CPI PROFILE

DAMMAM
The Future Saudi Cities Programme
CPI PROFILE - Dammam

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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 include Riyadh, Makkah, Jeddah, Taif, Medina, Tabouk, Dammam, Qatif, Ihsa, 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 include 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 Eastern Province Municipality together with its Local Urban Observatory have been working on developing urban statistics and spatial information (Geographic Information System) in order to provide relevant urban information that strongly supports 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.

Historical Background.

Dammam area was the site of several hamlets that depended on fishing and pearls for their survival. Over a span of a little more than half a century, the area has developed into a thriving hub of industries, commerce and science, and home to more than 1.7 million people. A complete transformation of Dammam occurred after the discovery of oil in commercial quantity in 1938, it was in Dammam that ARAMCO dug the famous Dammam No. 7 well that proved beyond doubt that the Kingdom possessed a large number of liquid hydrocarbons. The discovery of new oil fields to the south, west, and north of Dammam in the 1940s and 1950s, combined accounted for a quarter of the world's proven oil reserves; this triggered a building and construction boom in the city. Within just a few decades, the little fishing settlement grew to become the capital of the Eastern Province and worldwide oil shipping hub.
Geography and Location.

The city is located in the eastern part of Saudi Arabia on the Arabian Gulf, it is just 32ft (10m) above sea level. Dammam city is about 400 km east of Riyadh, the capital city of Saudi Arabia and about 1230Km east of Jeddah. It has a hot and dry desert climate, with average low and a high temperature of about 20 °C and 34 °C respectively. Rainfall in Dammam is generally sparse, and usually occurs in small amounts especially between December and April, the annual average rainfall is about 86mm. The city of Dammam has a geographical area of about 800km², however, the boundaries of the metropolitan area extend and covers two other cities Dhahran and Khobar to form Dammam Metropolitan Area, which is much bigger geographically.

Demographic Background.

With a population of 903,313 inhabitants (2010 census), Dammam city is the largest city in the Eastern Province and the fifth largest city in the Kingdom of Saudi Arabia; now it’s estimated that the city has more than one million inhabitants. The urban built-up area of the city is about 562 km² and has a population density of more than 2000 inhabitants per square kilometer. The population of Dammam city alone is about 46% of the population in the eastern region. The average household size in the city is 6.2 persons per household, which is higher than the national average which stands at 5.6 persons per household. The chart below shows the trend of population and the number of households in the city from 2010 to the year 2025.

Figure 1: Trend of Population and Number of Households (estimates)

Socio-Economic Background.

Dammam city is the capital or the seat of administration of Ash Sharqiyah Province, located to the east of the Kingdom on the Arabian Gulf. The Eastern Province of KSA is the heart of Saudi oil production and processing industry. The Saudi ARAMCO runs the oil and gas sector as a whole, from prospecting, exploring and extracting as well as collecting, processing, refining, and finally distributing, shipping and exporting. Consequently, the economy and physical development of the city is mainly dependent on the

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petroleum industry. A large proportion of the population in the entire metropolitan area works at Saudi Aramco and other petroleum-related business activities. The average household income in the city is high, it is estimated at about USD 4000 per month. A thriving manufacturing industry is also present in the city, by the end of 2013, the eastern region had 1,492 productive factories representing about 23.4% of the total number in the Kingdom amounting to 6,364; most of which are located in Dammam. The number of factory workers in the Eastern Region is about 214,000 representing around 25.8% of the total industrial manpower in the Kingdom; a large proportion of them work in Dammam.

The trend of Urban Growth and Existing Spatial Plans

In the early 1980s Dammam was a separate city but so close to Al Khobar and Dhahran, after years of rapid urban expansions witnessed in all parts of the Kingdom, the three towns inevitably merged into one, creating a single municipality known as Dammam Metropolitan Area (DMA). Dammam city is part of Dammam Metropolitan Area (DMA) which is the largest urban agglomeration in the Eastern Province and one of the largest in the Kingdom of Saudi Arabia. Urban growth in DMA has been rapid, the population has increased from 0.365 million inhabitants in 1974 and today the city is home to more than one million people and is expected to reach 3.62 million people by 2040.

