



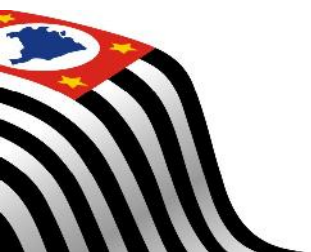
Initiative

Comparative Study on Metropolitan Governance

PRELIMINARY TEXT

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Introduction

The paradox that exists in most metropolitan regions, on account of the two facets they present, is a familiar subject to experts. On the one hand, metropolises are centres of economic dynamism that bring together population and wealth-generating economic activities, employment and productivity, as well as a broad spectrum of urban functions. So-called “economies of agglomeration” constitute opportunities that are opening up for cities and regions, which contribute towards interconnecting metropolises with other urban agglomerations, not only in the country itself but also in other nations, thereby forming an international network of functional interdependence between cities and metropolitan regions (Soja, 2000).

On the other hand, the intense urbanisation process, the heterogeneity of the territorial space and the diversity of economic statuses pose huge urban challenges, such as the growing pressure to provide basic services, the need for new and improved infrastructure, as well as the concentration of major social problems in metropolitan regions (housing shortages, high rates of poverty and environmental degradation).

Given the influence held by metropolitan regions in the socioeconomic development of countries and the importance of maintaining a competitive territory in order to attract global companies, measures aimed at overcoming the aforementioned obstacles must be implemented to ensure the survival of metropolises.

Challenges such as urban mobility, environmental sanitation, housing and quality of life, among others, extend beyond the realm of local governments and cover various legal-administrative divisions in the territory, which means that, in most cases, they must be borne by more than one municipality. To ensure effective measures and to achieve positive results for the population and companies, coordinated action is required on the part of various agents, which affords a multi-sector vision and at different stages of urbanisation, in order to find solutions.

Given this situation, the overarching goal of the [Metropolis Initiative “Comparative Study on Metropolitan Governance”](#) is to compare and discuss the different strategies developed by cities to establish both intermunicipal and supramunicipal agreements in metropolitan regions. Working together with partners that have joined the initiative, we seek to assess the different agreements on metropolitan governance in every region. To do so, special attention must be given to the institutional mechanisms, processes and agreements that underpin decision-making, in an endeavour to understand how they work in the different organisations. In particular, governance is to be approached from the point of view of financing actions of shared interest, in other words, analysing the different forms of financing, seeking good practices of metropolitan coordination. In this regard, the study of public-private relations that address the formulation, execution and funding of projects of shared interest to several municipalities is a key aspect of the work.

The issue of metropolitan governance

In most countries, municipal action addresses the planning, management and funding of joint projects in a piecemeal and limited fashion.¹ The majority of metropolitan regions do not have an established and recognised authority, with political leadership and influence, capable of coordinating metropolitan agendas and providing funding for actions.

Metropolitan institutional agreements assume diverse functions and structures in each place, according to the country's historic and political make-up. From this point of view, the pace of urbanisation and its impact on the territory's forms of political organisation can hinder joint action in the resolution of problems arising from said urbanisation. The spending power of different government structures constitutes a limiting factor for regional action and – particularly – metropolitan action in meeting needs, if the socio-economic heterogeneity of the metropolitan territory is taken into consideration in various aspects. Nonetheless, some successful experiences in EU countries that have adopted new strategies for financing urban development can be outlined – such as the establishment of structural funds –, which aim to align cities' high performance with countries' economic performance. In the United States, federal financial incentives for the transport sector call for metropolitan planning and coordination.

In the case of Brazil, the Constitution of 1988 consolidated the financial position of municipalities in the distribution of taxes. However, in return, the powers held by municipalities were increased, in accordance with the decentralisation process.² Furthermore, the decision to leave the issue of creating metropolitan regions in the hands of the states, coupled with the fact that the central government began to forge more and more direct relations with municipalities, made the issue of coordination and the financing of metropolitan actions increasingly more complex. Generally speaking, the investment capacity of municipalities is quite low, which is exacerbated considerably according to the large fiscal disparities that exist

¹ With regard to Latin America, please see Eduardo Rojas (2008).

² A range of responsibilities were transferred to subnational governments regarding the provision of services and the maintenance of infrastructure, without fostering the development of the corresponding institutional, fiscal and financial powers. Please see *Regiões metropolitanas no Brasil*, BID.

between governments that are part of the same metropolitan region.³ Often, these disparities are due to the lack of coordination of investments, which can generate conflicts with regard to the adoption of metropolitan projects.

On the other hand, given the urgent need for cooperation, the emergence of new governance structures can be noted, such as the Rede 10 (Network of 10), in the Metropolitan Region of Belo Horizonte (RMBH). The network is a collaborative governance body that covers ten cities and municipalities from the Metropolitan Region of Belo Horizonte (RMBH): Belo Horizonte, Betim, Brumadinho, Contagem, Ibirité, Nova Lima, Ribeirão das Neves, Sabará, Santa Luzia and Vespasiano. They account for 90.2% of the RMBH's population and the agreement was formalised in a protocol of mutual cooperation.⁴

Noteworthy in the EU is the new Barcelona Metropolitan Area (BMA), which in 2011 replaced the three metropolitan bodies that had existed since 1987. BMA is a cooperation model between the public administrations that has been developed over the years. It constitutes a significant step forward on how to promote policies and logics that assures the metropolitan competitiveness and well-being of the territory. However, the metropolitan action remains subject to other governments, social and economic actors agreements and balances, which seems inherent to the metropolitan phenomenon. The region does not have exclusive competence, therefore necessarily has the participation of other government agencies in determining their policies. Likewise, in the logic of metropolitan governance, the performance of BMA counts with the participation of social and economic actors of the territory as a guarantee of good public policies arrangement and its proper implementation and evaluation.⁵

The design of an appropriate institutional agreement, whether formal or informal, may be closely linked to the financing models used by

³ With regard to this matter, please see *Finanças públicas e capacidade de investimento da macrometrópole paulista*, Emplasa, 2011.

⁴ The agreement was signed in 2009 and sets forth the commitment of the participating municipalities to establish local public policies with the aim of improving regional performance and planning actions with a metropolitan focus.

⁵ For further details concerning BMA, consult Pla D'Atuació Metropolità.
<http://www.amb.cat/web/guest/pam>

metropolitan regions for the development of projects, as the viability of a coordinated action, capable of planning and managing projects of common interest hinges on the financial instruments available, among other aspects.

Therefore, identifying agreements that foster greater capacity for coordination among subnational bodies and, consequently, defining a common agenda, facilitates the financing of complex projects whose execution may exceed the political mandate period in most cases.

This is, specifically, the topic that the current project of the Metropolis Initiative on Metropolitan Governance seeks to debate: to identify the basic aspects of institutional agreements that are necessary to guarantee the effectiveness and success of metropolitan governance in financing actions that involve more than one municipality.

It is well known that there is no single solution, nor a recipe for success that can be replicated in every region. Therefore, the case study appears to be the most suitable way to analyse the feasible solutions and to formulate recommendations based on good practices.

Preliminary data analysis

To begin the analysis, partners in the initiative were asked to complete various tables with regard to territorial, population and economic aspects, as well as concerning instruments, planning and financing.

We present a preliminary analysis of the results obtained by means of data collection. The aim was to identify the information that is still insufficient and to seek ways of improving the methodology so that the data allows a valid diagnosis to be made. The tables are given in the appendix of this document.

