

EXPANDING URBAN SPRAWL: GROWTH OF LOW-INCOME SETTLEMENTS IN BOGOTÁ, COLOMBIA

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INTRODUCTION

SANTA Fe de Bogotá (hereafter Bogotá) is the capital city of the Republic of Colombia.¹ It has a population of approximately 5 million inhabitants which accounted for about 15 per cent of the country's total population according to the last national census in 1993.² Historically Bogotá has not had such a strong primacy over the other Colombian cities when compared with other major capital cities in Latin America, like Buenos Aires, Lima, or Mexico City. Rather, the difference between Bogotá's population and the next two or three largest provincial cities have not been so big.³

However, the concentration of population in Bogotá increased rapidly from the 1940s through 1970s, bringing the country closer to the typical Latin American pattern of urbanization where there is a high demographic concentration in one major city. During the 1938–85 period, Colombia experienced an important demographic change. Until the 1970s this change was caused mainly by internal migration from the countryside to major cities; thereafter it continued under the impetus of natural population increase in the principal cities. According to national census data, in 1938 the urban population accounted for approximately 30 per cent of the

¹ The official name of Bogotá, "Bogotá, Distrito Especial" (Bogotá Special District), was replaced by "Santa Fe de Bogotá, Distrito Capital" (Santa Fe de Bogotá, Capital District) as provided by the 1991 constitution. However, since "Bogotá" has been the most popular name, the author will use this name or "Bogotá City" in this study. The "Bogotá Special District" will also be used when referring to the administrative division of the capital before 1991.

² The population data for 1993 used in this study was taken from newly calculated data based on the national census of 1993 by Departamento Administrativo Nacional de Estadística (DANE) which were released in September 1996. It is worth noting that the data quoted in the author's previous study [9] were taken from preliminary data announced in 1994 and which were highly overestimated.

³ The urbanization pattern in Colombia has been different from other Latin American countries. The country has not experienced concentrated urban development in an absolute way. There have always been several provincial cities that have been important centers of regional development, such as Medellín, Cali, and Barranquilla. If the primacy index is calculated as the relationship between the largest city's population and the sum of the population of the next three largest cities, it comes to just 1.18 in 1993 for Colombia (according to newly calculated census data), while it is 3.67 for Argentina in 1991, 4.10 for Peru in 1993, and 3.97 for Mexico in 1990 [9, p. 265].

country's population; by 1985 it was close to 70 per cent. Though the pace of urban population growth has slowed down since the 1980s, population concentration in Bogotá has continued to rise. When Bogotá's residential stratification and internal migration patterns are analyzed, the phenomenon of expanding population sprawl that characterizes most of the major Latin American capital cities can also be seen in the Colombian capital.

The insufficient social expenditure on housing and public services in Bogotá and the rapid increase in the city's population have given rise to serious urban problems, one being the expansion of low-income neighborhoods or settlements (*barrios populares*) that have arisen on illegally developed and subdivided land. This study examines the main characteristics of such neighborhoods to identify the multifaceted causes for their expansion. Section I analyzes the pattern of the urbanization process and the supply of housing in Bogotá. Section II gives an overview of the low-income settlements and their expansion process. In Sections III and IV, the author will discuss some of the factors that determine the expansion of these low-income settlements, focusing particularly on urban regulation policy in Bogotá.

I. THE PROCESS OF URBAN EXPANSION IN BOGOTÁ AND HOUSING PROBLEMS

A. *Bogotá's Expanding Urban Sprawl*

Bogotá's position as the national capital has attracted a growing influx of people from all over the country, and since the 1940s there has been a widening differential between the national rate of population increase and that of Bogotá's. This population growth has been closely related to the capital's increasing importance as the economic center of the country in addition to its political and administrative functions. Bogotá's share of the gross national product rose from 6.3 per cent in 1938 to 32.3 per cent in 1988 [1, p. 24]. Its share of employment in the nation's manufacturing sector also grew from 16.8 per cent in 1945 [12, p. 53] to 32.3 per cent in 1988 [4].

Until the 1970s the city had expanded largely toward the north and south. During the last two and a half decades it has also begun expanding westward. Moreover, residential stratification by income levels and by geographical zoning related to the types of economic activities became entrenched during this period. The result has been that high-income population has settled mainly in an area running from the center of the city to the north, and low-income population in the area going from the center toward the south and southwest. Meanwhile, middle-income population has moved into former high-income areas as the latter residents moved toward the north and suburban areas. As high-income population settlements expanded north-

TABLE I
POPULATION OF COLOMBIA AND BOGOTÁ

	Whole Country		Bogotá			
	Population (1,000 Persons)	Annual Rate of Pop. Increase (%)	Population (1,000 Persons)	Annual Rate of Pop. Increase (%)	Bogotá's Share in Total Pop. (%)	Bogotá's Share in Total Urban Pop. (%)
1938	8,702		332		3.8	12.3
1951	11,548	2.2	660	5.4	5.7	14.8
1964	17,485	3.2	1,662	7.4	9.5	18.3
1973	22,773	3.0	2,845	6.2	12.5	21.0
1985	30,062	2.3	4,223	3.3	14.1	21.5
1993	33,109	1.2	4,945	2.0	15.0	21.0

Sources: DANE, *Censo nacional de poblacion* (Bogotá), 1964, 1973, and 1985 editions; for 1993, newly calculated data by DANE, released in September 1996.

ward, a new residential area was formed encompassing the center and the north where tertiary industries came to be concentrated. Manufacturing activities became concentrated in the center-west zone.

Bogotá's expansion brought the need for institutional and administrative reforms. Decree No. 17 of 1954 (*Decreto 17 de 1954*) designated Bogotá as a special district (*distrito especial*).⁴ It was reorganized with a new administrative structure whereby areas which in practice had been dependent on Bogotá's public services but which administratively had been controlled by the Department of Cundinamarca were integrated into the Bogotá Special District. By 1985 six other municipalities had been similarly annexed into the Bogotá Special District. Bogotá has become the capital of the Department of Cundinamarca as well as the capital of the Republic of Colombia.⁵

Table I indicates the change over time in the share of Bogotá's population in relation to the country's total population and total urban population based on national census statistics. Bogotá's population growth rate peaked during the 1951–64 period. The annual population growth rate from 1964 to 1973 stayed above 6 per cent, but declined to an average of 3.3 per cent during the 1973–85 period and to

