

**THE PRELIMINARY SURVEY ON
THE SUBURBANIZATION OF THE CITY OF BARCELONA:
A Case Study on a Peripheral Urban Area, Gavà**

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I. Introduction

Catalonia is one of the economically advanced regions in Spain. In 1982 Catalonia accounted for 15.8 percent of the total population, 18.8 percent of the gross added values of Spanish economy (22.8 percent and 17.3 percent as regards the secondary and tertiary industries respectively).¹ Some economic and social indices indicate the advantage for Catalonia when compared nationally; the economically active population engaged in the secondary industries was 37.3 percent versus 25.3 percent in 1984; the per capita income was 502,368 pesetas to 397,365 pesetas in 1982;² the ratio of subscription of telephone was 474 per thousand to 347 per thousand in 1981; the number of passenger car was 285 per thousand to 211 per thousand in 1981; the number of population covered by one bank ranged from 2,637 to 2,125.³ The figures of Barcelona Metropolitan Area on the same indices indicate they are at a higher level than those of Catalonia. Needless to say, the economic and social development of Catalonia was attributed to the industrialization in the city of Barcelona which started in the latter half of 18th century. The rapid economic growth since 1960s has accelerated the concentration of capital, productive activities and labours in the Metropolitan Areas of Madrid, Barcelona and Bilbao. Given the regional structure in Spain which has been characterized by unbalanced regional development, the internal migration took place and the concentration of migration flow into a few urban industrialized regions has become the more conspicuous feature of social change brought about by the rapid economic growth. The province of Barcelona has received by far the largest number of immigrants, roughly one hundred thousand in each year until the middle of 1960s.⁴ Calculating the net migration of the city

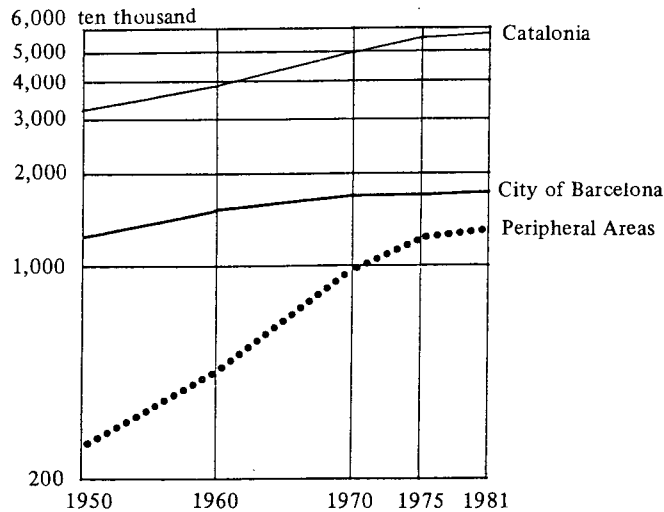
¹ I.N.E.: *Indicadores Estadísticos Regionales: una aproximación de la contabilidad regional*, Nu. 4, (1985), Madrid, pp. 25-28.

² CONSORCI D' INFORMACIÓ I DOCUMENTACIÓ DE CATALUNYA: *Anuari Estadístic de Catalunya*, 1980, Any 2, (1986), Barcelona, p. 136 and p. 166.

³ C.M.B.: *Àrea Metropolitana de Barcelona; Datos basicos*, (1986), Barcelona, p. 12.

⁴ RECOLONS I ARQUER, LL.: *La Població de Catalunya; Distribució territorial i evolució demogràfica 1900-1970*, Barcelona, (1976).

of Barcelona, the range fluctuated each year from 5,295 to 81,795 during 1951 and 1979.⁵ The city of Barcelona absorbed the population of nearly a million in these three decades. However, the population of the city of Barcelona which has continued to increase until 1980 experienced a decline in recent years after it recorded a peak of 1,906,998 in 1979. In 1984 it declined to 1,759,014.⁶ This is attributed to the drastic decrease of the net migration. This is in sharp contrast to the rapid population increase in the peripheral areas of the city of Barcelona as shown in Figure 1. It is supposed that concerning on the distribution of the population, the suburbanization proceeded within the Barcelona Metropolitan Area, though it is impossible to suggest how the intra-urban migration is related to this suburbanization. Urban space is reorganized to take some parts of urban functions in response to the suburbanization of the city. Taking the case of the city of Barcelona, it may indicate that the peripheral areas were mainly reorganized into the residential areas.