The rapid growth has led to the formation of an agglomerated urban mass in DMA, most of this growth was unplanned and happened beyond urban expansion limits set by Dammam Urban Planning Department. Due to the limited alternative options for investment by the ordinary citizens, investing in housing has become the preferred option for many of them. Private sector companies followed a similar trend and invested heavily in the housing sector. Urban sprawl is a major problem associated with the rapid development of DMA. The contiguous spatial expansion of DMA has been extensively outpacing the growth of population resulting in a sprawling low-density development. By the year 2003, only 8,900 out of 25,618 ha of land within the urban boundary accounting for 35% were developed, leaving 16,700 ha of vacant land. The three main factors that are promoting this growth can be identified as the rapid expansion of the economy; the speculative real-estate market and the limited capacity of Dammam Urban Planning Department (DUPD) in devising and imposing urban regulations (Abou-Korin, 2011).

Figure 2: Land use and Urban Growth Limit

The figure above is showing the trend of urban growth limit control and land uses for the city of Dammam.

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Abou-Korin, 2011

City Prosperity Index (CPI) Assessment

Prosperity implies success, wellbeing, thriving conditions, safety and security, long life etc. Prosperity in cities, therefore, 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. Prosperity in cities is a process and cities can be at different levels of prosperity. In order to measure the level and also track how cities progress on the path to becoming prosperous, UN-Habitat introduced a monitoring framework: The Cities Prosperity Index (CPI). The CPI is a composite index with six carefully selected dimensions that captures all important elements of a prosperous city. This index along with a conceptual matrix, The Wheel of Urban Prosperity and a Global Scale of City Prosperity, are intended to help city authorities, decision-makers, partners and other stakeholders to use existing evidence and formulate clear policies and interventions for their cities.

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

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 CPI is a multidimensional framework that integrates several dimensions and indicators that are not only related but have a direct and indirect influence on in regard to fostering prosperity in cities. 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. Each of the dimensions is comprised of several indicators measured differently. Since the indicators are measured in different units, the first step in the index computation involves the normalization of the indicators into values ranging between 0 and 1; the normalized values are then aggregated stepwise to create the single value called the City Prosperity Index.

The following sections apply 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 (in reference to the scale of urban prosperity); it also provides an indication of the level of achievement towards the set prosperity goals (based on the magnitude of the CPI scores); and highlights whether there are disparities

\[\text{Very strong factors} \quad 80-100\]
\[\text{strong factors} \quad 70-79\]
\[\text{Moderate strong} \quad 60-69\]
\[\text{Moderate} \quad 50-59\]
\[\text{Under moderate} \quad 0-49\]

\(^3\) Can also be expressed in percentages so that values range between 0% and 100%, as used in this report.
between and within the six dimensions of prosperity (based on the concept of the Wheel of Urban Prosperity-stressing balance). An in-depth analysis of the findings will help to identify which particular sub-dimensions and indicators contribute to high or low values in each of the dimensions and the CPI scores.

**The Overall City Prosperity Index for Dammam**

The city of Dammam has an overall prosperity index score of 53.2%, according to the global scale of urban prosperity (shown above), the city is rated as having moderate prosperity. Therefore, there is a need to look closely at the causes and improve the overall CPI score of the city. The prosperity of cities requires a good balance of all the indicators of prosperity, it discourages a combination of indicators where some are too low and others very high. This low rating of the city is an indication that in as much as Dammam may be known to have a strong economic foundation, the city has many weak dimensions that weakens its overall scores. This can be seen in the chart below where urban governance and legislation (21.1%) and environmental sustainability (45.0%) dimensions perform dismally. On the other hand, three dimensions (Equity and social inclusion (69.7%), Infrastructure development(61.7%) and Quality of life(62.9%) can be rated as moderately strong. However, the city seems to be closer to achieving some balance than many other cities in the kingdom; the advantage of having a balanced city is that despite the low level of prosperity no segment of the city population is left behind or suffers extreme deprivations. This is why it is advisable that in the attempt to increase prosperity, strong factors can be held constant while improving extremely low factors to acceptable levels. The blue line in the chart below represent the dimension score of the city’s prosperity index and the orange line represent the mean.

