

**BRAZIL'S EARLY BUT UNFINISHED  
URBAN TRANSITION:**

**TRAJECTORY AND LESSONS LEARNED**

**(Preliminary Draft: Not for Quotation)**

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## INTRODUCTION

This paper narrates the history of urbanization in Brazil, a large and populous developing country that is widely considered to have completed an early urban transition. For instance, in the appreciation of the World Bank – “Brazil has over the last three decades become a fully urbanized country... Between 1970 and 2000, the urban system absorbed more than 80 million people... Cities became the core of economic activity (90 percent of GDP), with large cities becoming diversified, taking advantage of large markets for inputs and ideas and enjoying high levels of productivity and growth” (World Bank, 2006, Vol 1:i).

Despite an early urban transition, Brazil’s cities and their inhabitants still face stiff economic, social and environmental challenges. The road to a high level of urbanization has been exhausting and socially disruptive. The vestiges of the process still color aspects of current social organization. It can be posited that these difficulties originate from a combination of two principal factors: a historically-rooted and enduring structure of social inequality, and the persistent failure to foresee, accept and plan for massive urban growth.

Inequality came over on the boats with the highly-stratified social system of the Portuguese colonizers. It was then fortified by huge land grants that spawned a feudal landholding system as well as by the adoption of slavery, and subsequently prospered over the centuries through imperial, republican, military and democratic regimes, having only recently shown signs of abating. Solidly entrenched in the Brazilian makeup, an enduring framework of inequality has helped inure society to the plight of the poor masses who have made up the bulk of the country’s rapid urban growth. Decisionmakers have been slow to grasp the speed, the magnitude, the composition and the significance of urban growth processes and to prepare adequately for them. In the face of pervasive social inequality, this failure to take a proactive stance to deal with what turned out to be massive and inevitable urban growth has led to the escalation of slum growth, increased poverty, social disorganization and environmental degradation. These problems make it very difficult for the country to take advantage of its early urban transition and to exploit the full potential of urbanization for development.

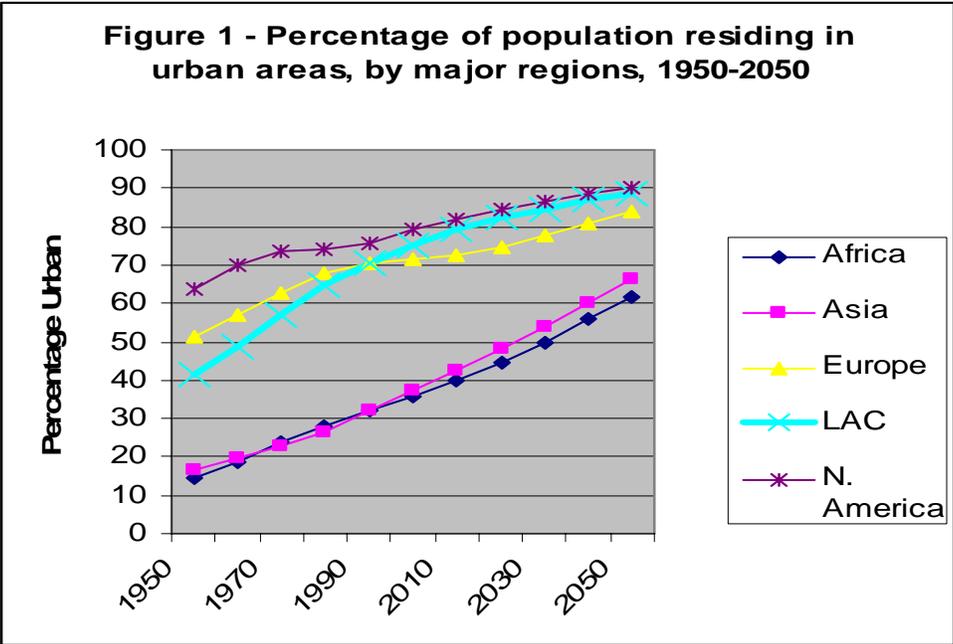
The history of Brazilian urban growth is thus closely intertwined with the economic, social, political and demographic transformations that the country has undergone, especially over the last century. During the period of accelerated urban growth, and in the current late transition stage, policymakers have attempted to explicitly influence the urbanization process in a variety of ways, with variable success. But they have also influenced it implicitly, and often unwittingly, through policies aimed at promoting other national or class interests.

Although Brazil finds itself at a mature stage of its urban transition, at least from a demographic standpoint, it is still facing significant absolute growth in some cities, especially on the periphery of large cities. There, the traditional distortions of the past persist and the lessons that could be derived from a reflection on previous experiences go largely unnoticed.

In the same vein, many other countries, especially in Asia and Africa, are currently in the initial stages of their own urban transitions. The massive numbers involved make such transformations a critical component of our common future. To forge ahead in the adoption of policies and practices that will change the negative trajectory of urban growth processes in those countries and cities currently undergoing fastest growth, it is useful to look at the historical record of other regions that have already undergone their urban transitions and to learn from their experiences, and especially their mistakes.

In this connection, the experience of the now-industrialized countries may be of only marginal relevance, given the critical differences in historical contexts. As was the case with the dissimilarities between developed and developing countries on the classic demographic transition (wherein mortality and fertility rates declined over a long period of time in the developed countries, and over a much shorter time span in most developing countries), the urban transition is currently proceeding at a much faster pace, with much greater magnitude and under vastly different conditions in developing countries from those in the now-industrialized world.

The field has paid insufficient attention to the experiences, and the possible lessons to be learned therefrom, of a developing region that has recently undergone an early and rapid urban transition – namely, Latin America. For a variety of historical reasons that will be discussed in the next section, Latin America has, as shown in Figure 1, preceded Asia and Africa on the urban transition. In principle, much could be learned from this experience in terms of orienting the massive growth still to come in other regions.



Source: United Nations Population Division, 2008

This paper specifically describes the urbanization experience of Brazil, by far the largest country in Latin America, and which has attained levels of urbanization that surpass those of most European countries. Despite historical differences, the trajectory of urbanization in

Brazil holds many parallels and key lessons for other countries that are currently undergoing massive urban growth. Reflections based on this narrative, including both the account of failed policies of the past and the innovative but partly proven policies of the present, could help policymakers in other developing countries deal more successfully with their own urban transitions.

The objective of this study is thus to provide a broad-based case study of urban growth and urbanization in Brazil that will help situate this process within the trajectory of the country's overall development pathway. By improving our understanding of trends and patterns, and their relation to other social, economic, political and demographic processes, this study should help sharpen knowledge of policy options for the future in other developing countries.<sup>1</sup>

The paper will begin with an overview of urban growth trends over the course of Brazil's history. The description of this trajectory is broken up into three periods, each of which will be the object of a specific section. The first one will look at some of the key influences on urban growth in the period beginning with colonization until 1930, in order to understand the long-term historical determinants of Brazilian urban structure. The second will focus on the Brazilian urban explosion, covering the period 1930-80, and will try to explain why the country achieved such high levels of urbanization in such a short time. Next, we will examine the trends in urban growth during the "late transitional period," extending from 1980 to the present, showing how changes in patterns of urban growth are linked to decision-making in both the private and public sector.

These synopses of urban growth trends and their determinants will be followed by a section which analyzes the particular process and trajectory of urbanization in Brazil in terms of its significance for present-day social and environmental conditions. Attention in this section will be particularly focused on the origins and consequences of the housing issue which has led to the persistent slum problems, as well as on what could have been done to avoid them. This will be followed by a discussion of the determinants of economic "success" in specific cities and the relevance of different policy options in that connection. The final section will analyze some of the more important approaches to urban policy that have been adopted in the country, including some recent policies that are generating considerable international interest.

### **Data Sources: Strengths and Weaknesses**

Periodic Demographic Censuses are the primary source of information used in the description and analysis of urbanization trends in the first sections of this paper. These evidently do not cover the colonial period since the first demographic survey of any sort was first carried out only in 1872; other "censuses" were carried out precariously at ten year intervals starting in 1890, but they also fail to provide information on urban areas as such (Senra, 2007). The first modern census was only carried out in 1940. Hence, the broad

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<sup>1</sup> (Hopefully, it could also serve as a model for similar analyses that UNFPA country offices can commission in other countries of the Latin American region).

sweep of urban growth during the colonization period presented here reflects a compendium of historical studies rather than demographic data.

For the two subsequent periods analyzed in the first sections of this paper, good demographic data are available. By comparison to most developing countries, Brazilian census data on urban growth trends can be considered as fairly comprehensive and accurate. Data have been collected at ten year intervals for seven consecutive censuses since 1940.<sup>2</sup> Throughout this period, the definition of what constitutes an urban area has remained basically the same. It refers to the population living in the administrative seats of municipalities or their sub-districts, independently of their size.

This official definition of what constitutes an “urban” area in Brazil is rather generous and does lead to the inclusion of some minuscule hamlets as “urban”. This has led to some rather heated debate recently on how “urban” the country actually is today (cf. Box 1). Nevertheless, the data also permit us to use a somewhat more discriminating definition of urban. Much of the present analysis will focus on localities having at least 20,000 inhabitants; although arbitrary, this lower limit ensures a certain correlation with commonly-accepted characteristics of urbanism. Throughout this paper then, we will refer variously to urban areas according to the “official definition” or to “urban localities” depending on the data available. Moreover, since many functional agglomerations increasingly consist of a number of adjacent municipalities, researchers have recently worked out a grouping of municipalities to form a list of urban agglomerations that will also be utilized in this paper when discussing the most recent intercensal period.<sup>3</sup>

Another drawback stems from the fact that the number of municipalities has increased from 1,574 in 1940 to 5,507 in the 2000 census. Despite the huge increment in the country’s overall population -- from 41 .2 million in 1940 to 169.8 million in 2000 -- and despite the fact that the proportion of the the urban population (according to the official definition) living in localities of less than 20,000 inhabitants fell from 65% in 1940 to 18% in 2000, the proportion of municipalities having *less* than 20,000 inhabitants has grown in the interim, from 54% to 73%. In the year 2000, 84% of the localities defined as urban had less than 20,000 inhabitants; however, their population accounted for only 18% of the officially-defined “urban” population.

This trend towards a larger proportion of smaller municipalities evidently stems from the dismemberment of municipalities, especially in the period after the 1988 Constitution, which fostered the creation of a large number of new municipalities (1,307) in order to favor the process of decentralized government. Thus, in 1940, municipalities covered a much larger average territory than they do now, and most of the newly-created municipalities tend to be very small in demographic terms.

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<sup>2</sup> The one exception is that the census which should have been carried out in 1990 was, in fact, postponed until 1991.

<sup>3</sup> The concepts of agglomerations commonly used are the result of a comprehensive urban study by IPEA, IBGE and UNICAMP (2002)

### **Box 1 – Is It Really Urban?**

Following the 2000 Demographic Census, a Brazilian agronomist (José Eli de Veiga) wrote a book attacking the recently-published data that showed Brazil reaching an 82% level of urban population. His criticism was directed at the usual definition issues, but his main concern was with the mounting relegation of the rural world to an insignificant status.

Veiga (2002) looked at the multiplication of municipalities, especially in the period after the 1988 Constitution and observed that, in 84% of the 5,507 municipalities described by the Census, the official “urban” seat had 20,000 or less inhabitants. He noted that one particular municipality (União da Serra in the state of Rio Grande do Sul), only had 18 people in its “urban” segment. To Veiga, this over-dimensioning of the “urban” reflects society’s identification of rurality with backwardness and degradation and as a characteristic to be “overcome”.

These views contrast with those of another author (Caiado, 2003) who, writing from the perspective of the state of São Paulo, sees urbanism stretching out into rural areas to such an extent that the rural-urban dichotomy has become meaningless. According to Caiado, the main phenomena at work are conurbation, metropolization and the expansion of non-agricultural activities in rural areas. More than anything else, this brings into question the functionality of municipal limits since the spatial location of economic, environmental and other realities extend beyond the limits of such units.

Such contrasting perspectives reflect not only the classic problem of defining “urban” in ways that will be acceptable to most people, but also the realities of a large and very heterogeneous country which includes both heavily occupied and dense areas as well as large and sparsely-settled regions. Such disparities are an invitation to “half-full” versus “half-empty” arguments. Ultimately, the fact that a majority of municipalities have small urban populations does not detract from the fact that the country has a large number of very “urban” localities and that these house a significant proportion of the total population.

The multiplication of the number of municipalities over time evidently poses methodological problems for researchers in many areas, inasmuch as it creates units of observation that are not strictly comparable over time. Nevertheless, this is less of an issue when dealing with urban growth trends over a longer period, since it is possible to differentiate urban localities according to their size, and to analyze trends with respect to larger urban communities, a procedure that will be used here whenever the data permit.

Finally, the fact that urban growth data are generated exclusively by the decennial censuses means that the latest available data at the time of this writing refer to events which occurred prior to 2000. Undoubtedly, much has transpired since then in terms of city growth patterns and one would ideally want to weave these more recent events into the narrative of Brazilian urbanization history. On the other hand, since it can confidently be stated that the apex of urban growth rates (though not of absolute increments in urban population) was reached several decades ago, and since the country’s urban transition is basically completed, events since the last census are more likely to have affected intra- and inter-regional displacements of urban growth hotspots than the overall trajectory of Brazil’s urban history that is being described here. Moreover, since the main goal of this paper is to provide a history of rapid urbanization in a developing country that will help pinpoint the do’s and don’ts of policy in such a context, the inability to describe more recent trends is a lesser issue.

One last methodological note. Brazil is a huge and very diverse country; a more comprehensive review of its urban trajectory would require delving into regional specificities and case analyses. (Figure 2 depicts major regions, states and state capitals). To exaggerate a point, the perennially poor Brazilian Northeast of the past provides a stark contrast to the developed-country ambiance of the Southeast, and particularly of its most advanced state – São Paulo. Nevertheless, delving into such specificities would transform this manuscript into a book-long affair and would possibly make it more difficult to transmit the basic messages which can be derived from Brazil’s overall experience. Hence, references to regional patterns and differences will be kept to a minimum in order to focus on the central thrust of Brazilian urban growth. At the same time, the city of São Paulo, as well as the state of São Paulo, inevitably receive an inordinate amount of attention in view of their predominant role in Brazil’s urban history.

Figure 2- Map of Brazil, showing Major Regions, States and State Capitals



## **THE DYNAMICS OF BRAZIL'S URBAN TRANSITION -- IN THREE STAGES**

From an international vantage point, the most striking feature of urbanization in Brazil (a trait shared with several other Latin American countries) is its early and rapid urban transition. By comparison to most other developing countries outside the Western Hemisphere, Brazil has urbanized quickly and massively. By 1950, it already had a level of urbanization (36.2%), comparable to that which would only be attained by Africa (34.5%) and Asia (37.1%) in the year 2000.<sup>4</sup> At the present time, Brazil has a larger share of its total population living in towns and cities than most European countries. At last count (the 2000 Demographic Census), it already had over 80% of its population residing in urban areas, according to the official definition.

In short, Brazil experienced what might be called an early “urban transition”. This concept, originally disseminated by Skeldon (1990), suggests that the trajectory of urbanization historically goes from late to advanced, much the same as did fertility and mortality rates in the classic “demographic transition,” though its chronological timing evidently differs. Brazil is now in a “Late Transitional Society” stage, in terms of the Skeldon model. That is, it has a large majority of its citizens living in urban areas; many of these are residing in large cities; and, most importantly, its rate of urban growth has declined drastically from the previous frenetic pace.

To what extent is this phenomenon of a precocious urban transition attributable to methodological and data issues, rather than to substantive trends? One might argue that the rather generous definition of what constitutes an “urban” area in Brazil (i.e. - the administrative seat of any municipality, independently of its size) is coloring the analysis of overall trends. As observed above, however, this definitional issue is not an important factor, overall. In actual fact, a large majority of all Brazilian urbanites live in a big city, many in huge cities. Thus, in the year 2000, 54.4% of all urban inhabitants lived in a city of one million or more, and 81.1% lived in a city of at least 100,000 people. This represents a considerably greater concentration of urban population in larger cities than can be verified in Europe. Moreover, the predominance of larger centers in Brazil's urban profile is sure to have increased additionally in recent post-censal years.

A first key issue that merits discussion in this paper is thus - why did Brazil and most other Latin American countries have an earlier and much more rapid urban transition than African or Asian countries? To answer that question, one must first look at the history of colonization in Latin America and the significance of the settlement model adopted by the Iberian colonizers for subsequent population distribution patterns. Although the urban explosion experienced by Brazil is a 20<sup>th</sup> century phenomenon, the main features of its structure were established during the colonial period.

Then, one must examine how, in more recent times, marked changes in the economic orientation of the country coalesced with high demographic growth rates and intense rural to urban migration to generate high rates of increases in urban population between 1930-1980. Finally, the post 1980 period has shown an abrupt decline in urban growth rates and a

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<sup>4</sup> Data from U.N. Population Division (2008).

certain leveling-off of the urban transition, as a whole. Large absolute increases in urban population and a greater concentration on the periphery of larger cities can still be observed but this is, in large part, due to the inertia of demographic trends and to the legacy of the previous boom period. The following pages address trends and factors in each of these three periods.

### **1. The Roots of Brazil's Early Urban Transition: Settlement Patterns and Economic Cycles in Brazil's History<sup>5</sup>**

A first explanation for the distinctive trajectory of urbanization in Latin American countries, by comparison to other developing regions, stems from the fact that the former was colonized from the outside world. When the Portuguese and Spanish explorers arrived in the New World, they set up an urban system to fit their own mercantile aspirations, restructuring existing systems if they already existed. The gamut of cities established thereby later served as the nucleus of an urban network and the springboard for subsequent urban growth.

In the regions taken over by Spanish colonizers, many great cities had been created by the indigenous population, but these were over-ridden and destroyed or adapted to the colonizers' own model. However, this was not the case in Brazil, where the native population, though numerous, had not established important urban centers in the regions that were exploited by the Portuguese colonists. Data on the size of the native population at that time is sketchy, with estimates varying from one to ten million, but the great majority of those groups lived in the Amazonian basin, which colonizers would only exploit much later (FUNAI, n.d.). A recent discovery suggests that there may have been at least one large city (perhaps of up to 100,000 inhabitants) in the Xingu territory of the Amazonian region, but this was not appropriated or built up by the colonists (although the latter were undoubtedly instrumental in decimating its population in one way or another).<sup>6</sup>

In short, the Portuguese model of urban organization was practically established on a *tabula rasa* in terms of urban antecedents. This situation obviously contrasts to that in many African and Asian countries, where the native-born population had been growing slowly over millennia and had established urban concentrations in variable quantity and size, despite migrations, conflicts and numerous natural and man-made disasters that variously affected the population of different regions. The first "vila" to be established by the Portuguese in Brazil was that of São Vicente (today part of the agglomeration of Santos) in 1532, followed by Salvador (which would become the capital of Brazil until the 18<sup>th</sup> Century) in 1549, by a Jesuit mission in what would later become São Paulo in 1554, by Rio de Janeiro in 1565, and by São Luis do Maranhão in 1612 (IBGE, n.d.). Except for the

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<sup>5</sup> For discussions of the functions performed by cities in pre-20<sup>th</sup> century Brazil, cf for instance, Morse (1962a and 1962b); Rios, 1951; Smith, 1955; Geiger and Davidovich, 1961; Faria, 1973; Cano, 1989; Campolina, 2000b. This section is largely based on summaries of that and other literature in Martine and Diniz (1997: 206-216); and Martine (1990 a and 1990b).

