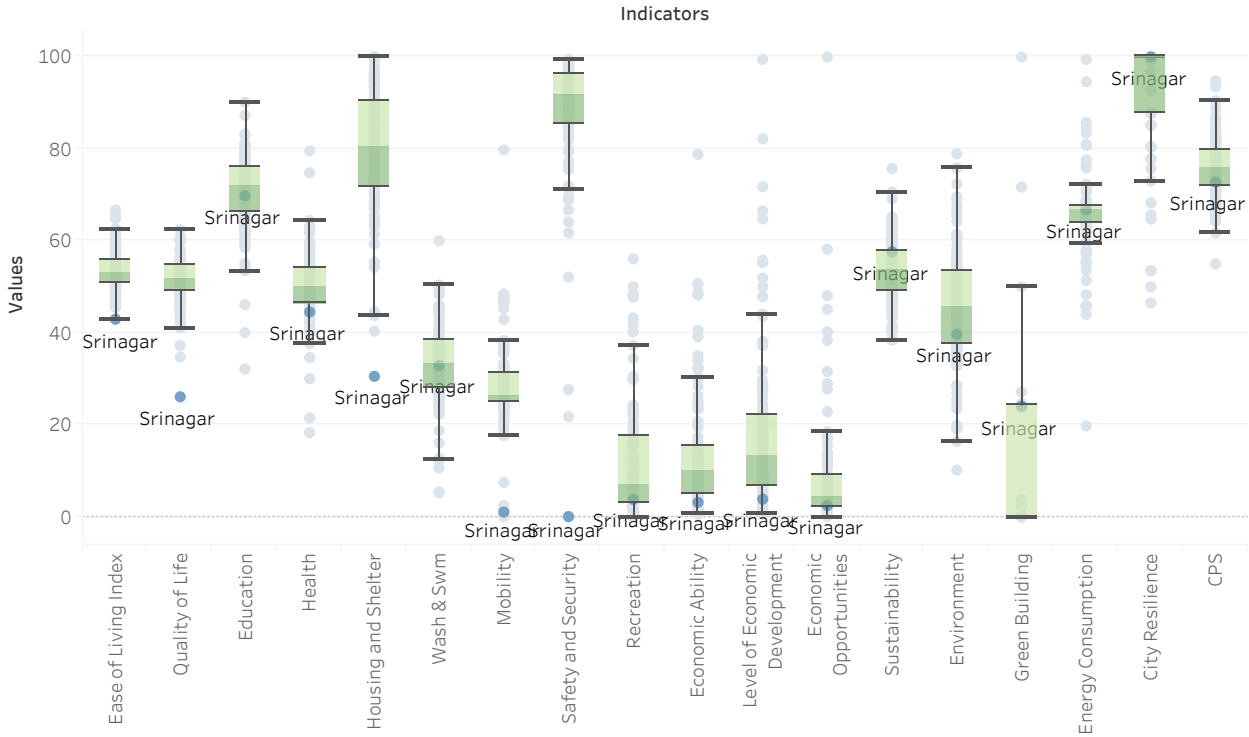
Srinagar

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

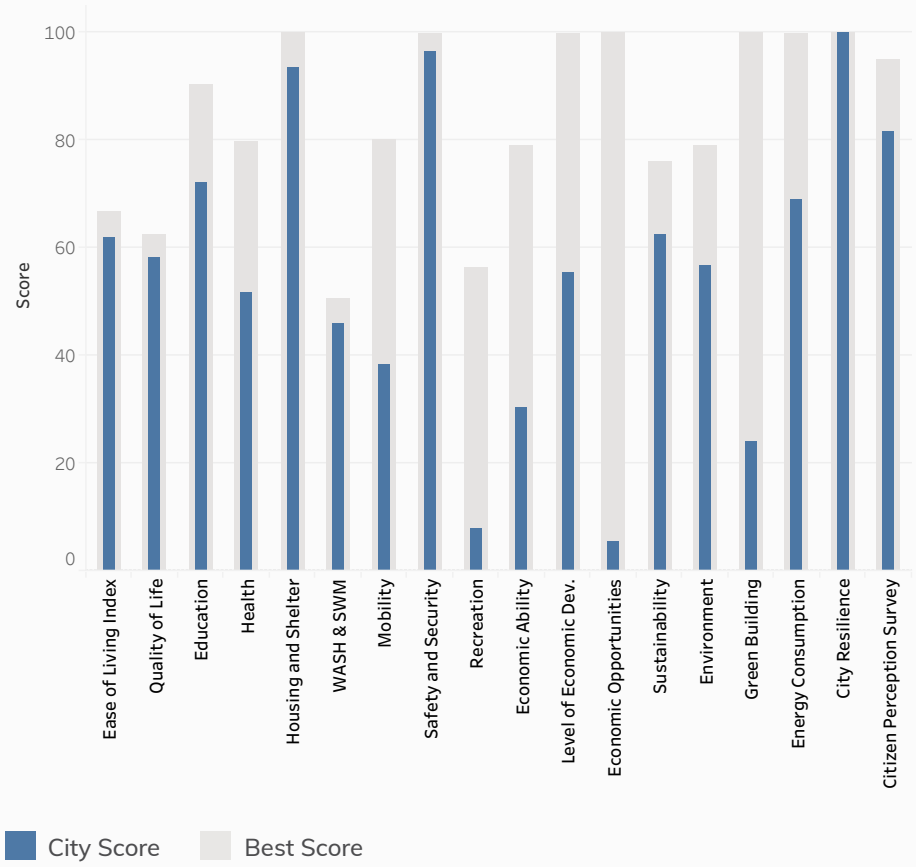


Rank
05

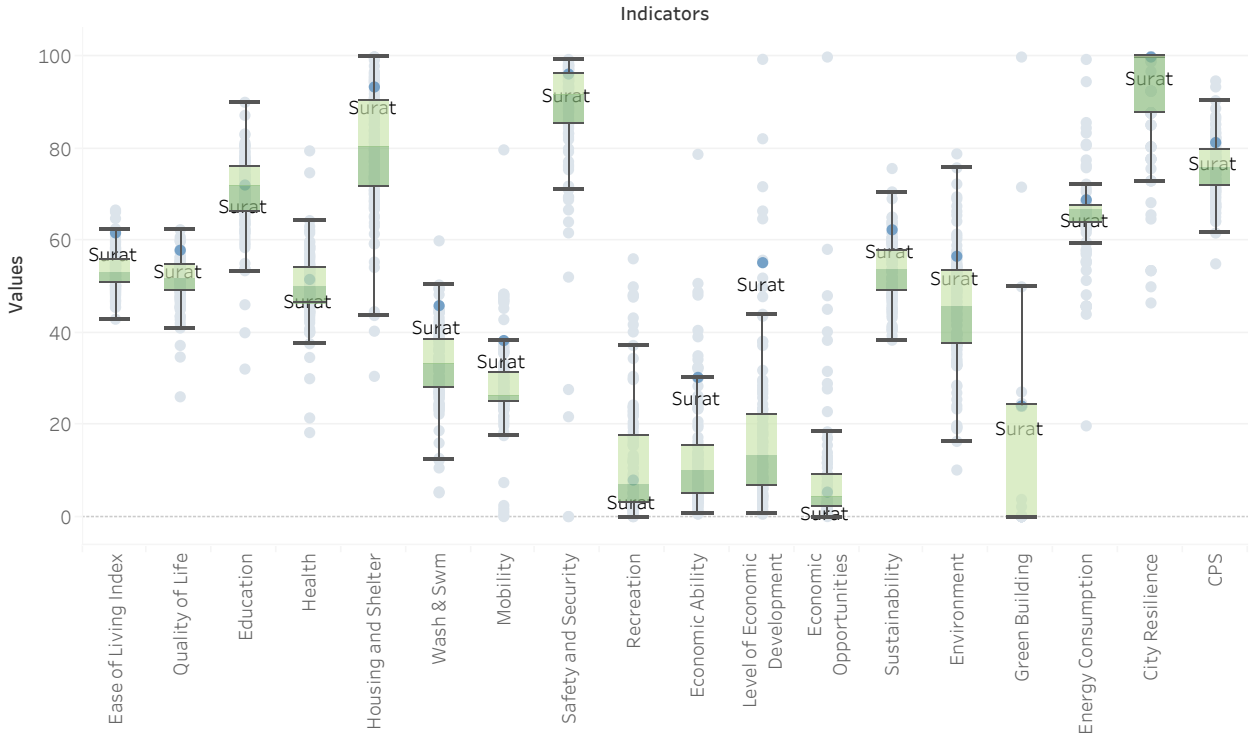
Surat

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

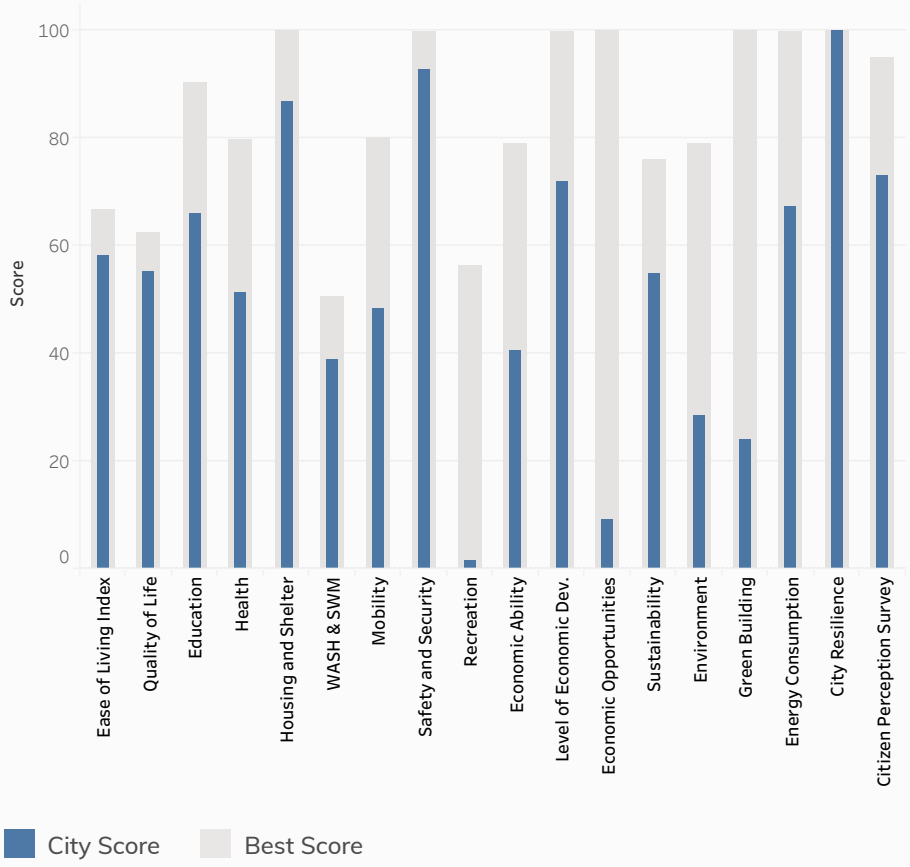


Rank
11

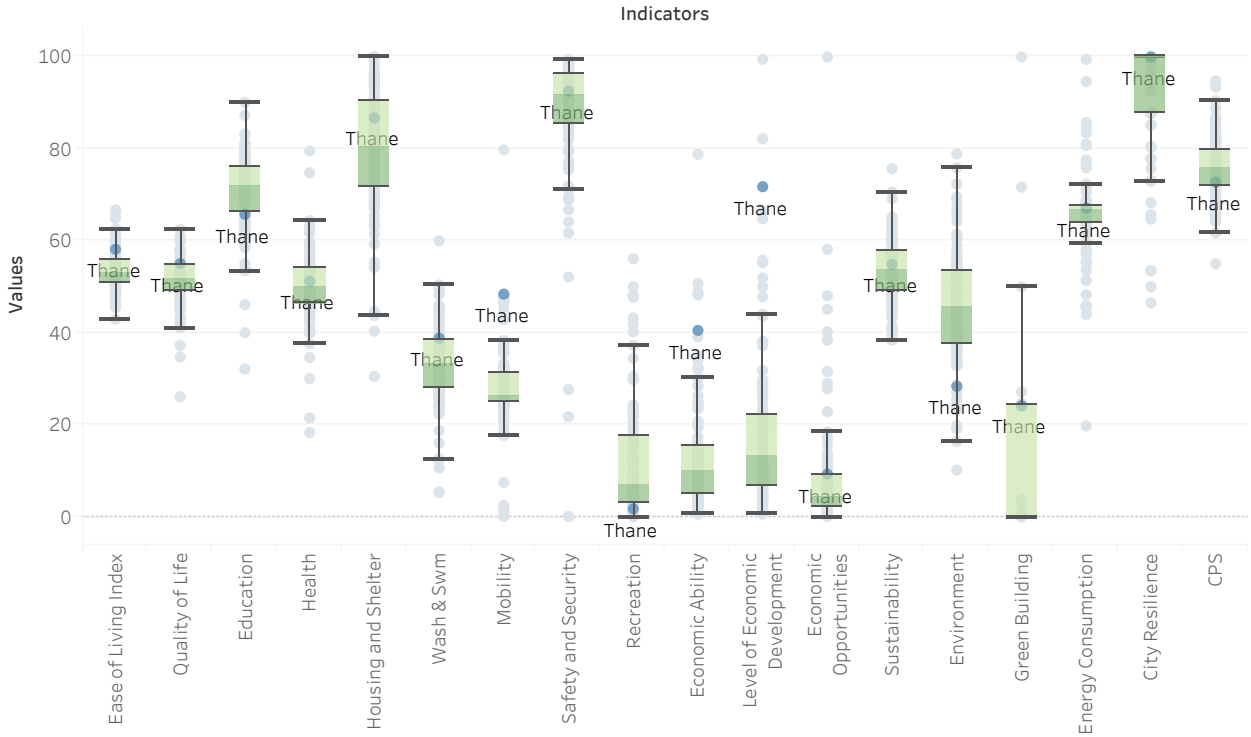
Thane

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

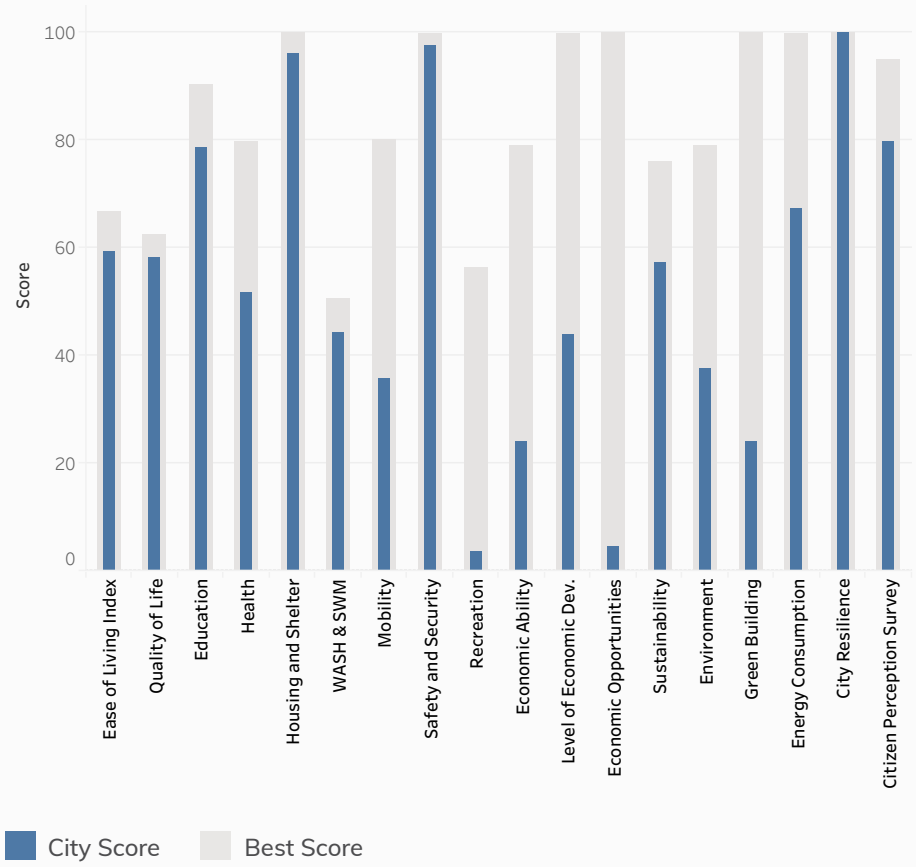


Rank
08

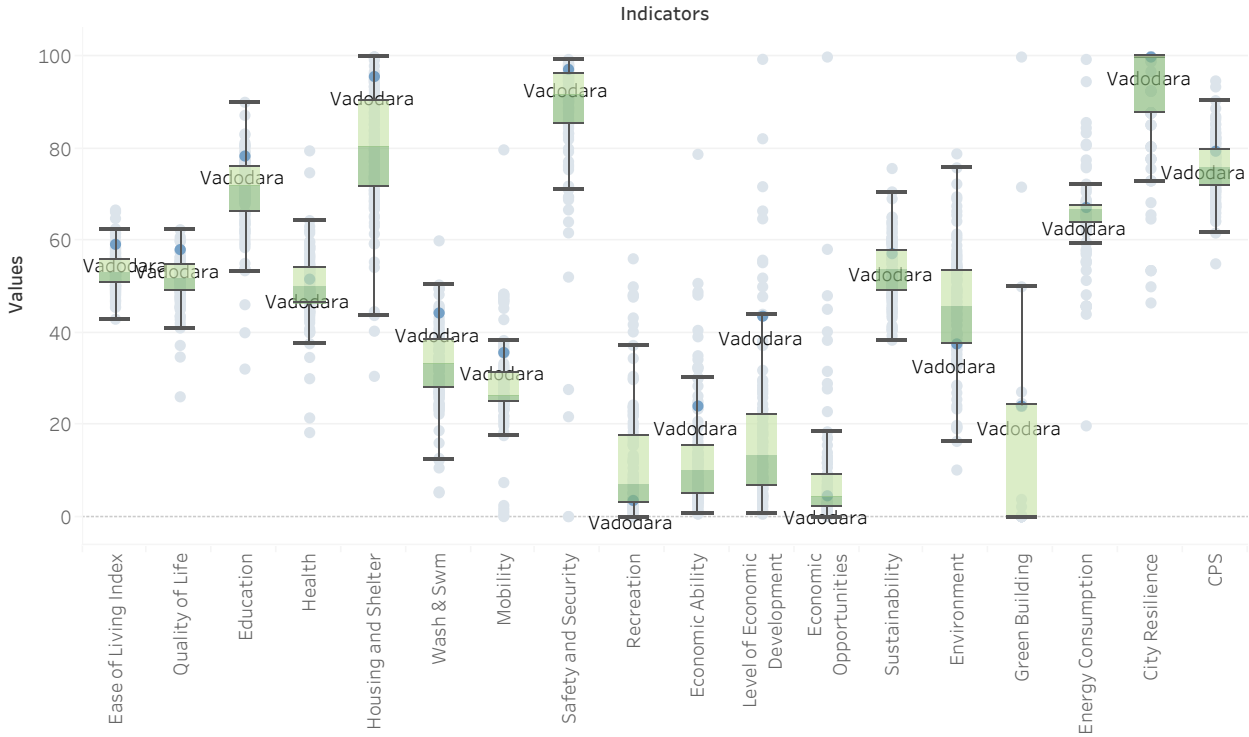
Vadodara

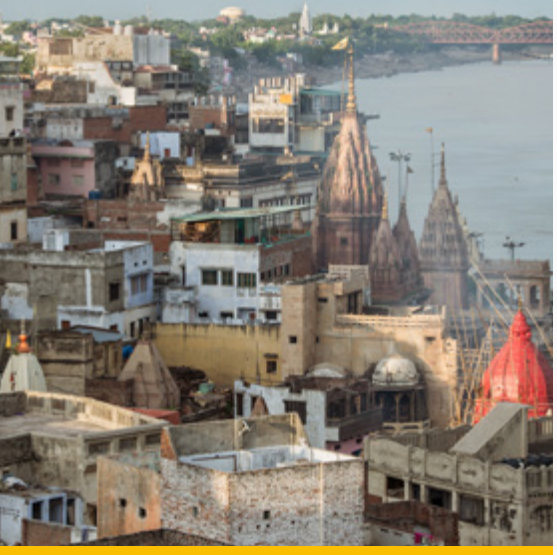
Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities



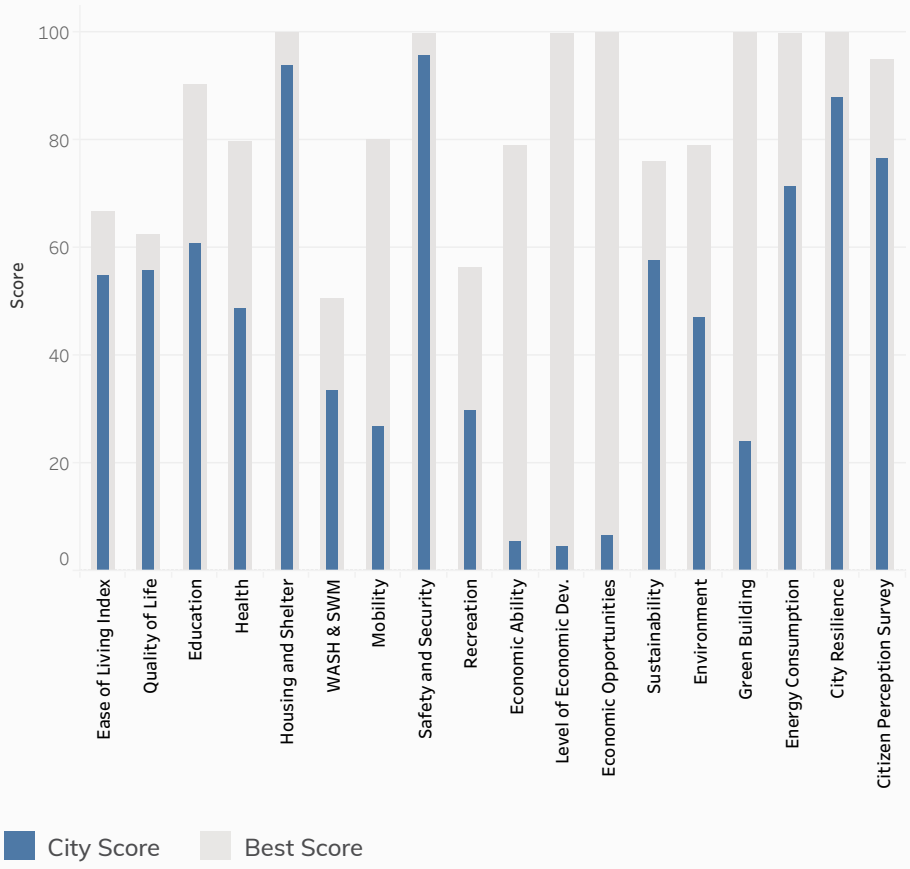


Rank
27

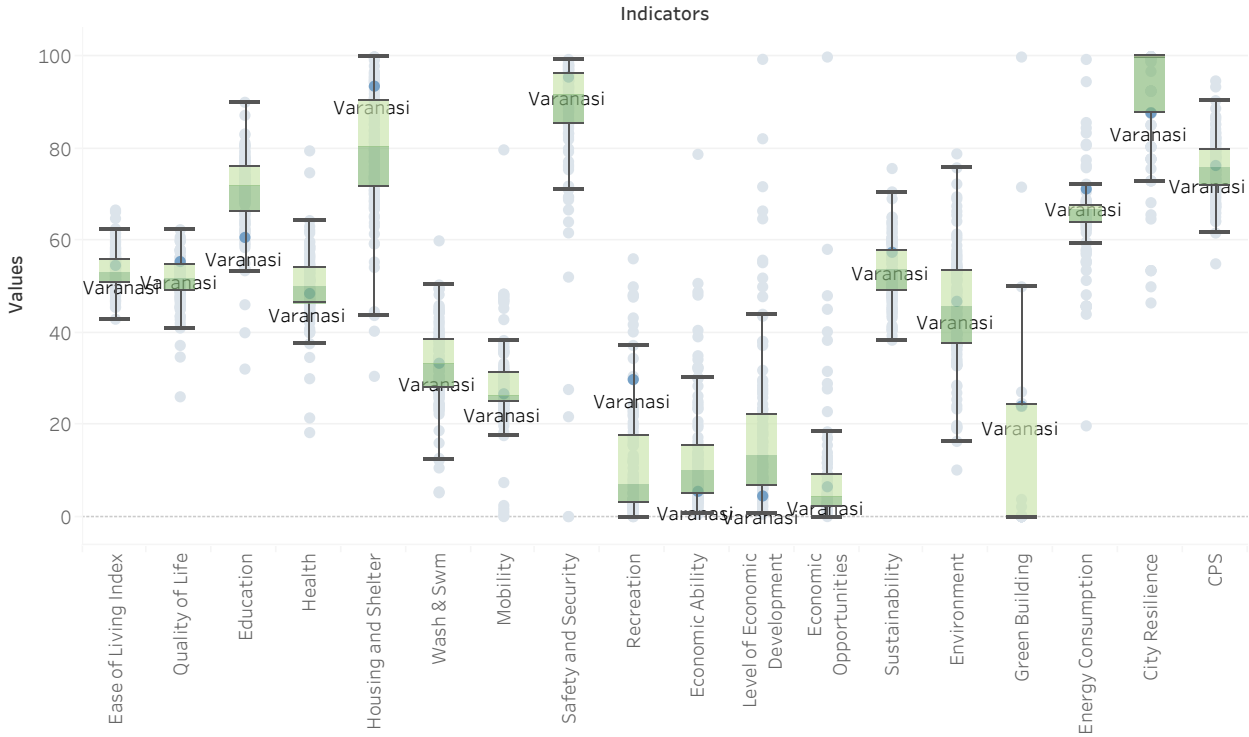
Varanasi

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

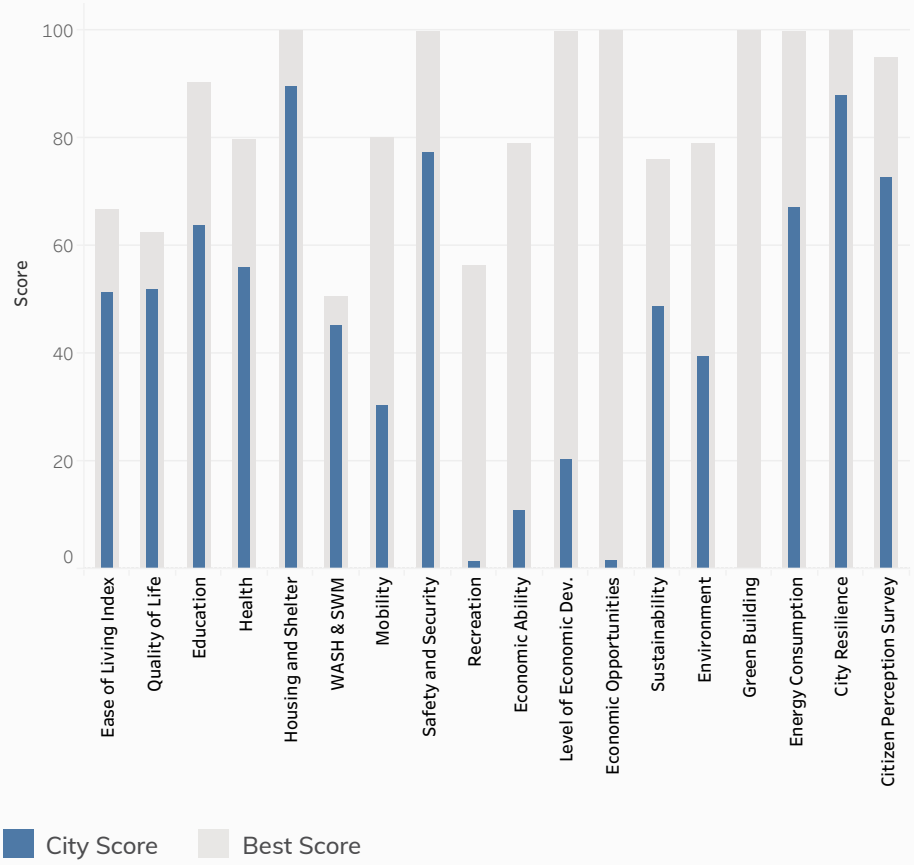


Rank
39

Vasai Virar

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

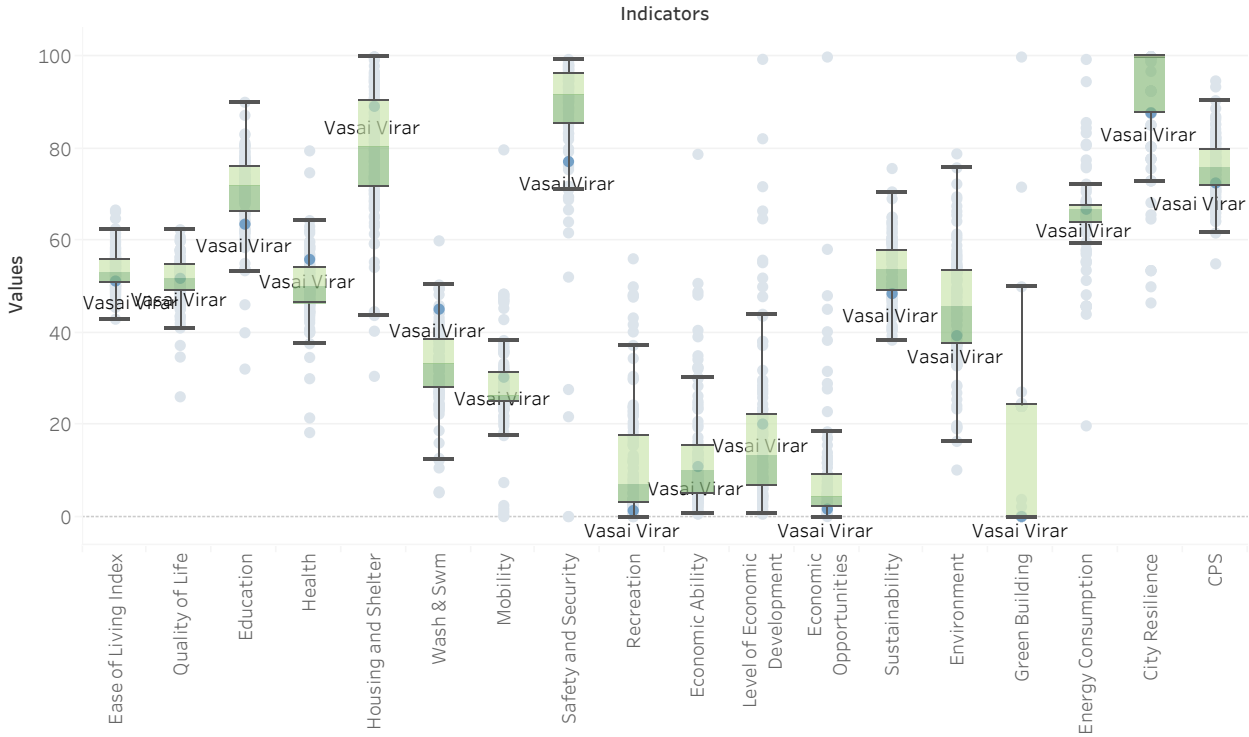


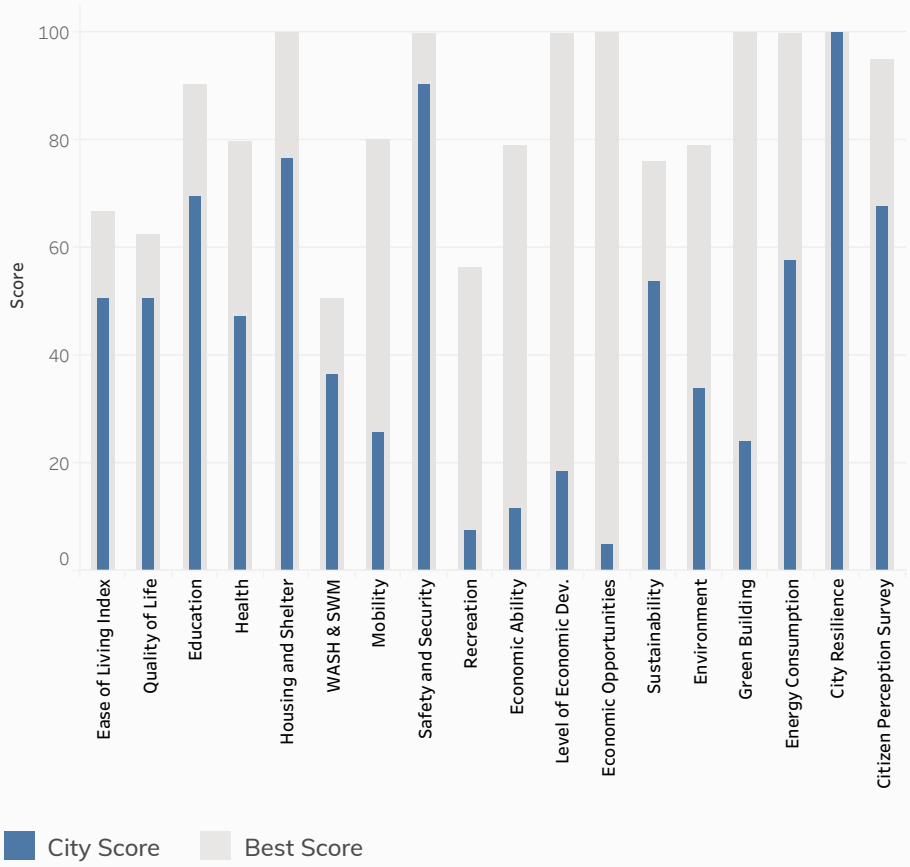
Image Source: https://oc.wikipedia.org/wiki/Fichi%C3%A8r:JivDani,Virar_-_panoramio_(35).jpg

Rank
41

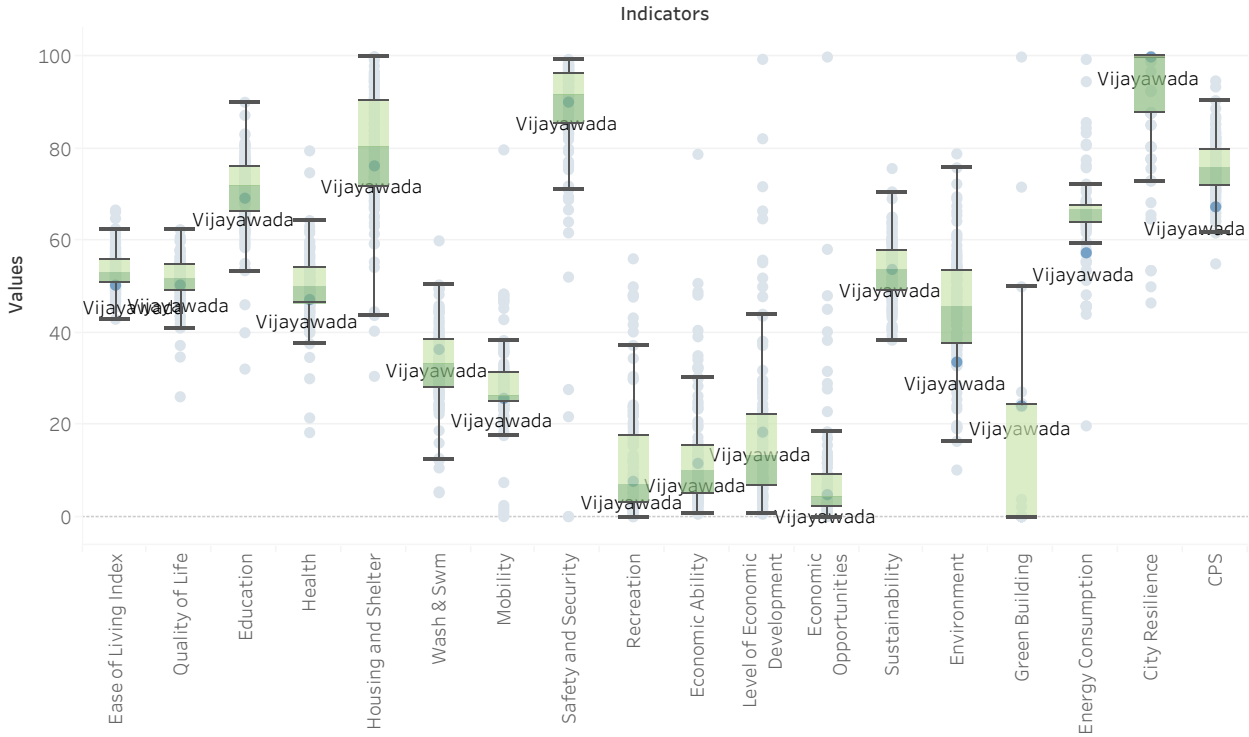
Vijayawada

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

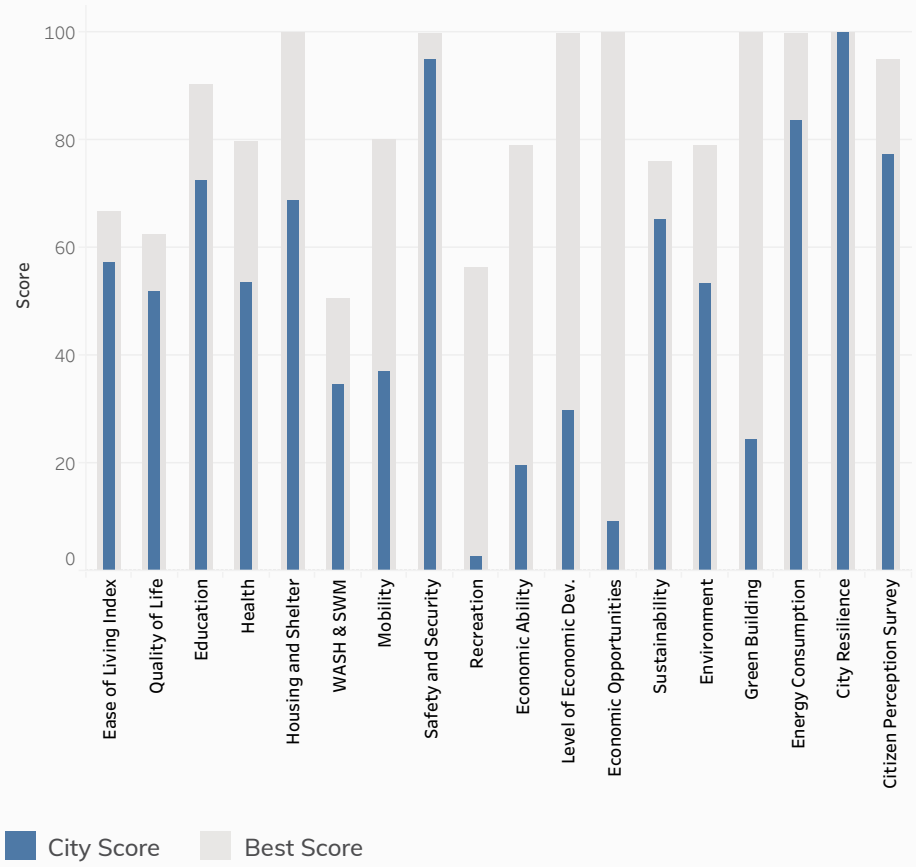


Rank
15

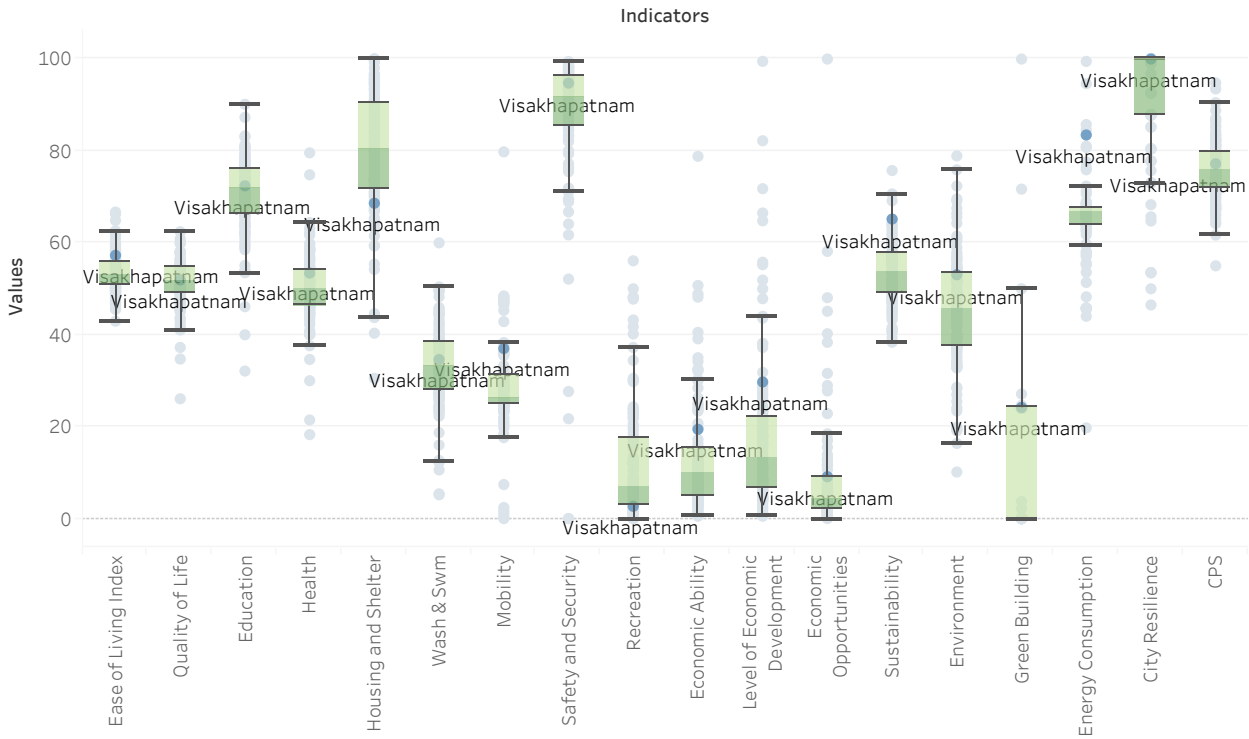
Visakhapatnam

Category: Million+

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities



City Profiles

Less than Million

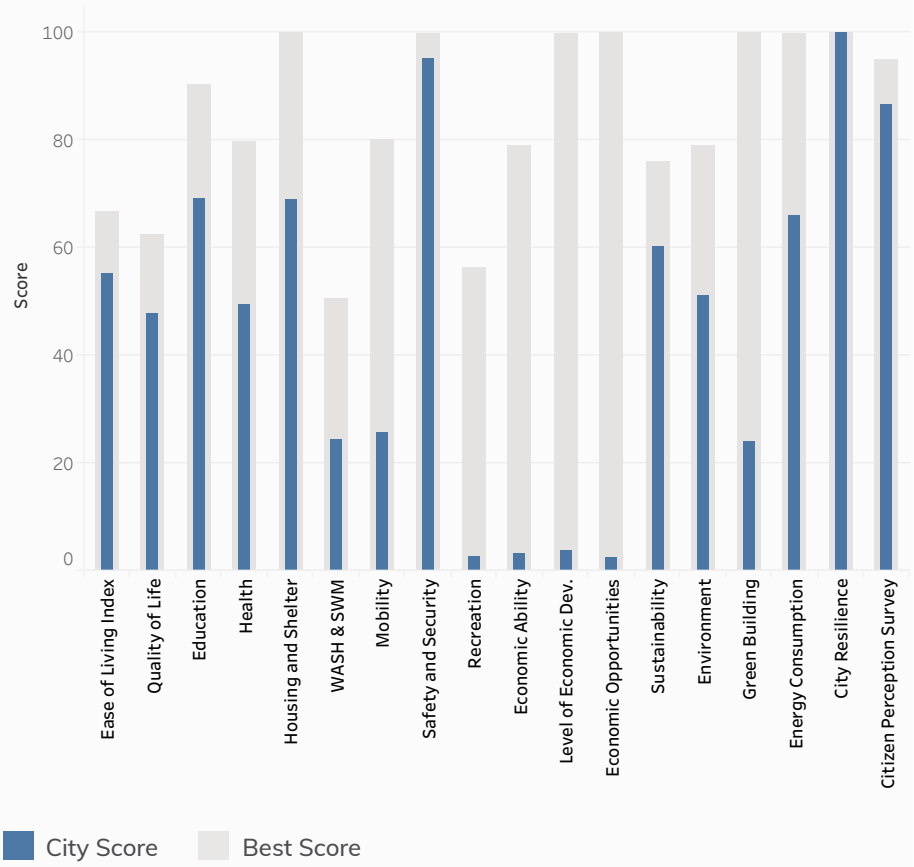
(cities with **less than a million** population)