The analysis in the next sections will dissect all the six dimensions of prosperity and identify areas of strengths and weaknesses for appropriate interventions.

**The Productivity Dimension**

The productivity dimension measures how cities contribute to economic growth and development, generate income, employment and equal opportunities and how it provides adequate living conditions

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for its population. The city has an overall productivity index of 59.0%, according to the prosperity scale, it means the city’s productivity is moderate. It could also imply that despite having very strong employment and economic growth indicators, it has some moderate areas which need to be addressed to make its productivity structure balanced. Some of the strong areas include economic growth indicators (90.5%) and employment indicators with 76.2%. Part of the weakness is in the spatial distribution of productivity which is below 10%. The low spatial distribution of productivity can be associated with the widespread urban sprawl in the city, urban sprawl has the effect of lowering productivity per unit area of a city. On the other hand, the good economic fundamentals in the city can be associated with high city GDP, high mean household income, and low old-age dependency ratio. The indicators of the employment situation in the city are generally good or strong, it has two strong indicators and one rated as very strong.

Table 2: Productivity Index (59.0%)

<table>
<thead>
<tr>
<th>Sub-Dimension</th>
<th>Indicator</th>
<th>Actual</th>
<th>Units</th>
<th>Standardized</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Growth (90.5%)</td>
<td>City Product per Capita</td>
<td>25,969.07</td>
<td>USD (PPP)/Inhab</td>
<td>71.5%</td>
<td>Strong</td>
</tr>
<tr>
<td></td>
<td>Mean Household Income</td>
<td>35,373.64</td>
<td>USD (PPP)</td>
<td>100.0%</td>
<td>V. Strong</td>
</tr>
<tr>
<td></td>
<td>Old Age Dependency Ratio</td>
<td>3.14</td>
<td>%</td>
<td>100.0%</td>
<td>V. Strong</td>
</tr>
<tr>
<td>Employment (76.2%)</td>
<td>Employment to Population Ratio</td>
<td>59.43</td>
<td>%</td>
<td>66.8%</td>
<td>M. Strong</td>
</tr>
<tr>
<td></td>
<td>Informal Employment</td>
<td>1.46</td>
<td>%</td>
<td>100.0%</td>
<td>V. Strong</td>
</tr>
<tr>
<td></td>
<td>Unemployment Rate</td>
<td>4.20</td>
<td>%</td>
<td>61.8%</td>
<td>M. Strong</td>
</tr>
<tr>
<td>Economic Agglomeration (9.4%)</td>
<td>Economic Density</td>
<td>80,232,270</td>
<td>USD (PPP)/km²</td>
<td>9.4%</td>
<td>Under moderate</td>
</tr>
</tbody>
</table>

The chart below clearly shows the disparities among the indicators of productivity. It clearly indicates that to bring balance to the productivity of the city, the focus should be on increasing the population to employment ratio and economic density.