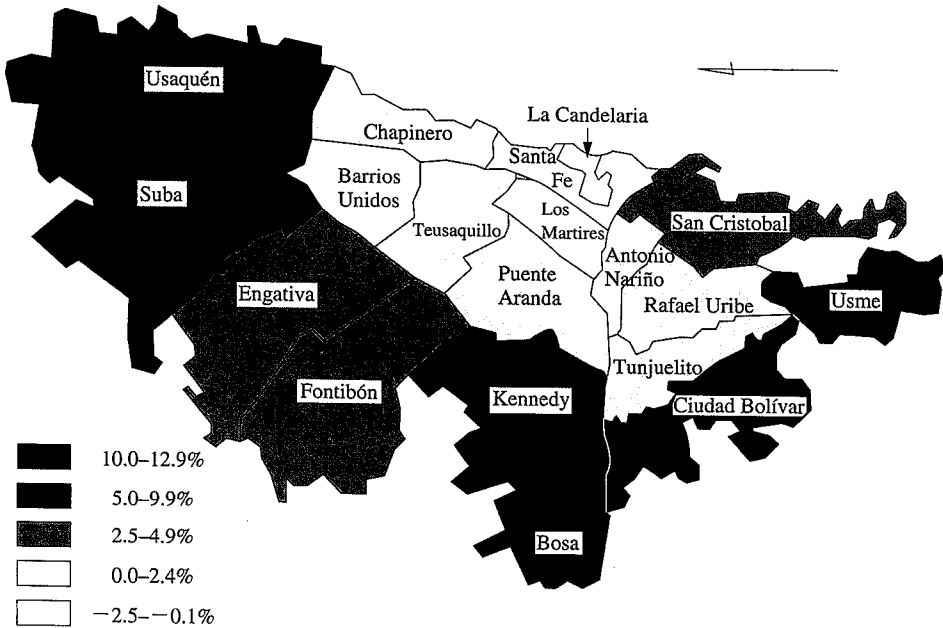
⁴ A *decreto* can be issued by the president of the Republic through his/her constitutional legislative powers (beyond the parliament). *Decreto* thus can be translated as presidential decree. "*Decreto extraordinario*" may be used as distinct from "*decreto ley*." The president can enact a bill in the form of a presidential decree which the parliament has failed to make law within a certain period of time as provided by the constitution. This decree is interpreted as having the same effect as law (*ley*) [15, pp. 112–14]. However, in this study, the author will simply use the term "decree" for *decreto*, and "decree-law" for *decreto ley*.

⁵ In Colombia, there are two levels of local administration: departments (*departamentos*) and municipalities (*municipios*). There are thirty-two departments in the whole country, and each department is divided into several municipalities.

2.0 per cent during the 1985–93 period. However, in 1993 Bogotá still accounted for 15.0 per cent of the country’s total population and 21.0 per cent of the total urban population.

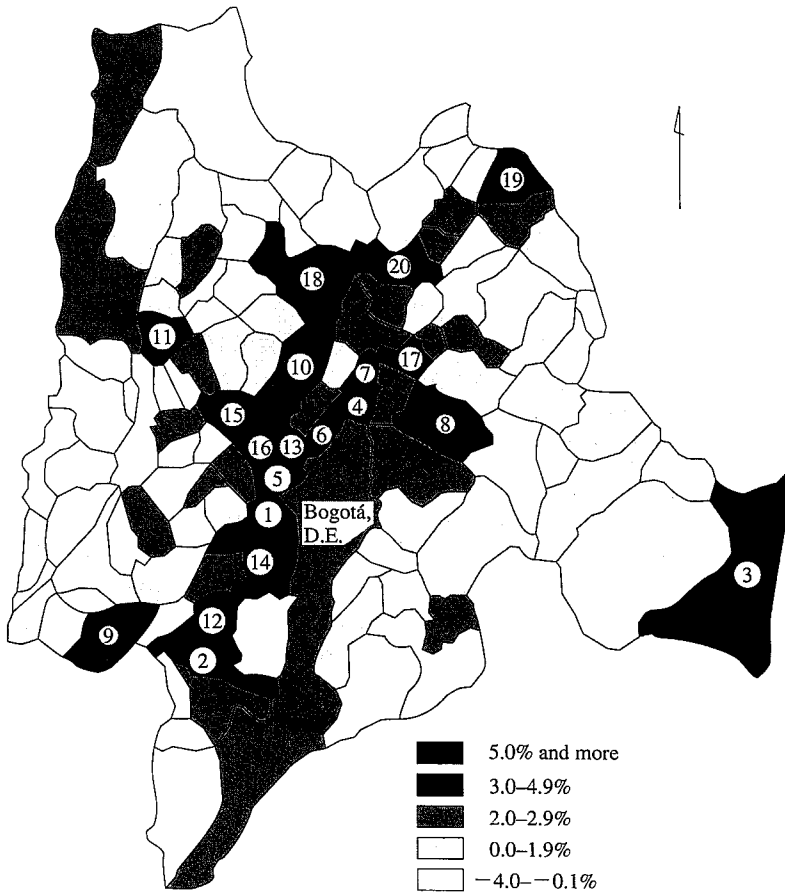
An examination of population changes in Bogotá City and its surrounding areas shows that population growth rates vary considerably according to localities (*localidades*). Figure 1 compares population growth rates for localities in Bogotá City during the 1973–85 period. The annual rates ranged from 5.0 to 13.0 per cent in peripheral areas such as Usme, Ciudad Bolívar, Bosa, Usaquén, Suba, and Kennedy which were far higher than the average of 2.1 per cent for Bogotá as a whole. Meanwhile, the central areas of Bogotá made up of Santa Fe, Barrios Unidos, Los Martires, and La Candelaria, lost population, showing a typical case of population hollowing out. In the Department of Cundinamarca, the municipalities bordering Bogotá expanded rapidly during the same period. As Figure 2 shows, most of the municipalities which experienced an annual population increase of 3.0 per cent or more were located close to Bogotá City. Particularly outstanding growth rates were achieved by Soacha (9.0 per cent), Arbeláez (6.8 per cent), Chía (4.8 per cent), Mosquera (4.5 per cent), and Cota (4.3 per cent). Although a

Fig. 1. Annual Average Rate of Population Increase in Bogotá by Localities, 1973–85



Source: Y. Soler and A. Carrero, *Dinámica demográfica de Santa Fe de Bogotá, D.C., 1973–2000* (Santa Fe de Bogotá: DAPD, 1992), p. 28, quoted in [5, pp. 19, 21].

Fig. 2. Average Annual Rate of Population Increase in Municipalities in the Department of Cundinamarca, 1973-85



Source: DANE, *Estadísticas municipales de Colombia, 1990* (Bogotá: DANE, 1990), pp. 25-28.