Rank
11

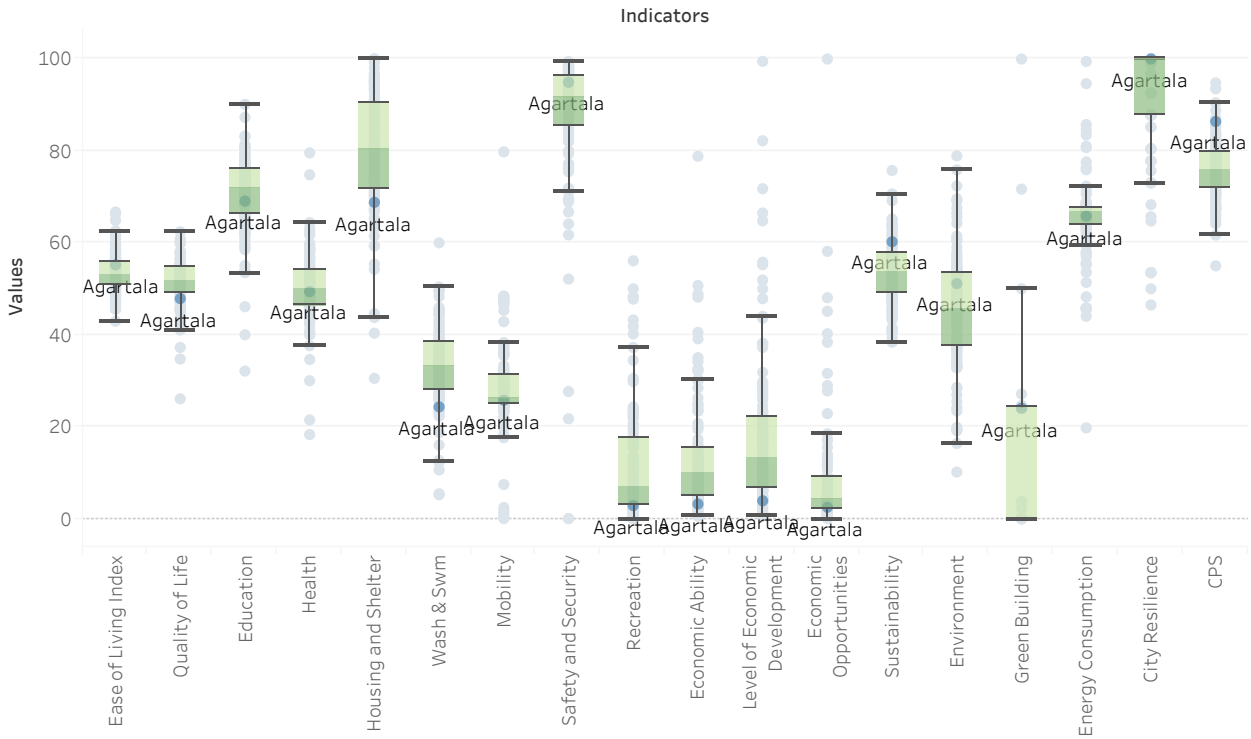
Agartala

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

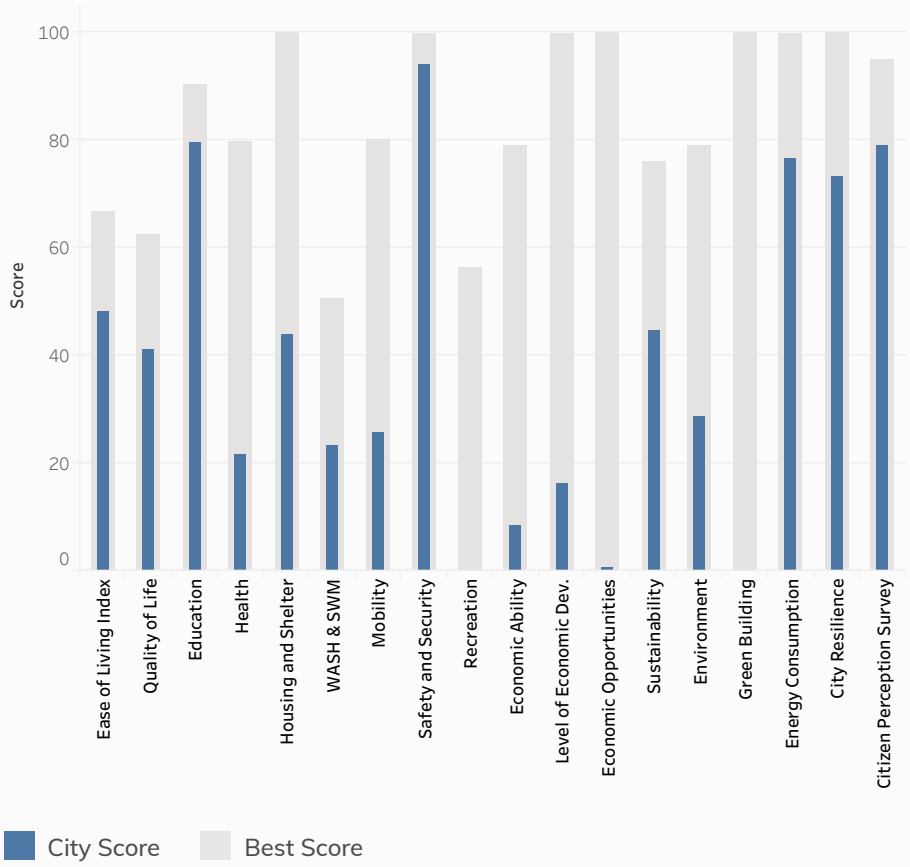


Rank
57

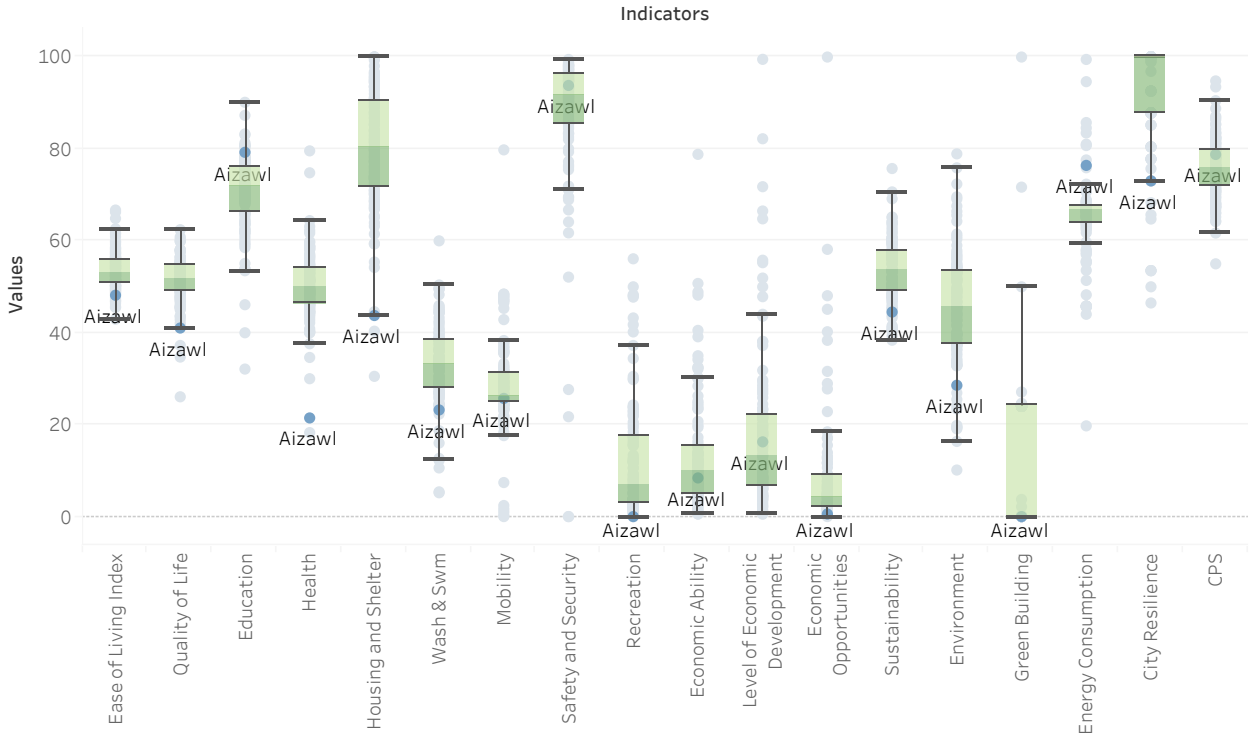
Aizawl

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

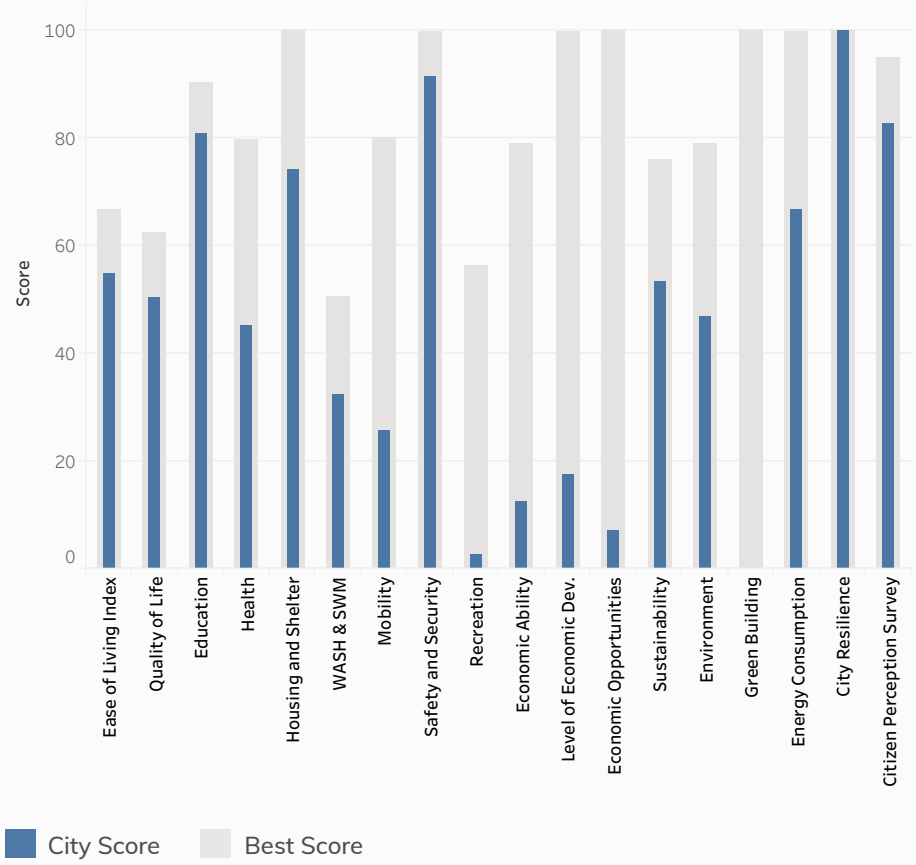


Rank
12

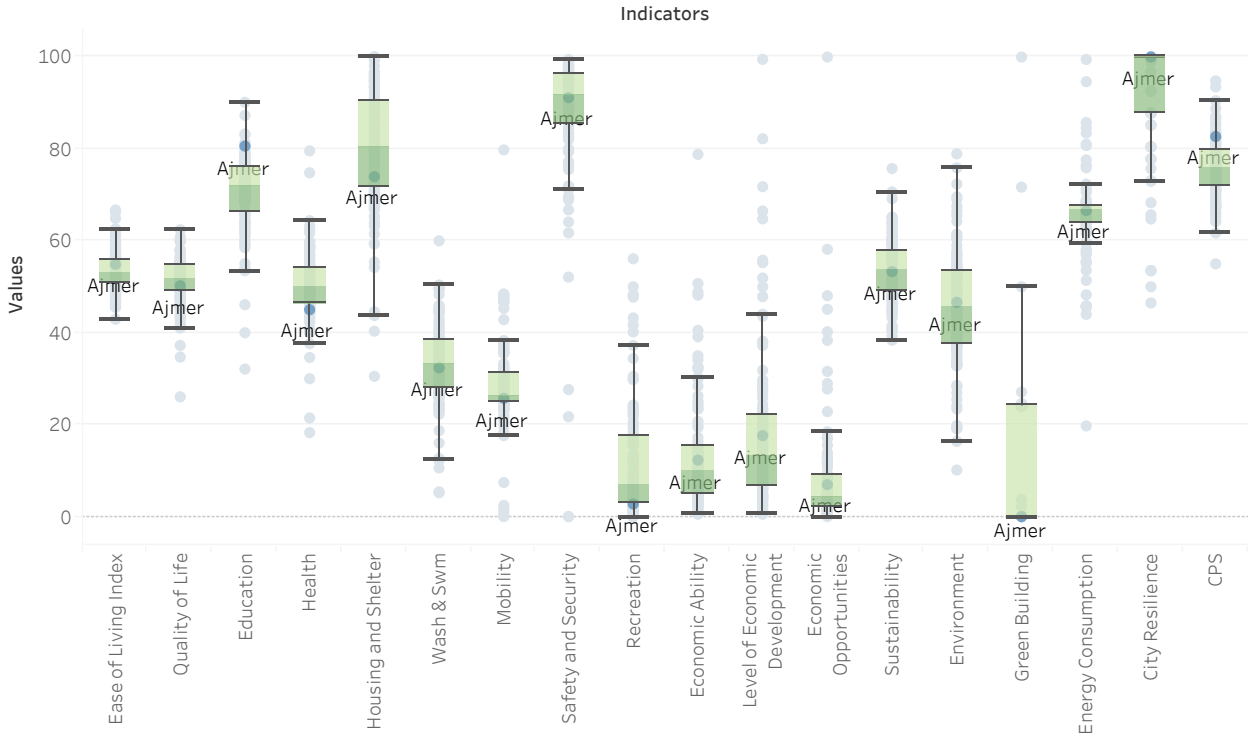
Ajmer

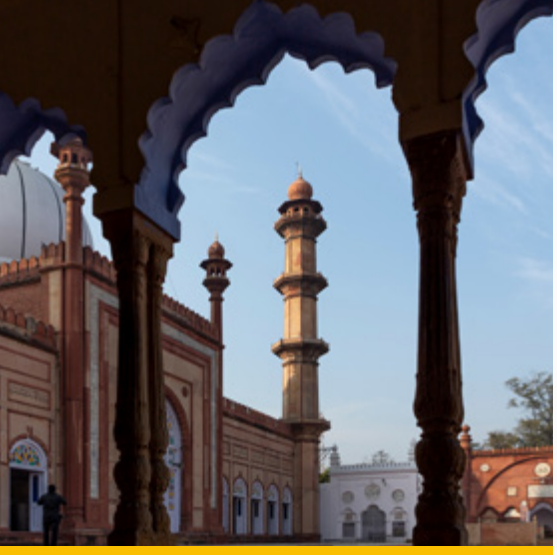
Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities



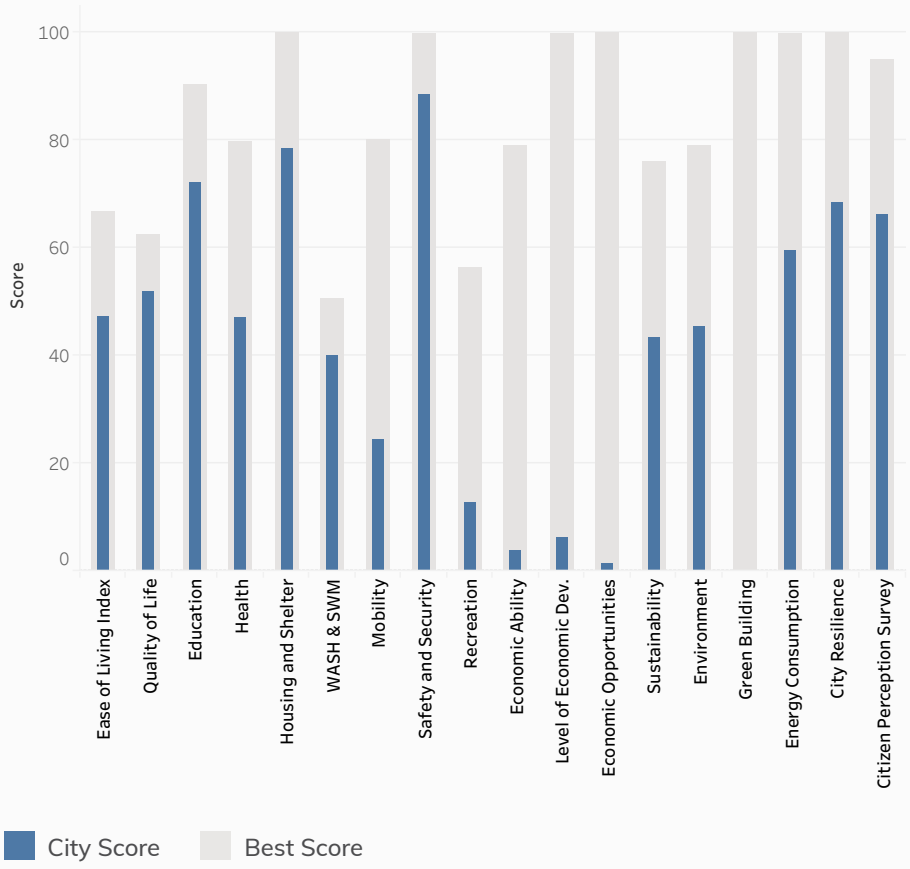


Rank
58

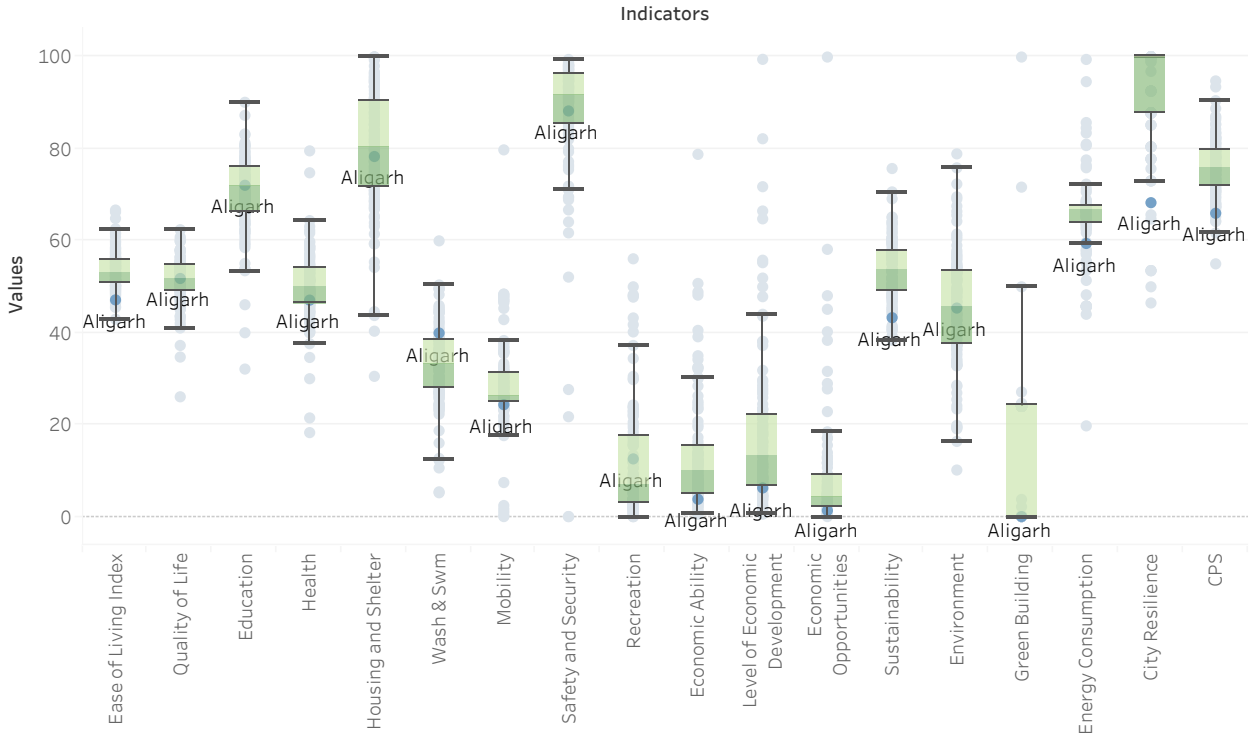
Aligarh

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

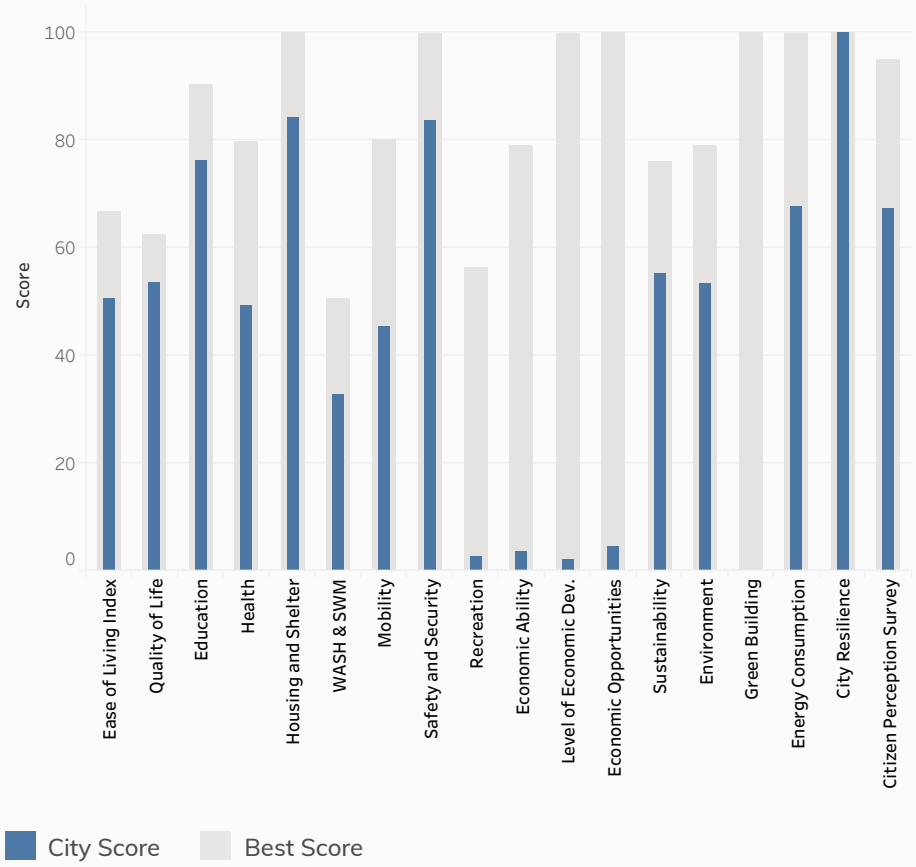


Rank
45

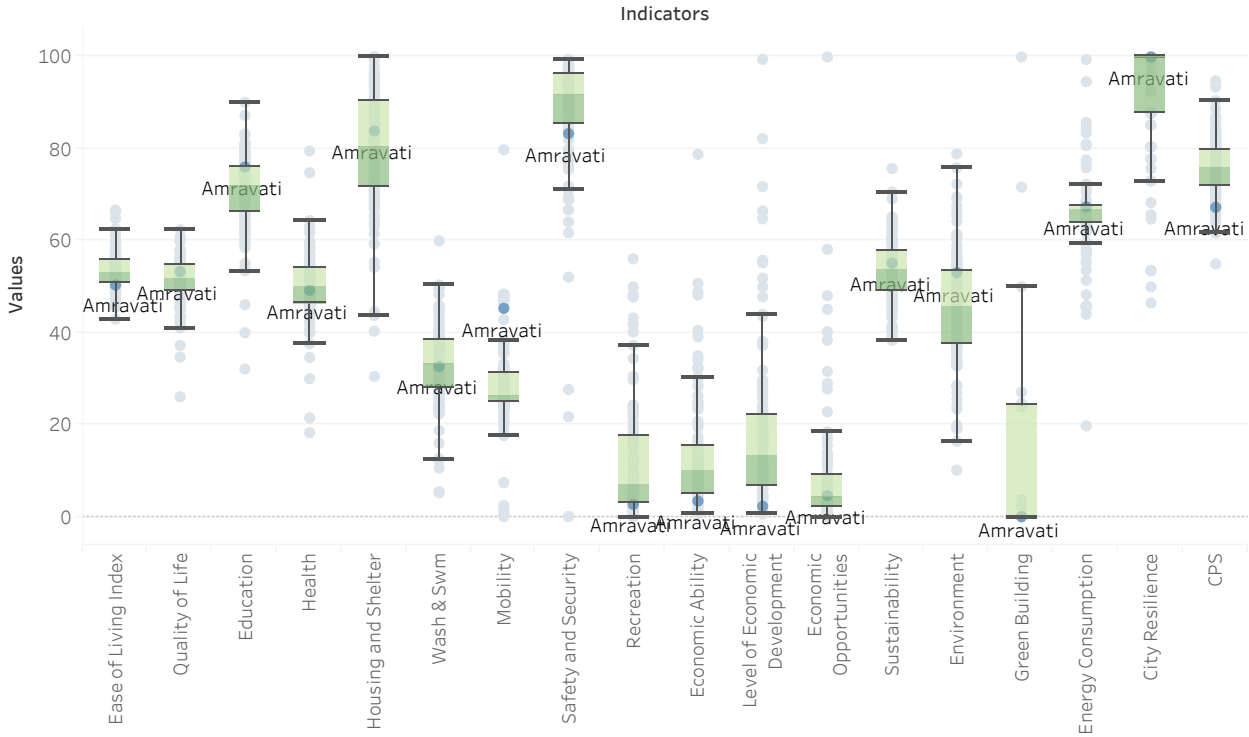
Amravati

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

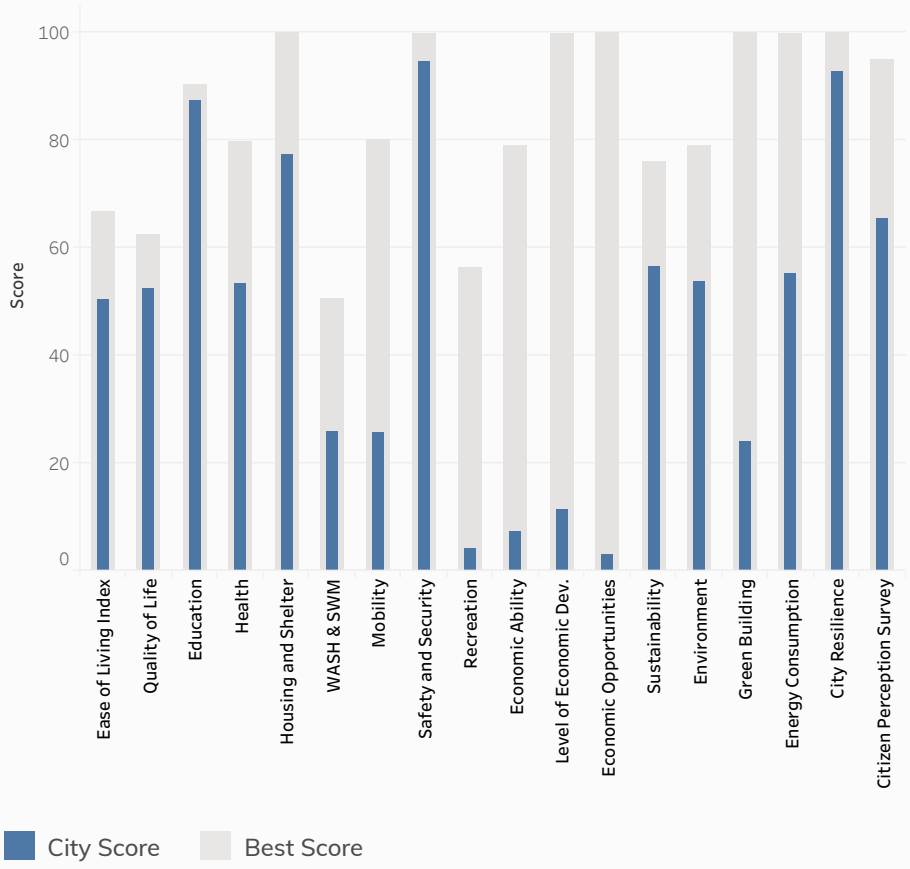


Rank
48

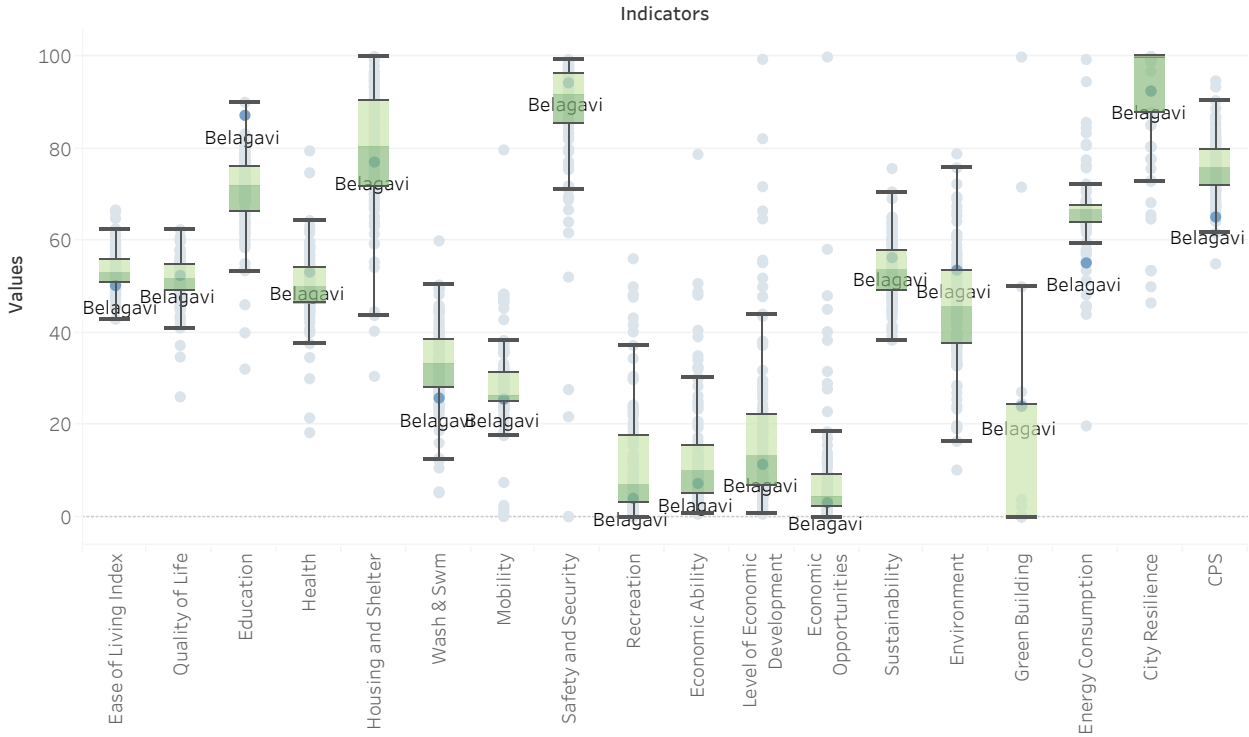
Belagavi

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

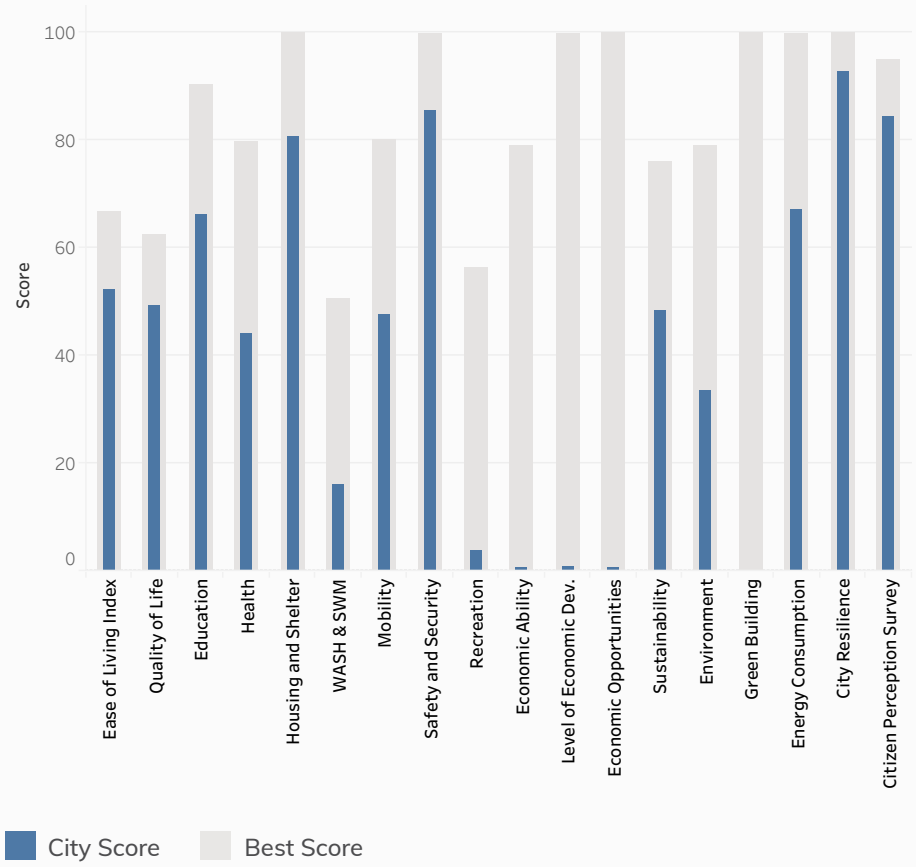


Rank
30

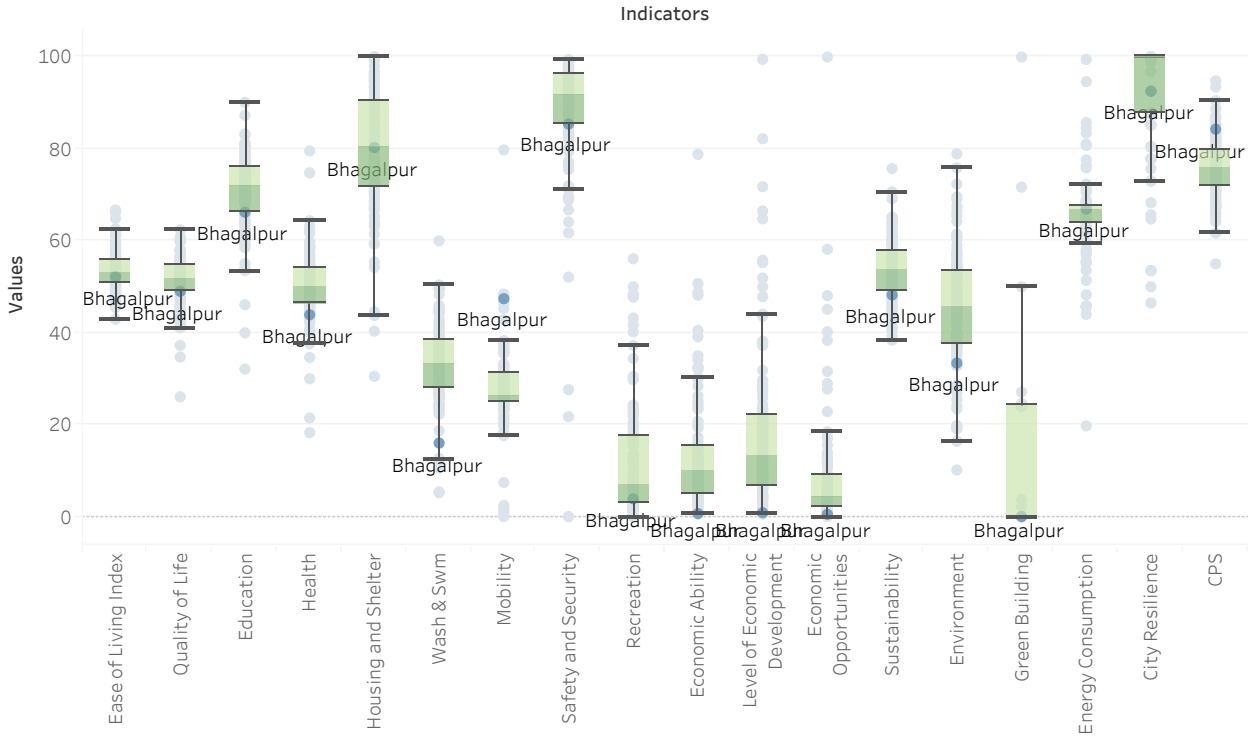
Bhagalpur

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

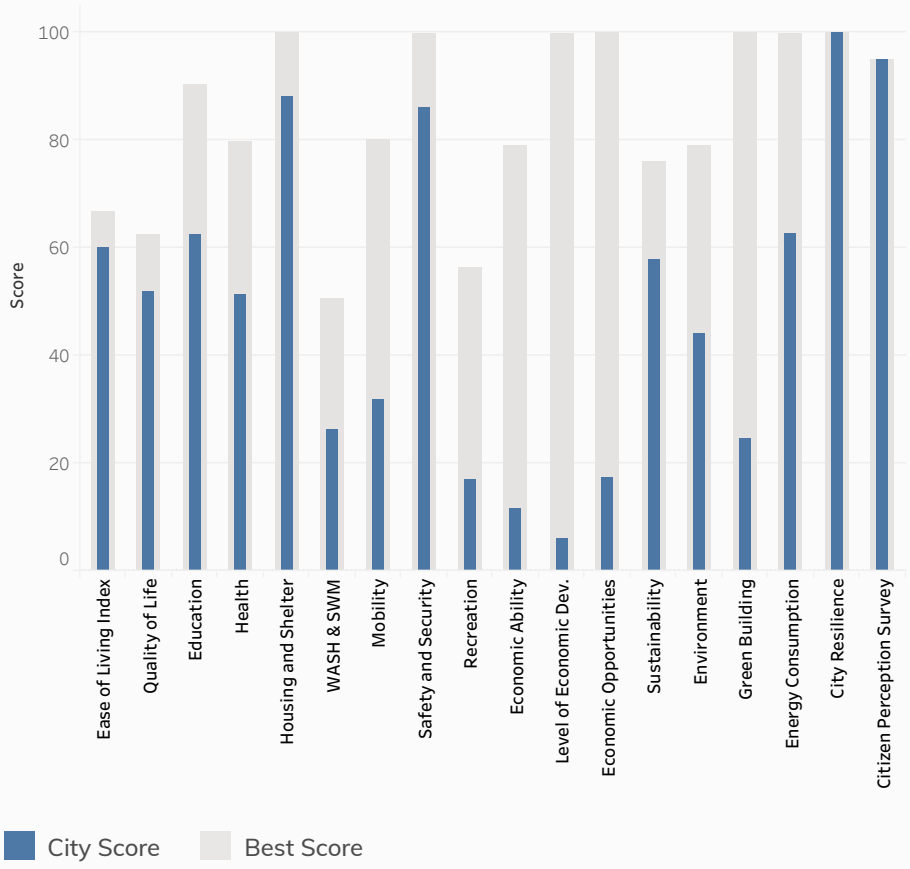


Rank
02

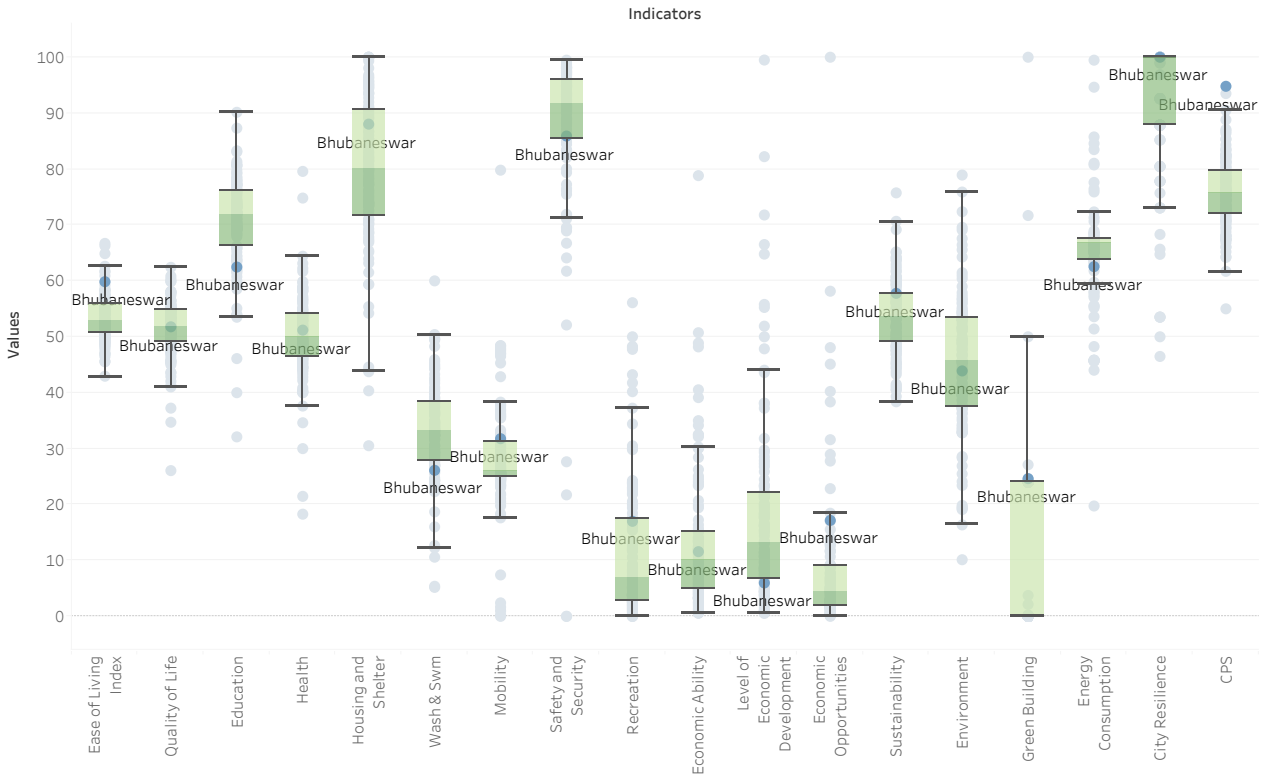
Bhubaneswar

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

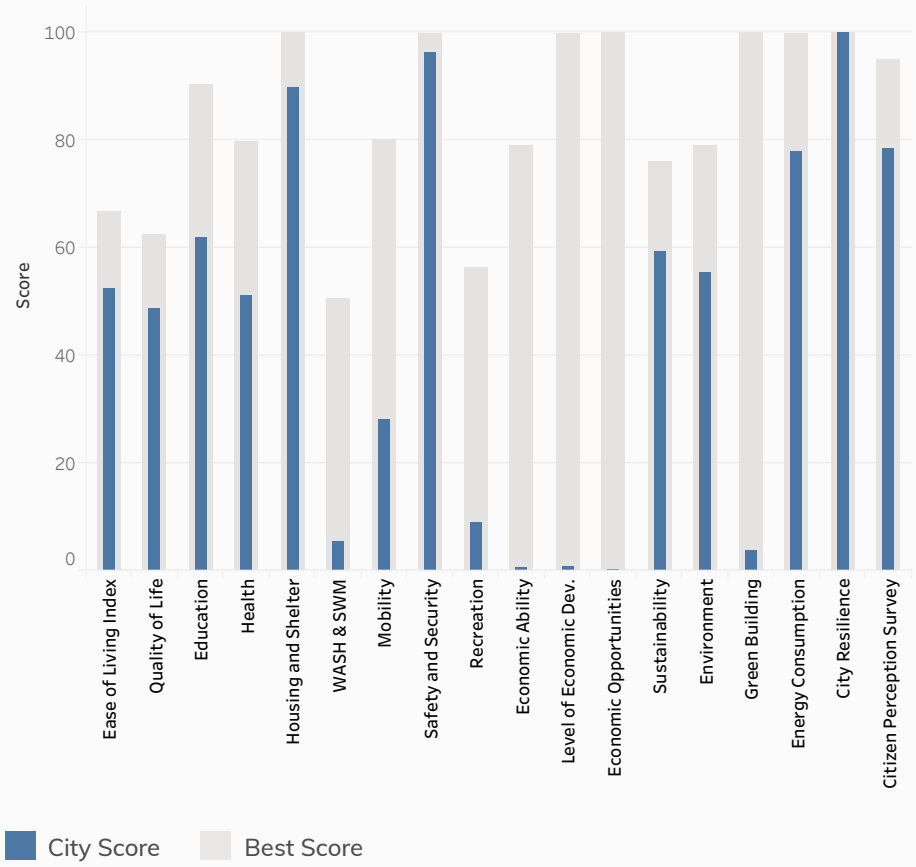


Rank
28

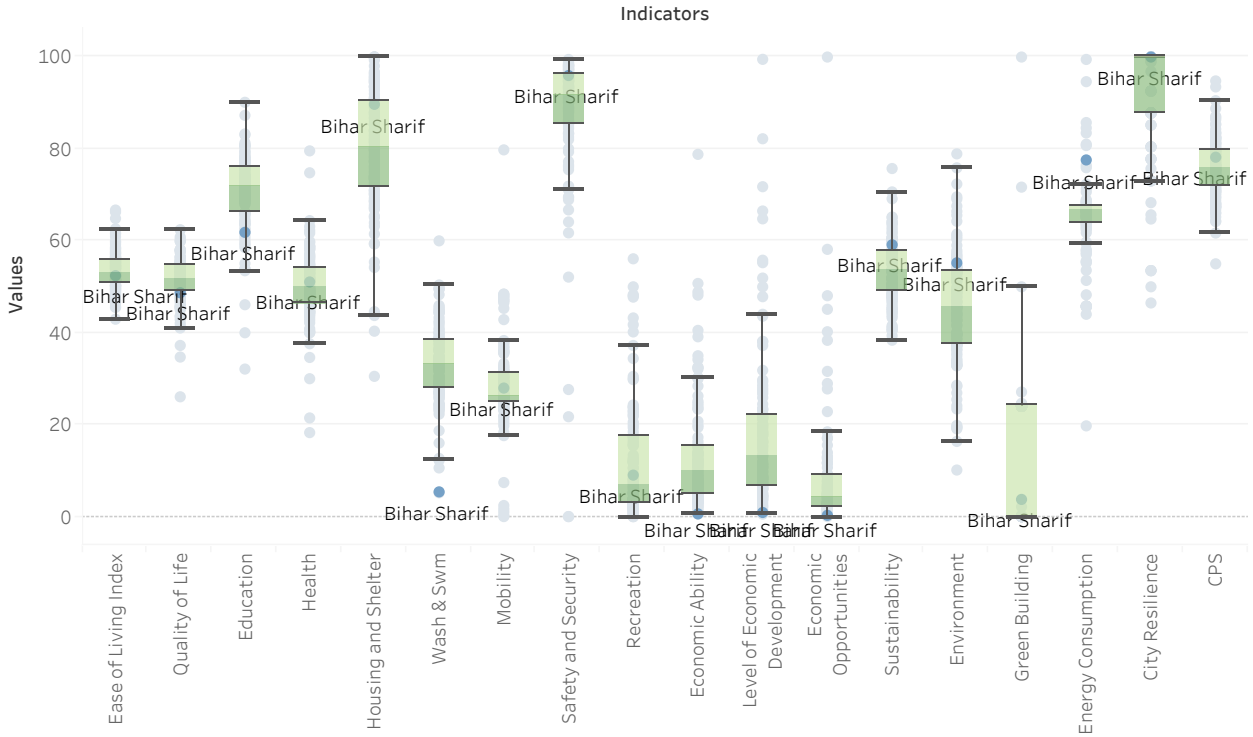
Bihar Sharif

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

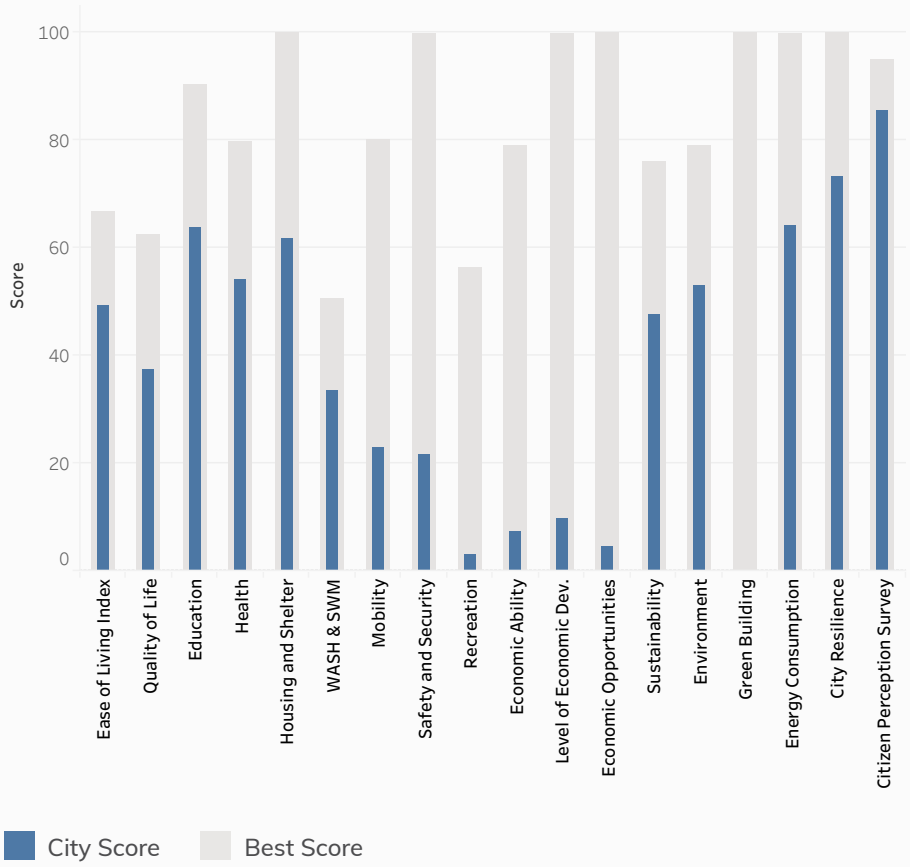


Rank
52

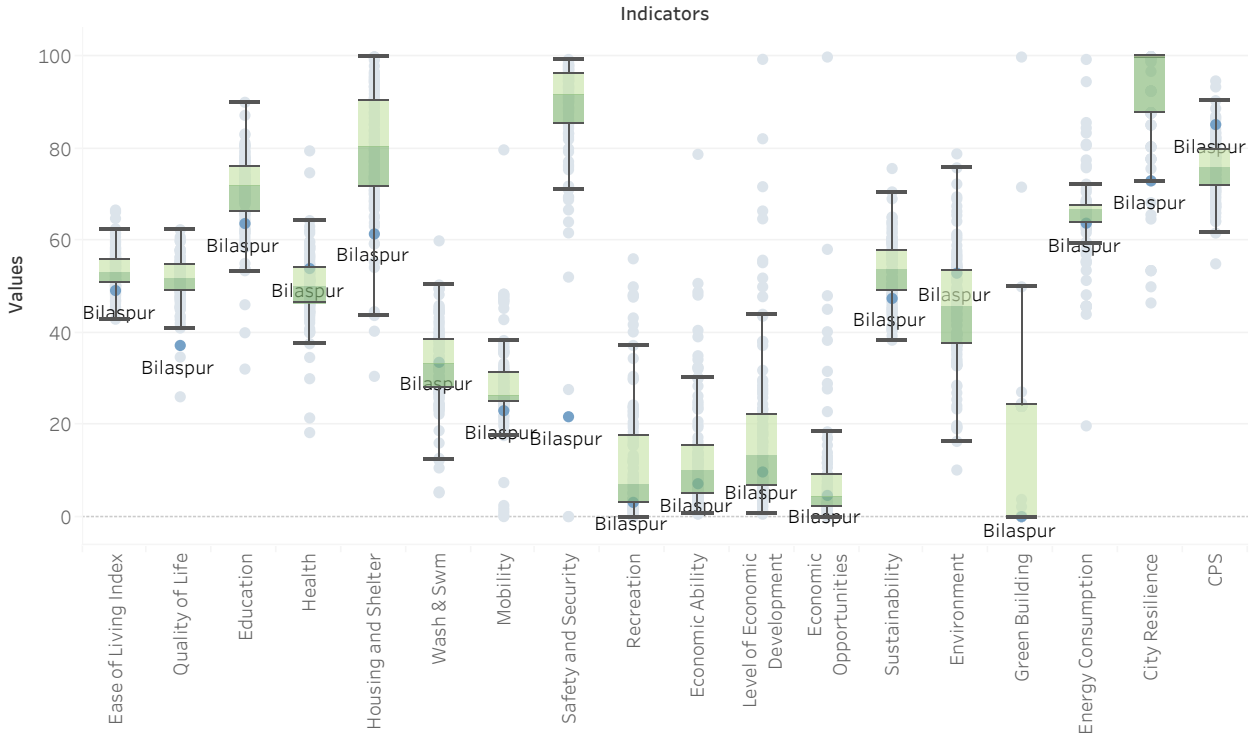
Bilaspur

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

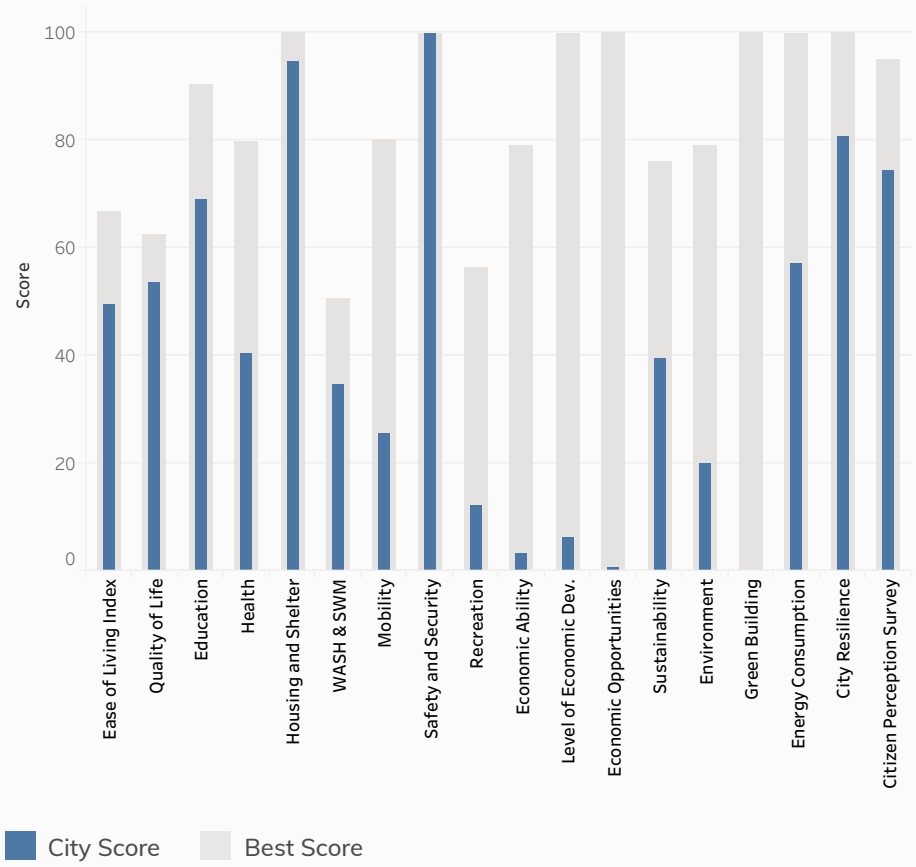


Rank
51

Dahod

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

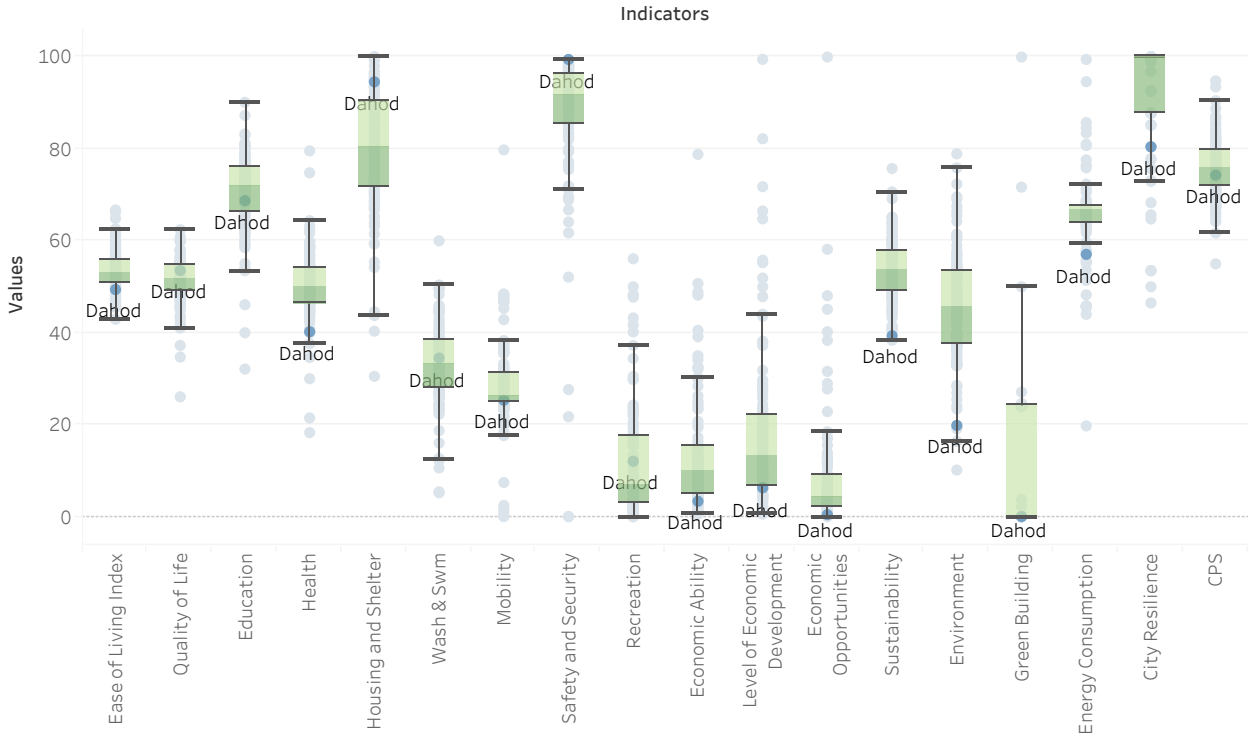


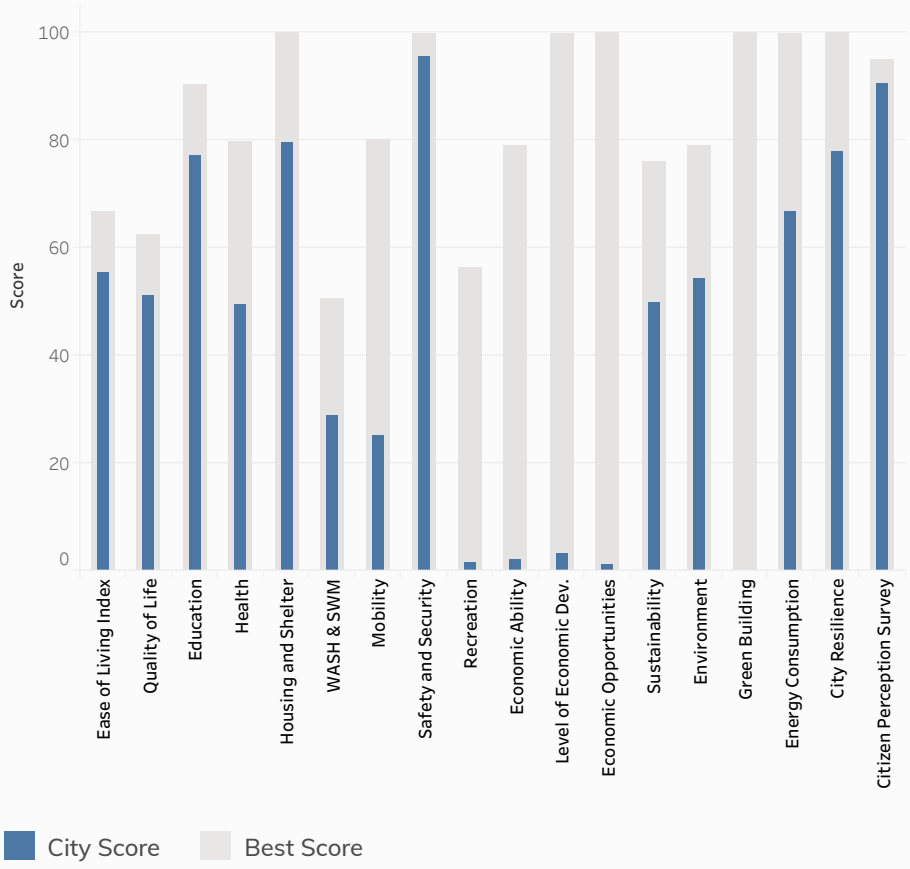
Image Source: https://en.wikipedia.org/wiki/File:Dahod_Bus_stand.jpg

