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**RECENT CHANGES IN PRODUCTION
AND POPULATION IN BOGOTÁ, COLOMBIA:
A SUCCESSFUL CASE OF CLARK'S LAW?**

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1. INTRODUCTION

For several decades now, planners and policy makers in developing countries have had to grapple with the challenges of an increasing concentration of population and productive activities in a few urban centres within their national territory. And although compared to the 1960s and 1970s, the pace of this concentration has dropped, the challenge of rapid growth and a legacy of institutional responses that all too often have seemed insufficient seems to linger on. Like their counterparts in the richer nations that industrialised earlier, rapid expansion has confronted metropolitan planners and managers with the mammoth task of providing infrastructure, services and housing to accommodate a vast influx of migrants and the emergence of new - and for conventional planners not always desirable - activities, such as those often embodied in the "informal sector" concept (Portes et al., 1989).

Another kind of evidence emerged in the late 1970s and 1980s from some of the largest and fastest-growing industrial centres in the developing world: a marked slowdown in the pace of population growth in the metropolitan core and a parallel dispersal of population and production away from the core towards the suburbs and even beyond the continuous built-up area, to smaller townships within the metropolitan region (Hamer, 1985; Vining & Kontuly, 1978). And although the phenomenon of suburbanisation can be traced back to the nineteenth century in the United States (Schnore, 1965), the conditions in which this has taken place in countries like Brazil, Mexico and South Korea, often involving inadequate government resources and institutions, highly polluting industries and a predominance of individual forms of motorised transport, seem to pose new and formidable challenges to metropolitan planners.

At the same time, underlined by economies of agglomeration, dramatic productivity gains and shifts in the structure of national production away from labour-intensive primary production, population and productive activities have become increasingly concentrated in a few large urban centres. In many ways, spatial development in the largest and fastest growing newly-industrialised countries, could be said to be conforming to Clark's "law of concentration", which states that 'the macro-location of industry and population tends towards an ever-increasing concentration in a limited number of areas; their micro-location, on the other hand, towards an increasing diffusion, or "sprawl"' (Clark, 1967, p.280).

This article explores the extent to which this phenomenon has been taking place in Colombia. Somewhat unusually in Latin America, a region where drops in the pace of large city growth have been the norm (Dávila et al. 1991), recent census data suggests that the population of Bogotá, Colombia's capital city, may have continued growing at a markedly faster and more sustained pace than most large cities in the country, while concentrating a growing share of national productive activities, particularly services. Bogotá's economic and physical fabrics have been recast as the city is called to play a significant part in Colombia's recent drive to liberalisation, opening up of its markets to world trade and a mass repatriation of capitals - including some from the drug trade. In tandem with the patience of its inhabitants, the city's infrastructure and its management capacity have been rapidly reaching their limits, a factor that lies behind the landslide election at the end of 1994 of a complete outsider to traditional partisan politics as the city's new mayor. Thus, an examination of the factors behind Bogotá's apparent success in attracting population and production is a crucial step towards identifying the challenges it faces in the immediate future.

Following this introduction, the second section examines Colombia's unusually dispersed pattern of urban growth, a marked contrast with the high concentrations of population in one large city found in other national contexts, particularly in Latin America. However, Bogotá's consistently high population growth and the increased concentration there of national population and production which marked the second half of this century could be pointing to changes in this respect, a theme examined in section three. The fourth section examines the changes in location of population and jobs that have occurred in the past two decades within the metropolitan area and the complex map of social segregation that has emerged in recent years. A fifth section concludes.

2.COLOMBIA: A DISPERSED PATTERN OF URBANISATION

The origins of Bogota's present political and demographic importance within Colombia may be traced to the pre-Hispanic period. Before the arrival of the Spanish **conquistadores** in the sixteenth century, the "Sabana de Bogotá" - the fertile plateau on which the city sits - was the site of two of the largest kingdoms of what is today Colombia, both Muisca communities of the Chibcha language (García-Mejía, 1988). Although occupation of the territory by the Muisca took the form

of dispersed settlements (Villamarín and Villamarín, 1979), the area was chosen by the Spanish colonisers as the site of government largely because it offered a potentially very rich source of tributes and income for the European invaders, given the area's high population density and its concentration of wealth, notably gold and agriculture.

In recent decades, and more specifically since the second half of the twentieth century, the relative importance of what we have termed here the "Bogotá metropolitan area" (see note 2 and appendix) has increased even further, particularly in relation to other large urban centres in the country. Given the comparatively small differences in population size between Bogotá and the next largest urban centres, Colombia would not appear to be a case of what the specialised literature calls "urban primacy" (also known as "macrocephaly"). For several decades it has been regarded as somewhat of an exception in Latin America, where in countries such as Argentina, Chile, Mexico and Venezuela, population, output and - more contentiously - government investments in the largest city exceed in many times those found in other cities in the urban hierarchy (Cuervo, 1990).

