

The critical factors for the competitiveness of cities

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Abstract

Cities have the ability to provide the conditions for efficient development of companies and to foster quality of life for the people who live and work in that environment.

Territorial competitiveness has traditionally been studied at a country scale perspective whilst it has an extraordinary capacity of implementation at the city scale.

This paper goes in depth to determine and explain the critical factors that have an impact on cities to become more competitive; analyzes how appropriate is to measure the competitiveness of cities on the basis of competitiveness indicators; concludes that quantitative indicators do not consider relevant qualitative aspects, so it becomes relevant to discover the complexity of the interrelations of the factors of competitiveness in specific cases to identify the critical factors of the competitiveness of cities.

Keywords: urban century, competitiveness of cities, benchmarking, city index, city profile, urban indicators, city ranking.

1 Urban century

The urbanization process we are experiencing today is unprecedented, in 1950, approximately 30% of the world population lived in cities. In 2000, the percentage of urban population was already 50%. According to certain forecasts, by 2025 approximately 70% of the world population will be urban. Over the next 25 years, nearly 2 million people will be born or live in cities. This process is an extraordinary social and economic challenge, and also a clear business opportunity of global dimension. As recognized by the theme of the Expo Shanghai 2010

“Better City, Better Life”, the quality of life on earth depends on our ability to improve our cities. In the international academic community, there is a growing interest in methods of measuring the competitiveness of cities, given the incidence of the cities in the economic development of countries.

There is a big debate about how to define competitiveness; this word has motivated countless debates. Competitiveness is a concept that has been in economic and business circles since the 80s. As indicated by Budd and Hirmis [1], the definition of competitiveness suggests different meanings to different authors.

Two of the most relevant authors in this field are Krugman [2] and Porter [3]. Krugman believes that the competitiveness of companies only depends on microeconomic factors. On the other side of the debate we find Michael Porter, who believes that the socio-economic environment and the territory, where the companies are located, have a fundamental impact on the competitiveness of different firms.

Around Krugman’s position we can find visions with different nuances from the economic point of view such as those provided by Siggel [4], Laos [5], and Graham [6].

Following Porter’s point of view, it is very interesting the position of authors such as Turok [7], Begg [8], Sobrino [9], and Camagni [10] who truly believe that competitiveness is not only about microeconomic factors but also the territory and the city offer special conditions to improve the performance of companies.

Therefore, following these latter authors, it seems clear that local stakeholders such as entrepreneurial leaders, local government, and even, civic society organizations have a key influence on competitiveness.

According to “The Economist Intelligent Unit” [11], cities nowadays generate more than 80% of global GDP. Even more, multinational firms are beginning to plan their locational strategies considering the singularity of the cities, the quality of life and the business ecosystem rather than only the country characteristics. This observation is totally aligned with the latest “Competitiveness of Cities report 2014” by World Economic Forum [12], and particularly their conclusions on how cities of the world are able to create competitive advantages. Therefore, cities clearly open a new framework for the study of competitiveness.

In recent years, the competition and cooperation between cities has received attention in academic writing. Today there is a growing consensus that Nation States are not really the only relevant operational and economic units in the new economy, but the cities and their regional environments are the key players of the global economy. Cities compete with each other in many different fields, it is for this reason that tools such benchmarking and “Index of Competitiveness” are becoming more relevant.

There is no doubt that firms compete today, not only locally, but also globally due to the availability of information, increasing market transparency and progressive elimination of barriers to international trade. As we could observe in Glaeser’s book “Triumph of the city” [13], cities play a major role in today’s economy and could be considered civilization’s best invention.

The key issue in connecting cities and competitiveness is if the mayors and city leaders can do something to improve the competitiveness of businesses in their towns or regions, or if in fact, these territories are competitive because of the companies that have settled there.

Cities are the *commanding hubs of a globalizing world* and city rankings are becoming a relevant tool used by cities and policy makers to better understand the singularities, the urban profile and their position in the world of cities. We see a strong controversy in economic circles about the very concept of competitiveness and about the key factors of urban competitiveness. Benchmarking studies are becoming more relevant and more popular when designing urban policies today. Regarding this debate, Florida [14] introduces the concept of the creative class, and how cities that are able to attract talent tend to be more prosperous.

Cities are diverse in nature, with its own idiosyncrasy and singularities. It is not appropriate to apply “one size fits all” approach to face urban challenges. As highlighted in different publications referred in this article, each city has a “unique combination of size, investment capacity and institutional framework”.