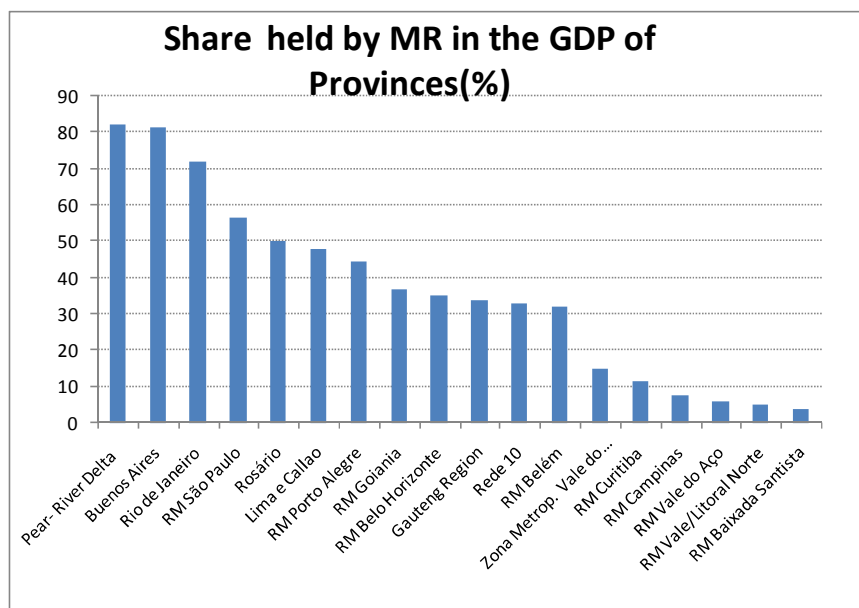
The analysis shows that all the metropolitan regions present a high rate of urbanisation, which in some cases reaches almost 100%. Population densities are quite high and there are several examples with more than 1,000 inhabitants per km². Callao (Peru) is the metropolitan region with the highest population density, almost 6,000 inhabitants per km² (see Table 1 – Territorial make-up). However, when considering the population density, there is a significant heterogeneity and scale difference between the metropolises. Despite the fact that several metropolitan regions count on a large number of municipalities integrating its territory, only a part of these cities actually composes the urban agglomeration. In the case of recently created Metropolitan Region of Vale do Paraíba e Litoral Norte (RMVPLN) (Paraiba Valley and North Coast) in the state of São Paulo, there are 39 municipalities whose densities vary from a minimum of 7.14 to 573 inhab/km² inhab/km², for the host city.

In Table 2 (Demographic features), one of the aspects that should be highlighted is the demographic importance of the metropolitan region in the context of the country and the main city (or core). It is interesting to note that the region where the greatest concentration of the country's population lies is Buenos Aires, with 37%, in sharp contrast with the regions of Baixada Santista and Vale do Aço, which barely have 0.2% of the national population. In more than half the cases, the main city concentrates more than 50% of the population of the metropolitan region. It must be asked whether the demographic importance (and, in some cases, the economic significance

also) of the main city is a factor that hinders the political balance of possible governance agreements in the metropolitan region.

As regards distribution by age, it would be interesting to explore the extent to which the percentage of population segmentation by age reveals the need to adopt specific policies and public care services. Table 2 includes some data to determine certain demographic aspects in the most appropriate manner. The geometric rate of population growth over a certain time period was included and respondents were asked to specify the year to which the data relates. In the case of the Metropolitan Region of São Paulo, the geometric rate of population growth between the years 2000 and 2010 was 0.97%, below the percentages in Brazil (1.17%) and the State of São Paulo (1.09%), which reveals a sharp drop in population growth. Nevertheless, closer analysis shows a decline in population growth in the central areas of RMSP and growth in the peripheries. It occurs that the central regions are the holders of most infrastructure services, public facilities and formal employment, while the peripheries lack of most of these services. On the other hand, there are regions where the rate remains high, reaching almost 2%, as in the case of the metropolitan area of Belém and Campinas. Although the distribution of age is not a topic of discussing during this study, it would be interesting to investigate how the population age segmentation may indicate the need for specific adoption of public policies and services cares.

Table 3 (Economic characteristics) reveals the major economic importance held by metropolitan regions. In some cases, the region's gross domestic product accounts for more than 80% of the total for the provinces or states, such as in Buenos Aires (Argentina) and in the Pearl River Delta Metropolitan Region (China).



Data on GDP per capita, though it does not constitute an accurate measure for analysing the quality of life of the metropolitan region, show that the regions that are project partners are still quite behind on the issue, in comparison with Europe and the United States, where the regions' GDP per capita exceeds 40,000 dollars per year. In the case of BMA, this indicator was estimated at € 32,700 in 2008. Furthermore, in order to improve the analysis, data on the HDI (the best indicator of human development) was presented.

Tables 4 and 5 (Industry and services) can be analysed together, to define the importance of the industry and the services in each metropolitan region. It is interesting to note that services represent the most important economic activity in metropolitan regions. In some cases, such as in Rosario (Argentina), Rio de Janeiro and Belém (Brazil), they come to account for more than 80% of the total added value and leave the remaining 20% for industry. The globalisation process largely explains said statistics, since the metropolises have turned into cores that concentrate high added value services (finance, culture, health, research and development, etc.). The effects of major changes on the economic profile must be noted, since the transfer of industry from metropolitan regions to smaller centres can generate unemployment and precarious labour relations. Similarly, the emergence of high added-value services calls for the availability of skilled labour, often in short supply in the region.

The findings presented in Table 6 (Results) are interesting. Partners were asked to indicate the main challenges and obstacles regions must face, as well as the means of resolving them and the actions that have already been undertaken. It is considered that issues such as environmental sanitation and urban mobility are among the main stumbling blocks for metropolitan regions, as well as the lack of uniformity with regard to land use and air, river and coastal pollution. Many regions have already addressed most of the obstacles in their long-term strategic plans and some of these are already being implemented.

Characteristics of the Institutional Apparatus for Metropolitan Planning and Management

Our interest in examining the institutional apparatus of each metropolitan partner region aims at understanding processes, mechanisms and institutional arrangements that are used to support decision-making to take action.

Moreover, we are interested in comparing which institutional arrangements, structures and public policy instruments are used by public and private players to go through the process of planning, raising funds and in fact succeed in implementing and managing metropolitan investments.

Most of the regions have their own institutional model of centralized planning and management. This is the case of the Metropolitan Zone of the Valley of Mexico and of all the metropolitan regions in Brazil (Belo Horizonte, São Paulo, Campinas, Santos, Paraíba Valley and North Coast, Goiânia, Belém and Curitiba).

The association among metropolitan municipalities also takes place in the cases of Buenos Aires and Rosario and other forms of institutionalization are found in the Metropolitan Area of Barcelona and in the Network 10 (*Rede 10*).

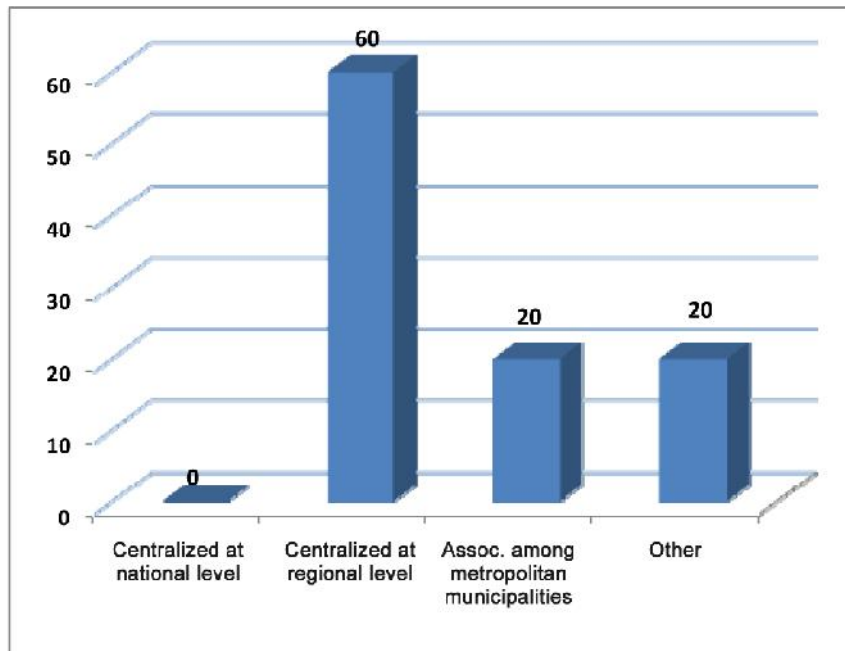
The Buenos Aires Metropolitan Region - BAMR has no political and administrative central structure and can be described as a regional marketplace made up by the territory of the Autonomous City of Buenos Aires plus 40 other suburban municipalities. It is a Metropolitan Forum on Urbanism where local city governments cooperate technically.