In Colombia, on the contrary, other large urban centres - notably Medellín, Cali and Barranquilla - developed almost at the same time and nearly as fast as Bogotá, with the result that the spatial distribution of population and resources has generally not been seen as skewed as in other countries with similar population and average income levels. For some authors, however, this situation of comparative "equilibrium" in the spatial distribution of urban centres may be coming to an end, largely as a result of Bogotá's success in concentrating a disproportionate and growing share of the country's population and output. Thus, one author has hypothesised that soon Colombia may cease to be a case of "quadriccephaly" to become a case of "macrocephaly" much along the lines of its neighbouring countries (Goueset, 1991). Drawing on earlier data from the 1964-73 period, Linn (1979) reached a similar inference and concluded that not only Colombia is not an example of what authors like Harry Richardson have defined as "polarisation reversal" but it might even be a case of increased urban polarisation in a few urban areas (pp. 64-65).ⁱⁱⁱ

Table 1 provides support for the view that Colombia's has not been a case of marked "urban primacy". A simple examination of the table shows that the size differences between Bogotá and the other cities have not been dramatic in recent years. Nor has it been so historically. In the mid-1800s, for example, the combined population of the three largest towns after Bogotá (Medellín, Socorro and Cali) was 1.37 times larger than Bogotá's. Over a century later, in 1985, the gap had narrowed to 1.14 times (although by then the next three largest urban centres were Medellín, Cali and

Barranquilla). This was in marked contrast with Latin American countries with similar national populations to Colombia's. In Argentina, for example, the population of Greater Buenos Aires was 3.5 times larger than that of the combined population of the next three largest metropolitan areas in 1980, while in the case of Lima (Peru) the ratio was 4.3 in 1981 (Dávila et al., 1991).

Colombia's largest cities are spread around the national territory (cf. figure 1). The earliest reasons for such an unusual pattern must be sought in Colombia's colonial history - when administrative centres, mining towns and ports flourished - but also in the more recent past - when activities linked to intensive agriculture, commerce, manufacturing and more recently services have provided a sustained boost to urban growth. Bogotá and Cartagena owe their colonial predominance to their functions as administrative centres and, in the case of the latter, to its pre-eminence as one of the Caribbean's busiest ports under Spanish domination in the 17th and 18th centuries. Although initially sustained by mining, Medellín was the largest manufacturing centre in the first half of the twentieth century, after which Bogotá took over as the largest concentration of manufacturing jobs and output. Finally, much of the twentieth century growth of Cali and Barranquilla may be attributed to their location near seaports and close to often prosperous agricultural areas.^{iv}

3.TOWARDS URBAN PRIMACY? CONCENTRATION OF PRODUCTION AND POPULATION IN BOGOTA, 1951-1994

Bogotá may not be said to have had a "disproportionate" demographic weight in Colombia's urban system in recent decades, although plenty of evidence confirms its growing economic role. In population terms, the national significance of the metropolitan area, which includes Bogotá's Distrito Especial and eight surrounding municipalities (see appendix), has no doubt increased (cf. table 2). According to national population census data, between 1951 and 1993 its share of national population more than trebled from 5.8 to 18.4 per cent. In a context where the country as a whole was rapidly urbanising (at an annual rate of 4.3 per cent between 1951 and 1993), Bogotá's relative weight also grew, to reach a quarter of the country's urban population by 1993.^v

3.1 Population growth and migration

When measured in terms of population growth, Bogotá has been one of the most dynamic Colombian urban centres in the second half of the twentieth century. During this period it not only maintained its position as the largest urban agglomeration (table 1), but it also sustained a rate of population growth which was rarely surpassed by any other large city in the country (table 3). Moreover, during most of this period, its population

grew faster than the rate at which the country was urbanising (table 2).

As has been the norm in rapidly urbanising countries, internal migratory population movements (in-migration) were a key contributor to urbanisation in the period after World War II. Colombia's four largest cities were by far the most favoured destinations for migrants between 1951 and 1973. Due to its sheer size, Bogotá was able to absorb much larger numbers of migrants than any other city: in the two inter-censal periods 1951-64 and 1964-73 it received an estimated 28.6 per cent and 46.4 per cent of all the country's in-migrants, respectively. This factor was behind growth rates which more than doubled those of the country between 1951 and 1973. In both 1964 and 1973, over half of Bogotá's population had been born outside the city, a slightly higher percentage than in most other large cities except Cali and Villavicencio (a city located in the Eastern Plains, with a 1993 population of 274,000), where over 55 per cent of all inhabitants declared themselves to be in-migrants at the time of these censuses (Flórez and González, 1983, p.66).