Rank
09

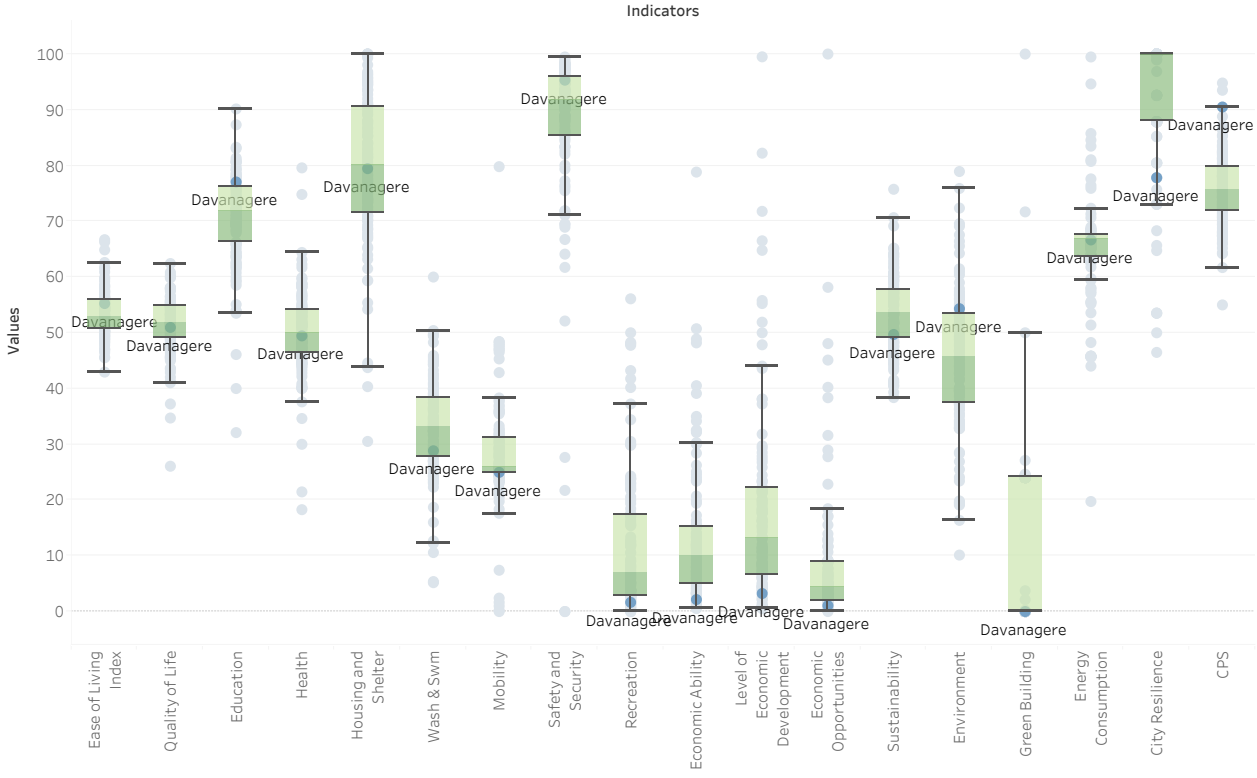
Davanagere

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

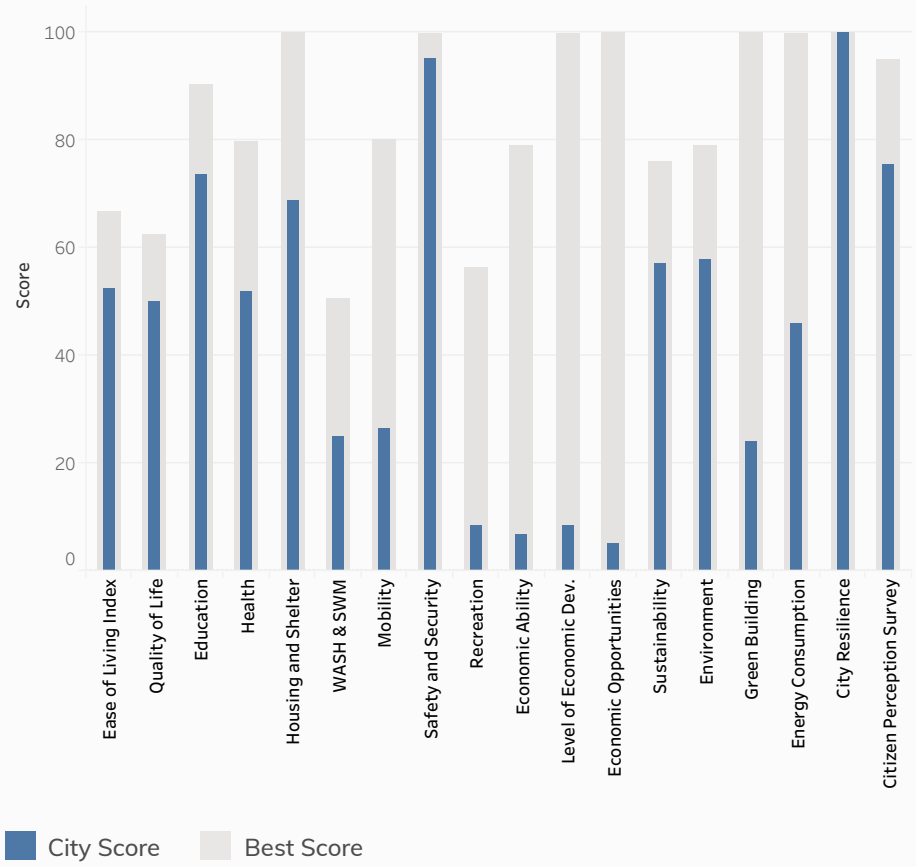


Rank
29

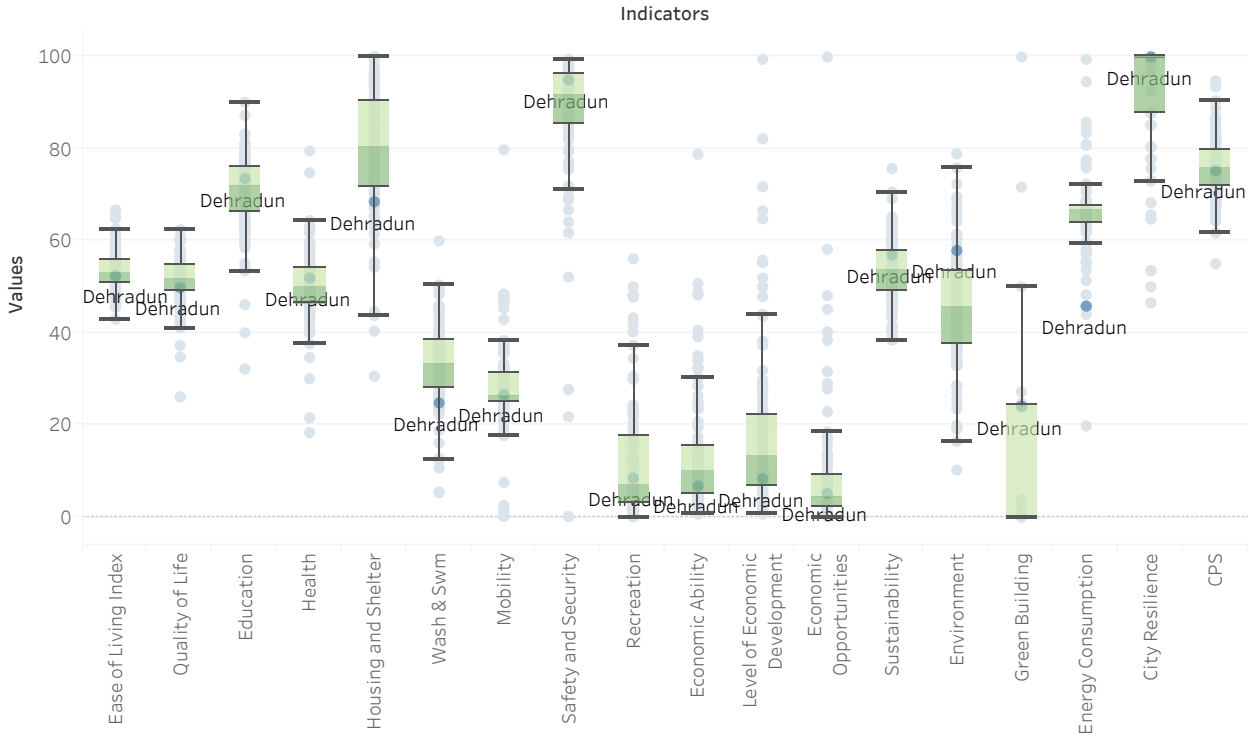
Dehradun

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

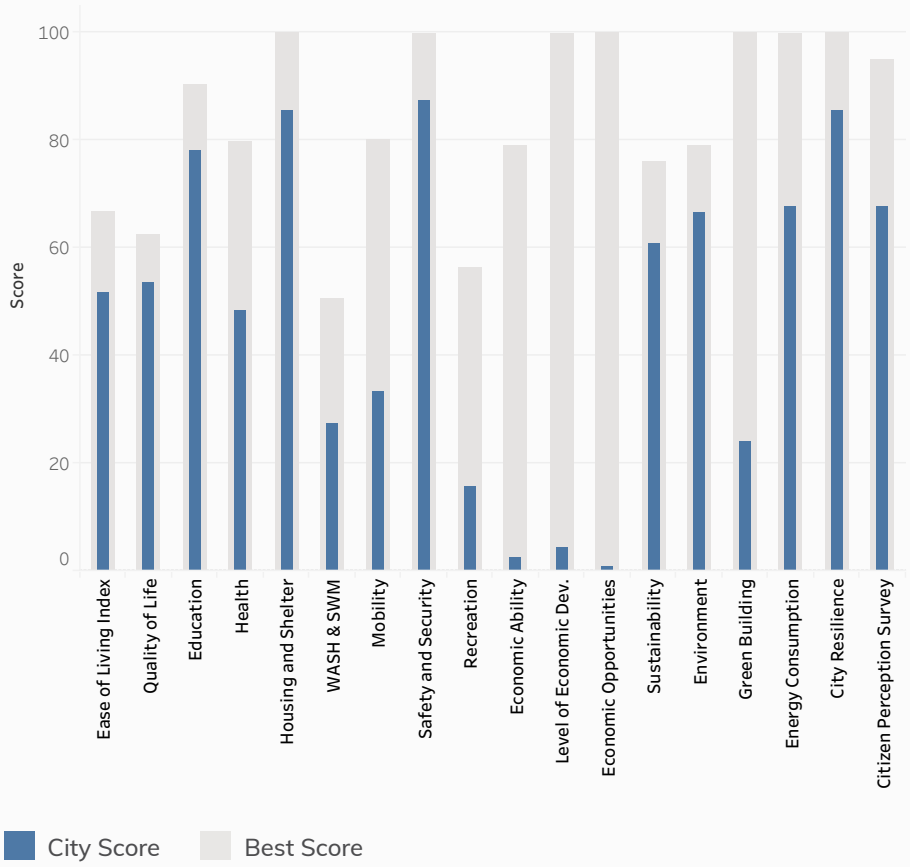


Rank
37

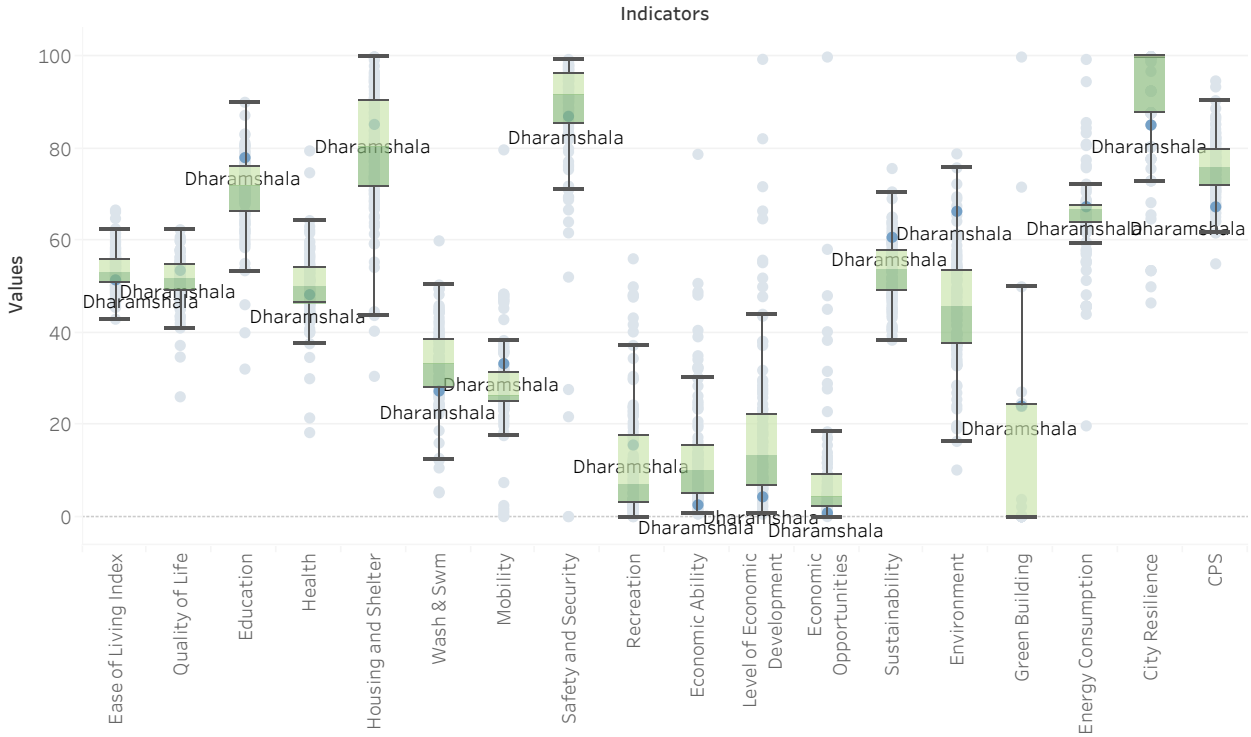
Dharamshala

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

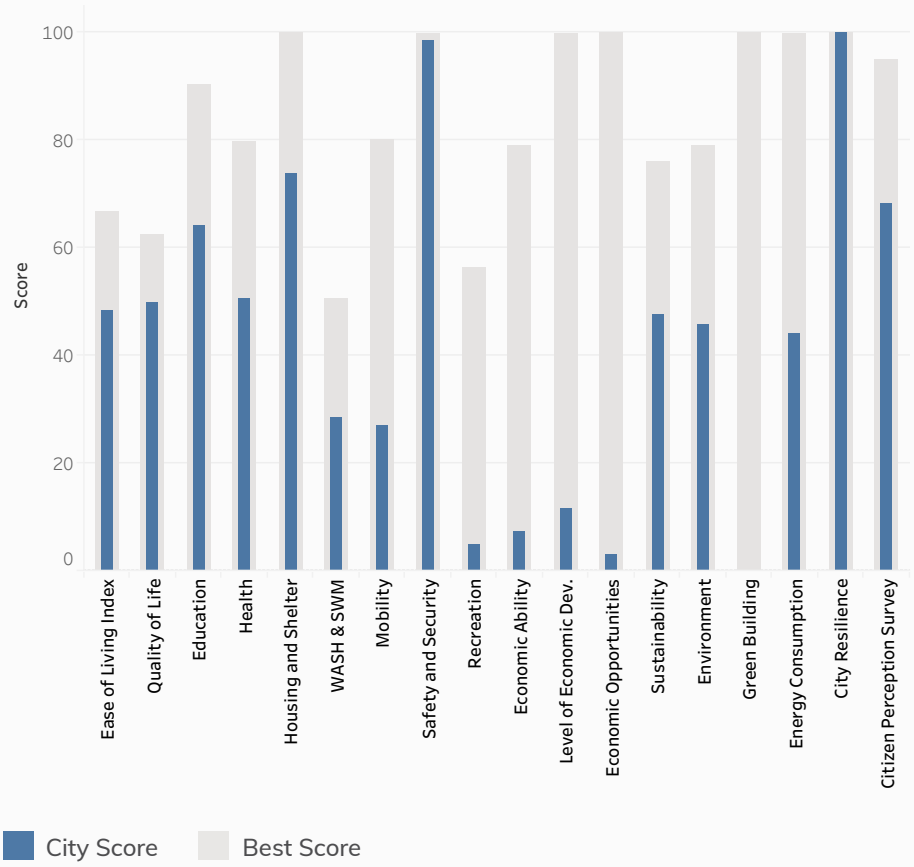


Rank
56

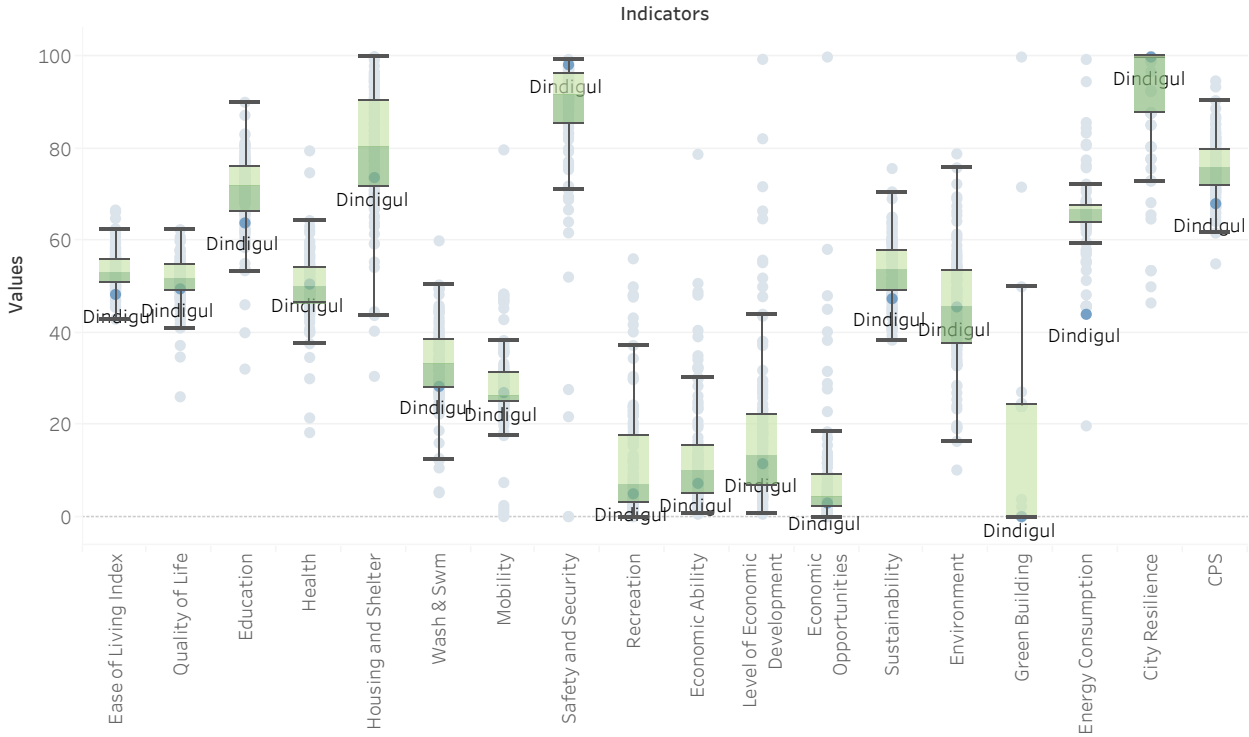
Dindigul

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

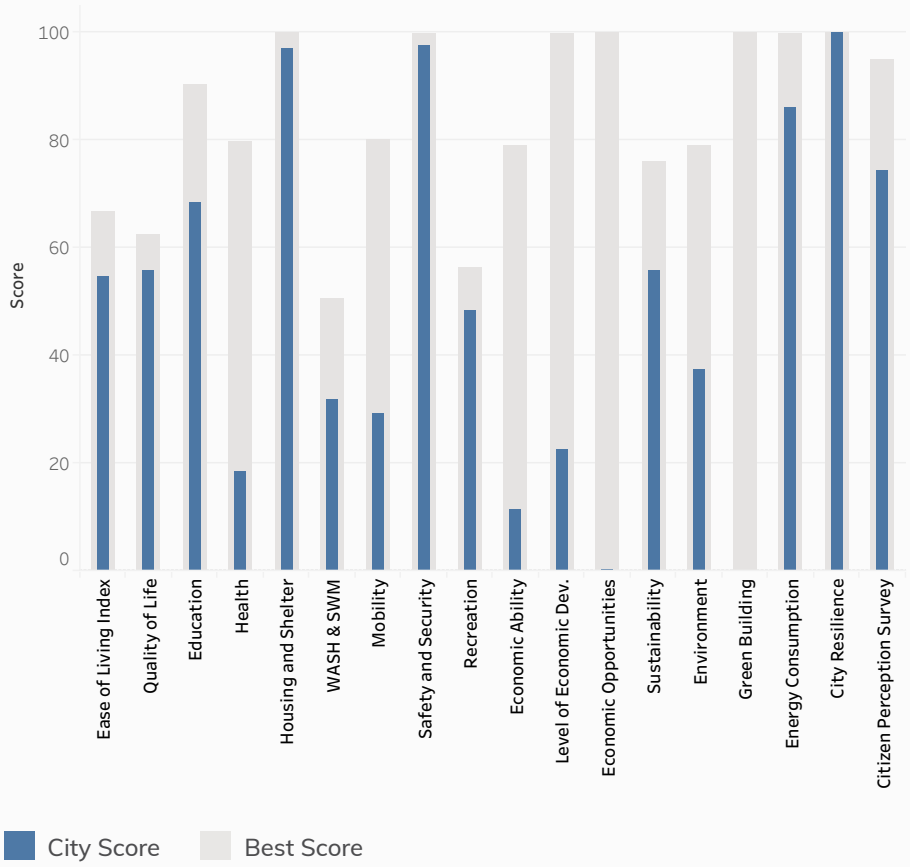


Rank
14

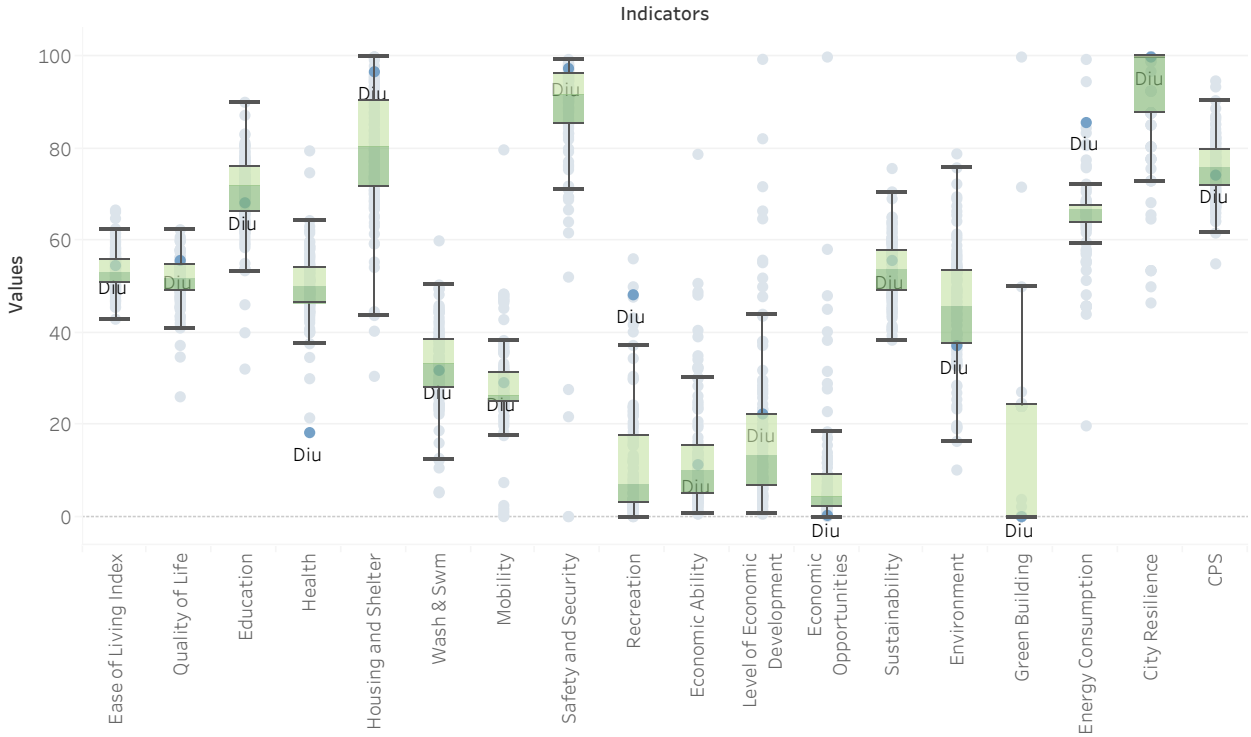
Diu

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

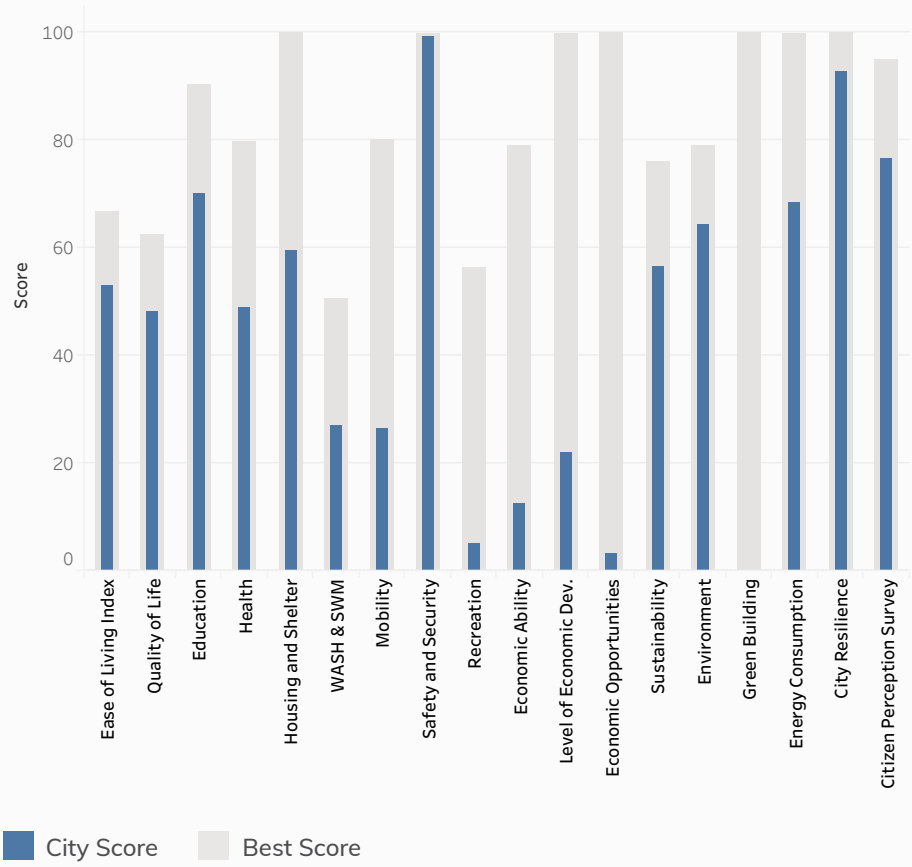


Rank
24

Erode

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

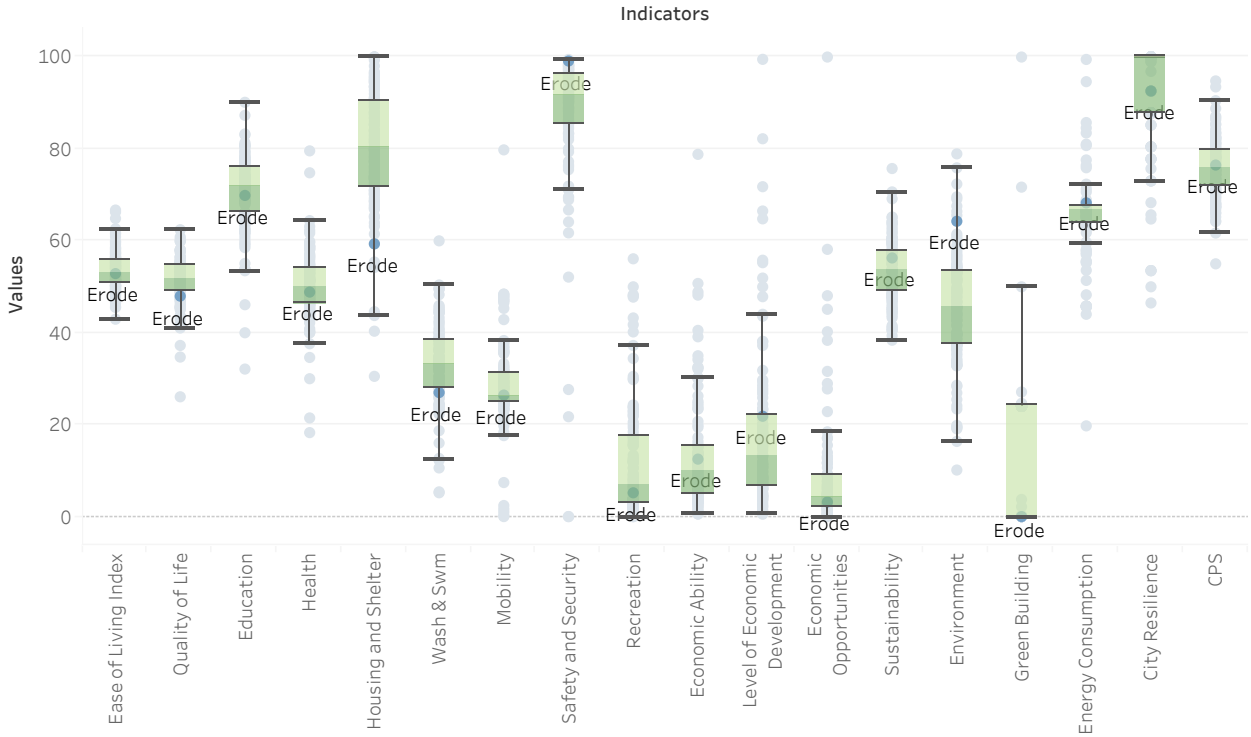


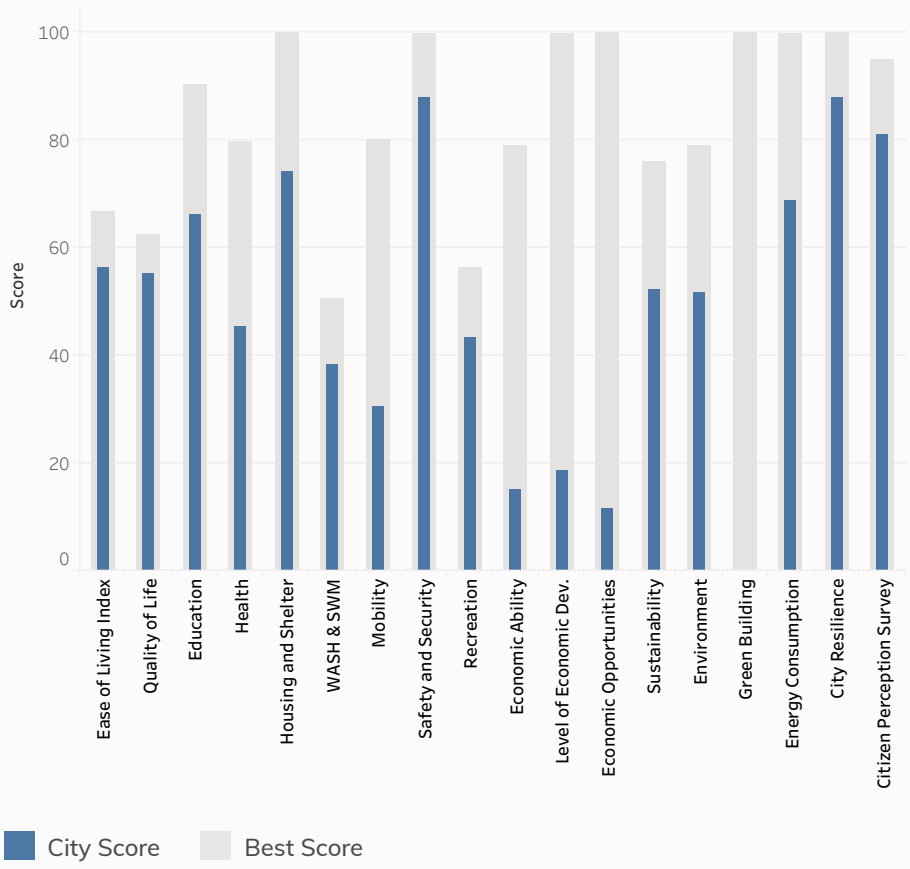
Image Source: https://en.wikipedia.org/wiki/File:Erode-Junction-Railway-Station-ED.JPG