In the case of Rosario, the model is a voluntary association, that is, municipalities and communes voluntarily adhere to a common agreement which is formally acknowledged by the respective local legislatures.

In the case of the BMA, the format adopted consists in a supra-municipal local entity of territorial character regulated by the same rules valid for the provinces and local governments in the country. As regards

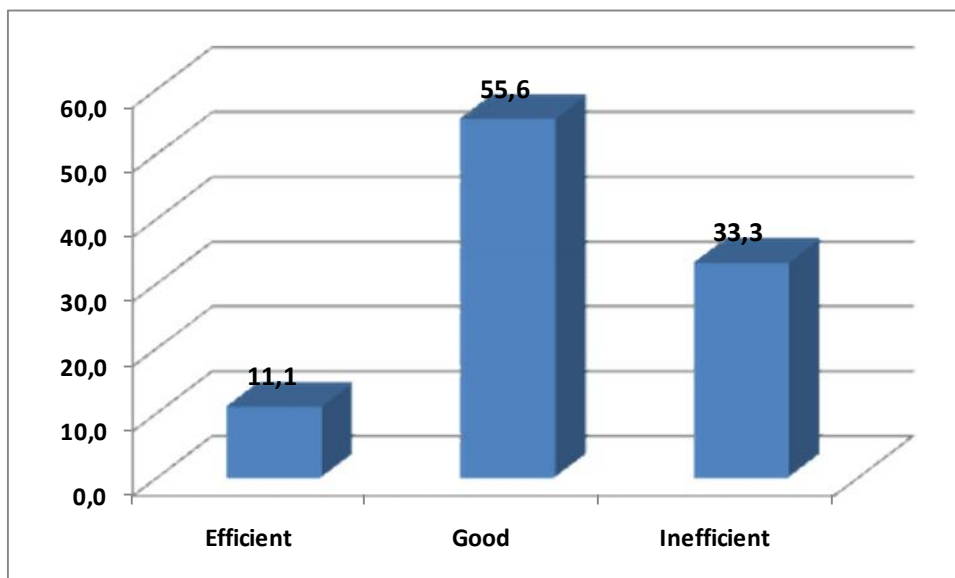
Network 10, it is a protocol for mutual cooperation that integrates and enhances the Belo Horizonte metropolitan region management system.

Institutional model for metropolitan planning and management – in %



Regarding the assessment and qualification of the institutional planning model in terms of organization and operation - except the BMA whose model has been regarded as efficient - all other regions consider their current organization as either good or inefficient, as shown in the chart below.

Performance evaluation of the institutional planning model - in %



With regard to other players participating or being represented in the planning and management models, 70% of metropolises allow for the participation of other governmental spheres and 60% of civil society. However, the private sector is represented in the decision-making apparatus only in the BMA, Belo Horizonte and Rosario. It is worth of note that the legal formalization of the representation of diverse players per se does not guarantee the effectiveness of such participation. This issue refers to the question of intergovernmental coordination, namely, the format adopted for the integration and shared decision making among different spheres of government.

In Brazil, where many Initiative partners are located, since 1988 the State Governments have been responsible for the creation and organization of the Metropolitan Regions - MRs. But even in the structures created after 1988 we find hindrances in the operational models that prevent a swift and effective implementation of shared management. In other words, although we find different models and institutional criteria, the common fact is that almost all of them suffer from lack of effectiveness.

Civil society is represented, by law, in most of the metropolitan region councils; however, experience has shown that there is no effective participation of civil society in planning or in decision making processes. Another issue is parity among entities, which in many cases is legally instituted, but does not actually materialize, as economic and population disparities among municipalities prevent practical voluntary cooperation. According to Rojas (2008), when economic activities take place and people occupy territories under the jurisdiction of several local authorities, a lack of alignment occurs among areas affected by diverse investment decisions and territories represented by elected officials.⁶ In short, despite a few exceptions, in most of MRs the institutional apparatuses that should support metropolitan management are weak and rather ineffective, which undoubtedly hinders territorial and social agreements.

According to Lefèvre (2008), the latest international experiences show the strategic role played by the articulation and agreement among the

⁶ See Rojas E., *Governança de Regiões Metropolitanas em América Latina - Governance of Metropolitan Regions in Latin America*.

various players and territorial power levels in favor of metropolitan programs that transcend any institutional engineering in place. Hence, for this study to yield positive results it is essential to explore and design new and more flexible institutional structures adjusted to the economic, political and territorial history of each metropolis.

Metropolitan Funding

As regards metropolitan financing, we have found a series of issues that seem to be common to most regions. We have observed various overlapping political jurisdictions on certain territories, where heterogeneous populations dwell and work and often demand different types of services.⁷

Besides, the complexity of urban policies regarding passenger transportation, housing and sanitation, among others, require high volumes of capital resources which are typically distributed unevenly over time. In most cases, the municipalities that make up metropolitan regions are unable to bear such volumes of capital, and the implementation of projects typically lasts longer than the mandates of mayors, which ends up generating a lack of interest on the part of the elected authorities.

Other barriers that affect funding are the huge asymmetries on the tax base and the lack of capacity of city governments to finance their own projects, which is a consequence of unequal populations and economic resources among municipalities in the same region. This often results in a locally restricted viewpoint and behavior when it comes to public policies, which are in fact of metropolitan dimension. This is usually an issue of dispute when it comes to building political consensus and therefore, many times investment efficiency is jeopardized.

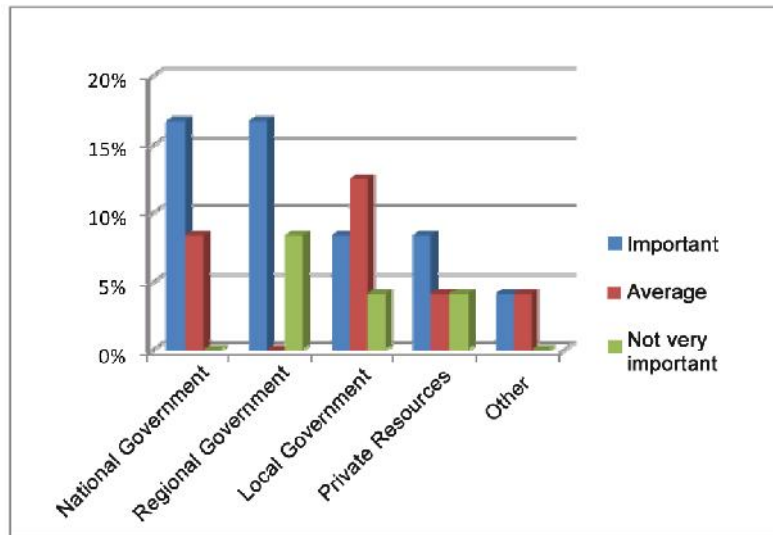
Therefore, an important point in this project is to understand what financial sources Initiative partners use for their metropolitan projects. For that purpose, we sent the following questionnaire to be answered by the MRs:

- How are the main economic resources of metropolitan governments composed?
- What is the level of autonomy of each jurisdiction regarding access to own resources and loans?
- Are the rules on metropolitan funding mechanisms stable?
- What is the role played by the private sector in metropolitan financing?

⁷ See Fernando Rezende, *Regiões Metropolitanas no Brasil - Metropolitan Regions in Brazil*.

The chart below shows that the national and regional governments are the main financing sources of metropolitan projects among the Initiative partners.

**Financing Sources of metropolitan projects
Degree of importance - In %**



Some governance structures incorporate financing mechanisms through financial funds that, in general, have proved insufficient to handle the volume of investment required to ensure the quality of life of all inhabitants and the metropolitan areas' competitiveness. Such constraint ends up generating uncertainty and delaying decision making. All Brazilian partner MRs, except Curitiba, have institutionalized a 'metropolitan fund', with 50% of financial resources coming from the State and 50% from municipalities. Nevertheless, when we assess the importance of such fund resources for financing Metropolitan projects, all of them show that the amounts are insufficient.

