CHALLENGES IN THE DEVELOPMENT OF AN URBAN RANKING SYSTEM: A CRITICAL ANALYSIS

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Abstract
Urban ranking is of great importance as a technique to evaluate cities and urban management systems. It applies various indicators and criteria to assess economic and social aspects, governance characteristics, and the degree of urban development. The current city ranking systems have become a prosperous industry for private companies, academic institutions, and other relevant organizations, which experience many challenges regarding their contents and procedure. In this case, a knowledge of the corresponding strengths and weaknesses is required for having a significant level of outcomes. In this regard, the present study aims to make a critical review of the performance of urban ranking systems by interviewing experienced university professors and analyzing the qualitative data with the MAXQDA software to identify the challenges and critiques of these systems. According to the findings, the shortcomings of urban ranking can be classified in several areas including a) identifying indicators and criteria, b) data gathering, c) adopting a methodology to select cities, and d) evaluation, interpretation, analysis, and final presentation of the results. Moreover, the research shows that, through certain actions, it is possible to turn the critiques on urban ranking into advantages. This includes addressing the questions which target the best ranking indicators to choose, evaluating the method of weighing indicators to adopt the best one for analyzing and interpreting them, choosing the best method of selecting cities, and finding a reliable source of data gathering. Finally, several suggestions are made to improve the performance of urban ranking systems.
Keywords: Urban ranking, Challenges of selecting indicators, Challenges of gathering data, Challenges of evaluation, Methodological challenges.

1. INTRODUCTION

Given the population growth and urban development around the world, urban ranking has increasingly found its place as one of the crucial criteria for measuring the development of cities competitively. The central issue in this regard is the global growth of interest in rankings cities in areas of general governance

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on an urban scale and policy making on a global scale by managers and the public (Portugal, 2019; Kitchin, 2014). This is interconnected with the increased attention of the media to the major issues of "high-ranking" and "low-ranking" cities. Research has frequently shown the misleading and central power of these rankings to regulate the everyday life of neoliberal societies (Banks, 2021; Beer, 2015). Meanwhile, governments and policymakers look for new sources of investments and examine novel policies to make their cities more sustainable, productive, and attractive in terms of quality of life. However, studies on city ranking should be a starting point of analysis for policymakers, but not the end. These measurements can help policymakers raise questions and decide what issues to focus on (Veneri & Edzes, 2017; Marans, 2015; Taylor, 2011). In this regard, as noticed by Leff and Petersen (2015), the corresponding indexes have become a thriving industry for consulting firms, think tanks, chambers of commerce, universities, and the media (Ichikawa et al, 2017; Leff & Petersen, 2015). It is to be noted that comparing cities requires a common language among the media, the public, and urban specialists, which goes beyond urban studies (Acuto & Pejic, 2021; Robinson, 2010; Trubina, 2018).

Quantitative ranking indicators have highly captured the attention of managers and urban policymakers to decide how to invest time and resources based on the comparisons of major cities. Therefore, the outcome of any comparative assessment of cities can positively affect the performance of those cities or negatively affect it and bring harmful interactions and communications among the cities. Moreover, in urban management, urban ranking is considered as a driving pressure and a strong tool for benchmarking (Conger, 2015; McArthur & Robin, 2019). This can increase the "competitiveness" of cities (Giffinger et al., 2010). However, the point is that the common ranking systems are not perfect, and their application involves many challenges. Failing to improve them and focusing merely on the final result without considering the obstacles involved can bring negative consequences and wrongly place cities in high ranks, which adversely affects urban planning and governments policies (Sáez et al., 2020; Tariq et al., 2021; Giffinger et al., 2010). This is because governments take these ratings seriously. Many urban managers ask consulting firms for guidance to improve city rankings or just for to be selected in the ranking competition.

Many issues interfere with the process of ranking and comparing the cities and their conditions. A few of them are a) disregarding the cultural diversity and city development over time, b) wrong selection of criteria, c) limitation of data or misrepresentation of results due to the data fabrication by administrative centers, and d) overlooking economic, political and climatic characteristics. Ranking systems may even cause economic, political and social tensions among cities. Generally, ranking does not involve a quantitative analysis of cities to improve their scores (Kaklauskas et al., 2018; Lin et al., 2021; Giffinger & Gudrun, 2010; Laslett & Urmee, 2020; Giffinger et al., 2010; Klopp et al., 2017). Therefore, there is an urgent need for the continuous assessment and monitoring of the performance of cities to measure their

development, progress, and final goals. Due to the inadequacy of the current ranking systems, however, there is no acceptable competitive assessment of cities, nor is there any dialogue established among them to promote urban planning as it should be. So far, most of the few studies performed to implement a ranking system have been low-quality, and their measurement criteria are quite far from standard (Azami et al., 2015; Moradpour et al., 2022; Seifollahi & Faryadi, 2011; Tabibian & Rezapour, 2016; Khorrami et al., 2021).