In fact, in-migration was the main contributor to Bogotá's demographic expansion in the 1950s and 1960s, and a substantial part of this migration was rural in origin. In 1973, as table 4 shows, a quarter of the city's in-migrants came from the neighbouring provinces (**departamentos**) of Cundinamarca and Boyacá, which represented an increase over the one-fifth recorded in the 1964 national population census (McGreevey, 1976). Up to the 1960s, the majority of men who migrated to Bogotá from these provinces were young unskilled labourers coming directly from predominantly rural communities. A 1968 survey of male migrants to Bogotá aged 20 to 54 found that 79 per cent of those born in these provinces had originally come from municipalities with less than 20,000 inhabitants where the largest urban centre had an average population of 3,000 (Simmons and Cardona, 1972). Only 12 per cent had lived in another urban centre (mostly medium-sized) before their arrival in the capital. The study also found that migrants from other parts of the country tended to come from larger communities and were generally more skilled.

But despite the focus on working-age males in Simmons and Cardona's study, and similarly to other large cities in Latin America (Gilbert, 1994), in recent decades Bogotá has attracted a larger number of female than male migrants from most regions of the country. In 1973, for example, there were over a third more Boyacá-born females than males in the city (table 4). Even by 1993, there were 93 males for each 100 women living in the city (DANE, 1994). These figures are partly a reflection of economic and cultural factors. Social change and widespread poverty in rural districts have compelled a disproportionate number of young women to seek employment in large cities, notably in domestic service

but also in other services as well as manufacturing. Since the late 1960s, the cut-flower export industry has grown considerably in importance as a source of employment for young female labour, particularly in municipalities close to Bogotá.

Even in the 1980s and 1990s, and somewhat unusually in Latin America for a city of its size, in-migration still represents a very important factor in Bogotá's growth, as suggested by the difference in growth rates between Colombia and the Bogotá metropolitan area (table 1). Even allowing for possible errors in the provisionally adjusted 1993 census figures, migrants make up a substantial share of annual growth, with perhaps as many as one fifth of a million in-migrants arriving every year in Bogotá, or over half all new inhabitants^{vi}. In the next two decades or so, however, a high rate of population growth such as that of the recent past may largely be sustained through a high influx of in-migrants, rather than natural growth; this is because Bogotá will have then a comparatively older population than Colombia, with proportionately fewer inhabitants in child-bearing age^{vii}. Whether this is actually the case will depend not only on Bogotá's success in providing jobs and services for its fast expanding population, but also in the social and economic conditions prevailing in other parts of the country, where endemic violence and poverty have underpinned out-migration^{viii}.

3.2 Economic growth, human capital and increased national concentration

A visitor to Bogotá in the early to mid-1990s could be forgiven for thinking that the city was undergoing a complete reconstruction. Building sites provide a highly visible testimony to the vitality of those parts of the

city's economy which in the 1990s has benefitted most from the liberalisation measures introduced by the Gaviria government (1990-1994) and from the repatriation of capitals, including, though not exclusively some from the drug trade^{ix}: the construction industry^x and commerce, particularly trade geared to the mid- to higher-income sectors^{xi}. Further evidence comes from an unparalleled expansion in the new vehicle stock, particularly private cars, which has led to a traffic congestion never before witnessed by its inhabitants.

And although the recent economic boom appears to have placed unprecedented strain on the city's resources, it is by no means a new phenomenon. The city has enjoyed rapid economic growth in the recent past, notably in the 1970s. Its economic weight in the country has paralleled its demographic significance and, particularly in the second half of the twentieth century, the city's economic importance has transcended its demographic weight on a number of accounts. This was a time when the country's economy expanded at a faster rate than at any other period in its history, with per capita output levels growing at an annual average of 2.2 per cent between 1945 and 1986, a similar rate to the average for Latin American countries (Ocampo et al., 1987, pp. 243-244). During this period, Bogotá's economy also grew at a sustained and generally higher pace than the national economy, as may be seen from table 5.^{xii} These higher rates were reflected in a gradual increase in the city's share of gross domestic product, from around one-seventh in 1950 to over a fifth in the mid- to late-1980s. But the city's population tended to grow at a faster pace than its output, so while Bogotá's per capita output was more than twice that of the country in 1950, 39 years later the gap had been reduced to just 30 per cent.

These sustained growth rates in output for the whole city conceal marked changes in the structure of production. The ten-sector classification used in table 6 shows that, between 1960 and 1989, for example, the joint contribution of housing rentals and commerce significantly dropped (from 31 to 19.3 per cent); this was compensated by an increase in the joint weight of finance and insurance, personal and domestic services, and government services (from 27.9 to 39.3 per cent). Although with variations in the intervening years, other sectors such as manufacturing, construction and transport generally maintained - or even marginally increased - their overall contribution.