We find different situations regarding the Initiative partners' metropolitan financing. In the BMA there is no metropolitan fund, but financing is ensured by a wide range of income from various sources, among which the following are worth naming: 1) resources based on the participation in state revenue; 2) resources from metropolitan municipalities calculated on revenue from immovable assets; 3) programmed contract on transport agreed with the Generalitat of Catalunya, the state and the

Barcelona Metropolitan Area (BMA), which determines the contributions of each administration for the maintenance of the metropolitan public transport system ; 4) tax on the use of public transport, paid by metropolitan citizens according to the value of their real estate properties; 5) metropolitan tax for waste treatment and 6) sanitation tax. The BMA example shows that clear and specific sources of funding are essential as an incentive for coordinated action.

In the BAMR local governments raise the resources for metropolitan financing and there is no such thing as a metropolitan fund in his model. In the Valley of Mexico, 0.4% of the federal budget is transferred to the metropolitan areas, but resources are too low vis-à-vis metropolitan financial needs.

All these interrelated issues should be part of the metropolitan governance model to be adopted; hence the need to seek new public management systems for major cities, including a greater cooperation effort among the various players involved and forms of funding that incorporate public and private resources.

Investment in urban infrastructure is capital intensive and generally distributed in long periods, unlike health and education, in which current expenses are preponderant (personnel, maintenance, etc.).⁸

Except the Valley of Mexico and Network 10, all the metropolitan partner regions have established some sort of legal regulation for public-private partnerships, usually defined in federal and state legislation. However, when analyzing the weight of partnerships in metropolitan finance, we observe that 60% of MRs consider the weight of partnerships unimportant. Probably, this finding may be explained due to the fact that PPPs are a contemporary and rather recent institution and their regulation and implementation has not yet matured.

In this sense, in the light of experiences discussed by the partners in the two workshops held, it is important for the purpose of this study is to answer the following questions:

⁸ See Sol Garson, *Regiões Metropolitanas: obstáculos institucionais à cooperação em políticas urbanas – Metropolitan Regions: institutional obstacles to cooperation in urban policies.*

- How can we induce new governance models with the participation of diverse players, mainly the private sector and civil society?
- How can we design new institutional structures that lead to an agreement on shared management?
- How can we define the role played by the private sector in funding and service provision?
- Can public-private partnerships, inter-federal consortia, investment funds including various levels of government and concessions/grants become efficient mechanisms for metropolitan funding? What has experience shown us so far?

New governance - the partners' experience regarding public-private partnerships and concessions/grants in metropolitan scale

In both seminars held by the Metropolis Initiative on "Comparative Study on Metropolitan Governance" (April/2013 and April/2012), the partners have reported their experiences in new forms of governance and financing. The main contributions are summarized as follows:

a) The Buenos Aires Metropolitan Region - BAMR

Working with three strategic axes – 1. equitable and inclusive city, 2. productive, creative and innovative city and 3. city of associated management and citizen participation - the BAMR urban redevelopment plan consists of action plans with possible instruments to make such plans feasible. Regarding the first axis, capturing added value may be a tool to attain a better distribution of costs and benefits generated by urban development, in an attempt to eliminate structural inequalities in the city. Another tool is the contribution for improvements, since an intervention can produce benefits for the owner of a property thanks to tax payers in general, part of that benefit should return to be reused by society in general. With regard to the second axis, the action plan provides for greater sustainability of public investment in conjunction with the private sector through various types of associations. To build the 3rd axis, it is necessary to take action strengthening mechanisms that allow for the participation of society.

The so-called *Barrio Parque Donado-Holmberg* project, besides being an urban redevelopment project, it was designed as an attempt to come to terms with a 20-year old problem, which involved 600 people living in poor housing conditions and environmentally degraded surroundings. The solution was a mix of housing units for low, middle and upper-middle income families, plus the construction of social and public facilities, such as schools, a sports center, a community center and a metropolitan police station. Part of the same project is the construction of a 17,000 m² linear park. With regard to transportation, there is a road plan under construction, which will eliminate urban barriers. And from the environmental point of view, the project intends to make use of solar energy.

The development of this project took into consideration a combination of public and private interests, such as letting the private sector build public spaces, which is an innovative element in the case of Buenos Aires. With resources derived from the gradual sale of the land, an Urban Renewal Fund was created for investments in integration and urban renewal of the expanded surroundings. The collection and reinvestment of urban value was possible through a mechanism of gradual adjustment of sales prices, allowing for the collection of part of the value generated by the project, while avoiding speculation.

Although under the leadership of the State, the project gained legitimacy through the participation of citizens and due to its transparency. Prior consultations to define the project were conducted by means of a participatory census of beneficiaries and their participation in the legislative debate.

b) Belo Horizonte Metropolitan Region - BHMR

The Metropolitan Region of Belo Horizonte participated in the seminar reporting the experience of a public-private partnership regarding integrated solid waste management. Over half of the municipalities in the region and in the outskirts usually dump residues improperly, so, in order to address this issue, an agreement was signed in June 2012 between the State of Minas Gerais and the municipalities, with the objective of promoting the transfer, treatment and final disposal of solid waste.

The partnership model mentioned above will serve 44 municipalities where 3 million inhabitants dwell (15% of the State population) and projects an average of 3,000 tons/day of Municipal Solid Waste - MSW managed during 30 years, which is the term of the contract. The bid for the PPP has not been carried out yet, but the judging criteria will be as follows: the best technical mark (by environmental coefficient) and the lowest value paid per ton of MSW managed by the concession grantor.

With this partnership, BHMR expects to attain several benefits, among which we can mention: 1) environmental (deployment of separate collection and proper disposal of waste); 2) social (inclusion of scavengers,

transference of residues collected primarily to the organization of scavengers) and 3) economic (scale gains and increase in the volume of waste that returns to the production chain).

An essential aspect in the setup of this partnership was the early participation of the Public Prosecutors Office and the Secretariat of the Environment with the objective of avoiding delays after the definition of the model.

c) Text on the city of Rosario for comparative study

The city of Rosario has developed a successful experience since the elaboration of the *Plan Estratégico Rosario (PER)*- Rosario Strategic Plan in 1998 and the *Plan Estratégico Rosario Metropolitana (PER+10)*-Rosario Metropolitan Strategic Plan implemented 10 years later; these plans were applied simultaneously with the development of urban planning .

As a result of these 15 years of strategic planning, it has been possible to advance into the current expanded planning stage, where the whole metropolitan territory is taking into consideration, requiring not only a change of viewpoint, but a more complex participation of the players involved. Within this new framework, the “metropolitan” concept implies operating in a territory subject to constant change, through a more complex approach and an integrating standpoint that allows us to face up to and resolve common issues on a greater scale.

Since the creation of the Metropolitan Unit for Strategic Planning and Management in December 2011, we have had the opportunity to conduct joint operations with the technicians of the municipalities and communities in the region, as well as with national and regional authorities. This institution, in conjunction with the aforesaid players, focuses on developing a full assessment of the territory, establishing common policies and agreeing upon guidelines for metropolitan planning.

The Metropolitan Unit has established the following strategic goals:

- To develop and share technical information enabling an approach to the region's problems with a metropolitan vision (database, indicators).
- To promote the creation of multilateral agreements with broad participation of private and public players, in order to boost synergy among the relevant institutions and players.
- To propose and organize a common position in terms of specific rules and regulations, agreed upon by the various towns in the region.
- To offer support to different areas of the municipalities and communities which are members of the *Ente de Coordenação Metropolitana (ECOM)*-Metropolitan Coordination Entity, concerning project development and management.
- To manage the resources for the completion of the projects planned.
- To study the problems identified by the *ECOM* with a strategic viewpoint.

In addition to the process of strategic planning developed by Rosario on a local scale, the *Plan Urbano Rosario – PUR* - Rosario Urban Plan was established as a process of urban planning and development. Regarding their project portfolio, two projects that will redevelop the city of Rosario are worth of note: the revitalization of both the Puerto Norte (North Port) and the Parque Ludueña (Ludueña Park).