Figure 3: Productivity Indicators

<table>
<thead>
<tr>
<th>City Product per Capita</th>
<th>Mean Household Income</th>
<th>Old Age Dependency</th>
<th>Employment to Population Ratio</th>
<th>Informal Employment</th>
<th>Unemployment Rate</th>
<th>Economic Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Strength</td>
<td>Economic Strength</td>
<td>Economic Strength</td>
<td>Economic Strength</td>
<td>Economic Strength</td>
<td>Economic Strength</td>
<td>Economic Strength</td>
</tr>
</tbody>
</table>

Figure 3: Productivity Indicators

8
The Infrastructure Development Dimension

The infrastructure dimension measures how cities use available resources to deploy a functional and efficient infrastructure. Infrastructural assets and services such as piped clean water, sanitation, electricity, road network, ICT are essential in supporting the city population, economy, and ensure a better quality of life. The city has infrastructure development index of 61.7%, therefore according to the global prosperity scale, it is rated as moderately Strong. Notwithstanding it still has some general weaknesses and several strong sub-dimensions. Among the strong sub-dimensions include the housing infrastructure (83.4%), ICT infrastructure (73.2%) and street connectivity infrastructures (73.4%). Social infrastructure and urban mobility still have significant weaknesses with scores of 22.1% and 56.5% respectively.

Most of the indicators under housing infrastructure are very strong except low population density in residential areas which may also be associated with urban sprawl in the city. Social infrastructure indicators are under moderate with a score of 22%; the city has a small number of public libraries compared to its large population. The city has good ICT infrastructure including very high access to the internet (98.1%) and ownership of home computers (92.5%), however, internet speeds are still very low making internet usage costly to the public. The main problem the city is facing regarding urban mobility is the low usage of the available public transport system. Street connectivity in the city is good but land allocated to streets is relatively low.

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5 Eastern Province Municipality, Dammam Urban Observatory Report, Dammam Local Urban Observatory, Dammam, 2016
Table 3: Infrastructure Development Index (61.7%)

<table>
<thead>
<tr>
<th>Sub-Dimension</th>
<th>Indicator</th>
<th>Actual Units</th>
<th>Standardized Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing Infrastructure</td>
<td>Access to Electricity</td>
<td>99.05%</td>
<td>99.1% V. Strong</td>
</tr>
<tr>
<td></td>
<td>Access to Improved Sanitation</td>
<td>97.75%</td>
<td>97.8% V. Strong</td>
</tr>
<tr>
<td></td>
<td>Access to Improved Water</td>
<td>98.00%</td>
<td>98.0% V. Strong</td>
</tr>
<tr>
<td></td>
<td>Access to Improved Shelter</td>
<td>99.20%</td>
<td>99.2% V. Strong</td>
</tr>
<tr>
<td></td>
<td>Population Density</td>
<td>3,089.53</td>
<td>20.6% Under moderate</td>
</tr>
<tr>
<td></td>
<td>Sufficient Living Area</td>
<td>86.00%</td>
<td>86.0% V. Strong</td>
</tr>
<tr>
<td>Social Infrastructure</td>
<td>Number of Public Libraries</td>
<td>0.06 #/100,000 inhab.</td>
<td>0.0% Under moderate</td>
</tr>
<tr>
<td></td>
<td>Physician Density</td>
<td>1.64 #/1,000 inhab.</td>
<td>44.1% Under moderate</td>
</tr>
<tr>
<td>ICT (73.2%)</td>
<td>Average Broadband Speed</td>
<td>4.00 Mbps</td>
<td>28.9% Under moderate</td>
</tr>
<tr>
<td></td>
<td>Home Computer Access</td>
<td>92.50%</td>
<td>92.5% V. Strong</td>
</tr>
<tr>
<td></td>
<td>Internet Access</td>
<td>98.10%</td>
<td>98.1% V. Strong</td>
</tr>
<tr>
<td>Urban Mobility (56.3%)</td>
<td>Average Daily Travel Time</td>
<td>22.15 minutes</td>
<td>100.0% V. Strong</td>
</tr>
<tr>
<td></td>
<td>Affordability of Transport</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Length of Mass Transport Network</td>
<td>- Km/1M Inhab.</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Road Safety (traffic fatalities)</td>
<td>10.19 #/100,000 inhab.</td>
<td>69.4% M. Strong</td>
</tr>
<tr>
<td></td>
<td>Use of Public Transport</td>
<td>6.10%</td>
<td>0.3% Under moderate</td>
</tr>
<tr>
<td>Street Connectivity (73.4%)</td>
<td>Intersection Density</td>
<td>93.44 km/km2</td>
<td>93.4% V. Strong</td>
</tr>
<tr>
<td></td>
<td>Land Allocated to Streets</td>
<td>23.97%</td>
<td>59.9% moderate</td>
</tr>
<tr>
<td></td>
<td>Street Density</td>
<td>13.38 km/KM2</td>
<td>66.9% M. Strong</td>
</tr>
</tbody>
</table>

