Looking at the Center of the Bogotá City*

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Resumen
El crecimiento de las ciudades implica una extensión del espacio metropolitano. Nuevos subcentros aparecen para garantizar la provisión de bienes y servicios en todo el espacio metropolitano sin desplazamientos de la población a diario. Sin embargo, este tipo de desarrollo bien podría reforzar la hegemonía del centro de la ciudad principal o dar lugar a su decadencia. Cuando un centro fuerte existe y es conservado, es fácil organizar una red eficiente de transporte público que garantice el contacto entre todas las clases sociales y evite la segregación de ciertas minorías o grupos de menores ingresos. Este trabajo analiza el caso específico de Bogotá, la principal ciudad de Colombia. Los datos muestran una disminución importante del centro de Bogotá, junto con el desarrollo de nuevos centros periféricos del área metropolitana.

Palabras clave
Centralidad, crecimiento urbano, desarrollo sostenible.

Abstract
The growth of cities implies an extension of the metropolitan space. New sub-centers appear which guarantee the provision of goods and services throughout the metropolitan space without daily population displacements. However, this type of development could either reinforce the hegemony of the main city centre or lead to its decline. When a strong centre exists, and it is maintained, is easy to organize an efficient network of public transport which guarantees contact among all the social classes and avoids the segregation of certain minorities or lower income groups. This paper analyses the specific case of the main Colombian city, Bogotá. The data show an important decline of

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the centre of Bogotá coupled with the development of new peripheral centers of the metropolitan area.

**Key words**
Centrality, urban development, sustainable growth

**J.E.L Classification:** O18, R11 y R12.

**Introduction**
The city has been always ideal context for social and economic progress. All the time, in every culture we can observe strong urbanization of societies. This process, the consequence of development, in the same time is the condition for maintain and boost the development of economies. Contrary to what is generally thought about the city and its development, it is not harmful for natural environment. It’s enough to imagine the consequences that populations of the big metropolises of the planet would cause if they disseminate by adopting the rural lifestyle. The environmental impact would be incalculable; the problem of environment is not caused by cities, but by the growth of the population in the world. The best solution is the urbanization process of this growth of people. The city is also ideal place of coexistence and development of tolerant and cosmopolitan societies. Far away from generating marginalization or exclusionary conducts, the city habitants, especially from the big cities, tend to integrate faster the social and culture differences. Moreover they easily assimilate to them.

When the countries develop, the cities grow. The measure is strengthened as we witness a growth of urban territory. In some cases this growth produces the consolidated and strong center. In other cases this center is getting weaker. It’s inevitable that development of the cities brings also the appearance of new sub-centers in the suburbs, giving basis for polynuclears models. However, we can also attend the compact development with the certain hierarchy of central places (Christaller, 1935), in which peak remains the principle center. The other option is that it can cause dismemberment of the metropolis with polynuclear structure and without strong connections with different peripheral suburbs.

The report – *Ciudades Europeas Sostenibles* (Sustainable European Cities) concerning *Medio Ambiente Urbano* (Urban Environment, 1996), prepared by the Experts Group, points out the importance of construction of compact cities with high population density. While they are grounded in a polynuclear model, they achieve to be strongly integrated with each other. Thus it gives the possibility to introduce efficient and sustainable public means of transport. Although this is not a unanimous option. Many of the urban economics experts advocate the relevance of presence of clear centrality in the city. It enables to integrate and to compact the metropolitan area, thereby facilitating the movements and relationships in the growing
Why the strong center is relevant in sustainable and balanced growth of the cities? The presence of the *strong center* in physical terms means the place where the people can realize the majority of their activities, from making shopping till recreation and cultural events. Realizing these activities is connected with the minimum effort of displacement. The persons are given to choose the best option for them between different places. Therefore what has the main impact on their decisions is the demand of living in the place where they can realize all of their needs (e.g. shopping, carrying out formalities, culture or leisure). It gives them benefits of saving time and money. Consequently the companies or institutions compete to be situated in this central place. In this way the center becomes the point with maximum value what facilitates the interactions [Leo and Philipe (1998) and Mc-Dowell (1997)]. It is said that the central place is located in the space which attracts the greatest number of people who look for goods and services at different levels, which makes it the contact point of the entire city. It's a common place for coexistence and interaction of different social, ethnical and religious classes. It gives the feeling of community and group membership.

Moreover, the expansion of the city is setting metropolitan area of huge extension and therefore it becomes difficult to link. Because of this, there is the need of using means of transport. If this expansion occurs with the consolidated center, it will be easier to provide public transport system. As the consequence, there will be less private vehicles as the main means of transport. It will result in reducing noticeably some typical problems of the large cities: traffic congestion, atmospheric and acoustic contamination, as well as the high opportunity costs, arising from lost time spent in the congestions [Garreau (1991) and Stanback (1991)]. The radial structure leads to the city with the principle center located at the height of sub-centers, which will appear as growing metropolitan area. In this model is easy to implement cost-effective and efficient infrastructures and means of transport (commuter trains, metro or buses networks). The profitability ensures the quality of services, what changes the way how the public transport is considered to be. The public transport will not be recognized anymore as a means of transport just reserved for less affluent social classes. It will be for every person, thus strengthening the contact between social and ethical classes living together in the big city.

