Measuring Urban Governance Using Governance and Legislation Index: A Case Study of Kuala Lumpur, Malaysia

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ABSTRACT

It was recognized that good governance is important to achieve the equitable and sustainable development which secure the common future. This is because active, effective and fair governance helps promotes the business development by putting in place integrated policymaking capacity and ensuring stable and secure societies towards sustainable development. Seeing this, hundreds of governance-indicator datasets have emerged. Stakeholders have relied heavily on these data in making cross-border decisions. Nevertheless, it is argued that most of these data are perception-based indicators; therefore, the decision made is bias and incorrect. On this ground, this paper attempts to identify and explain the quality of governance for the Kuala Lumpur city using an objective data-driven index, the City Prosperity Index (CPI). This paper employed content analysis of secondary data and literature, relying on statistical data from Kuala Lumpur City Hall, Election Commission of Malaysia and The World Bank. Results have shown that governance in Kuala Lumpur is a moderate solid factor (65.0) in contributing to the city's prosperity. Comparing to other cities, Kuala Lumpur ranked 20 out of 47 selected cities. There is still plenty of room Kuala Lumpur to improve its governance to remain competitive and sustainable. In conclusion, objective data is good as data produced will not be bias. Nevertheless, it should not be generalized to reflect the overall quality of governance. This is because there are many other governance related variables can only be obtained via perception-based data. It is recommended that the GLI measured in this paper should be use together with other subjective data to give a most complete coverage of the overall quality of governance of a city.

Keywords: Governance and Legislation Index, City Prosperity Index, Objective Data, Kuala Lumpur, Sustainability

1. Introduction

In the past two decades, there was a sudden increase in interest in the quality of governance, especially in developing countries. This is because it was recognized that good governance where decision-making and the implementation of policy is carried out effectively, transparently and impartially (Rostin and Teorell, 2008) is important as it helps to ensure the development of economy and other resources are fairy distributed among people of different classes. At the same time, it also helps to guarantee that the needs of the society's most vulnerable people, i.e. the poor, youth, single parents, senior citizen etc. are heard (UN Habitat, 2016). From the economic perspective, an active, effective and fair governance helps promotes the business development by providing integrated policy-making capacity which ensure a stable political environment ideal for business and investment.

The growth in interest in the quality of governance has further promoted the use of quantitative governance

indicators, especially by cities in the developing countries. As such, investors, policy makers and other stakeholders have heavily relied on these data to make decisions. Nevertheless, it was found that there are some problems hindering the use of these global governance indicators. For instance, it was argued that most of the governance-indicator datasets are composite perceptions-based indicators (Foresti, Wild and Takeuchi, 2014). Seeing this, the computation of existing dataset is not transparent, and often bias in nature.

In 2012, the UN-Habitat has introduced the City Prosperity Index as a tool to measure the achievement of Sustainable Development Goals, in which GLI aspects are crucial to be taken into account. Recognizing the need to have a balance between each dimension in a city, the CPI has place governance as the center of its conceptual matrix. Unlike most of the governance indicators, the computation of CPI uses objective data, thus, help mitigating the problem of transparency and biasness.

On the ground of this, this paper attempts to identify and explain the quality of governance for the Kuala Lumpur city using an objective data-driven index called the City Prosperity Index (CPI). This paper employ critical analysis of secondary data and literature, heavily relies on statistical data from the World Bank, KLCH and Department of Statistics Malaysia. Following this introduction, the objective data and subjective data, and their respective pros and cons in measuring the quality of governance will be discussed. Then, the variables and the methodology of computation of GLI will be detailed. Before concluding the paper, the GLI of Kuala Lumpur and its position as compared to selected cities will be discussed.

2.   Literature Review

2.1   *Measuring Governance Using Objective and Subjective Data*

Generally, governance related data can be divided into two types, i.e. the objective data and subjective data. Objective data is data based on quantifiable input or output. It is more desirable when comparing to subjective data due to its reproducibility and

unambiguous nature as they are normally based on events and facts, rather than mere opinion (United Nations, 2007). Nevertheless, most of the time, especially in developing countries, governance related objective data is always in poor quality or often not available. At the same time, risk also arises when they are inappropriately generalized to represent the governance quality of a city/ country as whole (United Nations, 2007).