Structural change was also a feature of national economic growth during this period, although the transformation there was considerably less marked than Bogotá's. No doubt the most salient aspect of national economic change was a sharp drop in the participation of the primary sector from nearly a third of total output in the early 1960s to just under a quarter in 1989, a fall for which agriculture was mostly responsible. This drop was compensated by the growth of other sectors, notably construction, utilities, commerce and services. The

contribution of manufacturing, finally, appeared stable throughout the period (table 6).

It was noted earlier how, somewhat unusually in the Latin American context, Colombia's spatial development of the past half century or so was punctuated by the simultaneous growth of a number of urban areas in different regions. However, recent decades have seen Bogotá attain an unchallenged lead over other large cities in a number of respects. This is exemplified by the contribution that the capital city makes to some

sectors of national economic life, as shown by the figures in table 7. Some sectors clearly stand out as providing Bogotá with a much larger share of national activity than either its population or its total output would warrant. Notable examples are communications, finance and insurance, house rentals, personal services and government services: at some point in the period 1960-1989, at least one third of national activity in all these sectors was located there.

The city's disproportionate lead in such areas is not entirely surprising. In the case of government services, for example, this preeminence is explained by the fact that Bogotá is not only the seat of a historically highly centralised national government but also of the provincial government of the Cundinamarca **departamento** and of the largest local authority in the country. This, coupled with a rapidly expanding national government throughout the second half of the twentieth century, has been seen as a factor behind the city's lead in other sectors (Gilbert, 1981, p.68). The concentration of specialised services such as communications and finance & insurance may no doubt be partly explained by the advantages of physical proximity to the government and to ancillary services normally associated with these activities, but also in terms of a workforce that demands sophisticated amenities usually found only in large cities.

There are other well-documented indicators of the city's sustained and even increased preeminence in the nation particularly in the service sector (see for example Goueset, 1991; Jaramillo and Cuervo, 1987). Bogotá's share in the total volume of loans and deposits in banks and other financial institutions rose from around 40 per cent in 1975 to 50 per cent in 1990, with deposits in the city's banks outstripping loans (Goueset, 1991, p.13). Throughout the 1980s, the capital city provided the headquarters for two-thirds of the 500 companies with the largest annual turnover (Cuervo, 1992, p.37).

On average, **bogotanos** are more spoilt for choice when it comes to specialised retail and service outlets than the inhabitants of any other large Colombian city. As table 8 shows, in 1990 the city had over twice the proportion of car dealers, finance outlets, estate agents and establishments providing services to firms than its share of national population would appear to suggest. With twice the population of Medellín and three times that of Cali, Bogotá had three times more educational establishments and two-and-a-half times more health establishments than Medellín; in terms of numbers of hotels and restaurants and of retail outlets it outstripped Cali's by a factor of six and four respectively.

Bogotá's inhabitants are also on average more educated and have better access to services and infrastructure than most Colombians. For example, in 1993, 94 per cent of those aged five or more in Bogotá were literate, 43 per cent had completed secondary education and 16

per cent were tertiary graduates^{xiii}. By contrast, the literacy rate in Colombia was 86 per cent, while 34 and eight per cent of all Colombians over five years of age had completed secondary and tertiary education, respectively.

On average, Bogotá's population also enjoy better living conditions than the majority of Colombians, as the information in figures 2, 3 and 4 and table 9 helps illustrate. Whereas in terms of access to electricity and water supply **bogotanos** were only slightly better off than the rest, there were noticeable differences in the numbers who had access to sewerage and those with no access to services whatsoever.^{xiv} Similarly, with a smaller average size of 4.1 compared to a national average of 4.4, in 1993 Bogotá's households tended to live in dwellings built with more durable building materials, while a higher proportion used either gas or electricity for cooking.

Notwithstanding several decades of virtually uninterrupted growth in real average incomes, and Bogotá's unequalled preeminence among Colombian cities, poverty is still a striking feature of everyday life in the capital. Using an examination of the degree to which a set of five "basic needs" were met or unmet in the Colombian population, a recent study (DANE, 1989) concluded that Bogotá had a comparatively smaller incidence of poverty than all provincial subdivisions (**departamentos**) in 1985. Unfortunately, however, the study also found that for an estimated 17.3 of the city's inhabitants one of such needs remained unmet in 1985, while there were 6.2 per cent for whom two or more basic needs were unmet - and were therefore regarded as living in absolute poverty.^{xv}

And although the existence of such high levels of poverty stands in the way of the future development of the city, there is perhaps an even more pronounced obstacle in its highly skewed distribution of personal incomes. In 1990, the top 20 per cent of the population earned 55 per cent of the city's income while the bottom 40 per cent earned a mere 11.3 per cent (Misión Siglo XXI, 1993). Similarly, the ratio between the income of the highest 20 per cent to the lowest 20 per cent was 14.1 in the same year, a figure which shows a more pronounced concentration of income than in countries such as Canada (with 7.1 in 1980-91), Sweden (4.6), Singapore (9.6) and Thailand (8.3) (cf. UNDP, 1994).