Source: *Dades estadístiques del Padró de 1981 dels municipis de la C.M.B.*, p. 22.

Figure 1 The Evolution of Population (1950-1981)

This article aims firstly to clarify how the suburbanization of the city of Barcelona proceeded since 1950s by analyzing the statistical data on population and secondly, to consider some aspects of impacts brought about by the suburbanization. It is of interest to note how the local economy of peripheral residential area was transformed to come under the direct influence of the city

⁵ AYUNTAMENT DE BARCELONA: *Estadística Municipal, Butlletí 1985*, (1986), Barcelona, p. 24. Though the net migration is calculated, the problem is found that the figures of the census year are extremely low. The total population is presumably measured differently in the ordinary years from the census year.

⁶ *Ibid.*, p. 24.

of Barcelona and to see what extent the development of local economy contributed to improve the local government finance. The analysis starts with a case study on a typical residential area, Gavà which is located in the western part of Barcelona Metropolitan Area.

In this article three dimensions concerning on the spatial scale are considered: the city, the peripheral areas surrounding the city and the metropolitan area. They correspond eachly to the city of Barcelona, 26 municipalities which constitute *la Corporació Metropolitana de Barcelona* (C.M.B.) and the Barcelona Metropolitan Area. In other words, the Barcelona Metropolitan Area covers the administrative territory of C.M.B. which was organized in 1974 and composed of Barcelona city government and the 26 local governments which are surrounding the city of Barcelona.⁷ It is evident that the influential area of the city of Barcelona does not coincide with this administrative territory and extends by far beyond these boundaries. However, the reorganization of urban space is strongly affected under the implementation of urban planning of each local government. Urban planning restrains competitive land use and determines land use in the future. The first article of legislation declared in 1974 defines the C.M.B. as the specific organ which achieves the aim to promote, coordinate, control, supervise and enforce the urban planning and also offers the public services for the entire metropolitan zone. The urban planning which is actually implemented was approved in 1976.⁸ The C.M.B. which has its own financial resources acts to redistribute public services in the Metropolitan Area. Taking an example of 1983, 58.0 percent of total expenditure was appropriated to the public investment which includes the planning, the acquisition of land and the provisions of infrastructures, etc.⁹ This implies that urban space is created by administrative authorities with the implementation of urban planning. In this sense it is significant to study the suburbanization of Barcelona within the administrative territory of the C.M.B.

7 The term Barcelona Metropolitan Area in this paper may be confused with the definition by the *la Comisión de Urbanismo y Servicios Comunes de Barcelona* which enforced the first urban plan, *el Plan Comarcal de 1953*. This commission delimited the zone intensively affected by the city of Barcelona as the Metropolitan Area, which includes the Comarcas (which signify the region and are recognized as the similar concept to French *pay*) de Barcelona, Baix Llobregat, Baix Maresme, Valles Occidental and the large part of Valles Oriental except valley of Tordera. The area covers 3,206 square kilometers. In response to the socio-economic changes, the commission gave way to C.M.B.