The Urban Agreement, which is part of the Rosario Urban Plan, is the legal mechanism that regulates private and public relations and serves as a management tool among the parties involved. According to the responsibility matrix, the government assumes the central role of planning agent through a Special Plan¹ (technical tool used to design the physical and functional transformation of a specific area of town). Consequently, a Detail Plan² is designed, whose objective is to precisely detail the previous plan and to reach an agreement among the public and private players involved. Finally, the Urban Agreement is signed, which regulates the commitments

¹ The Special Plan details the technical peculiarities of projects in a certain sectors of the city (for example: streets, avenues, squares), it also defines the scheme to regulate the participation of the public and private sectors.

² Detail Plans are developed by the Department of Municipal Development in accordance with the objectives and principles defined in the Rosario Urban Plan (PUR) and the Special Plan.

made by the municipal government, the proprietors of the land and private entrepreneurs.

Along these lines, the city of Rosario successfully used the Urban Agreement for the implementation of various projects, among which the Ludueña Park and the North Port developments stand out.

The Ludueña Housing Park Special Plan³ consists of a project financed by a trust fund made up of land owners and private investors, where a housing project is the main driver of the urban redevelopment process. Besides offering housing units to families of different social strata, the venture also features social infrastructure facilities, such as schools, a health care center, a sports center, a park and services in a total area of 700ha.

Another important milestone in the process of urban renewal is the Puerto Norte (North Port) project, which materializes the city's desire to reorganize public access to the Paraná River. The project started by launching an international contest of ideas and blueprints in 2004, with the aim of integrating the 100ha port area to the city. With the objective of connecting the northern region to the city center, the project was divided into eight execution units so as to incorporate and coordinate the joint intervention of important public and private players. Seven Detail Plans and seven public-private agreements were implemented.

The management model for this project consisted of public appropriation of the land. Thus, 42 out of the 100 ha were recovered for public use by means of six agreements signed by the land owners, which legitimize the Detail Plan⁴ elaborated by the municipality. The North Port development comes down to a project of public planning with investments, implementation and maintenance by the private sector.

It is worth of note the use of the principle of urban added value recovery, redistributing the benefits of urban development for social purposes.

³ This venture was approved by the sanction of a municipal edict, the *Ordenanza* number 7932/05

⁴ Each Detail Plan specifies technical indicators for the construction, the preservation of public heritage buildings and also establishes the time line for the works to be carried out by the public and private sectors.

New phase: the metropolitan projection

The Metropolitan Region of Rosario implements integration via functional interdependence. The model of voluntary association of municipalities was created by an agreement of voluntary adherence on the part of communities and municipalities, which was formally acknowledged by the local legislatures.

Hence, the configuration of the metropolitan territory emerges as a process of social construction whose main elements are the strategic organization of the players involved and the institutions that make it up. The development strategy relies mainly on public-private articulation.

Currently, in terms of metropolitan governance, the MR of Rosario is taking steps forward by institutionalizing the *Ente de Coordenação Metropolitana (ECOM)*-Metropolitan Coordination Entity, a voluntary association made up of 19 municipalities directed by a Government Council where metropolitan strategic plans are discussed.

Thus, a process of articulation among Rosario and the towns within its metropolitan area is starting to take place, with the purpose of identifying and agreeing on joint and aligned activities, so that the elaboration of special projects of metropolitan scale is possible. In this sense, the experience in strategic and urban planning developed in the city of Rosario - in the local scale - redefines a broader territorial and institutional scope based on the interaction of a new set of players.

d) Gauteng Region

The Gauteng region occupies the smallest area of all South African provinces (1.4% of the country's total), with 12.3 million people, however, it accounts for 34% of the national GDP. It comprises three metropolitan municipalities, two municipal districts and six local municipalities.⁹

⁹ The Constitution provides for three levels of Government: national, provincial and local. Local governments are differentiated as follows: metro (single tier) and district and local municipalities (two tier in non-metro areas).

Three PPP experiences were presented: 1) Gautrain; 2) Gauteng Freeway Improvement Project (GFIP) and 3) Gauteng-Free State-Durban F&L Corridor.

Gautrain is a line of fast trains, with 10 stations. The line connects from north to south economic hubs of great importance and also links the east to the west districts, reaching the airport.

This line benefited the town by reducing road congestion and dependence on public transport and private vehicles on wheels. It also furthered the achievement of spatial development objectives and improved the overall sustainability of the urban environment, in addition to stimulating investment and economic development.

In the year 2000, when the discussion about the project started, various challenges had to be overcome. There was an intense debate between the Gauteng region and the National Government on the merits of the project, on competence and costs and with trade unions and community-based organizations on the “elitist” nature of the project. Other public transport operators also questioned the project as regards potential competition and the division of public transport subsidies.

The project was structured as a PPP, with a maturity of 20 years. The public sector bore the responsibility for it: regulatory structure, land, subsidies and guarantees. Through a concession/grant, the private sector carried out the project and the construction, in addition to being responsible for the operation and maintenance of the trains. Users pay a fee to use the service.

GFIP is a project that sought to critically improve the existing road network in Gauteng, in order to overcome the congestion issue and improve urban efficiency. It is a PPP using the BOT model (build-operate-transfer). The highway is tolled and each vehicle carries an electronic stripe. However, the implementation of toll collection was delayed due to the resistance of unions and community-based organizations.

Given the fact that Gauteng has become the largest domestic market and a key logistics center for both South Africa and the neighboring

countries, the Gauteng-Free State-Durban (G-FS-D) is a strategic, national infrastructure project aimed at improving transport and logistics. The project is still in its early stages, it is being designed as a PPP with various partners: national government services and regulatory agencies, state-owned enterprises, three provincial governments and the private sector. Given the diversity of players involved in the project, it will be interesting for the Initiative to follow up the development of the various phases of the project, as this model will teach us many lessons with regard to the mechanisms of political negotiation and the exercise of political leadership in carrying out the project.

Lessons learned from the Gauteng project:

- The national regulatory structure (supervised by the National Treasury) is very expensive for the PPP.
- Intergovernmental issues, such as the various competences and the multiplicity of players.
- Political will is crucial for the project (Gautrain = very strong and GFIP = moderate);
- Public participation and acceptance are fundamental factors, particularly when the paying user principle applies;
- To deal with and mitigate unexpected events is a big issue, for example, the drainage system and water infiltration during the construction of the Gautrain.

e) São Paulo Macro-Metropolis

Two PPP experiences in the São Paulo Metropolitan Region - SPMR were presented: the first one already in progress regarding public transportation (Line 4 – subway) and the second one concerning a housing project currently under public consultation, whose modeling process is already complete and approved by the managing council, but the bidding process has not been carried out yet.

The subway yellow Line 4 was the first Public Private Partnership in Brazil. It is a sponsored concession/grant for the exploration of subway transport services regarding a 12.8 Km long line with 11 stations and 29 trains.

The line will serve the São Paulo Metropolitan Region, with 19.7 million inhabitants, an area of 8,000 Km² and 39 municipalities. The São Paulo subway network is currently made up of four lines in operation, comprising a network of 74.3 Km, 64 subway stations and 150 trains, which transported 1.268 billion passengers in 2012, with an average of 4.34 million passengers per working day.

The *Companhia do Metropolitano de São Paulo* - São Paulo Subway Company was responsible for the civil works, tunnels, stations, power and auxiliary systems while the private partner supplied the rolling stock (trains), signaling, control, operation and maintenance systems.

The line will connect Luz station, in the central district of the city of São Paulo, to the municipality of Taboão da Serra and was divided into three phases, two of them under PPPs

- **Phase 1:** connecting Luz station to Vila Sônia, comprises the construction of a 12.8 km long line, 6 stations, a structure of 3 intermediate stations, electrification and 1 train yard in Vila Sonia. The operation started in 2010, when 2 stations opened (Paulista and Faria Lima); 4 more stations opened in 2011 (Butantã, Pinheiros, Luz and República).
- **Phase 2:** opening of the intermediate stations started in phase 1, plus construction of 2 new stations and complementary systems.

The projected demand was of 700 thousand passengers/day (phase I) and 970 thousand passengers/day (phase II);

The sponsored concession/grant mode was adopted, with a maturity of 32 years, extendable to up to 35, so that 30 years of effective commercial operation of the line are assured. The total investment amounted to R\$ 5.6 billion, R\$ 4.6 billion related to the civil works and R\$ 1 billion invested by the private partner.