<sup>6</sup> According to a report in *Science* (Vol. 321. no. 5893 29, p. 1214 August 2008), a recent expedition of American and Brazilian anthropologists, aided by members of the Xingu tribe, uncovered traces of what is considered to have been a large planned city between the 12<sup>th</sup> and 16<sup>th</sup> century in Xingu territory.

Jesuit mission in São Paulo, whose commercial function would only burgeon much later, the remainder were spread out on the coastline.

The Portuguese colonizers who took over this vast land area called Brazil were eminently outward-oriented. That is, they were primarily interested in extracting riches from the New World for their crowned masters and, to this purpose, established an agricultural-extractive economy. Urban areas served primarily as launch pads for exploration and exploitation of the hinterland, as well as ports for channeling the New World's products back to the motherland. Moreover, they were necessary as defensive strongholds against the designs of other colonizing powers. Towns thus came into existence on the coastline as a point of departure for settlement and as a source of energy and organization for exploitation of natural resources. The settlement process impressed by the colonizers produced a mosaic of coastal towns and cities.<sup>7</sup> Brazil's vast and diversified natural riches made this strategy viable over a period of four centuries.

Throughout its early history, Brazil's economy depended on the exportation of a variety of raw materials and foodstuffs, the nature of which depended on their discovery and exploitation as well as on fluctuations in the international markets. This approach to the appropriation of the New World's riches produced various cycles of expansion, atrophy and regression, the main ones originating in the extraction of brazilwood, gold, diamonds and rubber, as well as the agricultural production of cattle, sugar and coffee. Each cycle monopolized the factors of production until changes in power relations in the colonial seat, exhaustion of raw materials, or stiff international competition, prompted a switch to another product. As the geographic axis of economic production changed, it propitiated the construction of new towns and further regional segmentation. Most of the labor force left behind after a given cycle eventually turned to subsistence agriculture, leading to the progressive growth of the *minifundios*, contrasting with the huge *latifundios* which had been carved by royal land grants.

Except for the latter half of the coffee cycle, these activities depended primarily on slave and quasi-servile labor, thus delaying the formation of an internal market. The dominant social class, formed during the agricultural cycles, was composed of anti-urban landowners who occupied large tracts of land grants, and depended on coastal towns for markets and supplies. Only the extractive cycles were able to attract significant population contingents towards the interior.

Throughout these various cycles, the prevailing urban model, transplanted from Portugal to Brazil, was that of maritime and agro-commercial towns, which also served to support the new nation's defensive concerns. With the exception of the mineral extraction, much of this activity was on or near the coastline. Each new economic cycle led to flourishing towns on some part of the country's extensive coastline that led the drive towards the interior. These towns and cities were closely linked to the motherland but considerably isolated from one another. Regional trade routes and regional economies remained undeveloped while

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<sup>7</sup> The concentration of activities on the coast led a Franciscan scholar of the time, Frei Vicente of Salvador, to comment that the Portuguese colonists were like crabs scratching on the coastline (Diniz, 2005:159).

maritime transport served primarily to maintain their contact with the exterior and also provided tenuous links between the towns.

Detailed information on the size and number of cities prior to 1940 is unavailable but it can be estimated that Brazil only had some ten cities of 20,000 or more inhabitants as late as 1872 -- more than three and half centuries after the arrival of the first colonizers. A population survey carried out in that year showed that only 8% of Brazil's population lived in municipalities having 20,000 or more total (i.e. - urban *and* rural) inhabitants. Only three municipalities (Salvador, Rio de Janeiro and Recife) had more than 100,000 total inhabitants. The capital was transferred from Salvador to Rio de Janeiro, at the end of the 18<sup>th</sup> century, in order to better control the flow of minerals from the interior states of Minas Gerais and Goias.

With the exception of São Paulo, all of these ten cities with 20,000 or more inhabitants were located on the coastline. Maps of Brazil to this day reflect the coastal density of the colonial period. (Cf. Figure 2) Concern with the occupation of the interior had already prompted the construction of the first planned capital in Teresina, Piauí in 1851. Teresina was to remain the only State capital among the thirteen northeastern states not located on the coastline. This was followed by the erection of another planned city, Belo Horizonte, in 1897. Built in what had earlier been the heart of the diamond and gold extraction region, this city was soon destined to become one of the four largest cities in the country. Despite such initiatives, the urban network retained its coastal character.

The modernization of Europe's economy in the 19<sup>th</sup> century, coupled with the intensification of commercial relations between countries, and the universal movement towards the abolition of slavery, brought several repercussions in the New World. When the last great economic cycle of this period – coffee - eventually shifted the locus of production to the state of São Paulo in the latter half of the 19<sup>th</sup> century, it marked a significant turning point in Brazil's economic history and, eventually, determined its demographic and urban trajectory. Indeed, it could be cited as the starting point for the country's precocious process of urbanization.

A main reason for the ascendancy of the state of São Paulo (and later of the city of São Paulo) in the 19<sup>th</sup> century, was its ability to adapt to the abolition of slavery, shifting away from slave labor and attracting a large number of immigrant laborers to its coffee plantations. Some four million immigrants are estimated to have entered the country between 1880 and 1930, one million of these in the 1980-90 period alone; some 70% of these arrivals settled in the state of São Paulo (Merrick and Graham, 1979:65-92).

This introduction of salaried labor would subsequently serve to further attract both internal and international migrants and, later, would become a stimulus for the formation of an internal market. Moreover, São Paulo introduced the commercialization of food production, the use of coffee processing machines and promoted railway transport and other urban infrastructure and services. The State also began to assume a more direct role in economic affairs around this time, helping to attract immigrants from the Old World and subsidizing the construction of private railroads. The political power of Rio de Janeiro allied itself with

the economic power of São Paulo and the foundations for the dominance of a Rio-São Paulo axis were cemented.

Unfortunately, data on urban formation in this critical period is sketchy but there can be little doubt, in comparing the 1872 survey with the 1940 Census, that enormous growth had taken place in urban localities during the interim. The period was undoubtedly marked by intense migratory movements (Balan, 1973; Merrick and Graham, 1979). Exactly what proportion of that growth is due to the economic dynamism of the modern coffee cycle cum immigration, and what part due to the sequels of the 1929 crash, which devastated the coffee economy and disbanded its workers, is understandably hard to ascertain today. What stands to reason is that, when the long period of prosperity generated by the coffee economy was disrupted by the economic crisis in 1929, the basic conditions for the establishment of a new source of economic dynamism and urban concentration – industrialization – had already been laid out.

For our purposes what is crucial to observe is that when Brazil began the urban transition that the modern censuses permit us to describe in the following pages, the country had already reached a relatively high level of urbanization by comparison to that observed in other developing regions.

## **2. Industrialization, Demographic Transition and Urban Growth**

The global crisis provoked by the US stock market crash of 1929 caused a sudden drop in world prices for Brazilian agricultural products, and was particularly disruptive of the country's coffee-based economy. Sudden and virtual abandonment of the labor-intensive coffee production, particularly on the rich lands of São Paulo state, prompted substantial out-migration flows of the rural labor force which had accumulated over the various economic cycles of previous centuries, but especially during the last one, centered on coffee production in São Paulo.<sup>8</sup>

Two broad trends in the redistribution of population were initiated at this point and were to last for the next 50 years. These two simultaneous but contradictory movements involve the progressive occupation of interior spaces, and the concentration of population in ever-larger cities (Martine, 1990a and 1994). The acceleration of demographic growth, propitiated by the decline of mortality, particularly after 1930, fed and increased the stock of potential migrants who would criss-cross the Brazilian territory over the next half century.

In the 1930s and 1940, population movements towards the interior began with the occupation of new agricultural lands in the states of São Paulo, Parana and Santa Catarina. In the 1950s and 1960s, the Center-West region was flooded with rural frontier settlers and, in the 1970s, the Amazon region became their prime target.

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<sup>8</sup> The brief historical introduction to this section represents a stylized summary covering a large body of literature. Cf. for instance, Singer, 1968; Ianni, 1971; Balan, 1973; Lopes, 1973; Cano, 1977; Mendes, 1978; Merrick and Graham, 1979, to name a few. The main arguments presented here and the specific literature it is based on is presented in Martine and Diniz (1997); Martine (1990 a and 1990b), and Diniz (2000).

More importantly, from the standpoint of this paper, significant urbanwards migrations were initiated for the first time after the 1929 market crash. Brazil's balance of payment problems at this point had led to an abrupt severance of international ties and this, in turn, provided the stimulus for import-substituting industrialization. Both the productive process and labor relations were modernized under this new economic pursuit. Moreover, in São Paulo, many immigrants, who had initially arrived in Brazil as agricultural labor, turned their attention to the potentialities of the industrial and services sectors. Their success would later transform several of these immigrant families into some of the country's most powerful economic forces.

Intense migration to the cities brought housing shortages, public sanitation problems and the first signs of political mobilization. Such conditions, in turn, helped foster the first government attempts at intervention in the economy, as well as in the areas of public health, social welfare, basic education and regulation of the labor market. Though their absorption in cities was deemed to be chaotic, migrants helped to generate a new economic dynamism, particularly in the São Paulo area.

The heritage of regionally disconnected markets, which had been the norm over the previous four centuries, was an initial stumbling block for the new economic activity but, once the industrialization process was started, it reverberated over the entire territory. The need to integrate the various regional markets led to investments in ground transportation, thereby facilitating further inter- and intra-regional migrations. The State took further steps towards a more active role in the economy and in the improvement of social conditions, particularly in urban areas. By 1940, when the first comprehensive demographic census was taken, the urban population (as defined officially) had jumped to 31% of the total, more than half of which lived in cities having at least 20,000 inhabitants. At this time, Brazil had 53 such localities, one-third of which were located in the state of São Paulo.

The rural-urban movements of the 1930s were further quickened in the 1940s as a result of the Second World War. The domestic demand for industrial products was swelled by a growing international market and, since immigration had been curtailed by the war, rural-urban migrants became the main source of labor for industries that were adopting double-shifts in order to keep up with the demand. Moreover, the government at this time began to make a more concerted effort to improve the social conditions of urban workers.

A crucial factor at this point was the onset of higher rates of natural increase, as mortality rates declined due to improved sanitation and the importation of technologies to control contagious diseases. The increased demand for labor combined with new high rates of demographic increase to promote further migration and rapid urban growth. An estimated 3 million migrants, equivalent to 10% of the 1940 rural population, moved to towns and cities from rural areas during the 1940-50 period. The number of cities having at least 20,000 inhabitants rose from 53 to 82, while the level of urbanization rose to 36.2% in 1950, according to the official definition, and to 24.3%, according to the urban localities' definition.

The factors underlying urban growth were reinforced in the post-war period. Continuing mortality declines, in the face of constant high fertility, (cf Table 1) led to new highs in

demographic growth rates; these hovered just below the level of 3.0% annually from 1950-1965. High rates of natural increase caused a dramatic upsurge in the total Brazilian population, from 33 million in 1930 to 70 million in 1960. During this period, despite considerable out-migration, the population of rural areas continued to grow steadily, generating an enlarged stock of potential migrants to the cities. The agrarian structure inherited from colonial times was marked by a strong concentration at both extremes of the land tenure scale, in *latifundios* and *minifundios*, both of which were conducive to out-migration in a context of high natural increase.

Table 1. Crude Birth and Death Rates, Brazil 1872 to 1960

<b>Period</b>	<b>Crude Birth Rate</b>	<b>Crude Death Rate</b>
1872-1890	46.5	30.2
1890-1900	46.0	27.8
1900-1920	45.0	26.4
1920-1940	44.0	25.3
1940-1950	43.5	19.7
1950-1960	44.0	15.0

Source: IBGE, *Estatísticas do Século XX*,  
<http://www.ibge.gov.br/seculoxx/arquivos/populacao.xls>.

Meanwhile, Brazil was re-structuring its economy through the modernization of communications and transport, as well as the provision of basic infrastructure. Central planning was strengthened and, under its aegis, incentives to import-substituting industrialization, to national automobile production and to massive road building programs were provided. Rural-urban differentials in wages and lifestyles served to reinforce the attraction of the cities; this, coupled with improved transport and communications, resulted in the migration of some 7 million people to towns and cities in the 1950s. That number corresponded to approximately 21% of the size of the rural population (official definition) at the beginning of the decade.

Government influence on population redistribution during the 1930s and 1940s appears to have operated in two contradictory manners (Martine, 1992). Explicit policies were generally directed to opening up segments of the vast interior region, subsidizing the rapid occupation of the Parana frontier in the 1930s and channeling migrant flows towards the Center-West region in the 1940s, also promoting the construction of still another planned interior capital (Goiania) in 1937. Meanwhile, although stimuli aimed at strengthening industrial production were meager by modern standards, their effect -- together with attempts to improve living conditions in cities, to strengthen the national market and to improve transport and communications -- had a larger influence and favored rural-urban migration as well as urban and regional concentration.

The post-war era witnessed a more definitive refutation of traditional canons regarding the international division of labor, and of Brazil's role within it as a provider of raw materials

and importer of industrialized products. By the mid-50s', political platforms backing import-substituting industrialization won important electoral victories. Meanwhile, State intervention and planning came into its own; it aimed primarily at promoting vigorous industrialization and at the integration of the national market. A key initiative was the creation of a national automobile industry, which not only generated dynamic forwards and backwards economic linkages, but also made it feasible to occupy and integrate the interior region through more agile transport modes.

Concern with the integration of the national market also prompted the creation of SUDENE -- a regional development agency for the densely populated and impoverished Northeast -- as well as the relocation of the nation's capital from Rio de Janeiro to Brasília, in the heartland of the vast unoccupied interior. It also stimulated the construction of a network of highways linking Brasilia to the Center-South and, later, to the vast and largely unpopulated Northern region.

The main thrust of the vigorous measures enacted during this era favored rural-urban migration as well as greater concentration in industrial areas. In demographic terms, the 1950s also witnessed the country's highest annual rates of natural increase (3.0%). As a result of both strong demographic growth and rural-urban migration, the number of cities having at least 20,000 inhabitants rose from 82 to 147, and the level of urbanization rose significantly between 1950 and 1960, whatever the definition of "urban" one utilizes.

Table 2 presents summary information on changes in level of urbanization and rates of urban and rural growth for the 1940-2000 period. Using both the official definition of "urban", as well as one that refers to the population residing in localities having at least 20,000 people, this Table shows striking urban growth throughout the period, but an especially rapid rhythm in the 1950 and 1960 decades. It might be noted that, in all cases, using the official definition of "urban" yields not only a considerably higher level of urbanization (as expected by definition), but also slower rates of urban growth than with the definition based on locality size. Over time, however, the latter two rates tend to become more similar as the urbanization process matured after 1980.

Government intervention aimed at the intensification of industrialization inevitably reinforced the loci of its original growth. Thus, as urbanization and import-substituting industrialization progressed, the city of São Paulo and its surrounding regions assumed a hegemonic role in the national economy, accumulating locational advantages based largely on its external economies, the size and power of its hinterland market, as well as the dynamism of its entrepreneurial class. Conversely, the Rio de Janeiro region showed a relative decline, due to a combination of stagnating economic conditions and, subsequently, to the transfer of the capital city to Brasilia.

The 1960s were marked by important political and social transformations, chief of which was the military takeover in 1964. This led to the imposition of a conservative-modernization development model, that is, a model that aimed at the technical improvement of agricultural and industrial production while maintaining the previous highly stratified social structure through the imposition of a rigid control over social movements. Belief in the merits of central planning was heightened and technocracy

achieved a new status under the regime when the conjunction of good economic decisions coincided with a highly-favorable international context to create “the Brazilian Miracle” of the late 1960s and early 1970s.

Basic infrastructure was rapidly improved. Spectacular advances were made in transport as locally produced buses, trucks and cars multiplied traffic in all directions. A prevailing mood of arrogant optimism favored territorial expansion and the integration of previously isolated regions. Meanwhile, geopolitical considerations stimulated the occupation of open spaces, including attempts to colonize the Amazon region (where most of the new population actually ended up being concentrated in urban areas, despite the agricultural pretensions of the settlement schemes). The communication sector also saw dramatic improvements and the far corners of this vast country were linked together by telecommunications, bringing the bright lights of the bigger cities into the imagery of less-developed regions, further attracting potential migrants.

Table 2 – Percentage of total population living in urban areas according to two definitions of “urban”; and, annual growth rates of the urban, rural and total population: Brazil 1940 to 2000

Period	% Urban, at beginning of period, by type of definition		Rate of Growth (using official definition of “urban” and “rural”)		Rate of growth (using 20,000 + cutoff)		Rate of Growth
	Official Definition	Localities of 20,000 +	Urban	Rural	Urban	Rural	
1940-50	31.2	19.5	3.9	3.8	4.6	1.7	2.4
1950-60	36.2	24.3	5.2	1.6	6.2	1.8	3.0
1960-70	44.7	32.7	4.7	0.6	5.4	1.5	2.9
1970-80	55.9	41.6	4.2	-0.6	4.9	0.4	2.5
1980-91	67.6	52.3	2.6	-0.7	2.6	-0.1	1.9
1991-2000	75.6	62.7	2.5	-1.3	2.2	0.5	1.6
2000-2007	81,3	65.6	n.a	n.a.	n.a.	n.a.	1.2

Source: IBGE, Demographic Censuses and 2007 Population Count.

Such pull factors were reinforced by push factors in rural areas.<sup>9</sup> The new government introduced a Green Revolution technological package that promised to modernize agricultural production through increases in productivity rather than the redistribution of land. To motivate farmers to adopt this package, it provided subsidized credit. However, the logic of bank loans implied possession of a legal deed to the land and it inevitably preferred larger commitments over piecemeal loans. Since agricultural loans at this time

<sup>9</sup>. This discussion of agricultural modernization and its consequences is based on Martine, 1987 and 1992.

were highly subsidized, larger farmers were guaranteed financial gains through mere application for loans. This stimulated land purchases and land takeovers, not only for the mechanization of production, but also for purely speculative purposes.