The big metropolises tend to be leaders in growth and innovation in their regional or national environments. The size of big metropolis is what gives them the leadership role and drives economic growth, social progress and innovation (cultural, scientific and
technological). It is possible thanks to strong externalities arising from agglomeration with large population that lives and interacts in a city [Henderson (1988), Catin (1994), Giersch (1995), Prudhomme (1997), Capello (1998), among others]. The centers play also the important role in the dynamic generation of progressive growth. If they can be strong and attractive, they will succeed in creating a range of activities and diversified services. This diversity will give flexibility to the companies situated in this central place. The central location can give them opportunity to fulfill all of their various necessities, hardly without moving the place beyond the central place. The center, through the ability to attract the activities, its size and position become an element of economic development (Coffey and Polèse, 1998).

A lot of European cities create good example of strong center models, around which the city is organizing its structure and growth. There are created new residential areas, more or less dense, around large business centers that concentrate most of the employees of the city from different districts of the periphery. There are other sub-centers which play an essential function in covering a wide range of needs of established population. This population comes from the districts or cities in the metropolitan area, but all of them are connected around the main center. This structure is an efficient system of radial communication. It is easily developed through the whole population, because of the need of connection in a common point – the principle center of the city. In this sense we treat the center as extended area, in which are generated intern processes of spatial specialization.

However, it may not be generalized to all of the North American cities. Some of the metropolises in the United States have developed various patterns of development. There were different factors that have boosted the certain decline of the center. Thus, the city demands the complex crossed communication system, without common meeting point. There are two reasons that can lead to decline of the center. On the one hand, the functions of the city can be pressured to move when the center becomes expensive. On the other hand, these activities can abandon the center, because of the fact that it is no longer desirable place in the city. In the various cities in the United States there have been taken several political decisions and socio-cultural habits which in many cases increasingly favored the decline of center. These actions included for example: the intensive use of cars versus public means of transport boosted by low prices of petrol, the implementation of free cost highways or car parks, constructing the intra-urban highways, the extensive use of land that is very often subsidized by politicians, which generates large and hardly communicable cities, the decline of quality and efficiency.
of the public transport system, as well as the administrative and fiscal decentralization of the cities, which results in creating authentic ghettos and zones of complete decline.¹

Latin America is experiencing a big urban growth, possessing an area that develops quickly, but with some disorder in some cases. The proper urban structure planning of the main metropolises is crucial to ensure a sustainable future of these urban spaces. A particular case in Latin America is Mexico City. The Mexican capital city starts to be an empty center, where there is scarce presence of dynamic activities (e.g. consulting offices, high specialized shops and recreational activities. The majority of them are located outside of the city center (Pérez and Polèse, 1999). However, what is more serious for this important place is the abandonment of the center by the part of habitants from all social classes. It is caused by economical, social and risk reasons implicated by living in the damaged buildings (after earthquake in 1985). This generates the process of moving away to other residential areas, remaining the economically disadvantaged social groups.

The objective of this paper will be the study of particular case of the capital city of Colombia: Bogotá. As we will see this city is facing complex challenges. The center seems to show signs of decline and starts producing a disconnection between the neighborhoods of the periphery with a certain forsaking of southern areas of the city.

After this introduction, the second section of this work describes the characteristics of this great metropolis. The next section shows the methodology of study, where we apply the method conducted by Polèse and Chapain (2003). Thus following the results we conduct analysis of the possible factors that explain the declining of the center of Bogotá. Finally, we present some conclusions.

The general information about the city of Bogotá in the urban context.

Bogotá is located in the center of Colombia, on the eastern plateau of the Andes, 2,600 meters above the sea level with an average annual temperature of 14 Celsius degrees. It is the part of the Cundinamarca region which is the administrative and political capital of Colombia.

The city and its nearby metropolitan environment is divided into 20 localities (see Map 1) headed by a mayor called Menor, who hierarchically receives economic, social, political and infrastructure directives from the Alcaldía Mayor del Distrito Capital (Big City Hall of Capital District), under the direction of its Mayor and the boss of the capital.

¹ For a comprehensive review of the literature about this subject see chapter II of Pérez and Pujol (2003) realized by Polèse and Chapain (2003).
The administrative defined urban area is urbanized only in 21%, according to data of the Secretaría Distrital de Planeación (2007) (District Planning Secretariat). The distribution of the urban area is as follows: 32% residential, 16% undeveloped urban land, 16% equipment, 12% industrial and commercial activities, 8% roads and public space, 5% reserves of environmental protection and the rest (11%) is used for multi-purposes.

From the settlement (1538) Bogotá was extending its physical range, giving the special functional equipment required to accommodate a growing population. Nevertheless, there was not efficient character of urban planning. The modern urban industry, the characteristics of modern population and city start in the twentieth century, although during the early decades its population was predominantly rural. During 1950s Bogotá begins to expand the boundaries of their territory, incorporating nearby towns from the north, west and south of the city. The criteria of this process were based on natural parameters and they resulted from necessary condition to improve and to expand public service infrastructure (e.g. the water supply network, sewerage and transport through those cities). As the result there was generated a linear prolongation of the city, providing places for trade of goods that met the specialized demands of property for this social class.

The location process of population in the north part of the city and development of this area resulted in important prolongation of the historical center (in terms of road infrastructure and the commerce). From the decade of the 1970s, this attractive place allows the investors to realize projects of creating the most important commercial centers, like Unicentro. Moreover it is ideal place to establish housing constructions, which have big economic impact. By this time the population had increased considerably, being more urban than rural.