Considering the complexity of urban issues and the diverse challenges that cities have to struggle with, it is necessary to evaluate the advantages and disadvantages of urban ranking systems. An improved recommended system is required to create dynamic competition among cities and thus motivate them to move toward progress and development (Noori et al., 2020; Arefi, 2013). Therefore, with a critical review of the research background, the present study proceeds to address the challenges of urban ranking so as to identify and eliminate the undesirable factors and present a more accurate urban ranking system on regional and global scales.

Through reviewing and identifying the impacts of urban ranking systems as well as improving the knowledge in this field, it is possible to provide corrective solutions in order to improve urban ranking procedures. Also, a critical analysis of ranking methods (Conger, 2015), their criteria (Kaklauskas et al., 2018), and the diverse cultural values (Capitanio, 2017) can help to recognize the challenges of urban ranking.

2. THEORETICAL BACKGROUND

2.1. The concept of ranking system and its significance in international communities

Urban ranking is the process of "comparing urban indicators within and across cities to recognize how well an area is performing compared to other locales" (Acuto et al., 2021; Kitchin et al., 2015). This has led to a growing set of benchmarks in the form of reports, indicators, and criteria. These indicators are very useful as cities are rarely evaluated in urban hierarchies and administrative systems; the case is even worse on a competitive global scale (Gertler et al., 2002).

However, based on different objectives and the data analysis methods in the other ranking systems, various rankings can be presented for the same cities. Generally, in line with the growing importance of monitoring urban affairs and evaluating cities, the role of urban ranking also grows continuously, and it is entangled with the benchmarks to determine the future development map of cities (Giffinger et al., 2010; Sáez et al., 2020).

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2.2. *Challenges of urban ranking and the inadequacy of methods*

Urban ranking methods are generally faced with three major challenges including a) how the boundaries are determined, b) how the cities are chosen for ranking, and c) how cultural biases are measured. This highlights a range of inadequacies in quantifying urban data (Brenner & Schmid, 2014; Conger, 2015).

Different boundaries for a city lead to the deviation of criteria, and there is a consensus that determining the political boundaries in most cities becomes less significant (Brenner, 2017). Regarding the second challenge of urban ranking, the Global Livable Cities Index (GLCI) eliminates several cities based on the data availability (Tan, 2012). The data used in urban ranking are according to the studies that have ranked cities from best-rated to worst-rated based on interrelated multi-dimensional urban indicators (Acuto et al., 2021).

The collection of urban data is done quite differently across the world (Robin & Acuto, 2018). Depending simply on data availability leads to unequal urban comparisons, as the less available data can keep some cities hidden from international monitoring (Robinson, 2006).

The lack of data at a metropolitan level is an unacceptable issue not only in the comparative literature (Stokey, 1999; Grupp & Mogi, 2004; Conger, 2015) but also in urban studies on a general scale (Robin et al., 2018). As frequently discussed, due to the lack of data for specific indicators on an urban scale, urban ranking is often based on selective national-level data instead of the data covering all the cities of a country, as there are possible differences in their performance (Meijering et al., 2014; Leff & Peterson, 2015).

According to Power (2004), the defining characteristics of urban ranking are required to be equitable by using objective instruments, which means that the process should be independent of who is measuring, and where and when it is measured. Therefore, the data resources for measuring the development of cities determines the validity of indicators and the ranking performed (Meijering et al., 2014; Mavrič et al., 2014; Owusu-Manu et al., 2020; Rodrigues et al., 2018). So, if urban benchmark studies are performed merely based on the data obtained through different methods such as interviewing experts, filling questionnaires, and using the public databases available in national statistics offices, one may question the consistency and coherence of the data used, which affects the results obtained. In their study entitled "Lisbon Ranking for Smart Sustainable Cities in Europe", Akande et al. (2019) suggested the use of European statistics (Eurostat) to rank cities. This ensures the consistency of the data used and the repeatability of the results (Feldmann, 2008, Akande et al., 2019). In city ranking, repeating the measurement with other factors but the same method and data should present the same results. In many cases, the scores in each category are subjectively assigned (Taylor, 2011) and biased depending on

who does the ranking and for what organization it is performed (Tan, 2012; Conger, 2015; Capitanio, 2018; Ruggeri et al., 2018). This adversely affects the ranking system.

Thus, different ranking systems with various results might reveal the subjectivity of the ranking criteria and the applied methods (Greenbaum, 2020). Another challenge in ranking cities is the selection of ranking indicators and criteria. A report on the ranking of Canadian cities indicates the diversity of the major indicators of city ranking, lack of clarity in their definitions, and inconsistency in the city comparing methodology (Taylor, 2011, Giffinger et al., 2010; Nursanty & Susilowati, 2021; Grant & Chuang, 2012, Moilanen, 2015).

There are more than 500 studies conducted on city benchmark issues, covering a broad scope of international subjects from policy issues to urban geography. However, it appears that only 1% of the criteria to measure urban development is generated by city and regional advocacy groups or urban managers (Acuto et al., 2021; Goodwin et al., 2021; Mavrič & Bobek, 2015; Greene et al., 2007).