Cities, and particularly major cities, are expanding their influence in their regions and globally. Cities of today are becoming the main centres of political power, concentration of talents, hubs of education, research, arts and culture as stated by Moonen and Clark [15].

As this urban century evolves, the essential requirements of city competitiveness, those of growth, skills, enterprise and trade have now been coupled with the need for sustainability, resilience, and livability; transparency and governance; innovation, culture, distinctiveness, and adaptability, amongst then many more qualities that we demand of the city in order to shelter, entertain, inspire and encourage us. It is especially relevant in this new century of cities the need for physical and virtual connectivity. Cities do not live in isolation; they compete and cooperate with other cities. In this context, city benchmarking and learning from best practices are becoming more relevant in a globalized world.

2 City rankings

In spite of the relevance of cities in this new century, Urban Science concepts and methodologies are still going through a major evolution. It is important to highlight that many of the great challenges that cities are facing do not have a major framework of study and it is difficult to measure and compare initiatives and performance in different cities.

“City Indexes” are becoming very useful for benchmarking cities and to understand how they behave in relation with other cities. Indicators and Indexes can help to measure the level of competitiveness of a city or a city region. Measuring certain key urban indicators, and providing relevant comparisons through benchmarking analysis, allows stakeholders of the city to make appropriate decision to achieving specific objectives. Even though these city studies of ranking are very refined and robust, the methodologies are still evolving and need to be improved.



It is important to highlight that the origin of the benchmarking studies in the field of cities is quite diffuse. According to our research, Places Rated Almanac in 1981 [16] and UBS Survey Price and Earning Survey [17] in 1970 could be considered the some of the initial works of ratings and indexing cities.

First of all, before analyzing different rankings, it is important to define and clarify what exactly is the general accepted meaning for city indexes methodology. A very concise approximation for this concept is provided by the Cities Research Centre and its publication “The business of cities” 2015 [15].

According to JLL Business of cities, a city index, “is a tool that measures performance over time” this city indexes help city managers to understand the performance of its own city in relation with other cities according to various indicators in a precise moment of time.

Benchmarking is the concept used to compare the performance of different cities. According to JLL Business of cities, benchmarking could be defined as a “standard by which cities are measured or judged”. This technique is a useful tool to approach the study of factors of competitiveness. Cities could learn from other cities and benefit each other. Cities can discover through benchmarking how they can compete and cooperate with other cities and look for integrated strategies and solutions to achieve its own objectives.

Finally, according also to JLL “The business of cities, is possible to define city rating “as the use of a point scale to assess city performance”.

In this paper we analyse several City Indexes that are considered relevant when studying and comparing the competitiveness of global cities: PwC Cities of Opportunities, Mori Foundation Global Power City Index, IESE Cities in Motion and Instituto Mexicano de la Competitividad. These four institutions work in cities from different perspectives and in different geographical regions and can help us to have a more holistic approach of city ranking and discovering key factors of competitiveness of cities.

The selection of city indicators and the weighting to these indicators for measuring the level of competitiveness of cities differ widely for the different research institution we are analysing.

3 Research organization measuring urban competitiveness

Price Waterhouse Coopers has been elaborating *Cities of Opportunities* [18–20] ranking from 2007 classifying cities according to its social and economic vitality.

Cities of Opportunities’ last report of 2015 selects 30 cities, all relevant capitals of finance, commerce and culture: Paris, London, San Francisco, Stockholm, Toronto, New York, Los Angeles, Sydney, Chicago, Tokyo, Berlin, Seoul, Hong Kong, Singapore, Madrid, Shanghai, Milan, Moscow, Dubai, Beijing, Mexico City, Kuala Lumpur, Buenos Aires, Johannesburg, Istanbul, Sao Paulo, Rio Janeiro, Mumbai, Jakarta, Nairobi.

This report presents 56 indicators in 10 categories: Intellectual capital innovation, Technological readiness, City gateway, Transportation infrastructure, Health/safety/security, Sustainability and natural environment, Demographics/livability, Economic clout, Ease of doing business and Cost of living. It is

important to highlight the importance of having a series of reports to understand the evolution of performance of different cities in different categories.

The categories and the indicators adopted by PwC has changed during the years, the methodology applied in this ranking allows the researcher of PwC to establish a ranking in each category according to the performance of each city. Finally PwC integrate the different categories to obtain a final score that could be considered as a real integrated ranking of competitiveness.

This methodology of getting a final score, as an integrated result, run the risk of losing nuances of the profile of different cities. It is also difficult to ponder the relative importance of different indicators in a coherent way. Other singularity we observe when analysing this ranking “Cities of Opportunity” is that is a backward looking approach, taking variables and past records from cities. On the contrary, other ranking such as Economic Intelligent Unit or Fdi Global Cites of the Future [21] are emphasising how cities would look like in 2025.