The form of population settlement in the capital shows a process of socio-spatial segregation. Generally, people with lower income live in the south and in the peripheries of the city, the industrial sector is located in the west, the institutional activities, commerce and services are in the central area, while the higher income population lives in the north-east part. This distribution is in large part obedient to the form of the process of migration not only in the city but in every part of the highlands (departments of Cundinamarca and Boyacá).

This context implies that in the north of the capital and in the department arise

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2 This aspect has been treated in the several studies. For example, Alcaldía Mayor of Bogotá – Departamento Administrativo Catastro 2006 (Administrative Department of Cadastre).

3 The economic and urban impact of Unicentro in the greatest expansion of the city toward the north end has been the subject of researchers. See it, for example in Borrero (2005).
housing projects of high-income people that are looking for a better quality of life. The people with lower income (but not necessarily low) migrate toward the western edge of the capital in order to take advantage of transport routes favored by the arterial road of the valley of Rio Magdalena (the most important river axis in Colombia) and to find a diverse industrial development. Though, the low-income population immigrates to the south of Bogotá, to find a place to live and work.\footnote{The more details of these migratory flows can be found in a document prepared by the Mesa de Planificación Regional Bogotá-Cundinamarca (2003) (Group of analysis and planning for Bogotá and Cundinamarca).}

In 2005, the year of the last population census conducted by DANE (the National Administrative Department of Statistics), the total population of the capital district of Bogotá amounts to 6,840,116 people, with 99% of them located mainly in urban areas (6,824,510) and equivalently 21.4% of the total population of Colombia.

The primacy of Bogotá, in the current context within the country, can be observed through the size of population...
as well as through the participation in the output and employment generation in Colombia. Generally, in terms of the evolution of the population, from the second half of the twentieth century this city has gained the population in comparison with other important regions in the country. According to the mass population, Bogotá represents high potential of output and employment. Bogotá with Antioquia and Valle generate 50% of GDP and 40% of the employment in Colombia (to see Table 1).

**Methodology**

The methodology utilized to analyze the weakness of the metropolitan center of Bogotá is simple and it can be adapted to scarce information that exists for the city according to this aspect. We apply an index executed by Polèse and Chapain (2003). These authors propose the calculation of the centrality index (Ci), which is the ratio between the office rental rent paid per square meter in the center of the city and the office rental rate in suburban locations in the city. It is calculated as follows:

\[
Ci = \frac{R_i}{R_{periphery}}
\]

Where:
- \(Ci\) = the centrality index for the city
- \(R_i\) = office rental rate ($ per sq. meter) in the center of the city
- \(R_{periphery}\) = office rental rate ($ per sq. meter) in the suburban locations in the city

The key to the application of such analysis is to define the concept of income from which is calculated the ratio of centrality. Alonso (1964) de-

### Table 1. The percentage participation of major Colombian regions in the total GDP and employment 2005

<table>
<thead>
<tr>
<th>Region</th>
<th>GDP</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bogotá</td>
<td>23,30</td>
<td>17,67</td>
</tr>
<tr>
<td>Antioquia</td>
<td>15,40</td>
<td>12,26</td>
</tr>
<tr>
<td>Valle</td>
<td>11,30</td>
<td>11,04</td>
</tr>
</tbody>
</table>

Source: DANE.

5. Antioquia, is a department located in the central northwestern part of Colombia with the capital city in Medellín (the second important city in the country); Valle is a department localized in the pacific coast, with the most important commercial port in Colombia (Buenaventura) and with the capital city in Cali (the third important city in the country).
fines income as the price that a trader is willing to pay for occupying a given space. This is an indicator of the additional benefit that the space can generate. Therefore it is the average price paid per square meter of office in the market at a given date. The data lower than the unit, would indicate a clear decline in the center while those that deviate significantly above the unit would inform about higher remains of superior value of the center.

Unfortunately, the scope of the purpose of this research has been limited by the availability of data. This is a problem for any variable-indicator that would be used to characterize in details the city of Bogotá. So, for the concept of centrality and for the best approach to it, there were used the data registered in the Report of the Office, generated by Colliers International Company (2004 - 2006).

The advantage of this information is the possibility of organizing it according to the structure of localities. In this way it enables to consolidate the figures for the central and peripheral areas. Nevertheless, the studies are not systematic in time, there are data for December 2004, June 2006 and the last available date is June 2008.

The information obtained by this international real-estate firm is based on the monitoring of sales representatives, defined as sub-markets of analysis, which consider potential and strategic areas, where customers rent or buy office space. It is stressed that these real-estate representatives are always the same. They are associated with shopping centers (Santa Bárbara and Andino in the north and Salitre in the west), main avenues (72nd street which is a prolongation of the center to the north and 100th street in the end of the north of Bogotá) and the focal urban points (Chicó and Nogal districts in the north of the city and the International Center, the area of business and administration activities, located in the historical center).

The supply and demand variables analyzed in these reports are: the number of buildings classified according to the criteria of quality of buildings and services, inventory of office space in square meters, the minimum prices, the maximum and average value of income and sales (in Colombian pesos per square meter) and the absorption (the change of the number of square meters of occupied space, in a given period of time).