4.HOME AND WORK: INTRA-METROPOLITAN CHANGES, 1972-1994

Despite its status as the seat of a Spanish Viceroyalty in the years before 1819 and, since the mid-nineteenth century as capital of a country with an area twice the size of France, for centuries Bogotá remained no more than a small, compact town. Notwithstanding a persistent economic stagnation throughout most of the nineteenth century which critically constrained the city's physical expansion, population - and, in consequence, density - more than tripled during the century (Vargas and Zambrano, 1988). The first half of the twentieth century saw an increase in its pace of demographic growth and, since the 1920s, also a swift physical expansion towards the north along the eastern mountains, a movement led by wealthy families in search of more space and greenery than the densely-built old colonial core could offer them. This movement would decisively leave its imprint on the future social map of the city.

4.1 Towards suburbanisation

Several authors agree that Bogotá has been undergoing a process of "suburbanisation" -involving faster growth of population and activities in the city's peripheral areas than in its core - although there is no agreement as to precisely the shape or scale of this movement. A historical overview of the city's physical expansion shows evidence of this dating back to the 1920s (Salazar and Cortés, 1992). As figure 5 suggests, already by 1953 the city was expanding in different directions away from the city's traditional central business district - or core -, along a small number of axes specialising in different functions: high-income residential areas along the northern axis, middle-income residential clusters to the northwest, government services and manufacturing industries to the west and low-income residential areas to the south. After decades of rapid growth and even faster increases in land prices (Villamizar, 1980), by 1990 the much enlarged city had become comparatively more compact, with a semi-circular shape and small protruding radii along the main transport corridors (figure 6) and a more mixed land-use pattern.^{xvi}

A handful of studies offer insights into the changing location of jobs and homes within the administrative area of Bogotá's Distrito Capital since the early 1970s. In looking at the two decades since 1970, Pineda (1991) argues that the core has tended to lose population since 1981 while peripheral areas gained population in absolute and relative terms; similarly, figures quoted by him for the period 1972-1978 show that employment tended to disperse from a relative concentration in the core, towards a more "pluri-centric" pattern of location, with several outlying areas gaining in relative terms.

Pineda's observations for the years 1972-1978 are based on the results of the World Bank's "City Study", a major research exercise conducted with Colombian researchers in the late 1970s and early 1980s which looked at different aspects of growth in Bogotá and to a lesser extent Cali^{xvii}. Using the same basic employment data, Lee (1989) reinforces and complements Pineda's conclusions to show that, in the period in question, the pattern of births, deaths and relocation rates of firms was much more dynamic than those of large US cities: if projected over a ten-year period, Lee argues, 'as much as half of all manufacturing firms in (Bogotá and Cali) would be relocated' (p.5).^{xviii} With the help of data disaggregated by type of establishment, Lee shows that dispersal away from the core was highest among trade establishments, followed respectively by service and manufacturing establishments. In addition, small new firms tended to locate in central areas, with larger ones appearing to favour more peripheral sites, an observation that in Lee's view confirms the "incubator hypothesis" for Bogotá.^{xix}

In relation to employment location, an analysis using more recent data confirms that suburbanisation has been taking place, but this has been largely concentrated along two main corridors rather than spreading indiscriminately from the centre to the periphery (Cuervo, 1993). From a spatial perspective, an area with the shape of a rotated L would seem to attract a disproportionate share of employment. The traditional Central Business District is located at the angle of this L, with one arm extending from the centre outwards to the north and the other one extending from the centre to the west (see figure 7). Areas which are predominantly residential would appear to be confined to peripheral rings in the south and the northwest, with the rest of the city's built-up area showing a more mixed form of productive activities and residential areas.

A composite picture of the predominance of economic activities within the built-up area of the "Distrito Capital" in 1990 (and excluding the built-up fringe and outer suburbs of the metropolitan area) shows that manufacturing extends largely along the western corridor, while services are located mainly along the centre-north corridor, and commerce is scattered largely in the northwest, southwest and south.^{xx}

The studies quoted above have been largely confined to the boundaries of the administrative area of Bogotá's Distrito Capital (or former Distrito Especial). A more complete spatial picture emerges from an examination not only of a wider region that includes the entire Bogotá metropolitan area (see note 2 and appendix), but also from examining a longer time range. A growing number of manufacturing establishments have developed around Bogotá since the 1950s, particularly in a region within a radius of some 250 km around the city. While some of these were the result of government policies to promote development in backward regions,

the growth of such establishments has generally been much slower than in the capital city (Dávila, forthcoming).