Despite some limitations in this area, the current city ranking systems, especially those measuring urban life quality, city livability and urban sustainability (McArthur & Robin, 2019), are not that much real. Generally, these measurements on a global scale are much more complicated than what the media present. So, comprehending the trends is quite necessary to predict the future of these formal comparative attempts. Moreover, to deal with urban development, certain factors are of great importance to note including the indicators of efficiency, sustainability, quality of life, urban attraction, the reliability of the methodology to measure and monitor them, the validity of indicators, the necessity of normalization for comparisons, weighing indicators, and a combination of the mentioned indicators. Due to the complexity of city ranking, the task is not free of controversy (Giffinger & Gudrun, 2010; Saez et al., 2020). Measuring the reliability of the adopted method requires benchmark rating or an index system to produce consistent results through repeating measurements (Huang, 2011). However, the problem is that the results are often presented to the public by focusing on the final urban score, and the methodological issues behind it are ignored.

According to Meijering et al. (2014), 'The efficiency of any ranking system is highly dependent on its methodology and the way it is reported' The same applies to other urban measurement and monitoring tools such as the urban rankings and criteria that ultimately work based on the application of indicators. The methodology used in each ranking or a combination of rankings is also different, which indicates the involvement of several criteria in it (Almeida, 2019). The topics raised in this section only present a part of the challenges involved in urban rating systems; the existing gaps may seriously impact the efficiency of measurements and show deviation from the reality. Some other challenges and weak points of urban rating systems are presented in the following section.

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3. RESEARCH BACKGROUND

In this section, the literature on urban ranking is reviewed, and a number of the most significant studies in this field are discussed to show the examples of selecting an approach and a research procedure. In this regard, the conducted research can be divided into three general categories as follows.

A)The first category includes studies indirectly related to the present research on the urban ranking system at the international level. They specifically address theoretical foundations of urban ranking and merely review the characteristics of cities. To avoid verbosity, this category of research is avoided here; they have been mentioned only in the theoretical foundation of the research.

B)The second group of studies includes those that address the impacts, difficulties, and challenges of rating systems, which is highly relevant to the present research. These studies focus on the weaknesses of ranking systems by adopting a critical approach and, in some cases, provide solutions to improve them. They address and analyze the available ranking systems more than the first category. Table 1 reports the specifications of the reviewed studies.

TABLE 1 -RESEARCH BACKGROUND OF CITY RANKING SYSTEMS AT THE INTERNATIONAL LEVEL

Authors	Key points	Summary of results
Taubenbock et al. (2019)	Contrast of the statistics used in urban rankings and the results to the realities of urban communities	Administrative units obscure the morphological reality; they significantly affect the statistics and the perception of city spaces.
Corrado lo Storto. (2016)		The framework proposed by the DEA is against the one presented by the economic newspaper Sole 24 Ore, which is usually assumed as a reference in Italy.
Taubenboc et al. (2021)	Ignoring the complexity of cities and overlooking the facts and realities	The statistics for the spatial spaces are deconstructive and not reliable for making political decisions without considering the complexity of reality.
Liu et al. (2021)	Evaluating major cities and ignoring smallones in the ranking system	Cities are ranked usually based on economic and social dimensions. This procedure tends to select major cities at the provincial level instead of selecting medium-sized cities at the county level.
Sáez et al. (2020)	Depending on the final results of ranking cities and paying no attention to methodological aspects	The results are often presented to the public by focusing on the final scores, but the methodological aspects behind it are not considered.
Francisco et al. (2021)	Using one-dimensional and individual indicators but not combining them	To have an accurate ranking system, they focus on a suitable methodological basis to aggregate the dimensions into one or more composite indicators.
Miebs and Kadzin (2021)	Using reliable methods in city ranking projects	Applying the available proposed algorithms for decision-making is the most attractive method for city ranking studies
Mohammadi et al (2020)		The cities are ranked with a new hybrid method based on the innovative Half-quadratic (HQ) theory.
Shi et al. (2019)	The negative impact of ranking results on cities	China's air pollution rating system does not promote the environmental behavior and only pushes cities backward.
Xinyu Wang et al. (2023)	The impact of urban ranking results in changing the economic performance of cities	Urban competition has changed the economic performance of the target city from production to service facilities.
Meijering (2014)	The direct impacts of the reporting system and the analyzing method on the ranking results	The usefulness of any ranking system is highly dependent on how its methodology is reported, as users should avoid using city ranking results with no sufficient information on the methodology and the validity of the results.

C) The third category includes the studies performed to evaluate and compare the targeted cities and covering the scope of the present research. These studies have only evaluated and ranked major cities

with no attention to the impacts and challenges of urban ranking. The reviewed studies are shown in Figure 1.