**Results and comments**

The urban space of Bogotá of 20 localities or Alcaldías Menores (Minor City Halls) (see Map 1) is divided in five areas:

a) The historical center that includes the following localities: Puente Aranda, Los Mártires, Santa Fe, Antonio Nariño and La Candelaria.

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6. In spite of the fact that this company realizes studies for various cities, there is just a few about Bogotá.
It has 3.636 hectares of urban area and 610.881 inhabitants with density of 168 persons per hectar.

b) The north-center, situated close to the historical center composed of Teusaquillo, Chapinero and Barrios Unidos localities with an area of 3.798 hectares and population of 425.668 inhabitants with density of 112 persons per hectar.

c) The north zone compounded of Usaquén. It has area of 3.087 hectares, the population of 449.621 inhabitants and density of 146 habitants per hectar.

d) The western extension, which includes Fontibón, Engativá and Suba. It has the population of 1.874.034 persons and density of 172 persons per hectare.

e) The south zone, which has area of 13.459 hectares, 3.435.098 inhabitants and density of 254 persons per hectare. All localities not mentioned before, are the part of this zone.

We will identify the center of Bogotá with the localities that make up the historical center, although it’s quite clear that the natural extension is toward the north center of the town. The north part of the center is a large growing area situated away from the historical center. A typical attractive space for the recreation is in the sub-center. Something similar occurs in the western extension, which is far away from the center and it is urban periphery in the direction of northwest of the city. It is an area of strong development, because of the main roads of Colombia that cross this place, as well as the presence of metropolitan airport here. Finally, the south zone is an area of strong growth, but with many neighborhoods with low purchasing power.

There has been calculated the centrality index of Polèse and Champain (2003), based on the division mentioned above and the income values in particular areas elaborated by Colliers International. The obtained results are shown in the Table 2.

According to the centrality index, Bogotá reflects a loss of relative importance of the historical center, since the average indicator for the particular years is clearly below the unit.

A big part of the loss of value of the historical center is due to the development of its natural extensions, especially the north center. This is the part of the city that reaches higher

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**Table 2. The centrality index for Bogotá (2004, 2006 and 2007)*.**

<table>
<thead>
<tr>
<th>Areas</th>
<th>Average</th>
<th>2004 (Dec)</th>
<th>2006 (Jun)</th>
<th>2007 (Mar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical center</td>
<td>0.47</td>
<td>0.54</td>
<td>0.37</td>
<td>0.48</td>
</tr>
<tr>
<td>North center</td>
<td>1.02</td>
<td>0.91</td>
<td>1.10</td>
<td>1.05</td>
</tr>
<tr>
<td>Western extension</td>
<td>0.99</td>
<td>0.99</td>
<td>1.02</td>
<td>0.96</td>
</tr>
</tbody>
</table>

*The index measures the relation between the average prices for each sub-area of the center and the north of the city. Source: Author’s elaboration based on Colliers International data (Report of Offices, several newsletters).
indices, although slightly higher than unit, including the lower in 2004. Something similar happens with the western extension, though is weaker than in the north center.

Nevertheless, this conclusion should be restrained because of the fact that the subzone of the north center it is a clear prolongation of the historical center. Taking it into consideration, we will obtain the centrality index for both of these zones with not so low value. In spite of this, the weakness of the center in the case of Bogotá is still true when you include the north extension of the center.

According to economic structure, we can say that the historical center of Bogotá generates diversified employment in manufacture industry (29%), commerce (18%), financial intermediation (15%) and business services (15%). The north center is quite specialized in the employment in business services (35%) and agriculture production (23%). In the western extension there is employment in transport and communication (33%) and in the manufacture industry (23%). The employment in the commerce sector (23%), business services (17%), as well as in hotels and restaurants (13%) can be found in the north of the city. The south zone of the city, with micro-enterprises generates employment in the manufacture industry (44%), in the commerce (24%) and in the transport (14%). The distribution of business employment in every area of the city points out that the tertiary activities are concentrated in the northern parts of the capital, especially in the north center (to see Table 3).

One of the aspects that make the analysis of Bogotá case especially interesting is that this city has become one of the leaders of Latin America in urban management. Some of the

<table>
<thead>
<tr>
<th>Areas</th>
<th>Percentage of the companies</th>
<th>Percentage of Business Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical center</td>
<td>21,63</td>
<td>19,28</td>
</tr>
<tr>
<td>North center</td>
<td>24,28</td>
<td>45,63</td>
</tr>
<tr>
<td>Western extension</td>
<td>25,21</td>
<td>22,06</td>
</tr>
<tr>
<td>North</td>
<td>9,94</td>
<td>7,57</td>
</tr>
<tr>
<td>South</td>
<td>18,95</td>
<td>5,46</td>
</tr>
<tr>
<td>Total</td>
<td>100,00</td>
<td>100,00</td>
</tr>
</tbody>
</table>

Source: According to the data of the DANE and the Cámara de Comercio de Bogotá, 2003-2004 (Chamber of Commerce).

7 The business services include e.g.: publicity, IT or marketing.
8 The micro-enterprises employ from 1 to 10 employees at maximum. However, in the case of the south area of Bogotá, these micro-enterprises are one-person companies where the activities are developed in the same house.
actions of recuperation of its heritage and impulse of modern solutions of public transport can be observed with the high interest by other cities from its environment. Therefore, what is happening that we are attending the intensive weakness of center of the city? We review the principle public politics that are realized in Bogotá, in order to look for the best answer to the problems of the Colombian capital city.

a. The administrative structure of the localities of Bogotá.