The bar chart below shows the level of disparity between the indicators of the infrastructure development. It displays the weak indicators which need to be improved as a matter of priority and the strong factors which need to be maintained so as to attain some balance as well as achieve higher levels of prosperity. Some of the indicators which need urgent attention include the following: population density, the number of public libraries, physician density in the health sector, internet speed, mass transport system, affordability of public transport, use of public transport and land allocated to streets.

The Quality of Life Dimension

The quality of life dimension measures the cities achievements in the provision of important amenities such as social services, education, health, recreation, and safety and security required for a high standard.

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of living and enabling the citizens to maximize their individual potential and to lead long fulfilling lives. In general, the quality of life in Dammam is rated as moderately high with CPI score of 62.9%; the high quality of life in the city may be attributed to the good healthcare system with 79.4% and very good safety and security with 92.7%. The city is doing well in the healthcare provision and this has led to high life expectancy and reduced under-five mortality rates; there is also very high vaccination coverage in the city which keeps away preventable diseases. Safety and security in the city is exceptionally good and this is attributed to the efforts made to keep homicide at the negligible level and very low number of theft cases in the city.

However, the city has weaknesses in critical areas such education provision (56.3%) and provision of public spaces in the city (23.2%) which is very key in creating cohesion. The weaknesses observed in the provision of education services may be attributed to the poor rate of enrolment in early childhood education and low net enrolment rate in higher education. Lastly, public spaces are very important as far as quality of life is concerned, it helps to increase cohesion in the society; the city has very few public spaces especially in terms of green area per capita (33.3%), the accessibility to the public spaces is also very low (13%).

Table 4: Quality of Life Index (62.9%)

<table>
<thead>
<tr>
<th>Sub-Dimension</th>
<th>Indicator</th>
<th>Actual</th>
<th>Units</th>
<th>Standardized</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health (79.4%)</strong></td>
<td>Life Expectancy at Birth</td>
<td>73.80</td>
<td>years</td>
<td>71.9%</td>
<td>Strong</td>
</tr>
<tr>
<td></td>
<td>Eradicate Maternal Mortality</td>
<td>-</td>
<td>#/100,000 live births</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eradicate Under-5 Mortality</td>
<td>9.40</td>
<td>#/1000 live births</td>
<td>67.1%</td>
<td>M. Strong</td>
</tr>
<tr>
<td></td>
<td>Vaccination Coverage</td>
<td>99.18</td>
<td>%</td>
<td>99.2%</td>
<td>V. Strong</td>
</tr>
<tr>
<td><strong>Education (56.3%)</strong></td>
<td>Early Childhood Education</td>
<td>12.60</td>
<td>%</td>
<td>12.6%</td>
<td>Under moderate</td>
</tr>
<tr>
<td></td>
<td>Net Enrolment in Higher Education</td>
<td>69.81</td>
<td>%</td>
<td>69.8%</td>
<td>M. Strong</td>
</tr>
<tr>
<td></td>
<td>Literacy Rate</td>
<td>12.60</td>
<td>%</td>
<td>86.5%</td>
<td>V. Strong</td>
</tr>
<tr>
<td></td>
<td>Mean Years of Schooling</td>
<td>-</td>
<td>%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Safety and Security (92.7%)</strong></td>
<td>Homicide Rate</td>
<td>0.29</td>
<td>#/100,000 inhab.</td>
<td>100.0%</td>
<td>V. Strong</td>
</tr>
<tr>
<td></td>
<td>Theft Rate</td>
<td>105.51</td>
<td>#/100,000 inhab.</td>
<td>85.4%</td>
<td>V. Strong</td>
</tr>
<tr>
<td><strong>Public Space (23.2%)</strong></td>
<td>Green Area per Capita</td>
<td>5.00</td>
<td>m² / inhabitant</td>
<td>33.3%</td>
<td>Under moderate</td>
</tr>
<tr>
<td></td>
<td>Accessibility to Open Public Space</td>
<td>12.98</td>
<td>%</td>
<td>13.0%</td>
<td>Under moderate</td>
</tr>
</tbody>
</table>