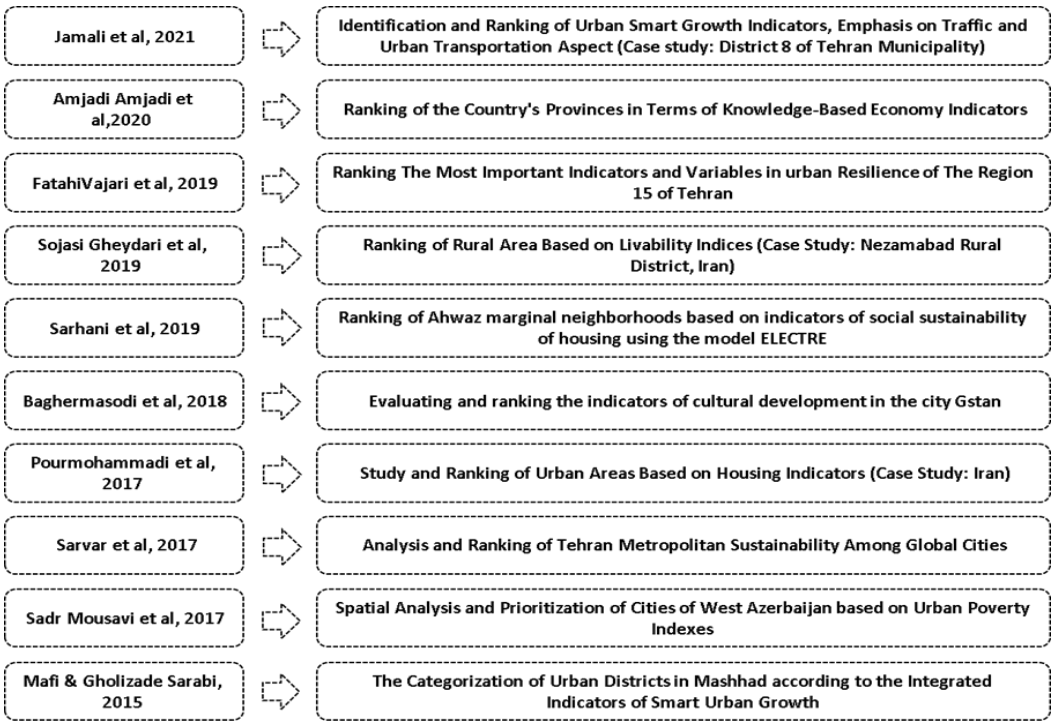

FIGURE 2 - RESEARCH BACKGROUND OF URBAN RANKING

A review of the studies reported above shows that most of them have evaluated major cities at an international level, but little attention has been paid to the challenges and impacts of urban ranking.

With a glance at the research background, one can find the biggest problems to be a) unreliable statistics, b) failure to describe the complexity of cities, c) lack of sources for ranking minor cities and second- and third-tier cities, d) focusing merely on the final results with no attention to the methodology of ranking systems, e) unreliability of the results due to the bias influenced by the beneficiaries, f) negative impacts of the ranking outcomes on the cities, g) impact of the ranking system outcomes on changing the economic performance of the cities, h) impact of reporting systems and the type of methodology on the final results, i) mere dependence on the social and economic dimensions of the cities, and j) inappropriate methodology to weigh the indicators. An analysis of the reviewed studies shows that each of them has addressed only one or a few challenges involved in urban ranking. The lack of comprehensive studies on this issue is the main reason for the inefficiency of ranking systems.

4. RESEARCH SCOPE AND METHODOLOGY

This study is an applied type of research in terms of purpose and a qualitative type in terms of data collection. It is based on the qualitative content analysis of the data obtained from interviews. The research targets the performance of conventional rating systems and specifically the impacts of indicators through

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the qualitative content analysis of the interviews by using the MAXQDA software, version 2020. The theoretical foundations and the analytical procedures derived from the literature are the basis of the analyses in this section. The MAXQDA software was selected owing to its simplified coding system and user-friendly nature in the qualitative analysis of recorded or written files. The data were elicited from open-ended interview questions marked through axial coding and selective coding. Also, the part-to-whole method was used to treat the statistical population until theoretical saturation was reached. The statistical population consisted of 52 experienced university professors who knew about the subject and the relevant urban authorities. The number of the participants was determined with the purposive sampling method. The inclusion criteria were on the knowledge of the subject gained either from academic studies, experiences in implementing relevant activities, or preparation of urban ranking reports. In this regard, the sampling was done by the qualitative snowball sampling method.

The interviews were done via Skype, each taking from 45 to 95 minutes. They were continued until theoretical saturation was reached. The saturation occurred after 25 interviews. After that, either the same interviewee was introduced, or no new data were acquired, so interviewing was stopped immediately. In the first stage, the opening questions were raised based on the theoretical foundations and the uncertainty in the researcher's mind, and the coding system was prepared immediately after the interviews. In the next step, a complementary questionnaire was prepared and provided to the interviewees. The total number of questions in the first and second stages was 18, of which six questions were related to the challenges of the proposed indicators and criteria, four were about the challenges of data gathering, four addressed the methodological challenges and the way of selecting cities, and four questions concerned the challenges in the analysis and interpretation of data.