Note: Municipalities with the highest rate of population increase (%):

1. Soacha	(9.0)	11. Villeta	(3.7)
2. Arbeláez	(6.8)	12. Fusagasugá	(3.6)
3. Paratebueno	(5.0)	13. Funza	(3.6)
4. Chía	(4.8)	14. Sibaté	(3.5)
5. Mosquera	(4.5)	15. Facatativá	(3.5)
6. Cota	(4.3)	16. Madrid	(3.4)
7. Cajicá	(4.2)	17. Tocancipá	(3.3)
8. Guasca	(4.1)	18. Pacho	(3.2)
9. Nilo	(4.1)	19. Gachetá	(3.1)
10. Subachoque	(3.8)	20. Tausa	(3.0)

“Bogotá metropolitan area” does not exist as a juridical entity, the city has acquired an enormous urban sprawl as indicated by the population dynamics of the city itself and its peripheral areas.

How can the rapid population increase in Bogotá’s peripheral areas be accounted for? Is it due to the immigration of new comers from surrounding departments? Or is it mostly due to the movement of population from Bogotá’s central area to its peripheries? Colombia’s statistics on internal migration are still very limited. The only available sources are: (1) the 1973 and 1985 census statistics showing the birthplaces of household heads; (2) the 1973 census data showing the number of immigrants in the previous year; (3) the 1985 census showing immigrant figures during 1980–85; and (4) data from a “Survey on Poverty and Quality of Life in Bogotá, 1991” conducted by the City Planning Administrative Department (Departamento Administrativo de Planeación Distrital, DAPD) of Bogotá City.⁶

According to 1973 and 1985 census data, close to half of Bogotá’s residents have come from other parts of the country (49.2 per cent in 1973 and 44.9 per cent in 1985), and one-third of those who moved into Bogotá were from the neighboring Department of Cundinamarca. Those from Cundinamarca and from the Department of Boyacá (bordering on Cundinamarca) make up more than half of the new immigrants that appear on the birthplace-classified list [5, pp. 120–24]. Related statistics also show the following data: 75 per cent of the persons who moved into Bogotá by 1985 moved in before 1980 and so lived in Bogotá for five years or more; only 15 per cent of the persons who moved into Bogotá after 1980 were from the municipalities of Cundinamarca. These statistics show that “step migration” (i.e., migration first from distant provinces to municipalities in departments neighboring Bogotá, then from there to Bogotá itself) is not the major pattern of the population movement [5, p. 134].

However, the above-mentioned facts do not give a complete picture of immigrants movement inside Bogotá after arriving in the city. A 1991 survey of Bogotá showed that new residents were concentrated on three areas: (1) the southwest periphery of the city (Bosa and Ciudad Bolívar), (2) areas bordering the center of the city (Puente Aranda and Antonio Nariño), and (3) the residential area at the center of La Candelaria. Following the three above-mentioned areas in terms of new resident concentration were Tunjuelito, San Cristobal, Kennedy, Chapinero, and Usaquén. These five areas along with Bosa and Ciudad Bolívar were those where illegal land development was rampant and low-income settlements were concentrated. When data on the years of residence is analyzed, it shows that new immigrants were concentrated in specific peripheral areas such as Usaquén, Bosa, and Usume. There were few in the central parts of the city. Meanwhile, those immigrants having resided in Bogotá for ten years or more were dispersed evenly throughout the peripheral areas. The data also shows that fairly many residents in

⁶ DAPD, “Encuesta pobreza y calidad de vida, 1991” (Santa Fe de Bogotá: DAPD, n.d.). As the original material is not available, the author quotes Dureau et al. [5].

peripheral low-income settlements which have been developed since the mid-1980s, have lived in Bogotá for ten to twenty years.⁷ This indicates a second movement of immigrants from the center to the peripheries of Bogotá after their initial immigration into the city.

The above-mentioned facts show that two factors caused the population increase in Bogotá's peripheral quarters: new migration coming from outside of Bogotá and a movement of residents from the city's central area to its peripheries in order to find better opportunities for building their own houses.

B. *Housing Supply in Bogotá*

Has the supply of housing kept up with the rapid growth of population in Bogotá? To answer this question the change in the supply of housing in Bogotá over time will be analyzed by comparing the number of households and the number of houses as shown in the national population and housing censuses. The relative housing-shortage rate (i.e., the percentage of houses needed but not available in relation to the total number of households) decreased from 37.8 per cent in 1951 to 19.5 per cent in 1985 [11, pp. 2-6].

Jaramillo has pointed out that the problems of housing supply in Bogotá are related to quality more than to quantity. For instance, if the quality of housing is measured by (1) the composition of the building materials, (2) the availability of basic services, and (3) the number of people living in a room, quality could be considered below basic standards if one or more of the following three housing constraints are present: (a) walls are made of cardboard, plastic sheets, or similar non-durable materials and the floor is half finished; (b) absence of one or more of the three essential infrastructure services, namely, water, sewerage, or electricity; and (c) three or more persons are living in one room. Jaramillo pointed out that in 1985, 21.9 per cent of the total Bogotá households faced one or more of the three housing constraints [11, p. 18].

The legal or illegal nature of the building process should also be taken into account as one of the determining factors of housing quality. Table II, prepared by Jaramillo, shows the trend of legal and illegal housing construction during the past five decades. Legal housing construction can be regarded as that where: (1) the plot of land, related infrastructure, and housing construction are all developed by "promotional capitalists"; (2) housing construction is contracted out to a developer although the land belongs to the contractor (landowner); and (3) the whole housing project is carried out by government agencies⁸ to supply housing to middle- and low-income people. Illegal housing construction, on the other hand, means self-

⁷ A similar tendency was also corroborated by a survey on low-income settlements in Bogotá conducted by Hataya et al. [10] in 1992.

⁸ For example, the Central Mortgage Bank (Banco Central Hipotecario), Institute of Land Credit (Instituto de Crédito Territorial), and other agencies.