8 C.M.B.: *Plan General Metropolitano de Ordenación Urbana de la Entidad Municipios Metropolitana de Barcelona; Memoria*, Memoria (1) 32p., Estudio Economico (2) 168p., and Programa de Actuación (3) 19p., (1976), Barcelona. This plan was drafted in order to revise the Plan de Ordenación Urbana de Barcelona y su Comarca of 1953 because the socio-economic situations had changed radically. Comparing with the plan of 1953, the plan of 1976 has the following characteristics; the reduction of the reserved urban land use and the industrial land use; the increase of public land use. As a result, the ratio of land used by the private sectors declined from 67.11 percent to 40.95 percent. It implies that the urban space is created through the implementation of the urban planning in order to meet the newly demanded land by the population growth. The plan theoretically estimates the population in the future of 4.7 million, of which 2.4 million is the population of the city of Barcelona.

9 *Ibid.*, 3, p. 6.

Reflecting the increasing concern on the serious problems of Barcelona Metropolitan Area, urban study is an especially attractive area of study among various disciplines, and excellent research works have been published (see bibliography). One of the major interests in these urban studies has been focused on the problems of the deteriorated inner city (*casco antiguo*) and urban renewal plannings. The other has been focused on the regional transformation of suburban areas and spatial urban reorganization. Although the interests of studies are separate for convenience, the problems confronted by the two areas arise within the same complex socio-economic framework. The problems of inner city are not irrelevant to suburban areas. We need the study framework on suburbanization which makes possible to totally understand the interrelated urban problems.

II. The Suburbanization of the City of Barcelona

For the purpose of clarifying the suburbanization of the city of Barcelona, we need to define the term suburbanization. In this paper the term is used as the key word to indicate the spatial structure organized by the decentralization of urban functions in the peripheral areas. The study should be of course attempted to not only analyze the spatial aspects of suburbanization, but also consider how a regional society is transformed by its impact.

1. Migration of Population

Firstly, we begin with the analysis on demographic data which is required to grasp the general features of suburbanization. The following description is to identify the spatial patterns of migration to the Barcelona Metropolitan Area. Migration study requires accurate information on the numbers of migrants, the migration flows, the socio-economic conditions, the motives to move, etc., but such statistical data at the municipal level are still not available.

The population growth rate figure offers a rough illustration of the spatial patterns of migration. Table 1 shows the numbers and annual growth rates of population of the city of Barcelona, the peripheral municipalities, the Barcelona Metropolitan Area and Catalonia from 1950 to 1981. Although the tendency of concentration of population in the city of Barcelona has not changed, its shares to the total population of the Metropolitan Area or Catalonia declined respectively from 83.2 to 56.6, and from 39.4 to 29.4 during the 31 years from 1950 to 1981. On the other hand, the peripheral municipalities have experienced a drastic increase of population in the same time frame and in absolute terms it has increased by 53 times from 257,878 to 1,344,121. This is due to the especially high increase from 1950 to 1960 which annually marked a ratio of 11.76 percent. The second column in Table 2 indicates the ratios of the annual average increase in each decades of the

Table 1. The Evolution of Population (1950-1980)

	Barcelona	Peripheral Areas	Barcelona Metropolitan Area	Catalonia
1. Total Population				
1950	1,276,675	257,878	1,534,553	3,240,313
1960	1,526,550	443,112	1,969,662	3,925,871
1970	1,741,979	964,401	2,706,380	5,107,606
1975	1,751,136	1,228,853	2,979,989	5,660,393
1981	1,752,627	1,344,121	3,096,748	5,956,414
2. Annual Average Increase (%)				
1950-60	196	7.18	2.84	2.12
1960-70	1.41	11.76	3.74	3.01
1970-75	0.11	5.48	2.02	2.16
1975-81	0.02	1.56	0.65	0.87
3. Territorial Distribution (%)				
1950	39.4	8.0	47.4	100.0
1960	38.9	11.3	50.2	100.0
1970	34.1	18.9	53.0	100.0
1975	30.9	21.7	52.6	100.0
1981	29.4	22.6	52.0	100.0

Source: C.M.B., *Dades estadístiques del Padro de 1981 dels municipis de la C.M.B.*, p. 22.

