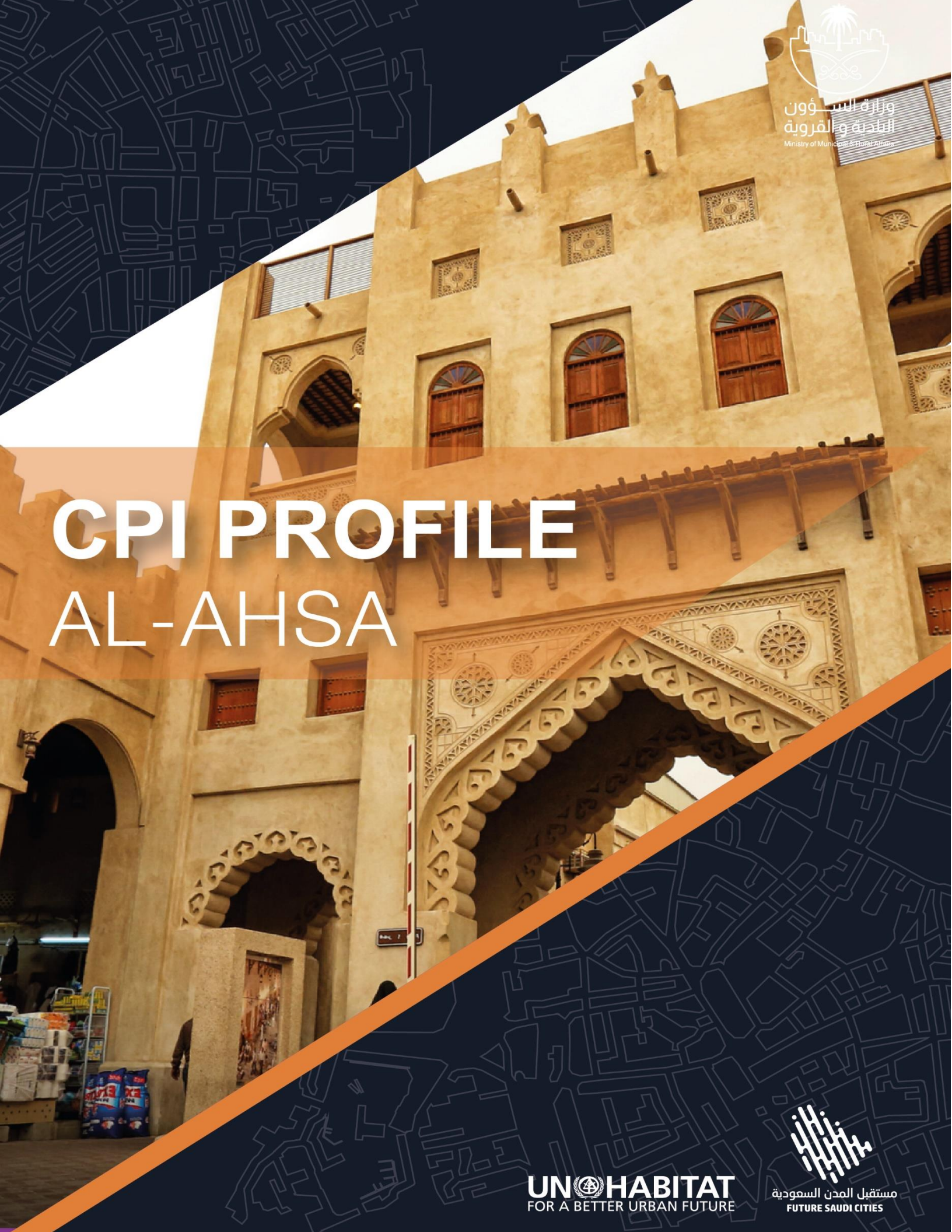
وزارة الشؤون البلدية والقروية
Ministry of Municipal & Rural Affairs

# CPI PROFILE
## AL-AHSA



UN HABITAT
FOR A BETTER URBAN FUTURE

مستقبل المدن السعودية
FUTURE SAUDI CITIES

**The Future Saudi Cities Programme**

CPI PROFILE – AL HASA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## Introduction

The United Nations Human Settlements Programme (UN-HABITAT) and Ministry of Municipal and Rural Affairs in the Kingdom of Saudi Arabia (MOMRA) jointly launched UN-HABITAT Saudi Arabia Programme titled " Future Saudi Cities Programme (FSCP)". The UN-HABITAT Office has been providing technical support to the MOMRA and targets 17 key cities in the Kingdom of Saudi Arabia. The cities includes Riyadh, Makkah, Jeddah, Taif, Medina, Tabouk, Dammam, Qatif, Ahsa, Abha, Najran, Jazan, Hail, Araar, AlBaha, Buraydah and Sakaka, to respond to national and local urban challenges.

UN- Habitat provides a new approach for measuring urban prosperity: which is holistic, integrated and essential for the promotion and monitoring of socio-economic development, inclusion and progressive realization of the urban-related human rights for all. This new approach redirects cities to function towards a path of an urban future that is economically, politically, socially and environmentally prosperous. The new approach or monitoring framework, The Cities Prosperity Index (CPI), is a multidimensional framework that integrates six carefully selected dimensions and several indicators that relates to factors and conditions necessary for a city to thrive and prosper. The six dimensions includes productivity, infrastructure development, equity and social inclusion, environmental sustainability and urban governance. The CPI uses the concept of The Wheel of Urban Prosperity and the Scale of Urban Prosperity to enable stakeholders to assess achievements in cities. The City Prosperity Index (CPI) not only provide indices and measurements relevant to cities, it is an assessment tool that enables city authorities as well as local and national stakeholders, to identify opportunities and potential areas of intervention for their cities to become more prosperous.

Under FSCP, the UN-HABITAT, MOMRA, and Al Ahsa Municipality together with its Local Urban Observatory has been working on developing urban statistics and spatial information (Geographic Information System) in order to provide relevant urban information that strongly support decision making process on urban development and urban planning in the city.

This CPI Profile Report applies the CPI framework and provide a summary of the basic information and urban statistics about the City and gives an overview of the city's achievements, opportunities and potential areas that contribute to its prosperity in areas such productivity, infrastructure development, equity and social inclusion, environmental sustainability and urban governance and legislation.

## Geography and Location

Al Hasa municipality is located within Al-Ahsa, the largest oasis in the Kingdom. Al-Ahsa is an area that extends from the Arabian Gulf from Kuwait in 29 20' N. to the south point of the Gulf of Bahrain in 25 10' North, a length of about 360 km bounded by the Al-Dahna and the Al-Daman deserts, and forms the border with Qatar, the United Arab Emirates and the Sultanate of Oman, covering an area of 2,500 kilometers in the southern part of the Eastern Province. The area around Al Hasa Municipality enjoys a tropical climate with only two seasons: a hot and dry summer and a moderate to becoming warm with occasional showers during winter.