Figure 5: Quality of Life Indicators.

The level of imbalance can be seen from the heights of the bars and it is clear from the chart above that there is disparity among the indicators of quality of life. The city has both weak and strong indicators in equal number, to improve the quality of life in the city, a decrease in the level of disparities is required.
This will mean addressing the issue of under 5 mortality rate, early childhood education, increase net enrolment in higher education, increase green area per capita and ensure accessibility to the public spaces.

**The Equity and Social Inclusion Dimension**

Cities which are socially inclusive and economically equitable are more likely to be more productive, exhibit higher living standard and good quality of life. The equity and social inclusion dimension measure how a city distributes the benefits of prosperity among its inhabitants. No matter how high the productivity or average income or good infrastructure a city has, no city can claim to be prosperous when a segment of its inhabitants lives in poverty and deprivation. The equity and social inclusion dimension measures the level of achievement of cities in the distribution or sharing of the benefits of prosperity among its inhabitants. Due to data unavailability problems 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 Dammam has a gender inclusion sub dimensional index of 69.7%. This is indicative of a fairly gender inclusive city.

The high level of gender inclusion in the city can be associated with high equitable secondary school enrolment rate with 94.72% and a high number of women in local government with 88.06%. Gender inclusion in the city is generally good except that the proportion of women in the labour force is still too low (26.22%), this also affects women access to employment opportunities.

### Table 5: Equity and Social Inclusion Index (69.7%)

<table>
<thead>
<tr>
<th>Sub-Dimension</th>
<th>Indicator</th>
<th>Actual</th>
<th>Units</th>
<th>Standardized</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Inclusion (69.7%)</td>
<td>Equitable Secondary School Enrollment</td>
<td>0.95</td>
<td>0 - ∞</td>
<td>94.72</td>
<td>V. Strong</td>
</tr>
<tr>
<td></td>
<td>Women in local government</td>
<td>44.03</td>
<td>%</td>
<td>88.06</td>
<td>V. Strong</td>
</tr>
<tr>
<td></td>
<td>Women in the workforce</td>
<td>13.11</td>
<td>%</td>
<td>26.22</td>
<td>Under moderate</td>
</tr>
</tbody>
</table>

---

Prosperous cities ensure that as they grow and develop economically the city’s environment is not destroyed or degraded but remains healthy and liveable; the city’s natural assets and resources are preserved for posterity for the sake of its inhabitants. The findings in the table below show that the city generally performs poorly in keeping a balanced and sustainable environment; the city has an ESI score of 45% which gives it a under moderate rating... The city has strong waste management (90.1%) but poor air quality (0%), resulting in a poor overall score. Although the waste collection is very well managed, waste recycling needs to be established and well managed to avoid ending up with the unsustainable environment.