municipalities. The growth rates between 1950 and 1960 range from 1.8 percent to 12.7 (mean 2.5 percent). Large increases were confined to the western municipalities (Delta Oriental) surrounding the city of Barcelona. Only one municipality, Espluges, gained more than 10 percent of population. Many municipalities were characterized by high population gains between 1960 and 1970 (ranging from 1.3 percent to 13.6 percent and the mean 3.2 percent). Those with more than 10 percent increase were Sant Vicenç dels Horts, Sant Joan Despí, Cornellà, Sant Boi de Llobregat and Viladecans in the western part and Ceradanyola, Ripollet and Santa Coloma de Gramenet in the eastern part. Contrasting with the high increase ratio of population in 1960s, the figures between 1970 and 1981 were lower than those calculated for the previous two decades and varied considerably. This variation is related to the rapid reduction of growth rate of the municipalities which recorded more than 10 percent in the previous decade. Only Cerdanyola showed more than 10 percent. If we consider the change in annual ratios of natural population increase from 0.6 percent to 1.1 percent between 1950 and 1970 in Catalonia, it is clear that the high population increase in the peripheral municipalities is provided by the social population increase. This also reveals that the increase in population is unequally distributed. It is geographically concentrated in some municipalities, for example L' Hospitalet de Llobregat, Badalona and

Table 2. The Population Increase and the Migration (1950-1981)

Municipalities	Population 1981	Ratio of increase (%)			Arrival period to a municipality (%)		No change of residence
		1950-60	1960-70	1970-80	before 1950	1951-60	
I. BARCELONA							
1 Barcelona	1,752,628	1.8	1.3	0.6	13.3	8.3	10.2
II. DELTA OCCIDENTAL							
2 Castelldefels	24,687	6.6	12.9	8.8	3.3	6.5	35.8
3 Gavà	33,624	8.4	4.5	4.1	5.6	10.8	22.7
4 Prat de Llobregat	60,419	3.4	9.9	6.6	4.8	4.8	28.5
5 Sant Boi de Llobregat	72,926	6.1	10.0	4.9	3.0	6.6	27.6
6 Sant Climent de Ll.	2,083	2.7	3.9	1.1	4.9	3.6	16.0
7 Viladecans	43,358	5.9	12.6	7.8	2.7	4.5	33.2
III. DELTA ORIENTAL							
8 Cornellà	91,563	7.2	13.6	2.0	3.5	7.9	33.1
9 Espulgues	46,079	12.7	8.4	5.6	2.6	5.7	27.7
10 L'Hospitalet de Ll.	295,074	5.8	7.0	2.3	5.9	9.3	21.6
11 Sant Just Desvern	11,022	8.0	3.8	2.0	6.9	11.3	17.8
IV. LIOBREGAT							
12 Molins de Rei	18,308	2.5	3.3	2.7	9.3	8.5	19.3
13 Palau de Gubert	5,728	7.9	6.1	4.0	4.8	11.0	19.8
14 Papiol	3,187	5.6	2.3	2.4	6.3	12.9	16.6
15 Sant Feliu de Ll.	38,004	3.6	7.9	7.5	4.6	4.4	22.0
16 Santa Coloma de C.	2,520	2.3	2.4	3.0	7.4	5.8	13.1
17 Sant Vicenç dels Horts	20,182	6.3	10.3	3.4	2.3	6.9	23.6
18 Sant Joan Despí	25,309	8.4	12.8	5.7	1.3	4.8	26.9
V. VALLES							
19 Montcada i Reixac	25,625	4.1	5.8	1.5	7.8	8.7	21.3
20 Ripollat	26,133	3.8	14.0	3.0	2.7	4.1	31.6
21 Sant Cugat del Valles	30,633	4.8	6.3	5.0	5.3	6.4	17.4
22 Cerdanyola	50,885	5.3	12.1	15.2	1.9	2.9	18.2
VI. BESOS							
23 Badalona	229,074	4.5	5.8	4.1	6.2	7.8	21.3
24 Montgat	6,944	3.1	2.6	4.2	7.2	6.7	14.3
25 Sant Andria de Besos	36,397	4.8	4.4	4.8	5.3	5.3	18.7
26 Sta. Coloma de Gramenet	140,163	8.2	12.6	3.3	3.0	6.7	32.0
27 Tiana	3,028	2.0	3.0	0.3	9.2	7.1	15.4

Source: C.M.B., *Dades estadístiques del Padró de 1981 dels municipis de la C.M.B.*, pp. 28-29 and pp. 223-227.