Bogotá's core has not experienced the regional dispersal of manufacturing industries that was the trademark of metropolitan areas like New York and London in the 1950s and 1960s, which has also been observed in recent years in large metropolises of emerging economies such as Sao Paulo, Brazil and Seoul, Korea. Indeed, as figure 8 shows, between 1974 and 1989 there was a trend for manufacturing employment within this larger region to concentrate in an area of some 50 km around Bogotá. Similarly, and in contrast to what Lee (1989) observed for the 1970s, the data in figure 9 shows that between the mid-1970s and the late 1980s there was an increased concentration of manufacturing employment **within** the Bogotá metropolitan area (away from the core).

4.2A social map of Bogotá

For around three decades after 1940 Bogotá developed as a socially highly segregated urban space. Even today the city is roughly marked by a relatively affluent north and a high-density, low income south and southwest, a separation that was made all the more evident by the fact that until the 1970s the city had an elongated shape, extending towards the north and the south along the main thoroughfares, bounded by the mountains on the east and on the west by the Bogotá river. Such impression of spatial segregation was reinforced by the reality of a society highly segregated along income lines, with a well-off small minority who could afford the large spaces and the greenery of the city's north.

Using data for the metropolitan core for 1978, Mohan (1986) classified workers according to their area of residence (figure 10): professionals and administrators were found mainly in the north, domestic workers in the more affluent residential areas, production and construction workers in the west and south, and clerks predominantly in the southwest. As Mohan rightly points out, however, not all those in the same occupation earn similar incomes. Although partly attributed to the broad nature of the occupations used in this classification, according to Mohan (op.cit., pp.152 and ff.) this is also a reflection of the fact that there is a marked spatial segregation of workers by income. Thus, for example, an administrative worker living in the northern corridor would earn nearly twice as much as one living in the south, while the ratio for a category like "production supervisor" would be more like one to three.

Spatial differences in income also have a gender dimension. Data for 1978 also suggests that women tend to earn generally less than men, with the ratio of earnings varying according to spatial location (op.cit., p.162). In the old Central Business District, differences in earnings are negligible; in the industrial corridor

towards the west, however, female average earnings are 54 percent of those of men, while in the affluent residential areas of the north, women earn less than a third than men (a difference explained largely by the presence of female domestic workers).

The trend in recent years appears to be towards a more complex social map of the city, with a less marked spatial segregation along income lines. Such increased complexity is the result of a combination of factors: by the mid-1980s, Bogotá had a higher share of middle-income households with higher average incomes than in the 1970s^{xxii}; increased demand resulting from higher real incomes and a fast population growth have pushed land prices up disproportionately both in central and peripheral areas thus out-pricing middle-income groups from their traditional locations in the enlarged core; this, coupled with an expanded personal mobility brought about more through a dramatic expansion in private car ownership rather than any significant improvements in public transport^{xxiii}, has meant that large middle-income residential developments have appeared in traditionally working-class districts mainly in the south and southwest of the city; similarly, since the 1970s working-class districts have continued to grow and develop in the north and northwest of the city, alongside middle-income areas and close to sources of employment and main thoroughfares.

5. CONCLUSIONS

The evidence presented here for Bogotá would seem to support Clark's law. Along with the surrounding municipalities, it has established itself as the foremost economic region in the country, particularly in terms of the sheer concentration of jobs, productive activities, capital and a vast array of services. Despite the continued demographic and economic expansion of Colombia's unusually high number of large cities, Bogotá's preeminence will not appear to be challenged in the near future. At the same time, it continues expanding towards surrounding municipalities, fuelled by capital flowing not only from other parts of the country, but also by not insignificant overseas earnings - legal and illegal.

As the twenty-first century approaches, Bogotá appears to have taken over from Medellín, Cali and Barranquilla as Colombia's most promising city, with its relative anonymity providing a haven for a vast and growing number of people and activities. But it is precisely this anonymity, the feeling that no one belongs there, that may prove the city's undoing. As suggested by the new mayor, a former academic and a highly charismatic figure elected despite all efforts by the established political parties^{xxiiii}, there is an urgent need to instill in the city's inhabitants a sense of belonging, and the belief that individual and collective efforts can only be made more

productive by protecting the city and its environment,
which are their common heritage (Eco-lógica, 1994).

APPENDIX

DEFINING THE "BOGOTA METROPOLITAN AREA"

In this paper the expression **Bogotá metropolitan area** is taken to mean a functional area as proposed by, among others, Hall and Hay (1980), rather than an administrative one. This could be defined as an invisible physical boundary where the volume and frequency of exchanges of goods, people and information is similar to that which happens within a much more neatly defined space such as a city centre. Administrative boundaries often artificially leave out such exchanges, simply because of the form in which statistics are collected, published and used in policy and planning.

Thus, the "Bogotá metropolitan area" (BMA) encompasses Bogotá and eight neighbouring municipalities with which the city exchanges a substantial volume of goods, people and information on a daily basis. In most cases, these municipalities are also part of a conurbation, a physical extension of the built-up area of Bogotá, such that it becomes difficult to identify any visible separation between the two in the form of large tracts of rural land, for example.