On the other hand, subjective data is perception-based data, often collected via polls or surveys. As of today, most of the governance-measuring indicators are computed using subjective data. Example of governance-measuring indicators often being used are Government at a Glance (prepared by OECD), Worldwide Governance Indicators project (developed for World Bank) and DataGov governance indicators database (maintained by the Inter-American Development Bank). One bad point about perception-based data which often being criticize is its reliability and representativeness (Herbert, 2013). In other word, subjective data is having a chance of biasness in opinion and the collection of data often lack transparency.

Of all the aforementioned indicators, the Worldwide Governance Indicators is probably the most carefully constructed indicators (Arndt and Oman, 2006). It is an indicator computed taking into consideration six aggregate indicators: (i) voice and accountability, (ii) political stability and absence of violence, (iii) government effectiveness, (iv) regulatory quality, (v) rule of law and (vi) control of corruption. These indices were solely based on subjective data collected from various sources.

Since the introduction of Worldwide Governance Indicator in 1996, there has been many questions arise, concerning about the transparency, biasness and likelihood of correlation of errors among the sources used. For instance, it was argued that some of the data collected are based on the opinion of experts. However, it was found that the opinion of experts often can be very different from the on the ground opinion (United Nations Development Programme, 2009). At the same time, the allocation of weightage based on correlation between each source is also

questionable as a high correlation between each set of data do not signify a low error (Arndt and Oman, 2006).

In respond to all the criticism, another working paper that explain and cast doubt on the practical importance of this sort of bias has been published (see Kaufmann and Mastruzzi, 2010 for the explanation). Nevertheless, as of today, there are still some studies continued to challenge the reliability, representativeness and methodology of WGI (see Langbein and Knack (2010) for further discussion of WGI).

However, even with the potential biasness of subjective data, we should recognize that subjective data is indeed important to capture information that may not be able to provide solely based on objective data (United Nations, 2007). For instance, there are very limited objective data available to measure corruption or the confidence level of citizens towards the government.

Seeing this, we shall conclude that both objective and subjective data have their respective pros and cons. At the same time, both types of data contain some error margin. Seeing this, some researcher suggested to measure the quality of governance using a combination of objective and subjective based data (United Nations Development Programme, 2009). This statement if further supported by Foresti, Wild and Takeuchi (2014) where they think that further attention needs to be paid to options for more objective measures in the calculation of governance related indicators. As most of the existing governance indices was computed using only perception-based data, this paper will attempt to evaluate the governance of Kuala Lumpur using an objective data-driven index called the Governance and Legislation Index (GLI). GLI is one of the six indices measured under the City Prosperity Index (CPI) by UN-Habitat. In next sections, CPI and GLI is further discussed.

2.2 City Prosperity Index

Based on "the future we want", it was found that poor planning and the absence of effective monitoring mechanism is the reason to unsustainable urban growth. Besides, the low capability of local authorities and the absence of effective governance has also become the stumbling block of attaining sustainable urban development (UN-Habitat, 2015). Due to these reasons, the City Prosperity Index was introduced by the UN-Habitat to measure the sustainability of cities.

It was proposed to become the global architecture platform to monitor the SDGs and it is seen as a contributor to the Data Revolution for sustainable development. Besides integrating all source of data, it also aims to increase the usefulness of data which in turn, able to assist city's stakeholder including the city authorities to identify investment opportunities as well as other development potentials to make a city to become more prosperous.

The conception of the City Prosperity Index is developed based on the basic rights of human, taking into consideration six dimension including (a) productivity; (b) infrastructure; (c) quality of life; (d) equity and inclusion; (e) governance and legislative and (f) environmental sustainability. It believes that the idea of the previous century where vitality and transformative dynamic of the cities were sufficient to sustain the functionality of a city should be shed. Instead, it considers urbanization as a process where the basic human right should be focus on, and city is the outcome of the process where basic human right is met. This means that the well-being of a city should shift its focus from national income and other monitised measures to the promotion of social inclusion and development, taking into account the urban related human rights for all.