## Demographic Background

Al Ahsa or Al Hasa is the major urban center in the Al-Ahsa Oasis in the Eastern Province of Saudi Arabia. The municipality of Al Hasa is comprised of four major cities: Al-Hofuf, Al-Mobarraz, Al-Oyoun, and Al-Oman. According to the housing census of 2010, the population of Al Ahsa municipality was 1,136,935, a mid-term survey conducted in 2016 puts the population at 1,193,373. It has a population density of 4,156 and the population of non-Saudi is about 19%. The number of households in the city is estimated at 160,304 and the average size of each household is 6.7. Looking at the two main cities within the municipality Al-Hofuf and Al-Mobarraz, there is a clear reflection of a very rapid rise in population during the period 1992-2016. It grew from 444,977 in 1992 to 572,908 in 2004, and to 660,788 in 2010, and the current estimate is 768,000 in 2016; this represent a high rate of population increase during the period 1992-2016 (72.6%) which is phenomenon. This rapid increase has sped up the demand for housing units and services. This rapid increase is expected to continue, it has led the local authorities to plan several new housing projects to meet the crutial and urgent demand for housing.

## Socio-economic Background

Traditionally life in the oasis depended on the abundant water from the numerous springs that supported agriculture, the oasis produced dates, fruit, rice, wheat, and barley. Historically, Al-Hasa was one of the few areas in Arabian Peninsula growing and exporting rice. The area is famous for its palm trees and dates and has over two million palm trees which produce hundreds of thousands of tons of dates every year. So agriculture has been the source of livelihood for many years. The government through the Ministry of Agriculture has set up a factory to process its rich output of dates, this has resulted in value addition and now farmers are able to earn more money from date farming. There is a big Camel market in Hofuf where camels are traded every Thursday, the city is also a major trade center for dates, wheat, and fruit and has a large mosque which brings people together. The presence of a big market means people can trade their produce and earn income from it. Other popular economic activities in the area includes textile manufacturing, food processing, and Arabian horse breeding. Like all other cities in Saudi Arabia, Al Ahsa Municipality has benefited immensely from the oil industry during the last two decades, the GNI per capita has risen from 24,400 dollars in 1990 to 54730 dollars in 2015 (World Bank, 2016). This reflected positively on per capita income which increased from 21,000 dollars in 2011 to 23,000 dollars in 2012 and to 25,700 dollars in 2013 (Arab News, 2017).

**Trend on urban growth in Al Ahsa Province**

The Municipality of Al Ahsa and the Al Ahsa Province share the same history and even both are named after the same oasis in which they sit. Al Ahsa municipality itself resulted from the growth of several small cities that merged to form one large municipality called Al Ahsa. The concept of urban growth has two main dimensions, the increase in population and the increase in geographical area or spatial growth. In the early days urban growth in the region was concomitant with the availability of water resources, mainly wells and springs which were spread all over the oasis. The settlements at that time were in form of small number of people surrounding water resources and they depended heavily on traditional material in building their houses. This happened until the early sixties, around 1963.

After the discovery of oil a flourishing economy ensued and the need for planning became apparent, a five-year development plan was adopted by the government of the Kingdom of Saudi Arabia. Due to a better planning and management of resources the economic situation in the area improved, land use pattern changed, the built-up area increased rapidly and the type of building materials changed and the use of concrete became predominant. By 1994 4.4% of the buildings were still mud and wood, in 2011 all houses were made of concrete or bricks, no mud and wood houses.

These improvements lead to a rapid population growth and increased demand for housing. Therefore, the authorities embarked on the establishment of residential schemes. This has been enhanced by better services and better infrastructure such as roads, water, electricity, and communication networks. Consequently, most of the residents in the old districts have moved to new neighborhoods on the outskirts of the area (Al-Ahsa Municipality, 1998). Due to the rapid expansion the two neighboring cities Hofuf city and Mubarraz city merged.

Since the early sixties, the area has witnessed a significant increase in the total area which has reached approximately 228.69 km² in 2011s, compared to 184.43 km² in 1992. This was accompanied by the increase in the built-up area from 76.5 $Km^2$ in 1994 to 91.6 $Km^2$ in 2011 and to 287.1 Km2 in 2015 including two other merged cities of Al-Oyun, and Al-Oman.

Since the discovery of oil the population in Al Ahsa has increase rapidly and since it is located near oil extraction areas it attracted labour from within Saudi and from other countries. So there is high correlation between the growth of the city and the discovery of oil in the 1930s. Another factor that contributed to the urban growth in the area is the outstanding role made by government to have balanced development among regions. In this context, Al-Ahsa Province was chosen as one of the national growth centers based on the development strategy of the kingdom. The development of the industrial sector is one of the most prominent official efforts in achieving socio-economic development in this area.

Al-Ahsa area could face many future challenges regarding both, population growth and urban expansion. Most of the lands outside the urban cluster belongs to Arabian-American Oil Company (ARAMCO) on the west, the urban cluster is surrounded by palm farms on the east, the storage activities are the most obstacles that hinder urban expansion. The question that should be asked therefore is the future of the urban growth in the current condition. Urban growth therefore should be well managed within the planning process to avoid negative impact on the surrounding.

**Cities Prosperity Index (CPI) Assessment**

Prosperity is about successfully meeting today's needs without compromising tomorrow and working together for a smart, competitive economy, in a socially inclusive society and a healthy, vibrant environment for individuals, families, and communities. In order to assess the current situation and determine future progress of cities along the path to prosperity, UN-Habitat introduced a monitoring framework, the Cities Prosperity Index. This index, along with a conceptual matrix, the Wheel of Urban Prosperity, are intended to help decision-makers and partners to use existing evidence and formulate clear policy interventions for their cities. The UN-Habitat's Cities Prosperity Index (CPI) allows authorities and local groups to identify opportunities and potential areas for action or adjustments in order to make their cities more prosperous.

The City Prosperity Index (CPI) is a multidimensional measurement framework that integrates several dimensions and indicators that are not only related but have a direct and indirect influence on each other on the path to prosperity. These components are embodied in the following six dimensions: Productivity, Infrastructure Development, Quality of life, Equity and social inclusion, Environmental sustainability, and Governance and legislation.

Since the indicators of prosperity are measured in different units, the CPI computation starts with the standardization/normalization of the indicators into values ranging between 0 and 1[1]; the standardized values are aggregated stepwise to create the single value called the City Prosperity Index. The chart below shows the six-point scale of urban prosperity.

[1] Can also be expressed in percentages so that values range between 0% and 100%, as used in this report.