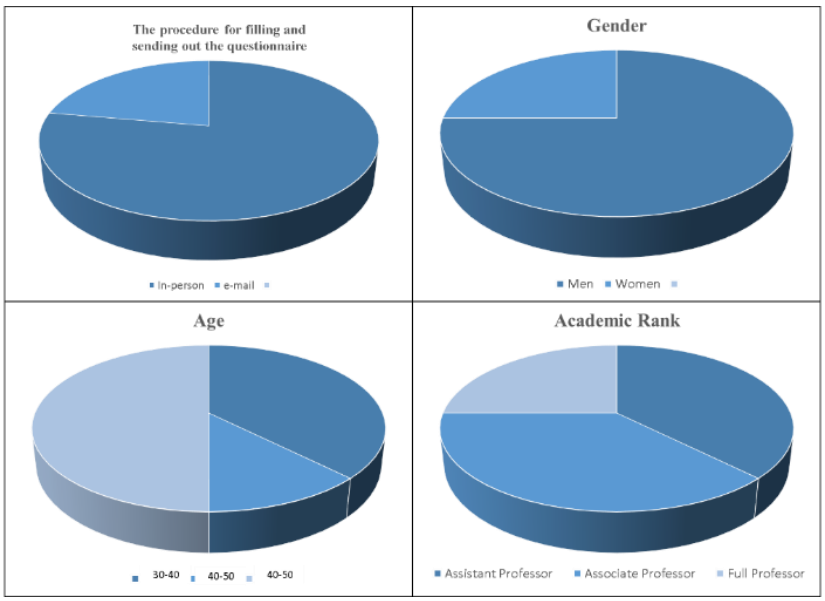

FIGURE 2- THE QUALIFICATION OF THE INTERVIEWED PARTICIPANTS

In the open coding process, there were 25 interviews (mostly with professors experienced in preparing urban ranking reports), and 195 codes were prepared by the part-to-whole method. Among them, 75 codes were for the challenges of the urban indicators and the rating criteria, 51 were for the data challenges, 36 codes for the methodology and the criteria of selecting cities, and 33 codes addressed the assessment, interpretation, analysis process, and presentation of the final results. The frequency of each code represented the significance and contribution of the corresponding factor to the critical process of evaluating the urban ranking system. The factors included age, gender, academic background, and the type of questionnaire (Figure 2).