Such measures did have a noteworthy impact on the modernization of agricultural production and productivity, especially in export-oriented crops and, later, in energy-substituting crops. As planned, the agricultural transformation also had a positive impact on industrial production, as a result of the increased demand for machinery and chemical inputs. In retrospect, Brazil implemented one of the most rapid agricultural transformations of any developing country through these mechanisms.

These measures, however, had severe and negative social impacts over the short run. Small farmers, who made up the large majority of all agricultural producers, received but a small share of the total volume of subsidized credit. A large proportion of their plots were soon taken over by larger farmers and speculators. Smaller farmers of all types – squatters, sharecroppers, tenants and small owners -- were pushed off the land in droves while the share of large farms increased. Between 1970-1985, this resulted in a sharp reversal of the trend that had persisted from 1920 to 1965, wherein small farmers had represented an increasingly larger segment of all producers and of the total area under production. At the same time, seasonal fluctuations in the demand for labor were accentuated with mechanization, further increasing the instability of agricultural employment and producing a massive rural exodus.

As is wont to happen in Brazilian social transformation, the country telescoped three different processes, each of which had each taken much longer periods of maturation in developed countries, into the span of a few years: a mechanical revolution, a chemical revolution and a demographic revolution. Brazil had very little by way of agricultural machinery prior to 1960, but the installation of an industrial park combined with subsidized credit for its purchase rapidly changed that deficit. The same is true for the introduction of Green Revolution's chemical package of fertilizers, herbicides and insecticides. Either one of these two would have, by itself, generated considerable out-migration; but the simultaneous combination of both with intensified population growth yielded massive out-migration, rapid urbanization and rapid urban growth.

Table 3 presents estimates of rural-urban migration for each decade between 1940-2000. Since such estimates require data on rural and urban fertility and mortality, and since these data are unavailable by city size, the estimates refer to net out-migration from "rural" areas to "urban" areas, as these are defined in official data.

It could be argued that the use of the official definition tends to provide a somewhat deflated estimate of out-migration (because of the smaller pool of potential migrants in the "rural" population) than if we had been able to use a definition that was based on city size rather than administrative function. This effect may be diminished slightly by the fact that the approach which uses the official definition also alludes to a larger target of "urban" destinations for migrants. However, since rural-urban migration involves a preponderance of movement towards progressively larger centers, it can be presumed that rural-urban movements are under-estimated in these figures. In any event, the figures on rural-urban

migration shown in Table 3 should be taken as rough indicators of movement, rather than as precise estimates.

Whatever their deficiencies, these data do show a clear intensification of rural-urban migration throughout the 1940-80 period, reaching a peak in the 1960s and 1970, when 31 million net migrants went to urban areas. Rural-urban migrants in the 1960s corresponded to 35% of the country's rural population at the beginning of the decade; in the 1970s, this proportion was even higher - 42%. Altogether, some 41 million net migrants made their way from rural to urban areas between 1940-80. Although, international comparisons on this issue are beset with problems, the magnitude and speed of this exodus (although underestimated here) has to rank among some of the most notable in human history.

After 1980, the drop in rural-urban migration was dramatic; nevertheless, rural-urban migrants still represented a contingent equivalent to about one-quarter of the respective rural populations at the beginning of each decade. The origins and manifestations of these changes after 1980 will be discussed in the next section.

Table 3 – Estimates of Net Rural-Urban Migration, (in millions) by Sex, Brazil 1940-2000

Sex	1940-50*	1950-60*	1960-70#	1970-80#	1980-90°	1990-2000°
Male	Na	Na	6.6	8.6	4.0	4.3
Female	Na	Na	7.0	8.8	5.2	5.2
Total	3.0	7.0	13.6	17.4	9.2	9.5
R-U migrants as % of rural pop at beginning of decade <sup>10</sup>	10%	21%	35%	42%	24%	26.5

Sources. Calculated from data in IBGE. Demographic Censuses. (Using official definition of “rural” and “urban”)

\*- From Martine (1987:60-61)

#- From Carvalho and Garcia (2002; Tables 92, 185 and 284

° - From Rodriguez and Busso (2009 EPD), Table 12

One characteristic of migration flows that became accentuated throughout the period is the higher rate of female out-migration from rural areas, especially among younger age groups. This process resulted in a “masculinization” of rural areas. Thus sex ratios show a systematically higher proportion of women in urban areas and of men in rural areas. The feminization of migration is particularly evident in Metropolitan Regions (Ramalho and Targino, 2004). Moreover, migration flows appear to be composed of increasingly younger age groups (Beltrão et al, 2004; Camarano and Abramovay, 1998).

High levels of rural-urban migration are inevitably associated with high rates of urban growth, as shown in Table 4. The most defining characteristic of Brazilian urbanization during the 1930-80 period was undoubtedly the progressive concentration of population

<sup>10</sup> It should be noted that the actual number of rural-urban migrants is inflated by children born after the date of the first census in the period.

into ever larger cities. Urban growth *rates* by city size class in Table 4 (based on localities of over 20,000 inhabitants) do not show systematic advantages. This absence of a definite pattern by city size class is partly methodological: since several dynamic cities move quickly from one size class to another between one decade and the next, they end up obfuscating whatever systematic patterns are at play.

The forceful thrust of the urbanization process is perceived more readily when looking at a combination of indicators on different aspects: the evolution of the *proportion* of the total population residing in rural and urban areas over time in Figure 3; the increase in the number and size of cities in Table 5; and, the absolute increase of population in differential areas in Table 6.

Table 4 – Annual Rates of Growth in Rural Areas and in Urban Areas by City-Size Class, Brazil, 1940-2000\*

City Size Class (000s)	1940-50	1950-60	1960-70	1970-80	1980-91	1991-2000
<i>Rural</i>	1.7	1.8	1.5	0.4	0.6	0.5
20-50	3.7	6.1	4.4	4.2	3.1	2.1
50-100	3.0	5.3	5.1	4.6	2.8	2.1
100-500	3.3	5.1	5.4	4.9	3.2	2.4
500 +	4.3	5.1	4.5	3.9	2.0	2.2
<i>Total Urban</i>	3.9	5.2	4.7	4.2	2.6	2.2
<i>Total Population</i>	2.3	3.0	2.9	2.5	1.9	1.6

Source: IBGE, Demographic Censuses. Author's calculations.

(\*) "Urban" refers to localities of 20,000 or more inhabitants: "Rural" includes the remainder of the population.

Figure 3 shows the rapid crossover between the primacy of urban and rural areas, independently of the definition used. According to the official definition, this crossover would have occurred in the early 1960s and, according to the locality definition, at the end of the 1970s. In either case, the transition has been rapid by any standard.

As can be seen from Table 5, the number of localities having 20,000 or more inhabitants has increased at a steady pace from 53 in 1940 to 660 in the year 2000. Most of that increase in the number of urban localities is concentrated in smaller-sized cities: those having less than 100,000 inhabitants have systematically made up around 80% or more of the total number of cities throughout the entire period under analysis. However, their share of the total population has fluctuated around only 20-22% throughout the period.

At the other extreme, cities of 500,000 or more have made up around 5% of all cities throughout the period, but their share of the total urban population grew from 54% in 1940 to 64% in 1970, largely as a function of the graduation of several cities from the size category immediately below it. The share of this largest category dropped slightly to around 60% in 1980 and 1991. The significant rise to 65% in the year 2000 is largely a

function of the reclassification of several clusters of smaller cities as “agglomerations” in this data set. The significance of these more recent trends will be spelled out in the next section when discussing the period of mature growth.

Figure 3 - Proportion of the Total Population Residing in Rural and Urban Areas, According to Two Definitions of “Rural” and “Urban” , Brazil 1940-2000

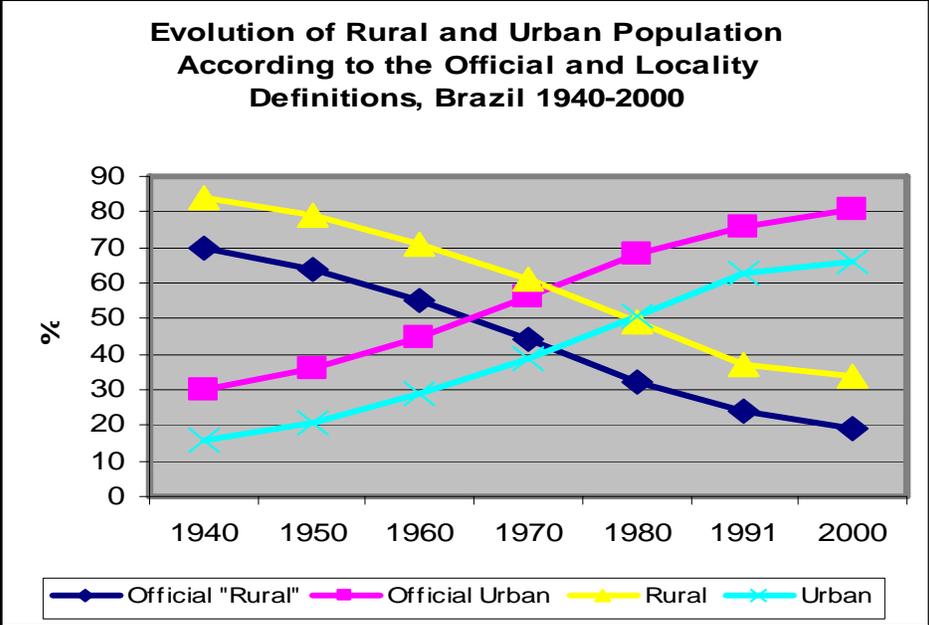


Table 5 – Number of Cities and Distribution of Urban Population\* by City-Size Class, Brazil 1940-2000

City-Size Class (in 000s)	Number of Cities							% of Urban Population						
	1940	1950	1960	1970	1980	1991	2000	1940	1950	1960	1970	1980	1991	2000
20-50	31	51	92	148	238	354	414	11.2	12.0	12.7	11.7	11.6	12.9	11.0
50-100	11	18	28	43	71	114	131	8.7	9.9	8.9	7.6	7.4	9.2	7.8
100-500	8	9	19	37	60	72	82	26.0	20.1	14.0	16.7	19.4	18.2	16.1
500+	3	4	8	11	14	20	33	54.1	58.0	64.4	63.9	61.6	59.7	65.0
Total	53	82	147	239	383	580	660	100%	100%	100%	100%	100%	100%	100%

Source: IBGE, Demographic Censuses. Author’s calculations.  
 \* - "Urban" refers to localities of 20,000 or more inhabitants; "Rural" includes the remainder of the population.

Most of this massive increase of inhabitants in the category of 500,000+ is actually occurring in cities having at least one million inhabitants. Although the available data do not permit subdivision of this upper category for the entire 1940-2000 period, it can be

calculated that cities having a million or more inhabitants accounted for 85% of all cities having 500,000 or more people in 1991, and 84% in 2000 (Not Shown).

Meanwhile, the 100-500,000 city category has fluctuated considerably from decade to decade, depending on the trajectory of a few dynamic cities that have gone through it at different moments. Overall, the patterns observed would suggest that urbanization in Brazil was so rapid that it coincided with “metropolization” (Brito and Mendes, 2005:4; Brito and de Souza, 2005).

Table 6 – Absolute and Relative Evolution of Population Distribution in Rural Areas and in Urban Localities\* by Size Class, Brazil 1940-2000 (in 000s of persons)

Residential Area	Absolute Population Growth By Period and Residential Area						
	1940-50	1950-60	1960-70	1970-80	1980-91	1991-2000	Total 1940-2000
Rural area	6404	8923	4970	343	-397	2695	22938
Total Urban localities	4373	9226	18105	25494	28312	20265	105776
20-50	756	1492	1877	2704	2575	2145	11549
50-100	476	593	1369	2213	1825	1462	7938
100-500	545	1552	1898	7407	1514	3506	16422
500+	2596	5589	12961	13170	22399	13152	69867
Total Intercensal Growth	10777	18149	23075	25837	27915	22960	128713

Residential Area	Relative Population Growth By Period and Residential Area						
	1940-50	1950-60	1960-70	1970-80	1980-91	1991-2000	Total 1940-2000
Rural area	59.4	49.1	21.5	1.3	-1.4	11.7	17.8
Total Urban localities	40.6	50.8	78.5	98.7	100.1	88.3	82.2
20-50	7.0	8.2	8.1	10.5	9.2	9.3	9.0
50-100	4.4	3.3	5.9	8.6	6.5	6.4	6.2
100-500	5.1	8.6	8.2	28.7	5.4	15.2	12.7
500+	24.1	30.8	56.2	51.0	80.2	57.3	54.3
Total Intercensal Growth	100%	100%	100%	100%	100%	100%	100%

Source: IBGE, Demographic Censuses. Author’s calculations.

(\*) "Urban" refers to localities of 20,000 or more inhabitants: "Rural" includes the remainder of the population.

Note – Highlighted figures are provisional

Indeed, most *absolute* growth throughout the period was occurring in progressively larger cities and metropolitan areas (Table 6). During the 1940-50 period, rural areas and small localities having less than 20,000 inhabitants still accounted for 59% of the country’s total population growth, despite the intense pace of urbanization observed at the time. The contribution of rural areas to total growth declined drastically in the 1960s and 1970s, and actually became negative in the 1980s. It is surmised that an important part of this decline has to do with the massive international migration that occurred as a result of the economic

crisis in the 1980s (Carvalho, 1996). When viewing the entire sweep of population increments in Brazil over the 1940-2000 period, it can be observed that rural areas made up 17.8% of the country's growth, while urban areas accounted for 82.2%.

### **Overview of Brazil's Urban Explosion**

To recapitulate, Brazil's precocious urban transition can be attributed to a combination of factors. In the first few centuries, the model of settlement imposed on this huge country by the Portuguese colonizers, the concern with defense, the variety of riches that the internal regions of the country yielded for exploitation at different historical moments, and the dominance of the landowning classes led to the creation of a strong but geographically-scattered and disconnected arrangement of cities along the coastline. The abolition of slavery, the induction of immigration, the modernization of productive processes and the emergence of new relations of production in a vastly successful coffee cycle in the state of São Paulo all helped to create a dynamic new growth pole which would set the stage for a rapid urban transition that began in the last decades of the 19<sup>th</sup> century.

The economic crisis of the 1930s and the consequent debt crisis triggered a switch to import-substituting industrialization. In this context, the stimuli of war-time production and of State intervention in key sectors, including transportation and communication, later combined with the acceleration of demographic growth to build up an intense process of urbanization and urban growth that persisted for half a century. The conservative approach to agricultural modernization that was adopted by the technocracy of the military regime provided a particularly prolific stimulus to urbanward migration during a time of peak demographic growth.

Taken altogether, Brazil's urban transition was established on the basis of a multi-nucleated urban system inherited from the colonial period and the rise of a more modern dynamic growth center located in the São Paulo-Rio de Janeiro area. Import-substituting industrialization founded on the dynamism of the economic region dominated by the city of São Paulo served to integrate these two systems. Despite political discontinuities, the model was reinforced throughout the entire 1930-80 period and was at the root of profound social, economic, political and demographic transformations.

Since migrations flow preferentially towards the more dynamic regions, it was inevitable that the Southeast region, in which São Paulo and Rio de Janeiro are located, showed the fastest growth. But changes affected the entire country. The upshot was the early and rapid transformation of a rural/agricultural nation into an urban/industrial one. However, as will be seen in a later section, this extraordinarily rapid transformation left profound scars on Brazilian urban society, some of which could have been avoided had a different approach to urban growth been adopted.

In concluding this section, it is interesting to observe that, paradoxically (though understandably), explicit government opposition to urbanization and to population concentration and its increasingly tangible negativities grew rapidly, in consonance with the rhythm of urban growth, throughout the period. A variety of explicit measures, from roadblocks to integrated migration policies were conceived for this purpose. Various

attempts were made to siphon off migration to unoccupied and undeveloped rural areas, first to the Parana frontier, then to the Center-West region, and finally to the Amazon region. Unfortunately, the relative attractiveness and absorptive capacity of the land in each succeeding frontier was proportionately less significant, when compared to the growing stock of potential migrants. Indeed, the last wave of frontier colonization, directed to the Amazon region, actually generated a much larger growth in urban, rather than rural, population.

The inability to control population movements and the resulting swell of urbanward migrants generated both opposition by urban administrators as well as a series of policies and programs aimed at reducing the negative impacts of this rapid growth. These will be discussed briefly in a later section of this paper.

### **3. The Surprise of the 1980s: Declining Urban Concentration**

The trend towards ever-increasing rates of urban growth and increasing concentration in larger cities was so firmly entrenched in the Brazilian landscape after a half-century dominated by these processes that the results of the 1991 Census – which showed a significant decline in urban growth rates, especially in the largest cities -- took the country by surprise. There was even an outcry from mayors throughout the country who vilified the national census bureau for its alleged gross underestimations. Since federal funds for municipalities are apportioned according to population size, and since previous trends had continuously shown growth and concentration, local politicians were expecting another demographic windfall and were dismayed with the figures showing deceleration of growth.

Tables 2 to 6, shown in the previous section, all attest to the remarkable dropoff in rates of urban growth and concentration after 1980. The overall annual rate of urban growth was cut from 4.2 to 2.6 between the 1970s and the 1980s. The reduction was significant in all city size classes. The decreases persisted during the more recent intercensal period, with practically all city size categories showing another important drop in growth rates during the 1990s. True, the number of cities continued to grow, and the absolute increases in urban population, during both the 1980s and 1990s, continued to be impressive, but this was increasingly attributable to demographic inertia and was increasingly confined to the urban periphery of larger cities. The frenetic pace of urbanization and concentration which had characterized the previous five decades had clearly declined.

In addition to the striking decline in rural-urban migration and urban growth rates, the post-1980 period presented a notable reduction in the trend towards concentration of the urban population in ever larger cities or, “metropolization” of the Brazilian population. As shown in Table 7, during the entire 1940-70 period, and even during the 1970s, the nine cities that are officially defined as “Metropolitan Regions” presented rapid rates of growth and absorbed a huge proportion of total national growth. Thus, during the 1940-70 period, these nine Metropolitan Regions (MRs) grew at a rate of 4.54% per annum and accounted for 34% of national growth. Although their collective rate of growth declined somewhat in the 1970s, as was inevitable because of their larger size, their participation in national population growth swelled to over 40%.