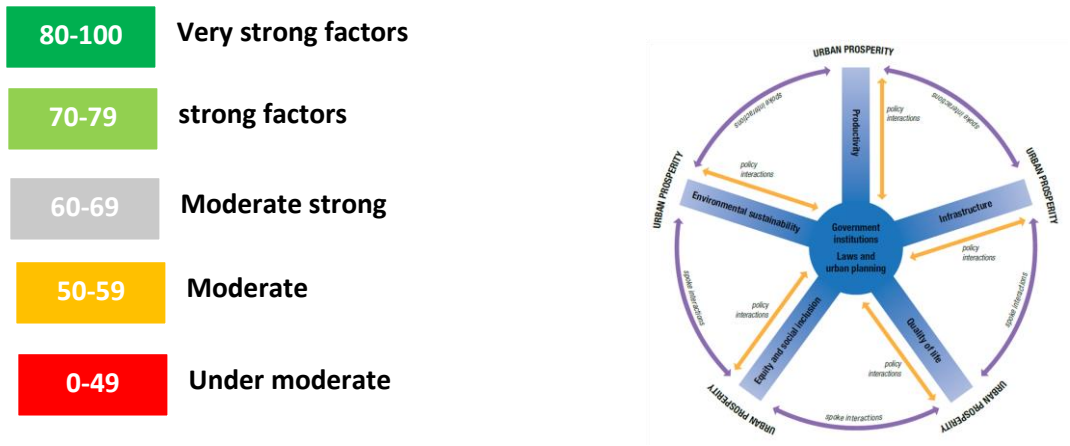



**Figure 2: Scale of Urban Prosperity and the Wheel of Urban Prosperity**

This section applies the CPI framework, the concept of the Wheel of Urban Prosperity and the Scale of Urban Prosperity to conduct an assessment of the level of prosperity in the city. The assessment provides an indication of the strengths or weaknesses in the factors of prosperity (using the scale of urban prosperity); it also provides an indication of the level of achievement towards the set prosperity goals called benchmarks (through the CPI scores); and highlights the level of balance among the factors by showing whether there are disparities between and within the six dimensions of prosperity (Wheel of Urban Prosperity-stressing balance). A synthesis of the findings culminating into a detailed SWOT Analysis which will help to identify which particular dimensions or sub-dimensions or indicators contributes to the strengths or weaknesses of the city and which ones creates opportunities or threats to the city as it moves towards achieving high levels of shared prosperity.

**Data Challenges and Solutions.**

The biggest challenge facing CPI implementation work is availability of data at city level, this problem is compounded by the fact that most statistics are not produced do not segregate between rural and urban i.e. city boundaries are not considered. In the case of Saudi Arabia most data is available at regional level and may include rural areas within the region. The other problem is that CPI contains some unique indicators that have not been part of the body of indicators generally produced in standard reports. For example city GDP, share of renewable energy and length of mass transport system etc. Such indicators do not have any official data source, an indicator like mass public transport system is very important for a large city but all cities in Saudi Arabia do not have proper public transport system leave a lone usage of public transport system.

In such situations like this, instead of giving all cities a score of zero to make it a constant in the dataset, we have decided to exclude them to avoid under estimation of the CPI and the computational challenges that comes with zeros where calculations involves roots of numbers.

Similarly indicators such as CO2 emissions, Civic participation, PM10, PM2.5, Public space for youth were excluded from the computation because sufficient data was not available, very few have reliable data on the indicators. Due to variations in the number of indicators included for the

each city it presented difficulty in comparing the level of prosperity in cities, therefore it is advisable to look at each city individually. These indicators will continue to be refined and more data collected so that they can be included in future CPI analysis, and then comparisons between cities will be more accurate.

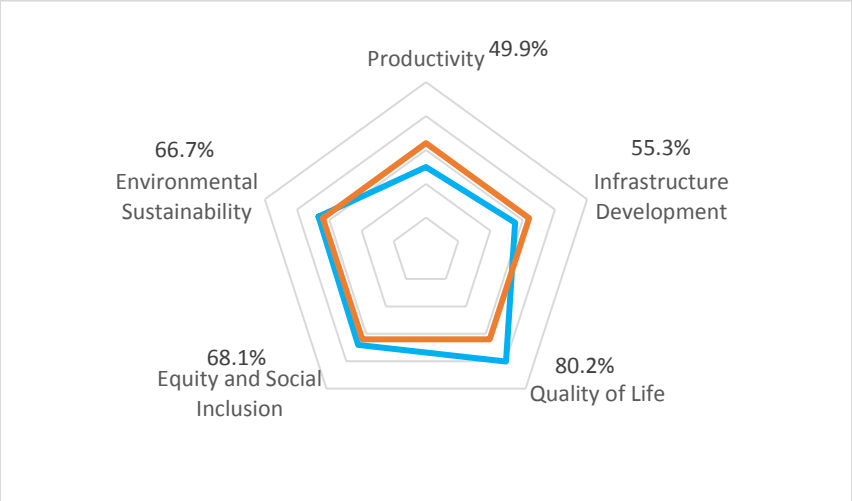
It is better to include few reliable and accurate indicator so that the result of the CPI can reliably be used in decision making, and policy formulation to avoid ending up with any form of misguided interventions. In this case therefore it is advisable that conclusions and recommendations can be made based on the dimensional or sub-dimensional indices with reliable data.

**The Overall City Prosperity Index**

This is one of the cities that were more affected by the data unavailability problem. Here, the CPI is computed using five dimensions instead of six asdata on urban governance and legislation dimension was not available. As mentioned in earlier sections, this does not invalidate the dimensional and sub dimensional indices, it only makes the overall CPI not comparable with other cities. As a measure of the level of prosperity in the city, the index value is an aggregate of many indicators and therefore to achieve a better understanding of the index value it must be analysed stepwise back to the individual indicators. The findings show that the overall CPI index for the city is 64%. Due to the fewer number of dimensions, the overall CPI may appear higher or lower than cities with similar characteristics. Most cities in Saudi scored low in the missing dimension therefore if added it may pulldown the overall index fractionally. At 64% the overall index for the city is moderately strong and therefore generally speaking the urban policies in the city are fairly good and only needs more strengthening. The five dimensions used are shown in the radar chart, the blue line represent the dimensional indices and the orange line represent the overall index. The chart shows that Quality of life dimension has a score of 80%; on the prosperity scale this implies that the dimension has very strong factors of prosperity. Therefore, it is advisable that urban policies and interventions regarding quality of life in the city of Al Ahsa should be consolidated, it is also important to find out if there are any sub dimensions or indicators within the dimension that may need strengthening to enable it to improve further. On the other hand, the dimensions of Equity and Social inclusion and Environmental sustainability have 68.1% and 67% respectively. According to the prosperity scale the two dimensions are moderately strong, therefore, urban policies regarding equity and social inclusion and environmental in the city should be strengthened to make them improve; urban policies and interventions regarding any sub dimensions or indicators within these two dimensions that may be found to be weaker should also be prioritised.

The dimensions of productivity and Infrastructure development have scores of 50% and 55% respectively, according to the prosperity scale this implies moderate factors of productivity and infrastructural development and this calls for prioritisation of the two sectors to ensure that urban policies and interventions regarding productivity and infrastructure in the city are improved.