Recognizing that it will be hard to balance between all these different dimensions, UN-Habitat has placed GLI at the center of its conceptual framework- the Wheel of Urban Prosperity to ensure that the innovative policies can help to balance out the development of all these aspects in any cities (see Figure 1). The next section will zoom in to the sub-dimension of GLI.
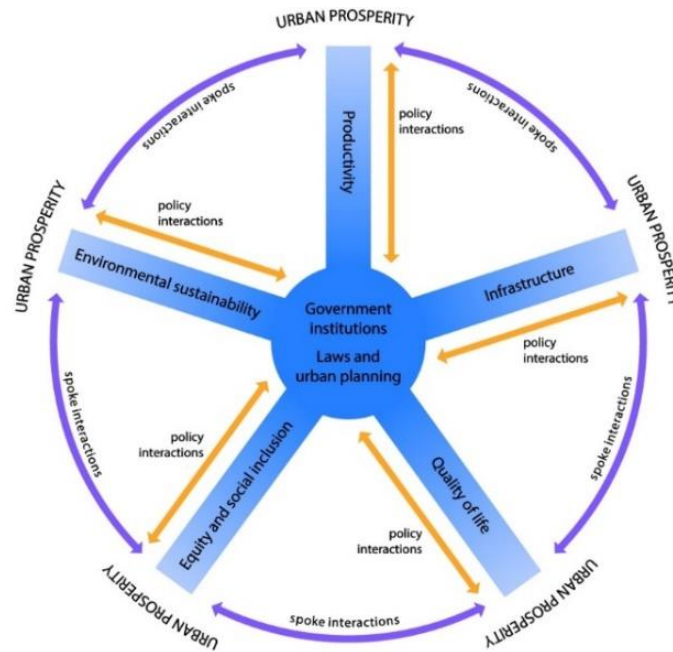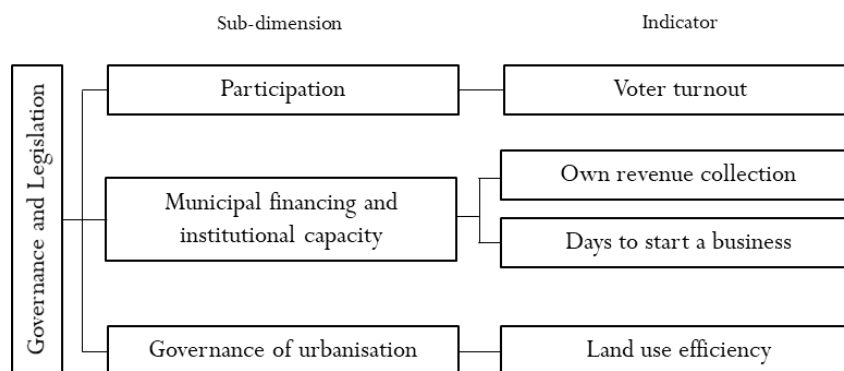
Figure 1 Wheel of Urban Prosperity (UN-Habitat, 2015)

2.3   Governance and Legislation Index

Under the basic CPI, Governance and Legislation Index (GLI) is measured using three sub-dimensions along with their respective suggested variables (see Figure 2).

Figure 2 Structure of the Governance and Legislation Index (United Nations, 2016)

Participation of the public is essential to ensure a prosperous city as it helps to ensure that governments and public institutions are accountable for their actions and responsive to public interest (Harrison and Sayogo, 2014). For instance, a high public participation increases the chances where decisions made by government will reflect the desire of a large number of individuals. At the same time, it also helps to bring the benefits of development to as many people as possible.