Rank
07

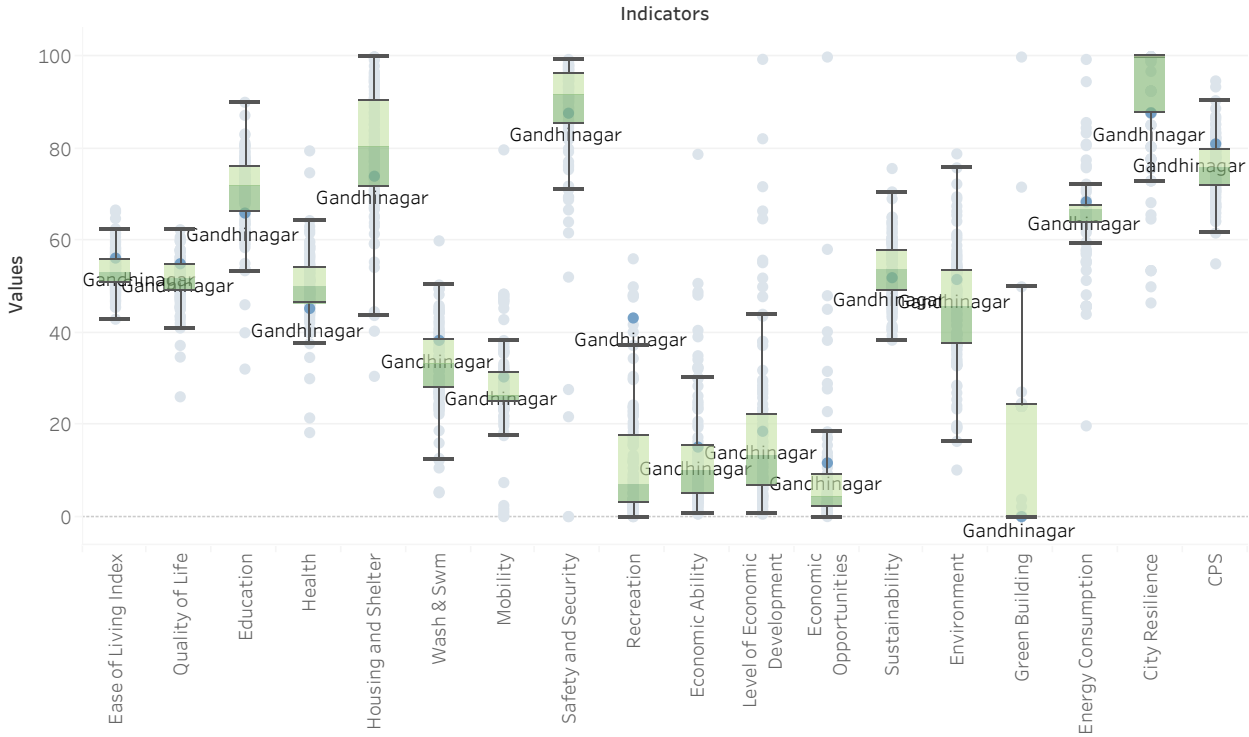
Gandhinagar

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

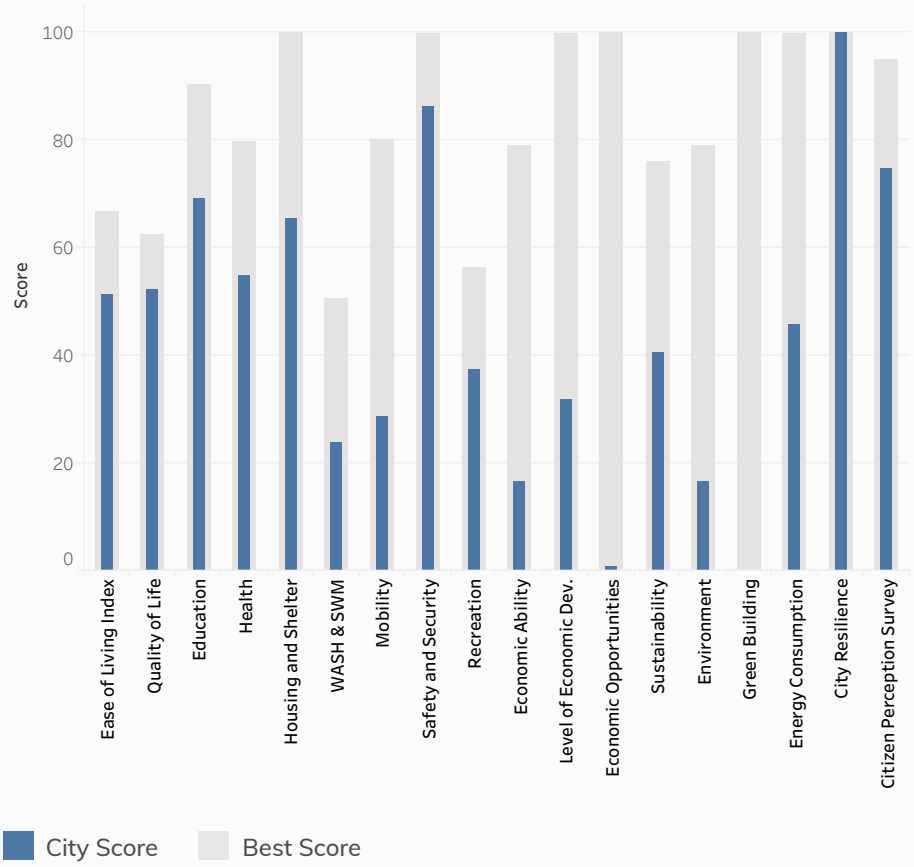


Rank
41

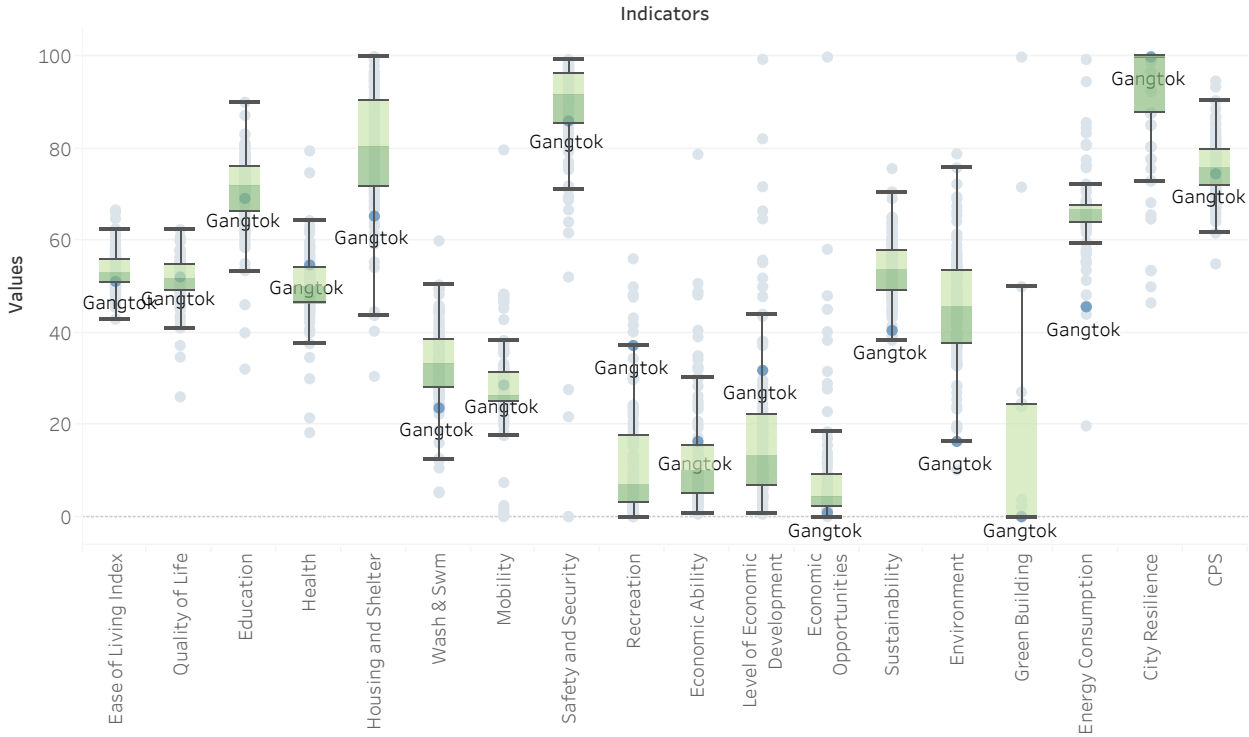
Gangtok

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

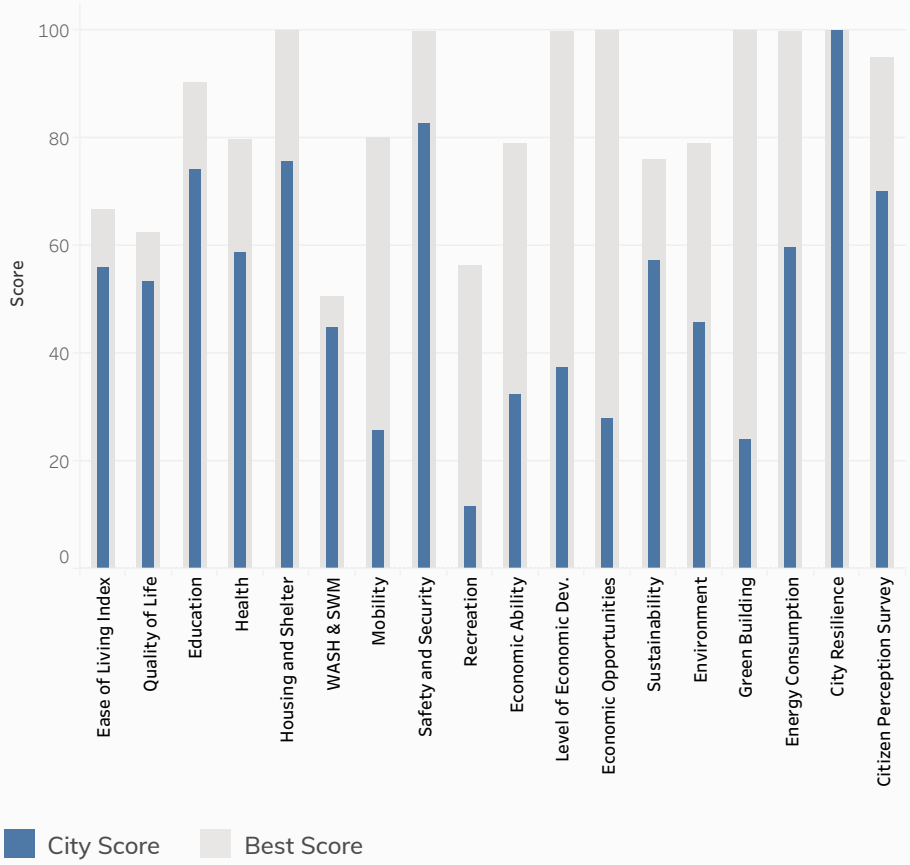


Rank
08

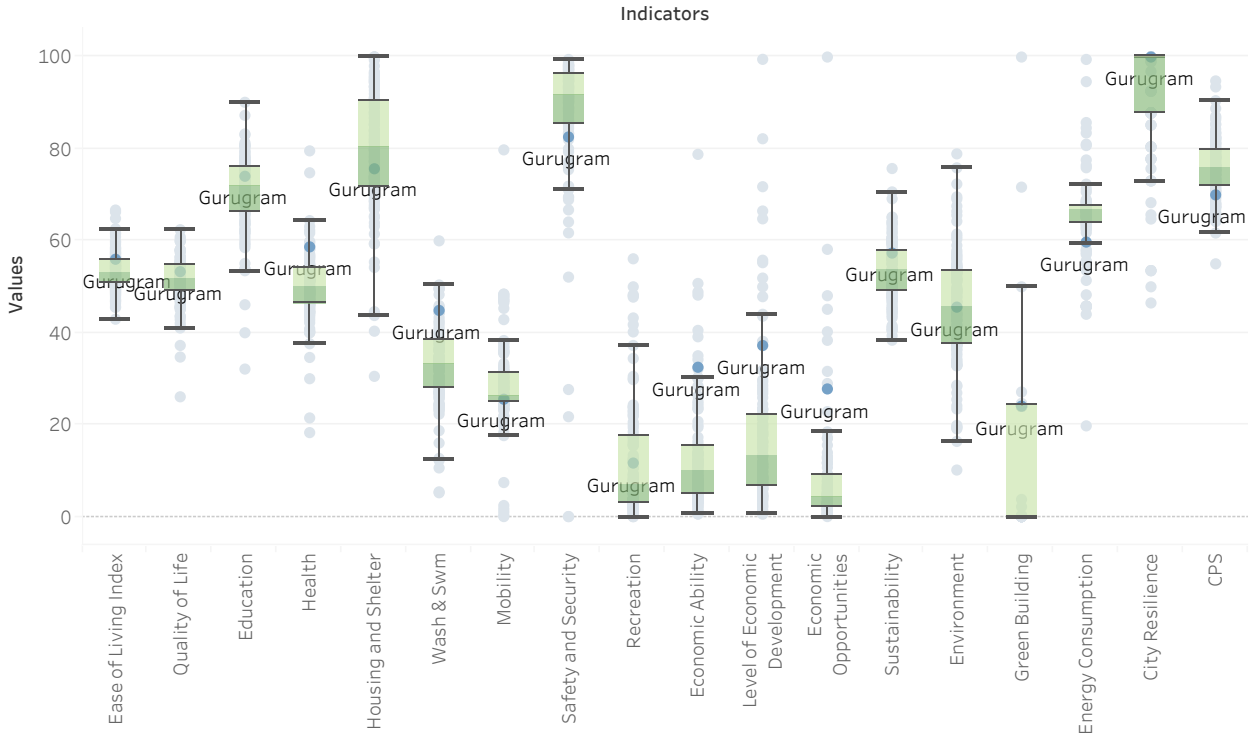
Gurugram

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

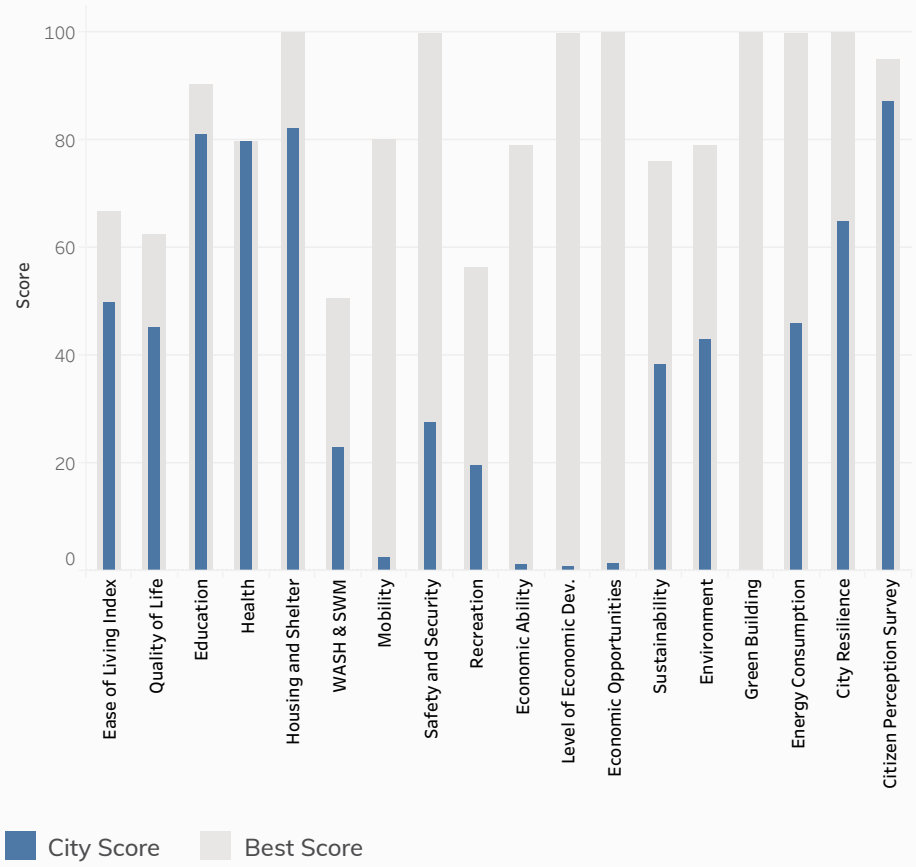


Rank
50

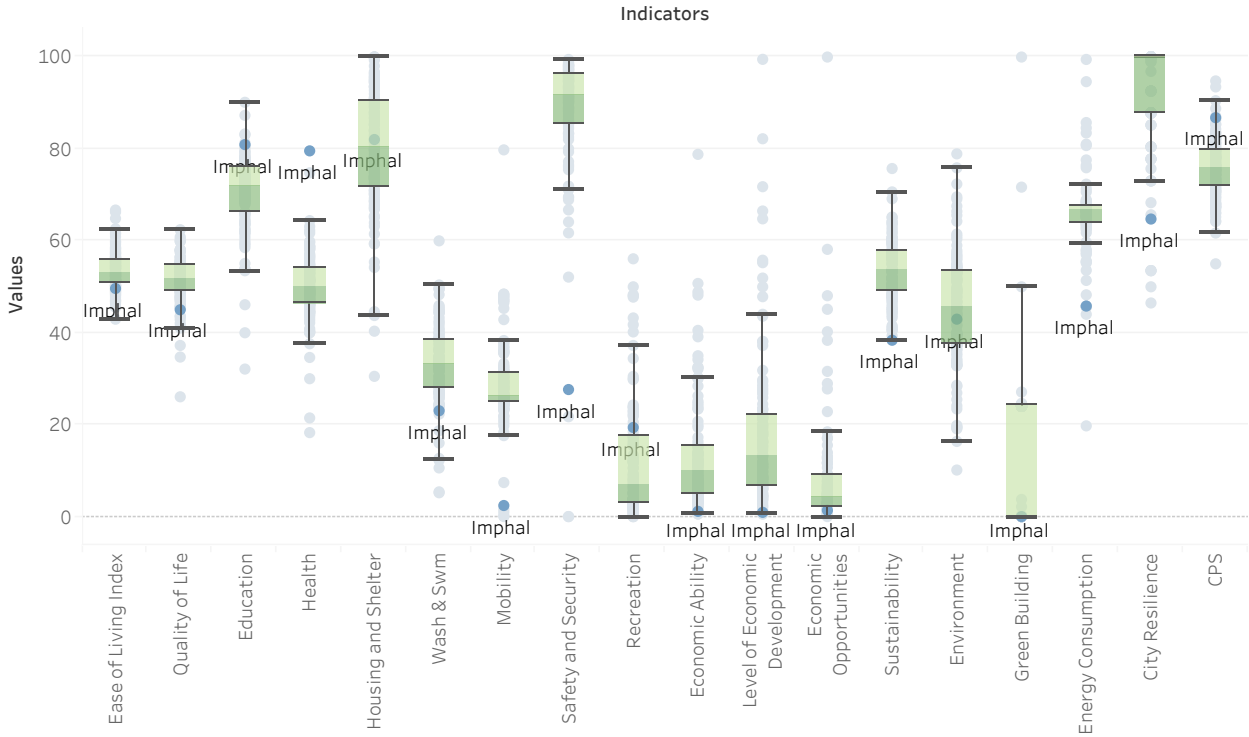
Imphal

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

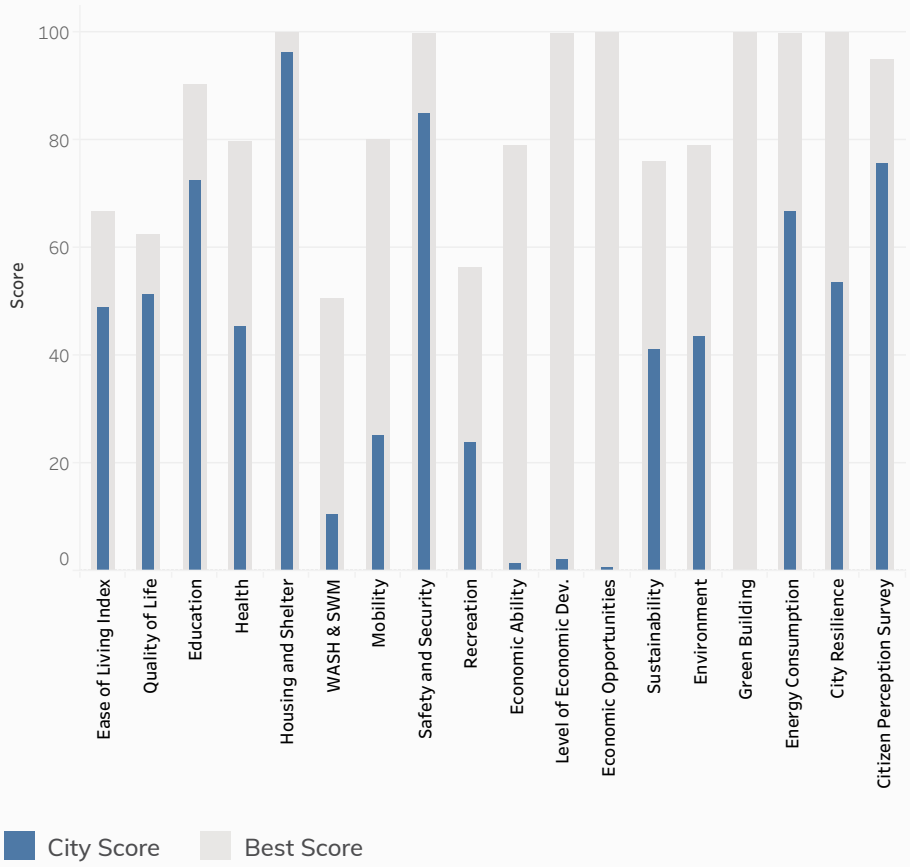


Rank
53

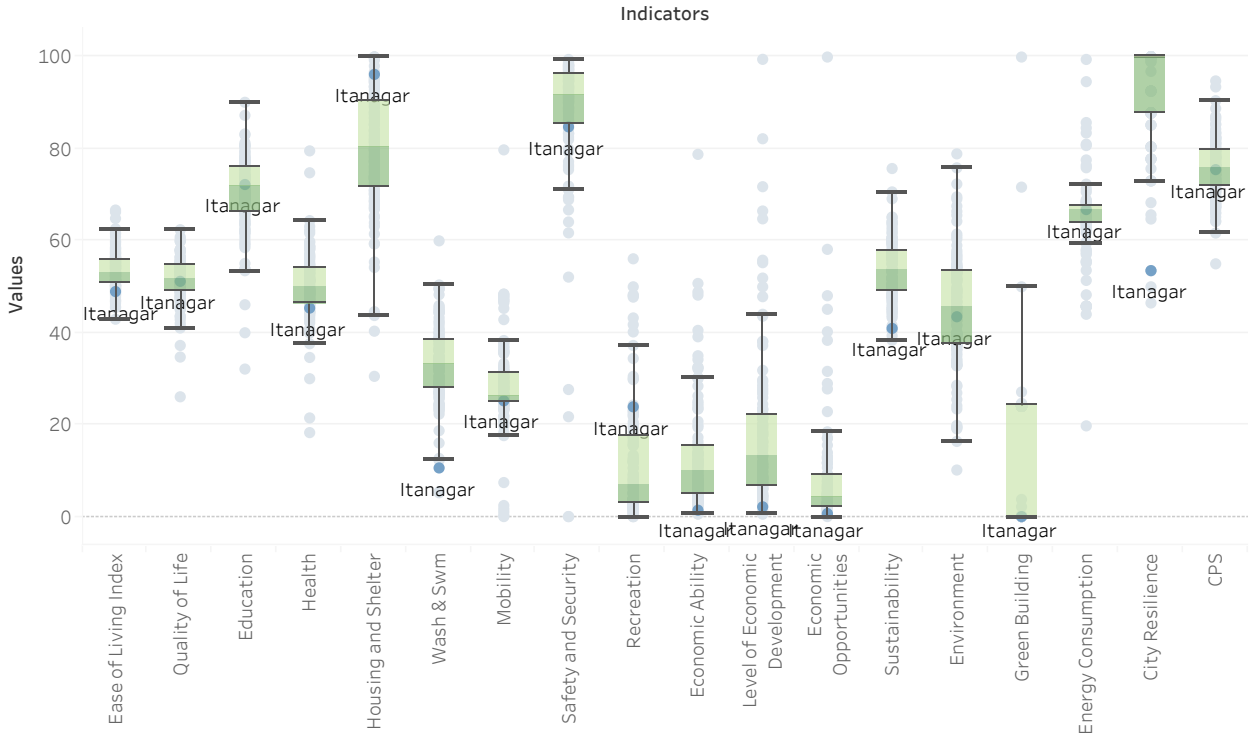
Itanagar

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

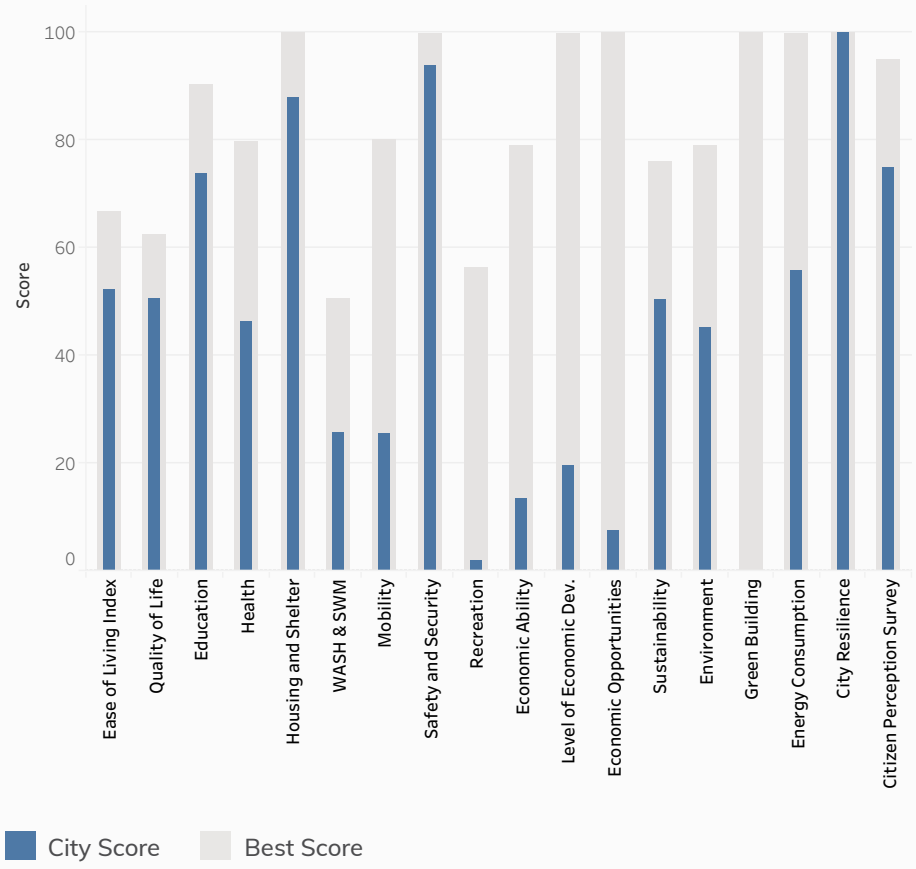


Rank
32

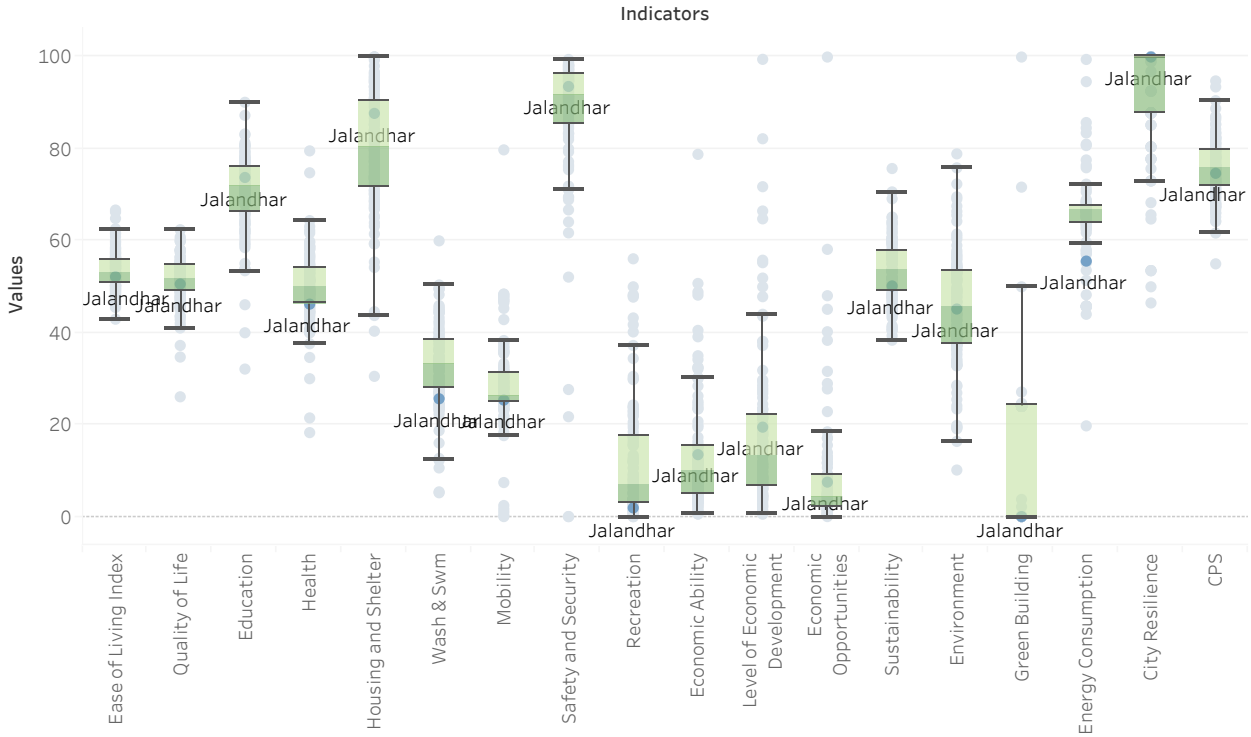
Jalandhar

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

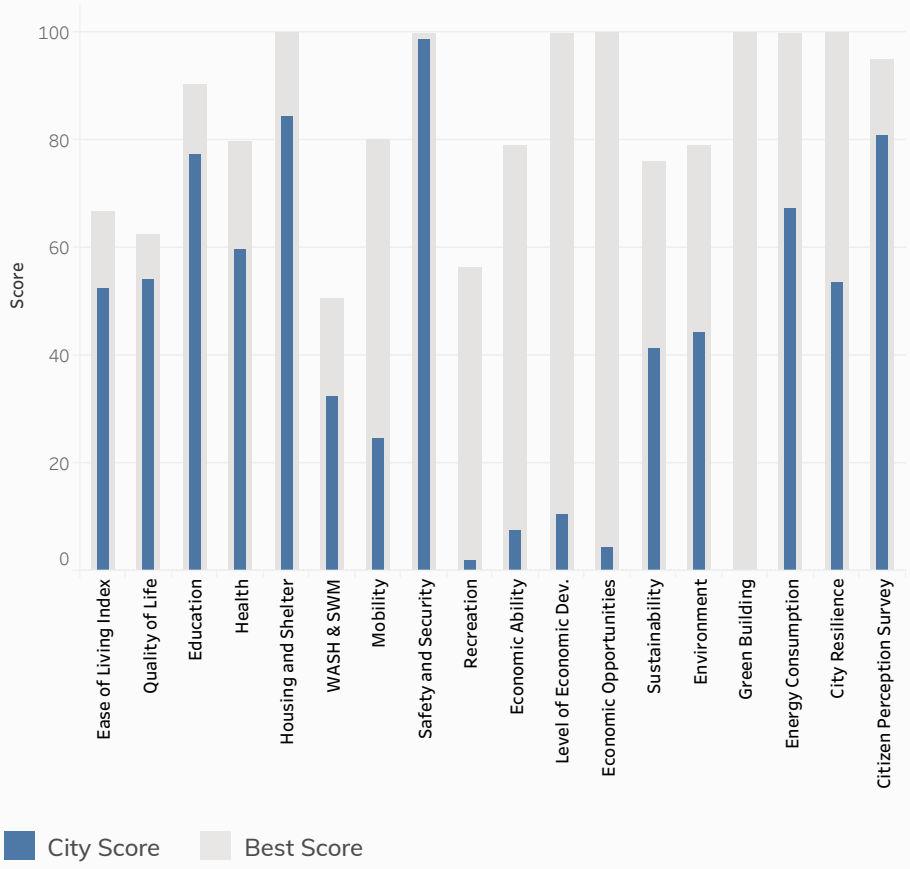


Rank
27

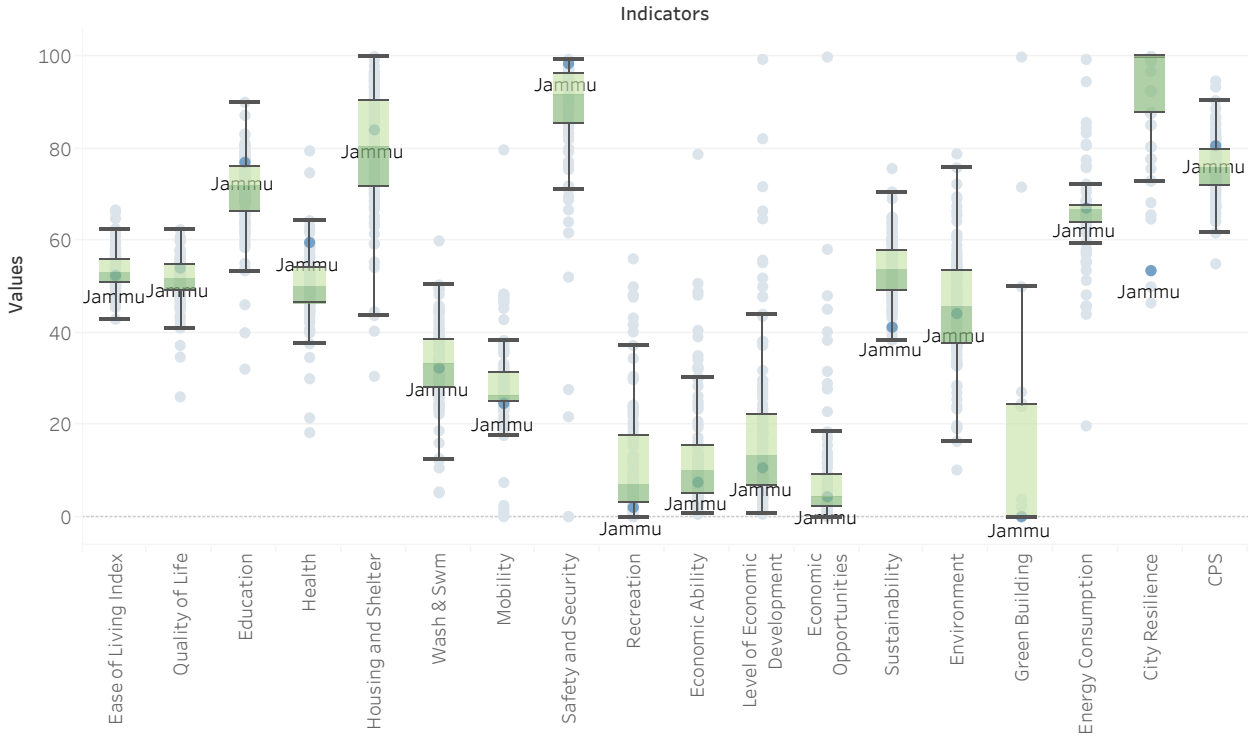
Jammu

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

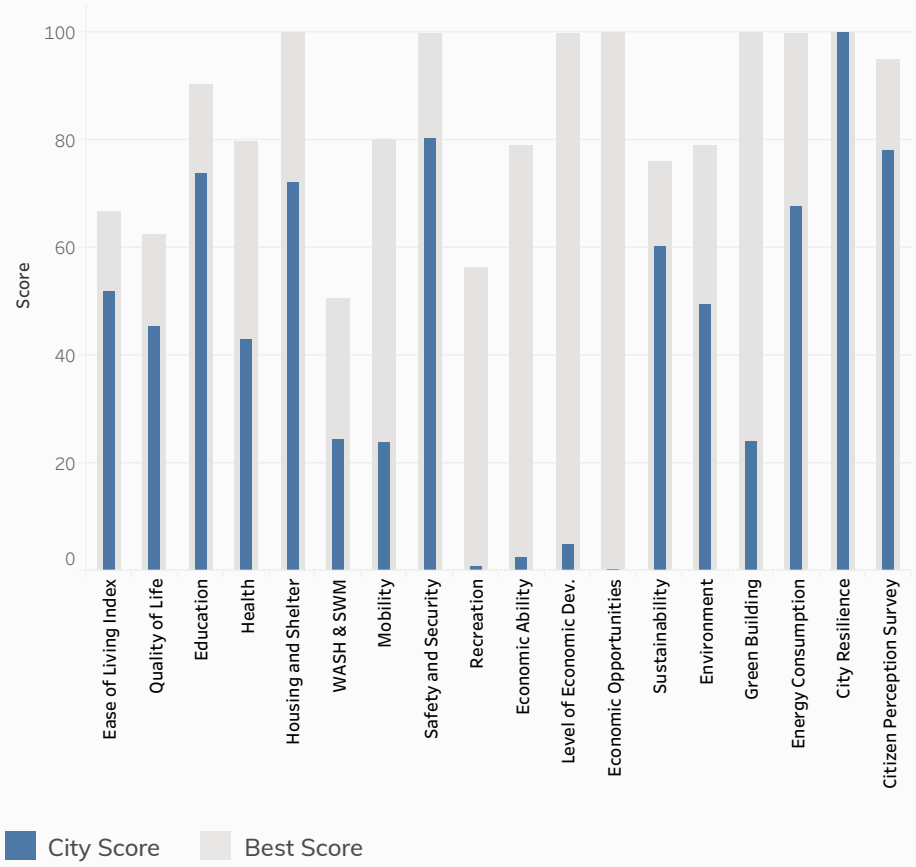


Rank
34

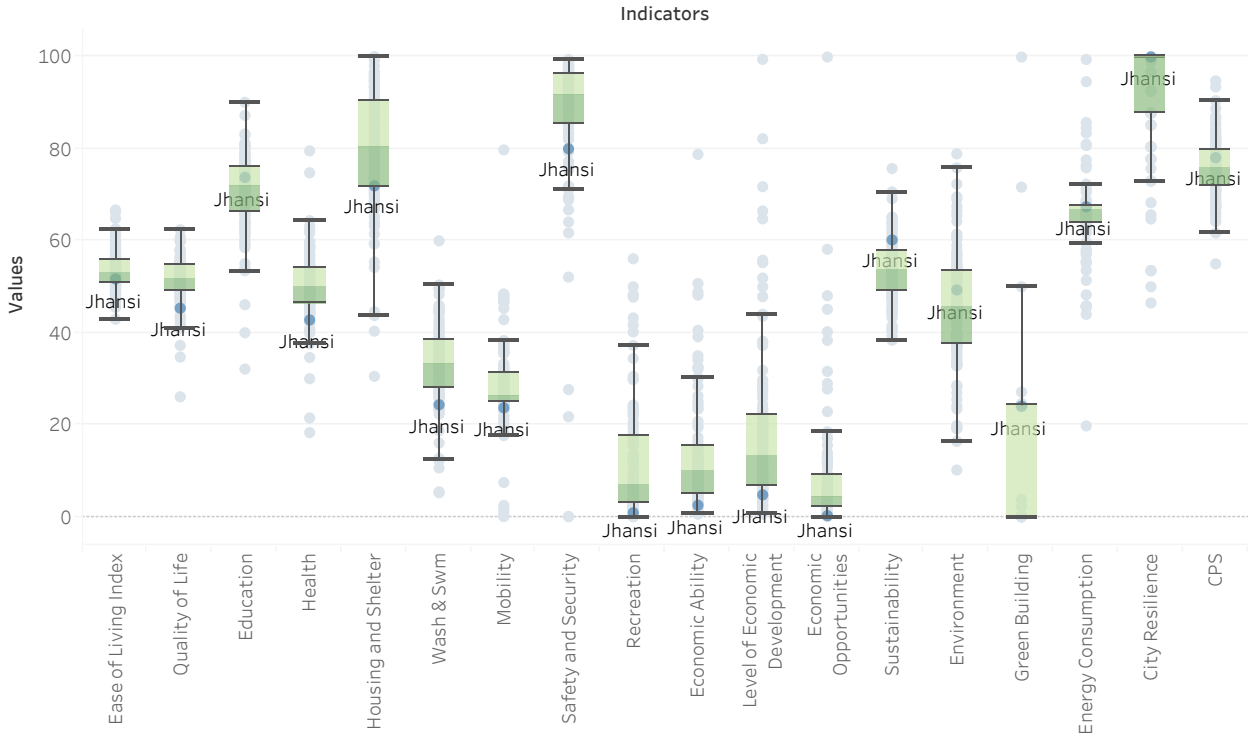
Jhansi

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

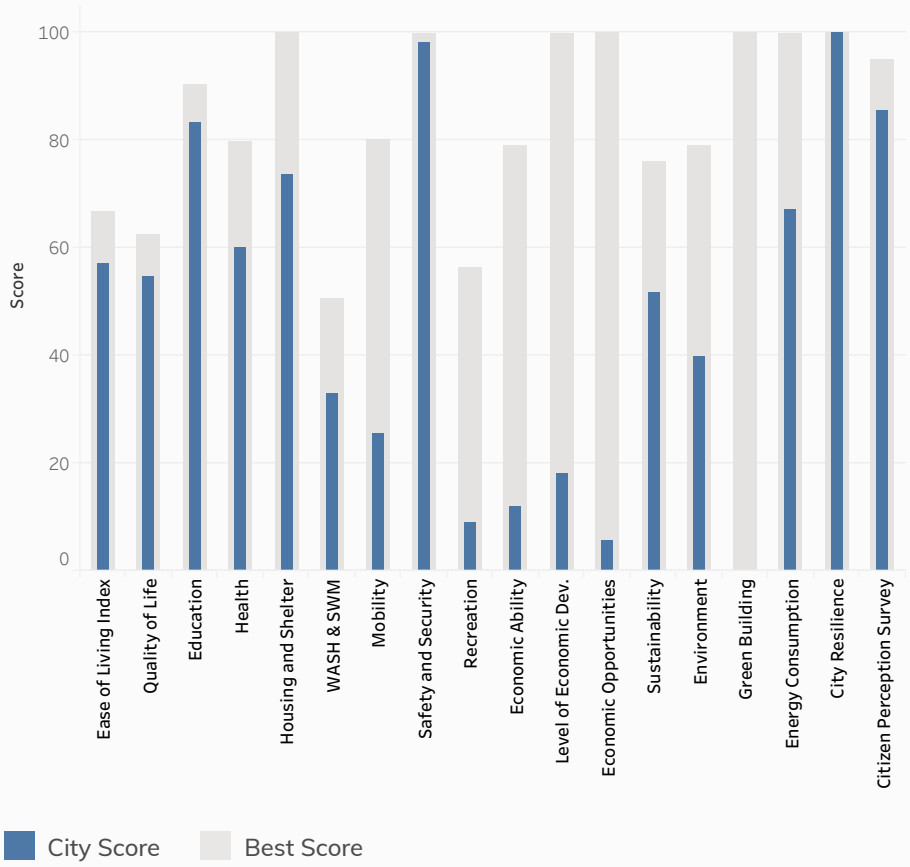


Rank
04

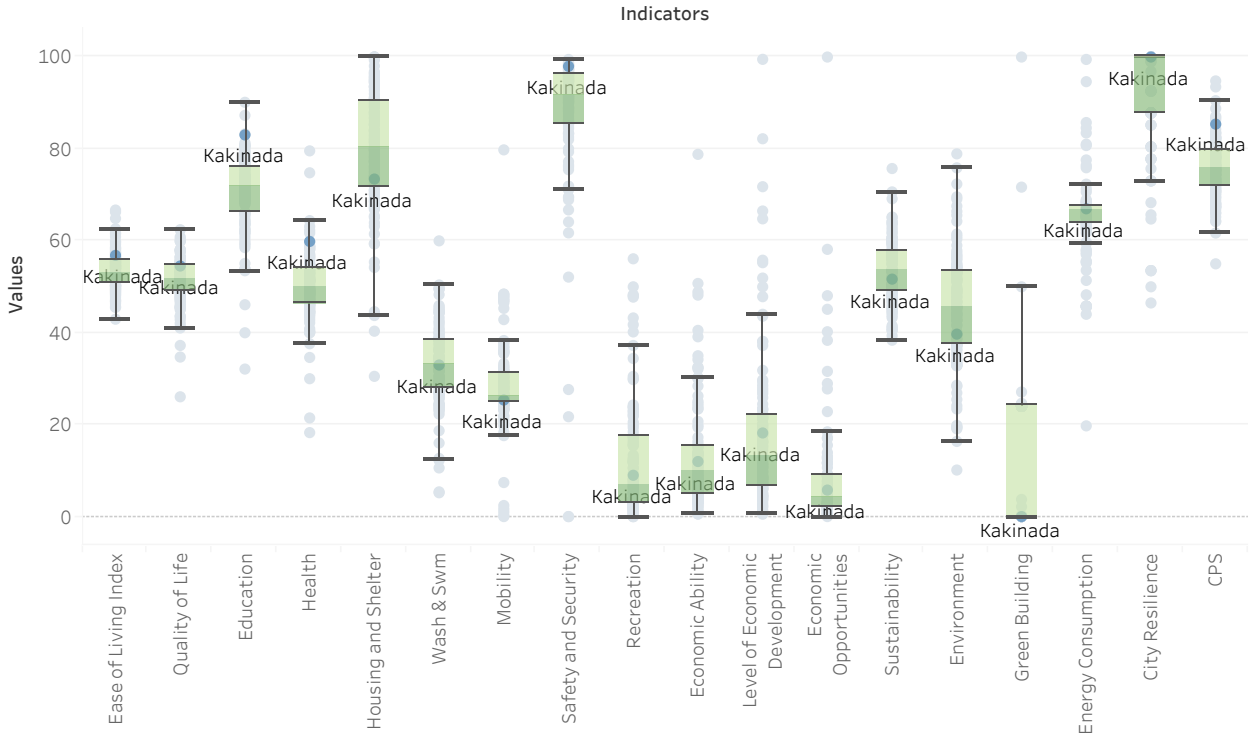
Kakinada

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