TABLE II
LEGAL/ILLEGAL HOUSING CONSTRUCTION IN BOGOTÁ

	Total Number of Houses Built			Illegal Houses Built / Total Houses Built (%)	Annual Average Number of Houses Built	
	Total	Legal	Illegal		Legal	Illegal
1928-38	9,723	6,841	2,882	29.6	684	288
1938-51	48,458	21,685	26,773	55.3	1,668	2,059
1951-64	139,453	80,785	58,668	42.1	6,214	4,513
1964-73	175,089	87,754	87,335	49.9	9,750	9,703
1973-85	332,888	220,541	112,347	33.8	18,378	9,362

Source: [11, p. 39, Table 14].

help construction (*autoconstrucción*) on illegally subdivided land. Though housing construction as a whole has been increasing in recent years, illegally built housing represents 40 to 50 per cent of newly built houses. Legal housing construction increased greatly during 1973-85, reflecting the housing construction boom during the 1970s, which was triggered by official support to the construction sector as a "leading sector" for economic development and by the subsequent expansion of official housing programs. Moreover, indexing of the credit system was introduced in 1972 which had a positive impact on official housing construction. This was a system of currency correction known as UPAC (*unidad del poder adquisitivo constante*), meaning "unit of constant purchasing power."⁹ The principal idea of this new system was to index or adjust loan payments to compensate for inflation. Consequently, loans under the UPAC system were chiefly granted to middle- and high-income households, but the system failed to provide affordable housing loans to low-income families. As a result, more than one-third of the houses built in this period turned out to be illegally built. In sum, housing supply in Bogotá has failed to keep up with burgeoning demand, and the shortage, both quantitative and qualitative, still remains as a serious problem.

II. PROBLEMS OF "LOW-INCOME SETTLEMENTS" IN BOGOTÁ

A. Definition of "Low-Income Settlement"

Low-income settlements (*barrios populares*) come into existence when low-income households, who do not have access to housing through legal land develop-

⁹ UPAC means the unit of loans and savings for housing construction with inflation-indexed interest rates. The rate and term of the loan are fixed, but the payments are calculated in UPACs whose nominal value in pesos fluctuates to compensate for inflation. This system was initiated in 1972 by Currie, an economic advisor to the Pastrana government. The original purpose of this system, however, was to activate the economy by raising the national savings rate.

ment or housing construction markets, buy low-priced illegally developed land (i.e., illegally subdivided land) on the periphery of Bogotá and build their houses through self-help methods. These settlements are also characterized by the following:

(a) Geographical location: on the peripheries of the city or outside of the urban boundaries as designated by the city administration;

(b) The quality of the housing and residential environment: the lack of standard materials for adequate housing construction and unavailability of basic urban infrastructure services like water, sewerage, and electricity;

(c) The mode of acquisition of the housing site: the housing site was illegally occupied or acquired from illegal developers. The residents themselves could have illegally occupied the sites owned by someone else and built houses for themselves, or they could have purchased the site through informal contracts (often oral) from so-called pirate urban developers.¹⁰ In Bogotá, most cases are of the latter type.

The above-mentioned characteristics are closely interrelated. From the city administration point of view, low-income settlements failed to enjoy public services because most of them were illegally developed, did not comply with urban development regulations, and were located outside of the urbanization areas as designated by the local administration. Therefore, most low-income settlements remain outside the areas supplied with public services.

B. *The Expansion of Low-Income Settlements*

From the above-mentioned characteristics it can be seen that illegal land occupation is not the single defining factor of low-income settlements. But the lack of reliable statistics makes it difficult to distinguish what degree of "illegal urban development" is due to "illegal land occupation" or to "illegal land subdivision" by pirate developers. At present, the statistics prepared by the DAPD of Bogotá City are the only data available which distinguish between "illegal urban development" and "legal urban development."

The Unit for the Improvement and Coordination of Neighborhoods which belongs to the DAPD [3, p. 9] defines "illegal urban development" as follows: "Illegal urban development can be understood as the process of installing basic infrastructure and the construction of buildings employed for typical urban use on land outside the boundaries of the city administration and without regard for basic urban

¹⁰ According to Treffeisen, pirate urbanization could be interpreted as an "unregulated or clandestine subdivision" [17, p. 134]. Housing plots divided through this method are offered at cheap prices to the low-income population, but without the provision of basic infrastructure services to meet city planning standards. Also, these land subdivisions are developed without taking into account the procedures required by the DAPD. In this sense, pirate urbanization is considered technically illegal.

planning regulations. Such installed infrastructure does not take into account either urban planning criteria or the legal procedures required by the DAPD" (the author's translation) [3, p. 12].

This definition of "illegal urban development" applies to all illegal urban land development projects and therefore involves cases other than low-income settlements. But in this study "illegal land development" refers only to illegal land development for low-income settlements which accounts for more than four-fifths of the illegal urban development in Bogotá. According to the 1990 statistics, 86.2 per cent of the total land illegally developed (6,270.5 ha) was categorized as within low-income settlements.

The portion of illegally developed land within the total urban area of Bogotá has continued to increase. During the 1960s, legal land development increased at an average of 464.3 ha annually. However, this fell to 307.3 ha during the second half of the 1970s, and dropped further to 126.0 ha during the 1980s. As a result, the ratio of illegally developed land to total newly developed land in Bogotá rose from 18.1 per cent during the 1960s to 33.7 per cent during the 1980s [3, pp. 13–14]. According to Jiménez and Molina, the ratio of illegally developed land to total newly developed land grew from 35.4 per cent during the 1972–86 period to 55.6 per cent during the 1987–91 period.¹¹

III. THE EXPANSION OF LOW-INCOME SETTLEMENTS: ITS MULTIFACETED CAUSES

In the previous section, the general characteristics of low-income settlements in Bogotá City were analyzed. This section will look at two factors which promote the expansion of low-income settlements: the establishment of landownership by acquisitive prescription, and the fluctuation of land prices in residential areas.

A. *Establishment of Landownership by Acquisitive Prescription*

The establishment of landownership by "acquisitive prescription" means the acquisition of land property rights through the use of the other people's land for a certain period of time defined by law.¹² A discussion of landownership perhaps is not central to this analysis of Bogotá's low-income settlements, considering that

¹¹ Unpublished data calculated by Luis Carlos Jiménez and Humberto Molina for Misión Bogotá Siglo XXI (a special research group on Bogotá's main socioeconomic issues).

¹² A certain legal action is subject to prescription when it becomes invalid due to the passage of time. In this study, it signifies that property rights become void after the passage of a certain period of time determined by law; as a result, the former owner is no longer able to prosecute. Here the term "extinctive prescription" will be used when the original owner loses property rights because he/she did not make any investments or claims on the occupied land by the end of the period of time established by law.

land occupation has not been as common as illegal land subdivision. However, it is worth looking at the way in which the residents in originally illegal settlements can acquire landownership through acquisitive prescription. This will give a better understanding of the legal effects of Colombian land regulations on illegal urban development.