**Figure 3: City Prosperity Index Dimensions**




The subsequent sections following this analysis of the overall index will further analyse and deconstruct the five dimensions individually and identify any areas of strengths and weaknesses so that appropriate recommendations and interventions can be formulated.

## The Productivity Dimension

The productivity dimension contains three sub dimensions which are all included in the index, but due to data issues two indicators namely informal employment rate and economic specialisation were not included. They are important indicators to keep in the list for future computations of the CPI should reliable data become available. The productivity dimension measures the city's efficiency in the creation of wealth for its people. Therefore, the index is a measure of how cities contribute to economic growth and development, generate income, employment and provide equal opportunities and good living standards for its entire population. The figure below shows the scores for all the indicators used.

**Table 1: Productivity Index (49.9%)**

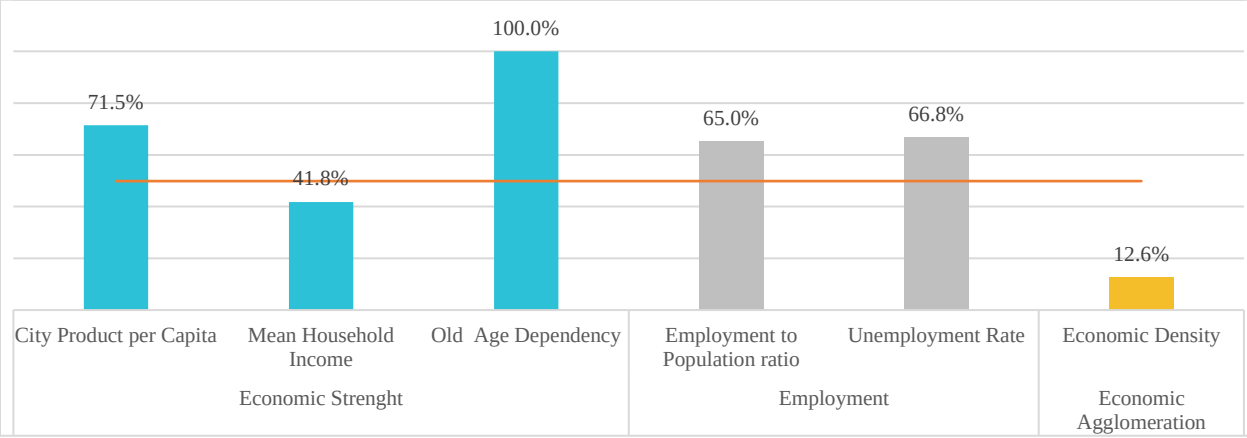
| Sub-Dimension | Indicator | Actual | Units | Standardized | Comments |
|---|---|---|---|---|---|
| Economic Strength (71.1%) | City Product per Capita | 25,969.07 | USD (PPP) /Inhab | 71.5% | Strong |
| | Mean Household Income | 22,399.20 | USD(PPP) | 41.8% | Under moderate |
| | Old Age Dependency Ratio | 3.14 | % | 100.0% | V. Strong |
| Employment (65.9%) | Employment to Population Ratio | 59.43 | % | 65.0% | M. Strong |
| | Informal Employment | | - | | - |
| | Unemployment Rate[2] | 4.20 | % | 66.8% | M. Strong |
| Economic Agglomeration (12.6%) | Economic Density | 107,944,211 | USD (PPP) /km2 | 12.6% | Under moderate |
| | Economic Specialization | - | - | - | - |

[2] This indicator is approximated based on regional data

The findings show that the productivity index is low at 50%, which according to the global scale of prosperty classifies productivity as an under moderate dimension.Thismeans factors / policies relating to economic productivity of the city are not working well and should be prioritised for revision. Consequently, it becomes apparent to find out which sub dimensions and indicators contributes to this weakness. The table shows that economic strength sub dimension is strong (71%) mainly due to low economic burden on the productive population as indicated by the old age dependency ratio (3.14%), and high city product per capita (72%), which is a sign of high efficiency in economic production. However, under economic strength sub dimensions, the indicator of household income is under moderate with a score of 42%, and it needs prioritization and strengthening to improve the purchasing power of the people and boost up economic productivity.

The findings in the table also indicates that the employment situation in the city is moderately strong with an index of 66%, generally this is fairly good but still requires strengthening of urban policies relating to employment in the city. Particular attention should be focused on strengthening urban policies targeting unemployment rate which currently stands at 4.20% and employment to population ration (65%). These two indicators are important in showing how people access jobs and the ability of the city to create employment for its people, respectively – the strength of the two indicators is key for economic development of the city.

**Figure 4: Productivity Indicators**




The other measure of the level of productivity and the one that has contributed allot in lowering of the productivity index is Economic agglomeration with a score of 13%. Economic density is a measure of how economic productivity is distributed spatially, and it is associated with the concentration of economic activities per unit area, and has cost saving benefits to business, resulting from spatial proximity between suppliers, retailers, customers, service providers etc. Low economic densities may mean long distances between suppliers or providers and consumers leading to high unit costs in all production processes. Low economic agglomerations imply the lack of the benefits that come when firms and people are located together near one another in cities and industrial clusters (high densities of people and firms together).

## The Infrastructure Development

Adequate and efficient infrastructure entails the capacity to manage the adverse effects of rapid urbanization which require faster means of moving goods, services and people around the city, which is key for the functioning of the city and its economic development. Prosperous cities continue to strive to achieve this by improving the quality of infrastructure relating to housing, social, ICT, mobility, street network, health, education and so on. The infrastructure dimensional index therefore helps to assess the level of achievements regarding such goals. The findings show that the overall index for the infrastructural development is 55.3%, this is fairly moderate on the global scale of city prosperity, and so it's not good enough. It is imperative therefore to find out which specific sub-dimensions and indicators are pulling down the means score which will make it easier to pin point the areas of weaknesses which may needs prioritization or urgent need for interventions.

The housing infrastructure sub dimensional index is 57.7%, this means the urban policies governing the housing sector are moderate and therefore needs to be strengthened. There are some indicators within the sub dimension that are moderate such as access to improved sanitation with 51%, improved water with 49% while the population density is under moderate at 29% They should prioritized for review and urban policies and interventions relating to such indicators should be reviewed.