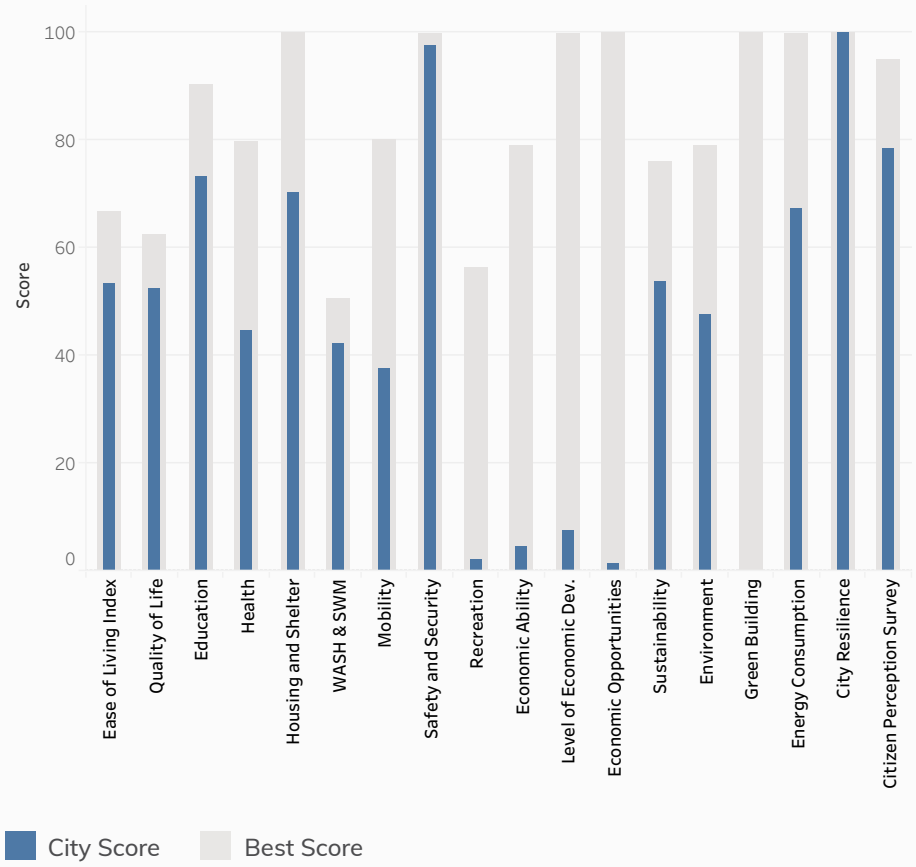


Rank
22

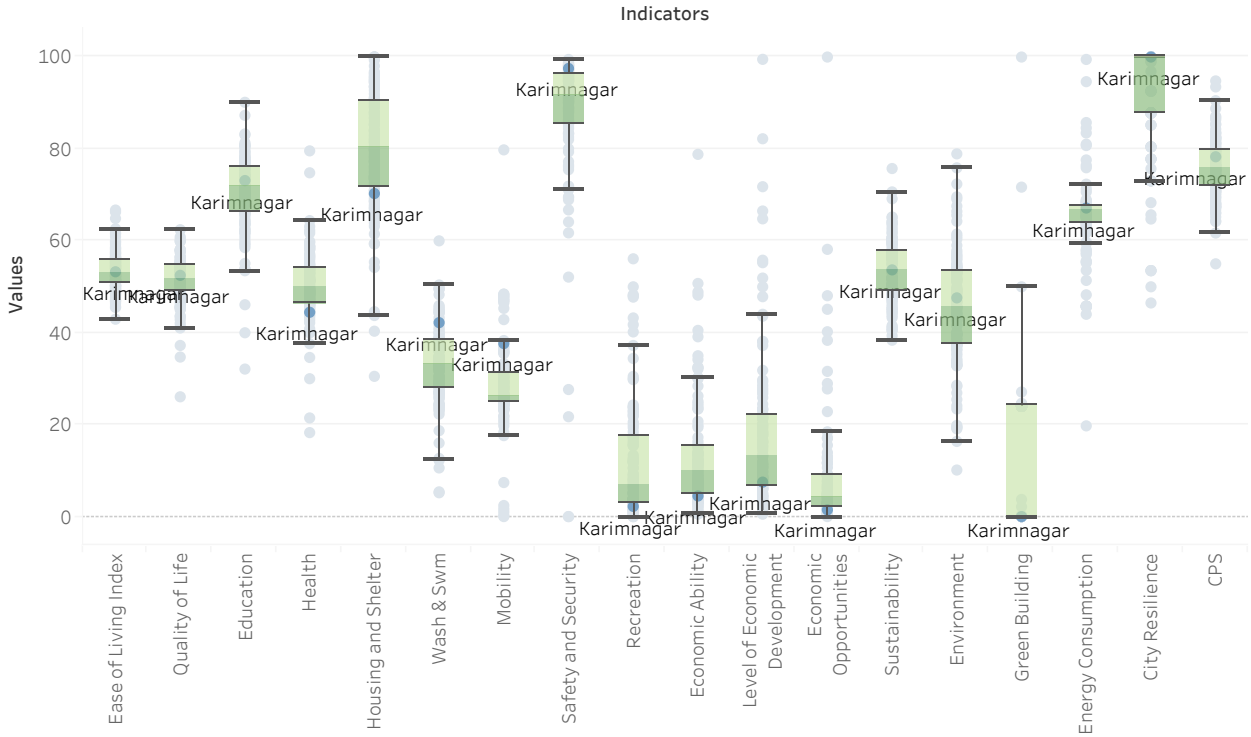
Karimnagar

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

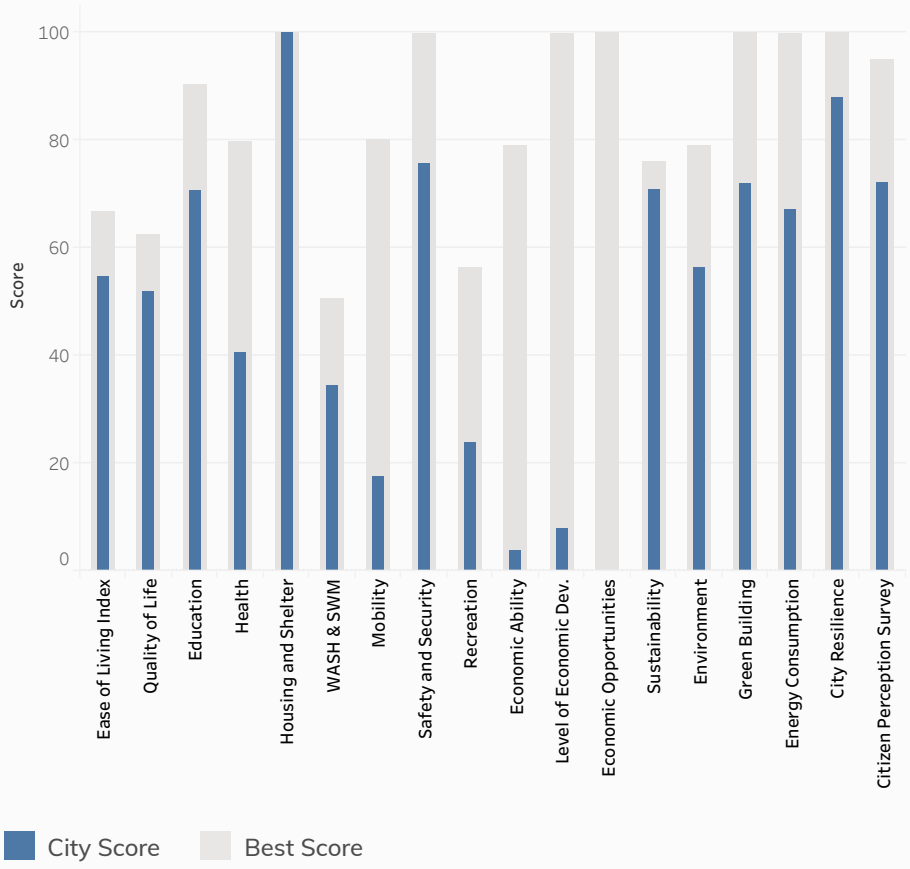


Rank
15

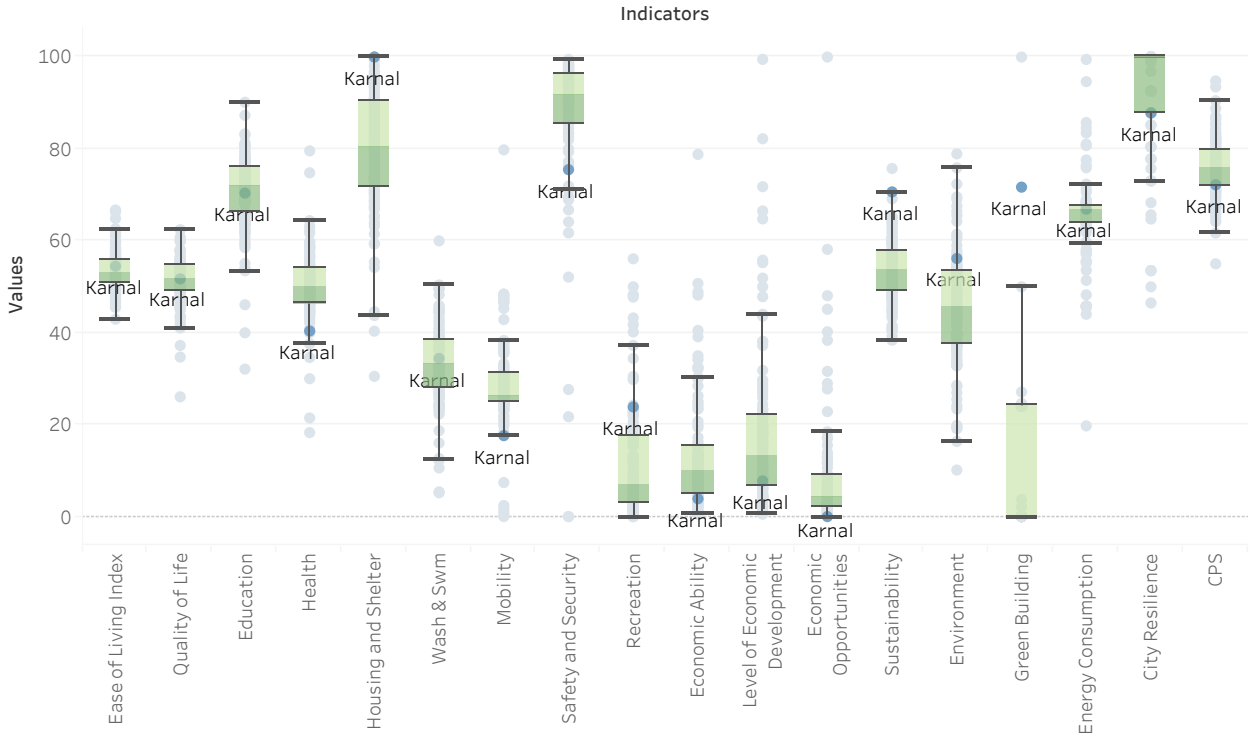
Karnal

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

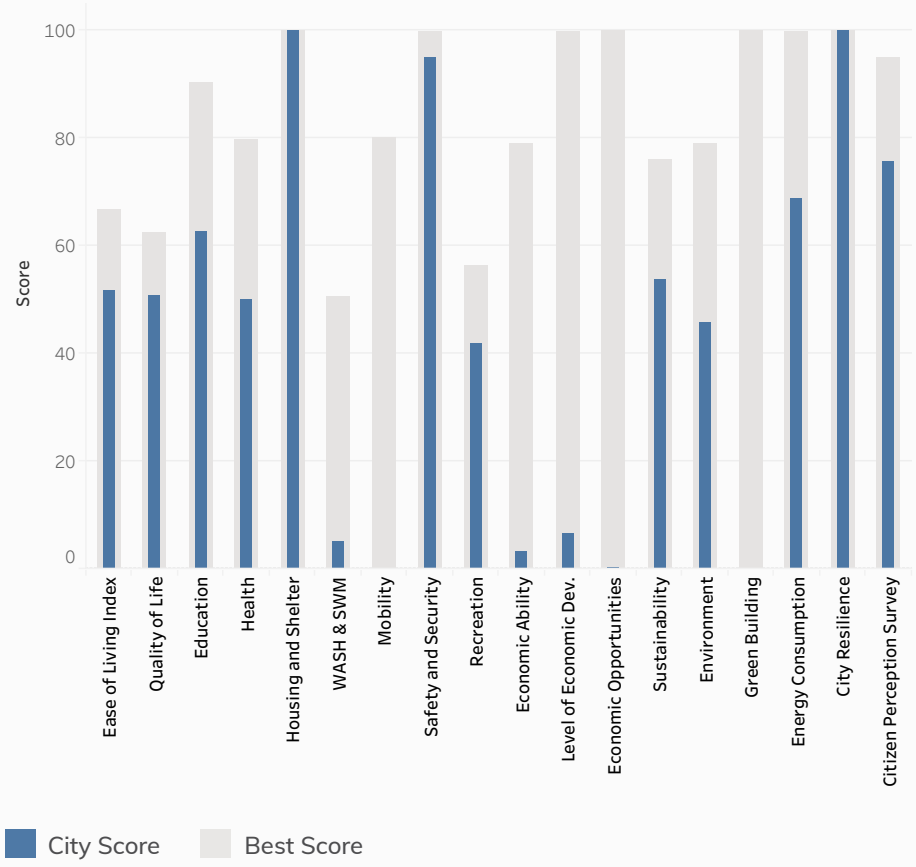


Rank
36

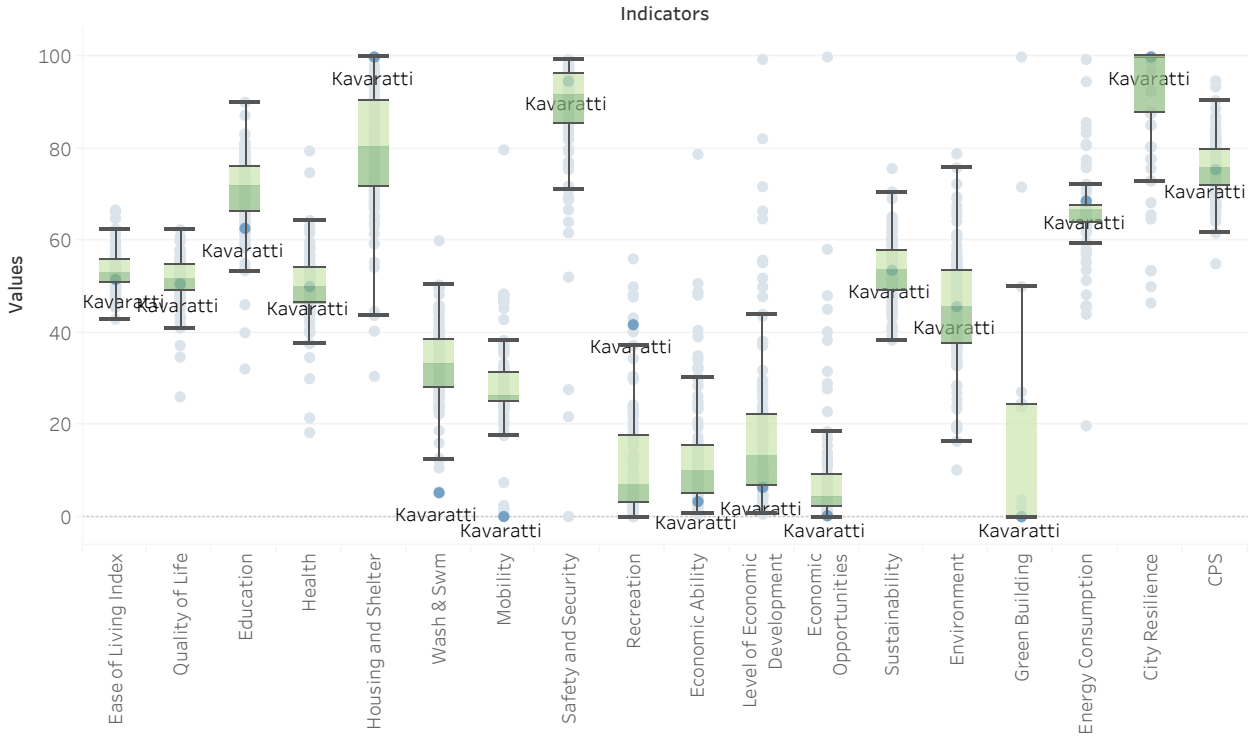
Kavaratti

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

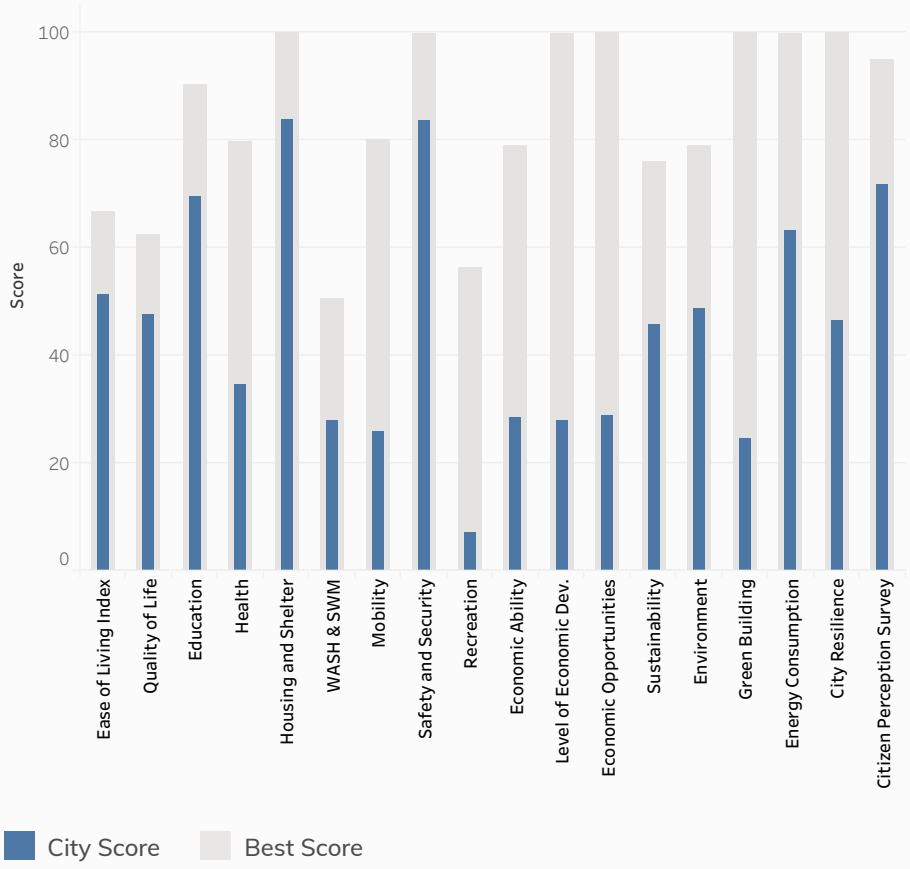


Rank
39

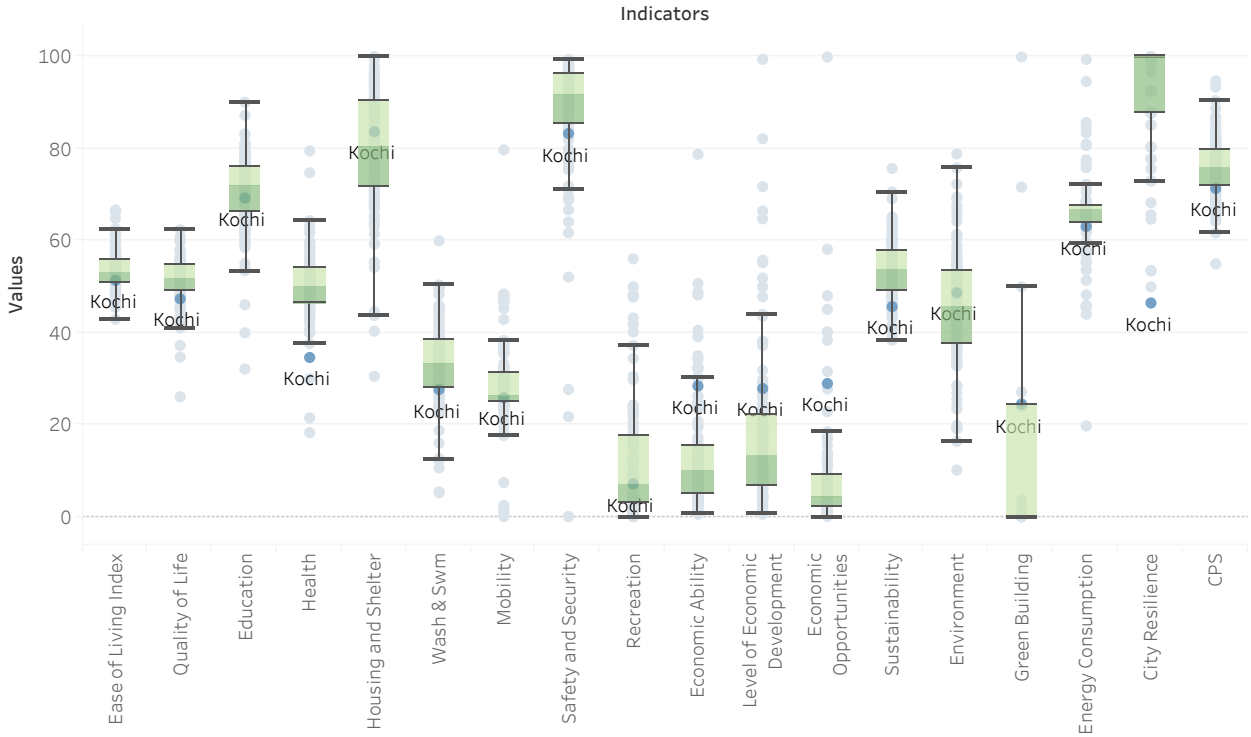
Kochi

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

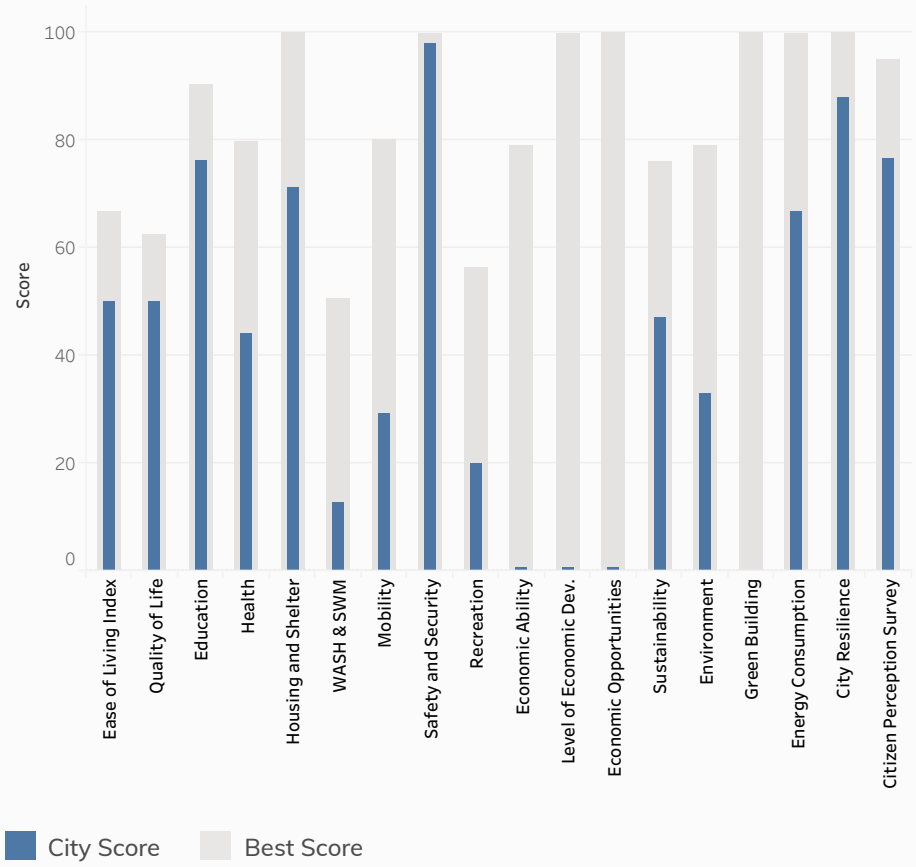


Rank
49

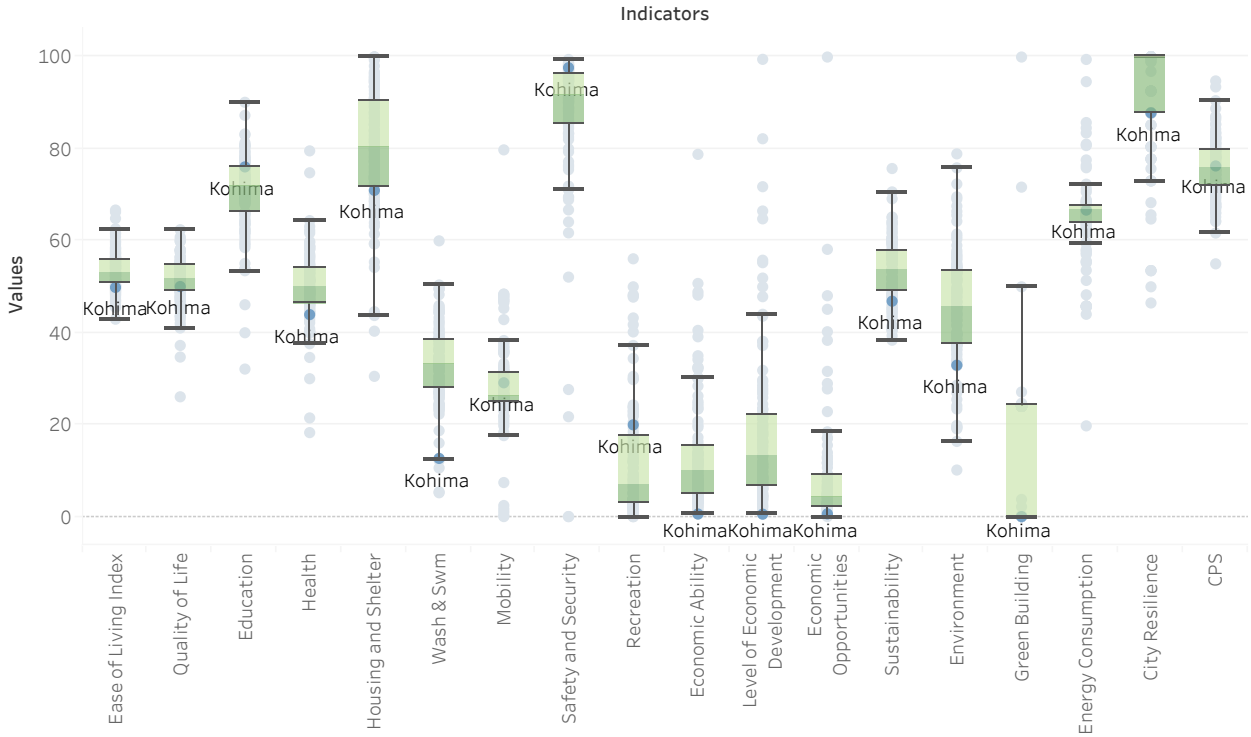
Kohima

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

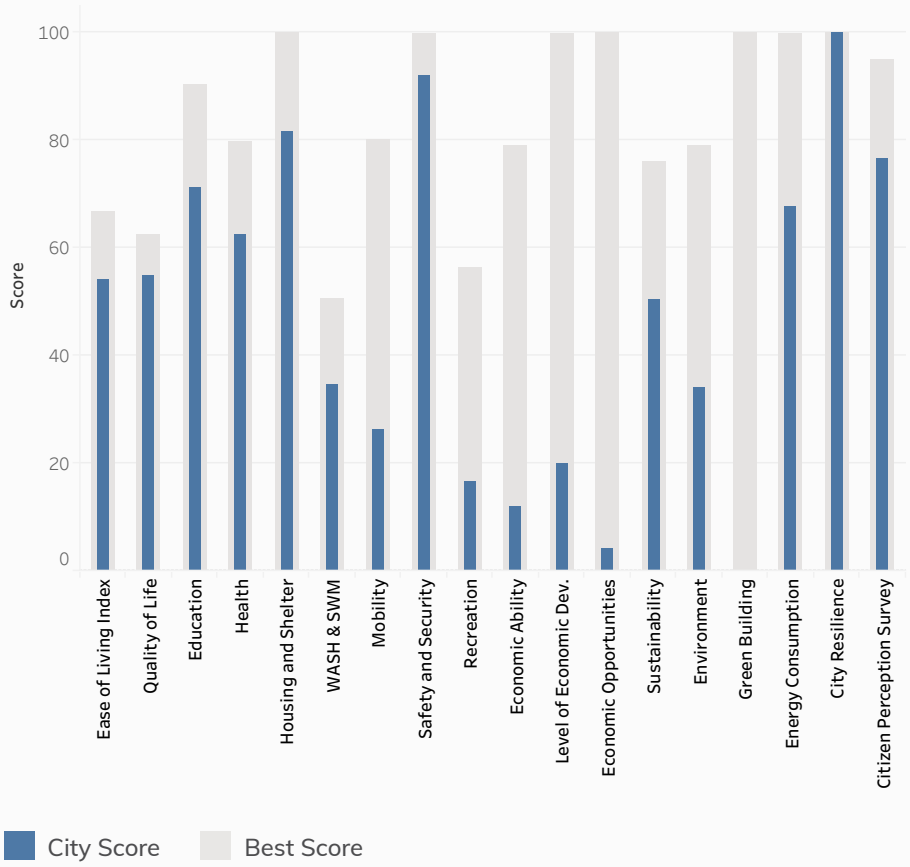


Rank
20

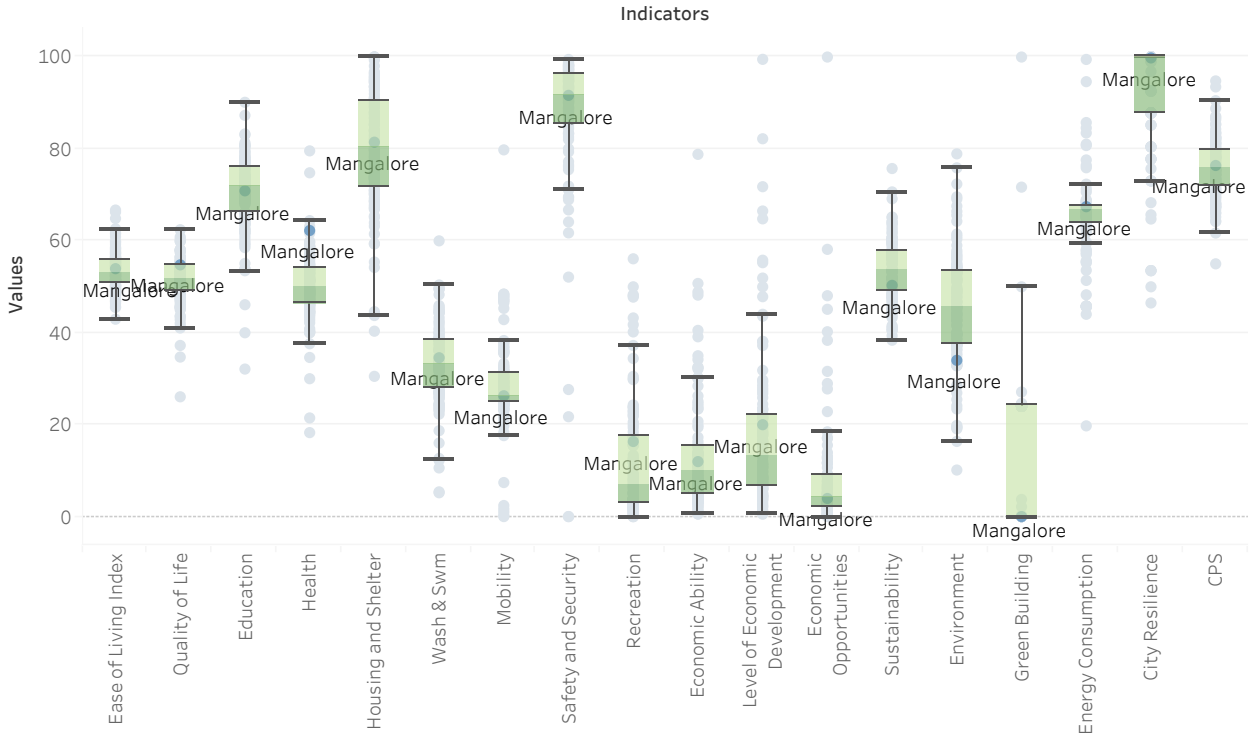
Mangalore

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

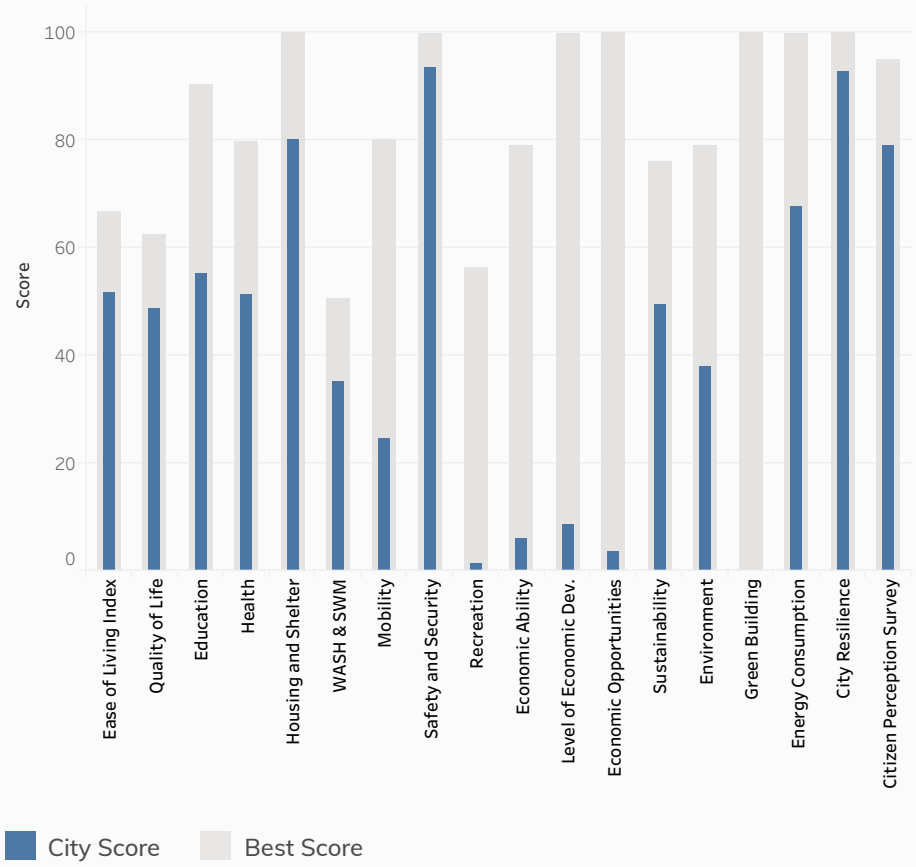


Rank
38

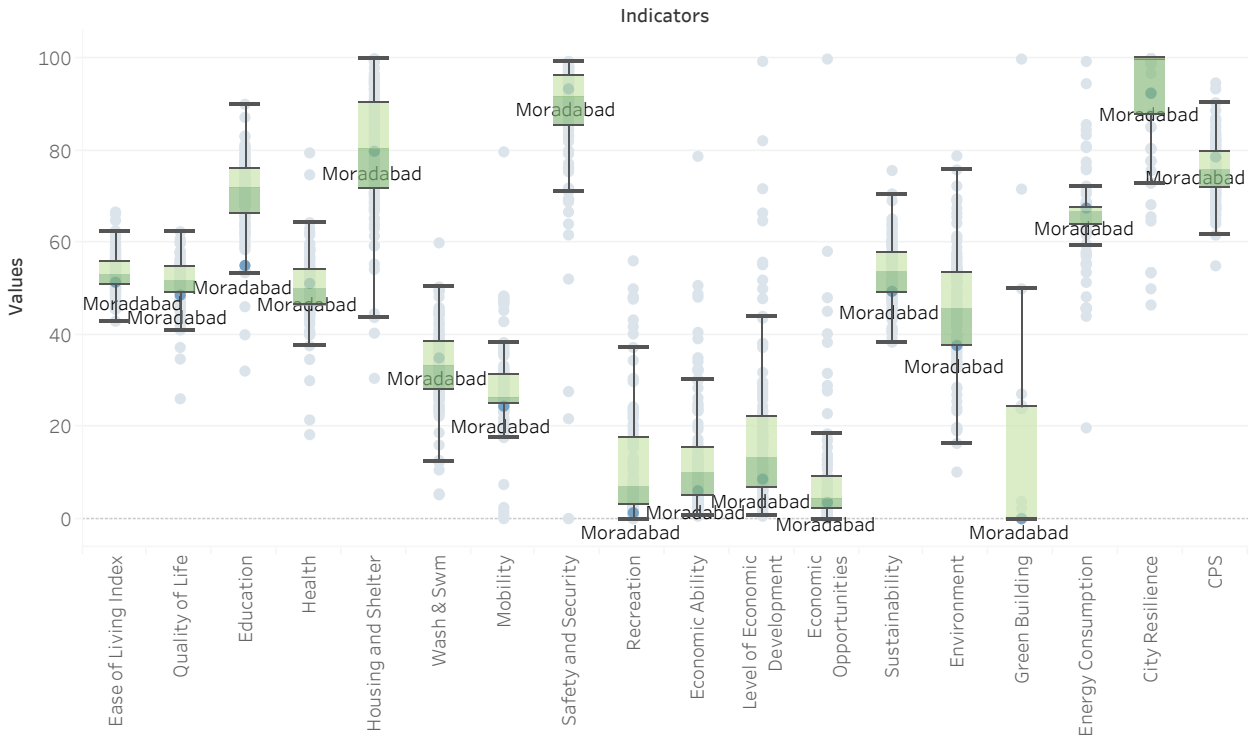
Moradabad

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

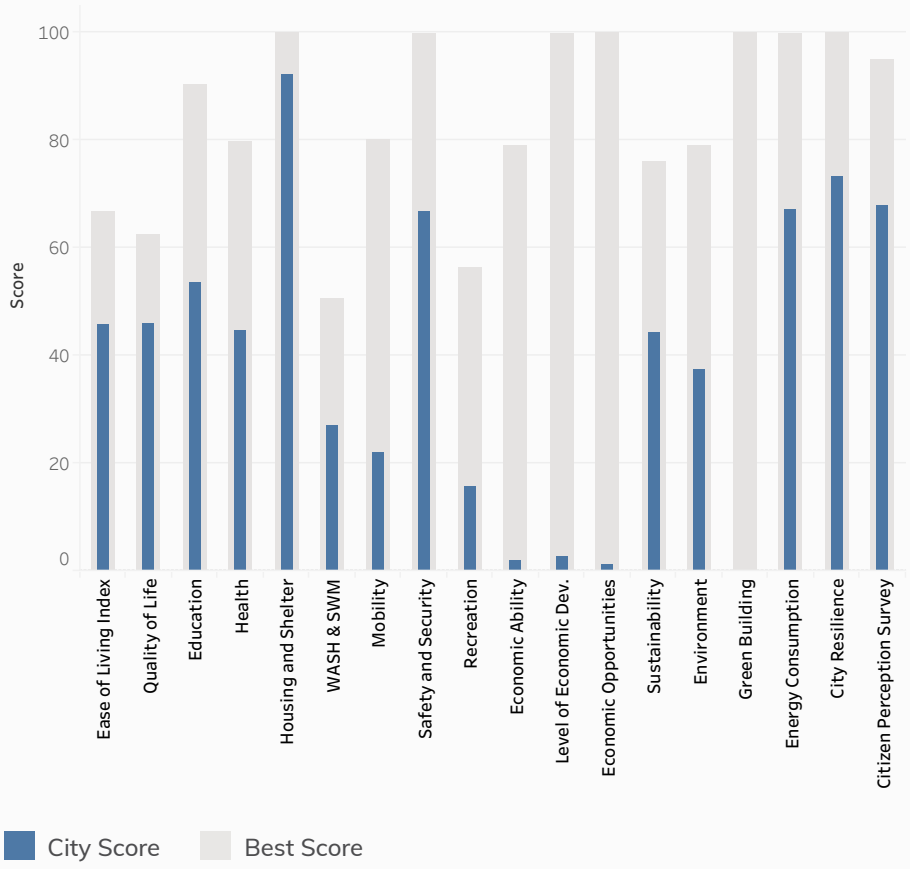


Rank
62

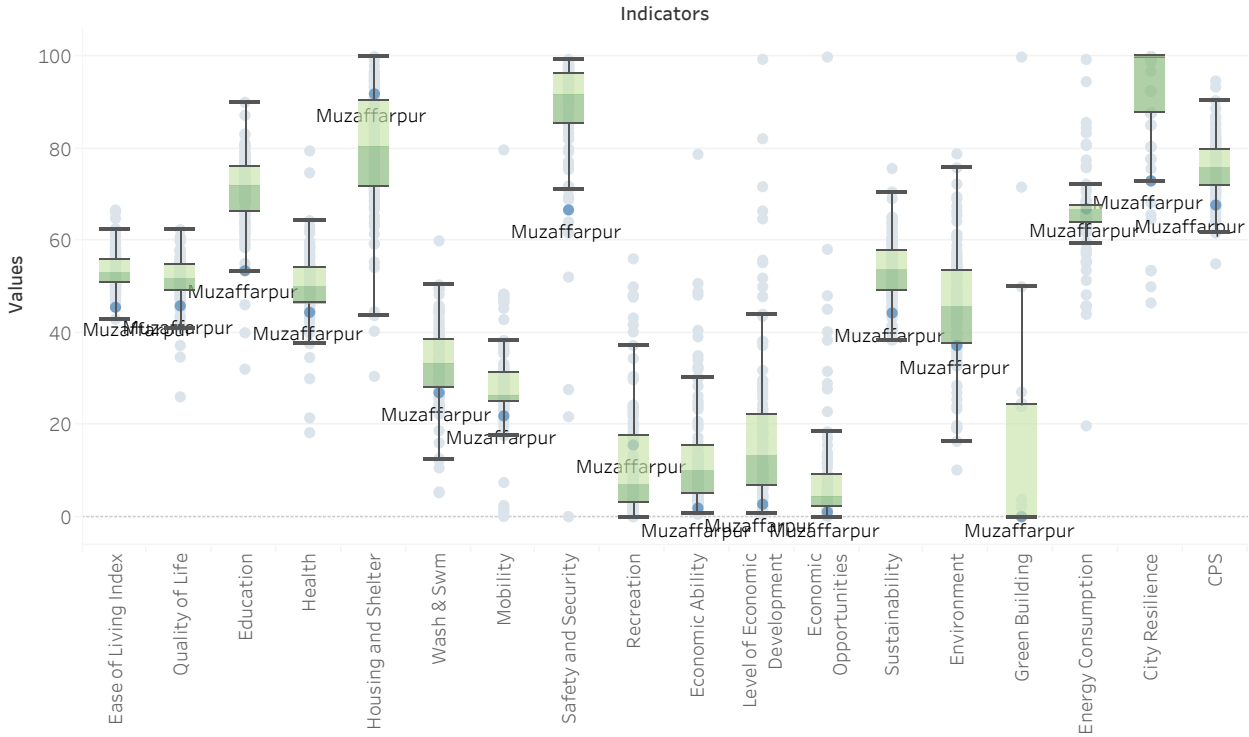
Muzaffarpur

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

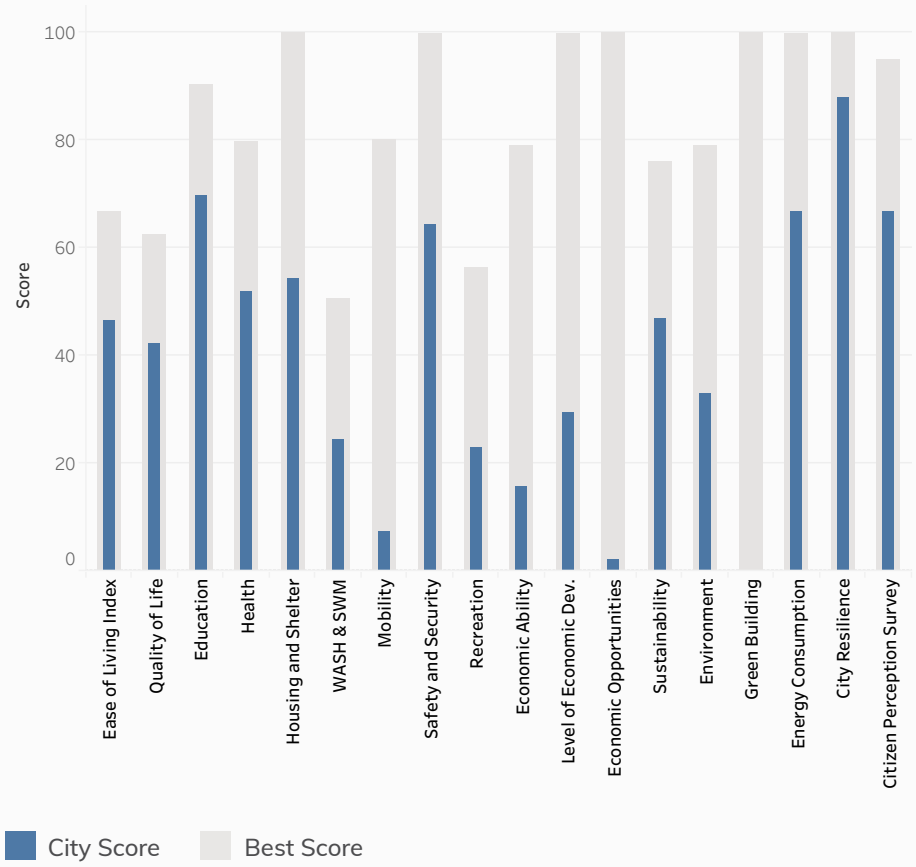


Rank
60

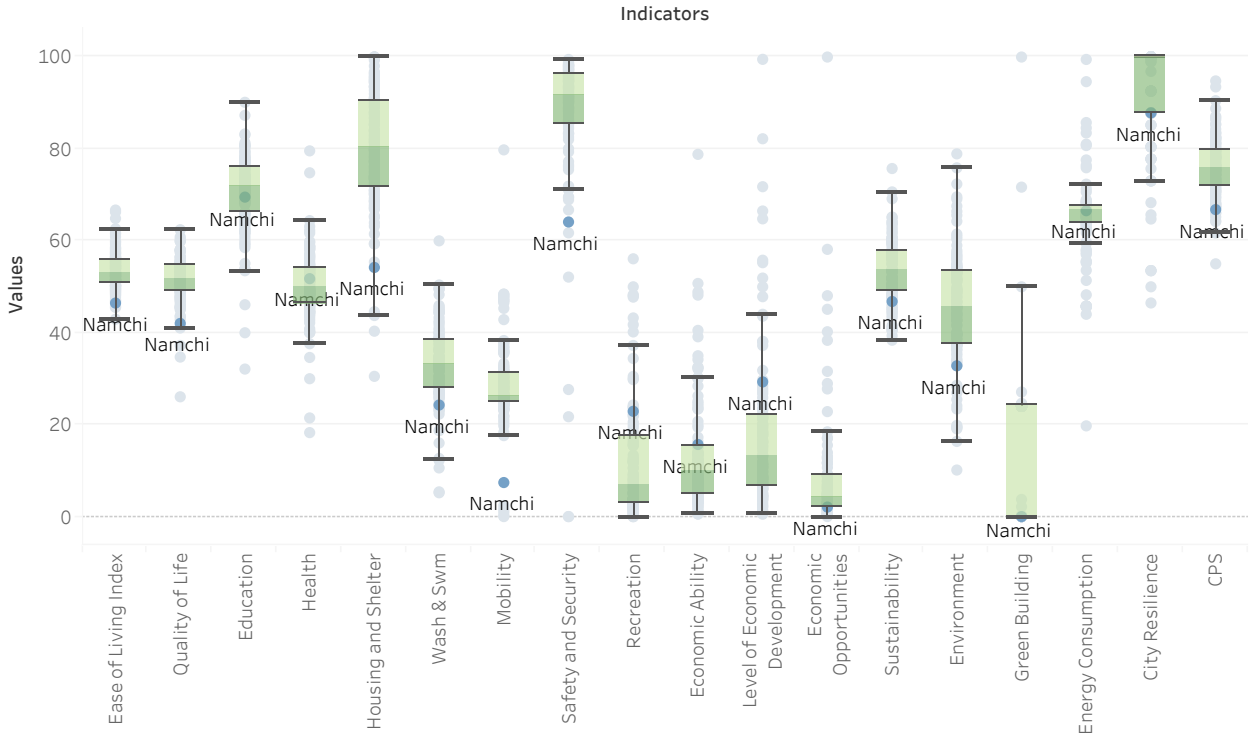
Namchi

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