The establishment of management models with wide organizational independence, including financing the zones with administrative divided metropolis has negative impact on the city. Generally this creates poverty pockets, segregation of population based on income levels, insecurity in many neighborhoods and other problems. Do these aspects explain also some parts of weakness of Bogotá? Answering this question requires analyzing how has been built the administrative structure in the capital city.

As it was already mentioned in the second section of this work Bogotá has been organized in Alcaldía Mayor (The Big City Hall), the principle organ of the metropolis government, and in twenty small Alcaldías Menores (The Minor City Halls), which have impact on locations that have been divided administratively.

One locality is the politic, administrative and territorial division of the municipal, with clear competences, criteria for financing and application of the resources. The Constitution from 1991 (last Constitution) defined the regulatory structure of the 20 localities in Bogotá. This division provides to the localities the administrative and fiscal autonomy in managing of the affairs of the correspond territory.

Every locality operates under the administrative criteria of decentralization and community participation in diagnosing problems, designing strategies and defining the local development plan, under the authority of the Alcalde Mayor (Big Major), the Junta Administradora Local (The Local Governing Board - public corporation that represents the population of a locality and is elected in the general election) and the respective Alcalde Local (the Local Major appointed by the Major, according to a panel provided by each locality).  

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9 Nevertheless, the process of community participation and management for the definition of frameworks of action of each locality has been slow. The population and its representatives had to be educated about the way of thinking and about technical elements. Only from mid-century of XXI century, there are some positive results regarding this issue. Therefore, the pursuit of results is expensive (Alcaldía Mayor de Bogotá – Departamento Administrativo de Planeación, 2004).

10 The Alcalde Mayor is elected from the current legislature (2008) for a period of 4 years; the mayors of the Juntas Administradoras (the Administrative Boards) began with a period of 4 years since 2004. The election of the Alcalde Mayor is done by popular vote since the mid-80s and the period of initial government was established for 2 years.
Local plays a leading role in establishing the guidelines of government in each locality. They contribute to the process of definition, approval, adoption, implementation and oversight of the Plan of Desarrollo Local (The Local Development Plan).

The Plan of Desarrollo Local is a document with the orientation for development of every location, before being approved by the Alcalde Mayor of Bogotá. A local plan has three essential components. The first one is the base structure of the Plan of Desarrollo of Bogotá city, which indicates the objectives and general politics. The second one is social, economic, cultural and environmental diagnosis. The last component is the plan of investments, which points out the necessary resources (available and reachable).

In any of the Alcaldía Mayor legislations a Plan of Desarrollo Local is approved with the base on its own population request, which must have diagnosed their basic needs. However, there is a priority for social projects and especially those with high-impact (they cover several areas of the town and its population).

Starting from the Plan of Desarrollo it has assigned budget. These resources come from three sources: the city’s central administration, decentralized entities (public establishments, industrial enterprises and the state trading) and from the Fondo of Desarrollo Local (Local Development Fund).

The investment or direct social spending of the Administración Central (the Central Administration) is carried out with resources from property taxes (root property), from industry and trade (economic activities). The Fondo of Desarrollo Local is the most important source of resources for each locality, as it is practically in its own heritage; There is a fund for each locality, which is fed with three kinds of income: transferences made by the Administración Central, which is equivalent of 90% of the received income, current income (own resources generated from de fines, rents and other non-tax revenues) and capital resources (donations, sale of assets, etc.)

It is highlighted that the resources of Fondos de Desarrollo Local have grown significantly: about 600% in real terms between 1993 and 2007. Anyway, this scheme does not represent a significant decentralization, as the Unidades Ejecutivas (the Executive Units) of the localities, the head of the district authorities, are responsible for the contracting the Fondo de Desarrollo Local.

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11 They are public establishments, e.g. the education, health, life and development funds. Among the industrial and commercial enterprises are: the Lotería (the Lottery) and the Terminal de Transporte (The Transport Terminal).
12 According to the Decree 1421 from 1993, 10% of current revenues of the Administración Municipal (the Central Municipal Administration) will be resources of transferences allocated for localities.
13 The calculation based on the information reported by the Alcaldía Mayor of Bogotá (2007).
Although each municipal administration has its own special objectives and investment programs, generally there are identified following areas: public administration, finance, economic development, industry and tourism, health, culture, recreation and sport, mobility (transport system), government, security and coexistence, planning, education, social integration, environment and habitat. In the last decade, according to the Alcaldía Mayor of Bogotá (2007), 73% of the investment has been made by four entities: Secretaría de Educación (Secretariat of Education), Secretaría de Salud (Secretariat of Health), Instituto de Desarrollo Urbano-IDU (Urban Development Institute) and Empresa de Acueducto and Alcantarillado (Water and Sewerage Company).

In terms of budget execution, it is interesting to contrast the priority of localities that not necessarily coincide with the importance given by the Alcaldía Mayor. A study realized by the Alcaldía Mayor – Departamento Administrativo de Planeación (2004), based on the sample of ten locations (Usaquén, in the north; San Cristóbal, Bosa, Kennedy, Rafael Uribe and Ciudad Bolívar in the south; Fontibón, Suba and Engativá in the western extension of the center, and Puente Aranda, in the historical center) reveals that in the Plan de Desarrollo del Distrito Capital 2001-2004 (the Development Plan of Capital District) the largest proportion of budget was given for the purpose of productivity (36%), for education (27%) and for social justice (19%). In the added value of this sample, the order of priorities and their weights are different: 39% social justice, 16% productivity, 13% public management and 12% education.