Next, generating own income is one of the abilities a prosperous city is trying to achieve as it will reduce its dependence to the central government's transfers. Seeing this, in past few decades, decentralization occurred in many countries with the aim of increasing the responsibility of subnational governments in city developments (UN Habitat, 2016). On top of that,

days to start a business is also an important indicator of municipal financing and institutional capacity. It gives us an idea on whether the government is providing a conductive environment in the market. High number of days needed to start a business signify that there is excessive business regulation in a city. This can bring down the overall economic performance of a city as longer days generally means that a higher cost is needed in order to be engaged in the city's formal economy (Hallward-Driemeier and Pritcheet, 2015). Lastly, governance of urbanization can be measured by measuring the land use efficiency of a city. It is the measure of rate of land consumption, in many case, the increase in built-up area of a city to its population growth. High land consumption as compared to the growth of population signify the occurrence of urban sprawl. Based on various study, we understand that when cities continue to grow without any barrier or limitation, especially when it is low in density and not in a continuous form, it reduces the ability of city to generate economies of scale and agglomeration. This is seen to be unsustainable.

With these four variables, the GLI of Kuala Lumpur will be estimated. In next section, the methodology of computation of GLI will be explained.

3.   Methodology

Generally, the computation of GLI can be divided into three main stage: (i) collection of data, (ii) standardization of data and (iii) weighing allocation.

3.1   Collection of Data

All data collected for this paper are source from secondary sources, including data, publication and estimation from the Election Commission of Malaysia (SPR), Kuala Lumpur City Hall (DBKL) and The World Bank.

As discussed in the previous section, data of four indicators, including (i) voter turnout, (ii) own revenue collection, (iii) days to start a business) and (iv) land use efficiency has been taken into consideration in the computation of GLI. Voter turnout refers to the number of eligible voters who

cast a ballot in an election, calculated using the formula:

$$\text{Voter turnout} = 100 \left(\frac{Voters\ who\ cast\ a\ ballot\ in\ a\ local\ election}{Number\ of\ eligible\ voters} \right)$$

The last Malaysian general election is held in 2013. In Kuala Lumpur, there is a total of 792,071 registered voters. Of these 792,071 voters, 83.71% or 663,049 have cast a ballot in the election (SPR, 2013).

Next, own revenue collection refers to the own source revenue as percentage of the total city revenue calculated using the formula:

$$\text{own revenue collection} = 100 \left(\frac{Own\ source\ revenue}{Total\ local\ revenue} \right)$$

Where total local revenue normally includes central government or external loans or grants.

There is no document or report (i.e. the annual report or financial statement) published by the Kuala Lumpur City Council Hall in recent years (most recent being the 2013 annual report). Nevertheless, according to the Mayor of Kuala Lumpur, Mayor Mhd Amin Nordin Abdul Aziz as cited in Achariam (2016), the estimated tax collection in 2017 is RM1.04 billion, or 42.1% of total revenue collection. Seeing that there is a lack of existing data, this forecasted data will be used as the percentage of own revenue collection in Kuala Lumpur.

Days to start a business refers the median duration that incorporation lawyers indicate as necessary to complete all required registration procedures. The days to start a business estimated by the World Bank (b) for Malaysia are 19 days.

Lastly, land use efficiency is the land consumption rate over the rate of growth of population, calculate using the formula:

$$\text{Land use efficiency} = \left(\left| \frac{Urban\ expansion\ annual\ growth\ rate}{Population\ annual\ growth\ rate} \right| \right)$$

Where

$$\text{Urban expansion annual growth rate} = \left(\frac{Urb_{t+n} - Urb_t}{Urb_t}\right)^{\frac{1}{y}}$$

And

$$\text{Population annual growth rate} = \left(\frac{Pop_{t+n} - Pop_t}{Pop_t}\right)^{\frac{1}{y}}$$

Notes:

- t is the initial year under consideration
- t+n is the final year consideration
- y is the number of years of consideration between the initial and final year
- Urbt is the built-up area in square kilometers in the initial year
- Urbt+n is the built-up area in square kilometers in the final year
- Popt is the total population within the built-up area in the initial year
- Popt+n is the total population within the built-up area in the final year

According to the World Bank, 2011, the population of Greater Kuala Lumpur increased from approximately 3.1 million in 1990 to 5.96 million in 2009. At the same time, its built-up area increased from 621 sq. km. to 1,555 sq. km. This translate to a land use efficiency of 1.03.

3.2 Standardization of Data

Following the collection of data, variable standardization will be carried out. This process is necessary as data collected are of different units of measurements and is not comparable to each other. Therefore, variable standardization can help to transform all data from its original measurement unit to a standardized measure, the index. Besides, the process of standardization also serves to show the correlation between each indicator to the prosperity of a city. For instance, the standardized measures range from 0 to 100. In this case, the larger the variable, the more prosperous the city is.