The most important legislation in Colombia concerning land regulation is Law No. 200 of 1936 (*Ley 200 de 1936*). Although this law was enacted to regulate agricultural land property rights, it also contains stipulations for landownership in urban areas. It has remained the principal legislation on landownership even though a series of urban planning regulations dealing with zoning and land use came into effect during the 1970s.

Article 7 of this law determines landownership in urban areas as follows: "Recognition as private property is extended to those respective urban lands whose registered deeds were granted prior to this law and where there is evidence of land possession for a period of time not less than the term specified by the law for extraordinary prescription. Other ordinances comprised in this law do not apply to urban property" (the author's translation) [16, pp. 17-18].

Article No. 12 of the same law refers to the question of the expansion of low-income settlements by land occupation in good faith. This concerns the transfer of land property rights where the land has been occupied for a specified period of time. According to this article, land property rights will be transferred in favor of a person who has occupied (in good faith) for a period of five continuous years or more a certain piece of land that is the private property of another, in the belief that such land was wasteland, and if the original owner did not make any kind of investment during the period of occupation. In this way, the original landowner would lose rights to the land through "extinctive prescription" if he/she failed to conduct any economic activity on the occupied land or if he/she did not claim his/her ownership rights during the period specified by the law. There are three different forms of acquisitive prescription pertaining to land occupation in urban areas:¹³

(1) The term of acquisitive prescription is twenty years: This is a special case applied when the occupant of the land acted "in bad faith," that is to say, he/she occupied the land knowing it belonged to another person and without having any certificate of land purchase (e.g., land occupation through seizure).

(2) The term of acquisitive prescription is ten years: This applies if the occupant of the land acted "in good faith," i.e., believing that the land was wasteland and not being owned by anybody and holding a certificate of land purchase.

In both cases, the occupant of the land may legally claim his/her ownership of

¹³ The three types described here are based on an interview the author had in September 1993 in Bogotá with Mr. Eduardo Caicedo Escobar, Director of the Registry Office of Real Estate, the Northern Section of Bogotá, and some data extracted from Mr. Escobar's survey on land law [6].

the land only after a judicial verdict, which must be presented and registered in the concerned Land Registration Office. The term of acquisitive prescription in the above cases is set longer than that for agricultural land (five years) because land occupied in urban areas is for housing use instead of productive activities.

(3) The term of acquisitive prescription is between three and five years: In this case, acquisitive prescription is applied under a special rule introduced in Law No. 9 of 1989, called the "Urban Reform Law." By this law, illegally occupied land can be legally acquired in a shorter period of time if it is utilized for the construction of low-income housing. This law could be interpreted as part of the Colombian authorities efforts to increase the supply of subsidized low-income housing. With the shortened period of time needed to legalize land occupation, land occupants could obtain their property rights in a shorter period of time no matter what the nature of their occupation (e.g., through land seizure or purchase by illegal land subdivision).

B. *Land Price Differentials in Residential Areas*

The second factor promoting the expansion of low-income settlements is the fluctuation of land prices in the formal land market. According to a time-series analysis on land prices in Bogotá prepared by the Colombian Real Estate Federation (Federación Colombiana de Lonjas de Propiedad y Profesiones Inmobiliarias, FEDELONJAS) [7], the fluctuation of land prices are linked with macroeconomic cycles. Land prices generally rose during the boom period of 1977–81 and went down during the subsequent recession of 1982–85. Overall, the land prices declined during the 1980s. This reflected a slowdown in the construction industry between 1982 and 1985 caused by a macroeconomic crisis that hit the country as well as by the tightening of housing loans for high-income households.

Table III compares land prices and the average annual fluctuation in residential areas with different levels of household income. The figures were provided in the same study by the FEDELONJAS [7]. As the figures cited here are based on assessment prices, the land prices quoted in actual transactions are often higher than these. Even so, the table compares the differentials in land price fluctuations according to residential areas.

Land prices in absolute terms are generally lower on the city's peripheries than in the center. But it should be noted that land prices on the peripheries have tended to rise more rapidly while those in the center have tended to stabilize or even decrease. In the 1980s, land prices soared conspicuously for high-income and low-income residential areas while those for middle-income residential areas declined. Land prices plummeted for middle-income area by a steep annual average of 5.7 per cent in real terms. These were already exhaustively developed areas where new large land tracts for major housing development were no longer available, and most of the existing houses there were old and worn out, offering no attraction for specu-

TABLE III
CHANGE OVER TIME OF LAND PRICES IN RESIDENTIAL AREAS
(ANNUAL AVERAGE RATES OF PRICE INCREASE)

Residential Areas by Income and Development Stage	1966	1969	1975	1980	1985	1969	1980
	-69	-75	-80	-85	-88	-88	-88
High income	2.6	6.0	19.4	-2.9	15.0	8.5	4.2
Upper-middle income:							
Development completed	7.0	9.2	7.1	-2.6	5.9	4.6	0.2
Development in progress	7.0	2.9	16.1	-1.8	13.1	6.1	2.8
Middle income:							
Development completed	8.3	3.1	11.7	-4.8	-7.5	0.7	-5.7
Development in progress	0.8	17.8	25.0	-1.9	10.7	9.3	1.8
Lower-middle income:							
Development completed	n.d.	5.4	6.2	0.1	-1.3	5.8	-0.5
Development in progress	n.d.	n.d.	7.2	5.7	-3.6	n.d.	2.5
Low income:							
Development completed	-6.0	1.9	4.8	4.1	3.5	3.4	3.9
Development in progress	n.d.	n.d.	15.1	7.8	3.2	n.d.	6.2

Source: [7].

Note: n.d. means "no data."

lative investments. A comparison of housing areas under development with those already built up shows that land prices go up most rapidly immediately after the completion of land development and slacken after housing construction starts.

As Treffeisen [17, p. 179] pointed out, the upward pressure on land prices during the 1980s had been stronger in zones occupied by households at the two extremes of the income spectrum—"high income" and "very low income" groups. Based on FEDELONJAS statistics, Treffeisen analyzed the relationships between land price fluctuations and land utilization in different residential areas according to income levels. In this analysis he used three main indicators: (1) land utilization density gradient, (2) rent gradient, and (3) land-capital substitution elasticities. The last one, (3) is calculated from (1) and (2) combined. Treffeisen first assumed that the poorer the residents, the more sensitive they would be to land prices, i.e., their land price elasticity would be high. However, in reality low-income households are eager to obtain a housing lot even if land prices go up. Treffeisen concludes that the poor families will reduce the size of their housing lots and resort to building their own houses using inexpensive building materials in order to cut down on construction costs. In other words, land-price increases force low-income households to reduce the size of their housing plots and economize on construction materials. Thus, the more attractive alternative to a low-income family under these circum-

stances is to build a house themselves on a low-priced subdivision purchased from pirate developers.