Consequently, we can assume that the administrative structure is not essentially responsible for the weakness of the capital’s center. The system ensures a redistribution of resources from richer areas to poorer and guarantees proper financing of services and infrastructures in the whole metropolis. However, everything is based on the assumption that all Alcaldías Menores have identical managerial capacity and clear identification of priorities. Nevertheless this assumption might be wrong, as it can be known intuitively from the analysis of efficiency of expenses. Taking into consideration the significant decline of the center of Bogotá, it seems more appropriate to use more centralized model, in which are set out more detailed guidelines about the use of local funds.

b. The urban system of public transport.

When a community is making greater use of private transport to the detriment of public one, it’s very complex to gain access to the urban centers. They occupy the oldest parts in the city, with paths less prepared for the mass use of cars, with fewer parking areas and with less congestion. This situation may favor the imposition of the sub-centers that are better prepared for the use of car.
The city of Bogotá, in the extensive structure, requires the wider use of means of transport. The system of public transport in Bogotá\textsuperscript{14} is formed of three principle means: collective public transport (buses, small buses and collective ones), mass public transport - Transmilenio (combining articulated buses that operate on dedicated bus roads and smaller buses that operate in residential areas, bringing passengers to the main grid) and the individual public transport (taxis). The distribution of the vehicle fleet and the number of motorized passengers are shown in the Table 4.

Although the indicators related with the distribution of vehicle fleet and passengers in Bogotá reflect the big number of the collective public transport system, the productivity (the average number of transported passengers in relation to the daily average of used vehicles) indicates that monthly mobility of people in mass public transport is higher: 34.662 against 18.500 in collective public transport, according to the data of DANE. The mass public system of articulated buses,\textsuperscript{15} which connects the city from south to north, has been established and started functioning since 2000. It was a key for the transport of Bogotá and the mobilization of its population (mainly from medium and low income social groups). On average, according to the figures released by the Secretaría Distrital de Planeación,

<table>
<thead>
<tr>
<th>Transport class</th>
<th>Monthly average of vehicles</th>
<th>Number of transported people (miles)</th>
<th>Daily average of passengers (miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collective public transport system</td>
<td>18.339</td>
<td>274.969</td>
<td>3.055</td>
</tr>
<tr>
<td>Mass public system (***)</td>
<td>1.367</td>
<td>91.090</td>
<td>1.156</td>
</tr>
<tr>
<td>Individual public system (***)</td>
<td>48.700</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

\textsuperscript{(*)} The data for the transport classes of public transport are from the fourth quarter of 2006 and the data for the public individual transport are from March 2008.

\textsuperscript{(***)} In use 1.225 (91\% of total).

\textsuperscript{(***)} It corresponds to the total availability of taxis, which perform 343,000 tours daily.

n/a = Data not available.

Source: DANE and Secretaría de Movilidad de Bogotá (Secretariat of Mobility in Bogotá, Traffic and Transport Secretariat until 2005).

\textsuperscript{14} In the strict sense it is called the subsystem of transport, as a part of the mobility system (the integration of population in relation with economic, social and spatial life, but beyond of displacement) and it is limited to the public transport.

\textsuperscript{15} In technical terms, Transmilenio is a structure composed of high-capacity articulated buses that operate on dedicated bus roads, which are integrated with feeder routes (feeder –small bus) covering a circular peripheral services to medium-capacity buses. There are also mixed-use lanes for particular cars, trucks and taxis. This system has bus stations with high platforms and with the automatic doors coordinated with the buses and with the satellite control system that monitors them. In order to widen the knowledge about the functioning of this transport is recommended to refer to Chaparro (2002).
the inhabitants of the city make 10% of their travels through this means of transport (excluding the higher income population, which does not use it).

Nevertheless, the use of the private cars is high and its daily use has increased during recent years. Generally, the capital inhabitants make their daily mobilization (10.5 million trips) in any means of transport (82%). 36% of them use the public transport, the particular public transport is little used (6%), while the car has 26%, but with a preferential use for residents with higher income (55% of the trips of the population from upper stratums and 39% of the trips of the population from high-income and media-income stratums).

In this way, it can be said that Bogotá during the XXI century is experiencing a transformation in the use of means of transport, with a privilege of private vehicles. The table 5 shows the annual evolution of the number of mobilized people in the public transport since it was put into operation of Transmilenio, reflecting not just a replacement from the mass collective systems. Although it’s true to say that the Transmilenio brings an increasing trend and on the contrary, the different forms of buses present decrease trend, the total demand of public system (excluding taxis) also have been reduced.

The use of means of transport and distance determine the travel time that is assumed by the inhabitants of Bogotá in their journeys. On average, Transmilenio is the fastest way to travel for those people who have to cross big distances, while the taxi or car is favorable for short distances (see Table 6). Regarding the time spent in the mobilization, this indicator has been quite stable during the decade of 2000, with the total average journey duration of 51 minutes (see Table 7).