The winner of the bid was the MetroQuatro Consortium, which offered the lowest value for the consideration, that is, US \$ 75 million (limited to a maximum of \$ 120 million).

With regard to risk mitigation, the table below defines the division between the public and the private partners:

| | |
|---|--|
| Risks exclusively assumed by the Private Partner | The Private Partner will assume risks related to operation and maintenance, such as personnel, safety, non-expected costs, etc.; and risks related to the implementation of systems under their responsibility, including delays in equipment delivery and in raising funds for investment. |
| Shared Risks | The Partners will share risks related to demand and exchange rate variations. Regarding demand, there will be a protected variation scope of +/- 10% to +/- 40% on the estimated demand. Regarding exchange rate variations, within the remuneration fee readjustment formula, the Contract provides for the inclusion of the IGP-M in the readjustment period considered, so that the economic-financial balance of the contract is taken care of, limited to 50% of the exchange rate impact, if so requested. |
| Risks exclusively assumed by the Public Partner | The Public Partner will assume risks related to delays in the conclusion of the works and will have to ensure no competition between subway Line 4 and inter-municipal bus lines. |

Lessons learned in the Subway Line 4 project:

- The model where the State is responsible for the civil works may end up being more expensive than planned. In the case of line 4, an accident that took place in 2010 delayed the delivery of the first phase, leading to an unnecessary increase in costs. The next subway PPP (Line 6-orange), will test a new model, in which the private partners will also be in charge of the civil works. This became possible due to changes in the legislation that allow the State to assign anticipated resources to the private sector.
- To inform about and discuss the PPP project with the trade unions. In the case of Line 4 a series of strikes were declared against the PPP, which delayed the project.
- To keep the public informed about the progress of the project through web-sites and advertising campaigns.
- To plan in advance the development of urban operations and changes in the relevant legislation on use and occupation of the land.

The PPP on social housing projects the construction of 20,000 housing units for low-income families in the central area of São Paulo. This will be an administrative concession/grant, with a maturity of 20 years and an estimated investment of R\$ 4.6 billion. The State and the Municipality of São Paulo will participate in the partnership in addition to the private partners. The following are the responsibilities of the granting authority:

Guidelines on the offer of housing units:

- Technical characteristics of the products;
- Sectors of interest;
- Infrastructure and equipment;
- Guidelines and criteria for the registration and funding of beneficiary families:
- Subsidy policy;
- Specification of condominium management services and social work;
- Guarantee for the private sector on payment of contractual consideration;
- Granting of powers to the Specific Purpose Partnership to carry out the expropriation of real estate and deploy the housing project.

The following will be the responsibility of the concessionaire:

- To create a Specific Purpose Partnership (SPP) – compulsory;
- To collect the necessary investment resources;
- To provide services:
- Registration and qualification of target population;
- Direct or indirect funding for families;
- Management of funding agreements;
- Social work during pre and post occupation;
- Resettlement, if applicable;
- Condominium management;
- Management of commercial and service areas;
- Other responsibilities related to housing perhaps demanded in the invitation to bid;
- To promote legal action for real estate expropriation;
- To promote real estate developments

The main goal, in addition to supplying housing units, is renewing the urban space by accelerating the development process of the city center. The priority target public will be people who work in the city center and live in other regions of town; most units will be allocated to people earning up to 5 minimum wages. About 2 thousand units will be provided to meet the demands made by social movements.

The various experiences discussed by the partners, both those already executed and those still in progress, show on the one hand, that we should regard partnerships with the private sector as a step forward to raise the huge capital resources needed for investments in infrastructure, on the other hand we should take into consideration that such partnerships are not free of risks.

Lessons learned:

- PPPs are complex and expensive and often a concession/grant may be an option;
- Political will and public acceptance and participation are key elements for the success of the project;
- Involving the environmental authorities and the public prosecutor's office from the very start of discussions on the project is essential for a better understanding and to make the partnership as transparent as possible.
- It is essential that provisions are taken for the mitigation of future unexpected events;
- Not all services are attractive to the private partners;
- The PPP can make public administration more efficient, but planning cannot be substituted or overlooked;
- PPPs should be used for the achievement of efficiency gains, on the other hand, the public sector should not use them to temporarily improve their budget;
- PPPs may be wrongly taken as an "easy" solution to budget constraints and then governments may engage in high expenditures, not taking into consideration the administrations to come. These projects must be treated as part of the Government's balance sheet, that is, as public investment.

- Some PPPs turn out not to be successful and the lesson learned is that the formulation of such partnerships must excel, promoting the participation of all social players involved;
- Modeling PPPs demands that the public sector be prepared technically, that it implement the right tax conditions, have a well-defined regulatory framework and a robust governance model for a swift flow and approval of projects.
- The long-term sustainability of a public-private partnership rests mainly in accurate risk assessment. All obligations to be paid shall be considered as government debt;
- The false fulfillment of contracts should also be considered, that is, some companies win the concession/grant by bidding very low prices, but are subsequently unable to make the necessary investment, or else the quality of the works and services provided turns out to be way below expectations. This can be mitigated by the requirement of proof of financial standing and technical capacity.⁵
- PPPs are not the only funding alternative. A large number of public managers believe that another option for solving urban problems involving neighboring municipalities is through intergovernmental cooperation by establishing consortia, conventions, or other specific forms of partnership among municipalities.

Based on the discussions held in both seminars about the funding scenarios presented by the partners, particularly concerning the PPP experiences in their respective regions, an assessment of the results achieved up to that point was carried out and the steps forward to be taken within the Initiative framework were debated and agreed upon.

⁵ In this respect, see M. Portugal. *Concessões e PPPs: o que temos a apreender com o falso cumprimento dos contratos*. - Concessions and PPPs: what we have to learn from false fulfillment of contracts.

On the results achieved

1. Greater knowledge was attained on the different forms of financing used by the members of the initiative;

2. Critical points on metropolitan governance were identified:

(a) "Institutionalization is a means, but not an end". We noted that certain formal/institutionalized arrangements of metropolitan governance often lack operational effectiveness. On the other hand, in some situations, informal, collaborative, non-institutionalized arrangements turn out to be effective in the implementation of metropolitan projects.

i. The metropolitan region of Rosario can be cited as an example of an informal collaborative non-institutionalized arrangement that has been able to implement metropolitan projects through the mobilization of local players.

ii. In the State of Minas Gerais (Brazil), we find two types of metropolitan arrangements: one consisting of the voluntary common action of suburban municipalities which unite in order to tackle problems common to their geographical boundaries, with no specific institutional framework; and the other consisting of the Metropolitan Agency of BH, coordinated by the State Government of Minas Gerais.

(b). Institutionalization does not necessarily ensure efficiency in metropolitan governance. Case studies show the possibility of setting up collaborative governance arrangements as an alternative to institutional frameworks.

(c). Being a voluntary union of municipalities that share common concerns, which generally count on the action of various social players, down-top arrangements can be truly efficient, but in some cases, the maturation of this type of collaboration ends up requiring some sort of institutionalization for it to last in the long-term and due to the need to interact with other government bodies.

3. The presence of representatives of MRs in various stages of institutionalization and implementation of projects was important for the debate. The opportunity to interact with representatives of cities that have established rather advanced management and governance models served as a learning tool for other urban regions which have not yet progressed as much regarding their metropolitan projects, so that they can take home lessons learned and create shortcuts to avoid errors already committed.

4. The urban renewal experiences of Rosario and Buenos Aires were presented as alternatives to the traditional public-private partnership formats.

Solutions vary from country to country making it clear that there is no such thing as a unique model. The solution to the complex problems that big cities face, which usually suffer from large deficits of urban infrastructure, requires a governance structure where not only the various public players participate, but also the private sector and civil society.

Next steps

The Initiative proposes the experience of Rosario as a case study. For that purpose, a technical visit will be scheduled for an in-depth study of the urban redevelopment project, with emphasis on the governance building process and the instruments that guided and supported project financing.

We will look for cases of projects structured through other arrangements, such as agreements and inter-municipal consortia, among others.