The core of the BMA is, of course, the Distrito Especial de Bogotá, defined by presidential decree in 1954 as Colombia's comprising the old municipality (**municipio**) of Bogotá and six neighbouring municipalities. The name "Distrito Especial" was changed to "Distrito Capital" (DC) in the new Constitution of 1991, but its boundaries and functions remained virtually unchanged. Beyond the core lies the "built-up fringe", an area comprising the municipality of Soacha and extending to the southwest of the DC; this has become a seamless extension of the city and one of the fastest growing parts of the functional area, with a large concentration of manufacturing and extractive industries. Finally, the BMA includes an area more removed from the core called here the "Outer Suburbs" comprised by seven municipalities located towards the southwest, west, north and northwest of the core.

The table presents the population growth of each one of these components of the BMA for the census years 1951 to 1993.

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NOTES

- i. The most promising of which in terms of their ability to attract foreign investment have been labelled as "emerging markets", along with some of Eastern Europe's former communist states.
- ii. Since the promulgation of the 1991 National Constitution, the city's official name has reverted to **Santafé de Bogotá**, the name which the Spanish **conquistadores** gave the city upon its foundation in 1538. The administrative area which in the 1950s incorporated a few neighbouring municipalities, also changed its name from **Distrito Especial** to **Distrito Capital (DC)**. Despite calls dating back to the 1950s, the new Constitution failed to designate a larger "metropolitan area" which would include the municipalities where the city's physical expansion is expected to take place in the next decades. It did, however, leave open the possibility of creating one, although this involves a cumbersome legal and juridical process. The term "metropolitan area" as used in this context is, therefore, not administrative but functional (Hall and Hay, 1980), as explained in more detail in the appendix. Facts and figures in this paper sometimes refer to Bogotá, DC and sometimes to the Bogotá metropolitan area, a distinction that has been clearly indicated in the text.
- iii. "Polarisation reversal" is defined as the stagnation of demographic growth in a country's central region (or its largest metropolitan area) accompanied by a rapid growth in peripheral areas. Richardson (1977) cites Colombia, South Korea and Brazil as countries where polarisation reversal may have already started.
- iv. A more detailed historical analysis of this pattern lies beyond the confines of this paper. Useful sources include Jiménez and Sideri (1985) and Flórez and González (1983).
- v. The 1993 population census information used in this paper comes from provisional information made available in diskette by DANE (1994), Colombia's official census and statistical agency. Some of the figures in this initial release, including the population of the country and of the capital cities of **departamentos**, have been adjusted for coverage. Objections have already been raised by members of the local scientific community about the reliability of figures from remote rural areas and areas affected by political and social conflict as well as about the use of inadequate criteria in adjusting urban figures (ACIUR, 1994).
- vi. Assuming that net international migration makes a negligible contribution to national population growth rates (de Llinás, 1990, table II-10), Bogotá's natural growth could be assumed to be similar to the country's for the period 1985-93, ie. 2.2 per cent per annum (table 2). Migration would, therefore, account for the 3.0 per cent growth differential in the metropolitan area, or an estimated 198,000 new inhabitants in 1993. If this figure appears unexpectedly high, it must be remembered that so was Bogotá's population growth rate in 1985-93, which seems to have exceeded demographers' forecasts (cf. de Llinás, 1990 and Granados, 1992).
- vii. In 1993, 28.7 per cent of the city's population were aged under 15, compared to a much higher 33.8 per cent in Colombia. Given the evidence that in-migrants tend to be individuals in reproductive age, by the time today's children reach a reproductive age around 2010, Bogotá will have a smaller share of child-bearing age-groups than Colombia.
- viii. Violence, political and otherwise, has been a trademark of rural life in Colombia for the past four decades. In the past, this has fueled out-migration from many regions, and probably continues to be an important factor, as victims of the indiscriminate actions of the paramilitary, guerrilla groups and drug traffickers flee to the relative safety of large cities. Between July 1990 and June 1994, for example, it is estimated that political violence (including presumed political killings, "social cleansing", disappearances, and deaths in military action) claimed nearly 15,000 lives in Colombia (Colombia Bulletin, 1994).
- ix. It is estimated that over the past decade some US\$ 1.5 to 2.5 billion from the drug business are repatriated every year, compared to an average private investment of US\$2.8 billion a year in the 1980s (The Economist, 1994).
- x. Nationally, construction grew between 9 and 12 per cent in 1994, and thus became a substantial contributor to overall economic growth. In Bogotá, investment in apartment and office buildings reached profit rates of over 40 per cent (once inflation is accounted for). This is estimated to fall to about 15 to 25 per cent in 1995, as markets reach their saturation point (Semana, 1995).
- xi. Apart from construction, laundering of drug money inside the country has involved three main activities (The Economist, 1994): purchase of agricultural land (up to a third of all agricultural land may be in the hands of drug entrepreneurs), agro-industry (even in loss-making businesses) and subsidised imports of electrical appliances, including computer equipment. Vast warehouses selling a range of imported consumer goods have sprung up in Bogotá, with the some established shopping centres (known as "Sanandresitos", after the first one set up in Bogotá several decades back) where contraband goods were traditionally found, have also expanded.
- xii. Spatially disaggregated data on economic growth is generally collected and published using a provincial (**departamento**) classification. Information on some government and community services (such as banks, educational and health facilities, judicial courts, and so on) is regularly published by the Central Statistical Office (DANE) for the municipal level. Because what we call here the Bogotá metropolitan area does not officially exist, most of the figures quoted in this paper refer, therefore, to productive activities within the boundaries of what up to