Depending on the nature of the data, i.e. whether the data is positively or negatively related to the prosperity of a city, or in some case, there is a range where data should fall into in order to be prosperous, different approach of standardization method is used.

Two standardization methods, i.e. direct classic standardization and reversed classic standardization has been employed. Formula of both standardization method is as below.

i) Direct classic standardization:

$$V^{(S)} = 100\frac{V - Min(V)}{Max\,(V) - Min(V)}$$

ii) Reversed classic standardization:

$$V^{(S)} = 100\left(1 - \frac{X - Min(V)}{Max(V) - Min(V)}\right)$$

Where V is the variable and V(s) is the standardized variable and Max(V) is the maximum and Min(V) is the minimum observed value for V.

3.3 Weighing Allocation

Lastly, the weighting scheme by Alkire and Foster (2011) for the Multidimensional Poverty Index, as suggested in UN Habitat (2016) has been adopted. Assumptions for the construction of this weighting scheme is that all sub-dimensions carry the same weight within the dimension and all variables carry equal amount of weight within their respective sub-dimension.

Calculation of GLI of Kuala Lumpur as summarized in Table 1.

Table 1 Calculation of GLI of Kuala Lumpur

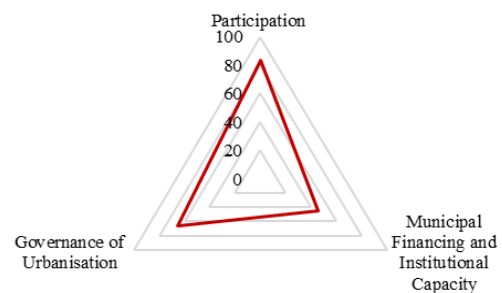| Variables	V	Unit	Standardization approach	Benchmark		V$^{(S)}$	Weightage
				Min(V)	Max(V)		
Voter turnout	83.71	%	n.a.	n.a.	n.a.	83.71	1/3
Own revenue collection	42.10	%	Direct classic standardization	17	80	39.84	1/6
Days to start a business	19.00	Days	Reversed classic standardization	2	208	51.52	1/6
Land use efficiency	1.03	Dimensionless	Reversed classic standardization	0	3	65.68	1/3

4. Main Result

Generally, UGL index can be classify into six classifications (see Table 2). Cities scoring high GLI are overall well developed and have strong integration of all dimensions, showing good synergy between urban planning, governance and finance interest. To enjoy the competitive advantage from being a prosperous city, cities are trying their best to increase their index for each dimension, including the ULI.

Figure 1 GLI of Kuala Lumpur by sub-dimensions

Table 2 GLI classification

UGL Index	Classification
0-40	Very Weak
40-50	Weak
50-60	Moderately Weak
60-70	Moderately Solid
70-80	Solid
80-100	Very Solid

Results has shown that GLI in Kuala Lumpur is a moderate solid factor (65.0) (See Figure 2) in contributing to the city's prosperity. This indicate that the GLI of Kuala Lumpur still lack behind and is insufficient to help Kuala Lumpur to become a prosperous city.

Participation is the strongest sub-dimension of the three sub-dimensions under UGL (83.7) due to the high voter turnout during the election in year 2013 (83.7%) [13]. This shows that there is a high likelihood that decisions and policy made in Kuala Lumpur will reflect the will of a large number of individual. Seeing this, governments and public institutions are more accountable for their actions and at the same time, being responsive to public interest.

Next, the land use efficiency (under Governance of Urbanization sub-dimension – 65.7) in Greater Kuala Lumpur is 1.03[14]. This shows the occurrence of urban sprawl. It reduces the capacity of city to generate economies of scale and agglomeration, thus prevent the realization of the potential that urbanization offers.