Table 7, Rate of Growth and Participation in National Population Growth of Metropolitan Regions, Brazil, 1940-70, 1980-91, 1991-2000

Metropolitan Region	Annual rate of Growth				% of National Population Growth			
	1940-70	1970-80	1980-91	1991-2000	1940-70	1970-80	1980-91	1991-2000
São Paulo	5.64	4.46	1.88	1.70	12.6	17.2	10.2	11.0
Rio de Janeiro	3.71	2.45	1.26	1.54	8.8	7.3	3.7	6.3
Recife	3.99	2.74	1.22	2.32	2.4	2.1	1.8	2.8
Belo Horizonte	5.47	4.70	2.42	2.46	2.5	3.7	3.0	3.7
Porto Alegre	4.48	3.84	2.16	1.73	2.2	2.8	2.7	2.2
Salvador	4.19	4.43	3.04	2.40	1.6	2.4	2.6	2.6
Fortaleza	4.36	4.29	2.67	2.67	1.4	2.1	2.6	2.7
Curitiba	4.30	5.80	3.03	3.46	1.1	2.4	2.0	3.1
Belem	3.93	4.30	3.43	3.37	0.9	1.4	1.4	1.7
<b>All Metro Regions</b>	<b>4.54</b>	<b>3.79</b>	<b>1.99</b>	<b>2.00</b>	<b>33.4%</b>	<b>41.3%</b>	<b>30.0%</b>	<b>36.2%</b>

Sources. IBGE, Demographic Censuses, *apud* Baeninger (2004) for 1970-2000 data, and Martine (1994) for 1940-70 data.

As of the 1980s, however, both the growth rates of these great cities, as well as their participation in overall population increase, plunged drastically. Thus, the growth rate of the category dropped from 3.79 to 1.99% per annum from the 70s to the 80s, and its participation in national population growth slipped from 41 to 30%. The drop was particularly noticeable in the national economic capital of São Paulo, whose growth rate declined from 4.46 to 1.88% per annum, and its participation in total growth from 17 to 10 percent. The 1990s did present some recuperation in the level of participation of metropolitan regions in national growth, particularly in Rio de Janeiro, Curitiba and Recife, but their overall growth rate remained the same as in the 1980s.

The next pages will address some of the main causes of this abrupt change in rates and levels of urban growth. They will focus mainly on three factors: rapid fertility decline, the impacts of the profound economic crisis that began in the late 1970s, and the broader secular process of deconcentration of economic activity from the dominant pole of São Paulo.

### a) Fertility Decline and The Components of Urban Growth

From a strictly demographic standpoint, it would appear that Brazil has reached a stage of maturity in relation to the urban transition. The comparison of urban growth rates with those of the total population in Table 4 had made it clear that there is a correlation between the two. Urban growth rates were greatest when natural increase was at its highest point in the 1950s and 1960s, and began to drop when natural increase declined. This obviously indicates that one needs to look at Brazil's rapid fertility decline in order to understand the downward shift in growth rates.

The fact is that Brazil has experienced a remarkable drop in fertility decline the last 40 years. Its TFR (Total Fertility Rate) fell from a high level of 6.3 in the mid-60s to a below-replacement level of 1.8 in 2006, according to the latest DHS data (Alves, 2008). Despite

the absence of widespread family planning programs throughout most of this decline, the speed of the reduction to below replacement-level fertility in Brazil surpasses that of several countries that have had aggressive family planning programs. Implicit, rather than explicit, policies are deemed to have had the largest impact on this spectacular decline (Martine, 1996).

The reduction occurred during a period of far-reaching social change that covered both periods of rapid economic growth, as well as of economic and political crises. Government-induced modernization, begun in the 1950s and speeded up in the 1960s, eventually had an important impact on people's motivation to control fertility and on their ability to do so. Institutional changes in the areas of health and security, as well as of communications, catalyzed other key influences. Rapid urbanization itself can be cited as a major factor that accelerated many other traditional determinants by reducing the incentives for large families and increasing disincentives to unlimited reproduction (Martine, 1996).

The rapid fertility decline affected urban growth in two ways. First, although fertility rates remained higher in rural areas, they eventually did decline significantly in all regions and parts of the country; this helped to reduce the stock of potential rural-urban migrants, and thus induced a reduction in the size of the migrant flow to cities. Second, the decline was responsible for reducing rates of natural increase in urban areas – not only of the native population, but also of the migrants, who came to the city with higher patterns of fertility and a disproportionate number in reproductive age groups.

Although the data that would be necessary to carry out a satisfactorily accurate analysis of the evolution of the different components of urban growth over time are lacking, some preliminary estimates might help illustrate the nature and significance, if not the exact dimensions of recent changes. Since such analyses require data on fertility and mortality, and since, as explained above, these are only available in relation to officially-defined rural and urban areas (and not city size classes), the rough estimates provided here refer only to the “official” urban population. Obviously, such estimates are made even more imprecise by the fact that some unknown part of all urban “growth” comes from the reclassification of rural areas as “urban”. In any event, this proportion of overall growth can safely be assumed to be relatively small in comparison to the relative contributions of rural-urban migration and natural increase to city growth.

According to these admittedly rough estimates, rural-urban migration figured as the primary source of urban growth during the 1950-80 period, with its contribution hovering slightly above 55% in all three decades. However, during the 1980s, the situation was dramatically inverted and the contribution of rural-urban migration dropped to less than 30%. The impact of the severe economic crisis of the 1980s undoubtedly affected, *inter alia*, different patterns of migration, including a significant increase in international migration, as mentioned earlier. Although the role of rural-urban migration picked up slightly in the 1990s, it still accounted for only one-third of all urban growth.

Overall, the role of natural increase in cities has grown in the last few decades and will inevitably become predominant in the future, despite lower urban fertility. Two other factors are at play here: the reduction in the size of the rural stock (from 41.0 million in

1970 to 26.9 in 2000); and, the greatly increased size of the urban population, composed both of natives and a large number of former migrants (from 52 million in 1970 to 138 million in 2000) whose natural increase, even at low and decreasing levels of fertility, has a larger effect.

Table 8 – Estimates of the Relative Contributions of Rural-Urban Migration and Natural Increase in Urban Localities to Urban Growth, Brazil, 1950-2000\*

Period	Total Increase in Urban Areas (in 000s) (A)	Estimate of Rural-Urban Migration (in 000s) + Reclassification (B)	Natural Increase (in 000s) (A) – (B)	% of Growth due to Rural-Urban Migration + Reclassification	% of Growth due to Natural Increase
1950-60	12521	7000	5521	55.6	44.4
1960-70	21786	12000	9786	55.1	44.9
1970-80	28351	16000	12351	56.4	43.6
1980-90	30455	9168	21287	30.1	69.9
1990-2000	26963	9484	17479	35.2	64.8

Sources: IBGE, Demographic Censuses and Sources Cited in Table 3.

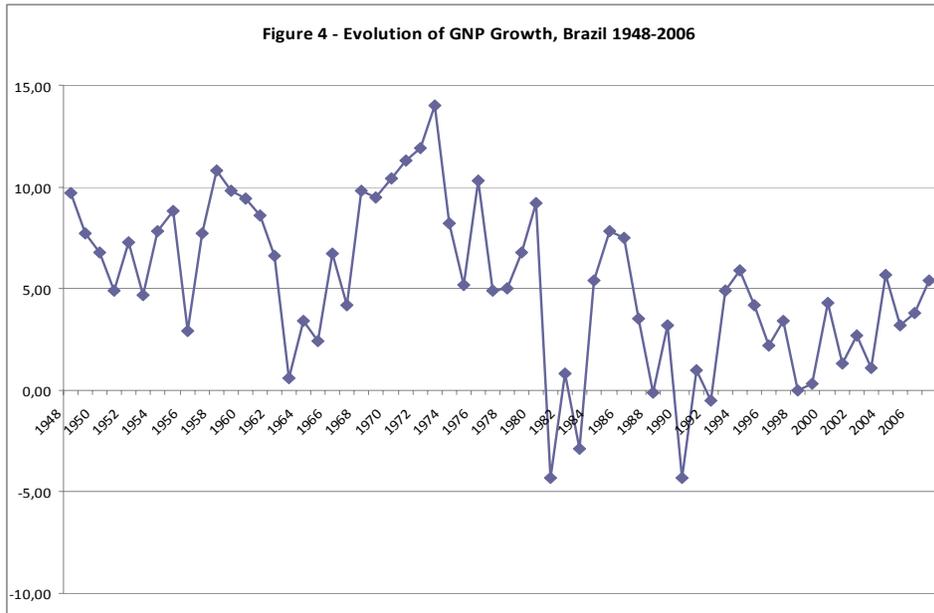
\* - “Rural” and “Urban” defined here in relation to the official Census definition

### **b) The Lost Decade and its Sequel: Economic Crisis and Urban Growth**

Brazil had experienced extraordinary economic growth, termed as an “economic miracle” during the 1968-74 period. During that period, the abundant flow of cheap external capital had prompted the military government to borrow heavily in order to improve the country’s infrastructure and to integrate its farthest regions. The oil crisis following the Yom Kippur war, however, permanently altered the country’s economic trajectory. The steep hike in international interest rates after the second oil shock, at the end of the 1970s, undermined the economy of various debtor countries, including Brazil. From then on, Brazil’s external debt grew exponentially for many years, until the country was finally able to reduce that burden in recent years.

Industrial expansion was severely curtailed in the early 1980s, not only because of the crisis but, *inter alia*, because financial speculation became more lucrative than production. Inflation soared and Brazil was plunged into a lengthy recession and stagnation. In 1981, for the first time in recorded history, Brazil’s GNP registered a negative rate of growth (cf. Figure 4). Over the entire decade, GNP growth averaged a modest 1.5% per annum – lower than the average annual population growth for the period.

During the 1983-93 period, the country changed its currency five times, implemented several different indices to measure galloping inflation and repeatedly substituted finance ministers who promoted the adoption of nine different economic stabilization programs. This succession of negative trends and futile experiences with stopgap measures during the 1980s earned it the name “The Lost Decade”.



Source. IBGE, Séries Estatísticas, Contas Nacionais.

[http://www.ibge.gov.br/series\\_estatisticas/exibedados.php?idnivel=BR&idserie=SCN02](http://www.ibge.gov.br/series_estatisticas/exibedados.php?idnivel=BR&idserie=SCN02)

On the other hand, the woes of the 1980s undoubtedly helped to trigger other transformations that would have longer-term implications, including the overthrow of the military regime and the re-introduction of democracy. In the economy, the prolonged crisis marked the end of the import-substitution cycle, the opening of the economy to the external market, the privatization of key State economic ventures, and the reduction of government long-term planning, intervention and participation in the economy. Crippling subsidies to inefficient firms were also cut down significantly and tertiarization became commonplace as a cost-cutting scheme. In brief, Brazil was painstakingly forced, with considerable prodding from international financing establishments, to globalize.

The desolate economic framework that prevailed in the 1980s inevitably had significant social impacts in terms of increased unemployment and underemployment, poverty and inequality. The larger dynamic metropolises of previous years were the most affected. The crisis transformed the structure of social and geographical mobility. Reductions in the rhythm of employment creation in the formal sector, especially in the industrial and construction sectors, as well as increasing job turnover rates, had a particular impact on the Metropolitan Regions (Januzzi, 2001:18-27). Contrary to previous tendencies, unemployment now affected well-educated individuals, and not just women, the young and the poor (Pochmann, 2000). This economic downturn caused by the crisis of the 1980s coincided with, and speeded up, the process of industrial de-concentration from São Paulo that had been initiated in the 1970s, a process that will be discussed in greater detail below.

In some ways, the social consequences of the crisis were even more extensive in the 1990s than they had been in the previous decade. Average economic growth was even slower than

it had been in the 80s (Pochmann, 2000). The powerful Metropolitan Region of São Paulo had unemployment rates that fluctuated between 10 and 16% in the early 90s. The 1991-92 recession had serious negative implications, not only for Metropolitan Regions but also for previously prosperous interior regions. Employment expansion occurred at an even slower rate than the average for 1980s, as labor-saving technologies were adopted and newly-globalizing firms pared down personnel at all levels (Januzzi, 2001:26-27). Formal sector occupations continued to lose ground while informal sector activities expanded. By the year 2000, Brazil had the third highest number of unemployed people in the world and only 54% of the occupied workforce received a salary (Pochmann, 2008).

The constriction of employment opportunities in the larger and traditionally more dynamic cities evidently had an impact on the preferential direction of migration flows. Anecdotal information at this time related many cases of downward mobility in metropolitan areas, with liberal professionals serving as cab-drivers and skilled industrial workers working as handymen or trying their luck on the agricultural frontier. This type of evasion appears to be confirmed by the analysis of census data (Matos and Ferreira, 2004).

Significant return migration flows, particularly to the Northeast, traditionally the major out-migration region, were also registered. Thus, the number of return migrants, as identified by the Census, increased by 127% between the 1970s and the 1980s, and by an additional 42% in the 1990s. Evidently, people preferred to lean on the solidarity of their home communities and on kinship networks during a time of stress, rather than continuing to fight for survival in a big city. Emigration to foreign countries had never been a significant phenomenon in Brazil before, but the 1980s witnessed the first important movements of people to the exterior. These have subsequently continued to intensify, especially to North America, but also to Japan and, more recently, to Europe as well.

In this context, smaller cities began to drain off some of the migratory movements that previously had been focused on the MRs (Figueiredo and Targino, 2001). Thus, the MRs had noticeably lower rates of growth than other smaller agglomerations, in both the 1980s and 1990s, although the difference between them decreased in the latter period, as shown in Table 9. The collective rate of growth of the nine MRs in the 1980s and 1990s was 2% per annum, while that of the 17 cities defined as “Metropolitan Agglomerations” was 3.31% per annum in the 1980s and 2.79% in the 1990s. Another 35 “Urban Agglomerations” also grew at a considerably faster rate than the MRs.<sup>11</sup>

Nevertheless, it should be observed that, despite the relative stagnation of growth in the MRs during these two decades, the nine MRs together still had a bigger absolute increase in population than did the sum of the 52 other large cities (16.7 million for the nine MRs and 15.4 million for the 52 Urban Agglomerations between 1980-2000).

It should also be noted that these figures on relative decline and yet significant absolute growth in the MRs actually tell two different stories for the post-1980 period. On the one hand, it is clear from Table 10 that the core municipality (termed “nucleus” in Table 10) of

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<sup>11</sup> The list of “Metropolitan Agglomerations and “Non-Metropolitan Agglomerations” was drawn up by IPEA/IBGE/UNICAMP (2002) and the data quoted here are from Baeninger (2004).

each Metropolitan Region – which had generally responsible for much of the city’s key economic activity and housed the majority of its more affluent population – grew at a much diminished pace during the 1980s and 1990s. Meanwhile, the peripheries or suburbs of the MRs continued to grow at a rapid pace.

Table 9 - Absolute and Relative Growth of All Metropolitan Regions and All Urban Agglomerations, Brazil 1980-91 and 1991-2000

Type (and No.) of Large Urban Area	Annual rate of growth (%)		Absolute Increase of Population (in 000s)	
	1980-91	1991-2000	1980-91	1991-2000
Metropolitan Regions (9)	2.00	1.99	8,387	8,290
<i>Nucleus of MRs</i>	<i>1.36</i>	<i>1.10</i>	<i>3612</i>	<i>2693</i>
<i>Periphery of MRs</i>	<i>2.79</i>	<i>3.68</i>	<i>4775</i>	<i>5597</i>
Other Metropolitan Agglomerations (17)	3.31	2.79	3,942	3,675
Other Non- Metropolitan Agglomerations (35)	3.21	2.33	4,367	3,435

Source: IBGE, Demographic Censuses, *apud* Baeninger (2004), Table 2; and Torres, 2002, Table 1, p. 149

In Brazil, the “suburbs” are called peripheral areas, a reference both to their geographic location as well as to the social condition of their residents who, with the exception of a few gated communities and other enclaves, are generally composed of low-income families. As shown in Table 9, these “peripheral” or “suburban” municipalities are still experiencing rapid growth as poorer people, both migrants and natives, flocked to outlying districts in search of cheaper housing. This “suburbanization” process had first been observed in the 1970s, but was greatly accentuated in the 1980s, when data from the 1991 Census showed large discrepancies in growth rates between core and peripheral municipalities (Martine, 1995:11; Cunha, 2002:41). This same pattern was consolidated in the 1990s when six of the nine Metropolitan Regions showed an increase of less than 1% per annum while peripheral municipalities in all nine Regions showed vigorous growth (Baeninger, 2004:4)

Table 10 confirms the existence of a wide income gap between nuclear and peripheral municipalities in all MRs in 2000. The importance of these differentials in rates of growth and in household incomes between nuclear versus peripheral municipalities cannot be overstated. On the one hand, they show that, despite the advanced stage attained by the Brazilian urban transition, it is still incomplete: considerable dynamic growth is still going on in key localities. On the other hand, the discrepancy between the household incomes of residents in nuclear versus peripheral municipalities, a gap which averages 56% for the nine MRs, is a primary indicator of the kinds of social challenges which still have to be met (Torres, 2002:150).

Given the social characteristics of these peripheral areas, they have been dubbed “urban frontiers” (Torres, 2004). These regions continue to receive migrants and to grow at high rates because they represent an escape valve for the poor; as could be expected, these are

the regions that struggle with precarious infrastructure, slum growth and informal settlements, environmental conflicts and violence (Torres, 2008). In a later section of this paper, it will be shown how these differentials condition, to a large extent, the nature and the size of social and environmental problems of current-day Brazilian cities.

Table 10. Average Income of Heads of Households in Nuclear and Peripheral Municipalities of Metropolitan Regions, Brazil, 2000

Metropolitan Region	Average Income*		Income Differential (%)
	Nuclear Municipality	Peripheral Municipality	
São Paulo	1,480	968	65.4
Rio de Janeiro	1,354	706	52.2
Recife	1,025	557	54.3
Belo Horizonte	1,316	575	43.7
Porto Alegre	1,500	680	45.4
Salvador	894	440	49.2
Fortaleza	847	352	41.5
Curitiba	1431	632	44.2
Belem	860	502	58.4
<b>All Metro Regions</b>	<b>1309</b>	<b>734</b>	<b>56.1</b>

\*In Reais (R\$) of 2000, considering that US\$1.0 = R\$1.8

Source: IBGE, Demographic Census of 2000, *apud* Torres (2002), Table 2 p. 149.

### c) De-concentration from the São Paulo Growth Pole<sup>12</sup>

Rio de Janeiro had been chosen to replace Salvador as the national capital in the 18<sup>th</sup> century. In addition to this distinction and the power it wielded from the presence of the Royal and Imperial Courts, the city also benefited from its perfect harbor conditions, its natural beauty and its defensive advantages. As such, Rio seemed destined to remain Brazil's top city. Nevertheless, Rio began to lose some of its ascendancy during the second half of the 19<sup>th</sup> century, when the dynamic coffee economy sprang up in São Paulo state. The city of São Paulo then became the hub of national economic activity and for the next half-century, Rio had to share supremacy as part of the Rio-São Paulo axis.

When the coffee economy was derailed and import-substituting industrialization began to integrate the national economy under a new productive system in the 1930s, the economic importance of Rio de Janeiro had begun to wane and the city of São Paulo became the undisputed economic and financial hub of the country. This position was continuously reinforced until the last quarter of the 20<sup>th</sup> century.