The minutes spent on frequent travel by people in Bogotá are explained mainly by distance between the starting location and final one. Generally, more extensive distances occur because of the work location of people and concern inhabitants living in the southern localities. It has to be stressed that residents from the north also make extensive travel to get to work (probably located

<table>
<thead>
<tr>
<th>Year</th>
<th>Collective transport</th>
<th>Mass transport</th>
<th>Total public transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1.956</td>
<td>0</td>
<td>1.956</td>
</tr>
<tr>
<td>2001</td>
<td>1.681</td>
<td>119</td>
<td>1.800</td>
</tr>
<tr>
<td>2002</td>
<td>1.523</td>
<td>208</td>
<td>1.731</td>
</tr>
<tr>
<td>2003</td>
<td>1.477</td>
<td>230</td>
<td>1.707</td>
</tr>
<tr>
<td>2004</td>
<td>1.421</td>
<td>269</td>
<td>1.690</td>
</tr>
<tr>
<td>2005</td>
<td>1.358</td>
<td>300</td>
<td>1.658</td>
</tr>
<tr>
<td>2006</td>
<td>1.167</td>
<td>345</td>
<td>1.512</td>
</tr>
</tbody>
</table>

Source: DANE.
more in the center) or to go to study
(schools outside of the city or traditional
universities located in the historical
center of Bogotá) (see Table 8).

The other important indicator related
with the velocity of mobility is the
average speed of vehicular traffic
circulation, estimated as 10km/hour
in the important roads and 5km/hour
in peak hours. This result, which is
listed as unsuitable by the experts,\textsuperscript{16}
influences the level of occupancy by
private vehicles.

Ultimately all the evidences clearly
point out the increasing use of private
cars compared to other means of
public transport. The initiatives, like
Transmilenio have reduced something
in this trend but did not slow it.

Table 6. The distance, speed and average time of use of the vehicle fleet in Bogotá (2005)

<table>
<thead>
<tr>
<th>Transport class</th>
<th>Average distance of trip (Km)</th>
<th>Average speed per trip (Km)</th>
<th>Average time of trip (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public collective transport</td>
<td>11</td>
<td>15</td>
<td>58</td>
</tr>
<tr>
<td>Mass transport</td>
<td>11</td>
<td>18</td>
<td>49</td>
</tr>
<tr>
<td>Public individual transport</td>
<td>7</td>
<td>14</td>
<td>34</td>
</tr>
<tr>
<td>Private vehicles</td>
<td>9</td>
<td>13</td>
<td>42</td>
</tr>
</tbody>
</table>

Source: Secretaría Distrital de Planeación, according to DANE.

Table 7. The travel time in Bogotá, 2005 (the time used to drive to the final destination)

<table>
<thead>
<tr>
<th>Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-motorized trip (walking and transfer)</td>
<td>14,4</td>
<td>15,7</td>
<td>15,0</td>
<td>15,0</td>
<td>16,1</td>
</tr>
<tr>
<td>Motorized trip</td>
<td>35,0</td>
<td>35,3</td>
<td>32,8</td>
<td>37,6</td>
<td>36,6</td>
</tr>
<tr>
<td>Total duration of the trip</td>
<td>49,0</td>
<td>50,9</td>
<td>47,8</td>
<td>52,6</td>
<td>52,7</td>
</tr>
</tbody>
</table>

Source: Secretaría de Tránsito y Transporte de Bogotá (Traffic and Transport Secretariat).

Table 8. The average distance according to the frequent activity, 2005 (km of route)

<table>
<thead>
<tr>
<th>Areas</th>
<th>Work</th>
<th>Study</th>
<th>Shopping</th>
<th>Total average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical center</td>
<td>6,81</td>
<td>5,09</td>
<td>6,18</td>
<td>6,05</td>
</tr>
<tr>
<td>North</td>
<td>6,54</td>
<td>5,74</td>
<td>4,43</td>
<td>6,07</td>
</tr>
<tr>
<td>Western extension</td>
<td>9,69</td>
<td>7,74</td>
<td>7,33</td>
<td>8,69</td>
</tr>
<tr>
<td>North</td>
<td>9,79</td>
<td>8,80</td>
<td>5,37</td>
<td>8,76</td>
</tr>
<tr>
<td>South</td>
<td>12,30</td>
<td>8,17</td>
<td>8,91</td>
<td>10,81</td>
</tr>
</tbody>
</table>

Source: Author’s elaboration based on data from the Alcaldía Mayor de Bogotá, Documentos de la Formulación de Plan Maestro de Movilidad 2005 (Documents of Formulation of Mobility Master Plan).

\textsuperscript{16} See, for example Chaparro (2002).
c. The other factors of urban planning. The decline trend of the center never can be explained by one phenomenon. Normally, there are various elements combined together. The increased use of private cars is produced according to improved purchasing power of the capital's population. It is an explanatory factor because the sub-centers are becoming more attractive than the traditional historical center, but also gives us clues about other possible explanatory elements.

According to the reports of Colliers International, the offices located towards the north of Bogotá present some of the following characteristics: it has a maximum 20 years construction time, the height between floor and ceiling is at least 3 meters, they are always equipped with car park space for 40 square meters of the office. However the offices located more towards the historical center of Bogotá have a construction time exceeding 25 years in most cases, the car park area is for every 50 square meters or higher, office security systems and the fire control systems are the basics. All this illustrates the fact that new sub-centers present modernity and efficiency in comparison with the historical center that is less prepared.