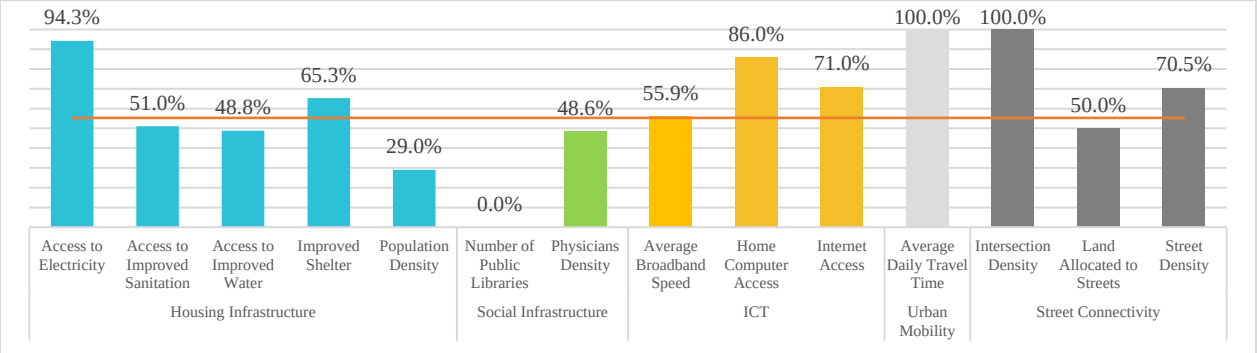
The social infrastructure dimensional index is very low, 24%, this is can be seen in all the associated indicators as well. It is therefore important to prioritize urban policies relating to social infrastructural development in the city.

**Table 2: Infrastructure Development Index (55.3%)**

| Sub-Dimension | Indicator | Actual | Units | Standardized | Comments |
|---|---|---|---|---|---|
| Housing Infrastructure (57.7%) | Access to Electricity | 94.72 | % | 94.3% | V. Strong |
| | Access to Improved Sanitation | 51.00 | % | 51.0% | Moderate |
| | Access to Improved Water | 48.80 | % | 48.8% | moderate |
| | Access to Improved Shelter | 65.28 | % | 65.3% | M. Strong |
| | Population Density | 4,344.46 | Inhab /Km2 | 29.0% | Under moderate |
| | Sufficient Living Area | - | % | - | - |
| Social Infrastructure (24.3%) | Number of Public Libraries | 0.08 | #/100,000 inhab. | 0.0% | Under moderate |
| | Physician Density | 1.96 | #/1,000 inhab. | 48.6% | Under moderate |
| ICT (71.0%) | Average Broadband Speed | 16.20 | Mbps | 55.9% | Moderate |
| | Home Computer Access | 86.00 | % | 86.0% | V. Strong |
| | Internet Access | 71.00 | % | 71.0% | Strong |
| Urban Mobility (50.0%) | Average Daily Travel Time | 21.00 | minutes | 100.0% | V. Strong |
| | Affordability of Transport | - | % | - | |
| | Length of Mass Transport Network | - | Km/1M Inhab. | - | - |
| | Road Safety (traffic fatalities) | - | #/100,000 inhab. | - | - |
| | Use of Public Transport | 0.00 | % | 0.0% | Under moderate |
| Street Connectivity (73.5%) | Intersection Density | 110.90 | #/km2 | 100.0% | M. Strong |
| | Land Allocated to Streets | 21.00 | % | 50.0% | Moderate |
| | Street Density | 14.09 | Km/KM2 | 70.5% | Strong |

ICT plays a key role in driving the world economy today especially in relation to innovation which depends highly on knowledge and access to information, access to home computers and the internet are very important. The ICT sub dimension measures the level of achievement in making an efficient and accessible ICT infrastructure available to the public. The ICT sub dimensional index is 71%, meaning the available ICT infrastructure and associated policies are generally good and need to be consolidated and improved further. However, one indicator under the ICT sub dimension, broadband speed, is moderate so there is need to increase the internet bandwidth in the city and strengthen the policies associated with it.

**Figure 5: Infrastructure Development Indicators**




Urban mobility and street connectivity can be likened to the blood circulation system; efficient urban mobility system with adequate street network allows timely and cost-effective movement of people, goods and services, which is a very critical factor in commerce and industrial development as well as social interactions and exchanges within the city. Most Urban mobility indicators for the city could not be included due to data availability issues, but indicators such as Length of Mass Transport Network, Road Safety (traffic fatalities) and affordability of Public Transport still remains very important. Based on the available indicators, the sub dimensional index for urban mobility is 50% and the index for street connectivity is 74%, which means the city has moderate urban mobility and strong streets connectivity factors. In addition, there are indicators within the two sub dimensions which needs to be prioritized and addressed; land allocated to streets (50%) and the use of public transport system (0%). In general, the street connectivity sub dimension is strong and needs policy consolidation while urban mobility is moderately weak and needs policy review and strengthening.

### The Quality of Life Index (80.2%)

Life in the city can sometimes be very miserable especially when people are not able to access basic services, when people feel insecure and when faced with health risk situations; in situations like this people don't live long and are not productive. Therefore, cities striving for higher prosperity must ensure that all factors that contribute to the wellbeing and good standard of living such as health care, education, safety and security and public spaces are available and are easily accessible to the city dwellers. The quality of life dimension index measures the level of availability vis-a-vis access to these services. Due to data unavailability problems however, some indicators were not included in the index butmeasures were taken to ensure the available data gives a representative picture. Among the indicators excluded were Maternal mortality rate, Vaccination coverage, Mean years of schooling and Accessibility to open public space. They remain very key

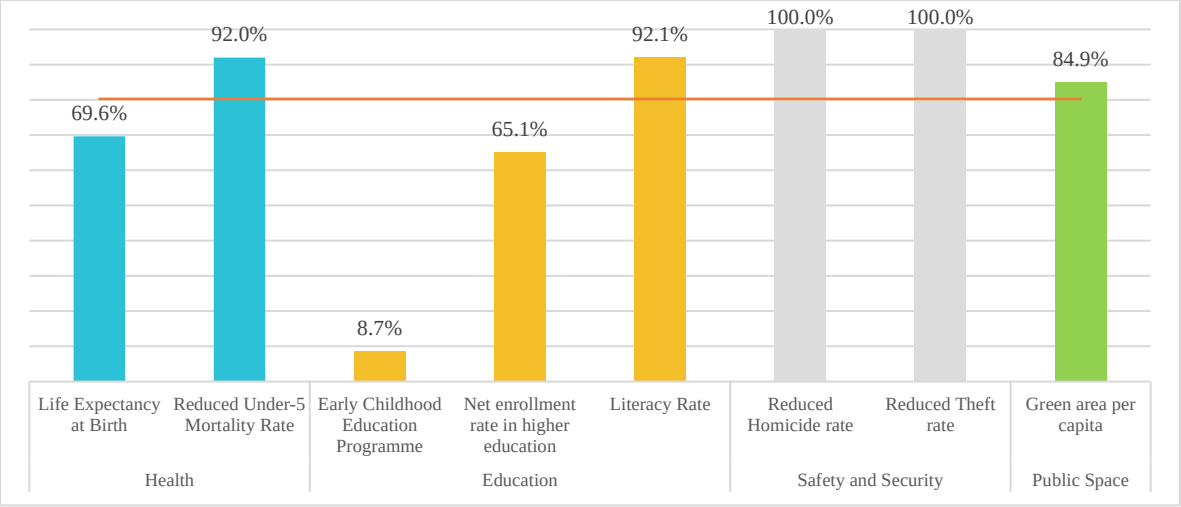
indicators thus efforts should be made to make them available so that they can be used in future CPI estimations. The findings show that the overall quality of life index is 80.2%, according to the global scale of prosperity, this is very strong and indicates that the city generally has high quality of life, meaning it has very good urban policies that supports high quality of life. It is therefore recommended that these policies should be consolidated and reinforced so that they remain stable.