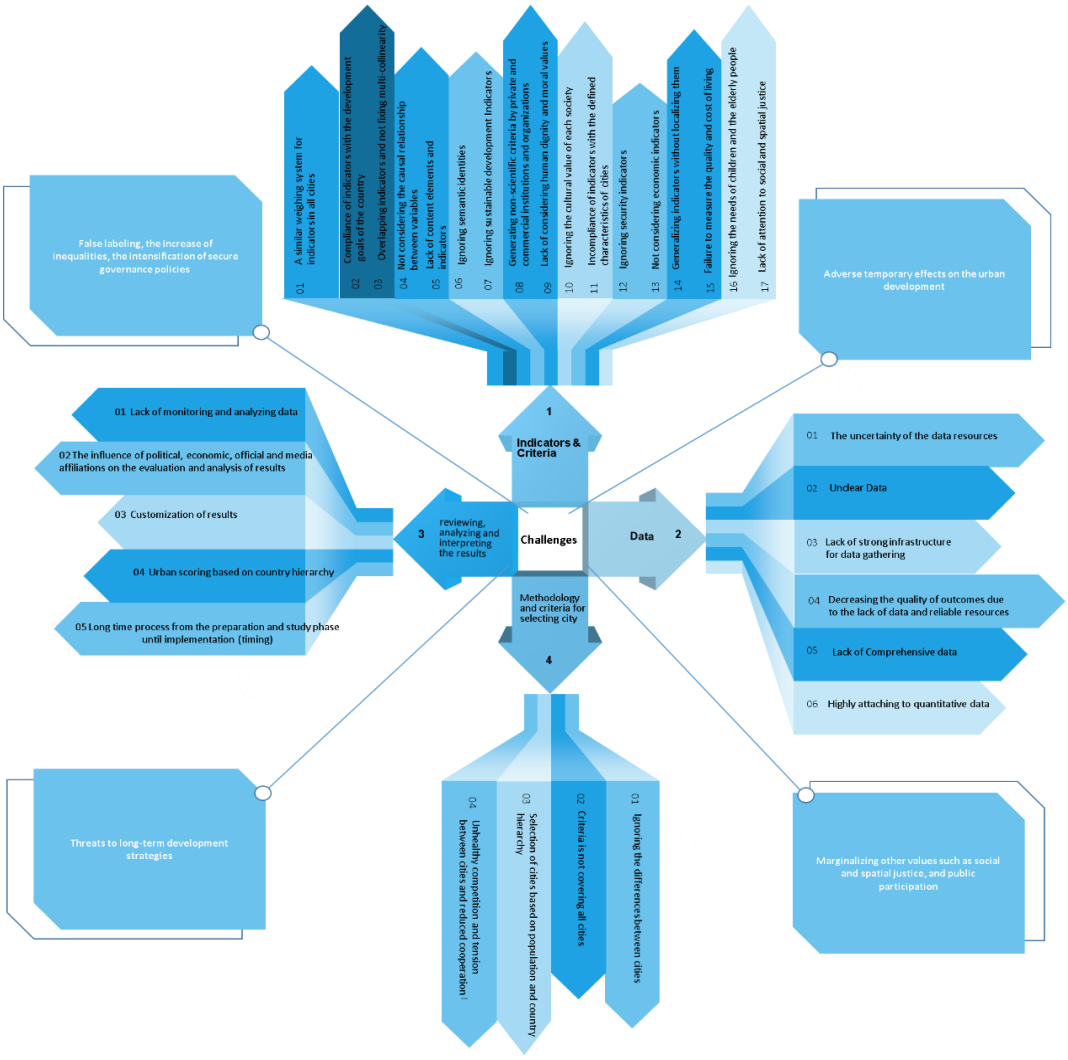

FIGURE 3- THE CHALLENGES IDENTIFIED BASED ON THE QUALITATIVE CONTENT ANALYSIS OF THE INTERVIEWS

5. RESULTS

The challenges and the impacts of the implemented urban ranking systems were classified in terms of the groups and frequency of codes. The results obtained by the interview coding system based on its

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challenges, the corresponding components, and the limitations of the urban ranking system are all shown in Figure 3.

TABLE 2 - THE NUMBER AND FREQUENCY OF THE CODES AND SUB-CODES RESULTING FROM THE ANALYSIS OF THE DATA ACQUIRED FROM THE INTERVIEWS

No.	Codes (challenges)	Sub-codes	Quantity	Code frequency	Portion amount (%)	Total amount (%)
1	The challenge of selecting indicators and criteria	The weights of similar indicators in all cities	5	6.6	2.56	38.46
		Compliance of the indicators with the development goals of the countries	4	5.3	2.05	
		Overlap of the indicators and non-fixed multi-collinearity	3	4	1.53	
		Not considering the causal relationship among the variables	4	5.30	2.05	
		Lack of content elements and indicators	4	5.30	2.05	
		Ignoring the semantic identities	5	6.60	2.56	
		Ignoring the sustainable development indicators	5	6.60	2.56	
		Generating non-scientific criteria by private and commercial institutions and organizations	6	8.00	3.07	
		Lack of consideration for human dignity and moral values	5	6.60	2.56	
		Ignoring the cultural values of each society	6	8.00	3.07	
		Non-compliance of the indicators with the defined characteristics of cities	5	6.60	2.56	
		Ignoring the security indicators	5	5.30	2.05	
		Not considering the economic indicators	5	6.60	2.56	
		Generalizing the indicators without localizing them	5	6.60	2.56	
		Failure to measure the quality and cost of living (security, economic housing, and efficiency of the financial and commercial services	3	4	1.53	
		Ignoring the needs of children and elderly people	2	2.60	1.02	
		Lack of attention to social and spatial justice	4	5.30	2.05	
2	The challenge of the data	The uncertainty of the data resources	9	16.90	4.61	27.17
		Unclear data	8	15.09	4.10	
		Lack of strong infrastructure for data gathering	9	16.90	4.61	
		Decreasing the quality of outcomes due to the lack of data and reliable resources	7	13.20	3.58	
		Lack of comprehensive data	12	22.60	6.15	
		Firmly attaching to quantitative data	6	11.32	3.07	
3	The challenge of methodology and criteria for selecting a city	The influence of political, economic, official, and media affiliations on the evaluation and analysis of the results	12	25.53	6.15	24.10
		Lack of monitoring and analyzing data	9	19.14	4.61	
		Long-time process from the preparation and study phase until implementation (poor scheduling)	7	14.89	3.58	
		Urban scoring based on the country hierarchy	3	6.38	1.53	
		Customization of the results	5	10.63	2.56	
4	The challenge of reviewing, analyzing, and interpreting the results	Ignoring the differences among cities	10	24.39	5.12	21.02
		Criteria not covering every city	13	31.70	6.66	
		Unhealthy competition and tension among cities and reduced cooperation	8	19.51	4.10	
		Selection of cities based on the population and country hierarchy	2	4.87	1.02	

The frequency of challenges and the impacts of urban rating systems are presented based on a coding system and using the MAXQDA software (Table 2). The most emphasis of the interviewees was on the challenges in selecting criteria and indicators with the frequency of 38.46%. The least frequency was

found for the factors of evaluating, interpreting, and analyzing the results; it was 21.02% of all the identified challenges.

The research findings based on the processing of the data obtained from the interviews and the analysis of the content were classified into four sections including a) choosing indicators and criteria, b) data gathering, c) methodology and city selection, and d) analysis, interpretation, and evaluation of the data following the edition of the results (removing the duplicate and false data) and considering the challenges raised by the interviewees.In this process, there were some results in common with other studies, which have not been deleted due to their significance and the comprehensive nature of this study

5.1. The challenge of choosing indicators and criteria

The criteria for urban ranking are generally based on the benchmarks produced by institutions, private companies and commercial organizations, which mostly use non-scientific processes to reach specific goals and political orientation in preparing urban ranking reports. In today's world, these indicators have become a prospering industry for consulting corporations, think tanks, chambers of commerce, academic centers, and media. These indicators are usually in contrast to real data due to their specific intentions and deviations regarding certain aspects of cities so as to deliberately increase their rank. They are usually not prepared based on the development goals of countries and have little compliance with sustainable development and macro, regional and local goals of those countries. Most of the indicators in a number of studies are applied with no consideration for the local characteristics of each city; those indicators are generalized to other study plans without the differences of cities taken into account, which makes the ranking process far from real.