Santa Coloma de Gramenet.

Another data which reveal the similar spatial pattern of population change are provided by the third column in Table 2. It lists the percentages by the periods when inhabitants arrived to the municipalities. According to these data, the larger shares are accounted for by the western and eastern municipalities between 1961 and 1981, and the smaller by the city of Barcelona. If we compare this result with the percentages of persons who never changed their residential places or have immigrated before 1950, we find out that these are relatively high in the city of Barcelona and the northern municipalities. This quite accurately reflects that the high population increase in some western and eastern municipalities is due to the population inflow. However, there is a technical difficulty in the precise calculation of migrants among the municipalities because we lack the statistical data on the previous residential places of the migrants. As an alternative, we may study the data which describe the birth places of inhabitants by provincial and regional levels. The ratio of inhabitants whose birth place is Catalonia is especially low in Delta Occidental except in Sant Climent de Llobregat. As mentioned above, Barcelona Metropolitan Area has received immigrants from Andalusia region. In the peripheral municipalities more than 20 percent of total population came from Andalusia. Its share is nearly 30 percent in Sant Joan Despí, Ripollet, Sant Vicenç dels Horts, Viladecans, Santa Coloma de Gramenet, Cornellà and Pallesca. On the other hand, in the city of Barcelona and a few northern municipalities its share is less than 10 percent. This spatial distinction corresponds to the inhabitants understanding of the Catalan language with an implication that the cultural movements of Catalanization is difficult to prevail equally in the municipal level in recent years.

The peripheral municipalities supposedly have received inter-regional and provincial migrants as well as the city of Barcelona. Although much can be learned from limited information, we are still far from discovering the most significant one. We cannot examine the precise intra-urban migration from the city of Barcelona to the peripheral areas because the statistical data are not available in the municipal level. Statistics by the city government of Barcelona tells us that in 1985 about a quarter of emigrants was destined to the peripheral municipalities (5,988 to total emigrants 21,824).¹⁰

The results of which are presented in this section show that the peripheral areas are reorganized as the residential areas of the city of Barcelona. In passing, it may be noted that the spatial organization pattern of commuters corresponds to this.

2. Urban Economic Activities

According to the data on occupational structure, major economic activity

¹⁰ *Ibid.*, 5, p. 62.

is derived from the secondary industries. In 22 municipalities the ratio to total active population engaged in this sector accounts for more than 40 percent (excluding the construction industries). The rapid industrialization since 1960 explains this high share, however, it does not mean that the newly created employments are equally allocated in all municipalities. As Figure 2 illustrates, the industrial parks are concentrated mainly in the city of Barcelona (Subarea I) and the western municipalities adjacent to the city of Barcelona (Subarea VI). These two regions accounted for 53.9 percent of the total industrial parks in Metropolitan Area in 1975, though it is pointed out that only a half of them were actually utilized.¹¹ The most typical example is provided by the creation of the industrial estate *el polígono industrial* and the designation of commercial free zone *la zona franca* which is situated west 6 kilometers from the city center of Barcelona. *El polígono industrial* is one of the large industrial estates in Europe, which covers 728 hectares. The big enterprises such as SEAT and Motor Iberica opened their plants. In the middle of 1970s, the metal industries occupied the largest area and absorbed 85 percent of the total employment 44,694.¹²

Table 3. The Numbers of Enterprises and Labors by the Economic Sectors (1983)