This ranking only analyses cities in isolation as independent entities although cities belong to metropolitan areas, to urban systems and to specific ecosystems of innovation. It is risky to get conclusions from a city analysis without considering its complex context and PwC do not define indicators related to this important component of the profile of cities. Finally, it is difficult getting the appropriate data from city to city when working at international level in different continents and in cities with different level of economic development and heterogeneous statistic information.

The study of PwC emphasises economic performance, and not so much governance. Key international experiences of urban transformation happen because the quality of leadership, that is the case of Bilbao from 1983, in this respect, to better understand the importance of government in the new economy we recommend reading Goldsmith and Crawford [22]. Cities leading this ranking of PwC are: London, New York, Singapore, Toronto and San Francisco. In general, cities with strong financial position in the global economy and cities that are multicultural and successful in attracting creative people.

Mori Foundation Global Power City Index (GPCI) [23–29] is a powerful tool used by governments and city managers to measure the magnetism of cities. The first edition of this index was published in 2008 analysing 30 cities. Today this City Index consider 40 cities: Madrid, Barcelona, London, Paris, Brussels, Amsterdam, Geneva, Frankfurt, Berlin, Zurich, Milano, Copenhagen, Vienna, Stockholm, Istanbul, Moscow, Cairo, Mumbai, Bangkok, Kuala Lumpur, Singapore, Hong Kong, Beijing, Shanghai, Taipei, Seoul, Fukuoka, Osaka, Tokyo, Sydney, Vancouver, San Francisco, Los Angeles, Chicago, Toronto, Washington DC, New York, Boston, Mexico City and Sao Paulo. A balanced combination of cities from the east and cities from the west.

Cities are selected from the top ten of influential ranking such as Global Financial Centres Index [30], Global Cities Index from Kearney [31] and Cities of Opportunity from PwC, etc. The GPCI is composed of 70 indicators divided in 6 categories: Economy, Research and Development, Cultural Interaction, Livability, Environment and Accessibility. This city index is designed to know the comprehensive power of cities and city magnetism using a very sophisticated



approach by which the index is trying to gauge not only tangible economic quantitative metrics but also qualitative metrics.

Some of this indicators are measured by questionnaires to experts and residents such as: Ease of securing human resources, Readiness for accepting foreign researchers, Environment of creative activities, Opportunities for cultural, historical and traditional information, Attractiveness of shopping options, Attractiveness of dining options, Level of satisfaction of employees, Variety of retail shops, Variety of restaurants, Punctuality and Coverage of public transportation, Commuting convenience, etc. Globally, there are 59 quantitative indicators plus 11 qualitative indicators measured from questionnaires. The Mori Foundation Index highlights the cities of London, New York, Paris, Tokyo, Singapore, with strong financial systems, but also Berlin, Amsterdam and Vienna are in the Top 10 of the ranking due to the importance given by GPCI to Liveability and Environment. In fact, quality of life and environment have a strong weight in the overall structure of this Index if we compare with indexes such as PwC where finance indicators appear heavily ponder and therefore financial hubs type of cities appear top of the list of competitiveness.

GPCI is a backward looking analysis tool with the most recent data available for each city. Its main singularity is the effort in measuring the qualitative components on the Index, and particularly, the cultural interaction, liveability and environment.

Governance is becoming more and more important for the development of cities and competitiveness therefore, it seems that although GPCI is a very robust index, would be interesting in next editions integrate indicators on quality of leadership as is analysed un the report Magnet Cities from KPMG [32]. It is also key to consider the structure of governance to understand the power and the degree of independence of city mayors when taking and implementing decisions. We see very different structures in cities like London or Tokyo, or even, in Singapore as a “City State”.

Centre of Globalization and Strategy of IESE (Cities in Motion) [33, 34]. This Index provide a very solid understanding of the way city operate to promote economic development and to improve competitiveness. The prestigious report the Business of Cities by JLL from 2015 considers “Cities in Motion” as the best city index in the world in the areas of planning, strategy and innovation capacity of cities.

This Index integrates different indicators in 10 categories: Human capital, Social cohesion, Economy, Public management, Governance, Mobility and transportation, Environment, Urban planning, Technology and International outreach. This ranking has been operating since 2008. Cities in Motion 2015 studies 72 indicators in 148 cities from Africa, Latin America, Asia, Western Europe, Oriental Europe, North America, Oceania and Middle East. in the last edition integrates 13 new cities such as Canton (China), Bombay, Calcutta, Delhi, A Coruña, Bilbao, Malaga, Breslavia (Poland), Boston, Phoenix, Miami, Washington DC, and Jerusalem.