Every city or urban community has its specific values and culture, which requires different criteria compared to other cities. This is not presently considered in ranking systems. Ignoring the semantic identity of societies and overlooking moral values in urban ranking are other weaknesses of those reports. Ignoring the distinctions among cities has led to the implementation of the same weighing system for all cities. The overlooking of economic indicators in comparing cities and trivializing the differences are two other flaws in the common urban ranking systems, which can downgrade the efficiency of business and service environments, commercial communication, and gross metropolitan product (GMP).

The satisfaction of citizens depends on factors such as quality of life, cost of living, economical housing, and ensured security, which are overlooked in ranking and comparing cities. Although security indicators are known as the key features in accommodating people in a city, they are not sufficiently dealt with when comparing cities in an urban ranking system. Despite the emphasis of international organizations on sustainable development during the last decade, the incorporation of its goals to almost all urban planning schemes on regional and international scales has had little impact on the final results of urban ranking. The social-spatial justice indicator has a great impact on the location of large and mother industries. It

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also influences urban population, activity zones, and urban growth and development, which is ignored in the urban ranking processes in use. The indicators and criteria currently used in urban rating systems to compare cities are problematic because they largely overlap one another and the causal relationship among the variables is not taken into consideration. Indeed, all the components of a system, namely the input, output and outcome are treated at the same level.

5.2. The challenge of data

One of the main obstacles in studying urban ranking is the lack of data for measuring indicators, which is a more serious problem in small cities. Thus, a challenge in comparing cities based on certain criteria is the lack of relevant data.

The lack of formidable data on urban infrastructures in cities and megacities has made analysts remove some criteria and moderate the list of indicators for the comparative studies of cities by removing them from the evaluation process. With the growth of urban ranking systems and the awareness of the significance of evaluation processes, especially for local governments, and considering their impacts on urban branding, some administrative and private institutions falsify the data to change the ranks and conceal the urban challenges. These challenges are kept hidden from the public due to the lack of substantial data and database infrastructures in major cities. This is mainly why these urban ranking reports as considered as unreliable sources for comparing cities and doing final evaluation. In most of such urban reports, the data validity is under question. Also, due to the lack of clear data and the difficult access to the whole information, it would be almost impossible to measure the accuracy of data and present it to the public.

Considering that an urban ranking system is measured only to influence the public perception and make a commercial brand, it becomes important for private, governmental or local institutions to overshadow the facts and falsifying the data. With their dependence on biases, individuals and institutions tend to falsify the data in evaluation processes, which makes it difficult to detect the truth. So, the type of the data gathered and their application strongly depend on the purpose of city ranking. The data in the process of urban city ranking are divided into two major categories, quantitative and Qualitative. One of the reasons for reporting false results in urban ranking is focusing more on quantitative data, while qualitative data are also required to evaluate some urban indicators. Therefore, in order to have an accurate assessment, it is necessary to avoid insisting too much on quantitative data. Both quantitative and qualitative data should, indeed, be included in the process of urban ranking and the analysis of the corresponding indicators.

5.3. The challenge of methodology and selecting cities for urban ranking

The third challenge of urban ranking systems is the methodology adopted to select cities for the process of urban ranking and scoring. Certainly, a wide geographical scope with certain goals is needed before

the process is performed. However, due to the lack of resources to cover all the cities within that geographical area, some small cities are excluded from the evaluation process. Selecting cities for urban ranking is one of the main challenges in this procedure, which is because no standard criteria exist for comparing cities.

It should be noted that every city has differences from other cities, either nearby or far, due to its specific demographic, geographical, climatic, cultural, and economic characteristics. However, to rank cities, these differences are usually not included in the scoring; the measurements are usually performed regardless of these inherent factors and their impacts on the ranking process. Ignoring the differences among individual cities and simply considering them as separate groups can alter the final ranking results which, in turn, cause tension and unhealthy competition among those cities. This undermines the cooperation and finally the interactions among cities. The lack of specified criteria for selecting and ranking cities has made many urban ranking studies mostly focus on factors such as "population size" and "territorial ranking" as criteria for choosing cities, which cannot always be a suitable approach.

Another issue in selecting cities to place in the process of urban ranking is the lack of attention to smaller and less populated cities, which is due to the excessive importance given to the size of population as a criterion for comparison and the lack of data on cities with smaller size. Thus, city ranking systems have been assigned only to some major cities with high populations in the territorial hierarchy; those systems are not applicable to second or third-tier cities. This brings one to the conclusion that the efficiency of a city ranking system depends on its ability to cover almost every city and to compare and evaluate cities while respecting their distinctions.