**Table 3: Quality of Life Index (80.2%)**

| Sub-Dimension | Indicator | Actual | Units | Standardized | Comments |
|---|---|---|---|---|---|
| Health care (80.8%) | Life Expectancy at Birth | 73.00 | Years | 69.6% | M. Strong |
| | Eradicate Maternal Mortality | - | #/100,000 live births | - | - |
| | Eradicate Under-5 Mortality | 3.14 | #/1000 live births | 92.0% | V. Strong |
| | Vaccination Coverage | - | % | - | - |
| Education (55.3%) | Early Childhood Education | 8.66 | % | 8.7% | Under moderate |
| | Net Enrolment in Higher Education | 65.12 | % | 65.1% | M. Strong |
| | Literacy Rate | 93.20 | % | 92.1% | V. Strong |
| | Mean Years of Schooling | - | % | - | - |
| Safety and Security (100%) | Homicide Rate | 0.67 | #/100,000 inhab. | 100.0% | V. Strong |
| | Theft Rate | 12.32 | #/100,000 inhab. | 100.0% | V. Strong |
| Public Space (84.9%) | Green Area per Capita | 17.26 | m2 / inhabitant | 84.9% | V. Strong |
| | Accessibility to Open Public Space | - | % | - | - |

The table also shows that based on the available data the health care sub dimensional index is 81%, this is very strong and implies that the city has very good health care policies that supports availability and access to health care services. It is therefore recommended that the policies should be consolidated and reinforced to remain stable. Health care indicators such as life expectancy is moderately high and under 5 mortality rates is kept low and the city can build from this as foundation for a better health sector.

**Figure 6: The Quality of Life Indicators**



The findings also show that education sub dimension has an index of 55% and according to the global scale of prosperity this is moderate. Since the literacy rate in the city is very high with a score of 92%, the observed weakness could be associated with low early childhood enrolment rate which is extremely low at 9%. It is therefore recommended that, generally, urban policies and interventions relating to education should be reviewed and strengthened, however, a particular focus should be directed to prioritizing early childhood education programmes in the city. On the other hand, the finding shows that safety and security in the city is very good, therefore urban policies about safety and security in the city should be consolidated and reinforced to remain strong or get better. The city has allocated a good proportion of land to public spaces in the form of green area cover, efforts should be made to make them easily accessible to the public.

### The Equity and Social Inclusion Index

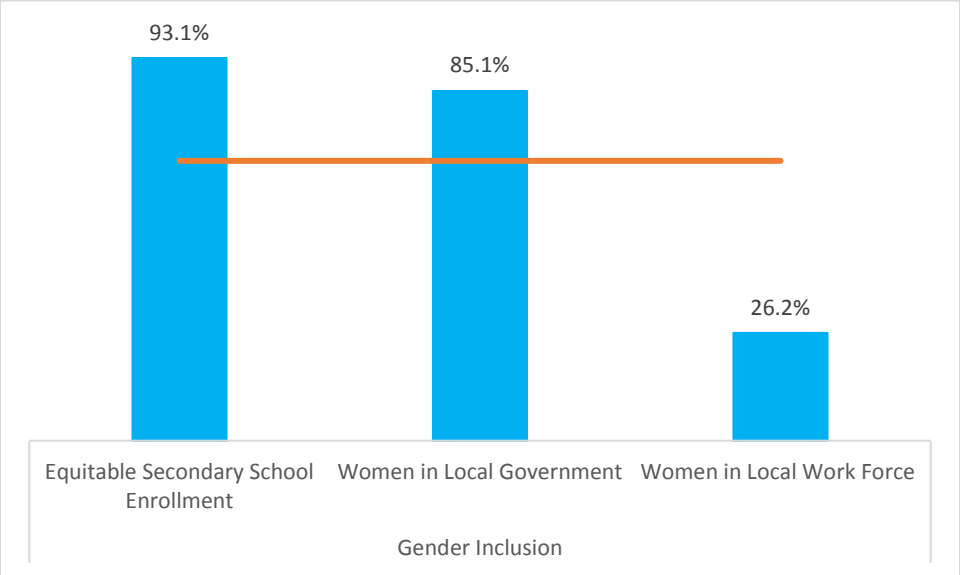
One of the most important concepts within the concept of prosperity of cities is the idea of shared prosperity. It requires that as the city moves from one level to another up the ladder of prosperity, it should "carry" along with it the entire population of the city. Put the other way around, no segment of the city population should remain behind in poverty or deprivation as the rest move up. Therefore, shared prosperity should cut across all sectors of the society to ensure economic inclusion, social inclusion, gender inclusions and any other form of inclusion – and eradicate any form of exclusion. The equity and social inclusion index reinforces this idea by showing how far the city has come towards achieving this goal. Although for this city many indicators such as, Poverty Rate, Slum Households, and Youth Unemployment are still not available, these indicators remain very important for the estimation of equity and social inclusion in the city. Therefore, efforts to make the data available should continue. As a result, only one of the three sub dimensions of equity and inclusion was used, the gender inclusion sub dimension. Based on the available data, the city of Al-Ahsa has a gender inclusion sub dimensional index of 68.1%. This is indicative of a fairly gender inclusive city.

### Table 4: Equity and Social Inclusion Index (68.1%)

| Sub-Dimension | Indicator | Actual | Units | Standardized | Comments |
|---|---|---|---|---|---|
| Gender Inclusion (68.1%) | Equitable Secondary School Enrollment | 1.07 | ∞ | 93.1% | V. Strong |
| | Women in local government | 42.56 | % | 85.1% | V. Strong |
| | Women in the workforce | 13.11 | % | 26.2% | Under moderate |

The good performance in the gender sub dimension could be associated with fairly good gender parity in secondary school (93%) and high number of women working in the local government (85%), however, the number of women in the city's workforce is extremely low (13%) and needs to be prioritized for urgent interventions.