As shown in Table 11, this ascendancy of São Paulo state and of its capital was clearly reflected in demographic concentration during the 1940-70 period. In that era, the state of São Paulo had a faster urban growth than the rest of the country and its cities accounted for exactly half of the country's absolute increase in urban population. The MR of São Paulo, in turn, accounted for more than two-thirds of the state's absolute urban growth in that

<sup>12</sup> The story of deconcentration from São Paulo has been documented and analyzed in a vast body of literature, including, *inter alia*, Azzoni, 1986; Pacheco, 1998; Negri, 1996; Diniz, 2000 and 2002. This section summarizes main trends and relates them to demographic processes in the period.

period, despite the relatively developed urban network that the state had already established. At the peak of regional concentration in 1970, the state of São Paulo, with only 2.9% of the national territory and 19% of its population, accounted for 39% of the country's GNP and 58% of its industrial production – 78% of which was concentrated in its MR (Diniz, 2002:248).

Table 11 – Absolute and Relative Growth of the Urban Population, Brazil and São Paulo 1940-2000\*

Categories	Annual Rate of Growth (%)				Absolute Increase (in 000s)			
	1940-70	1970-80	1980-1991	1991-2000	1940-70	1970-80	1980-1991	1991-2000
Brazil, urban population	4.5	4.2	2.6	2.2	19400	14309	27518	20265
São Paulo state, urban population	5.3	4.5	2.2	1.9	9684	8046	5506	4872
São Paulo MR	5.6	4.5	1.9	1.7	6569	4451	2856	2526
Other cities in São Paulo state	4.7	4.6	2.8	2.2	3115	4595	2650	2346

Source. IBGE, Demographic Censuses.

(\*) "Urban" refers to localities of 20,000 or more inhabitants: "Rural" includes the remainder of the population.

Although initially it went unnoticed, a gradual process of industrial de-concentration from the São Paulo MR began in the late 1960s and was intensified in the 1970s. Regionalized national accounts for the period showed that São Paulo's relative participation in the country's GNP fell for the first time between 1970 and 1980. These apparently minor changes did not generate a great deal of attention at the time, among other things because the São Paulo MR continued to grow demographically at a rapid pace, especially in absolute terms. Indeed, during the 1970s, the state of São Paulo increased its share of national urban growth to 56%; some 55% of that growth was concentrated in the MR of São Paulo. However, the trend toward deconcentration was beginning to intensify. Altogether, between 1970 and 2000, the MR of São Paulo saw its share of industrial production fall from 43 to 25 per cent (Diniz, 2002:256).

In retrospect, such changes can basically be attributed to the exercise of economic logic and to the need to conquer new markets. Geopolitical reasons had prompted the military government to offer subsidies aimed at occupying and integrating the entire country and, to this purpose, helped to create and protect industrial zones in different regions. Entrepreneurs simply took advantage of the cornucopia of fiscal and other incentives being offered by the government to establish subsidiary plants in different parts of the country. Push factors may also have been involved in some of the entrepreneurial decisions to move out, in order to avoid the growing diseconomies of scale in a huge city whose infrastructure and administrative problems were rapidly increasing. The growing power of labor unions in São Paulo's industrial district and, later, the impositions of environmental controls, probably also contributed to making other sites more appealing (Martine and Diniz, 1997).

As a result of the ensuing changes, the perimeter of the dominant pole was extended through the sum of individual entrepreneurial decisions, whether to take advantage of subsidies or access to raw materials, cheaper land and manpower, or better living conditions. A significant part of this extension occurred to regions within the State of São Paulo: cities such as Campinas, Sorocaba, São José dos Campos and Santos suddenly made huge economic and demographic steps.

Nevertheless, the São Paulo MR remained the country's economic center, inasmuch as it continued to concentrate much of the country's modern administrative, financial, educational and cultural services (Diniz, 2005:172). In short, although deconcentration did spread economic growth over a wide radius, one might consider the recent process as the expansion and strengthening of the São Paulo growth pole and its area of influence rather than deconcentration.

The demographic implications of this deconcentration, however, were not immediately perceived.<sup>13</sup> During the 1970s, when the process was already well underway, São Paulo state increased its share of the national population from 19 to 21 percent and the MR of São Paulo accounted for 17% of national growth (cf. Table 11).

Perception of the relative decline of the role of urban demographic growth from São Paulo state, and especially of the São Paulo MR, in national urban growth, only became clearer when the 1991 Census results were published. These data caused quite a stir. More than half of São Paulo's municipalities registered negative rates of internal migration in the 1980s (Pasternak and Bogus, 2005:22). Moreover, the participation of the state of São Paulo in national urban growth fell to 20%, from the 56% attained in the 1970s.

The process of industrial deconcentration came under greater scrutiny and researchers realized that the signs had been visible for some time – at least since the mid 1960s. The question then became – why did this industrial deconcentration take so long in generating a commensurate slowdown in demographic growth? Even a closer look at the demographic data for the 1970s would have failed to provide a clue. Up until 1980, the growth rate of cities in other states had been inferior to those of São Paulo. Although other cities in the state of São Paulo had been catching up to the Metropolitan Region in terms of rates of growth, this had to be expected in view of latter's very size.<sup>14</sup>

In short, the dislocation of the locus of demographic growth occurred at a slower pace than the redistribution of industrial activity. One possible reason for this is that migration patterns have a built-in inertia and tend to lag behind spatial changes in the distribution of economic activity. The previous 50 years of intense economic growth in the state and in the MR had undoubtedly created a certain aura of prosperity and expectations that its capacity to assimilate large numbers of workers would continue indefinitely. A complementary

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<sup>13</sup> It is worthy of note that in a 1991 publication, Vilmar Faria, one of Brazil's more clairvoyant sociologists, called attention to signs of industrial deconcentration from São Paulo – a process which had, in reality, already been going on for better than 20 years (Faria, 1991:118).

<sup>14</sup> The larger the city, the less its growth rate is affected by net in-migration, even though that may be of a huge dimension.

perspective is that the dislocation of industrial jobs is not what generates, *per se*, large numbers of jobs; it is only with the expansion of services and commercial activities that accompany the new-found wealth in a locality that the employment pool expands sufficiently to attract large numbers of migrants. Whatever the reasons for the time lag between industrial and demographic deconcentration, both trends are now well documented.

### **Overview of the Urban Maturation Process**

The foregoing section described how, as of 1980, a confluence of factors began to dampen the rapid rates of urban growth and metropolization that had marked Brazil for half a century. These factors coincided with, and contributed to, a major changeover in social, economic and political processes in the country. An era of rapid demographic growth was ended by an unexpectedly swift fertility decline; a military regime was supplanted by re-democratization initiatives; an economic model based on import-substituting industrialization was displaced by a more outward-looking system as the country was impelled into globalization; and, finally, the long-time concentration of industrial activity in São Paulo was dispelled as industrial growth poles multiplied throughout the country, but without really minimizing the economic dominance of that core city.

With most of its population now living in large but slow-growing cities, and with a well-developed and well-articulated network of cities throughout its different regions, Brazil can be seen as a developing country that has achieved a stage of maturity in its urban transition. Some 90% of the country's GDP is generated in cities (Da Mata et al, 2005a:2). With a total of 660 cities (with 20,000 or more inhabitants) well distributed over the entire territory, with 115 cities with 100,000 or more inhabitants, and with 18 agglomerations of more than one million residents, Brazil has, at least on paper, a head start in competing with other developing countries in the current globalized economic framework.

To what extent this early urban transition will actually help the country succeed or speed up results in its quest for development is still uncertain. Recent studies would indicate that the specific conditions and the policy framework to minimize negative externalities in each city will play an important role in determining its development trajectory. On the one hand, the stage of rapid growth has not been completely brought to a close, as witnessed by still rapid growth on the urban peripheries of MRs and other urban agglomerations. On the other, the social and environmental problems of urban areas have not been supplanted, as will be seen in the next section.

### **THE SOCIAL AND ENVIRONMENTAL DETRITUS OF AN ABRUPT URBAN TRANSITION WITHIN A CONTEXT OF INEQUALITY**

The main argument to be made in this section is that many environmental challenges facing the population of Brazilian urban areas are closely linked to social issues and that these interconnected problems can be attributable, to a considerable extent, to the lack of a proactive stance with respect to urban growth and, particularly, to the neglect of the housing and infrastructure needs of the poor. This inattention not only reflects a lack of

vision on how to deal with urban growth, but it also derives from, and is consistent with, a social structure that has historically been more attentive to the needs and interests of the powerful and privileged than attuned to the problems of the majority.<sup>15</sup> This section will begin with a focus on urban environmental issues and relate these to their political underpinnings and social implications.

### **Main urban environmental issues in Brazil**

Most international attention directed at Brazilian environmental issues in recent years has focused on Amazonian deforestation and on agricultural expansion in the savannahs, particularly with respect to their implications for the preservation of biodiversity and for global climate change. Some consideration has also been directed at the negative implications of industrial processes, but without the same intensity of purpose, except in the case of specific disasters such as Cubatão (cf. Hogan, 1995). More recently, intensification of world attention on the probable impacts of global climate change have spurred efforts to evaluate the probable impacts on coastline cities (Nacaratti, 2008).

Although Brazil has, by far, the largest industrial park in Latin America, its levels of pollution and greenhouse gases still do not compare with developed countries or with developing countries such as China. It was recently pointed out, for instance, that the megacity of São Paulo in Brazil, despite being four times larger than San Diego, produces one-tenth of the latter's greenhouse gas emissions (UN Habitat, 2008:xiv). Moreover, Brazil's cities are still denser and have less automobiles per capita than do those in developed countries. Deficiencies in access to piped water, sanitation and waste removal are significant, but are not as critical as in most other developing countries. However, the lack of a strategic vision and the absence of an integrated and proactive approach to urban growth does unnecessarily heighten some urban environmental management problems (cf. Carmo, 2002:172-176).<sup>16</sup>

This section will be less concerned with the broad picture of sustainability, or with particular urban environmental management problems, than with how specific urban environmental issues affect, and are affected by, the social situation of poor urban populations and what their joint implications are for making the development outcomes of the urban transition.

On the broadest level of interest in urban environmental issues, the spread of the urban blot is a prime concern (Hogan and Ojima, 2008). Indeed, the enormous growth of urban areas in Brazil over the past 80 years has inevitably meant encroachment upon previously open land (that may or may not have had ecological value) and/or agricultural land. Nevertheless, all urban areas (official definition) only occupy some 95 thousand km<sup>2</sup>,

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<sup>15</sup> As commented by a recent former Undersecretary in the Ministry of Cities – “... our country is primitive from this perspective and still marked by our slavocratic heritage, wherein it is felt that housing for poor people has to remain on the periphery. Our elite still has this vision and the State machinery is geared to perpetuating it.” (Rolnik, 2008)

<sup>16</sup> For instance, the availability of water per capita is among the highest in any large country, yet Brazil's two most powerful industrial areas in the state of São Paulo, located in the Upper Tiete Basin and the Piracicaba River Basin, respectively, come into potential conflict for water during every dry period (Carmo, 2002): 170.

which represents 1.12% of the national territory; urban density is 1,453 thousand inhabitants per km<sup>2</sup>, and 2,353 per km<sup>2</sup> for larger urban agglomerations (Ojima, 2007:283-4). Evidently, cities that sprawl—such as Brasília—consume more land per person than those that develop compactly. Overall, however, in light of Brazil’s land area and extension, the land area occupied by urban localities is not yet *per se* a primary issue, especially when one considers that the rather generous definition of “urban area” in the data utilized for this calculation overestimates the actual territory taken up by cities.<sup>17</sup>

Nevertheless, the way this land area is being occupied does bring cause for future concern. Urban sprawl has unquestionably been accentuated with the rapid expansion of the Brazilian automobile industry, especially as automobile ownership has multiplied in the last two decades. Low-density urban growth inevitably leads to higher energy costs as well as to higher per capita costs in infrastructure and transport networks (World Bank, 2006, Vol 1:62-63). It can also lead to the degradation of valuable natural resources.

Nevertheless, middle-class automobile-based suburbanization does not have nearly the same significance as it did in the classic urban sprawl of the United States. Indeed, despite the spread of gated communities in urban suburbs, most peri-urban growth in Brazil stems from the extension of low-income residential areas into the periphery. This too has distinctive and important environmental implications, but of a different nature. For instance, in the MR of São Paulo, where these issues have been analyzed in greater depth, expansion into peri-urban areas is transforming land use at an alarming rate, inducing degradation of the natural environment, the contamination of watersheds and the invasion of parks and other environmentally-protected areas, including the famously endangered Mata Atlantica. It also requires the continuous extension of the entire range of public services to distant peri-urban areas at high economic and energy costs (Torres et al, 2008).

As we will see in the policy section of this paper, “master plans” have been part of the discourse and reality of urban planners and policymakers for some decades, yet the practical fact is that the pace of urban growth has outstripped land use planning. Ideological and political opposition to urban growth has led more often to setting up obstacles to expansion than to planning ahead for it. Land use planning from an environmental standpoint is even more unusual. (For the rare opposite case of Curitiba, see Box 2; even here, however, planning for the land and housing needs of the poor was not a priority). With few exceptions, urban growth has occurred with minimal consideration of “...the physical environment, topography, hydrology, etc; rivers have been closed into pipes and covered by roads; very rarely have formal architectural patterns reflected concerns with the climate or use of energy; and applied research has been very timid in actually coping with profound social differences... criteria of functionality and efficiency have always prevailed...” (Costa and Monte-Mor, 2002:134)

The lack of a shared proactive vision for urban growth is commonplace, despite a generally professed faith in Master Plans. Unplanned and un-oriented rapid urban growth undoubtedly accentuates the problems of environmental management and inevitably favors the local degradation of natural resources, such as land, water and vegetation. Within this,

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<sup>17</sup> This figure is calculated on the basis of areal data provided by the demographic census (Ojima, 2007:283).

inattention to the housing needs of the poor lies at the root of many of Brazil's social and environmental urban problems.

### **Box 2 – Brazil' Model City: Curitiba**

At least one large Brazilian city – Curitiba - is repeatedly cited as a model of good environmental management. Without purporting to provide a detailed analysis of how this came about, a few main features of the city's recent trajectory may illustrate some key lessons.<sup>18</sup> Curitiba's history and rapid growth is relatively recent. Its peak period of expansion coincided with the era of faith in the capacity of the State planning framework, yet an integrated urban plan for the city was the result of a public contest in the 1960s. Its actual implementation only began after widespread public discussion in the early 1970s. Political continuity in the management of the plan was a critical factor; at the same time, despite the authoritarian nature of the military regime at its outset, public involvement increased to the point where programs practically require popular support for success.

The key ingredient of the original Curitiba Master Plan was the integration of traffic management and land use to limit concentration in the central city. Implementation of the plan also focused on physical, cultural, economic and social transformation of the city. Explicit "environmental" issues were not at the forefront of the original plan but have undoubtedly assumed increasing weight over time as environmental awareness blossomed in the 1980s.

The entire city is zoned according to two parameters: land use and density. In practice, urban growth has been encouraged along five main axes. Land use legislation, supported by prior acquisition of adjacent lands by the municipality, has encouraged high density occupation along each axis. These planned axes also facilitated the implementation of an innovative public transport system which has been widely acclaimed and copied. Express bus systems on exclusive busways provide a cheap and flexible system of transport which has encouraged public over private transportation.

Curitiba has a planned industrial city which houses most of the city's non-heavy industry; two-fifths of the land area in the industrial area is green space. Again, prior acquisition of the land area (partly through expropriation) for the proposed industrial site was a key factor in its success. Increasing concern with environmental issues has been a central feature of Curitiba's recent history: local environmental regulation and enforcement maintains the early high standards. Innovations in garbage control and recycling have combined environmental concerns with job-creation and income-redistribution policies.

Altogether, the Curitiba experience suggests that pro-active, participatory and imaginative management of urban growth and structure can bring significant rewards in terms of the social and environmental quality of life of the city's population. Early explicit decisions regarding the spatial structure and land use which best suit the city's needs are always better than later decisions. Emphasis on the public rather than private good, such as in the area of transportation, was also decisive in making the city more habitable and sustainable. A key tool for implementing the basic design was the control of critical land areas through early acquisition, either through purchase or expropriation.<sup>19</sup>

<sup>18</sup> The following discussion of Curitiba's trajectory is largely based on Martine (1998) and on references cited therein.

<sup>19</sup> This coincides with the recommendations made by Angel (2008) with respect to planning for inevitable urban growth.

Given the practical difficulties of such acquisition, strong political support has to back land use decisions. Paradoxically, in the case of Curitiba, early moves on land use were facilitated by an authoritarian and technocratic regime. Nevertheless, popular participation and support were critical in the initial stages as well as in the progressive improvement and updating of the original design. Rising environmental awareness in a later stage gave new vitality and content to such initiatives.

The one domain that does not provide a model for other developing cities is exactly that of land and housing needs of the poor. Various schemes, starting with peripheral “rural villages” for recent migrants, have been attempted. However, these have basically lacked the critical component which has served the city so well in other areas - the planning of land use. Consequently, Curitiba, like other Brazilian cities, has a significant number of precarious and informal lower-income settlements.

Thus, even in Curitiba, Brazil’s acknowledged model city, the combined efforts of technocratic planning and public participation have not been effective in dealing explicitly with the housing needs of the poor. One would have to delve more closely into the nature and composition of the participatory process in order to see whether the interests of lower-income people were effectively being represented in the vaunted participatory efforts. Even then, it is questionable whether the kind of proactive and long-term vision that is needed to deal effectively with the land and housing needs of the poor would have effectively surfaced.

### **The sequels of chronic inattention to the housing needs of the poor**

A more detailed analysis of the housing shortage in Brazil and its evolution over time would take us far afield in this paper. Quantifying the relative levels of housing shortages at different periods of time is also frustrating, due to lack of data and variability in definition. Moreover, rapid fertility decline, changes in family structure and an increase in the number of small families and unipersonal homes have altered the rate of increase of the demand (Cavenaghi and Alves, 2008). A much-quoted estimate by the João Pinheiro Foundation places the recent housing shortage (including deficient or precarious housing) at around seven million units; most of this is concentrated in the population earning less than three minimum wages (Malta, 2007). However, the number of empty housing with good services and infrastructure in the center of larger cities may be even higher than that (Rolnik, 2008; Cavenaghi and Alves, 2008) due to speculative practices in real estate.

For present purposes, suffice it to say that there is consensus around the fact that a large population of lower-income people lives in inadequate homes. This deficit increases every year. Thus, the World Bank estimates that annual household formation reaches about one million a year and that the formal housing market produces between 300,000 and 400,000 units a year. The difference evidently has to be made up by self construction and informal markets (World Bank, 2006, Vol. 1:52).