Table 6: Environmental Sustainability Index (45.0%)

<table>
<thead>
<tr>
<th>Sub-Dimension</th>
<th>Indicator</th>
<th>Actual</th>
<th>Units</th>
<th>Standardized</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Quality (0%)</td>
<td>PM10 Concentration</td>
<td>130.00</td>
<td>ug/m³</td>
<td>0.0%</td>
<td>Under moderate</td>
</tr>
<tr>
<td></td>
<td>PM2.5 Concentration</td>
<td>49.00</td>
<td>ug/m³</td>
<td>0.0%</td>
<td>Under moderate</td>
</tr>
<tr>
<td>Waste Management (90.1%)</td>
<td>Solid Waste Collection</td>
<td>98.41</td>
<td>%</td>
<td>98.4%</td>
<td>V. Strong</td>
</tr>
<tr>
<td></td>
<td>Solid waste recycling share</td>
<td>-</td>
<td>%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Wastewater treatment</td>
<td>81.70</td>
<td>%</td>
<td>81.7%</td>
<td>M. Strong</td>
</tr>
</tbody>
</table>

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8 Eastern Province Municipality, Dammam Urban Observatory Report, Dammam Local Urban Observatory, Dammam, 2016
From the figures above it is shown that share of renewable energy and waste recycling need to be addressed to ensure a more sustainable environment.

The Governance and Legislation Dimension

Prosperous cities are best able to combine sustainability and shared prosperity through effective urban governance and transformational leadership. They deploy appropriate and effective policies, laws and regulations, and create adequate institutional frameworks with strong local institutions and sound institutional arrangements. The findings show that governance and legislation index for the city is still under moderate, with a governance index score of 21.1%, the city of Dammam can be said to have a problem with governance and legislation. Dammnan has an under moderate score of 21.1%, with a mixture of an under moderate and strong indicator. Days to start a business indicator is strong at 73.0% but the revenue collection by the municipal is non-existent at 0%. On the other hand, the setting still does not allow proper public participation and accountability (5.6%). Therefore, areas which may need to be looked into under the city’s financial management include efficiency in own revenue collection and efficiency in local expenditure.

Table 7: Legislation and Governance Index (21.1%)

<table>
<thead>
<tr>
<th>Sub-Dimension</th>
<th>Indicator</th>
<th>Actual</th>
<th>Units</th>
<th>Standardized</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation and Accountability (5.6%)</td>
<td>Municipal Voter turnout</td>
<td>5.60</td>
<td>%</td>
<td>5.6%</td>
<td>Under moderate</td>
</tr>
<tr>
<td>Municipal Finance (36.5%)</td>
<td>Own revenue collection</td>
<td>17.00</td>
<td>%</td>
<td>0.0%</td>
<td>Under moderate</td>
</tr>
<tr>
<td></td>
<td>Days to start a business</td>
<td>7.00</td>
<td>Days</td>
<td>73.0%</td>
<td>Strong</td>
</tr>
<tr>
<td></td>
<td>Local expenditure efficiency</td>
<td>-</td>
<td>%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

9 Eastern Province Municipality, Dammam Urban Observatory Report, Dammam Local Urban Observatory, Dammam, 2016
SWOT Analysis based on City Prosperity Index

This section attempts to further analyze and break down the findings of the CPI and use it to identify areas of Strength, Weaknesses or challenges, Opportunities for growth and possible Threats that the city may have so that appropriate recommendations and actions can be designed for more in-depth analysis.