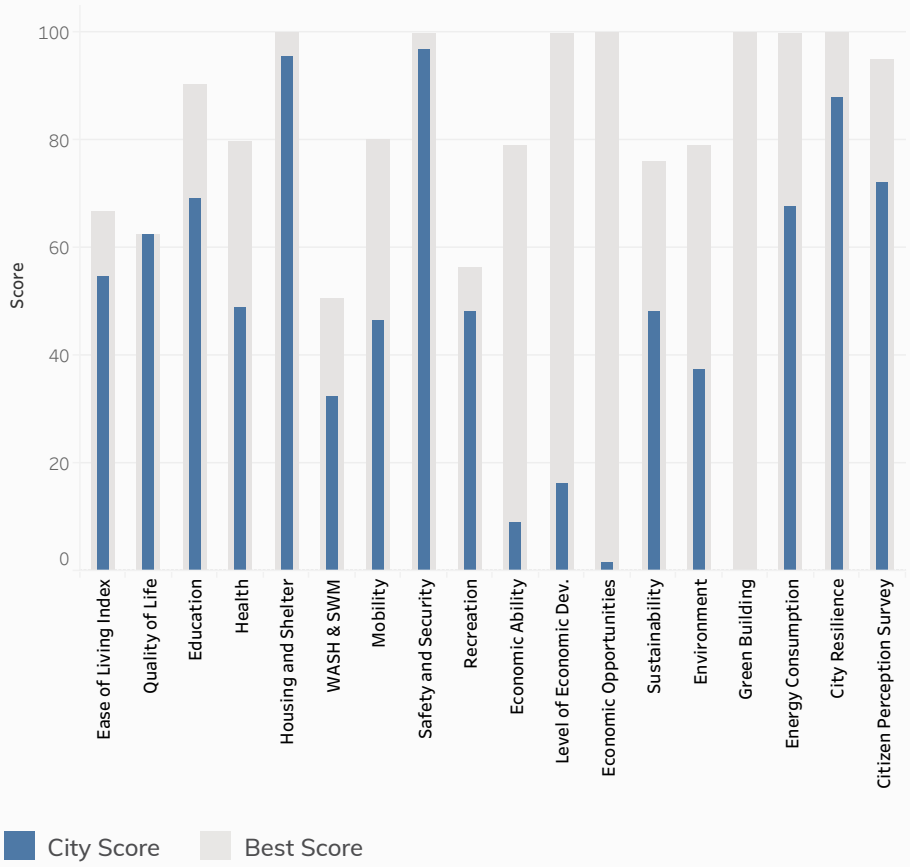


Rank
16

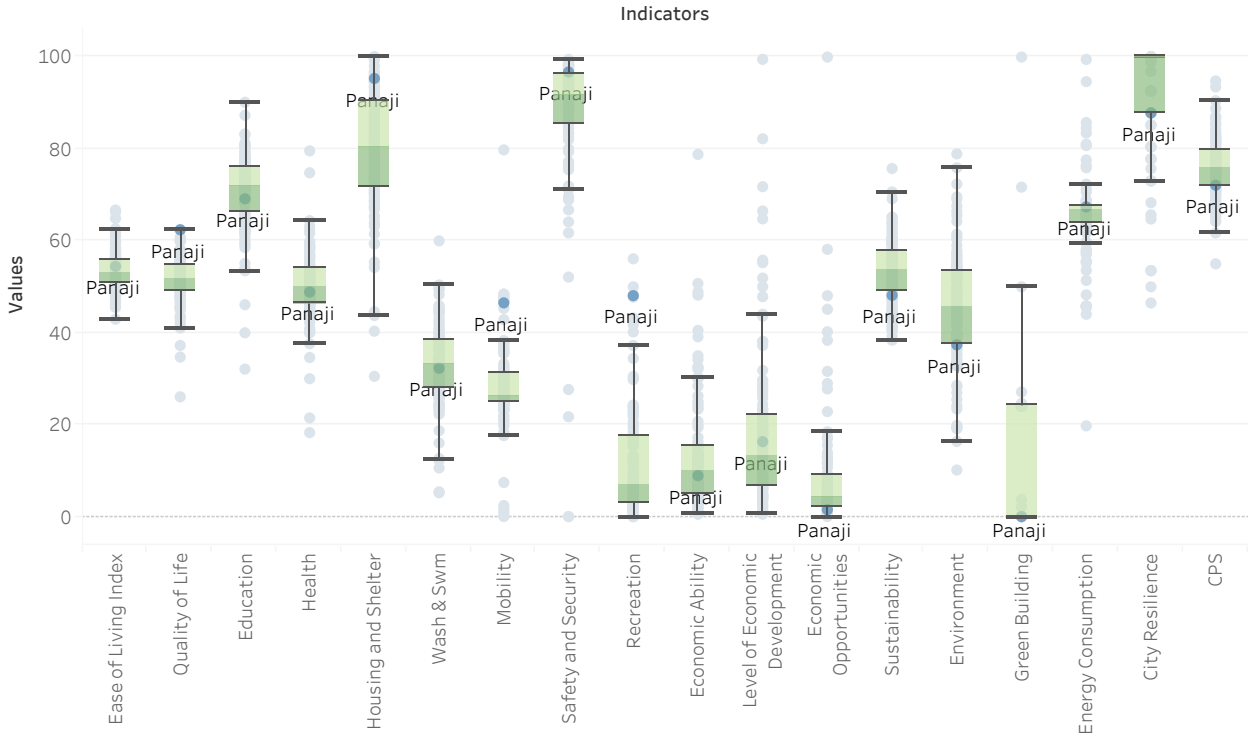
Panaji

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

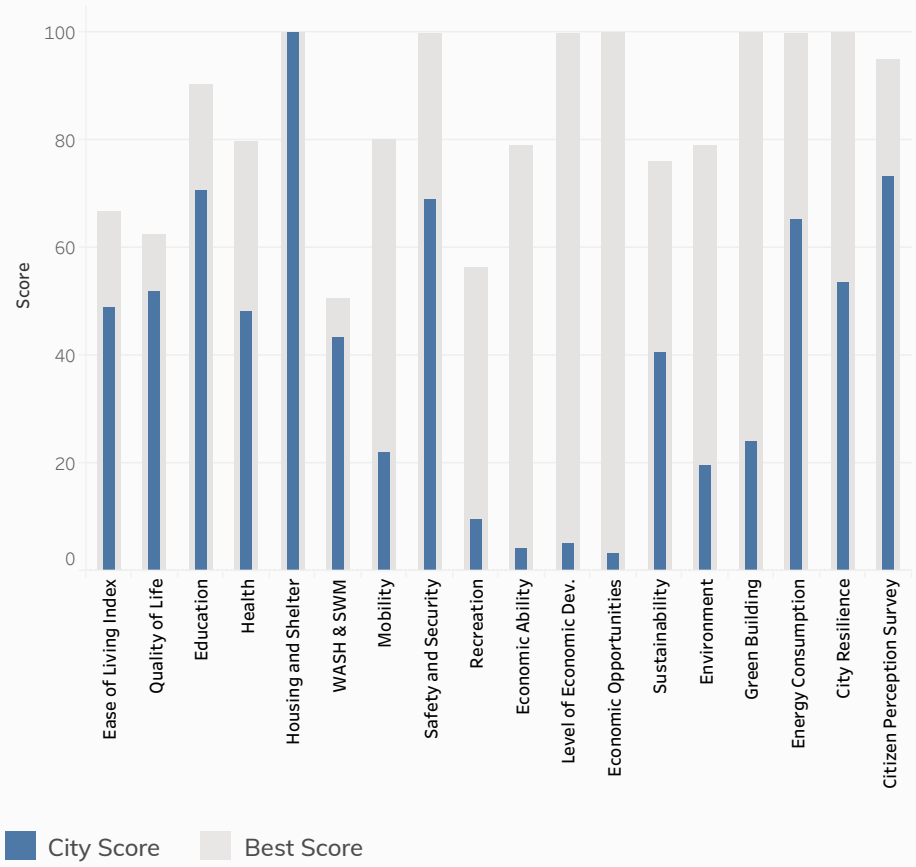


Rank
55

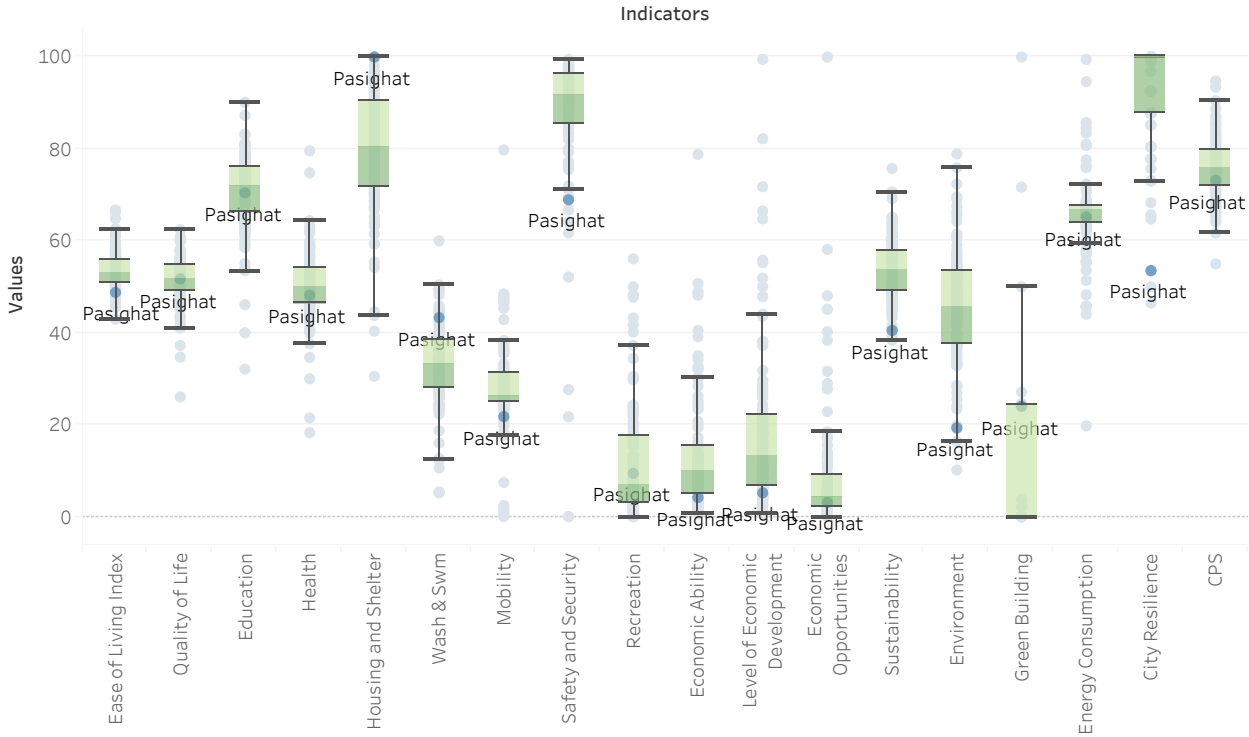
Pasighat

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

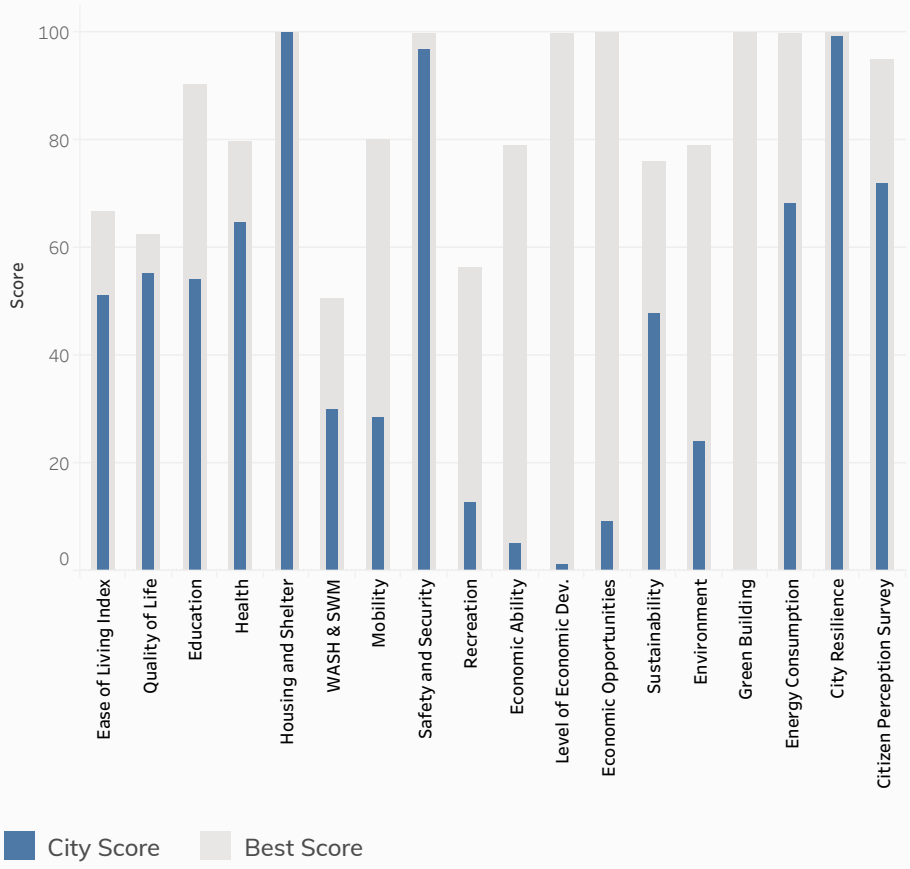


Rank
42

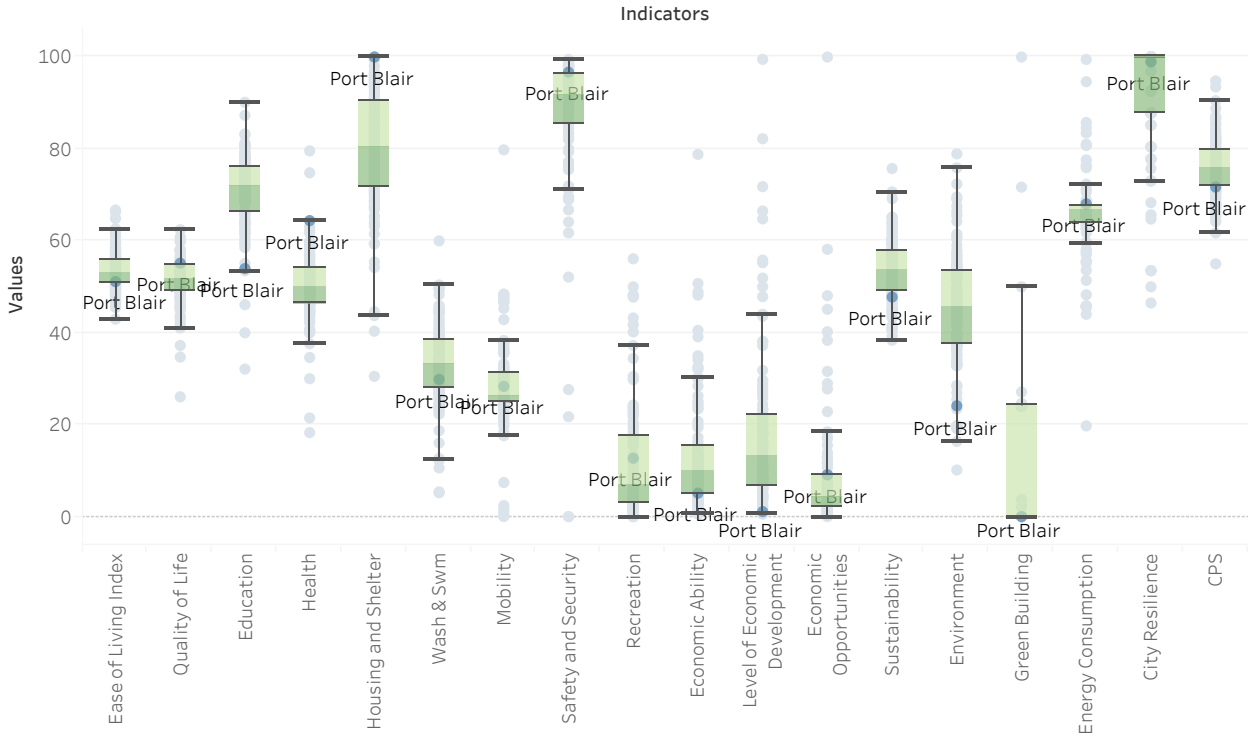
Port Blair

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

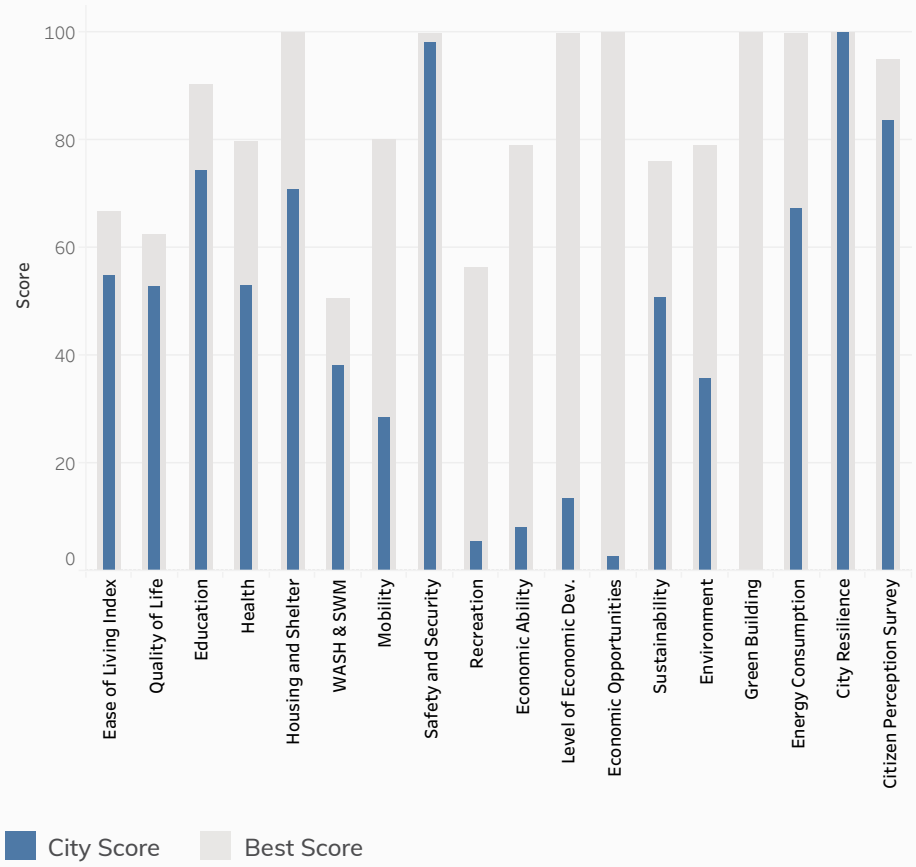


Rank
13

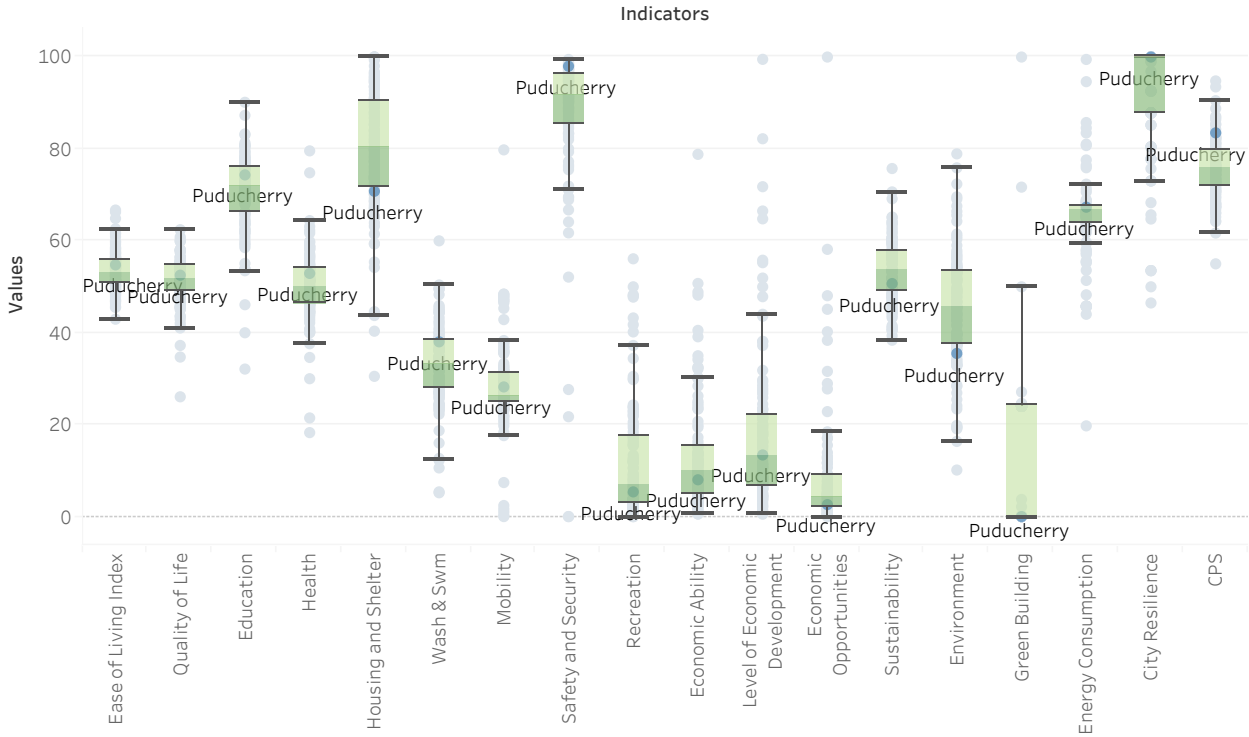
Puducherry

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

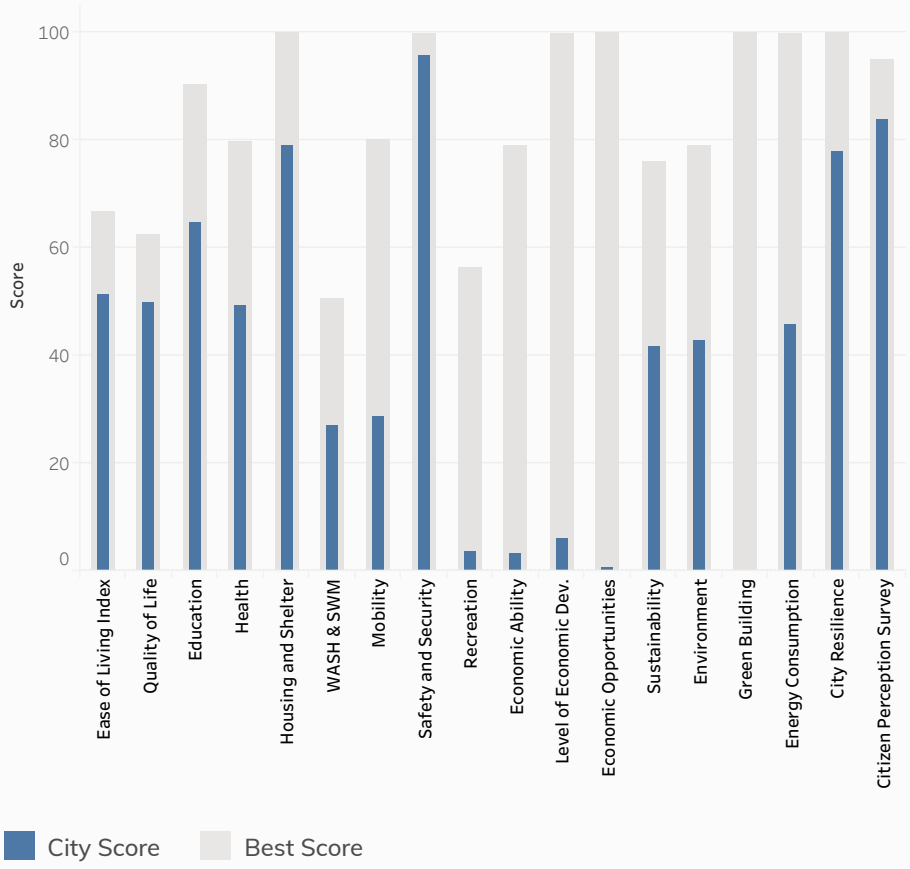


Rank
40

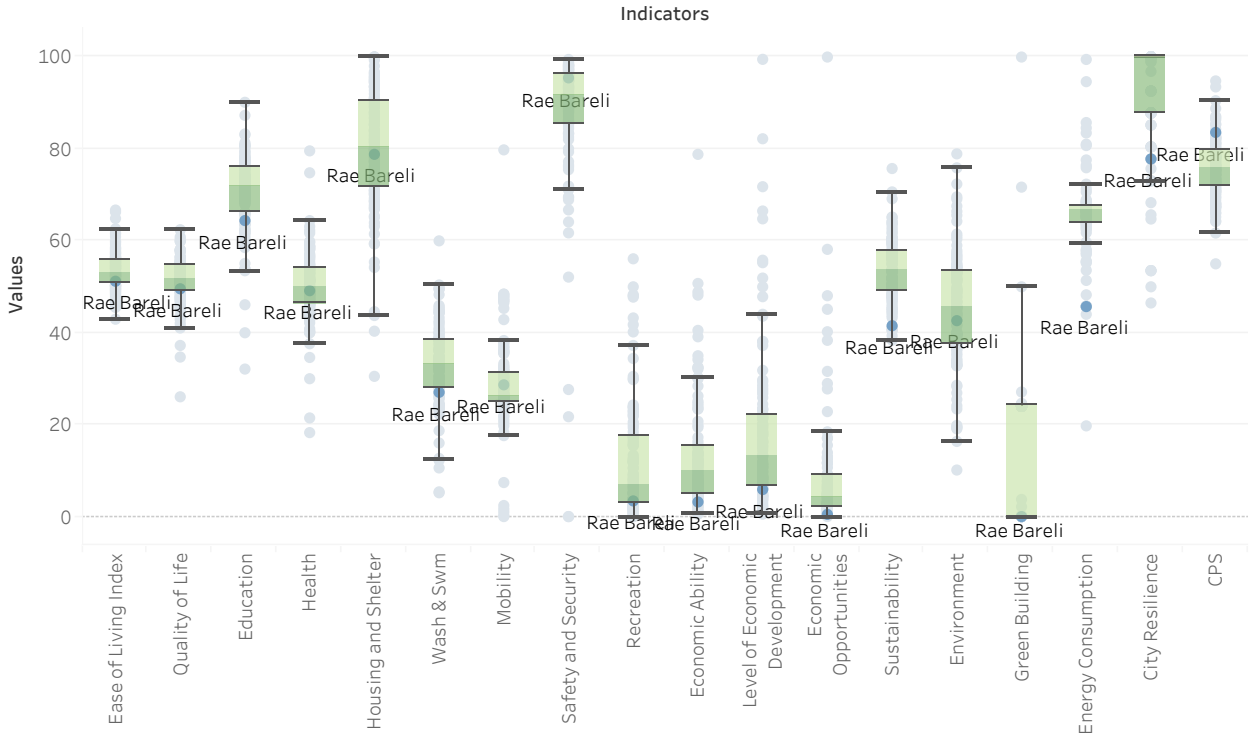
Rae Bareli

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities



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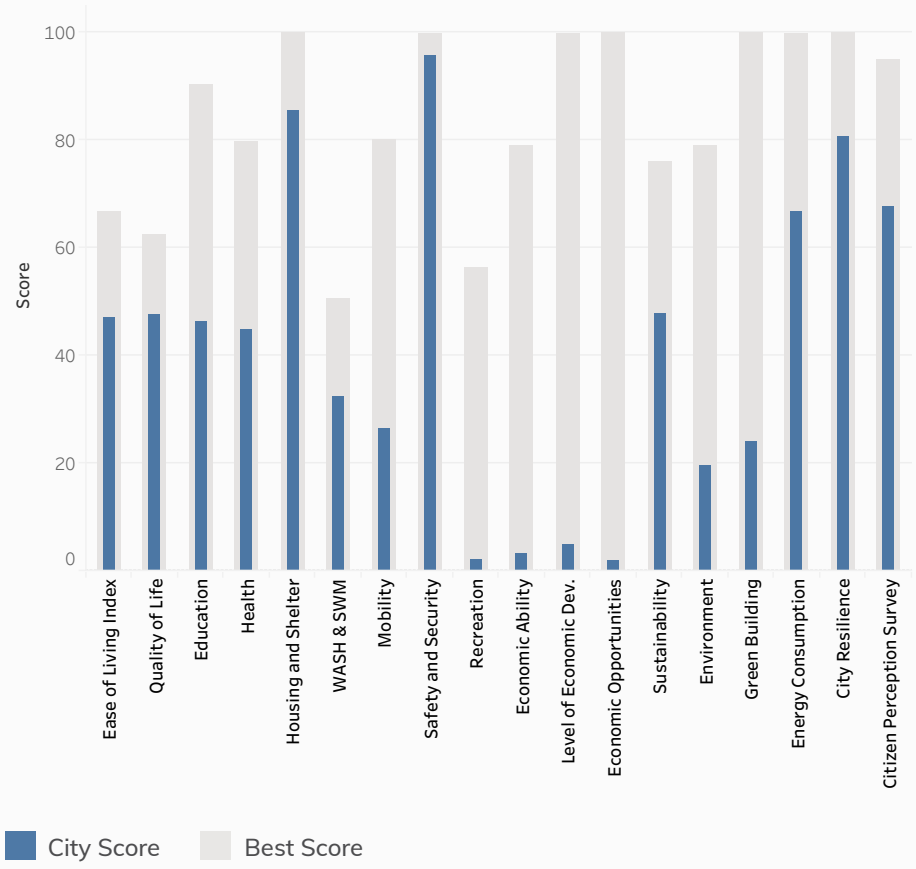
Rank
59

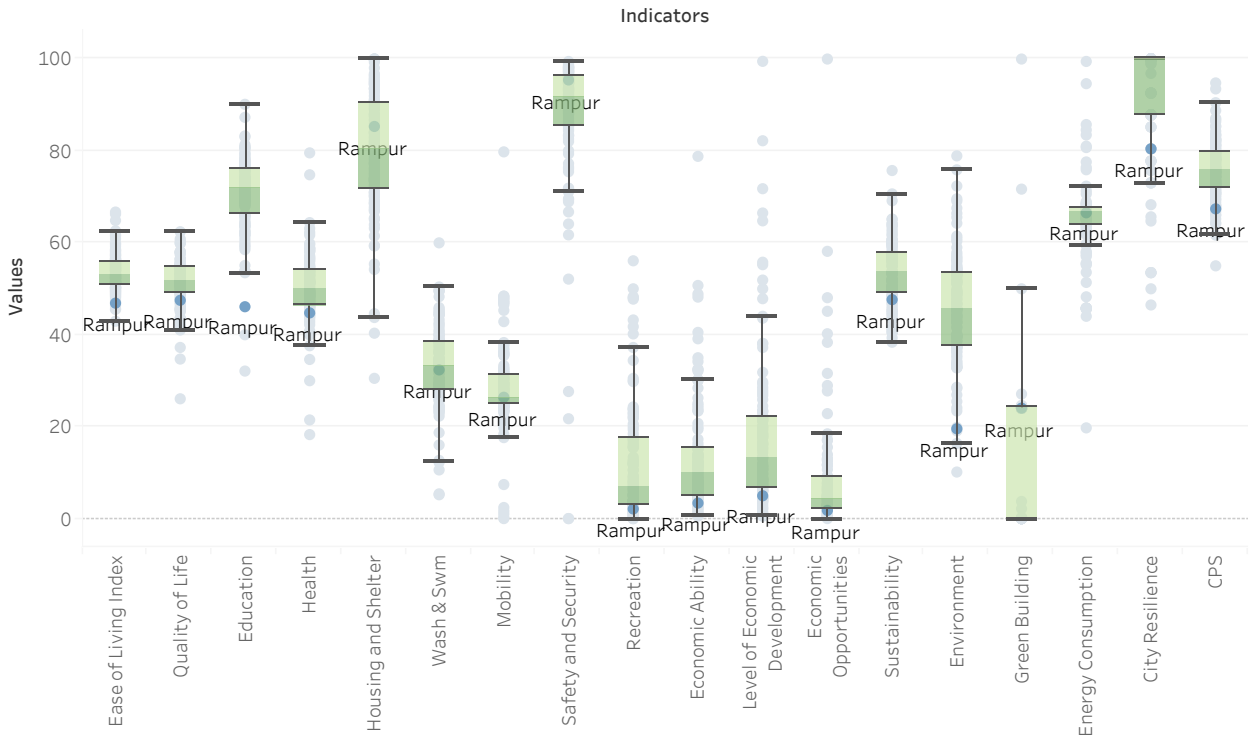
Rampur

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

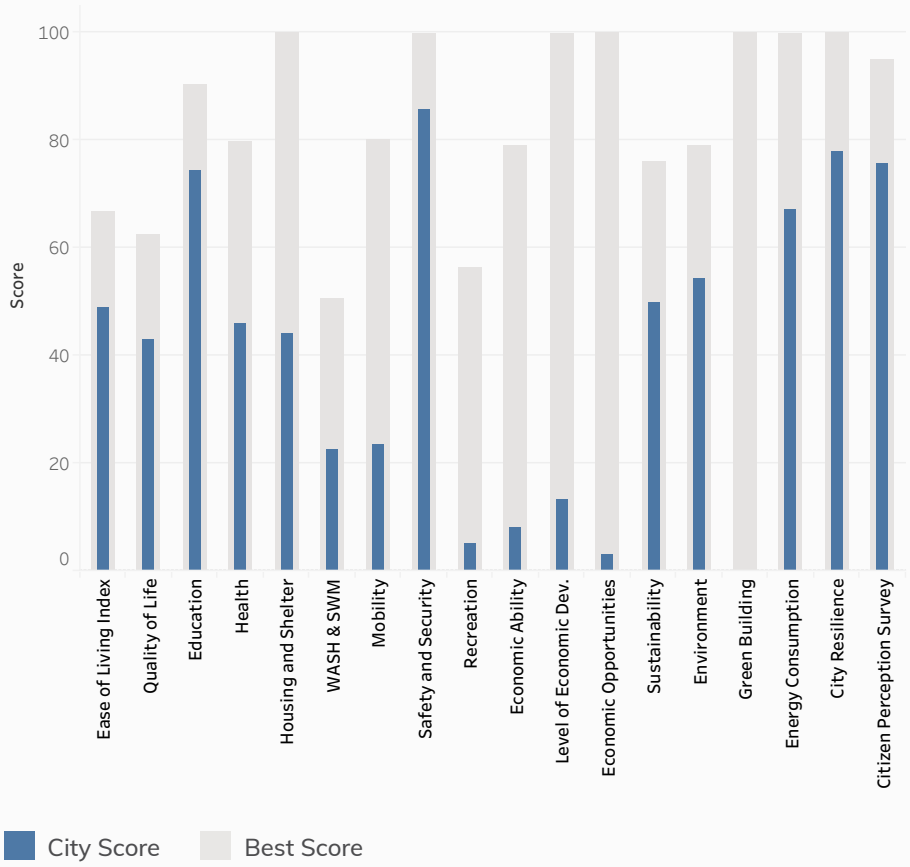


Rank
54

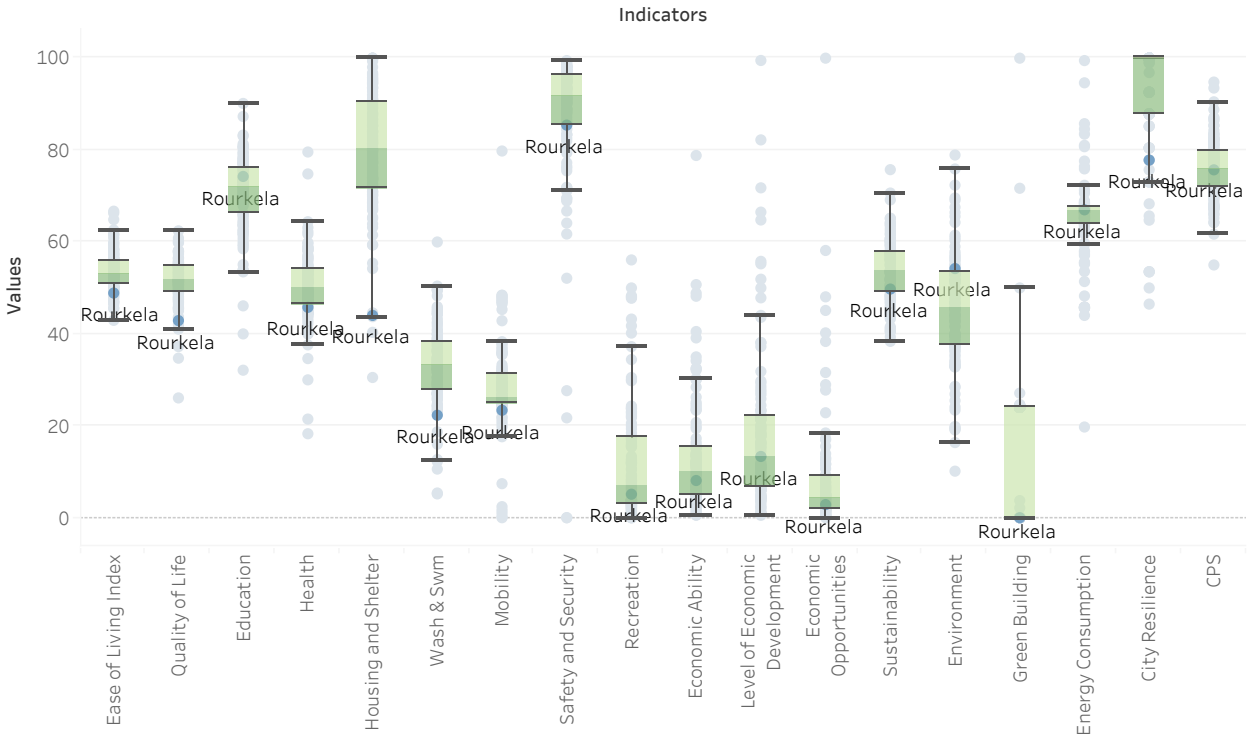
Rourkela

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

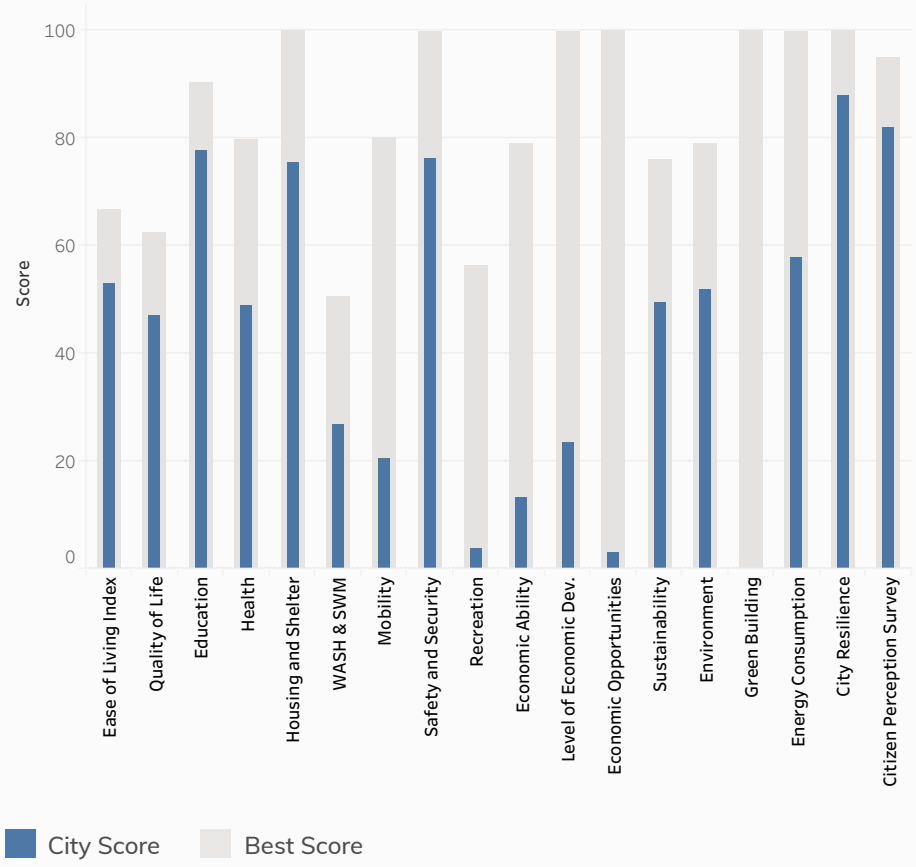


Rank
25

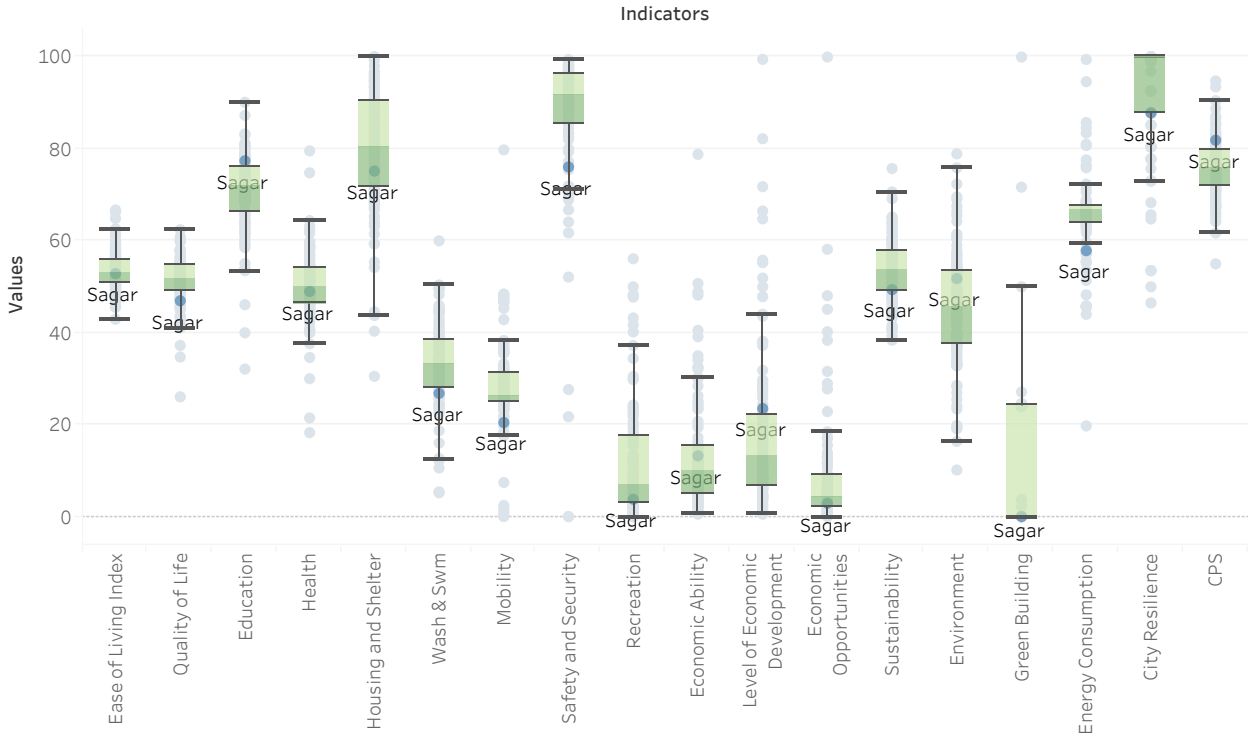
Sagar

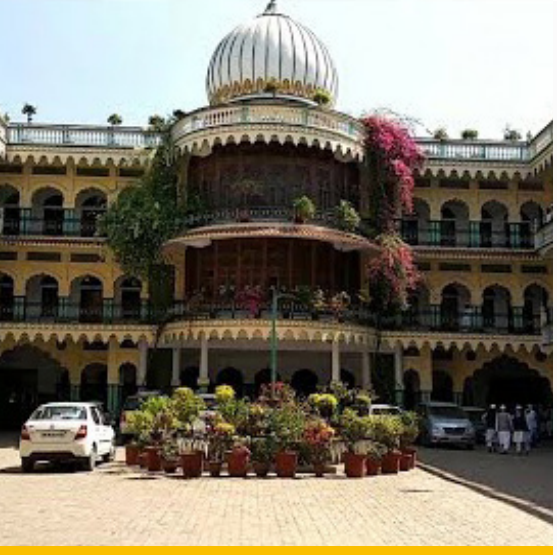
Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities



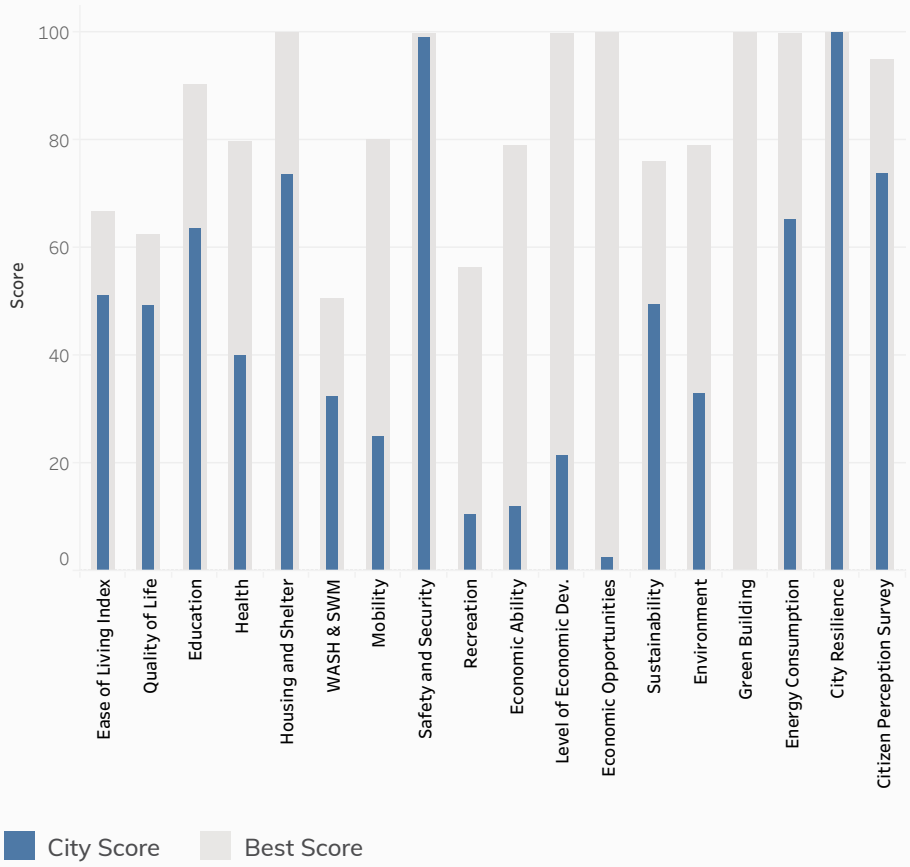


Rank
44

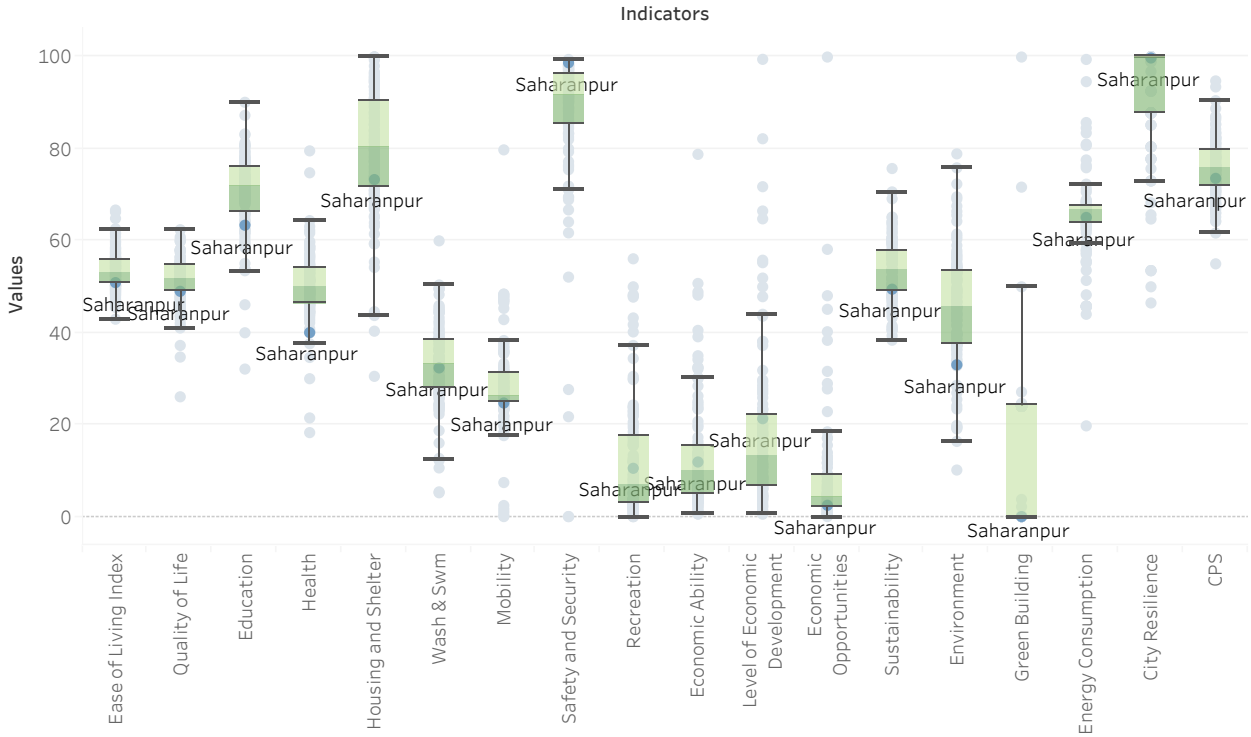
Saharanpur

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

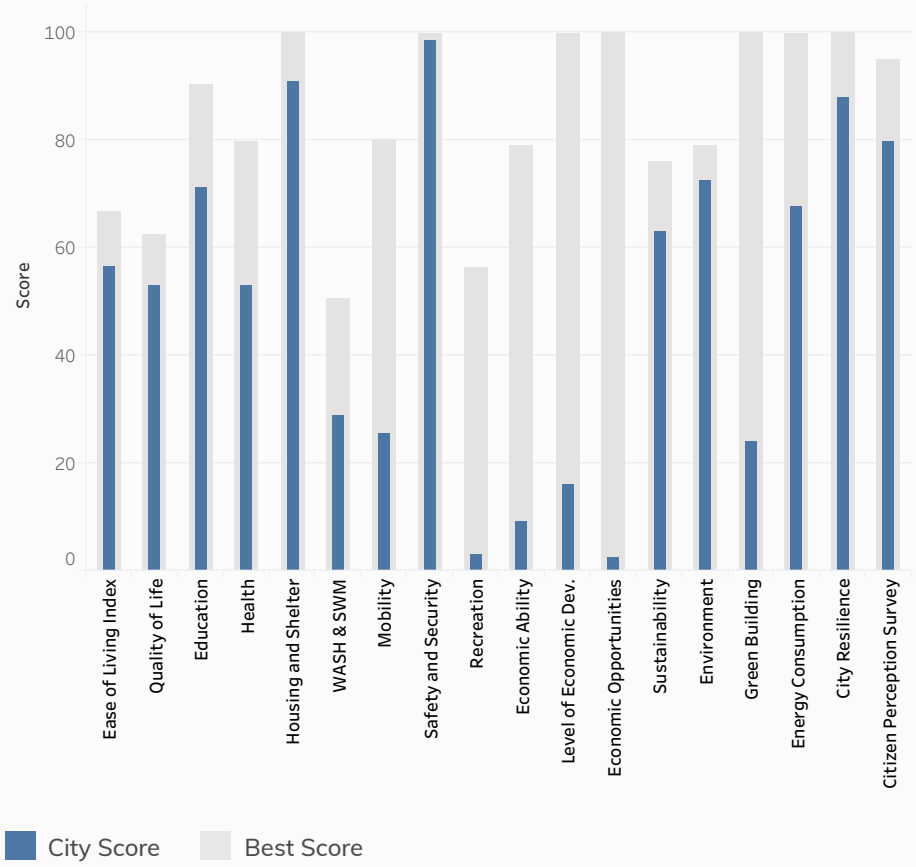


Rank
05

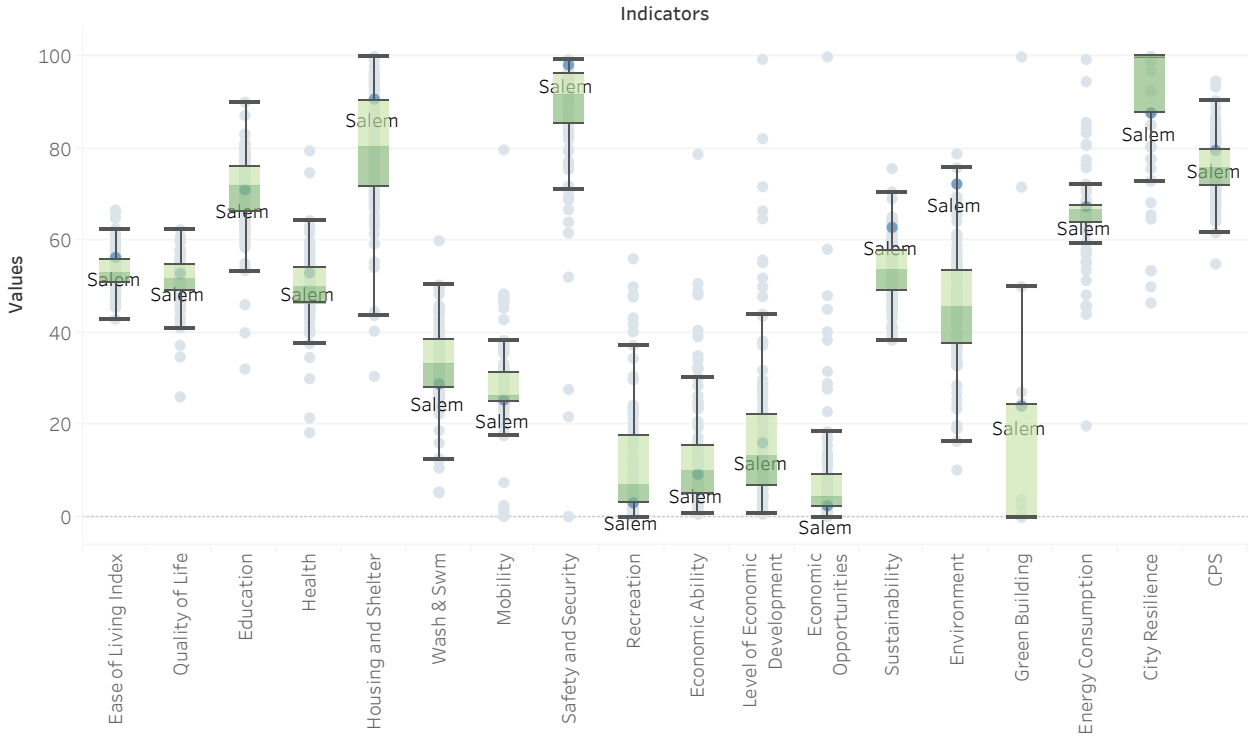
Salem

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

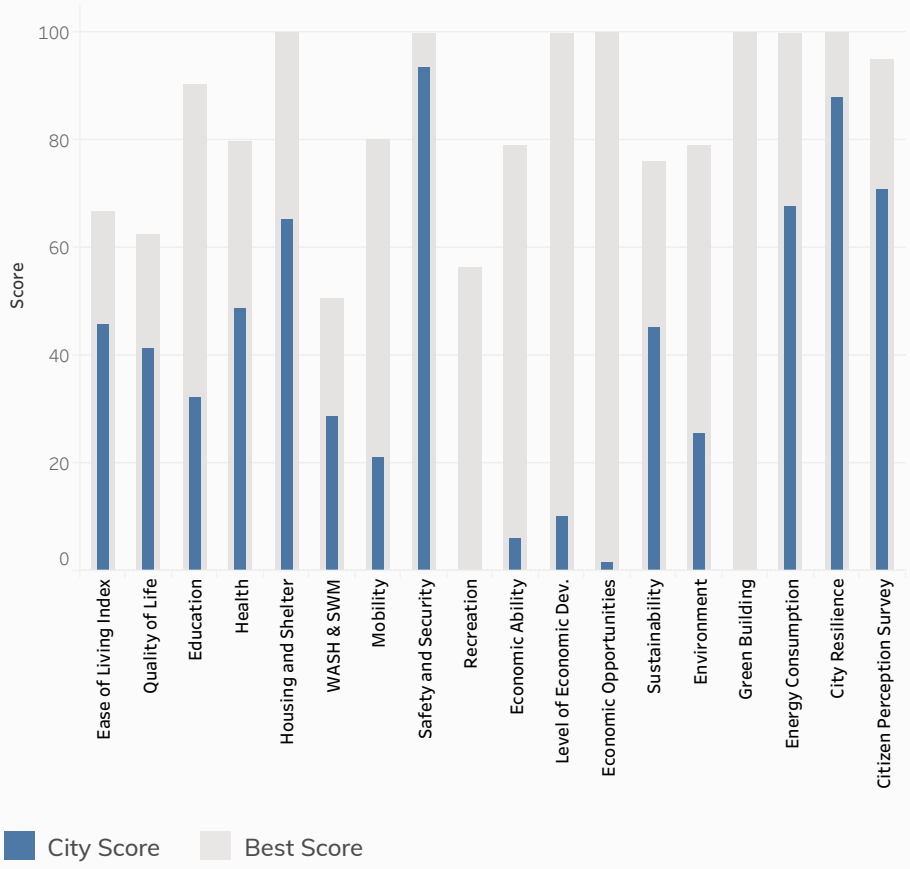


Rank
61

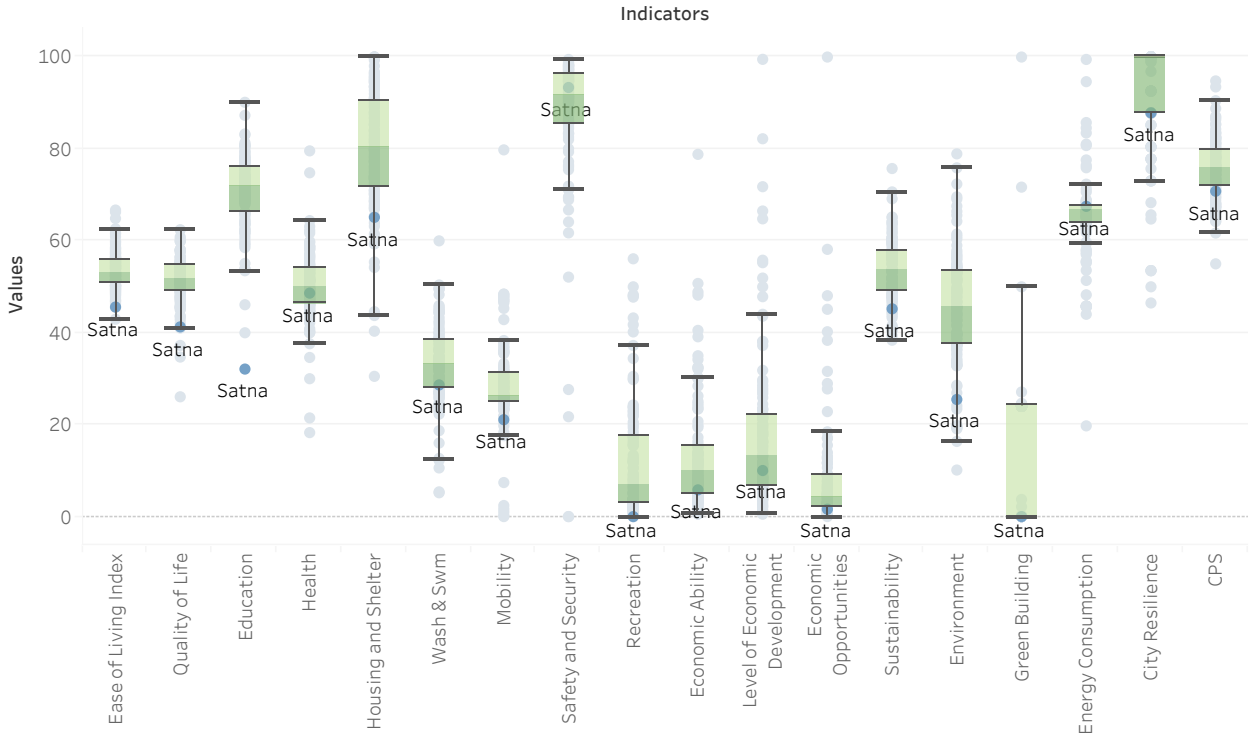
Satna

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

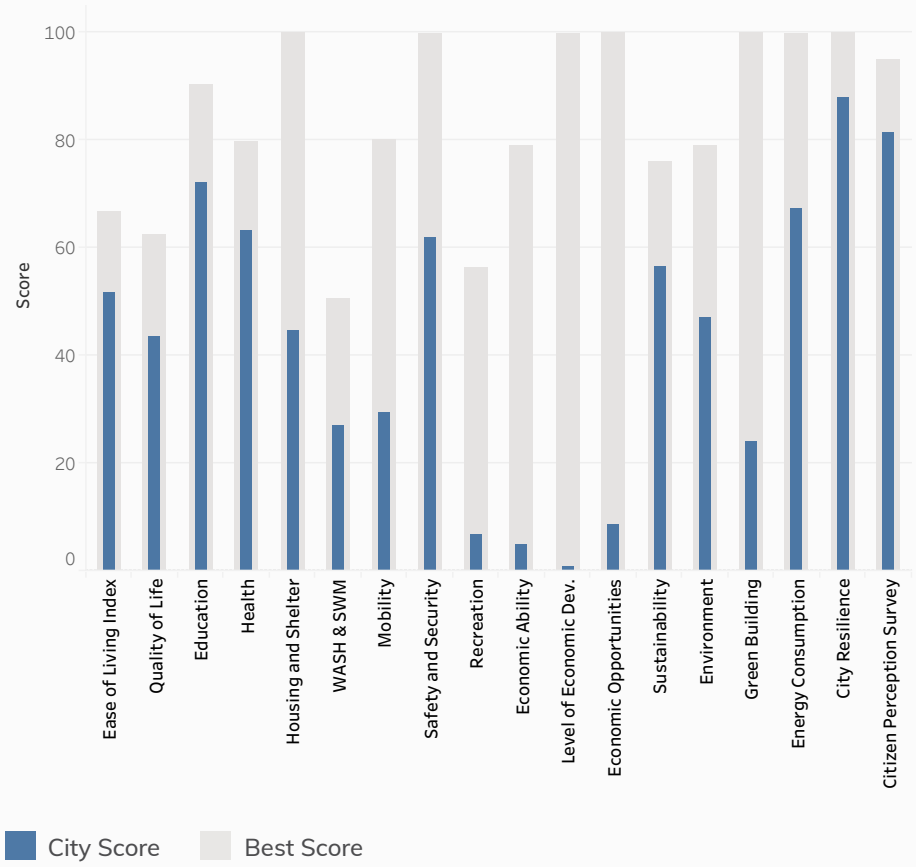


Rank
35

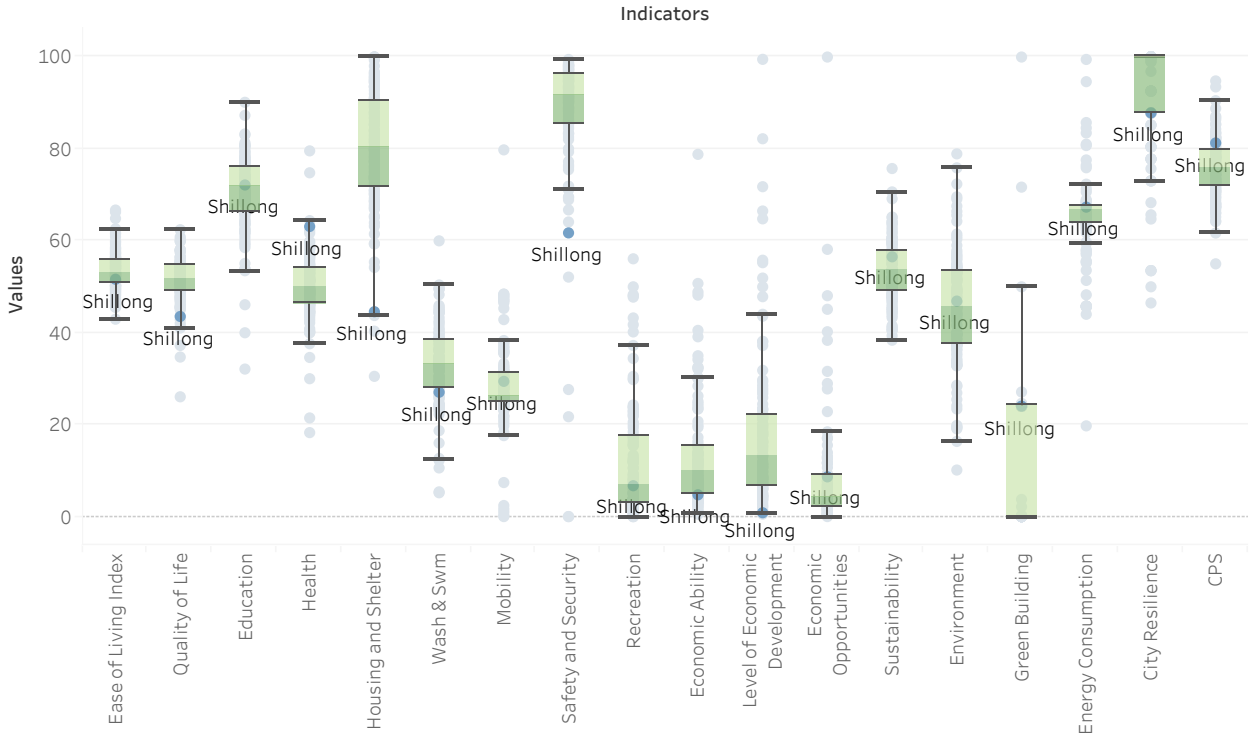
Shillong

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

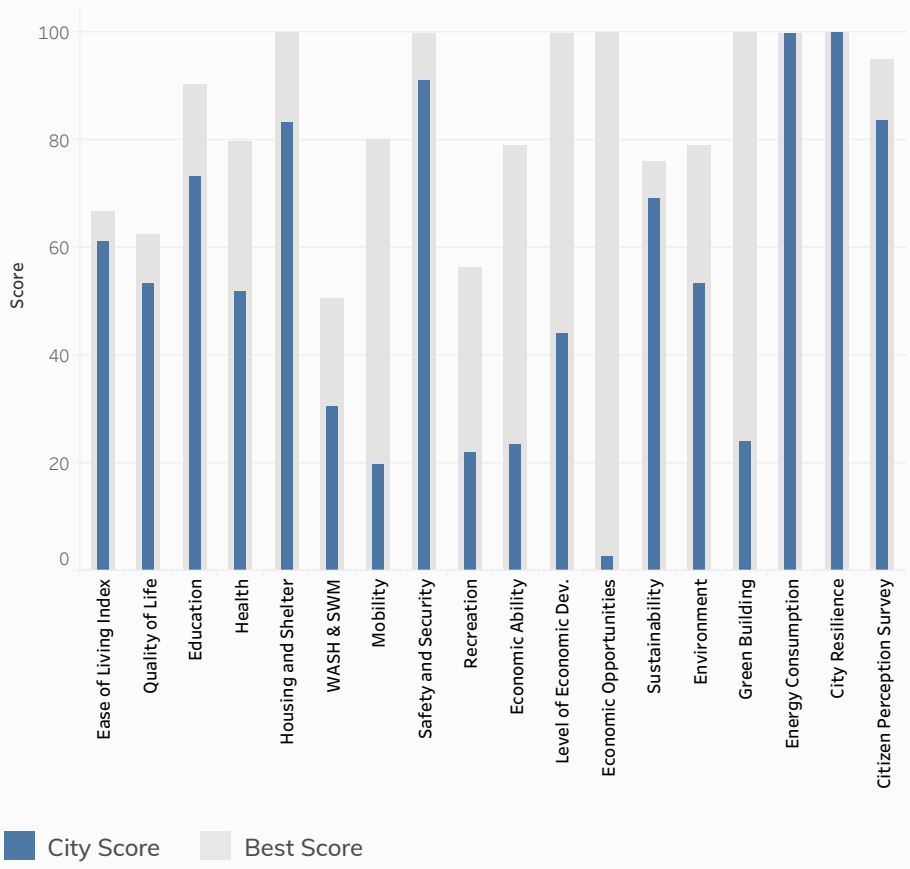


Rank
01

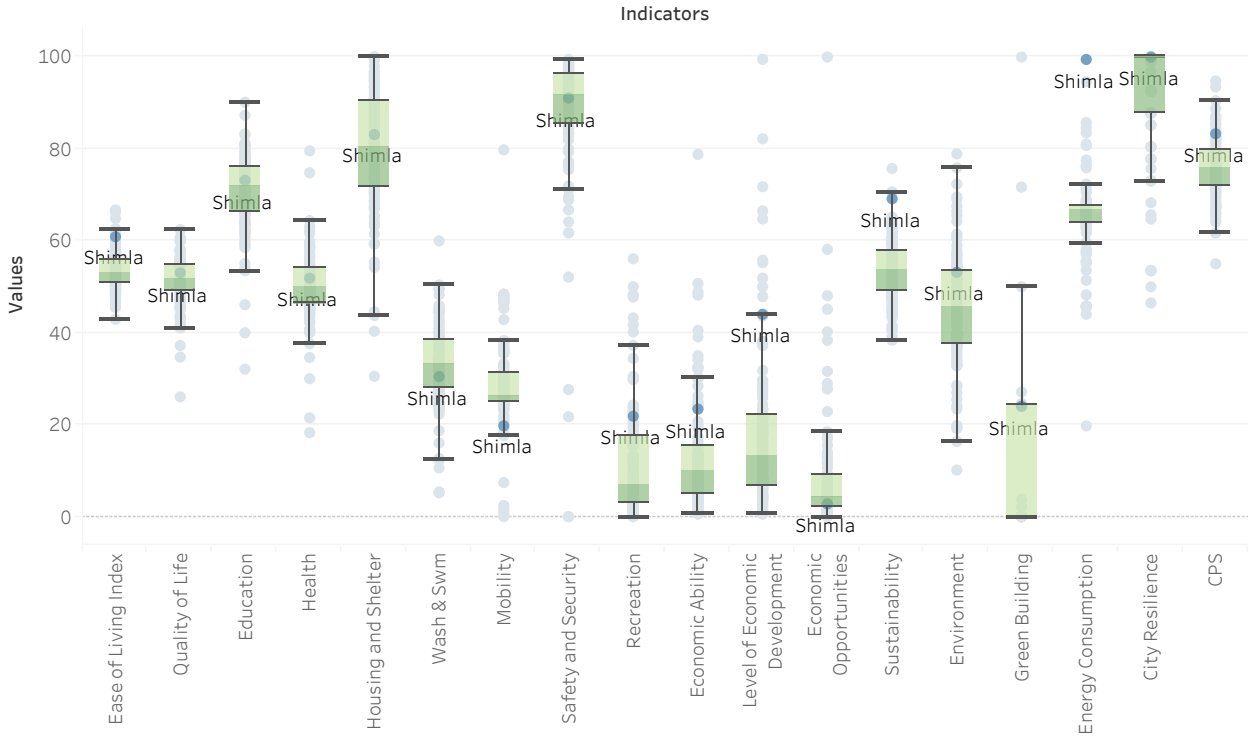
Shimla

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

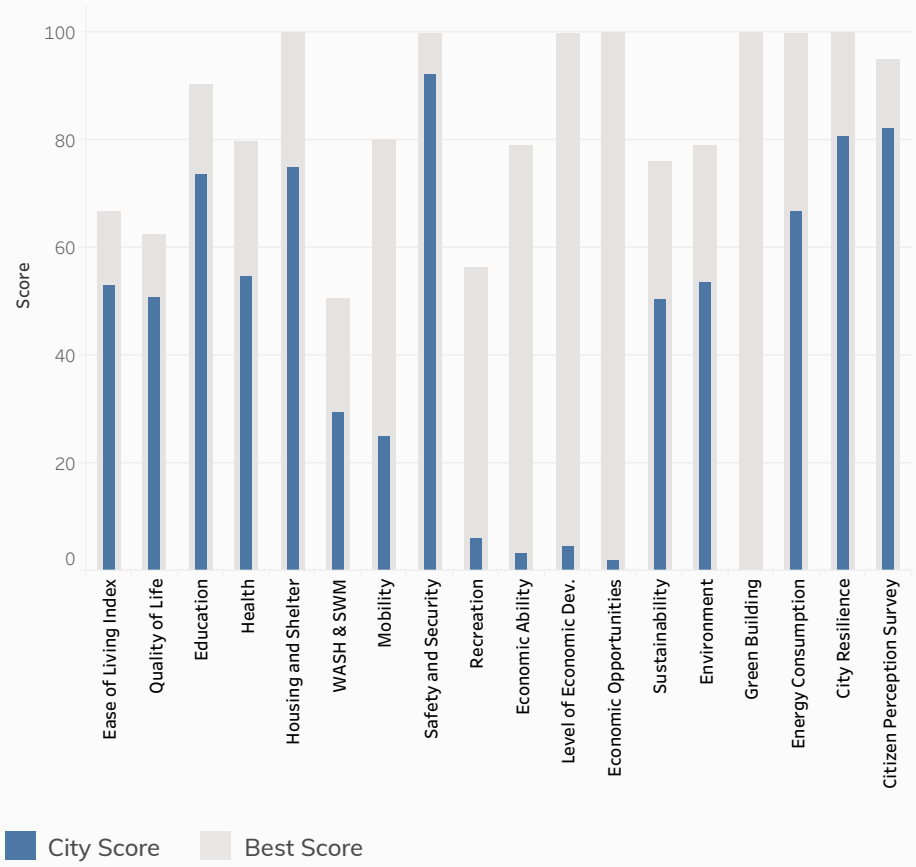


Rank
26

Shivamogga

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

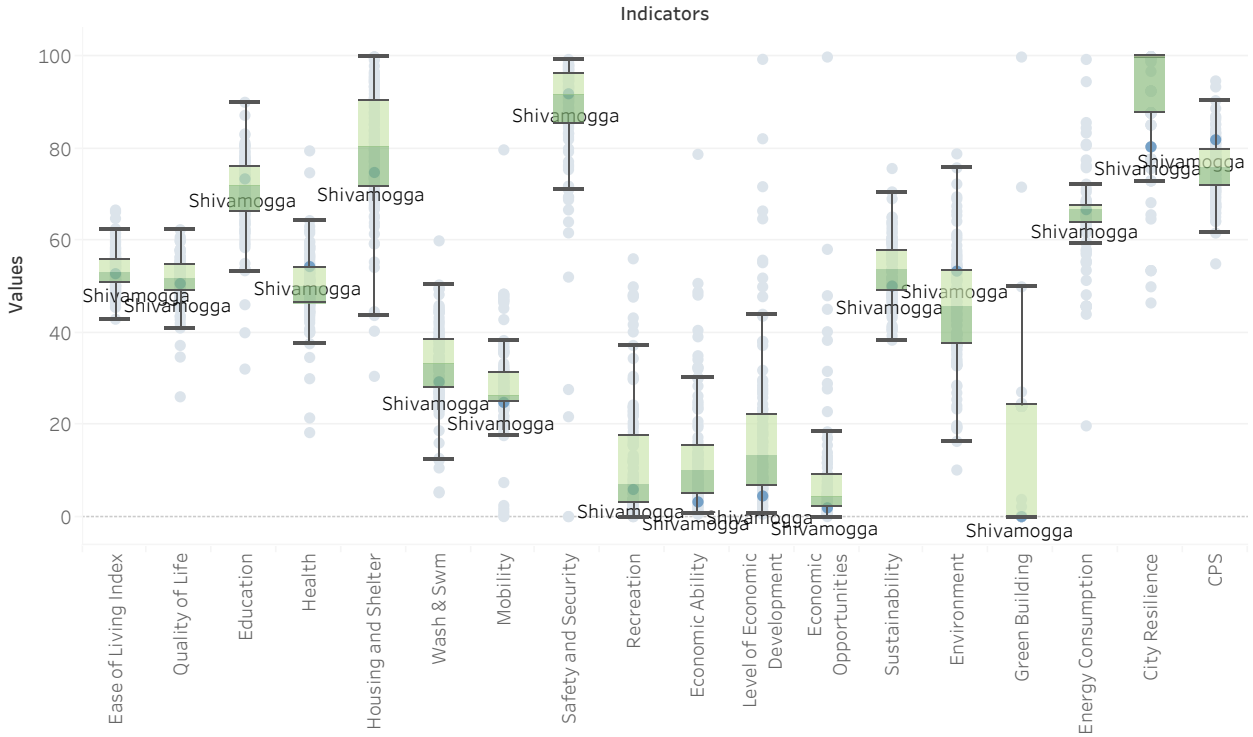


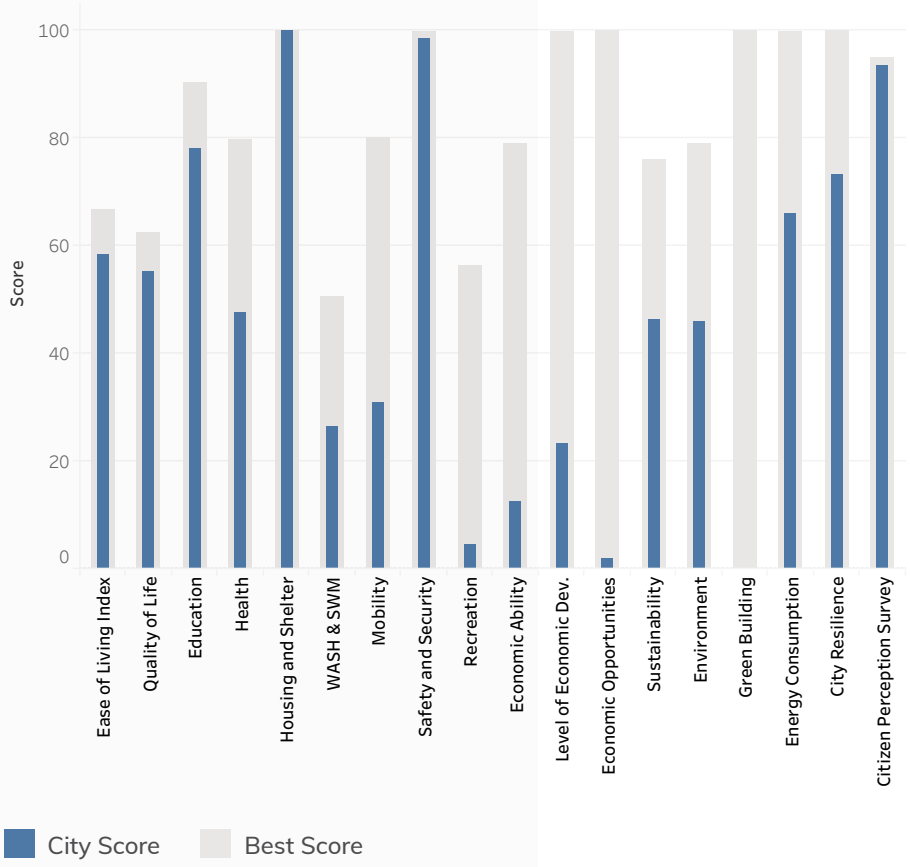
Image Source: https://en.wikipedia.org/wiki/File:Shivappa_Nayaka_Palace_and_garden.JPG

Rank
03

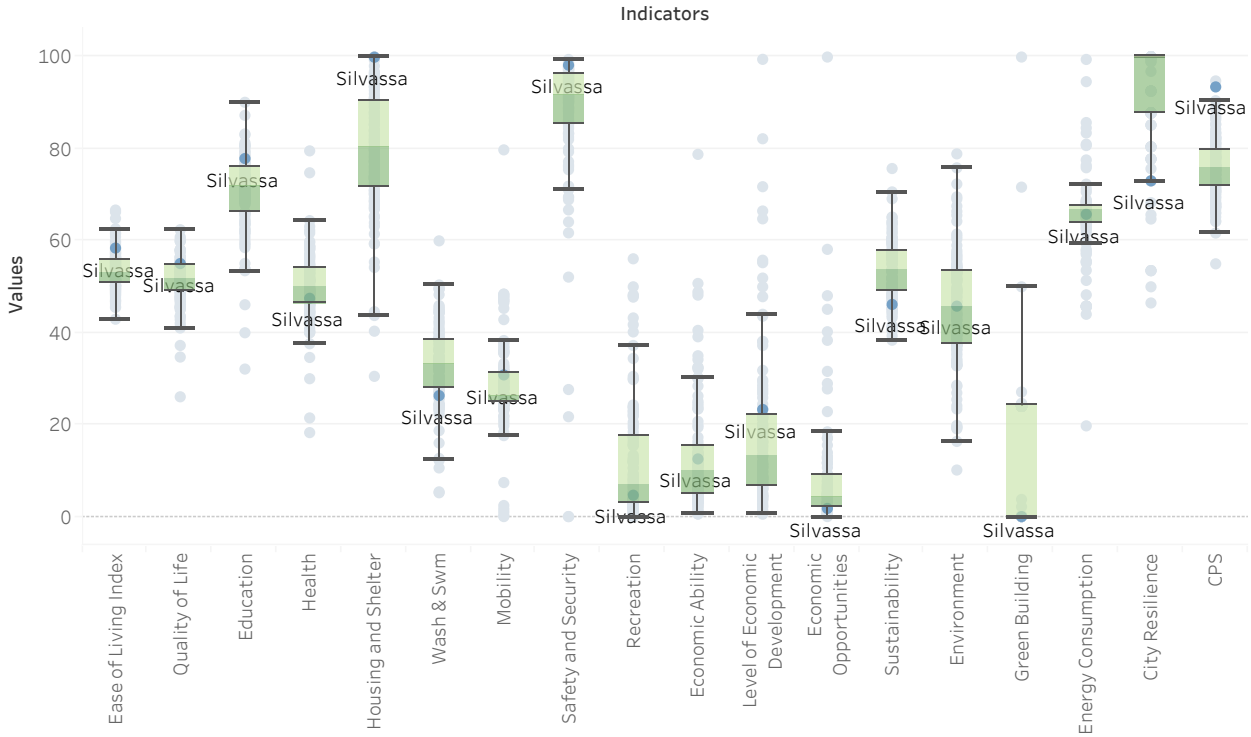
Silvassa

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

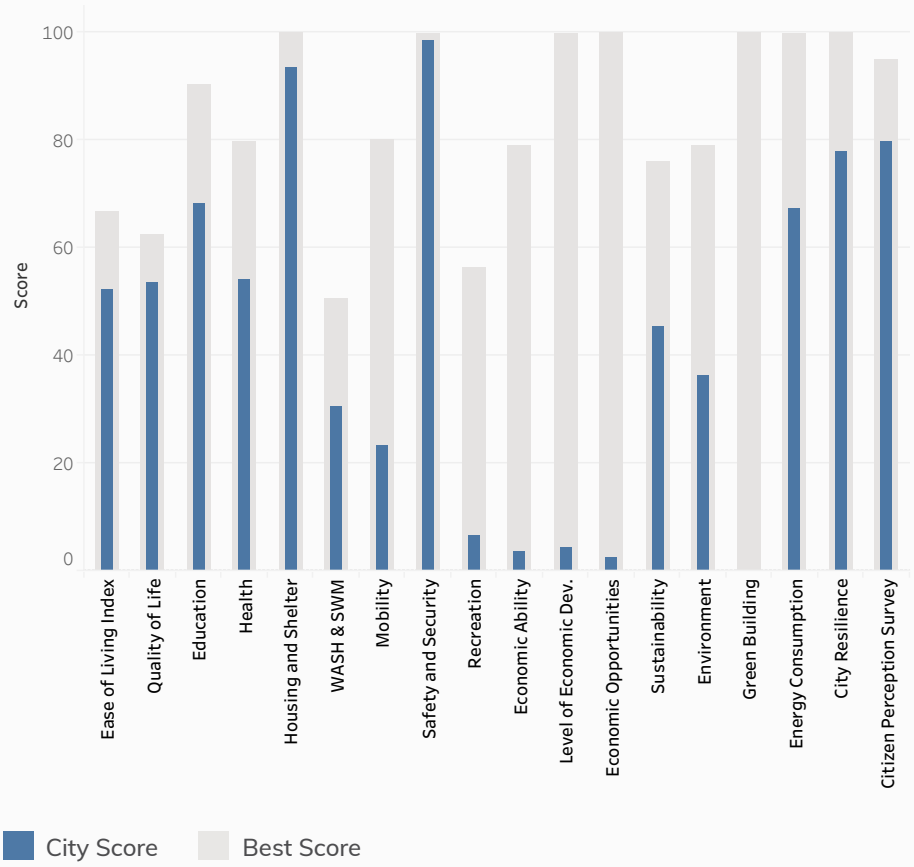


Rank
31

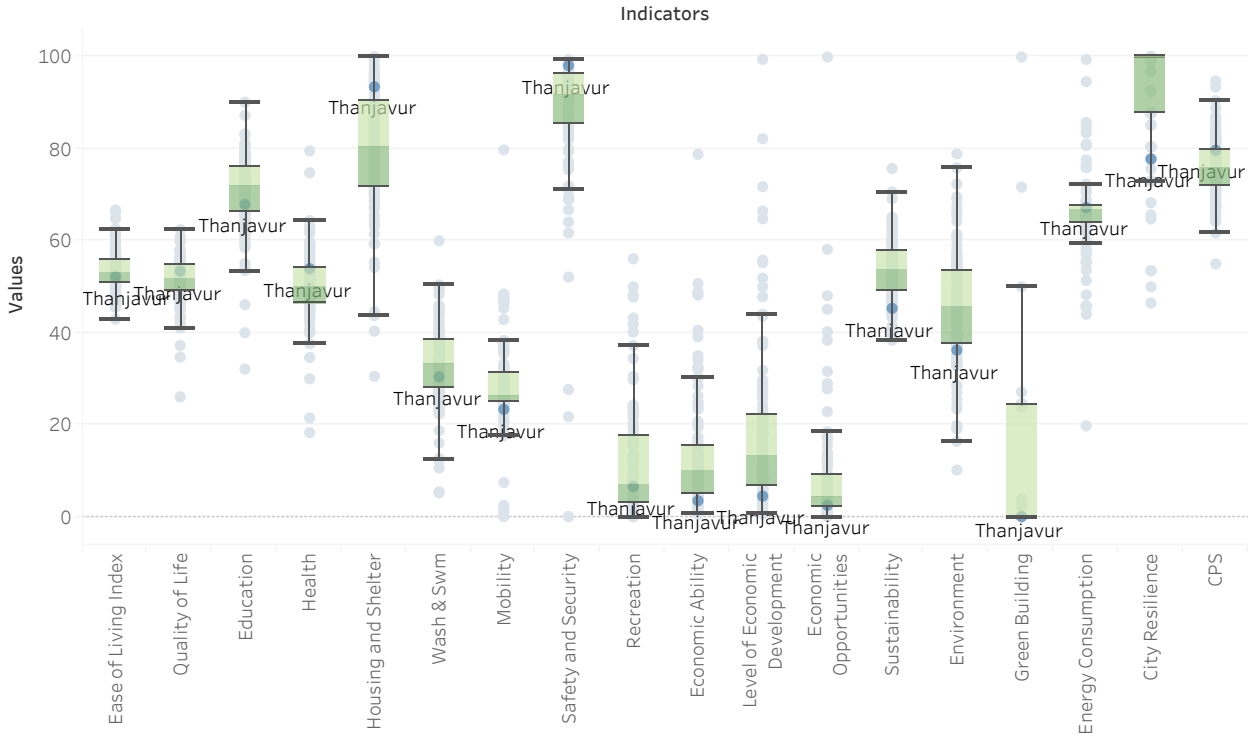
Thanjavur

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

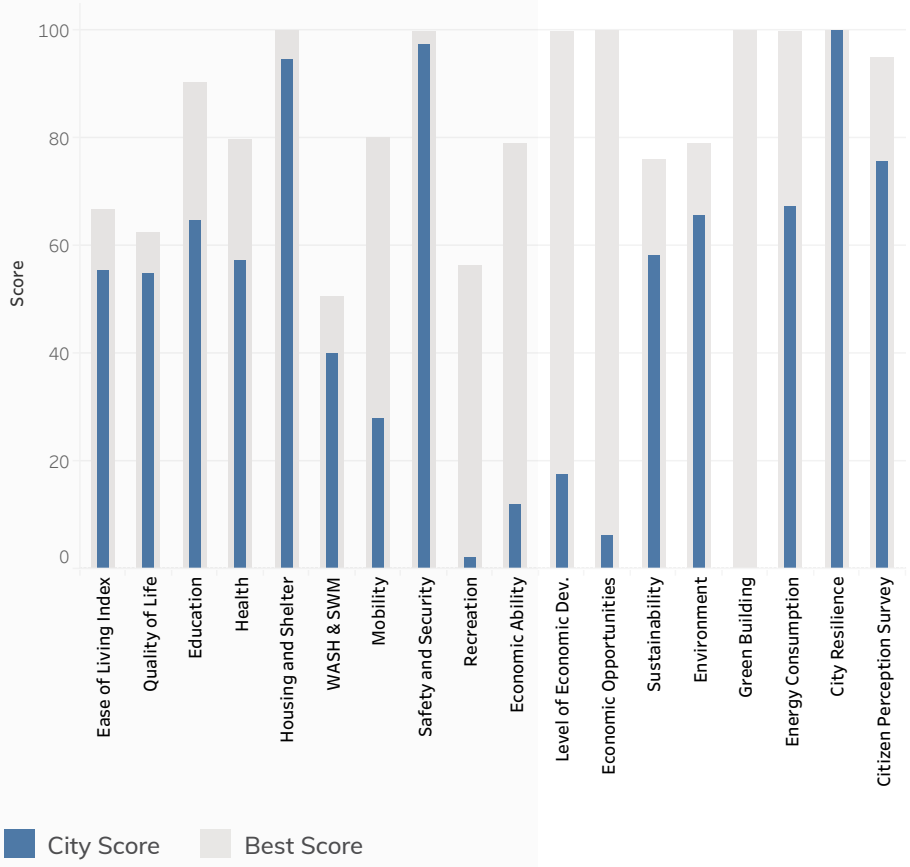


Rank
10

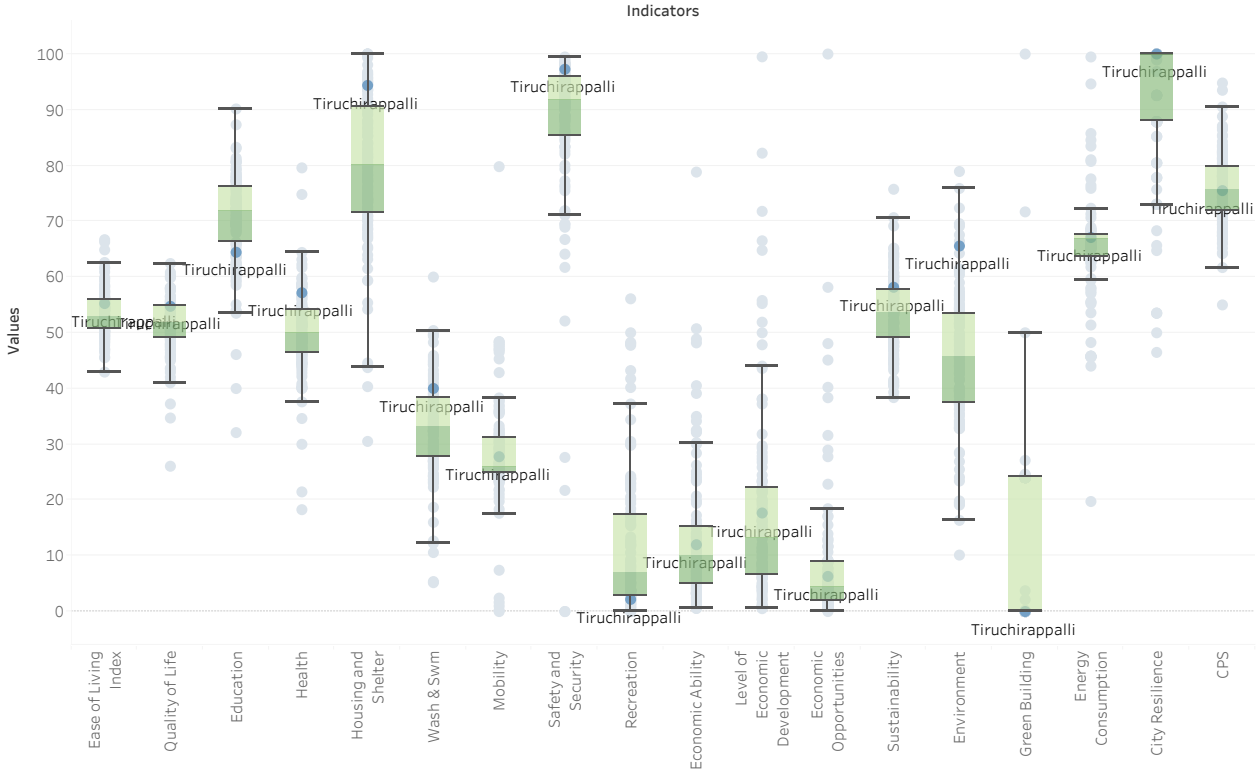
Tiruchirappalli

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

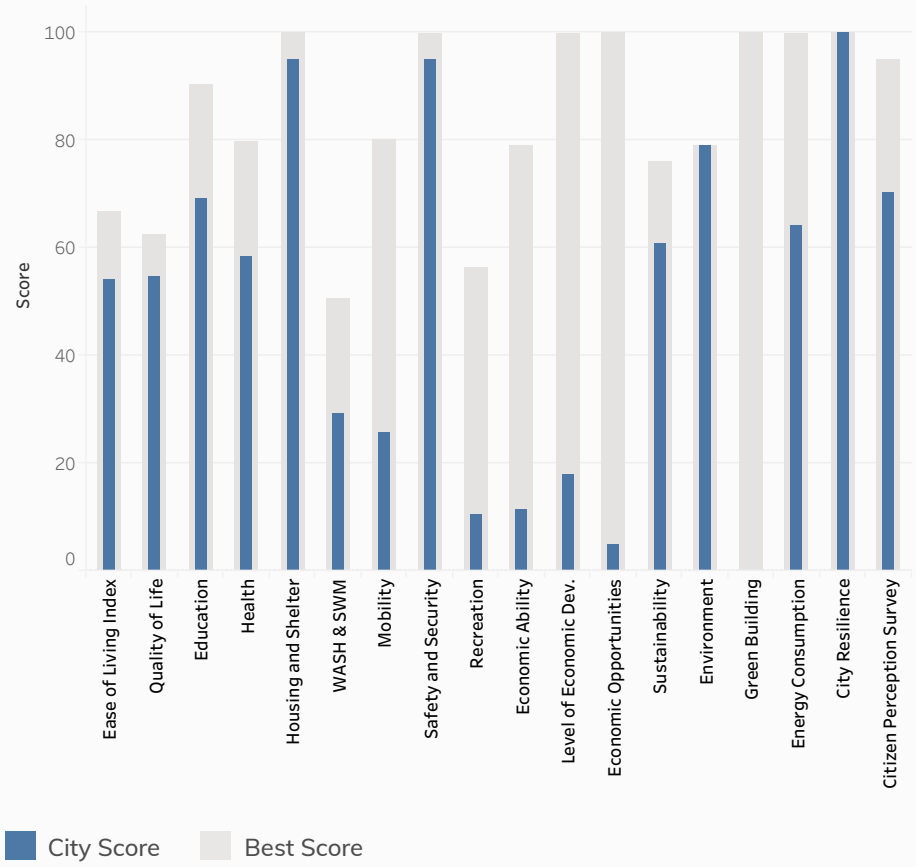


Rank
17

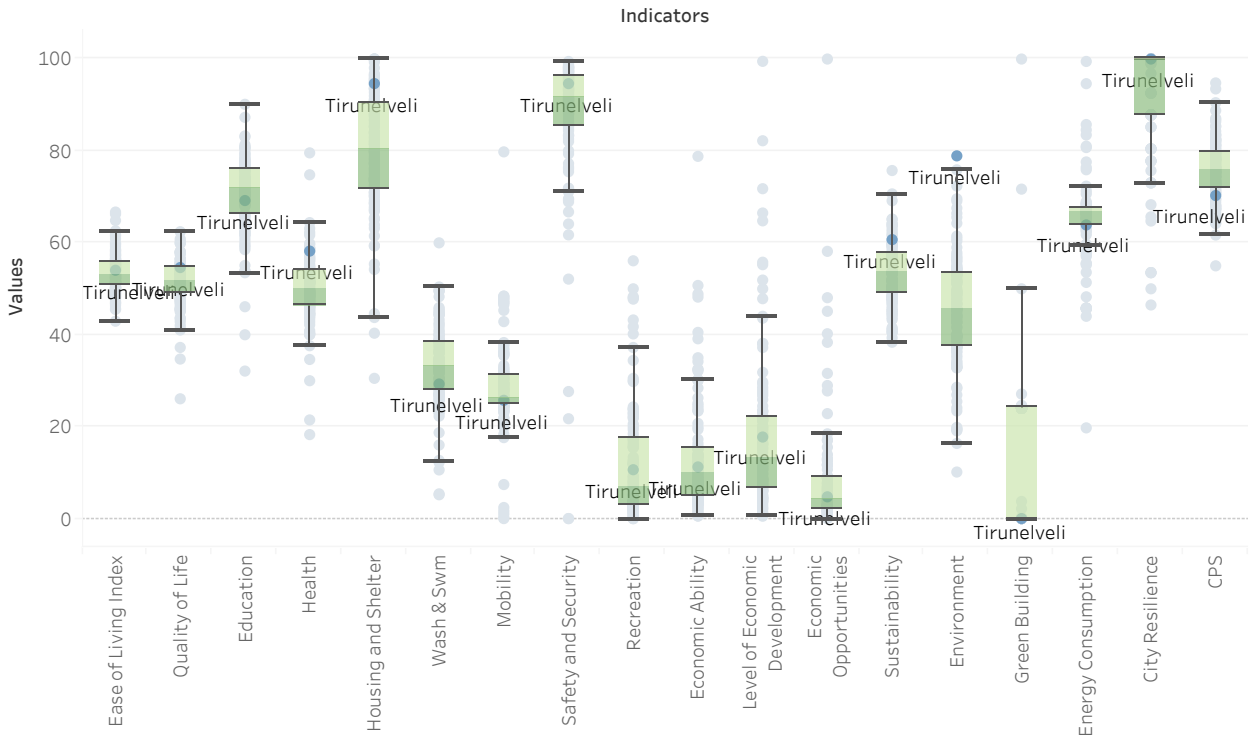
Tirunelveli

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

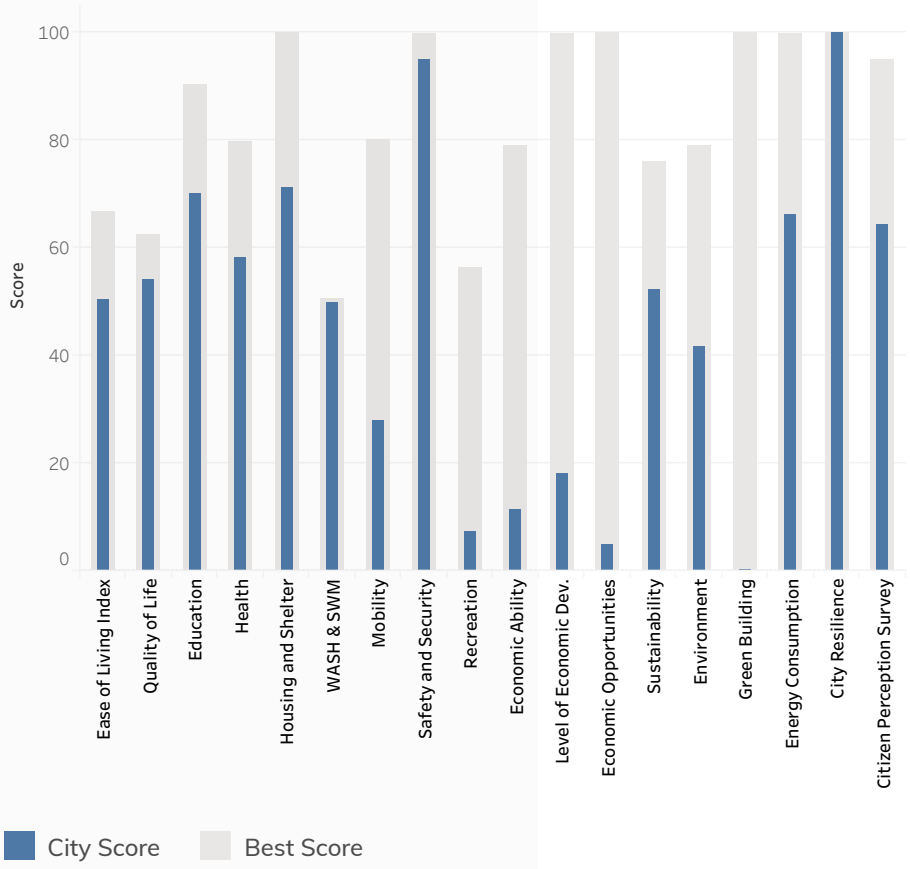


Rank
46

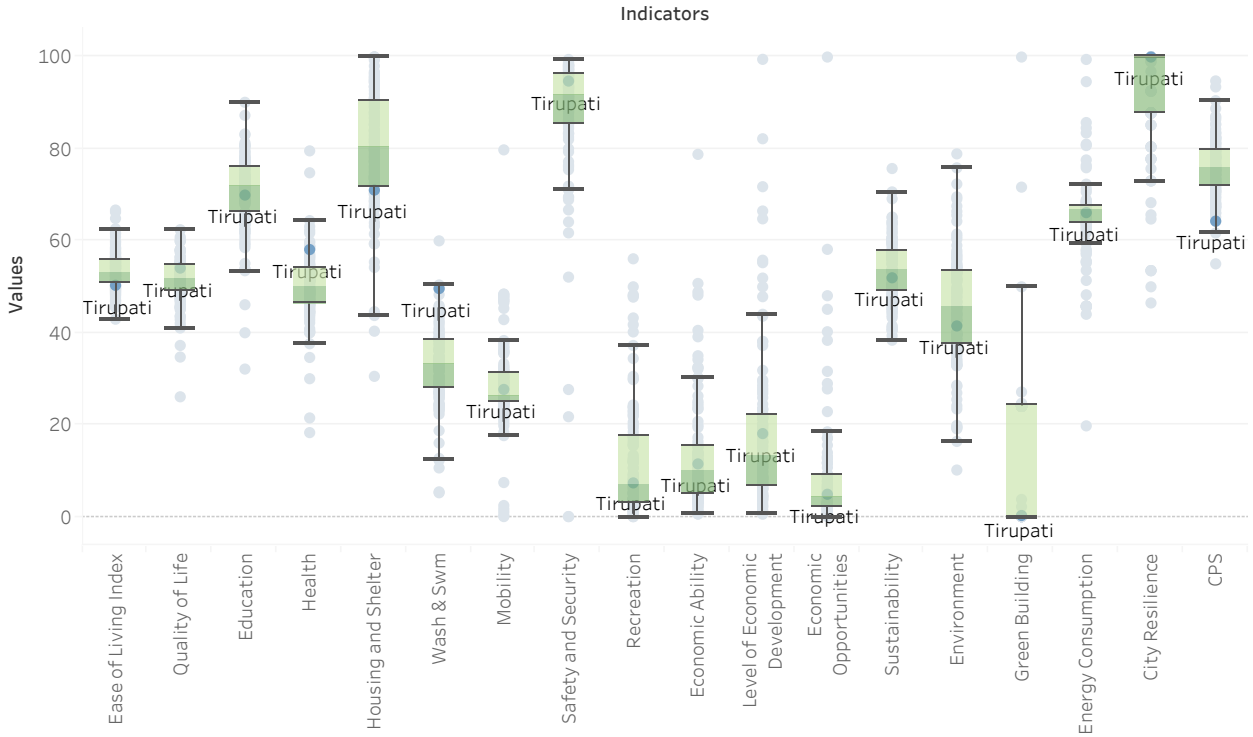
Tirupati

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

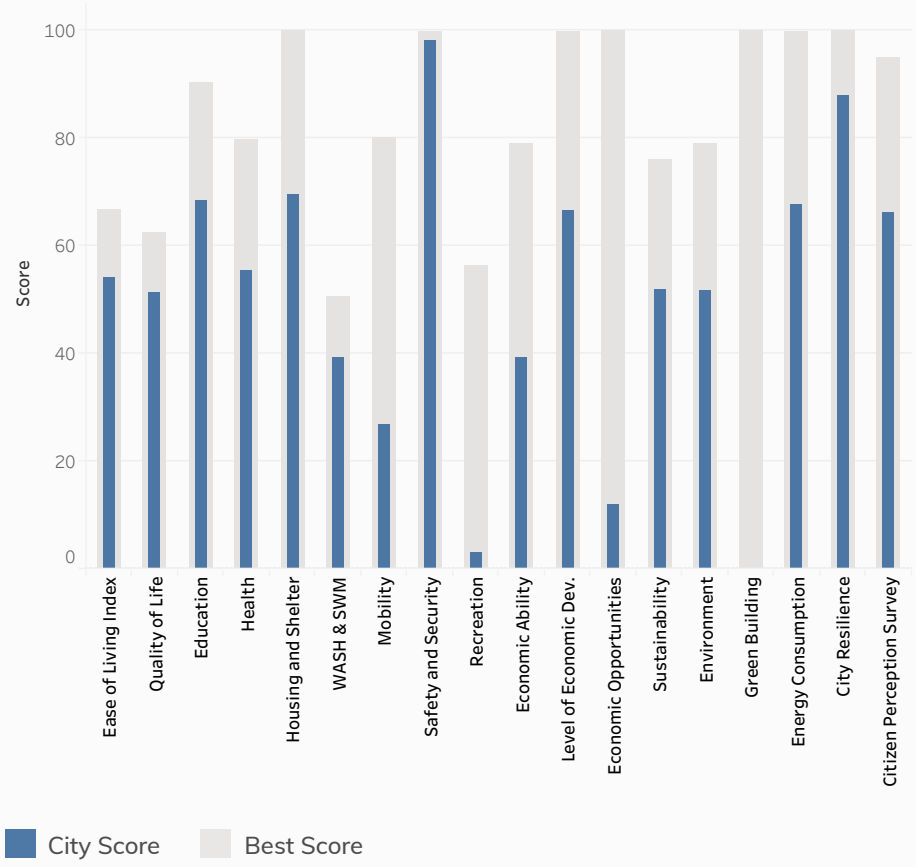


Rank
18

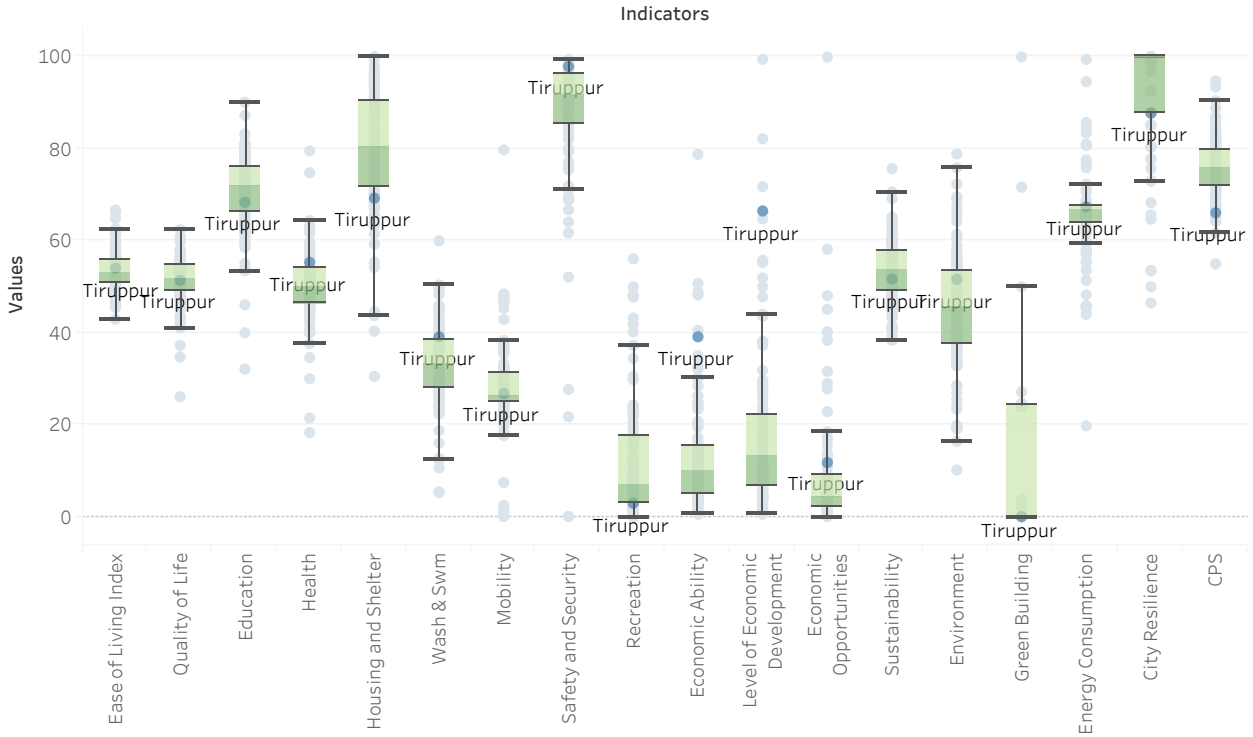
Tiruppur

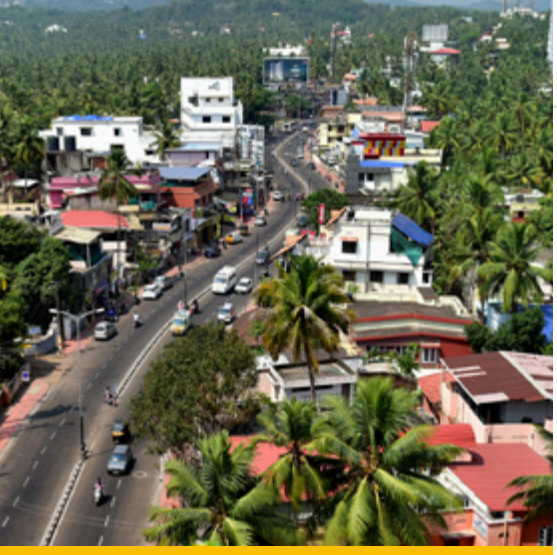
Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities



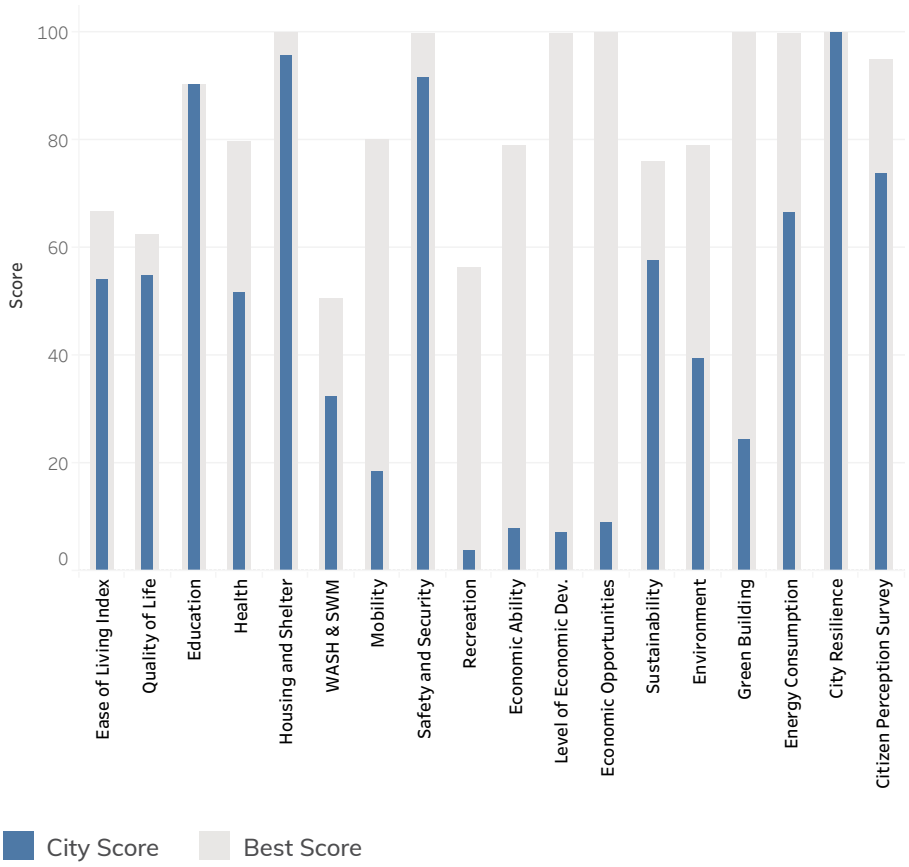


Rank
21

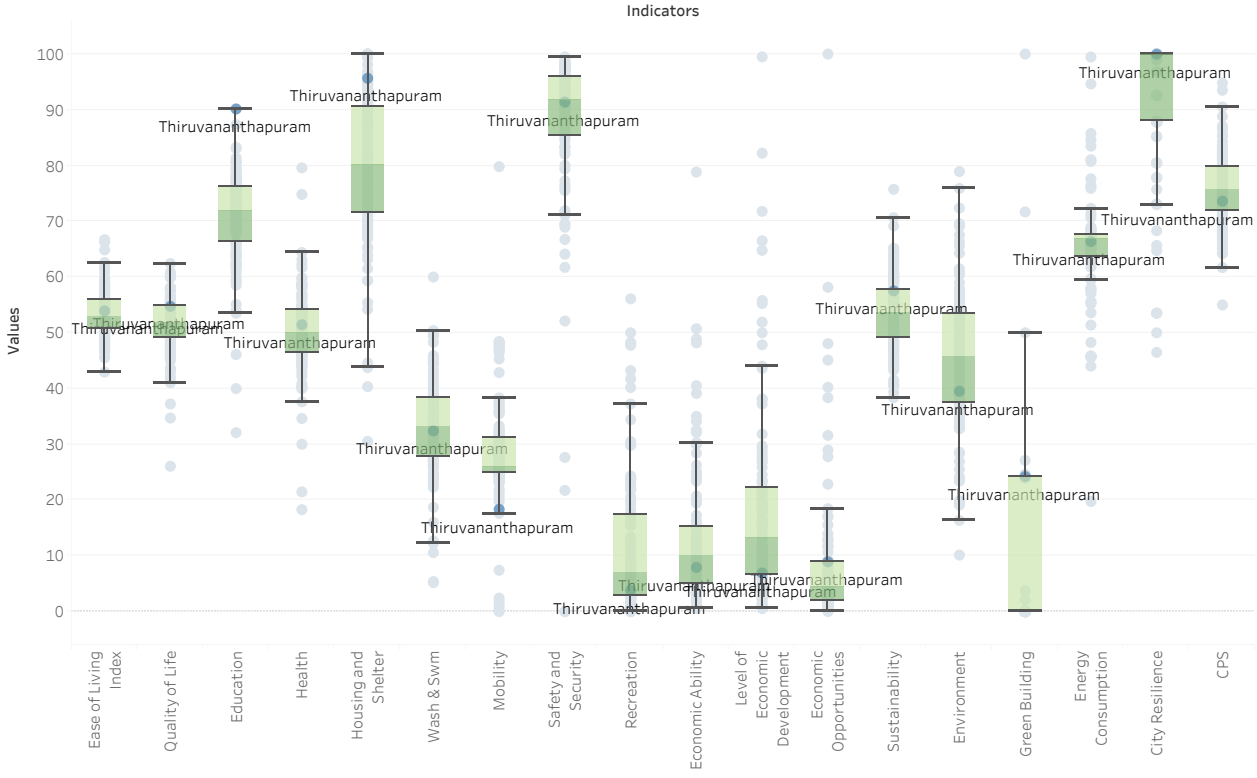
Thiruvananthapuram

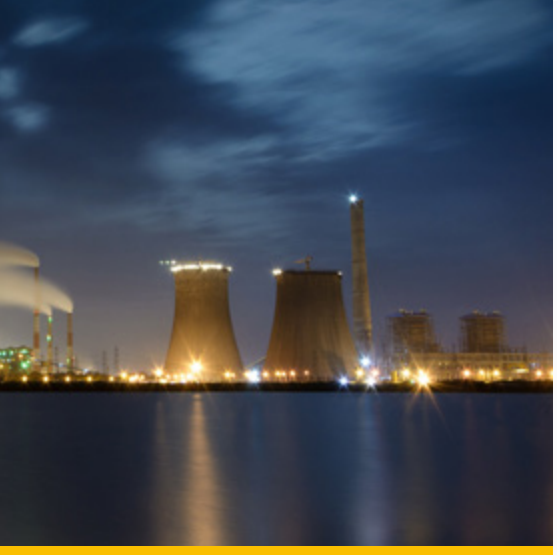
Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities



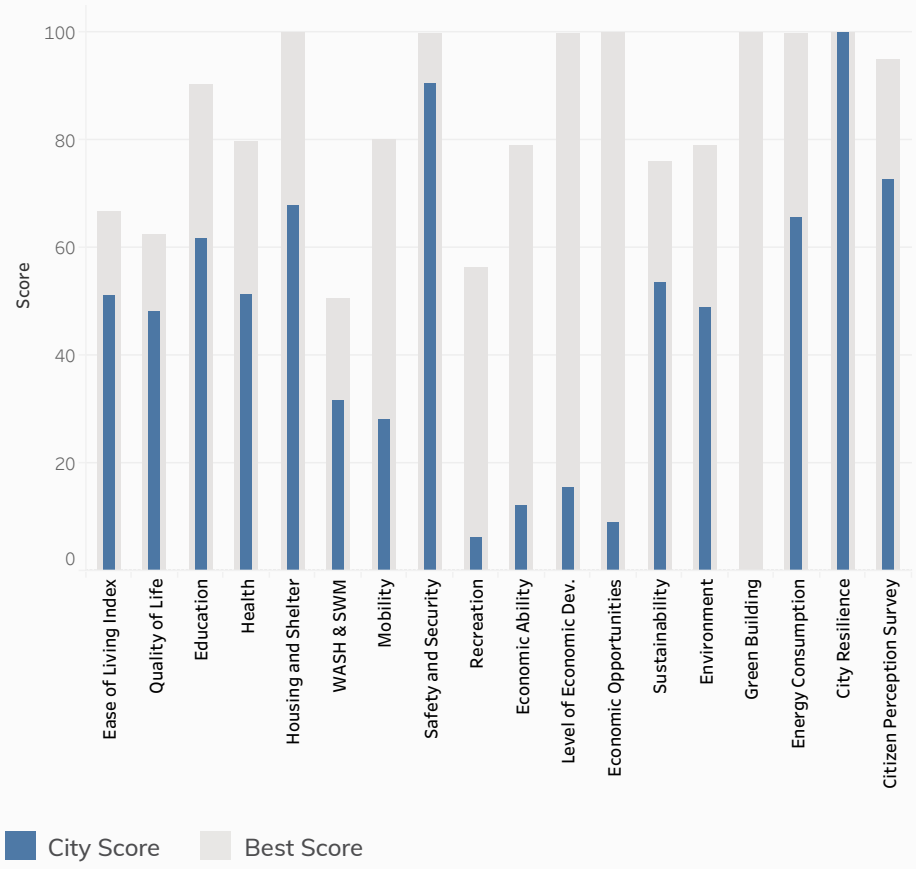


Rank
43

Thoothukudi

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

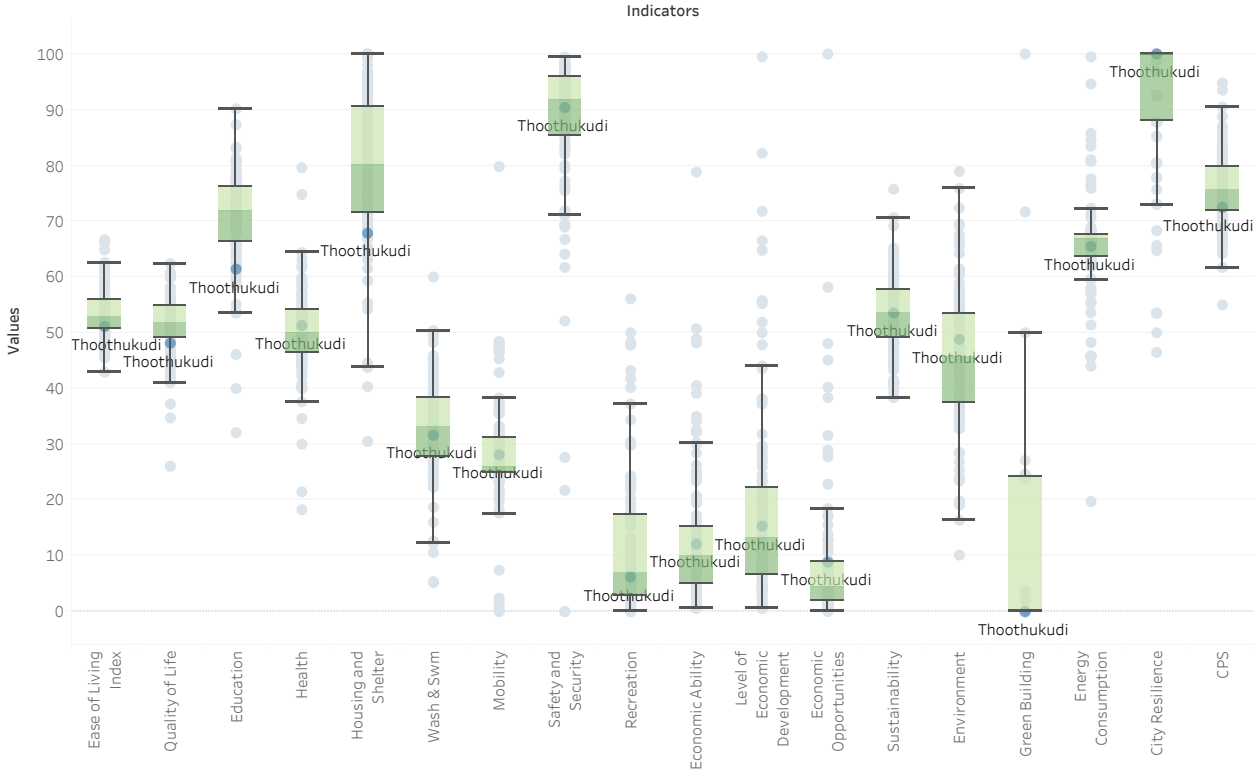


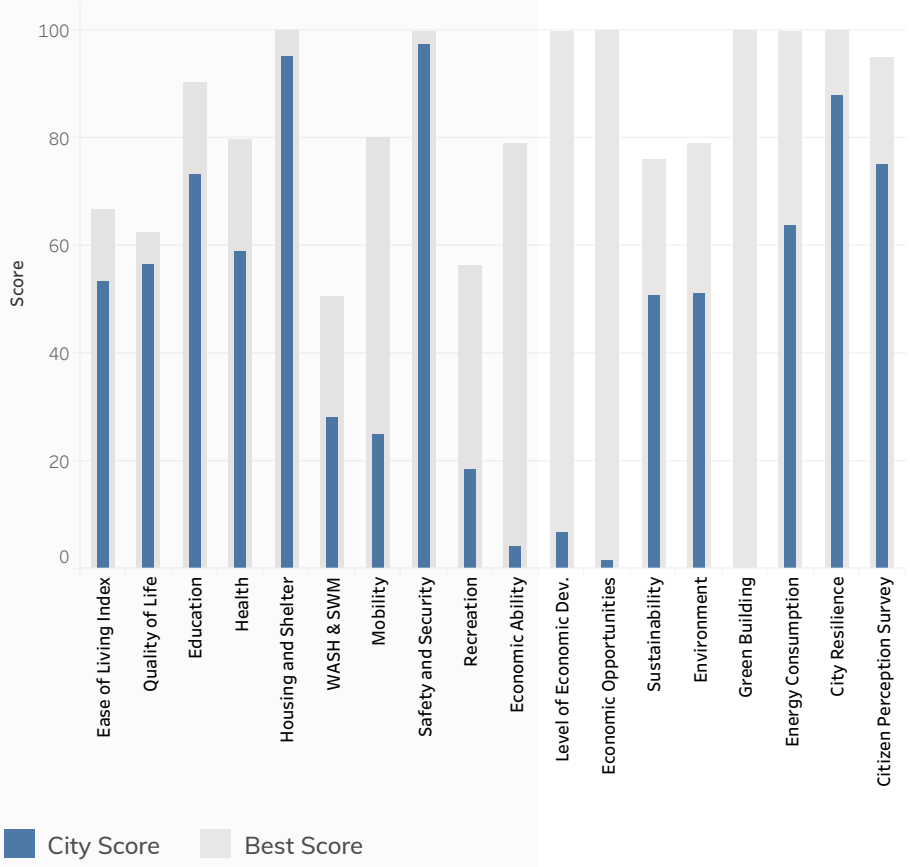
Image Source: https://en.wikipedia.org/wiki/File:Tuticorin_Thermal_Power_Station_at_Night_1_crop.jpg

Rank
23

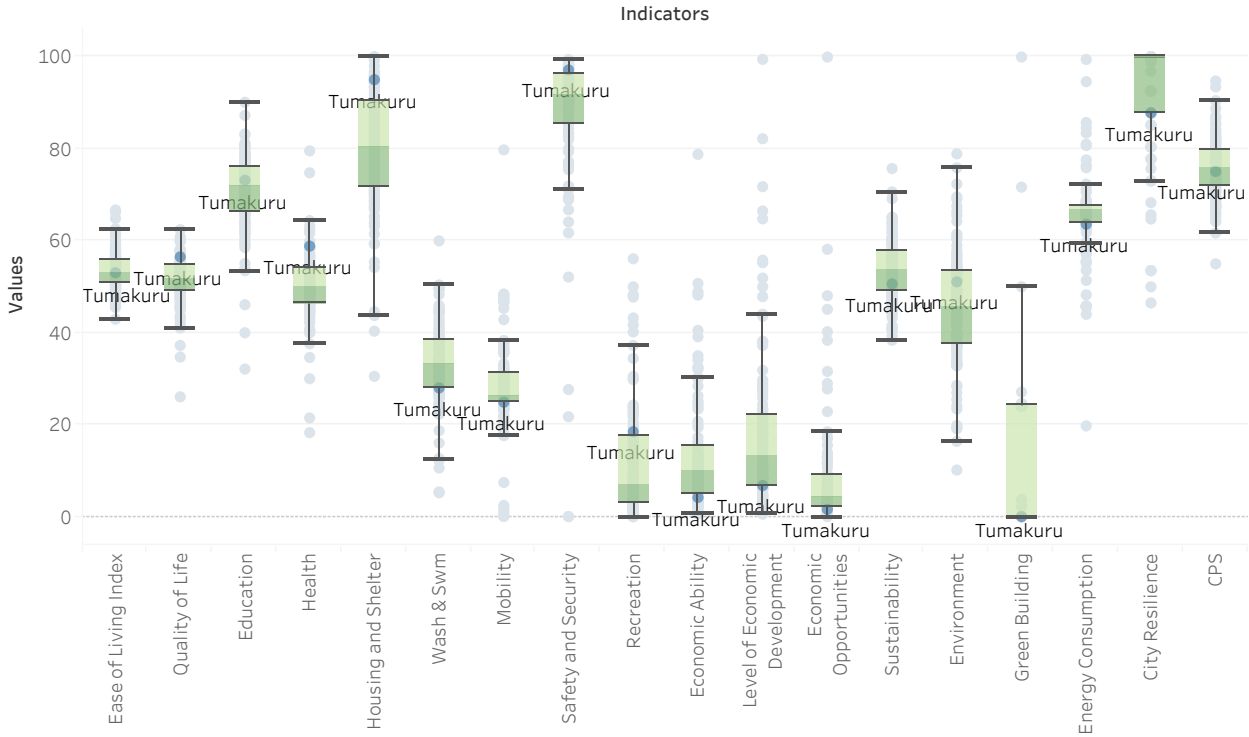
Tumakuru

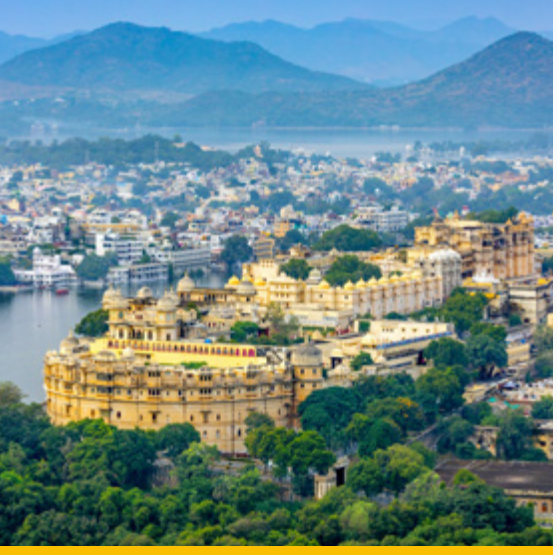
Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities



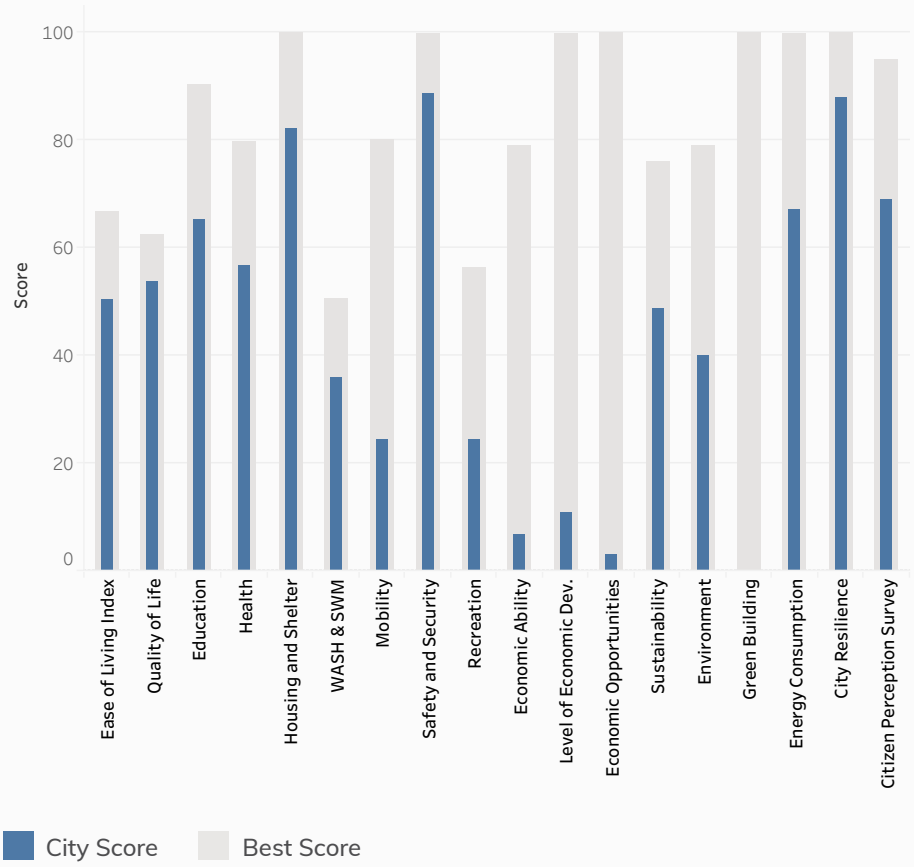


Rank
47

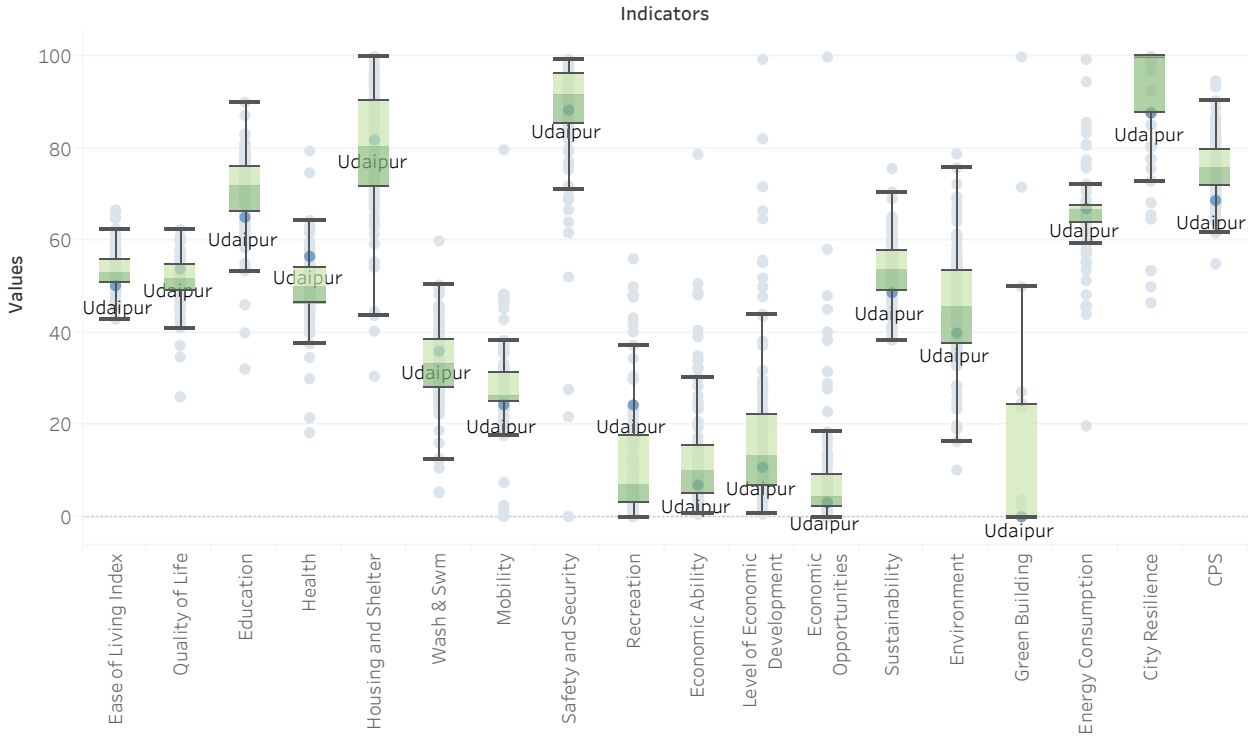
Udaipur

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

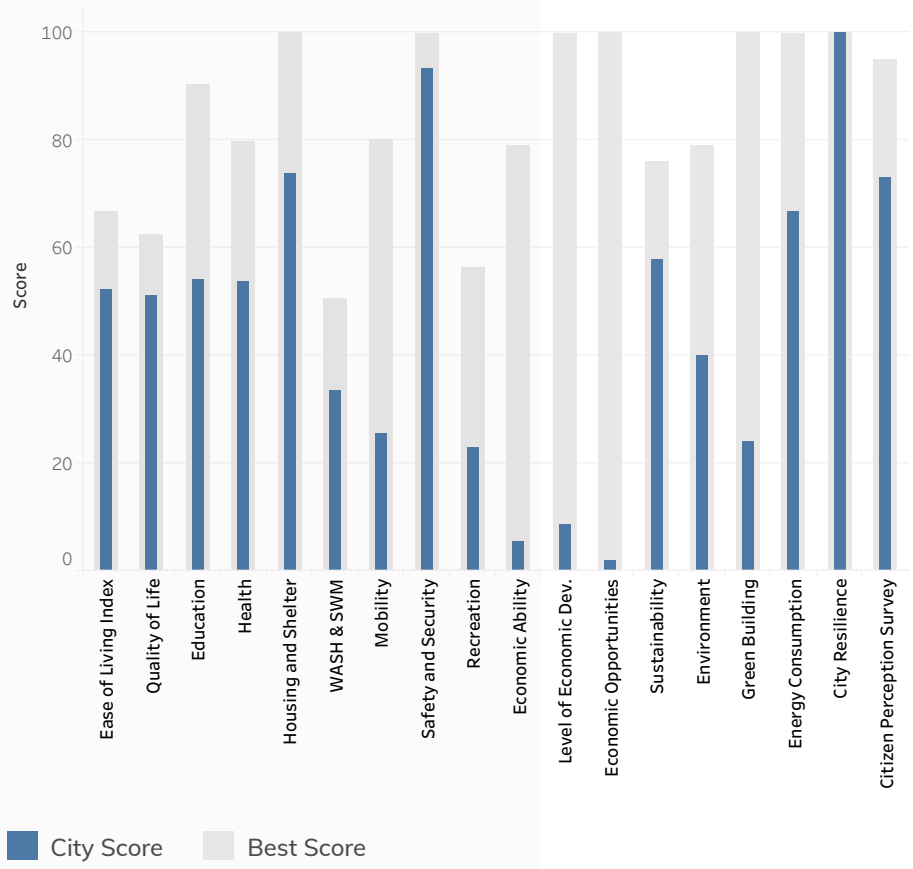


Rank
33

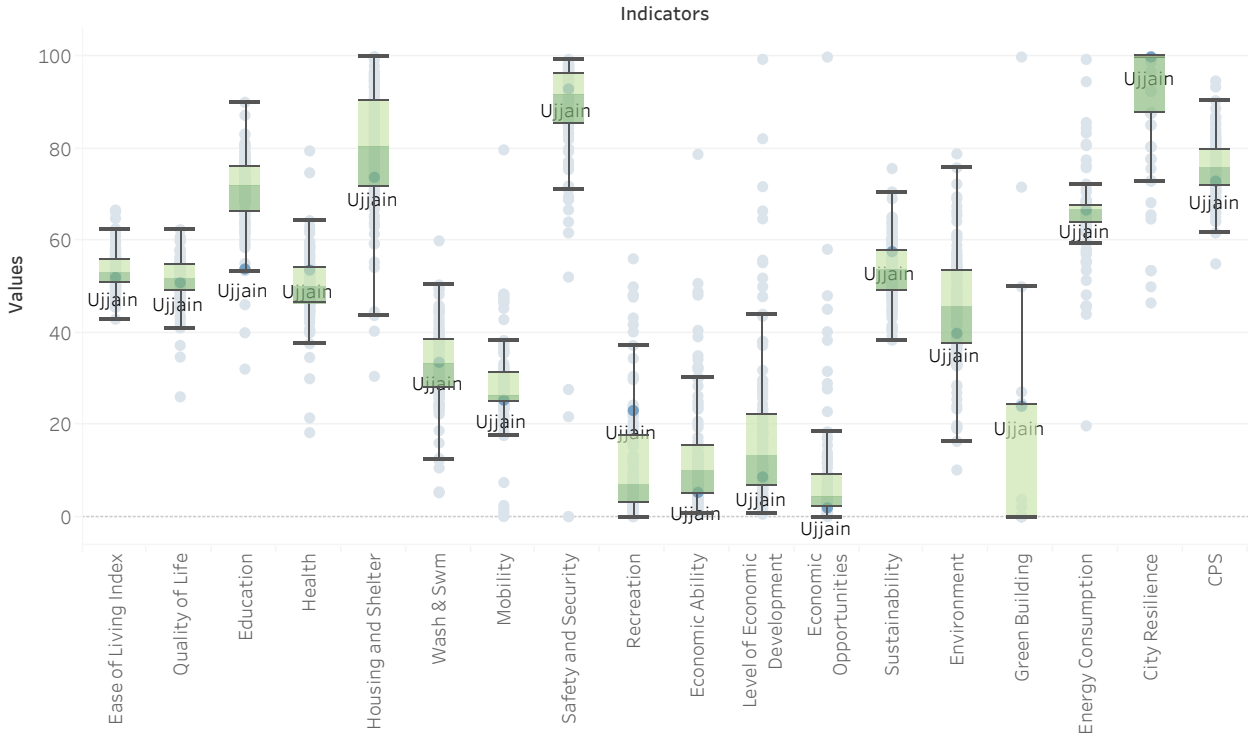
Ujjain

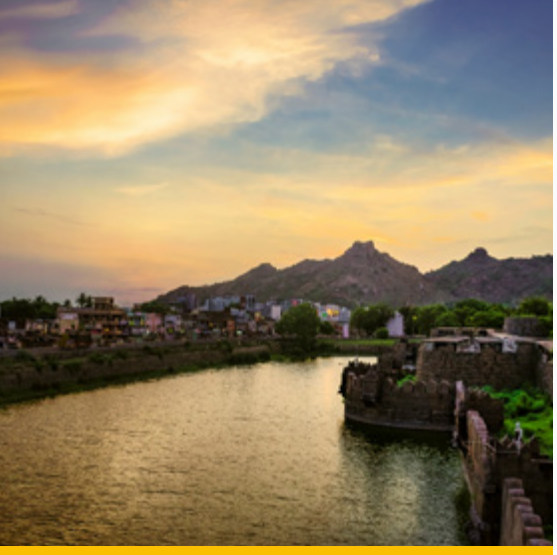
Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities



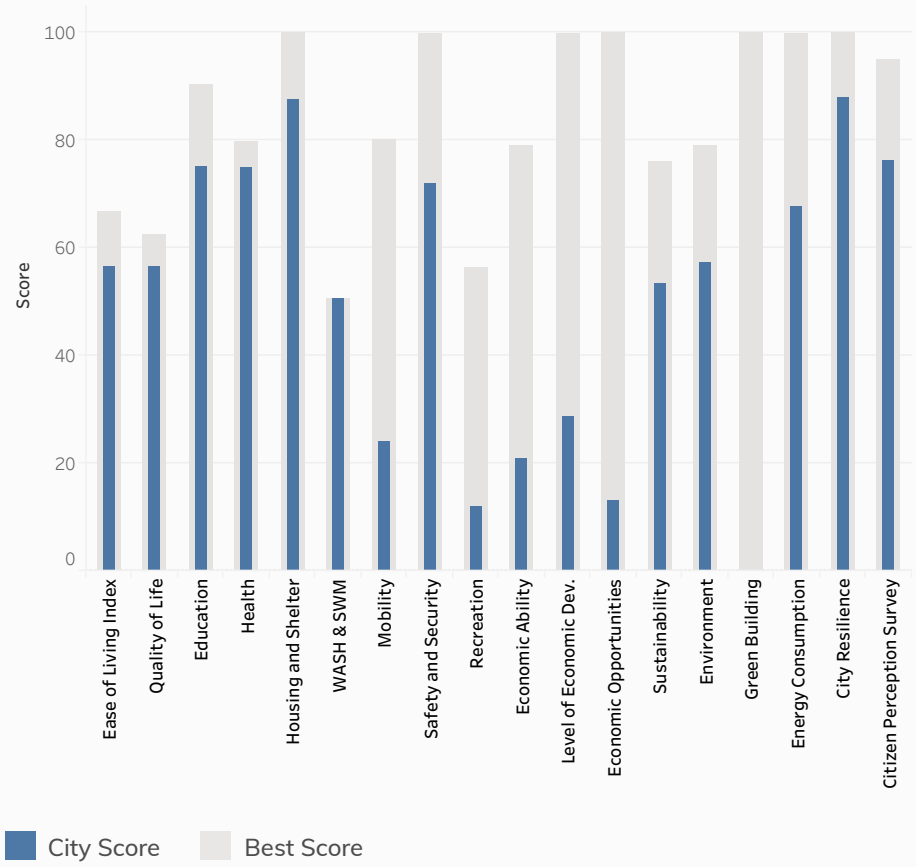


Rank
06

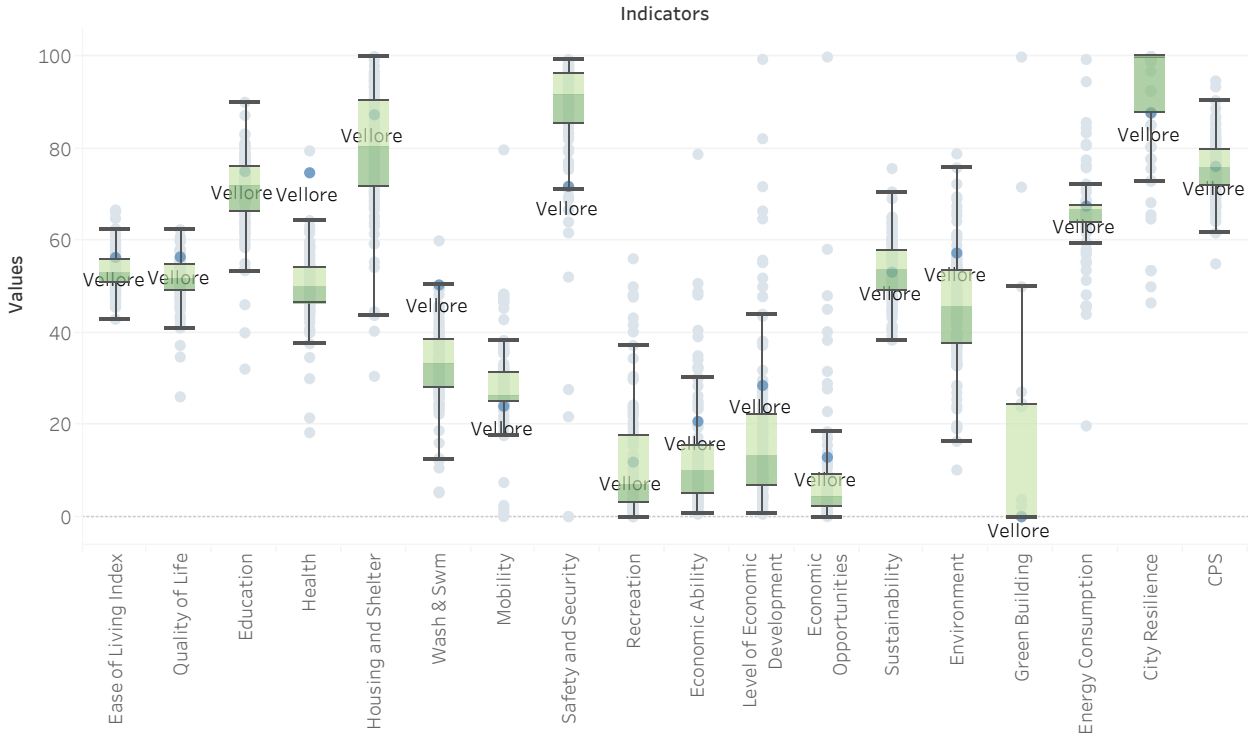
Vellore

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities

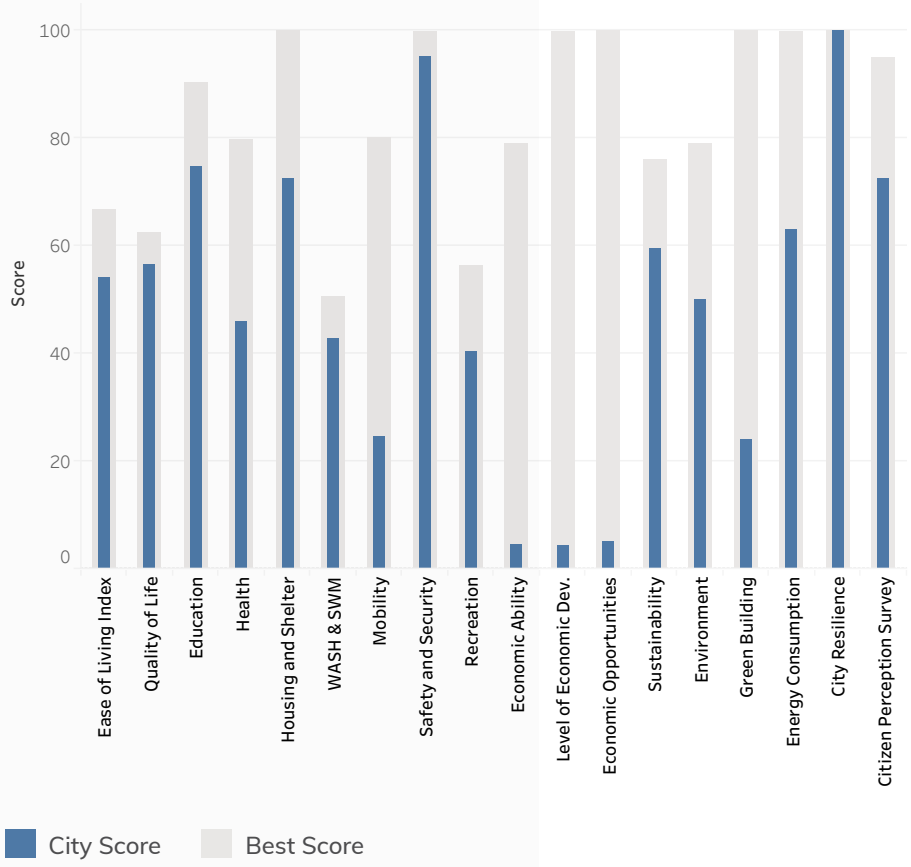


Rank
19

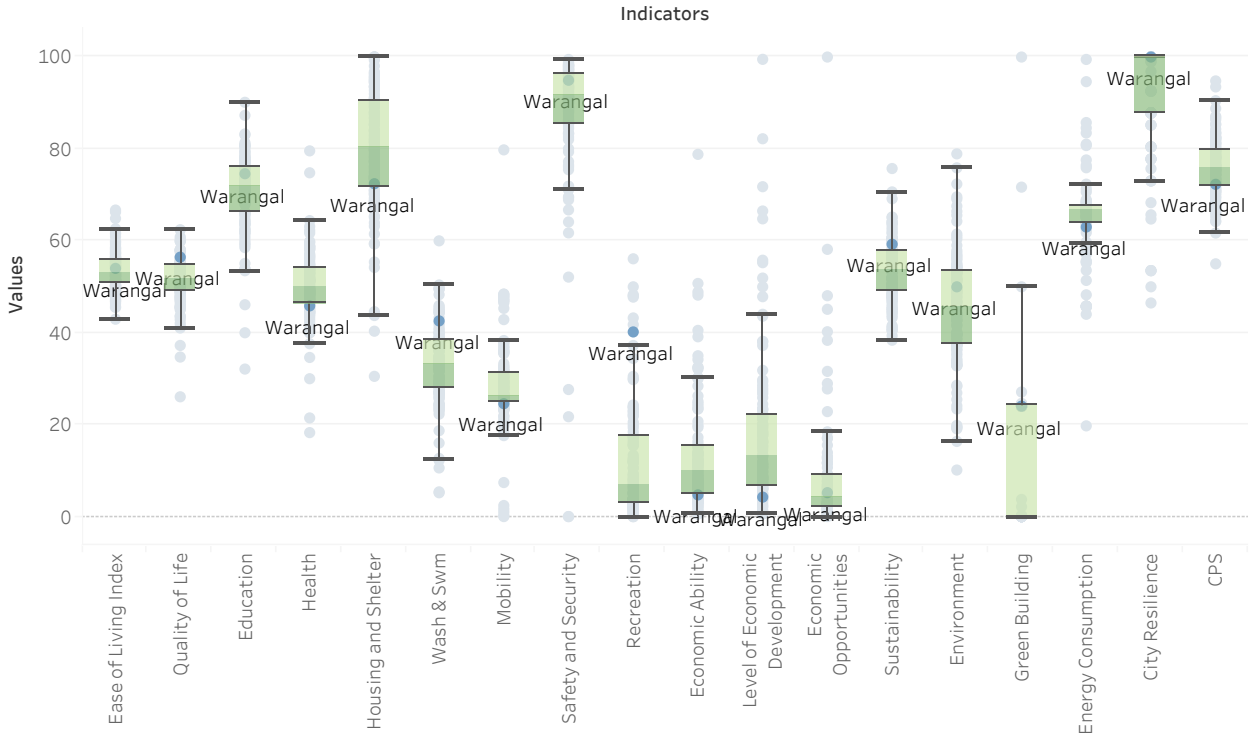
Warangal

Category: Less Than Million

City Scores and Best Score Comparison



Variation across Pillars, Categories and Cities



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Appendix

A1.
Process of Index Creation

The Ease of Living Index 2020 is an effort to improve upon the previous edition of the index. The framework for the index was developed by the Ministry of Housing and Urban Affairs in partnership with Institute for Competitiveness after consultation with key stakeholders and urban experts. The methodology was released in February 2019. A major deviation from the first edition of the index was the segregation of the Ease of Living Index and the Municipal Performance Index. The latter has been introduced to assess the performance of local bodies and their service efficiency while the former assesses the outcome of these services. In addition, the Ease of Living index is also supported by the citizen perception surveys of these outcomes.

After the release of the methodology, city data officers were engaged for each city and provided training on the data collection process. Simultaneously, a portal was created by the National Informatics Centre to facilitate the data collection from cities. Karvy Data Management Services was engaged to coordinate the data collection efforts and conduct the citizen perception survey for the Ease of Living Index. On their part, Karvy had established a total of six specialised cells to handle distinct functions associated with the successful execution of the assignment.

Once the data was collected from all cities, Smart City Consultants and Smart City Fellows were engaged to review the data along with Karvy. The former involved a team from PricewaterhouseCoopers (PwC) while the latter were a cohort of fellows from the India Smart Cities Fellowship Programme. These teams undertook several rounds of quality checks on the data that was obtained. The team from PwC also assisted in the pilot of the index across 20 cities and provided support to the NIC team for bug fixes and user interface along with User Acceptance Tests.

Finally, after the data was received and cleaned, Institute for Competitiveness undertook the final round of data checks and Karvy assisted in contacting the cities for which data discrepancies were observed. Upon completion of these checks, the final data analysis and report writing were done by Institute for Competitiveness and the rankings were obtained.

A2.
Index Framework

The framework for the Ease of Living index was published in February 2019. But there were some improvements made to the framework during the data collection process to make the assessment of cities more robust. The final framework has been presented in Figure 1 provided in the Framework and Methodology section of the report.

The index is composed of four pillars. Three of the pillars are based on secondary data obtained from cities, which include Quality of Life, Economic Ability, and Sustainability. These three pillars account for 70 percent of the index. The remaining 30 percent is based on the citizen perception survey, which was based on primary data from citizens residing in the cities that were a part of the index.

The first three pillars of the Ease of Living index were further bifurcated into 13 categories. The categories are further based on 49 indicators. The detailed framework is as follows:

Pillars	Category	Pillar Weight	Category Weight	Indicator No	Indicator
Quality of Life	EDUCATION	35	5	1	Household Expenditure on Education
				2	Literacy Rate
				3	Pupil-Teacher Ratio at the Primary Level
				4	Pupil-Teacher Ratio at the Upper Primary Level
				5	Dropout Rate at Secondary Level
				6	Percentage of Schools with access to Digital Education
				7	Percentage of Professionally Trained Teachers
				8	National Achievement Survey Score
	HEALTH		5	9	Household Expenditure on Health
				10	Availability of Healthcare Professionals
				11	Accredited Public Health Facilities
				12	Availability of Hospital Beds
				13	Prevalence of Diseases
	HOUSING AND SHELTER		5	14	Households with Electrical Connections
				15	Beneficiaries under PMAY
				16	Slum Population

Pillars	Category	Pillar Weight	Category Weight	Indicator No	Indicator
Quality of Life	WASH AND SWM		5	17	Deviation of Total Water supplied from Service-Level Benchmark
				18	Households with Piped Water Supply
				19	Swachh Survekshan Score
				20	Amount of Wastewater treated
				21	Households Connected to Sewerage Network
				22	Coverage of Stormwater Drainage Network
	MOBILITY		5	23	Availability of Public Transport
				24	Transport related Fatalities
				25	Road Infrastructure
	SAFETY AND SECURITY		5	26	Prevalance of Violent Crime
				27	Extent of Crime recorded against Women
				28	Extent of Crime recorded against Children
				29	Extent of Crime recorded against Elderly
	RECREATION		5	30	Share of Total Area of Cities that is Open Space for Public Use
				31	Availability of : a. Music, Dance and Drama Centre/Theatres b. Community Halls c. Restaurants d. Cinema Halls (Number of Screens)
Economic Ability	LEVEL OF ECONOMIC DEVELOPMENT	15	7.5	32	Traded Clusters
			7.5	33	Cluster Strength
	ECONOMIC OPPORTUNITIES			34	Credit Availability and Accessibility
				35	Number of Incubation Centres / Skill Development Centres

Pillars	Category	Pillar Weight	Category Weight	Indicator No	Indicator
Sustainability	ENVIRONMENT	20	5	37	Water Quality
				38	Total Tree Cover
				39	Households using Clean Fuel for Cooking
				40	Rainwater Harvesting Structures
				41	Air Quality Index : a. SO_2 b. NO_2 c. PM_{10} d. $PM_{2.5}$
	GREEN BUILDING		5	42	Does the City incentivise Green Buildings?
				43	Green Buildings
	ENERGY CONSUMPTION		5	44	Energy Requirement vs Energy Consumption
				45	Energy consumed from Renewable Sources
				46	Number of sustained Electrical Interruptions
	CITY RESILIENCE		5	47	Does the City have a Disaster Management Plan in place?
				48	Are Early Warning Systems (EWS) in place for Hazards?
				49	Number of Deaths and Directly affected Persons attributed to Disasters
Citizen Perception Survey (O)		30			
Total		**100**			

A3.
Cities Incorporated in the Index

The index aimed to cover a total of 114 cities across India. However, the cities from West Bengal could not be incorporated due to data challenges. Therefore, the following cities have been covered in the Ease of Living Index:

S. No.	City	State
1	Port Blair	Andaman and Nicobar Islands
2	Visakhapatnam	Andhra Pradesh
3	Kakinada	Andhra Pradesh
4	Vijayawada	Andhra Pradesh
5	Itanagar	Arunachal Pradesh
6	Pasighat	Arunachal Pradesh
7	Guwahati	Assam
8	Patna	Bihar
9	Bihar Sharif	Bihar
10	Bhagalpur	Bihar
11	Muzaffarpur	Bihar
12	Chandigarh	Chandigarh
13	Raipur	Chhattisgarh
14	Bilaspur	Chhattisgarh
15	Silvassa	Dadra and Nagar Haveli
16	Diu	Daman and Diu
17	Panaji	Goa
18	Ahmedabad	Gujarat
19	Surat	Gujarat
20	Vadodara	Gujarat
21	Gandhinagar	Gujarat
22	Rajkot	Gujarat
23	Dahod	Gujarat
24	Gurugram	Haryana
25	Karnal	Haryana
26	Faridabad	Haryana
27	Shimla	Himachal Pradesh
28	Dharamshala	Himachal Pradesh
29	Jammu	Jammu & Kashmir

S. No.	City	State
30	Srinagar	Jammu & Kashmir
31	Ranchi	Jharkhand
32	Dhanbad	Jharkhand
33	Bengaluru	Karnataka
34	Davanagere	Karnataka
35	Mangalore	Karnataka
36	Tumakuru	Karnataka
37	Shivamogga	Karnataka
38	Hubli Dharwad	Karnataka
39	Belagavi	Karnataka
40	Tiruchirappalli	Kerala
41	Tiruvanantapuram	Kerala
42	Kochi	Kerala
43	Kavaratti	Lakshadweep
44	Indore	Madhya Pradesh
45	Bhopal	Madhya Pradesh
46	Gwalior	Madhya Pradesh
47	Sagar	Madhya Pradesh
48	Ujjain	Madhya Pradesh
49	Jabalpur	Madhya Pradesh
50	Satna	Madhya Pradesh
51	Pune	Maharashtra
52	Navi Mumbai	Maharashtra
53	Greater Mumbai	Maharashtra
54	Thane	Maharashtra
55	Kalyan Dombivali	Maharashtra
56	Pimpri Chinchwad	Maharashtra
57	Solapur	Maharashtra
58	Nagpur	Maharashtra
59	Aurangabad	Maharashtra
60	Nashik	Maharashtra
61	Vasai Virar	Maharashtra
62	Amravati	Maharashtra
63	Imphal	Manipur
64	Shillong	Meghalaya
65	Aizawl	Mizoram

S. No.	City	State
66	Kohima	Nagaland
67	Delhi	NCT Delhi
68	Bhubaneswar	Odisha
69	Rourkela	Odisha
70	Puducherry	Puducherry
71	Ludhiana	Punjab
72	Jalandhar	Punjab
73	Amritsar	Punjab
74	Jodhpur	Rajasthan
75	Jaipur	Rajasthan
76	Ajmer	Rajasthan
77	Udaipur	Rajasthan
78	Kota	Rajasthan
79	Gangtok	Sikkim
80	Namchi	Sikkim
81	Chennai	Tamil Nadu
82	Coimbatore	Tamil Nadu
83	Salem	Tamil Nadu
84	Vellore	Tamil Nadu
85	Madurai	Tamil Nadu
86	Tirunelveli	Tamil Nadu
87	Tiruppur	Tamil Nadu
88	Erode	Tamil Nadu
89	Thanjavur	Tamil Nadu
90	Thoothukudi	Tamil Nadu
91	Tirupati	Tamil Nadu
92	Dindigul	Tamil Nadu
93	Hyderabad	Telangana
94	Warangal	Telangana
95	Karimnagar	Telangana
96	Agartala	Tripura
97	Lucknow	Uttar Pradesh
98	Varanasi	Uttar Pradesh
99	Kanpur	Uttar Pradesh
100	Ghaziabad	Uttar Pradesh
101	Prayagraj	Uttar Pradesh

S. No.	City	State
102	Agra	Uttar Pradesh
103	Meerut	Uttar Pradesh
104	Jhansi	Uttar Pradesh
105	Moradabad	Uttar Pradesh
106	Rae Bareli	Uttar Pradesh
107	Saharanpur	Uttar Pradesh
108	Bareilly	Uttar Pradesh
109	Aligarh	Uttar Pradesh
110	Rampur	Uttar Pradesh
111	Dehradun	Uttarakhand

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