Some measure of the inequality which characterizes the housing sector is provided by the observation that, in São Paulo, the majority of investments in residential construction are located in areas where population is actually decreasing. Torres et al (2007) observe that private investments in the order of ten billion dollars were made in residential construction

in that city between 1995-2003. These were located in areas that had lost considerable population between 1991-2000. In other words, there is little correspondence between demographic need and production of housing. All construction carried out by private enterprises were aimed at higher-income populations; the few units advertised as having less than 50m<sup>2</sup> were actually destined to become apart-hotels in rich neighborhoods.

Such disparities are chronic in Brazilian cities. A critical and obvious fact that fails to receive due attention is that, in all Brazilian urban growth processes, whether due to rural-urban migration or natural increase in the cities, poor people represent the largest social segment, if not the outright majority.<sup>20</sup> Despite the size of this contingent, it has historically had to fend for itself in tough housing markets. The failure to plan ahead for their needs inevitably forces the growing masses of urban poor to fend for themselves in squatter settlements and other informal communities. Poor people end up building their makeshift dwellings in whatever locality they find available, giving rise to the world-known *favelas* or slums that dot the hillsides, riverbanks and other inadequate locations in Brazilian cities.

There are three forms of urban slums in Brazil: *cortiços*, *favelas* and *loteamentos*. Tenement style slums in collective buildings (*cortiços*) are generally found in older run-down central parts of cities, and have a long history in Brazil.<sup>21</sup> The first recorded *favelas* (precarious settlements, generally located near city centers, lacking in infrastructure and services) date from the late 19<sup>th</sup> century, on the hills of Rio de Janeiro. In São Paulo, the *favelas* only appeared during the 1940s, and proliferated after 1970 (Pasternak, 1999:275-277). Irregular and clandestine *loteamentos* (the irregular and often illegal sale of small private lots, usually in peripheral areas) are generally known as “informal settlements” and may also become classified as *favelas* or slums, depending in part on their location and characteristics. *Loteamentos* have become the primary form of access to housing in larger Brazilian cities: in most cases, the occupiers of these plots buy them from people who presented themselves as landowners.

The actual number of people in slum dwellings of different sorts is poorly estimated. The Brazilian Census Bureau reports that *favelas* exist in 28% of all municipalities surveyed and that these include some 930 thousand residences. This is acknowledged by experts to be a major undercount. Moreover, surveys carried out by different agencies in cities are notoriously divergent. For instance, estimates of the *favela* population in São Paulo, *circa* 1992-1993 varied between 1.0 million people in 1,800 *favelas* to 1.9 million people in 1600 *favelas*. What is beyond doubt, however, is that slum populations have a long history, that they have had very fast rates of growth and that interventions aimed at “solving” this problem one way or another have been generally ineffective.

Slums grow when the capacity of the formal housing market is limited and cannot accommodate an increase in overall housing demand (World Bank, 2006 Vol 2: 37-43). The housing sector has always been a preferential target of clientelistic policies in Brazil (Valença, 2007). Attention to the housing needs of the poor has been more of an

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<sup>20</sup> The arguments developed in the following paragraphs are based on UNFPA (2007) and Martine (2008)

<sup>21</sup> An 1886 government document estimated the number of inhabitants in Rio’s *cortiços* as between 46 and 49 thousand (Brasil, 1886:10).

afterthought. Smolka and Larangeira provide an interesting analysis of the various approaches made by policymakers to deal with the pervasive problem of slum growth and informal settlements.<sup>22</sup> “Some Latin American countries have had more than a century of shortsighted urban policies ranging from outright repression, removals and relocation to full recognition, large scale housing projects, serviced sites and basic services, on-site selective support to self improvements and direct public investments in settlement upgrading. These policies did not significantly alleviate the problem and, in many circumstances, further fueled the growth of informal settlements” (Smolka and Larangeira, 2008:100).

The common denominator of these approaches is that they are *ex post facto*. Despite several decades of rapid urban growth marked by slum growth, informal settlements have generally been treated as transitory phenomena that are expected to somehow fade away with development. In most cases, it was only after slums had been in existence for several decades, and after politicians perceived advantages in “solving” the problem of informal settlements, that concrete action was taken. The form that this solution takes has undoubtedly become less ruthless over time, as social movements and political participation have gradually obliged politicians to look beyond the advantages for the city of transforming these central eyesores into prime real estate by shunting favela residents out to the periphery. Nevertheless, the many intermediary solutions aimed at improving the plight of informal settlements, reflecting various degrees of good intentions, have never been able to minimally keep up with the demand for lower-income housing.

The idea that it might be cheaper and more effective to prepare for inevitable growth rather than try to correct after the fact has never made serious headway. Yet, a simple example provided by Smolka and Larangeira for the city of Curitiba, generally considered to be a bastion of good social and environmental practices, reveals the folly of relying solely on *post hoc* approaches. There, a recent study identified 13,136 households on irregular sites, representing some 2,8 percent of the city’s total population. “To resettle all these families in new subdivisions with basic urban infrastructure and 27m<sup>2</sup> houses would require an investment equivalent to almost twice Curitiba’s entire revenue from 2005 property taxes, that is, approximately US\$183 million. This same amount, if spent on new serviced land, would accommodate from 30,000 to 50,000 families on plots of 250m<sup>2</sup>” (Smolka and Larangeira, 2008:112).

On the other hand, providing ready-made residences for the entire growing contingent of poor people in cities is clearly not realistic. Yet, the way that the problem has been handled, through unregulated informal land markets, is ineffective and socially costly. It is a mistake to assume that poor people completely lack resources. But because they only have access to informal markets, they end up paying more for a square meter of land than higher-income groups. As noted by Smolka and Larangeira (2008:100) – “Contrary to conventional wisdom, informal land occupations are, by and large, the object of ‘regular’ market operations, widely promoted by so-called ‘pirate’ or informal developers. This is now a

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<sup>22</sup> “Informality refers to illegal (lack of proper tenure rights), irregular (non-compliance with urbanistic norms and regulations) and clandestine (not licensed) activities to access and occupy urban land, which typically lacks minimal services and infrastructure. Slums tend to accumulate all these attributes” (Smolka and Larangeira, 2008:111).

highly profitable business (out-competing formal developers) and the prevailing form of land acquisition...”

The prevalence of informal land markets and the way they operate also makes it much more difficult for poor people to eventually get access to infrastructure and services. The World Bank (2006, Vol 1:52) estimates that -- “Extending and upgrading a standard package of urban services to informal settlement costs three times the amount for low-end formal-sector development.” Slum upgrading programs themselves are much more costly in informal settlements.

To turn this problem around would require two initiatives that are admittedly difficult to implement in a society that continues to be marked by inequality and by privilege, and one that treats slums as temporary eyesores that will hopefully go away by themselves. First, distorted urban land markets would have to be regulated and poor people protected from the abusive practices of developers. This is a complex and recalcitrant subject that meets with much opposition from vested interests, but the main point is that cities need to level the playing field and to finance development by taxing increases in land values. Secondly, in a related move, the public sector should take a proactive stance with respect to future land needs for the poor. Most cities have land in good locations that could be built up but that is being held in speculation. Taxing increases in land values resulting either from public investments or from the redefinition of land uses towards more profitable ones would make more land available (UNFPA, 2007:41).

### **Intersection of social and environmental problems and their impact on the city**

The precarious housing conditions which the poor have to endure inevitably accentuate the gamut of urban environmental problems and these, in turn, contribute to the maintenance of sub-standard living conditions. Since governments will generally not service areas where land rights are unclear, informal settlements are rarely provided, especially during their formative years, with water, sanitation, transport, electricity or basic social services. Frequently, the pattern of occupation in informal settlements is haphazard and asymmetrical, making it difficult to provide vehicular transportation, or other types of services, even when decision-makers have an interest in dealing with these problems.

Such difficulties not only exacerbate the miserable conditions of the poor in urban areas, but ultimately have an impact on the quality of life and sustainability of the entire city. Lack of access to shelter and services is the starting point for a vicious circle of poverty. The poor live in areas that are far from schools, hospitals, public transport and job opportunities. Their daily living environments typically concentrate hazards and lack minimal access to clean water for drinking, cooking, washing and bathing, as well as to serviceable toilets and garbage collection. These conditions increase the spread of mosquito-carried epidemics, such as dengue and malaria, and multiply disease-causing germs, frequently leading to chronic digestive tract illnesses or cholera epidemics. Crowded environments help promote such contact-related diseases as measles and tuberculosis, in addition to diarrhoea.

Disregard for the land and housing needs of the poor also contributes to overall environmental degradation because it affects both ecosystem services as well as the city's ability to responsibly and effectively plan for sustainable growth. Having little choice but to invade stigmatised or off-limits terrains, the poor sometimes occupy ecologically-fragile areas and watersheds, thereby endangering the city's water supply and other ecosystem services. Deforestation to clear spaces for housing also results in flooding. Meanwhile, the occupation of urban floodplains and wetlands not only endangers the lives and possessions of the poor, it also increases the probability of flood damages to other parts of the city. By the same token, the invasion of steep slopes and the removal of tree cover increase the probability of landslides.

Detailed analyses of environmental and social vulnerability in the core of Brazil's richest city – the municipality of São Paulo – provide a good illustration of the problems faced by low-income populations. Almost 50% of all favelas in that municipality are situated on riverbanks, a large number of them subject to chronic flooding. Favelas situated on municipal land are, for the most part, located on steep hillsides subject to erosion. Some are also located on landfills and garbage dumps (Pasternak, 2000:284-5).

Alves (2007) divided up the municipality of São Paulo in three classes of areas according to the predominance of populations belonging to high, medium or low income categories. Analyzing the risk of environmental disasters (flooding or landslides) with GIS tools in each of these three sets of areas provided clear evidence that poverty and environmental risk are closely correlated. In 2000, some 28% of the 2.8 million people living in low-income areas resided in localities that are at risk of flooding or landslides. By comparison, the proportion of middle-income groups in such areas at risk was 15% and that of higher-income groups, 9%. Moreover, the data in Table 12 show that only poor regions are growing, and that their rate of growth is highest in areas at risk. Poor regions are growing, overall, at a rate of 3.67% per annum while the areas at risk within them have an annual growth rate of 4.81%. In contrast, middle-income and high-income areas are showing negative growth, except for the slow expansion of middle-income population in areas at risk.

In addition, the population living in areas at risk show lower levels of income and lesser access to piped water, sewage and garbage collection, as well as higher illiteracy levels (Alves, 2007:310-314). In short, fast-growing areas within the municipality of São Paulo are both poor and subject to greater environmental risk. This would indicate that, as land for informal settlements becomes scarcer, people are forced to occupy areas that are increasingly inadequate.

Such social and environmental shortcomings can undoubtedly affect the very functionality of a city itself. The lack of access to water, sewage or solid waste management systems in informal settlements pollutes rivers and ends up affecting the appearance, air quality and health of the entire city. This results in enormous health costs to deal with these impacts (Satterthwaite and McGranahan, 2007, p. 27). In addition to direct consequences on the health of poor people, the number of hours lost due to illness has severe consequences, both for the overall productivity of the labour force and for household income.

Table 12 - Population Growth by Income Groups and Environmental Risk, Municipality of São Paulo, 1991-2000

Type of Area	Absolute growth 1991-2000 (in 000s)				Annual Rate of growth 1991-2000 (in %)			
	Poor Regions	Middle-Income Regions	High Income Regions	Total	Poor Regions	Middle-Income Regions	High Income Regions	Total
Pop. in areas at risk	378	37	-17	398	4.81	0.56	-1.21	2.51
Pop. in non-risk areas	696	-163	-141	392	3.26	-0.41	-1.10	0.53
Total	1073	-124	-157	790	3.67	-0.26	-1.11	0.88

Source: Alves, 2007. Table 1, p. 307.

The spontaneous but sprawling haphazard settlement patterns that typify the invasion of urban lands by poor people also make it much more difficult to put basic infrastructure into place, including roads and pathways that would facilitate the free movement of residents. The sprinkling of such settlements throughout a city also creates hurdles for the design of effective mass transportation and increases the costs of implementing it. Continually adjusted improvisations that ineffectually attempt to accommodate the increasing flow of people and vehicles through narrow winding streets that bypass these sprawling settlements, not only consume enormous resources, but also contribute to energy waste and pollution.

Perhaps even more telling in today's context of globalized economic competition is the fact that the lack of attention to the land and housing needs of the poor is ultimately bad for business. In a classic vicious circle, it helps to trigger a series of perverse effects that ultimately affect the very ability of a city to be competitive and thus to pursue economic and social development. For instance, it disorganizes the functioning of land markets, pushes up land prices, and increases the difficulties of providing infrastructure and services (Smolka and Lorangeira, 2008). In turn, this affects the ability of the city to attract investments, to create jobs and to generate a better financial base for implementing improvements in the city.

Generating a stable investment climate that stimulates private sector investment and business development is as important at the local as at the national level. Some more specific issues that have been repeatedly cited in the recent development literature with reference to the urban context are: a) provision of quality infrastructure, such as communications and social and protection services; b) nature and plenitude of social and cultural amenities that affect the quality of the urban environment in terms of such things as green spaces, recreational facilities, restaurants and shopping, as well as schools and health care; c) an institutional milieu that protects individual rights and is tolerant toward diversity (Campbell 2003).

Studies on Brazil discussed in the next section (cf. Da Mata 2005a), indicate that improved governance and dealing effectively with such problems as local crime and violence enhances a city's economic success. Crime and violence have increased dramatically in Brazil during recent decades, particularly in large urban areas, and have systematically undermined human rights and equity. Some 50,000 homicides are estimated to take place every year. Deaths by firearms have surpassed traffic accidents as causes of violent deaths. Overall, homicides have become the third leading cause of death among men, and the leading cause among young males aged 15-39. Black men have particularly high mortality rates from violent causes (UNODC, 2005; Hughes, 2004).

Periodic surveys carried out in different cities reveal that a disturbingly high proportion of the urban population has been victim of some sort of crime in the previous year. Not surprisingly, a large proportion of the population feels insecure, leading to high levels of stress in daily life, to reduction of social contacts, to the backing of simplistic solutions, and to the justification of police abuse.

Although simple correlations between the conditions of low-income settlements and violence or criminality reflect a number of other intervening variables, the bottom line is that favelas and urban peripheries systematically show higher rates of assaults, aggressions, drug traffic and violence of all kinds, including domestic violence (Cardia, 2000; Hughes, 2004). Organized crime, especially drug traffic, is on the rise and engenders various types of violence. These gangs cause enormous social and economic damage, through assassinations, arms traffic, terror, fomenting addiction among children and adolescents, and by compromising the legitimacy and viability of Brazilian public institutions (UNODC, 2005). The drug trade often establishes itself in favelas and, in the process, promotes violence, irradiates criminal behavior and makes a travesty of the justice system. In some instances, it has also taken over neighborhood associations, corrupted the local economy and inhibited political participation.

The implications of these social ills transcend the limits of problems faced by local neighbourhoods or cities; they reflect on the nation's social fabric, its self-image, its external perception and, thus, its very insertion into the international economic community. In this framework, it inevitably affects the success of cities in their pursuit of competitiveness within the globalized economic scenario.

## **THE DETERMINANTS OF URBAN ECONOMIC SUCCESS**

The previous section highlighted some of the main social and environmental characteristics, as well as the problems derived from the Brazilian process of urbanization. Despite the advanced stage of the country's urban transition, the section highlighted the persistence of severe challenges in those domains. Urbanization generates riches and cities are responsible for most of the country's GNP, yet not all urban dwellers benefit from them. According to the ECLAC estimates, 26.9% of Brazil's urban population was below the poverty line in 2007, including 6.6% in extreme poverty.<sup>23</sup> Access to minimal services and to the benefits

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<sup>23</sup> (By comparison, 45.7% of the rural population were poor and 18.1% were in extreme poverty). Data obtained from ECLAC's website on February 9, 2009. <http://www.eclac.org/estadisticas/bases/>

of urban life is thus still a problem for more than one-quarter of Brazilian city dwellers. Settlement patterns, even during the recent period of slower demographic growth, are contributing to the exacerbation of both environmental and social problems.

Part of the problems observed in urban areas can be attributed to the relative economic sluggishness of cities during recent decades. Moving forward and improving the lives of urban people will demand not only better social and environmental governance and more proactive policies in those realms, but it will also require resources from a prosperous tax base to finance infrastructure and services. In the context of the current globalized economic competition, this means that cities have to be able to attract investments in order to create jobs and raise resources for improved infrastructure and services. Well functioning cities are thus critical in generating competitiveness and social and environmental well-being.

How prepared are Brazilian cities to compete in the global scenario and what policies would improve competitiveness? The economic record of Brazilian cities in the last few decades is not impressive, although some cities (particularly smaller ones) have done better. A set of studies carried out by a collaborative effort between the World Bank and the Brazilian government (IPEA) posed a critical question: “*Why are some cities more successful than their peers?* Is the ‘success’ of individual cities driven by factors mostly external to any city’s immediate control (such as location, growth in market potential, being a port in a period of national trade growth, national level decentralization and improved governance), or do individual city policies and politics influence growth and development?” (Da Mata et al, 2005a:2)

Using a dataset spanning 1970 to 2000 on 123 Brazilian agglomerations, the IPEA/World Bank study analyzed the relative success of cities in terms of local and regional determinants. On the assumption that factors of production will move to the areas that promise the highest returns, the study measured success in terms of two inter-linked indicators: city productivity growth and city population growth (Da Mata et al, 2005a:5-6).

The study finds that several variables have strong impacts on rates of city growth. The main ones include: rural population supply, improvements in inter-regional transport connectivity, as well as education attainment and skill composition of the labor force. Increases in market potential, such as those provided by inter-regional transport improvements, have the strongest impact on city growth. Local land use and zoning enforcement also favor city growth, as does the presence of a diverse set of inter industry linkages. On the negative side, it finds that local crime and violence, and a higher representation of public industrial capital in the city, lower its growth rates (Da Mata et al, 2005a:24-26).

In general, urban productivity is influenced by economic composition. Both the concentration in closely related industries (localization economies) and the diversity of economic activities (urbanization economies) tend to enhance the productivity of urban areas (Lall, 2006:10). The division of industrial labor by city size in Brazil follows international patterns: large agglomerations are more diversified, having a mix of high technology and specialized services that require greater skills, yield greater profits and

provide better wages; middle technology and more specialized industries are more likely to be found in middle-sized cities; industries having high transport costs such as textiles and construction are spread around the country, while services (except finance) are equally spread. Non-tradable sectors and lower level services predominate in small urban areas. Industries that depend on the natural resource base are found in both small and medium size agglomerations. Manufacturing deconcentration is also leading to decreasing specialization (World Bank, 2006, Vol 1: 3-4 and 15-16; Lall, 2006:10-16).