This Index in the 2015 edition improve the quality of data and incorporate new qualitative indicators to measure certain categories such as Urban Planning and



Governance. The cities that received the highest scores are London, New York, Seoul, Paris and Amsterdam. Cities with strong economic performance, and also strong international connectivity, efficient transport systems and solid technological capacity.

Cities in Motion have been done since 2008, and allows city managers to understand the evolution of cities over time, and its performance in relation with other cities in different geographical and economic contexts. It also provides a sophisticated methodology to measure the difference between Reputation and Reality in cities with opinions from 22000 citizens around the world.

Cities in Motion try to obtain a synthetic Index by using DP2 statistic technique, different weighting have been given to several categories of indicators: Economy received the highest weight followed by Environment, Social Cohesion, International Outreach, Governance and Mobility, Public Management and Urban Planning.

Cities in Motion provides a clear vision of the profile of different cities with a powerful benchmarking reference to help city leaders in making decisions and establishing priorities. More emphasis in analysing the context of different cities would be needed to better understand the strengths and opportunities of cities in relation with the ecosystem in which the city is integrated.

The *Instituto Mexicano de Competitividad*, (IMCO) [35, 36] is an independent institution financed by the private sector that is doing an extraordinary contribution to understand the singularities and the profile of cities in Mexico. Its Index studies 379 municipalities integrated in 78 metropolitan areas. They consider 90 indicators for each of the metropolitan area classified in 10 categories.

The categories considered for this study are the following: “*Sistema de derecho confiable y objetivo, manejo sustentable del medio ambiente, sociedad incluyente preparada y sana, sistema político estable y funcional, gobiernos eficientes y eficaces, Mercado laboral, economía estable, precursores, aprovechamiento de las relaciones internacionales, innovación en sectores económicos*”.

IMCO defines competitiveness as the maximization of productivity and wellbeing of the habitants. One of the singularities of this methodology is the importance given to public sector and its relationship with the private sector. This Index also pays special attention to measuring the capacity of Mexican metropolitan areas for the attraction of companies and individuals.

IMCO do not use questionnaires or interviews. They collect the information and data for their indicators from credible institutions that publish regularly their report. The IMCO Index provides a clear view of functional cities in a metropolitan scale. The advantage of working only in one country is that the data a statistic information is very homogeneous and comparisons are easier. Top cities in the ranking of INCO Index are: “*Valle de México, Los Cabos, Querétaro, Monterrey and Cancún*”. We can see the importance given to critical mass, economic and demographic dynamism, international connectivity, location, natural qualities of the territory and the importance of nurturing local talent with solid universities as in the case of Valle de México Region.

IMCO is in a permanent process of refining its methodology to get the most precise approach to the concept and measurement of competitiveness of



metropolitan areas. It is expected new modifications and adjustments in the next report. One of the uniqueness of the approach of IMCO is that after the elaboration of ranking of cities in different categories, based on indicators and indexes, a series of recommendations are provided for cities to improve its degree of competitiveness.

Selecting cities just from a single country have great advantages because the standardization of data. At the same time, all the cities belong to a territory with the same political and administrative structure. Metropolitan scale of thinking is also unique and INCO, with its research, is in a good position to recommend specific policies to cities to improve competitiveness and economic development.

4 Conclusion

Cities, as could be derived from this paper, play a very important role in our urban and metropolitan century. Cities are the main engines of the global economy. Today's economic competition and cooperation is not only about countries but also about cities. Consequently, it becomes relevant to study the economic competitiveness at the new scale of cities. This paper contributes to discovering critical factors of competitiveness of cities. We reviewed the research of some of the most relevant institution working in measuring the competitiveness of cities through indicators: PwC *Cities of Opportunities*, Mori Foundation *Global Power City Index*. IESE. *Cities in Motion* and *Instituto Mexicano de Competitividad*

Cities, and relevant institutions working in cities, are trying to identify the uniqueness and the profile of different cities. The methodology of city index provide an approach to understand the key factors of urban competitiveness. Cities can learn from each other and benchmarking cities is a relevant tool to improve the capacity of cities to promote urban development in a coherent way. Even though it is evident that further refinement is required, this study shed light in the analysis of four sophisticated indexes elaborated by institutions working at the city and metropolitan level. Quantitative indicators and qualitative references are needed to offer an integrated view of city profile and opportunities of future transformation.

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