The use of virtual networks was proposed by the partners to feed the collective debate. In this respect, we should study the possibility of creating a virtual platform to exchange information on different issues concerning metropolitan regions.

Attachments

Table 1
Territorial Configuration

| Metropolitan Regions | Main Municipality | Nº of Municipalities | Area (Km ²) | Population Density (pop./Km ²) | Urbanization Rate (%) |
|---|---------------------|--|-------------------------|--|-----------------------|
| Região Metropolitana de São Paulo (RMSP) | São Paulo | 39 | 7 947 | 2 477 | 98.90% |
| Região Metropolitana de Campinas (RMC) | Campinas | 19 | 3 645 | 767 | 97.40% |
| Região Metropolitana da Baixada Santista (RMBS) | Santos | 9 | 2 406 | 692 | 99.80% |
| Região Metropolitana do Vale do Paraíba e Litoral Norte (RMVALE/LN) | São José dos Campos | 39 | 16 181 | 140 | 94.10% |
| Região Metropolitana do Rio de Janeiro (RMRJ) | Rio de Janeiro | 19 | 5 318 | 2 221 | 99.50% |
| Região Metropolitana de Belo Horizonte (RMBH) | Belo Horizonte | 34 | 9 475 | 515 | 98.10% |
| Rede de Governança Colaborativa (Rede 10) | Belo Horizonte | 10 | 2 775 | N.D. | N.D. |
| Região Metropolitana do Vale do Aço (RMVA) | Ipatinga | 4 | 807 | 56 | 98.7% |
| Região Metropolitana de Goiânia (RMG) | Goiania | 20 | 7 397,2 | 293,8 | 98.02% |
| Região Metropolitana de Curitiba (RMC) | Curitiba | 29 | 16 627 | 193.9 | 91.70% |
| Região Metropolitana de Porto Alegre (RMPA) | Porto Alegre | 32 | 10 097,194 | 394 | 88.40% |
| Região Metropolitana de Belém (RMB) | Belém | 7 | 3 570 | 637 | 97.62% |
| Pear - River Delta Metropolitan | Guangzhou | 9 | 54 700 | 875 | >80.00% |
| | - | - | 18 179 | 616 | 1.91% |
| Gauteng Region | Johannesburg | 1 | 1 645 | 2 430 | - |
| | Tshwane | 1 | 2 198 | 993 | - |
| | Ekurhuleni | 1 | - | - | - |
| | District Concils | 10 | - | - | - |
| Buenos Aires (RMBA) | Buenos Aires | 41 | 14 000 | 941 | 98.00% |
| Rosário (AMR) | Rosario | 19 | 1 880 | 729 | 97.60% |
| Lima e Callao | Provincia de Lima | 43 | 2 672,3 | 2 846,2 | 99.90% |
| | Provincia de Calao | 6 | 147.0 | 5 966 | 100.00% |
| Metropolitan Zone Valle de Mexico (ZMVM) | Cidade do México | 60 municipios e 16 demarcações territoriais ** | 7 854 | 2 559,8 | 98.60% |
| Área Metropolitana de Barcelona (AMB) | Barcelona | 36 | 636 | 5 074 | 47.00% |

* Rede 10 (Network of 10) is a collaborative governance body that covers ten cities and municipalities from the Metropolitan Region of Belo Horizonte (RMBH): Belo Horizonte, Betim, Brumadinho, Contagem, Ibirité, Nova Lima, Ribeirão das Neves, Sabará, Santa Luzia and Vespasiano, aiming at coordinating collaborative practices to solve common problems

** The political-administrative division of Mexico City is organized by territorial or political delegation, instead of municipalities.

Table 2
Demographic Features

| Metropolitan Regions | Population | % of National Population | % of MR Population Living in Main City | % of Population Aged 0 to 14 | % of Population Aged 15 to 64 | % of Population Aged 65 or Over |
|---------------------------------------|-------------------|--------------------------|--|------------------------------|-------------------------------|---------------------------------|
| RMSP | 19.683.975 | 10.30% | 57.20% | 21.90% | 70.90% | 7.10% |
| RMC | 2.797.137 | 1.50% | 38.60% | 20.50% | 72.10% | 7.40% |
| RMBS | 1.664.136 | 0.90% | 25.20% | 22.10% | 68.90% | 9.10% |
| RMVale/LN | 2.264.594 | 1.20% | 27.80% | 22.20% | 70.70% | 7.10% |
| RMRJ | 11.835.708 | 6.20% | 53.40% | 20.80% | 70.10% | 9.10% |
| RMBH | 4.883.970 | 2.60% | 48.60% | 24.40% | 68.40% | 7.20% |
| RMVA | 451.670 | 0.20% | 53.0% | 22.10% | 71.20% | 6.70% |
| RMG | 2.173.141 | 1,14% | 59,91% | 22.63% | 73.75%* | 3.62%* |
| RMC/PR | 3.223.836 | 1.70% | 54.30% | 22.70% | 70.90% | 6.40% |
| RMPA | 3.978.470 | 2.10% | 35.40% | 21.40% | 70.40% | 8.20% |
| Rede 10 | 4.360.662 | 0.02% | 54.47% | - | - | - |
| RM BELÉM | 2.275.032 | 1.20% | 61.25% | 24.98% | 69.49% | 5.53% |
| Pear- River Delta Metropolitan | 47.862.400 | 3.10% | - | - | - | - |
| Gauteng Region | 11.191.700 | 22.40% | | 23.60% | 72.40% | 0,0 |
| Johannesburg | 3.888.182 | 8.00% | 100% | 24.80% | 70.30% | 4.90% |
| Tshwane | 2.345.909 | 4.60% | 100% | - | - | - |
| Ekurhuleni | 2.724.227 | 5.40% | 100% | - | - | - |
| District Councils | 2.233.382 | 4.50% | 100% | - | - | - |
| Buenos Aires (RMBA) | 14.819.137 | 37.0% | 19.50% | 25% | 63.70% | 11.30% |
| Rosário | 1.370.884 | 0.03% | 72.70% | 18.60% | 72.30% | 11.10% |
| Lima e Callao | 8.482.619 | 30.90% | - | 25.20% | 68.10% | 6.70% |
| Provincia de Lima | 7.605.742 | 27.70% | - | 25.00% | 68.20% | 6.80% |
| Provincia de Callao | 876.877 | 3.20% | - | 26.80% | 66.80% | 6.40% |
| ZMVM | 20.533 | 0.3% | 68.70% | 15% | 48% | 37% |
| AMB | 3.226.944 | 0.07% | 50% | 14.20% | 67.70% | 18.10% |

*Minas Gerais Metropolitan Region (RMG) - % of population aged 15 to 69 and % of population aged 65 or over.

Table 3
Economic Features

| Metropolitan Regions | GDP in US\$ million | % of Country GDP | % of the Region/Province GDP | GDP Per Capita MR - US\$ | Total Nº of Formal Jobs | Average Monthly Income - US\$ |
|---------------------------------------|---------------------|------------------|------------------------------|--------------------------|-------------------------|-------------------------------|
| RMSP | 398.745 | 18.60% | 56.26% | 20.269 | 7.380.405 | 1.218 |
| RMC | 55.953 | 2.61% | 7.89% | 19.994 | 965.081 | 1.149 |
| RMBS | 26.874 | 1.25% | 3.79% | 16.159 | 398.204 | 955 |
| RMVale/LN | 35.053 | 1.64% | 4.95% | 15.491 | 551.865 | N/D |
| RMRJ | 127.205 | 7.84% | 71.80% | 10.757 | 3.151.210 | 886.91 |
| RMBH | 62.698 | 3.87% | 35.30% | 10.300 | 1.907.583 | 1.256 |
| RMVA | 6.902 | 0.43% | 5.80% | 9.800 | 118.653 | 1.316 |
| RMC/PR | 53.414 | 3.29% | 11.60% | 12.148 | 947.195 | 1.976 |
| RMPA | 62.782 | 2.9% | 44.40% | 13.810 | 1.293.000 | 1.512 |
| REDE 10 | 54.270 | 3.35% | 33.10% | 12.445 | N/A | |
| RMG | 15.757 | 0.97% | 36.81% | 7.251 | N/A | |
| RM BELÉM | 14.045 | 0.65% | 31.76% | 6.174 | 504.223 | |
| Pear- River Delta Metropolitan | 501.654 | 10% | 82.20% | 9.855 | N/A | 282 |
| Gauteng Region | 78.000 | 34% | - | 6.969 | | |
| Johannesburg | 34.000 | 17% | - | 9.188 | 1.952.843 | - |
| Tshwane | 19.100 | 9.50% | - | 8.862 | 1.066.528 | - |
| Ekurhuleni | 13.230 | 6.60% | - | 4.613 | 841.798 | - |
| Buenos Aires (RMBA) | 133.000 | - | 81.40% | 8.975 | 4.901.430 | 748 |
| ROSÁRIO | 12.655 | - | 50% | 9.470 | 575.000 | 1.108 |
| LIMA E CALLAO | 35.873 | - | 47.90% | N/A | N/A | 725 |
| Provincia de Lima | | | | | | |
| Provincia de Callao | | | | | | |
| ZMVM | 175.482 | - | 14.50% | 1.370 | 8.973 | 421 |
| AMB | 188.930 | 13.60% | - | 40.493 | 2.475 | 20.283 |