Size also matters with respect to wages and productivity. Historically, these have consistently been higher in large cities, thus giving credit to the theory that larger cities benefit from agglomeration economies. Per capita income was constantly higher in large cities over the last 30 years of the 20<sup>th</sup> century; larger cities generally have more economic opportunities and better functioning labor markets to attract more economic activity and higher productivity levels (Lall, 2006:8; Da Mata et al (2005b:3).

Nevertheless, there is some indication of income convergence with smaller, lower income cities experiencing relatively faster income growth (World Bank, 2006, Vol 1: 14). Such convergence is due to the fact that productivity growth has declined, especially in the larger cities, during the last 15 years of the 20<sup>th</sup> century. Although all cities are experiencing rather low growth, smaller cities have performed better than the larger agglomerations, and their share in GDP and industrial output increased from 40 percent in 1970 to 52 percent in 2000 (World Bank, 2006, Vol. 1:2).

Location and distance from the country's primary economic hub also matter. "Cities further from Sao Paulo, over and above declines in market potential, suffer. While this could reflect some aspect of Sao Paulo's huge, modern business service sector market that is critical to access for other cities, it might reflect other items like cost of capital or state-provided production amenities that respectively rise and fall as one moves further from the center of the political elites and power in Sao Paulo" (World Bank, 2006, Vol 2: 23). In more general terms, networks of cities and densely populated regions around a central location provide a rich environment for competition and collaboration, thereby favoring economic growth (Matos and Garcia, 2007; World Bank, Vol 2:28).

The study states a valid association between city success and governance. Thus - "Successful cities help businesses by providing infrastructure and administrative support. This not only enhances productivity but also raises wages and attracts workers who have skills and experience, are looking for better wages and can contribute disproportionately to productivity gains, as well as other people who want to benefit from high quality services and amenities" (Da Mata et al 2005b:3). Nevertheless, the impact of governance, either in a broader or stricter administrative sense, is not effectively broached in this study. The only two variables tested in connection with "governance" are existence of laws to collect property [IPTU] taxes and percentage of population under land zone laws. Since the collection of property tax is theoretically universal, it has no noticeable effect on growth. However, population growth is higher in cities with better enforcement of land use and zoning laws (Lall, 2006b:27-28).

Such results, though interesting, provide little insight into the importance of administrative or political practices in city success. The omission of governance in the analysis of the effectiveness of local and national policy environments on urban growth unfortunately characterizes much of the literature at this time, not only in Brazil but in most developing countries (Lall,2006b:19). The broad-based World Bank study referred to here might have been a good opportunity to analyze the implementation of a pathbreaking Federal Law, known as the Statute of the City. Passed in 2001, this Law introduced a new set of regulatory instruments that explicitly recognized the multiplicity of agents in an attempt to overcome the fact that “the usual planning practice in Brazil was preferably oriented for the median and high income demands...” (Avila, 2006:227). The next section of this paper will discuss the actual application of this Law, but further research is needed on all types of good practices, their effects and the impact that their dissemination would ultimately have on improved competitiveness.

What lessons and reflections does this battery of studies provide? Interestingly enough, one of the main results of the IPEA/World Bank studies would appear to be somewhat irrelevant for future policy in Brazil (although highly significant elsewhere) – that is, the finding that the volume of rural population supply is critical in elevating competitiveness.<sup>24</sup> The study covers a period (1970-2000) in which there was still considerable population growth in absolute terms, as well as large currents of rural-urban migration during the earlier stage of that period; urban areas (officially defined) absorbed some 80 million people during that period. Today, however, most movements are urban to urban and population growth rates have also declined significantly.

Whatever their limitations, these studies generally highlight the fact that business as usual in urban planning and administration will not be sufficient. Cities, in Brazil and elsewhere, have to become more competitive in the context of a globalized economy. What strategies need to be adopted for that purpose? One of the policy recommendations that merits special analysis in this series is the notion – promoted by some sectors of the national administration -- that governments should promote a shift in the locus of production, for instance, to cities of different sizes or in different regions, in order to boost the economic dynamism of the urban network.

There is a consensus that the large metropolises have, in recent years, already ceded some of their primacy and economic activity to intermediate and smaller cities (Matos and Garcia, 2007; World Bank, 2006, vol. 2). This shift goes beyond the deconcentration from the metropolis of São Paulo that was discussed in a previous section, and reflects a

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<sup>24</sup> The discovery of the importance of rural-urban supply (and thus of population growth) for city dynamism in this study seems particularly intriguing: it would appear to turn the neo-malthusian argument on its head and indirectly endorse an old marxist argument about excess labor supply, although it is couched here in more neoliberal terms of “rural population supply and rural income opportunities.” Essentially this argument builds on disparities in rural-urban income as in the phrase – “From the supply side, the availability of “rural” workers (inversely correlated with rural incomes) is the main variable to explain city population growth” (World Bank, 2006, Vol. 1:iv). The more general issue here may be the validity of using city population growth as an indicator of “success”, especially when the analysis covers a 30 year period marked by highly differentiated demographic trends. By this yardstick, for instance, a city such as Lagos might be viewed as eminently successful.

relatively greater dynamism of smaller cities than in previous periods. Should this trend be accelerated? Such an initiative would provide support to a long-standing desideratum of politicians in developing countries who have periodically advocated the stimulation of economic growth in secondary cities in order to relieve demographic pressure on the largest or fastest-growing cities.

Changing the locus of economic production involves two different issues: a) how is it achieved; and, b) does it work? It turns out that Brazil already has some experience with these issues. In the 1970s, the Brazilian government, supported by the World Bank, attempted to strengthen medium-sized urban nuclei in order to reduce both the proliferation of small cities and the expansion of Southeastern metropolitan cities. The project was short-lived and ineffectual. Originally, some 130 cities were to be selected for program grants but budget constraints during the crisis of the early 1980s soon narrowed it down to 26 cities, which were to receive support through a World Bank loan (Gilbert, 1993:11-12). Half of those sites were included in the project's first phase; however, the program's meager results precluded its expansion to the other 13 cities. Few of the goals were met in the original 13 cities: economic expansion was not effectively promoted and only a small number of jobs were created. Hence, the cities did not distinguish themselves as new poles of attraction and the goal of affecting spatial distribution of population was not realized (Gilbert, 1993:11-12; Richardson, 1983:18)

Some three decades later, the IPEA/World Bank study again addressed the question from a modelling perspective (interestingly enough, ignoring the previous joint government/Bank efforts in this domain). This time, the study finds little support for this type of policy: "...the impact of these initiatives on overall economic growth and urban efficiency is unclear...The simulation results show that there are very small differences in total urban income from favoring small cities vis-à-vis large cities...These results tell us that there are no major gains in terms of overall urban income from diverting investments from the largest cities to secondary cities" (Da Mata et al, 2005a:23-24). According to this study, historical coincidence and natural advantage combine to trigger a process of cumulative causation; city functions are differentiated by size with larger cities generating higher incomes. Such inertial factors favor the persistence of current hierarchies among cities (Da Mata et al, 2005b:33-34).

A subsequent publication by the Bank reaffirms this earlier view: "While it is clear that the largest metropolises are suffering serious problems of management and economic stagnation, it is not clear if net agglomeration economies in large cities can be offset by incentives and other measures to divert growth to smaller cities. In a context of increasing competition across continents and evident role for megacities to lead that growth, one needs to assess whether curbing the role of our few large cities in Brazil is the best way to proceed in a context of fierce and increased competition" (World Bank, 2006, Vol 1:22). The meaning of this guarded and diplomatic phrasing is nevertheless clear – resources cannot be wasted on artificially changing the economic logic that favors larger cities.

The same caveats concerning interference in the locus of urban economic activity is voiced in yet another study focusing on traditional regional disparities within Brazil's major geographic regions – especially between the poorer Northeast and the richer South and

Southeast regions – as well as between states and municipalities. This particular study asks whether such regional differentials can be alleviated, and if so, by what kinds of policies (Chomitz et al, 2005)? Focusing on labor market outcomes in Brazil over the 1990's, this study shows that dynamic municipalities that were experiencing both real wage growth and faster-than-average employment growth made up one third of the total work force, but absorbed more than half of net employment growth over the period.

*Inter alia*, the research found that initial workforce educational levels serve as accelerators of subsequent wages, even after controlling for correlated variables. The study observes that: “this is a sobering finding from the viewpoint of reducing inter-regional inequalities. It suggests that wages will continue to diverge between the more educated south and the less-educated north” (Chomitz et al, 2005:11). Low levels of government transfers, such as rural pensions, have multiplier effects at the local level but the same is not true at higher levels. Another main finding is that wages respond elastically to changes in labor supply, suggesting that in-migration could substantially reduce wages and that out-migration could put upward pressure on wages for those left behind in declining areas. Taken together, such findings, although still in a preliminary stage, do not reinforce government attempts to significantly alter the course of city or regional growth.

In short, although Brazilian cities are not taking advantage of opportunities that are arising in the global market, trying to artificially shift the locus of economic activity through government initiatives would not seem to be the way out. What needs to be done, in the World Bank's perspective, is to face the main problems currently hampering Brazilian cities in their quest for competitiveness. These include crime and violence, mounting bills in Social Security, the need to balance municipal finances, the need to improve infrastructure and to reduce the size of growing informality, in employment, in economic enterprises, and to improve the functioning of urban land and housing market (World Bank, 2006, Vol. 1:i& ii).

On the issue of land and housing, the Bank would appear to agree with the analysis made in the previous section of this paper when it notes that: “Slums and invasions are today part of a complex puzzle that needs urgent attention. During heavy migration flows, the public sector has been unable to absorb the population with adequate land structures. Once the forced resettlement of the 70s was banned, cities chose to accept slums as part of the urban landscape. It was a cheaper and less contentious solution than trying to prepare land and shelter in sufficient numbers. However, this left great scars on the urban tissue of Brazilian cities, institutionalized informality and ghettos, and blurred the boundary where informal markets end and poverty begins...” (World Bank, 2006, Vol. 1:ii)

Although the Bank's recommendations concerning the future of Brazilian cities are much broader in scope, its specific advice concerning land use policies dovetails with a main argument of this paper: “a) the need for a change in legislation to revise the binding regulations that increase land prices; (b) the need to plan ahead and to contemplate the massive need of urbanized land to provide for the upcoming expansion in urban centers; (c) the need to understand how market forces shape the form of the city; and (d) the need to understand the potential to use fiscal instruments to avoid land speculation and to enable

the public sector to capture some of the value increased brought about by public sector financed infrastructure” (World Bank, 2006, Vol 1:6).

### **An Overview of Success and Failure in Brazilian Cities**

Cities, particularly large cities, are acknowledged to have clear advantages in the framework of global economic competition. Brazil’s prospects for sustainable growth undoubtedly depend on the capacity of its cities to compete in the current globalization scenario. The all-encompassing challenge therefore is to make Brazilian cities function in order to attract investment and to create jobs and income. In that context, Brazil should thus have an important headstart, given its advanced stage on the urban transition, its high levels of urbanization, its number of large cities and its well developed network of cities. Indeed, 90% of the country’s GNP is already produced in cities. Moreover, it no longer has to deal with massive in-migration to cities or even with high levels of overall population growth, given the rapid fertility decline that precocious urbanization helped it achieve.

Nevertheless, it is clear that, so far at least, the country has not been able to transform this theoretical advantage into reality. Brazilian cities, especially the larger ones, showed low productivity growth in the last fifteen years of the 20<sup>th</sup> century. This poor performance can be attributed to increased levels and types of informality, crime and violence, and poor basic infrastructure. The locus of demographic growth has shifted from the urban center to the periphery; since it is largely composed of poor people, infrastructure and services for these new settlements are inadequate. Although urban growth levels peaked several decades ago, the difficulties show few signs of abating.

In accordance with the euphemistic language of the technocrats, there have been significant “policy failures” that have increased the gap between expectations and reality in the Brazilian urban transition. Local management and good governance are critical in city performance. Although there have been isolated instances of good practices in Brazilian cities that are being emulated internationally (as mentioned in the following section), there are extensive policy failures that affect practically all Brazilian cities.

Of particular importance are the policy failures that have occurred in the land and housing sphere. These have cascaded into a variety of social and environmental ills that, in turn, have affected the ability of cities to compete more effectively in the global context. As recognized by the World Bank – “Slums are probably the most visible and perverse consequence of policy failures in urban settings” (World Bank, 2006, Vol 1:23).

In market terms, this situation is correctly attributed to the “very low price elasticity of housing supply” and the inability of the formal market to respond to housing demands. In sociological and political terms, however, it reflects the consequences of a deeply-ingrained tolerance of inequality and a consequent lack of attention to the needs of the poor, even though they constitute the largest and fastest-growing social group in urban society. Such inattention, in turn, is at the very root of the difficulties being experienced by Brazil in matching its progress in global markets to its demographic advances on the urban transition.

## URBAN POLICY AND PLANNING IN BRAZIL

### Trying to Take Control

Despite our depiction of Brazilian urbanization as a largely unoriented and uncontrolled process in previous sections, the country has a long and varied history of government intervention on spatial distribution in general, and on urban policy in particular. Some of the first noteworthy actions involved the city of Rio de Janeiro, then the nation's capital.<sup>25</sup> Urban renewal projects at the beginning of the 20<sup>th</sup> century aimed at "hygienizing" the center of the city by forcing favela dwellers to move out. Subsequently, a comprehensive master plan (Le Plan Agache) for the city was drawn up by a famous French urbanist in 1930; although nobody ever bothered to translate this proposal into Portuguese, it apparently inspired a widespread and lasting belief in the capacity of master plans to solve the increasingly complex problems posed by rapid urban growth in subsequent decades (Villaça, 2005:10).

Meanwhile, explicit Brazilian government efforts to intervene in population redistribution on a larger scale had begun in the 1930s and 1940s, when the government promoted the expansion of the Paraná agricultural frontier. In the 1950s, attempts to reduce regional disparities had resulted in the creation of SUDENE, a regional planning agency for the Northeastern region. Moreover, the city of Goiania was planned and later, a new capital city (Brasilia) was built, both with the intent of favoring the de-concentration of population from coastal cities and the occupation of the vast Center-West region. This was later followed by massive colonization programs in the heretofore sparsely-occupied Amazon region during the 1970s (Martine, 1992).

Regional and urban planning was expanded under the military regime which took over the country in 1964. The stimulation of economic activity in outlying regions and the reduction of migratory movements to the main cities of the Southeast were primary objectives of such efforts. Despite this type of initiative, migration to these large urban centers continued to increase, in both absolute and relative terms, as described in earlier sections. Unable to stem the flow of urban-wards migration, the government turned its attention to organizing urban growth.

The new military regime, imbued with a high regard for technocratic planning, created, in 1964, two national agencies (BNH and SERFHAU) to deal with urban planning and lower-class housing. The decree that created the National Housing Bank (BNH), at the very outset of the military regime, explicitly stated that it would be responsible for "the formulation of national policy in housing and territorial planning" as well as for the stimulation and financing of private sector initiative in housing, especially for lower-income groups. In practice, the "territorial planning" part was limited to urban areas and would be carried out by SERFHAU (the Federal Service for Housing and Urbanism).

Essentially, the regime intended to use the BNH to curb the rapid growth of urban slums by eradicating existing slums and constructing large numbers of standardized dwellings for the

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<sup>25</sup> Brasilia became the capital of the country in 1960.

poor on the outskirts of cities. The subsidized financing for housing that it offered was usurped, in large part, by the real estate sector and by powerful construction companies catering to the upper and middle classes. The BNH was dismantled soon after the end of the military dictatorship in 1986 (Arretche, 1998).

SERFHAU assumed responsibility for the strategic management of the nation's increasingly-visible urban problems. In accordance with the predominant technocratic mindset, it promoted the formulation of municipal master plans that would address a wide gamut of social, economic, physical and institutional aspects of urban areas across the country. The formulation of these municipal master plans was financed by the BNH. This scheme generated a quick response by the private sector in the form of consultancy firms set up to help local mayors prepare their plans. Paradoxically, these became a niche and refuge for left-wing intellectuals and urban planners during the military regime. SERFHAU was responsible for defining the country's nine largest cities as Metropolitan Regions in 1969.

In retrospect, the SERFHAU agency has been criticized widely for its technocratic rationality, and for its dependence on "objective" diagnoses that were often put together without much regard to existing local administrations, to the needs of different social groups, or to the coalition of local political forces; moreover, it was allegedly focused on medium and longer-term planning, overlooking the fact that the changing nature of challenges and responses in the interim would require constant adjustments. In these enterprises, which inevitably aimed at containing the growth of favelas, the voices of the poor were seldom heard (Moreira, 1989:2; Ferreira, 2007:57; Villaça, 1999).

In accordance with the directives from SERFHAU, a large proportion of municipalities became involved in local planning. In the state of São Paulo, 88% of all municipalities elaborated a master plan. However, the lack of affinity between the technical teams and the political structure often ended up making these plans superfluous. In a survey carried out shortly thereafter, it was found that 7 out of every 10 municipalities had simply shelved the master plan (Moreira, 1989:2). SERFHAU itself was disbanded after only a ten year existence.

In hindsight, the negative appreciations of SERFHAU's planning efforts may primarily reflect their notorious failures to have an impact on improving conditions in larger metropolitan areas. There, problems were more complex and had the greatest political visibility; at the same time, the coordination of technical planning activities with the realities of a wide variety of local political scenarios was most difficult in these settings. In addition, the agency made an easy target for the withering fire directed by a wide range of political opponents at the military regime and its technocratic bent. On the positive side, it must be recognized that the SERFHAU experience drew attention to the need for concerted planning and action in urban areas at a time when rural-urban migration and urban growth were intensifying. Moreover, it stimulated the more systematic study of urban issues and created, in many cities, the empirical basis for subsequent analyses and planning efforts. It was also responsible for the creation of a prestigious Masters in Urban Planning within the Faculty of Engineering at the Federal University of Rio de Janeiro.

According to at least one detailed case study, (that of the city of Franca in the state of Sao Paulo), these municipal planning efforts are reputed to have laid the foundations for infrastructure development that have subsequently served the city well (Ferreira, 2007). According to this source, the master plan's proposals were based on a strong diagnosis and resulted in the creation of an industrial district as well as in effective plans for the spatial expansion of the city (although in contradiction to the plan's recommendations for vertical rather than horizontal growth). Industrialists and the power elite in Franca have defended the proposal through various administrations and this has guaranteed the continuity of the original master plan (Ferreira, 2007). However, to nobody's surprise, the aforementioned case study makes little explicit reference to popular participation in the preparation or implementation of these plans.