**Figure 7: Equity and Social Inclusion Indicators**




## The Environmental Sustainability Dimension

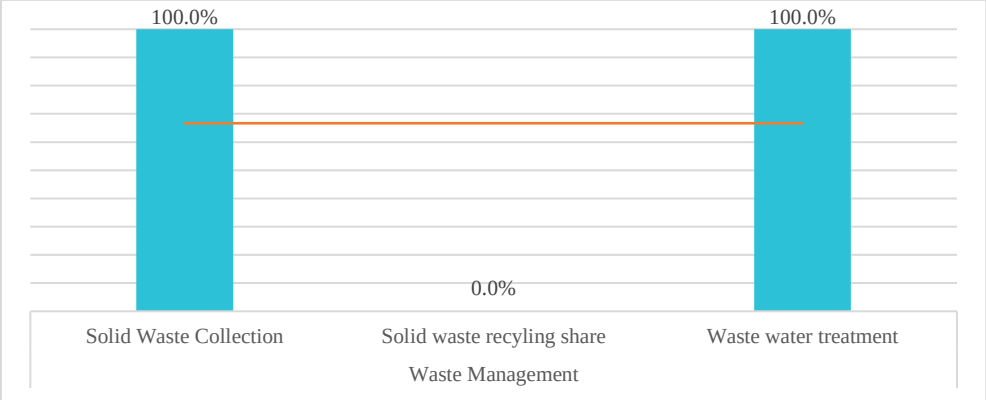
Environmental sustainability allows for the needs of man to be met by exploiting environmental resources without jeopardizing the ability of the environment to supports the future generations in meeting their needs. As cities grow and develop the city environment must be preserved to remain healthy and livable, its natural assets and resources should be well-preserved for posterity. As a result of data unavailability, the environmental sustainability dimension in Al-Ahsa was calculated using the waste management sub-dimension only. The findings, based on the available data, show that the city of Al-Ahsahas moderately strong environmental sustainability factors with an index score of 66.7%. Waste management in the city is moderately good except solid waste recycling.

**Table 6: Environmental Sustainability Index (66.7%)**

| Sub-Dimension | Indicator | Actual | Units | Standardized | Comments |
|---|---|---|---|---|---|
| **Waste Management (66.7%)** | Solid Waste Collection | 100.00 | % | 100.0% | V. Strong |
| | Solid waste recycling share | 0.00 | % | 0.0% | Under moderate |
| | Waste water treatment | 100.00 | % | 100.0% | V. Strong |

The city's strong waste management system, especially in solid waste collection and waste water treatment can be good sources of strength for the city to build on to set a base towards environmental sustainability.

**Figure 7: Environmental Sustainability Indicators**




**SWOT Analysis based on City Prosperity Index**

This section attempts to use the findings of the CPI to identify areas of Strength, Weaknesses or challenges, Opportunities for growth and possible Threats that the city may be facing so that appropriate recommendations and action plans can be considered.

**Table : Summary table for SWOT Analysis**

| **STRENGTH: List of Strong Indicators** | **WEAKNESSES: List of Weak Indicators** |
|---|---|
| **Productivity Dimension**:<br>• City Product per Capita<br>• Old Age Dependency Ratio<br>• Unemployment Rate<br>**Infrastructure Development Dimension**<br>• Access to Electricity<br>• Access to Improved Shelter<br>• Home Computer Access<br>• Internet Access<br>• Average Daily Travel Time<br>• Intersection Density<br>• Street Density<br>**Quality of Life Dimension**<br>• Life Expectancy at birth<br>• Eradicate Under-5 Mortality<br>• Net Enrolment in Higher Education<br>• Literacy Rate<br>• Homicide Rate<br>• Theft Rate<br>• Green Area per Capita<br>**Equity and Social Inclusion Dimension**<br>• Equitable Secondary School Enrolment<br>• Women in local government<br>**Environmental Sustainability**<br>• Solid waste collectio<br>• Waste water collection | **Productivity Dimension**:<br>• Mean Household Income<br>• Employment to Population Ratio<br>• Economic Density<br><br>**Infrastructure Development Dimension**<br>• Access to Improved Sanitation<br>• Access to Improved Water<br>• Residential Density<br>• Physician Density<br>• Number of Public Libraries<br>• Use of public transport<br>• Land Allocated to Streets<br><br>**Quality of Life Dimension**<br>• Early Childhood Education<br><br>**Equity and Social Inclusion Dimension**<br>• Women in the workforce<br><br>**Environmental Sustainability**<br>• Solid waste recycling |
| **OPPORTUNITIES: Indicators that creates an opportunity.** | **THREATS: Indicator that can pose threat to prosperity** |
| • **Old Age Dependency Ratio** – low burden on the productive population promotes growth.<br>• **Internet Access** – access to high speed internet can be used to promote innovation and access to information.<br>• **Literacy Rate** – high literacy rate is consistent with high skilled manpower to be tapped particularly women and youth.<br>• **Good safety and Security –**in the city provides a favourable environment for both domestic and direct foreign investment.<br>• **Women in the workforce –** although this is weakness but it provides an opportunity to tap into the huge resource of educated and skill Saudi Women. | • **Low Employment to Population Ratio** – the city can't create enough job opportunities.<br>• **Poor Access to Improved Sanitation** – is a huge health risk for city dwellers and housing sector.<br>• **Small Number of Public Libraries** – city risk having population without reading culture.<br>• **Physician Density** – if not checked there is risk of a reducing health care quality as population increases.<br>• **Land Allocated to Streets** – the city risks getting in to a complicated situation of wanting to widen streets without reserves – future threat.<br>• **Early Childhood Education** – the city risk having large population of youth/people without education. |

## Discussion of the SWOT Analysis

### Strength

The city of Al Ahsa has high city product per capita and one of the lowest Old Age dependency ratios, the indicator is a measure of the burden the productive population have to bear. A low ratio means low burden and since Saudi has a young population, it means this low burden on productivity is going to continue for some time as the youth join the workforce. This is a huge opportunity for the city to utilise while it last. It gives the city an added advantage to excel in development in that the productive population have the opportunity to reinvest the "surplus" that may have been used to take care of the old and reinvestment is a good way of creating more wealth. High productivity per person and fairly low unemployment rate means the city's productivity factors are good and should be consolidated and improved. The housing sector is also performing fairly well in certain areas especially in terms of access to quality basic services such as durable housing units, and access electricity. This are services that go a long way in making life in the city more comfortable. The ICT sector is moderately strong as well especially in terms of access to the internet and availability of home computers. As an information distribution system, the Internet and its usage provide opportunities for bringing education and information within the reach of all. It can significantly shorten time lags in information access as well as open up a new range of information resources. It also provides significant, new economic opportunities as well as possibilities for more environment-friendly options for the marketplace. This also means setting grounds for innovation in ICT particularly among the youth population. Cities are moving into the era of knowledge based economies which it is mainly driven by information technology. Urban mobility system is like the blood stream of a city though which people, good and services flow from one place to another. Although sufficient data was not available for a comprehensive analysis of this sector, the traffic flow in the city is still very good as indicated by the average time for commuting from house to workplace, it takes an average of about 21 minutes which is quite good and available public transport system is still affordable. Coupled with the high street connectivity in the city the urban mobility system can be said to be working fairly well. With increasing population this may not remain the same in the long run if nothing is done to make improvements, the current situation gives the city that ample time to work towards more sustainable mass urban