IV. URBAN PLANNING REGULATIONS IN BOGOTÁ

A. *Urban Planning Regulations in Bogotá City*

As explained in the previous section, there are two reasons for the existence of illegal land development and the expansion of low-income settlements: the establishment of landownership through acquisitive prescription and land price differentials among residential areas. However, there are other factors at work, some of which are related to the contradictions in urban planning policy itself. This section will focus on the urban planning regulations in Bogotá. This will entail analyzing the process of urban legalization and regularization of low-income settlements in order to understand the effects on the expansion of such settlements.

Bogotá City has two major categories of urban planning regulations. One category comprises rules applied to the entire city and the other comprises rules applied specifically to individual residential areas or land development units. One of the most basic regulations in the first category refers to the urban perimeter (*perímetro urbano*).

According to Losada and Gómez, “the urban perimeter fixes a geographic maximum limit to the eventual provisions of municipal public services (water, sewerage, electricity, telephone, etc.)” [14, p. 33]. The urban perimeter marks out the area feasible for urbanization in which basic urban services are made available.

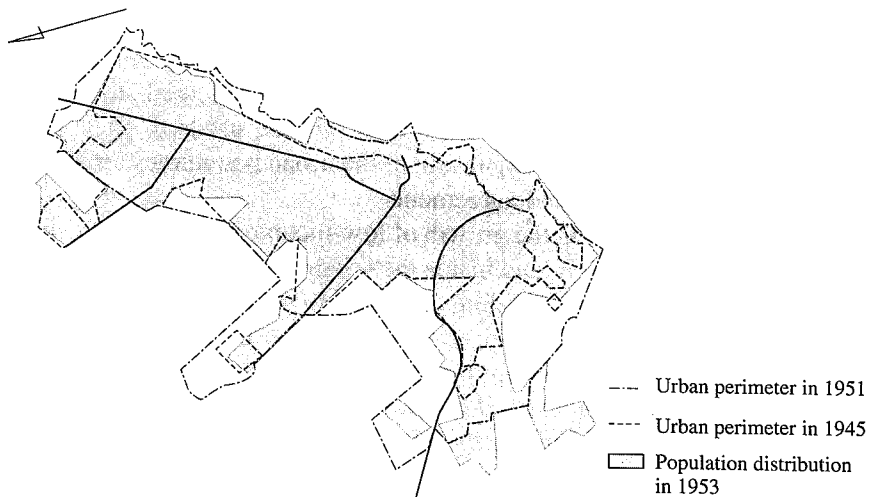
The first urban perimeter in Bogotá was defined by Agreement No. 6 of 1914 (*Acuerdo Municipal 6 de 1914*).¹⁴ The urban perimeter has since been modified several times by new agreements and decrees (Figure 3).

Theoretically, no urban development is to take place outside that administrative perimeter. Thus, urban residential areas actually developed outside that perimeter are against the urban administrative regulations and therefore cannot be provided with urban services. Therefore, most of the existing “pirate urbanization” in Bogotá is deemed to become illegal settlements simply because of their geographical location. The city authorities introduced the administrative perimeter precisely to prevent such illegal urban development.

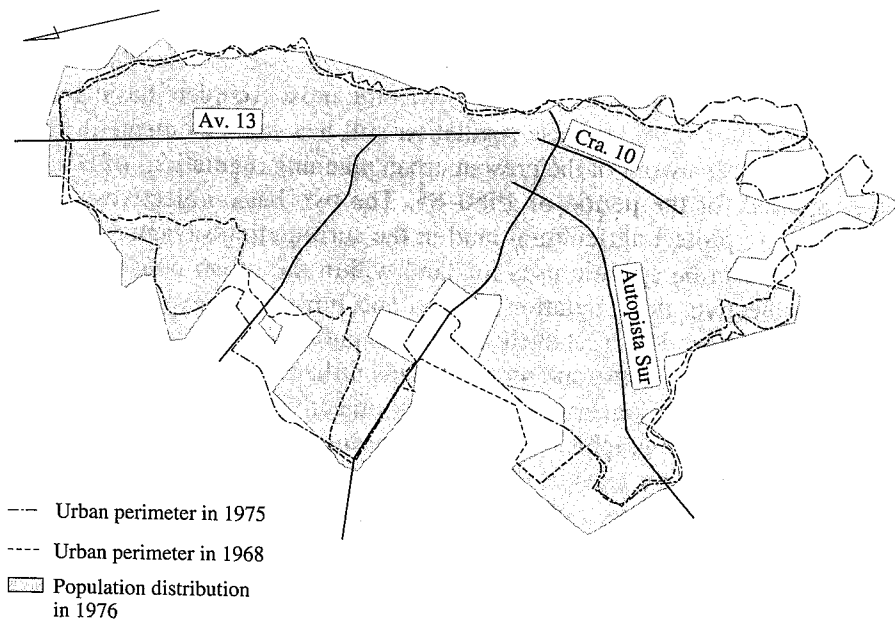
¹⁴ In Colombia, local governments, departments, and municipalities are subject to the constitution, laws, and decrees issued by the central government. However, they have the authority to issue regulations approved by departmental assemblies (*asambleas departamentales*) and municipal councils (*concejos municipales*). These regulations are called ordinances (*ordenanzas*) at the department level and agreements (*acuerdos*) at the municipal level. Article 41 of Decree No. 1333 of 1986 establishes the right for municipalities to issue their respective regulations related to urban development and planning [18, pp. 165–66].

Fig. 3. Expansion of Bogotá's Urban Perimeter

A. 1945-53



B. 1968-76



Source: [14, pp. 35-37].

Nevertheless, there has continually been a rapid spread of illegal urban development beyond the perimeter, and the perimeter has had to be periodically modified to cope with the expansion of these low-income settlements. It is important to point out that the very idea of an urban perimeter, originally intended to regulate pirate urban development, has ironically provoked the contrary effect. This contradiction arises from the fact that many of the originally illegal residential areas outside the administrative perimeter have been integrated into the urban district. Thus, they were legalized as a result of the expansion of the urban boundaries through successive enforcement of decrees and agreements.