After the demise of SERFHAU, it was replaced in 1974 by an agency that had an even broader mandate - the CNPU (National Commission for Metropolitan Areas and Urban Policy), within the powerful Ministry of Planning. It aimed at the coordination of an integrated planning system for the nine Metropolitan Areas and the promotion of growth in medium-sized cities. Results were again limited and subject to the interests of powerful interest groups. The attempt to strengthen medium-sized urban nuclei in order to reduce both the proliferation of small cities and the expansion of Southeastern metropolitan cities was short-lived and ineffectual, as described in the previous section of this paper.

An even more ambitious attempt to control population distribution was made by an inter-ministerial task force which, between 1973 and 1979, worked on the design of a comprehensive internal migration policy for the country. Federal attention to the migration problem was spurred by pressures from state and municipal authorities in the Southeast region, which was being most affected by massive in-migration, particularly in the city of São Paulo. However, proposed policies largely ignored the importance of "implicit" policies on population distribution, that is, the decisions that affect the transfer or allocation of resources and that impact on the spatial allocation of economic activities and, therefore, on job opportunities and people. As discussed earlier, the overwhelming thrust of such policies, from 1950 to 1980, favored concentration in cities, especially through the promotion of import-substituting industrialization and agricultural modernization of agriculture (Martine, 1992).

In 1979, the CNPU was transformed into an inter-ministerial council for urban development (CNDU). Although faith in technocratic planning was reaching a low ebb by this time, the CNDU's mandate was enlarged as it received responsibility for fitting urban policy within the framework of the National Development Plan. An ambitious Law for Urban Development was framed at this time. It aimed at the reorientation of migration patterns, taking the pressure off large cities through the spatial re-orientation of public investments, correcting intra-urban distortions and relieving urban poverty.

This more encompassing approach also failed to generate significant momentum in terms of re-organizing urban growth. On the one hand, the "economic miracle" phase had terminated and a decade-long economic crisis was taking root. The combination of economic policies adopted during this period and rapid population growth had generated an unprecedented urban explosion during the 1960s and 1970s. On the other hand, social unrest was

beginning to find forms that the military government no longer could or would repress effectively; much of this dissatisfaction was channeled through the more progressive segments of the Catholic Church which, *inter alia*, became one of the more effective critics of urban policy of the times.

Moving away from previous top-down approaches, the discussions of the period increasingly called for greater social participation. In 1985, when the military stepped down and a democratic government was elected, the CNDU was again reformulated, incorporating the objective of greater participation and acquiring a broader-based institutionalization in accordance with the new times. Its work over the next few years laid the foundations for the Statute of the City, which was approved by Brazil's new Constitution in 1988.

### **Innovation amidst Inequality: The Democratic Approach**

The military regime's centralized, interventionist, top-down and technocratic vision of urban planning had been aimed primarily at creating conditions for improving economic production and capital accumulation ("modernization"). In reaction to this approach, emphasis in the post-1985 democratic regime was predictably placed on participatory processes, decentralized decision-making and the reduction of social inequality. A movement supported by 150,000 voters presented a progressive amendment for urban reform to Congress in the elaboration of the new Constitution in 1988. Although this proposal was subsequently watered down, two articles -- focused on the key issues on the social function of urban land and on squatters' rights, respectively -- have had considerable impact, as has the injunction that such rights be enacted through Master Plans (MPs) at the municipal level (Souza, 2001:2).

Since then, urban policy has become a critical centerpiece in the country's efforts to make democracy a working reality and to combat entrenched social inequalities. Such efforts have led to bold innovative practices that have created great expectations and that have subsequently been replicated in other countries. As recently observed -- "this new, participatory method of urban policy formulation and implementation engenders and expresses a new vision for the ordering of urban space; a new way to see the state's role in development, and a new role for the newly empowered citizenry" (Caldeira, 2007)

The core of the new democratic approach to urban planning in Brazil is undoubtedly the Statute of the City ("Estatuto da Cidade") which regulated the two critical articles focused on urban issues approved by the 1988 Federal Constitution (i.e. the social function of urban land and squatter's rights). This law, finally adopted after considerable debate in 2001, regulates how all municipalities having more than 20,000 urban inhabitants, as well as those located within the limits of a Metropolitan Region or Urban Agglomeration, are to develop a Master Plan (MP). At first, center-left political groups considered the injunction to develop an MP to constitute a residue from the top-down authoritarian planning approaches of the military regime. In subsequent years, however, these groups have re-defined and reshaped urban planning into a bottom-up approach and consequently adopted the Statute of the City as a primary instrument for the promotion of democracy and the reduction of social equality (Caldeira, 2007).

A key article of the Statute of the City established the principle of the social function of urban property, creating instruments that enabled the state to tax or force the utilization of properties that were uninhabited and therefore did not fulfill the social function. This was reinforced by another article, adapted from previous CNDU legislation, that essentially legitimized squatters' rights under specified conditions.

The practical implementation of the Statute of the City presupposed a combination of socially-oriented regulation and democratic management. Popular participation in urban planning would be achieved when civil society organizations and private initiatives took part in debates, public hearings, conferences, popular amendments, and participatory budgeting.

As astutely pointed out by Caldeira, the reinforcement of popular participation as a planning tool in Brazil was supported by two strange bedfellows, whose burgeoning development coincided in historical time: neoliberalism and democracy (Caldeira, 2007). Neoliberal influences were actively dismantling the corporatist authoritarian state while ushering in the "miracle of the markets"; within this model, free speech and democratic participation were vaunted as having the ability to find adequate solutions that circumvented the need for State intervention. This period coincided with the re-invention of democracy in Brazil, a process dominated by center-left political forces – who also defended local government and a participatory ethos in decision-making. Each of these forces promoted and legitimized their own brand of citizen involvement in public decisions – and, paradoxically, had to accept the other's right to participate and to promote participation.

Progress, whether in the confection of Master Plans or in the implementation of the new democratic approach to urban management, was understandably slow and irregular. This sluggishness was due both to the complexities of the issues and to the lack of practical experience, as well as to the differentiated capacity of social sectors to participate effectively in deciding the affairs of the city. Moreover, the allocation of authority and resources among federal, state and municipal entities was often blurred and the institutional framework for urban policy was unclear.

The creation of the Ministry of Cities by the Workers' Party that took office in 2003 helped to give form and direction to the overall thrust of urban policy and planning (Maricato, 2007). The injunctions of the Statute of the City had initially failed to specify a timeline within which the MPs were to be prepared. Municipalities were now reminded of their obligation to prepare a Master Plan for their cities and were provided with subsidies to carry out this process. By the proposed deadline of October 2006, almost 90% of the municipalities had initiated or completed an MP (Maricato, 2007).

Nevertheless, the creation of a new participatory culture for urban management takes time and an engaged citizenry. Historically rooted inequality, low levels of political participation, high levels of illiteracy (which until recently determined the loss of right to vote), and a succession of populist and authoritarian governments were hardly the most propitious context for participatory planning in the complex domain of urban growth. Thus,

results of the recent MP experience under the democratic regime have also come under criticism. Villaça, for instance, analyzes MPs in the state of Sao Paulo – the most economically advanced in the country – and concludes that this instrument was ineffective because of the “violent inequalities in economic and political power” that characterized the debates about urban policy and management (Villaça, 2005).

A first problem stemmed from the fact that Master Plans were frequently confused in the minds of participants with zoning efforts, whereas the two are in fact fundamentally differentiated from a social, political and ideological standpoint. Zoning laws had never left the agenda of urban administrators since the early 1970s, but they only affect land use; Master Plans aimed to affect the entire range of urban problems, including transport, housing, sanitation, education and other issues that impact on urban life (Villaça, 2005).

Moreover, some of the people involved in the negotiations for the Master Plans evidently had the notion that this would be the forum in which to address a wide variety of comprehensive social problems, whereas these were, in fact, well beyond the MP’s mandate and capacity. In addition, since many of the urban management issues cannot be resolved at the local level, and/or depend on plans and resources from the state or even federal levels, this inevitably creates confusion and overlap in terms of who decides and executes plans and projects that have been approved at the municipal level. In some cities, the new MPs co-existed with previously-elaborated MPs during the military regime and/or with pre-existing sectoral plans such as in housing, sanitation or transport (Villaça, 2005).

A major problem with the Master Plans, particularly in the Metropolitan Regions and other large agglomerations, is the fact that their formulation is prescribed at the level of municipalities. In actual fact, however, some of the most critical problems of large urban areas cover a much broader region. Key problems, such as sorting out land issues, dealing with sprawl and peri-urbanization, guaranteeing access to a permanent source of water, dealing with wastes and, even more generally, attracting investments and generating employment are all questions that require a regional approach. Fragmentation of the responsibilities for the urban territory in larger cities leads to administrative inefficiency and compounds social and environmental problems. In short, municipal MPs for larger agglomerations can only deal with part of the local issues.

Another critical issue which, in many cases, overshadowed the technical and administrative complexities, stemmed from the nature and form of popular participation in urban policy and management. Brazil was, and continues to be – despite recent improvements – a highly unequal society. Such a condition cannot be simply superseded by political decree. When popular participation was mandated into the formulation of MPs, the existing imbalances between the political and financial clout of different social sectors naturally wove their way into the negotiations (Souza, 2001). Discussions were ostensibly carried out in “town hall” types of meetings but other fora, particularly the use of the media and the judiciary tended to be, in actual practice, much more decisive.

Both Caldeira (2007) and Villaça (2005) describe these processes in some detail with respect to the design of the Master Plan in the municipality of Sao Paulo. Evidently, only a very minute proportion of the 10 million people in this municipality could be heard or even

represented in public debates. Moreover, since the overall objectives of the discussion were couched in terms of general principles (reducing urban sprawl and socio-spatial inequality) rather than in those of the concrete issues that interested local neighborhoods, it was difficult to maintain popular interest at a high pitch.

Essentially, three well-defined interest groups surfaced in this context. The real estate sector focused on the rules governing land use and vertical growth; the traditional middle and upper classes centered on zoning laws that would preserve the residential privileges of their neighborhoods; and, the popular movement (“Frente Popular”) supported by NGOs and academics focused on the creation of low income areas to be targeted for state intervention. In the end, all three were successful in their respective quests, with the unanticipated result that inequality was formally entrenched: the less affluent areas of the city now have formally-accepted lower land use standards. “The very legislation of popular participation, intended to reverse urban illegality, has unintentionally legalized spatial inequality between the center and periphery, and therefore has set back social justice in São Paulo.” (Caldeira, 2007: 3)

Despite the positive reactions that Brazil’s Statute of the City have generated worldwide, such findings would seem to dampen the notion that social movements are the gateway to the quick resolution of urban management problems. Perhaps even more revealing is the fact that, after more than two years of intensive public debate surrounding the MP, mayoral candidates failed to make a single reference to it in their electoral campaign for the 2005 elections in Sao Paulo (Villaça, 2005:91).

Despite such limitations, considerable social progress has been made through attempts at planning and managing cities through popular participation. The Statute of the City in Sao Paulo, for instance, has generated considerable debate focused on social justice and on the plight of the urban poor in the country’s most powerful city. The quality and density of the political process was undoubtedly advanced. For the first time, the rich and powerful found themselves obliged to defend their interests explicitly in public debates rather than behind closed doors.

Meanwhile, low-income citizens obtained legal rights to the land they occupy within the center of the city, preventing their unceremonious expulsion at the whim of future urban managers as in the past. Moreover, they received public support, not only for their housing and infrastructure needs, but also to ensure that their other wants and needs would be heard through political representation. Previously, favelas had often been simply demolished whenever real estate developers coveted their land; with the formalization of illegal settlements, they have now gained the status and political clout of neighborhoods.

This mentality was incorporated in the favelas strategy of the recent over-arching PAC (the national Plan for Accelerated Growth), making it much more difficult for local authorities to simply disband and uproot favela-dwellers. Nevertheless, it is clear that the winning strategy adopted by poorer population groups and their intellectual supporters – of fighting for a special status that would ensure the permanence and improvement of lower-income settlements in their current locus – ended up cementing ambiguity and a certain form of inequality.

A second major manifestation of the democratic approach to urban management that has received considerable international interest relates to experiences in “participatory budgeting.” Essentially this refers to the direct participation of civil society in the definition of priorities for the allocation of the municipal budget. This process was not legislated in the Constitution but arose out of democratic process. Originally attempted in two smaller cities of Brazil’s southern region in the 1970s at the height of the military dictatorship, this approach has since been utilized in more than a hundred cities in Brazil as well as in other Latin American localities.

It is generally acknowledged that the most consistent experience with participatory budgeting is that which was initiated in the city of Porto Alegre by an elected mayor from the Workers’ Party in 1989, and which has persisted for the better part of two decades. There, a series of meetings are held every year in each of the city’s administrative regions, during which the mayor’s office gives an account of expenditures, and the representatives of civil society present their views on the identification of priorities for the coming year (Jacobi, 1999; Souza, 2001).

Budgeting is done in three stages. The administration formulates a proposal, discusses it with the regions and defines investment priorities. Then, the administration formulates a strategy to weigh priorities against the expected resources in each secretariat with regional delegates, leading to an overall investment plan and a list of the works that will be supervised in a third phase during which the public can control and monitor the city’s investments. These discussions follow a pre-ordained calendar of activities and the budget becomes the incentive for all popular debates (Jacobi, 1999:7).

Participatory budgeting thus refers to a continuing exercise through which the citizenry expresses its views concerning local priorities and needs. In that sense, it does not have the overall strategic and longer term pretenses of the Master Plan. Moreover, the practice has not been mandated either in the Constitution or other specific statute, and its implementation does not receive subsidized federal funding. Hence, it is simply adopted in accordance with the political perspectives and interests of different elected mayors. Consequently, it does not lend itself to easy institutionalization. Nevertheless, participatory budgeting reflects the same desire to make urban planning address issues of social justice rather than simply defining the use of urban space *per se*, to reduce traditional clientelism, and to ensure that political decisions are transparent and accountable to popular control.

In an overview of the recent Brazilian experience, it is clear that neither the formulation of socially-guided master plans nor participatory budgeting processes constitute a panacea for urban problems. But this was even more true of traditional urban planning tools.

The enactment of democratic procedures such as participatory master plans and participatory budgeting presupposes an organized civil society as well as an informed and interested citizenry. Such characteristics do not spring up overnight in a society that has historically been characterized by huge inequalities in assets and power. It is not mere coincidence that most of the more effective participatory efforts witnessed so far have taken

place in the Southern region of Brazil, where literacy levels as well as political consciousness and mobilization have historically been higher.

At the other extreme, experts point to the deterioration of pre-conditions for social mobilization in the favelas of Rio de Janeiro as the clearest example of the difficulties encountered in promoting effective bottom-up urban management (Caldeira, 2007 and Souza, 2001). Rio's favelas have in recent decades come under the dominance of local drug lords who provide a local source of order, jobs and wealth, but who also have a strong vested interest in the maintenance of the status quo. Accordingly, they either dominate local neighborhood associations or pressure them to retain the traditional informality status prevailing in the favelas, thus reducing the penetration of outside influences and maintaining their control over the inhabitants. The conditions for local participation in urban management are obviously curtailed under such circumstances.

Given the intimate dependence of participatory planning and management on the strength of civil society, the recent initiative called "Our Sao Paulo Movement" provides a different and potentially powerful starting point for the promotion of a more democratic and more effective approach to urban planning and management.<sup>26</sup>

Launched in 2007, this movement aims to promote citizen participation and to bolster the deteriorating credibility of political activity and public institutions in the city of Sao Paulo. Following the leads of similar movements in Barcelona and Bogota, this leaderless alliance hopes to stimulate a participatory framework for political decision and to generate a social, economic and political force that will be capable of committing successive governments to making Sao Paulo an attractive, safe and sustainable city that offers a high quality of life to all its inhabitants. It promotes active participation and social mobilization and generates baseline information and indicators which permit the citizenry to monitor the impact of public sector initiatives and thus improve efficacy and transparency of governments, irrespective of political party. Some 500 civil society organizations, in addition to private citizens, community leaders and private enterprise support this apolitical initiative.

Ultimately, the impact of this type of initiative may, in the long run, have great significance, both for the quality of urban life and for the reduction of social inequity. The kind of broad-based awareness-raising, popular participation and consensus building being carried out by such movements as "Our São Paulo" may be one of the necessary pre-conditions for more effective governance. The imperfect and unequal results of participatory MPs and participatory budgeting in Brazil described above might be seen as somewhat frustrating. Yet, expectations that such initiatives could somehow steer Brazilian society out of its accumulated social, political, economic and demographic debts may evidently have been too lofty in the first place.

Urban management in large and heterogeneous cities is extremely complex under the best of circumstances, and appears to be permanently impermeable to perfect solutions. Perhaps the best that could have been expected was in fact achieved, to a considerable extent, at

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<sup>26</sup> Information presented here on the movement "Nossa São Paulo" is largely obtained from websites, including: <http://www.nossasaopaulo.org.br/portal/quem>

least in some cities: a contribution to the formation of a more enlightened citizenry, the reduction of clientelistic practices and the provision of an effective voice for the poorer segments of the population. More effective democratic participation depends not only on mobilizing the population but also on improving the quality of the information on which different sectors base their decisions.

## FINAL CONSIDERATIONS

Rapid urban growth can arguably be understood as the single most influential process affecting social, economic, political and demographic trends of the developing world in the 21<sup>st</sup> century. The ongoing scale of urban growth in developing countries, particularly in Asia and Africa, is huge and unprecedented in human history. The manner in which future processes of population concentration is carried out in towns and cities during the next few decades will directly affect development, poverty and environmental conditions on a global scale.

Well oriented and under conditions of proper governance, urbanization can be a significant boon for poverty reduction, population stabilization and environmental well-being. However, the manner in which rapid urban growth is being handled at the present in many developing countries gives cause for concern. The proportion of developing countries that have adopted policies aimed at retarding urban growth has soared from 44% in 1976 to 74% in 2007 (United Nations, 2008b). Such increasingly negative attitudes towards urban growth, especially in countries that are currently experiencing the fastest growth rates, will undoubtedly prompt increases in poverty and environmental degradation.

Recognition of the magnitude of this ongoing changeover and its implications has been slow in coming, as a succession of other shorter-term global issues inevitably seem to take precedence. The perception that business-as-usual with respect to upcoming massive urban growth will be utterly inadequate is also slow to register.

The point made in this paper is that there is much to be learned from the experience of developing countries such as Brazil that have achieved, at considerable cost, a demographic maturity in their transition process. A recalcitrant unwillingness to accept and to prepare for massive growth has not only made this transition much more traumatic than necessary, but has also left a heritage of social and environmental problems that prevent the country from benefiting from all of the inherent advantages that urbanization can offer. Historically structured and deeply-sedimented inequality undoubtedly contributed to the unwillingness of society to deal more effectively with the blatant needs of the major social group in Brazilian urban growth. Nevertheless, it is a matter of some concern that this same inattention to the needs of the masses who are swelling the cities of the developing world can also be observed in a wide variety of Asian and African countries.

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