The commercial areas always play a major role both in the social dynamization and in the increase of the value of the areas where they are located. Taking it into consideration and according to the information given by the Secretaría de Turismo of the Alcaldía Mayor of Bogotá (Tourism Secretariat of Big City Hall in Bogotá), currently the capital city has 26 commercial centers that are extended in different areas, defining the agents of trade activities and business in general. Nevertheless, their locations and dynamics are not homogeneous, but are concentrated mainly towards the north part of the city. While the south zone of the city, that is the most densely populated, has only two commercial centers. The north zone that is formed by a single district has fourteen. In turn, the historical center, the same as the western extension, has only three malls, while the northern extension of the center has four. This distribution of buildings or spaces for commercial use also presents a differentiation regarding the type of activities that take place there. In general, all of these shopping centers have areas for fast food, playgrounds and cinemas, (except for these one situated in the heart of the historical center). The most common economic activities include: banking, Internet and music shops. More specifically, in the malls situated in the south of the city are located big supermarkets, contrary to the north, which has much more specialized and exclusive shops. It may even have the art galleries, little theaters, conference rooms and luxury restaurants. Additionally, in the commercial centers situated in the north of the city there are activities connected with business consulting,
like IT, advertising, marketing, estate agents and lawyers, among others. Also in the shopping centers in the north, their customers always have parking areas.

These elements of modern and edifying business of north zone are undoubtedly adding high value to the traditional center of the city. The other elements of urban planning have just confirmed this trend.

Since 1998, the Alcaldía Mayor of Bogotá, through the Instituto de Desarrollo Urbano - IDU (Urban Development Institute) has developed the strategic plan of construction of car parks and public parking for this zone. The purpose was to meet the demand and to organize public roads. There were constructed the underground car parks in the most important places of the city (World Trade Center Building, avenues 11 and 15, streets 96 and 97). Actually, the north of the city has 1,630 underground car park places and 289 ground parking lots.

Ultimately everything points out that the policy measures taken since a decade favor the development of the north of the city. The process of revitalization of the center is not as determined as the north of the city. This has resulted in the division of the metropolis into three main areas: the south (residential and depleted), the north and west (modern, adapted to current needs and with dynamics of enrichment) and the center, which is caught between the two realities of Bogotá. It is losing the leadership that once had because of its deteriorating infrastructure and antiquity of their constructions.

Conclusions and comments

Because of the cities expansion and growth, it will be more complex to maintain an efficient management of the spaces that will occupy the metropolitan area. The major cities create the place for sub-centers in the periphery. The presence of these sub-centers ensures the efficient distribution of goods and services among the population without the need of daily commuting. Notwithstanding, some cities grow and keep consolidating the supremacy of a main center and meanwhile the others are attending a decline. The first model, with the maintenance of a strong center, provides a greater cohesion of the population of the city. It integrates the minorities and social classes in the common space of living and enables social contact. The presence of a center at the height of the central places that are developed around it, often results in a radial structure that is easier to connect by making more efficient and cost-effective means of public transport. Thus, it reduces the diseconomies of acoustic and air contamination that usually occurs in large cities.

The analysis of the experience of Latin America is especially interesting. Especially because of the fact that this zone is under economic development
that brings strong growth of major cities. Nevertheless is very difficult to meet the needs and challenges that arise in these cities that are expanding intensively. Bogotá is a good example. In recent decades there have been adopted intelligent policies that are changing Colombian capital to become a benchmark for the country and their environment in Latin America. On the other hand, despite of efforts, there are signs that evidence a decline in the center and a certain abandonment of the meridional periphery.

In this work we have concentrated our interest in this city by applying a methodology proposed by Polèse and Chapain (2003) used by these authors for several cases in the U.S. and Mexico.

The results show a clear weakness of the center of the capital of Colombia. This weakness is particularly clear referring to the historical center, but although the result is tempered by extending the center to its north and west branches, the results show that the growth of Bogotá is accompanied by a decline of the center. It has been reflected in the various elements that may have caused this situation. In the literature the decline is often explained by the administrative structure of city government, by the public transport system and by factors related to other aspects of urban planning.

The conducted analysis suggests that the weakness of the center of Bogotá is not attributable, at least not so clear, neither of the administrative structure nor of the system of public transport within the city. It is true that the management system implemented in Bogotá is not the most appropriate to reinforce the center: implementing a decentralized management model that limits the scope for redistribution and impoverishes the center. However, the system is designed in a way that there is no absolute fiscal decentralization therefore it shouldn’t be the cause of so weak center of the city. The use of the vehicles grows inexorably according to the development of the city. This deteriorates the quality and use of the public transport. Nonetheless, there have been made investments of the public transport more appropriate for the reality of the capital city, such as Transmilenio that allows the city to have an immediate means of transport, without having huge infrastructure, an efficient and cheap public transport.

So what is happening that the center of Bogotá is diminishing its role? An exploration of the policies implemented over the past decades shows that in the richest areas of the city (mainly in the north) have been developed modern and well equipped commercial and business centers. Nevertheless the center suffers from a progressive deterioration that makes it less attractive. The south has become the poor area of the city. Thus, Bogotá experiences a dangerous process of social polarization. In the north the wealth guarantees the security and
high quality of services, the south is increasingly concentrating poverty and the center has been caught in the middle of what increasingly appear around it.

References