the new national Constitution of 1991 was the **Distrito Especial de Bogotá** and since then is known as Santafé de Bogotá, Distrito Capital (see note 2).

xiii. All 1993 population data in this section comes from provisional census figures; in the case of Bogotá they refer to the Distrito Capital, the old Distrito Especial, which excludes the eight municipalities within what we have called here the Bogotá metropolitan area (see note 2 and appendix).

xiv. As was said earlier, national census figures may be over-estimates resulting from adjustment errors and from inadequate coverage of remote rural areas and areas affected by social and political conflict.

xv. The research included a household survey which looked at five indicators: housing quality, basic services to the dwelling, overcrowding, economic dependency ratios within the household and number of children without access to formal education. Households living in absolute poverty (the word used in the Spanish original is **miseria**) were those where two of these basic needs were unmet.

xvi. In 1979, in recognition that tertiary activities in the central business district had spilled onto a much larger area (covering roughly the city's built-up area in 1950), the city's planners designated this much expanded "central core" as a mixed-land use area, thereby giving green light to the development of alternative concentrations of tertiary activities further to the north (Salazar and Cortés, 1992, pp.34-35).

xvii. The output of this research exercise - perhaps the largest conducted at the time in a city of a developing country until that time - runs into the tens of publications. Mohan (1986 and 1994) and Lee (1989) are good analyses and summaries of some of the major findings in the study's main areas of work, including employment, social welfare, housing, land and local government institutions.

xviii. Lee's proposition, as well as some of the City Study's conclusions, are undoubtedly coloured by the fact that the second half of the 1970s was a period of unusual economic growth for Bogotá, as Mohan (1986, p.349) acknowledges. A survey of a random sample of 28 manufacturing establishments conducted in 1990 in the metropolitan area of Bogotá (Dávila, forthcoming) showed a remarkable locational stability in the following decade across different establishment sizes, branches of production and location within the metropolitan area. The 1980s, by contrast, were a time of unusually slow economic growth in the city's recent history.

xix. This hypothesis views central business districts as "hatching areas" offering small new firms a favourable environment of markets, business services - including delivery services - and labour availability without which they would not be able to take off in the crucial first stages of their development. As firms become more established and they grow larger, and as they become able to internalise these externalities, they would tend to move to outlying areas. The hypothesis was partly developed in a now classic study of New York by a team led by Edgar Hoover and Raymond Vernon (1959) in the late 1950s.

xx. The 1990 data which feeds such an analysis comes from the National Economic Census, an attempt to quantify and assess the full extent of economic activities in the city. This information, as well as that compiled for the World Bank's City Study, was subsequently classified into **comunas**, or small statistical areas designated by DANE. It must be noted, however, that because of limitations in the way information on Bogotá is made available by DANE, both the City Study and Cuervo's analysis (1993) is limited to the area of the former Distrito Especial, which excludes neighbouring municipalities.

xxi. The figures shown earlier speak for themselves: the city's output grew at an annual average of 7.8 per cent in the early 1970s and 4.6 per cent in the second half of the 1980s, while the city's population expanded at 3.5 per cent per year in 1973-85.

xxii. The number of private vehicles registered in Bogotá and the neighbouring municipalities of La Calera, Facatativá, Mosquera, Soacha and Zipaquirá grew 7.3 per cent annually between 1977 and 1989 when it reached 502,400 (Ospina et al., 1992), approximately 9.1 cars for every 100 inhabitants. By 1994, there were an estimated 673,000 private cars, 55,000 taxis and 22,000 buses and other public service vehicles circulating in the streets of the capital (El Tiempo, 1994). As a result of such dramatic expansion, traffic in some parts is reaching gridlock, a situation compounded by the fact that Bogotá lacks any form of rapid transit system though no paucity of proposals; even by early 1995 there are no firm plans for building one in the near future.

xxiii. Antanas Mockus, who has no political party affiliation and made headlines as a controversial vice-chancellor of the National University, won a landslide election in October 1994, against the machinery of the two more established political parties, which found themselves unable to counteract his simple yet highly philosophical message to the voters. It is claimed that no more than \$1,000 were spent in his publicity campaign.