Table 4 e 5
Industry e Services

| Metropolitan Regions | % Share of Industry VA in MR's Total VA | % Share of MR's Industry VA in Regional Industry VA | % Share of Services VA in MR's Total VA | % Share of MR's Services VA in Regional Services VA |
|---------------------------------------|--|--|--|--|
| RMSP | 24.60% | 47.30% | 75.36% | 60.71% |
| RMC | 37.0% | 9.80% | 62.56% | 6.97% |
| RMBS | 27.50% | 2.80% | 72.25% | 3.03% |
| RMVale/LN | 46.40% | 8.40% | 52.88% | 4.00% |
| RMRJ | 17% | 45.0% | 83% | 79% |
| RMBH | 33.94% | 33.37% | 65.20% | 36.63% |
| RMVA | 55.10% | 5.50% | 44.70% | 2.40% |
| RMPA | 48.20% | 50.50% | 50.70% | 46.20% |
| RMG | 19,58 | 26,51 | 79,01 | 47,92 |
| RM BELÉM | 19.10% | 13.60% | 80.34% | 45.70% |
| Pear- River Delta Metropolitan | 47.80% | >90% | 49.90% | >80% |
| Gauteng Region | | | 25.50% | |
| Johannesburg | 17.40% | | 12.70% | |
| Tshwane | 16.10% | | 30.40% | |
| Ekurhuleni | | | | |
| Buenos Aires (RMBA) | 23% | | 77% | |
| Rosário | 19% | N/A | 81% | N/A |
| Lima e Callao | 18.40% | 58.80% | | |
| Provincia de Lima | | | | |
| Provincia de Callao | | | | |
| AMB | 20.30% | 74% | 70.30% | 69% |

Table 6
Challenges and bottlenecks

| CHALLENGES AND BOTTLENECKS | RMSP | RMC | RMBS | RM Vale/LN | RMBH | RMVA | RMPA | RMG | RM BELÉM | RM DF | Pear- River Delta | Gauteng Region | Buenos Aires (RMBA) | Rosario | Lima and Callao | AMB | ZMVM |
|--|------|-----|------|------------|------|------|------|-----|----------|-------|-------------------|----------------|---------------------|---------|-----------------|-----|------|
| INFRAESTRUCTURE AND ENVIRONMENT | | | | | | | | | | | | | | | | | |
| Environmental sanitation | x | x | x | x | x | x | x | | | | | x | x | x | x | | |
| Mobility and integrated metropolitan transport | x | x | x | x | x | | x | | | | | x | | | | | |
| Quality of urbanization (risk areas and slumps) | x | x | x | x | | | | | | | | x | | | | | |
| Environmental and infrastructure | x | x | x | x | | | | | | | | x | | | | | |
| Inefficient management of solid urban waste | x | x | x | x | | | | | | | | | x | | | | |
| Water resources management | x | x | x | x | | | | | | | | | | | | | |
| Lack of road and railway infrastructure | x | x | x | x | | | | | | | | | | x | | | |
| Cargo transport and flow | x | x | x | x | x | | | | | | | | | x | | x | |
| Lack of uniformity with regard to land use | x | x | x | x | | | | | | | | | | | | | |
| Air, river and coastal pollution | x | x | x | x | | | | | | | | | | | x | | |
| Spatial structure centralized in the main cities, weakening nearby cities growth | x | x | x | x | x | | | | | | | | | | | | |

| CHALLENGES AND BOTTLENECKS | RMSP | RMC | RMBS | RM Vale/LN | RMBH | RMVA | RMPA | RMG | RM BELÉM | RM DF | Pear- River Delta | Gauteng Region | Buenos Aires (RMBA) | Rosario | Lima and Callao | AMB | ZMVM |
|--|------|-----|------|------------|------|------|------|-----|----------|-------|-------------------|----------------|---------------------|---------|-----------------|-----|------|
| ECONOMIC DEVELOPMENT | | | | | | | | | | | | | | | | | |
| Necessity of a sustainable economic growth | x | | x | x | | | x | | | | | | x | | | | |
| Labour policy and competitiveness | x | | | x | | | | | | | | | | | | | |
| Local management and public accounts improvement | x | x | x | x | | | | | | | | | | | | | |
| Demographics imbalances | x | x | x | x | x | x | | | | | | | | | | | |
| Towns heterogeneity in relation to production framework and average income | x | | | x | | x | | | | | | | | | | | |
| Low diversification of production | | | x | x | | x | | | | | | | | | | | |
| Jobs creation need | | | | x | | | | | | | | x | | | | | x |

| CHALLENGES AND BOTTLENECKS | RMSP | RMC | RMBS | RM Vale/LN | RMBH | RMVA | RMPA | RMG | RM BELÉM | RM DF | Pear- River Delta | Gauteng Region | Buenos Aires (RMBA) | Rosario | Lima and Callao | AMB | ZMVM |
|--|------|-----|------|------------|------|------|------|-----|----------|-------|-------------------|----------------|---------------------|---------|-----------------|-----|------|
| GOVERNMENT / FUNDING | | | | | | | | | | | | | | | | | |
| Efficient metropolitan management with centrality | x | x | x | x | | | x | x | x | x | | | | | | | |
| Legal constrains | | | | | | | | | x | x | x | | | | | | |
| Coordination problems | x | x | x | x | | | | | | | x | | | | | | |
| Slow decision making | | | | | | | | | | | x | | | | | | |
| Sustainable financing framework for waste, sewerage and public transport | | | | | | | | | | | | | | | | x | |
| Unstable political environment | | | | | | | | | x | | x | x | | | | | |
| Lack of financial resources to support metropolitan actions | x | x | x | x | | | | x | | | | | | | | | |
| Necessity of regionalized budget | x | x | x | x | | | | x | | | | | | | | | |
| Defining priorities and management in a metropolitan scale | | | | | | | | | x | | | | x | | | | |
| Lack of metropolitan plan | | | | | | | | | x | | | | | | | | |
| Communication between authorities | | | | | | | | | | | | | x | | | | |
| Development of guidelines to metropolitan arrangement | | | | | | | | | | | | | | x | | | |

| CHALLENGES AND BOTTLENECKS | RMSP | RMC | RMBS | RM Vale/LN | RMBH | RMVA | RMPA | RMG | RM BELÉM | RM DF | Pear- River Delta | Gauteng Region | Buenos Aires (RMBA) | Rosario | Lima and Callao | AMB | ZMVM |
|--|------|-----|------|------------|------|------|------|-----|----------|-------|-------------------|----------------|---------------------|---------|-----------------|-----|------|
| SOCIAL PROBLEMS | | | | | | | | | | | | | | | | | |
| Social exclusion | x | | | | | | | | | | | x | x | | | | |
| Unsafety | x | x | x | x | | | x | | | | | x | | | x | | |
| Violence and criminality high levels | x | | | | x | | | | | | | x | | | | | |
| High social and environmental liabilities from industry plants | | | | | | x | | | | | | | | | | | |
| Poverty | x | x | x | x | | | | | | | | x | | | | | |

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