The second factor affecting the growth of low-income settlements has been zoning laws to regulate the use of land inside the urban perimeter. The first zoning law in Bogotá took effect in 1944 dividing the city into seven zones according to land use, the economic activity permitted, and the socioeconomic level of residents. The residential zones were classified into two types: one for middle and upper socioeconomic classes, and the other for the working class. Each zone had required standards stipulating urban design and building construction (e.g., street width and public areas, plot ratio, etc.). However, these requirements were not followed by most inhabitants in Bogotá particularly by low-income population. This promoted pirate urbanization which ran contrary to the original intention for zoning. This Zoning Law of 1944 was modified by successive agreements in 1951, 1961, 1967, and 1974 by which the requirements for the distribution of lots became less and less rigid.

The Land Use Regulation in Bogotá City denominated: The "Zoning Plan" (Plan de Zonificación; Agreement No. 7 of 1979) was the most complete basic zoning plan during the 1970s. This land use regulation still has some elements in force under the juridical framework of the present urban planning regulations of Bogotá, which was applied for the period of 1980–85. The two basic objectives of this regulation were: to protect agricultural land in the surrounding savannah zone of Bogotá, and to prescribe specific uses for land within the urban boundaries. To meet the first objective, the regulation defined and limited the expansion of the administrative perimeter which set the boundary for public services, provided measures to secure agricultural land, and prescribed the utilization density for different areas within Bogotá City. Concerning the second objective, the specifying of land use, the regulation set geographical districts according to the types of economic activities and prescribed for each of them the form of land utilization, utilization density, the floor/site area ratio, and other matters related to land use. What is most interesting in connection with this study is the determination of the so-called perimeter of public services, which coincided with the perimeter of services that had been first defined in 1975. From the technical as well as planning points of view, the constraints preventing the expansion of this perimeter of 1975 were explained in the following way: "The perimeter at the east side of the city could not be ex-

panded due to the additional expenditure required for pumping water to residential zones that were located beyond certain altitude. By the same token, the perimeter at the west side of the city was restrained by technical reasons. These were related to its location, below the level of the Bogotá River, causing serious problems for the evacuation of water, a matter that was recently evident when the Patio Bonito and Bosa zones flooded” (the author’s translation) [2, p. 5]

As is evident from the above-mentioned facts, the public service perimeter is prevented from being moved outward basically for technical and financial reasons. However, in setting a new perimeter, the city administration cannot disregard the presence of low-income settlements outside the administrative perimeter. As these settlements are located outside the officially set urban perimeter, they are illegal from the point of view of agreements on urban planning. Moreover, the zoning became more realistic in order to facilitate greater access to housing or to land where low-income residents could build. As Gilbert and Ward summarize, “the main effects of the zoning legislation have been to increase the incidence of illegal low-income housing and to accentuate residential segregation” [8, p. 108].

Regarding city planning in Bogotá itself, up to the present there has been no master plan for urban development that might have been carried out in a satisfactory way. However, there have been various intentions to establish and enforce plans on urban development with the aim of organizing expansion and the urban structure of the city.¹⁵ Generally these plans have set out the system of principal roads, the norms for sidewalks, the intermediate zones, the green areas and the areas for parks; and they have also projected future zoning according to land use, such as residential zones and commercial or industrial zones, in order to guide developers when developing new projects.

Regarding the norms applied to the urbanization or development of residential areas, there are a series of requirements that should be followed at the time an urban project is carried out. Among these, the most important one is the requirement to obtain a license permitting urban development, called “minimum norms” (*normas mínimas*). Such minimum norms must be followed regarding the disposition of public services and the reservation of land for common use. These norms regulate the provision of public services which officially licensed urban developers are obliged to provide. The origin of the minimum norms dates back to the year 1902 when it was required that new residential settlements be provided with “water supply, public lightning, sidewalks, and roads with width not less than twelve meters” [14, p. 45]. However, these requirements were not fulfilled by the social classes with less resources. Recognizing the economic limitations on the working class,

¹⁵ Among these plans can be mentioned the “Bogotá in the Future,” approved by Agreement No. 74 of 1925, the “Pilot Plan,” approved by Decree No. 185 of 1951, and the “General Plan for Development,” approved by Agreement No. 14 of 1975.

Agreement No. 30 of 1961 stipulated that the developers themselves had to provide the working-class settlements with these basic public services. The minimum norms called for a public water basin, public illumination, and public telephones. A sewage system was not required at the initial stage, but at least each house had to have its own toilet, and the principal roads need to be surfaced with asphalt. After the agreement of 1961, there were various modifications until the present scheme of "minimum norms" were approved in Agreement No. 20 of 1972. Despite these administrative efforts, this application of minimum norms to provide public services to certain sectors of the city with the idea of benefiting the illegal settlements did not work as had been expected.

In sum, all of the regulations up to the decade of the 1970s proved ineffective because they could not stop the expansion of illegal settlements. Instead the city authorities have "normalized" their existence, even though belatedly, by expanding the urban perimeter to integrate such illegal settlements and providing the low-income settlements with basic public services to regularize them.

B. *Urban Reforms and Urban Planning in the Late 1980s*

In the 1980s, steps were taken to revise a number of rules and regulations pertaining to urban administration and jurisdiction at the municipal level that had been drawn up during the 1970s, e.g., the Municipal Regime Statute,¹⁶ enacted by the Decree-Law No. 1333 of 1986 etc. However, it was Law No.9 of 1989, known as the Urban Reform Law, that was considered to be the most important urban administration reform regulation as it was intended to organize urban planning for the first time on a national basis. This law was enacted to deal with a wide range of urban problems. The Bogotá City administration was then facing the urgent task of improving living conditions for low-income residents, enabling them to participate in politics and achieving effective democratic policies in the low-income settlements. The Urban Reform Law thus reflects the need to supply improved public services to segments of the population lacking such facilities. The principal purpose of this law is to normalize urban development and achieve urbanization with economic development. To achieve this goal, the law declares that local governments will work out their respective, appropriate urban development and housing policies with the aim of eventually integrating them with the state guideline.

The Urban Reform Law provides for the legalization of ownership of "housing for social interest" (*vivienda del interés social*). The concept of "housing for social interest" was introduced in an attempt to promote low-cost (subsidized) housing with basic service infrastructure for low-income households, at the prices determined largely on the basis of the legal minimum wages. Under the law, municipal authorities are obliged to create a special division concerned with the promotion of

¹⁶ "Statute" here means "*estatuto orgánico*."

such low-cost subsidized housing. The law has simplified administrative procedures required for purchasing land for housing construction, issuing construction permits, and transferring landownership in order to reduce time for low-cost housing projects.