Another serious problem of urban ranking systems is the major attention that the public pay to the final ranking results, regardless of the evaluation methodology, which plays a very important role in obtaining accurate ranking results. This role is not adequately addressed in most studies, nor are most urban ranking methodologies clearly explained. Moreover, the position and the contribution of the evaluated cities have not been of concern in most projects, considering that the cities selected for comparison are not at the same level. Beyond this, the common methods used in different urban ranking systems are not clear enough due to their inaccurate methodology and bias, as they are usually adopted to allocate specific ranks to cities.

5.4. The challenge of evaluation and the analysis of the results

Another significant challenge in the field of urban ranking is the evaluation, analysis and interpretation of data to present the final results. Almost all complex ranking systems follow a common list which shows their attachment to a general approach. Since there is no access to detailed results and interpretations,

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they simply draw the public attention to the final ranks rather than reporting the strengths and weaknesses of the cities.

This is usually because the ultimate goal of city ranking is mainly to introduce attractive high-ranking cities without considering their different conditions and distinctions. Some studies present even more different results as they show intentional bias due to their organizational and political affiliations, which influence the reports written for various demands and ordered production. Considering that the results of urban ranking reports can direct investors toward a specific place for investment, they are very important for policymakers and city managers. The lack of accurately evaluated, interpreted and analyzed indicators and criteria for ranking cities together with political and organizational factors affects the final results.

Therefore, the performance of an urban ranking system and its results should not be considered independent of the person or place of assessment. Without regulating and controlling measures, this kind of urban planning cannot be monitored and evaluated. Another weakness of the common urban ranking and scoring systems is their focus merely on the territorial hierarchy without weighing the urban development and sustainability criteria. Generally, in the evaluation and ranking process, cities are not classified based on their level of development, while they should be clustered based on a set of variables with a separate rating system for each class. Rank assessment merely based on a national urban hierarchy leads to the unreal recognition of the advantages and disadvantages of cities, which consequently misleads policymakers and city managers in their next urban planning; they usually make decisions based on urban ranking results. The analysis of these results does not apply to the cities that expect to improve their urban scores and pursue urban growth and development.

Accurate analysis and interpretation can turn urban ranking systems into applicable tools to identify the reasons for the underdevelopment of cities. Another shortcoming of urban ranking systems is their lack of specified timing. Determining a set of criteria and indicators to evaluate and analyze urban development and implementing urban plans make the time-consuming side of this process. This makes rather unreal urban ranking systems inconsistent with up-to-date development indicators. Considering the long process from evaluating cities to making a final report, the urban characteristics of the target cities usually change over time. Since urban conditions constantly change, it is not feasible to perform urban ranking in a long process.

6. CONCLUSIONS

Urban ranking indicators are known as a tool for measuring the level of urban management in cities. In recent years, these indicators have been the main focus of urban managers and planners. However, they have some deficiencies that make them an imperfect tool for representing real urban conditions, whether on a city scale or a land scale.

Since an urban ranking system is required for urban development and future planning, it is considered as a part of an information policy whose impacts are very important to study. The system can represent and describe the current conditions and characteristics of cities in an urban hierarchy from the perspective of an external observer. Moreover, it can visualize potential urban landscape, affect urban policy-making and improve urban governance. Despite the positive and proceeding functions of urban ranking systems, which serve to redefine and clarify the boundaries of urban reality as well as determine and evaluate the urban development and the position of cities, one cannot ignore their potential undesirable consequences.

A critical review of the performance and content of ranking systems reveals their adverse temporary effects on urban development, false labeling, increase of inequalities, intensification of secure governance policies, and marginalization of cultural values such as social justice, spatial justice and public participation. The conventional ranking system tends to ignore complicated interactions while strengthening the existing typecasts, which may threaten long-term urban development strategies.

The weaknesses of urban ranking systems can be turned into strengths if responses are provided to the questions 'which indicators should be chosen?', 'what are the criteria for measuring and weighing those indicators?', 'how to analyze and interpret the data?', 'what method is used to select cities?', and 'what are the reliable resources?'

Moreover, a vivid urban ranking process based on gathering data and planning for implementation can build trust and increase public confidence. This study has provided valuable insights into urban ranking systems by critically reviewing their weaknesses, limitations, and challenges in measurements from the viewpoints of process (procedural dimension) and content (substantive dimension). It has been found that urban ranking systems can be improved through reconsidering their main goals and missions, critically examining the public benefit concept in urban ranking policies, analyzing the potential threats such as creating a nonconstructive competitive environment, evaluating factors disturbing the urban vision, considering the ambiguities in common indicators, reviewing the ways of publishing and presenting the results, moderating, authenticating and improving the reliability of the applied methodology and the ranking systems, and considering multiple methodologies to improve the weaknesses or minimize the shortcomings and challenges of the conventional urban ranking system. As a suggestion for further research in this field, reliable indicators may be selected and localized so as to minimize their adverse impacts.

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