Table 7: SWOT Analysis based on City Prosperity Index

<table>
<thead>
<tr>
<th>STRENGTH</th>
<th>WEAKNESSES</th>
</tr>
</thead>
</table>
| 1. Good economic growth fundamentals such as high economic productivity, high household income, low old-age dependency ratio.  
2. High literacy rate: the youth and women have untapped potential to contribute allot to economic growth. There is a lot of unutilized skilled manpower (human capital), especially among women.  
3. There are good safety and security and political stability which provide a conducive environment for growth and development.  
4. There is good healthcare provision in the city: a healthy population is productive, happy and peaceful. | 1. Low economic density- possibly due to urban sprawl leading to tracks of empty land: re-examine and establish the need for increased densification of economic or commercial activities within the commercial, industrial and even residential areas in the city.  
2. Use of public transport is very low and there is over-dependence on private cars for transport even for short distances, not good for the environment and lack of physical activity is not good for health.  
3. Low average bandwidth speed where there is high internet access and ownership of home computers result in discouraging internet usage.  
4. Generally, housing infrastructure is good but there is a problem with access to sanitation facilities such as access to the sewerage system. |
| OPPORTUNITIES | THREATS |
| 1. High green area per capita and low accessibility mean there are a lot of green area that can be made accessible to the public.  
2. This is the time to begin implementing programmes to promote the use of public transport system before the completion of Metro Train System.  
3. High street intersection density and street density which should encourage alternative means of transport such as walking and cycling especially early morning and evening.  
4. High internet access and ownership of home computers is a good opportunity to increase bandwidth and encourage more usage.  
5. High productivity, good economic fundamentals, good safety & security and political stability in the city provide a conducive environment for attracting foreign investments. | 1. High investment is required to meet the needs of the rapidly growing population.  
2. There are other factors affecting the already low usage of public transport such as cultural and extreme temperature, unless they are appropriately addressed they may affect the usage of the Metro Train system as a public transport system when it is completed. |
Global Urban Observatory Network (GUO-Net) is a worldwide information and capacity-building network established by the United Nations Human Settlement Programme (UN-HABITAT) to help implement the New Urban Agenda at the national and local levels. The GUO-NET consists of national and city-level institutions that function as National and Local Urban Observatories.

The purpose of GUO-Net is to support governments, local authorities and civil society:

- To improve the collection, management, analysis and use of information in formulating more effective urban policies;
- To improve information flows between all levels for better urban decision-making;
- To stimulate broad-based consultative processes to help identify and integrate urban information needs;
- To provide information and analyses to all stakeholders for more effective participation in urban decision-making;
- To share information, knowledge, and expertise using modern information and communication technology (ICT);
- To create a global network of local, national and regional platforms for sharing information about the implementation of the New Urban Agenda;
- To share some tools and benefits provided by the GUO network;
- Training on using the urban indicator toolkit for data collection and analysis;
- Training on how to use the results of the urban indicators data for fundraising activities;
- Conferences of the network members for information exchange and city-to-city networking;
- Access to internet resources available at UN-Habitat’s website including urban indicators databases and Urban Info system;
- Data used for evaluations done for the World Cities Report published biannually by UN-Habitat
UN-HABITAT achieves these objectives through a global network of local, national and regional urban observatories and through partner institutions that provide training and other capacity-building expertise.

The UN-Habitat and MOMRA have previously established Local Urban Observatories in the 17 cities covered by the FSCP. A rapid survey conducted by UN-Habitat-KSA in June 2015 targeting the 17 LUO/cities, found out that only 15 LUOs existed. The findings also showed that 88% of Local Urban Observatories are under Municipal Departments while 12% are under Authority for Development within Municipality. It also revealed that 71% of the Local Urban Observatories were active while the operations of 23% of them were suspended due to unaccomplished staff/contractual arrangements.

Some of the data the Local Urban Observatories are required to collect in collaboration with the Municipals are GIS-related, so there is need to have collaborative work relations between the LUOs and the GIS departments within the Municipalities. The survey revealed that in terms of connections with the GIS departments, 59% of the LUOs have work relations with the GIS department while 18% do not. There was evidence that 71% of the LUOs have GIS data while 6% do not have.

The Local Urban Observatory of Dammam was established in 2013 (6 years) as a department located within the municipality to be responsible for developing tools, collecting and analyzing urban indicators at the city level.

Dammam LUO has produced two rounds of indicators and now working on the third round of urban indicators, so far they have produced a total of 134 urban indicators.
References

- Ministry of civil services, survey for the local government employees for 17 cities, Riyadh, 2016.
- Authority of Communication and Information Technologies, Broad Band Speed Survey in 17 cities, Riyadh, 2016.