Concerning urban planning, the basic regulation ratified was Agreement No. 6 of 1990, the Statute for Regulating Space in the Bogotá Special District.¹⁷ Agreement No. 6 of 1990 revised the stipulations set in Agreement No. 7 of 1979. Land utilization and zoning plans were renewed and retained as basic to Bogotá's urban planning.¹⁸ Simultaneously, rules involving measures taken by the urban administration were revised to simplify procedures required for the legalization of land development. These deregulation measures were intended to stimulate the supply of public services for low-income households and to normalize their residential environment.

According to new rules contained in Agreement No. 6 of 1990, the urban area of the Bogotá City has been divided into two zones: (1) "the principal urban area" which is composed of the urban area designated under Article No. 13 of Agreement No. 7 of 1979 along with the areas within the public service perimeter; (2) lands located in the suburbs outside the "principal urban area" (e.g., lands bordering agricultural areas) as well as those places within the public service perimeter which have not yet been urbanized but which satisfy the land development criteria and therefore are eligible for public services. The last named category includes: (a) those lands outside of the urban area and those located within the urban area but traditionally considered inappropriate for urbanization, where residential settlements have been legalized through the agreements enforced in recent years (i.e., Agreements No. 21 of 1972, No. 25 of 1975, No. 7 of 1979, and No. 1 of 1986) and (b) sites for the construction of houses for the poor and for social interest located outside the urban area, as designated under Article No. 13 of Agreement No. 7 of 1979, or outside the urban service boundary. Of such residential areas, those developed by nonprofit organizations prior to July 28, 1988, are to be treated the same as settlements within the urban area of Bogotá. This means that they are eligible for official legalization procedures. As declared in Article 47 of Agreement No. 6 of 1990, these measures are intended to regularize public services for low-income households in illegal settlements.

Thus, the new laws regulating space in Bogotá City widened the definition of urban areas in order to provide public services to a larger number of citizens, espe-

¹⁷ The name of this statute in Spanish is "Estatuto para el Ordenamiento Físico del Distrito Especial de Bogotá."

¹⁸ Concerning the classification of land utilization, three categories were established. The first category defined the lands for public use under the Bogotá Special District administration. The second one distinguished among urban, suburban, and agricultural areas. The last one classified urban land by types of economic activities and residential areas.

cially to residents in low-income settlements. Procedures required for legalizing urban development were also simplified. However, this reform based on a broadened definition of Bogotá's urban area weakened the restrictive effects of the newly designated boundary set for land development projects, both legal and illegal. Moreover, procedural deregulation of permits for housing construction did not have the positive effect of strengthening control over illegal land subdivisions (pirate urbanization).

A major factor for the ineffectiveness of legislation and urban development reform to control the expansion of low-income settlements has been the problem of political corruption, particularly as it involves "patron-client relationships" (*clientelismo*). Generally, politicians at the municipal level foster these "patron-client relationships" with pirate urban developers as well as with inhabitants of pirate urbanization in order to secure votes from these residents in exchange for concessions and protection. As long as this political custom for collecting votes continues, pirate urbanization and the purchase of housing lots in the informal market cannot be eliminated, and illegal urban settlements will continue to expand.

Under these circumstances, illegal land development continues expanding. Progress in improving institutional arrangements for normalizing low-income settlements has failed to catch up with the rapid increase of illegal land development. Thus, the ratio of illegally developed land still remains alarmingly high. In 1990 the area of illegally developed land was calculated to be 547,117 ha. This represented one-sixth of the newly developed land within the public service perimeter. Of the illegally developed land, 256,917 ha has still not obtained approval from the city planning office. These illegally developed plots have a population of 1.34 million, or a quarter of the estimated population of Bogotá in 1990 [3, p. 14].

CONCLUDING REMARKS

This study has attempted to describe the phenomenon of urban sprawl in Bogotá caused by the expansion of low-income settlements (Sections I and II) and to examine some of the multifaceted factors that promoted the growth of such settlements (Sections III and IV).

In Colombia the urbanization pattern has not been characterized by the overwhelming primacy of one large city as in other Latin American countries. However, from the 1940s the country began to suffer from a growing concentration of urban population in the capital city. This process has been accompanied by the expansion of urban sprawl, a common phenomenon in other metropolitan areas of Latin America. Bogotá's urban periphery is widening beyond the urban perimeter due to a constant influx of population from the other parts of the country as well as to an internal movement of residents from the city's center to the periphery.

The supply of housing available through legal means, meaning from the formal

housing land market or official housing programs, has failed to keep up with increasing housing demand. As a result, the low-income population has mainly resorted to self-help construction of houses on illegally developed land on the periphery of the city. This has been a major cause for the expansion of low-income settlements and the low standard of basic public infrastructure provided to these areas.

One of the main factors promoting the growth of low-income settlements has been the process by which legal landownership can be transferred to an occupant who is living on land that has been illegally subdivided and occupied (i.e., "acquisitive prescription"). Another factor has been the land price differentials among income groups which have prevented low-income households from entering the formal housing land market because of successive increases in land prices. This has also caused land price rises in low-income residential areas, leaving no alternative to low-income families other than to build their houses through self-help methods on illegally subdivided land.

Moreover, the city's urban planning policies had contradictory effects on the growth of low-income settlements. Until the 1970s, urban planning regulations such as the definition of the urban perimeter, construction requirements, zoning law, etc., had not effectively controlled urban sprawl, despite the intention of city authorities to reorganize Bogotá's urban development. The continuous expansion of the legally defined urban area did not help in the normalization of adequate public services to newly incorporated neighborhoods. Therefore, urban planning policies which legalized *ex post facto* illegal urban settlements produced the opposite effect on urban development: the legalization of abnormal (low-standard) urban settlements. In other words, instead of suppressing the expansion of such settlements, the inconsistencies in the legal framework and urban planning helped promote their development.

In the same fashion, urban reforms introduced at the end of the 1980s were another official attempt to cope with the growth of low-income settlements on the city's periphery, together with the provision of subsidized housing for the low-income population. This effort was carried out by widening the range of the urban area under the city's jurisdiction and by deregulating procedures for housing construction, but such measures again produced contradictory results, bringing further expansion of illegal land subdivisions.

The examination of this study goes up to 1990, thus further research will be needed to understand the current situation of Bogotá's urban sprawl and the new political approach of the city administration to cope with illegal low-income settlements. One of the recent studies on low-income settlements in Bogotá shows that the expansion of such settlements still continues and living conditions remain substandard [10]. However, the role of local people's organizations in low-income settlements have become increasingly important, particularly in the area of community-based self-help activities supported by nongovernment organizations [13].

This is an alternative approach for overcoming abnormal urban development in Bogotá, where further cooperation between community organizations and city authorities will be needed.

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