It is estimated that the tax collection of Kuala Lumpur contributed to 42.1% of its total revenue in year 2017. In a prosperous city, city tend to have a higher ability to generate its own revenue. On the other hand, the

days to start a business in Malaysia is 19 days (The World Bank). High number of days required signify that there is excessive business regulation may affect the economic performance as it increases the costs of engaging in the formal economy. These two variables have resulted in a Municipal Financing and Institutional Capacity index of 45.68, making it the weak sub-dimension of GLI.

When comparing with other cities, the GLI of Kuala Lumpur ranked number 20 out of 47 cities evaluated by the UN-Habitat in 2015 (see Figure 3). This shows that there is still plenty of room Kuala Lumpur to

improve its governance to remain competitive and sustainable. Two Austrian cities, Melbourne and Sydney scored the highest with GLI of 93.9 and 92.4 respectively. On the other hand, Quito (37.5), Sao Paulo (33.8) and Fortaleza (30.9) are the only three cities being "very weak" at their governance aspect. In terms of cities in South East Asia, all three cities being evaluated Manila (51.7), Jakarta (45.4) and Bangkok (45.2) have a GLI lower than Kuala Lumpur (GLI of other cities obtained from Monero, Murguia and Lavagna, 2015).
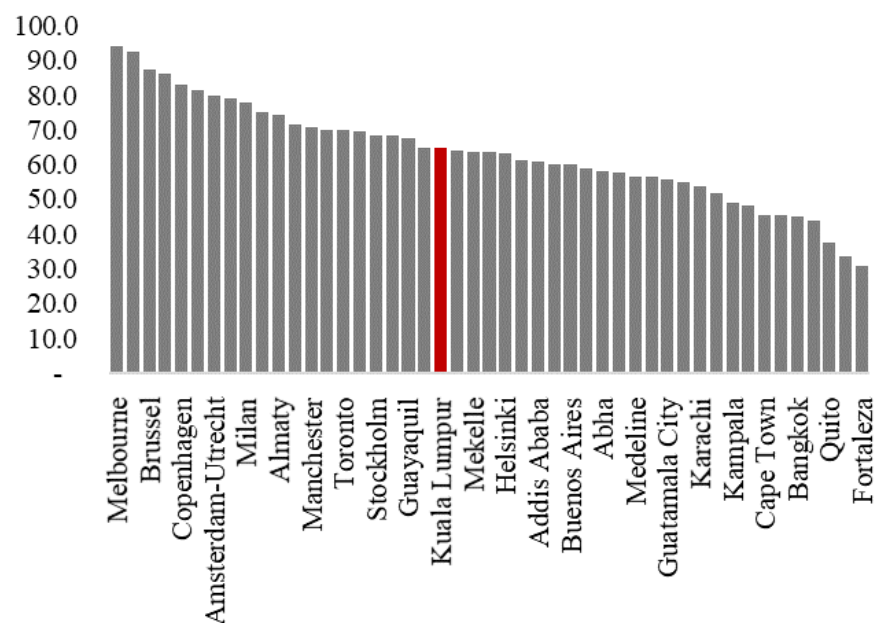
Figure 2 GLI of Kuala Lumpur as compared to selected cities

5. Conclusion

In conclusion, a perfect governance measuring indicators will never exist. Yet, the process of governance indicator production should be more transparent to minimize the ambiguously of the measurement. With this, it is hope that governance measuring indicators can better serve the needs various party that rely on the measurement to make development decisions.

Using only objective data, the GLI of Kuala Lumpur is estimated to be moderately solid at 65.0 and ranked number 20 amongst 47 selected cities worldwide. In

order to increase the competitiveness of Kuala Lumpur, all three sub-dimensions, especially the municipality financing and institutional capacity of Kuala Lumpur should be improved. This include improve the own revenue collection of DBKL as well as reducing the days needed to start a business.

Even though it has come to an understanding that objective data is good in the sense that the data produced is not bias, it is necessary to be reminded that the objective data should not be generalized to reflect the overall quality of governance. This is because there are many other governance related variables i.e. the confidence level of citizens towards the government and the control of corruption of a city which can only

be obtained via perception-based poll or surveys. Seeing this, it is recommended that the GLI measured in this paper should be use together with other subjective data to give a most complete coverage, thus, helps to draw a more holistic picture about the quality of governance of a city.

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