transport system that is affordable, safe and faster. In the health sector, Life expectancy, U5 Mortality and Maternal Mortality are among the most strongly and universally supported development goals. Life expectancy, maternal mortality and Under-five mortality levels are influenced by the availability, accessibility and quality of health services; education, particularly of mothers; access to safe water and sanitation; poverty and nutrition, among other factors. Therefore achieving high scores on these indicators is a demonstration of a working health care system and availability of basic supporting infrastructure. High literacy rate is an indication of the success in efforts made to make education accessible to all adult population, increased level of literacy rate in a population has been shown to have positive effect on productivity as well as health and life expectancy. The phenomenon of high crime rate generally compromises human dignity, creates a climate of fear and erodes the quality of life. Good safety and security in the city of Ahsa is both a source of strength for the economy since it helps to attract investment and at the same time safety and security make the quality of life in the city go up as it encourages healthy activities such as walking in the streets, enjoying public spaces without worries and just having sound sleep at night. All these contributes to high productivity and development. One important reason why having the high proportion of women in the local government is a good thing is that it is a clear demonstration of what Saudi women can do when they are given the opportunity to work, both in the public sector and in the private sector. It is also a proof that if it is organised and managed well within the confines of religious guidelines and culture then it works just perfectly well. It will go a long way to reduce the gender parity gap. The city has put in place efforts to ensure that there is economic, gender and social inclusion in the city by reducing poverty level, youth unemployment, having high gender parity in secondary schools and the women working in the local government.

**Weaknesses**

A city's economic strength is a very important factor of prosperity because it has crosscutting effect on all aspects of development. The general productivity of the city still has areas that need to be improved, going by the low mean household income in the city. Low income at household level means low purchasing power which is not good for economic growth. The city's employment to population ratio is just moderately strong. Moderately strong economic strength has been compounded by the city's inability to create enough employment opportunities leading to

unemployment rate which is still on the scale of balance. Low economic density is possibly due to sprawl leading to sparsely developed land, in a city economy that is not yet very strong, the spatial distribution of the benefits of economic growth becomes very minimal. This requires legislation to control sprawl and prioritise interventions that aims at increasing mixed use and densification of economic or commercial activities within the commercial, industrial and even residential areas in the city. Cities are encourage to provide adequate and affordable housing not only because shelter is a basic human need but descent housing goes hand in hand with standard of living as well as quality of life – in fact it also protect the health of the family. Therefore it is not just about housing, there are important attributes or minimum standards that makes a housing unit acceptable for human habitation in a prosperous city. A significant proportion of houses in Al Ahsa do not have access to water and sanitation facilities, lack of sanitation facilities such as connection to sewerage system can expose families to communicable diseases such as cholera-making the housing unit substandard. Access to adequate sanitary facilities noticeably improves health, the lack of it therefore, in spite of the availability of other conditions must have negative affect on the overall quality of life. Cities are moving into the era of knowledge based economies, so availability and access to social infrastructure such as public libraries are very important.

They help to encourage a reading culture in the society and help to increase the knowledge require for personal growth and development. The findings showed that Al Ahsa city has low number of health professionals compared to its increasing population. If not checked and properly planned, it may lead to low quality health care services which in turn affects the general health of the society and a sick population cannot be productive hence no prosperity.

Statistics shows that education provision and policies in the city are very good and all indicator are showing very good results except one which may be the most important one, enrolment in early childhood education. This is a general problem cutting across all the cities in Saudi Arabia so it needs to be addressed urgently both locally and nationally. Early childhood education is the entry point into the education system, all education systems globally suffer attrition - the rate at which children drop out of the education system, and it varies from one country or city to another. Cities with very low enrolment rates in the early stages of education risk having very low skilled labour

force or low literacy rate in future. It also leads to wastage of some brains which may have contributed immensely to the development of the nation.

The Saudi government have invested allot in the education of women but the number of women in the workforce is low across all cities. It is good and favourable for the cities that the government has put in place interventions at national level to correct this situation. Therefore, all cities including Al Ahsa should increase the number of women working in all sectors. Studies have shown that a large proportion of Saudi women are well educated and have invaluable skills. Since productivity is a question of per capita, it means a significant amount of this unproductivity is just a matter of policies that have excluded women from the workforce. The women population is a huge untapped resource which will contribute immensely and increase productivity nationwide.

**Opportunities**

As mentioned earlier, low Old Age Dependency Ratio is a source of strength and also pose a great opportunity for growth. Since it's a measure of the burden on the productive population, low Old Age Dependency Rate implies little burden on the working population so their output has more value resulting to more disposable income. Saudi generally has a young population which will eventually become old in the long run, so there is an opportunity now to achieve higher prosperity as possible while it last since population structure is a dynamic phenomenon. It has already been mentioned that the internet is an information distribution system, the Internet and its usage provide opportunities for bringing education and information within the reach of the public. It can significantly shorten time lags as well as open up a new range of information resources. It also provides significant, new economic opportunities as well as possibilities for more environment-friendly options for the marketplace. If you look at all these then it literally means having

accessible, high speed and reliable internet is like arriving at appoint of departure from traditional economy into the beginning of a knowledge based economy. The number of women in the workforce has also been low across all cities, it is very favourable for the cities that there are interventions at national level to correct this situation. Statistics shows that a large proportion of Saudi women are well educated and have invaluable skills. Since productivity is a question of per capita, it means a significant amount of this unproductivity is just a matter of policies. The woman

population is a huge untapped resource. Although the low rating is a weakness, it also provides an opportunity to make a start in the right direction. Many cities across the world are threatened with insecurity, investors can only put their money where there is stability, safety and security. The high level of safety and security in most of the cities in Saudi including Al Ahsa provides a huge opportunity to attract investors both from within the country and foreign investors.

**Threats**

The employment-to-population ratio provides information on the ability of an economy to create employment. Since it is just moderately strong it is important to find out the direction of its trend because a downward trend must be corrected as a matter of urgency. Employment-to-population ratios are of particular interest when broken down by age and sex, as they can provide information on gender and age differences in labour market activity, this is of particular interest in a country with youthful population and women population that need to be absorbed. So a reducing trend in the rate at which cities create jobs is a big threat to prosperity. A significant proportion of houses in the city of Al Ahsa do not have access to water and sanitation facilities, lack of sanitation facilities such as connection to sewerage system can expose families to communicable diseases such as cholera-making the housing unit substandard. Any risk to public health is not desirable in cities of the future. Availability and access to public libraries help to promote a reading culture in the society and help to increase the knowledge require for personal growth and development. Lack of public libraries exposes the city to a mild risk of having a population without reading culture, a people without the enthusiasm to have lifelong learning and acquisition of new knowledge is not progressive. Weak early childhood education program is a risk factor in that it can lead to higher illiteracy level among the youth in future.

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