	Barcelona		Peripheral Areas	
	Enterprises	Labors	Enterprises	Labors
Agriculture	550	3,237	158	891
Energy and Water	67	12,896	14	104
Extraction and Chemicals	1,252	36,831	652	11,461
Metal manufacturing	3,751	93,984	2,199	36,384
Manufacturing (others)	6,469	96,438	2,310	32,237
Construction	3,085	36,240	1,385	9,971
Commerce and Hotels	16,265	104,710	4,418	22,394
Transportation	2,650	41,082	712	4,454
Financial agencies	4,701	70,774	447	3,483
Others	15,219	127,906	2,166	21,884
Total	54,009	624,098	14,461	154,263

Source: C.M.B., *Área Metropolitana de Barcelona, Datos Básicos*, p. 17.

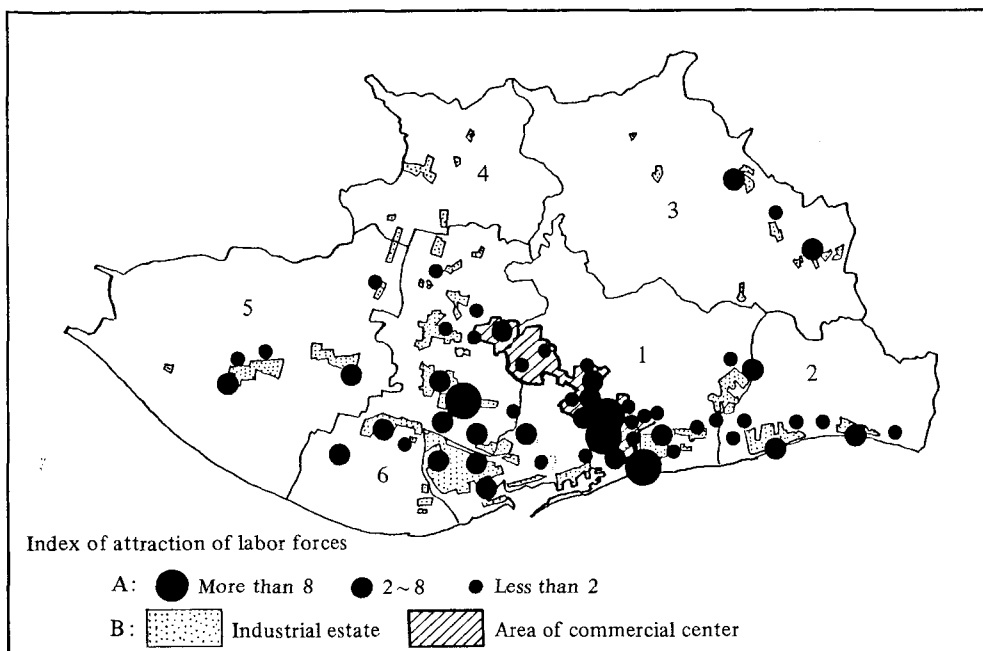
Referring to the statistical data estimating the job opportunities in 1975, it is most remarkable that the city of Barcelona and Subarea II monopolized them and that the shares of manufacturing industries were considerably high in Subarea II and VI.¹³ This shows that the employment opportunities have

11 CLUSA, Joaquim: *Localització Industrial a la Zona Metropolitana de Barcelona; Proposta per la programa d'actuació 1980-90*, (1980), C.B.M., Barcelona, pp. 28-40.

12 ORTEGA, Eloisa: "La Zona Franca de Barcelona de Puerto Franco a Polígono Industrial", *Revista de Geografía* (Universidad de Barcelona), Vol. IX, Nu. 1-2, pp. 89-106.

13 *Ibid.*, 11, p. 56.

newly enlarged in these Subareas, accompanied by the industrialization since 1960s. It can be said that a major factor provoking the remarkable increase of population in the western and eastern municipalities as mentioned above, is related to this industrialization.



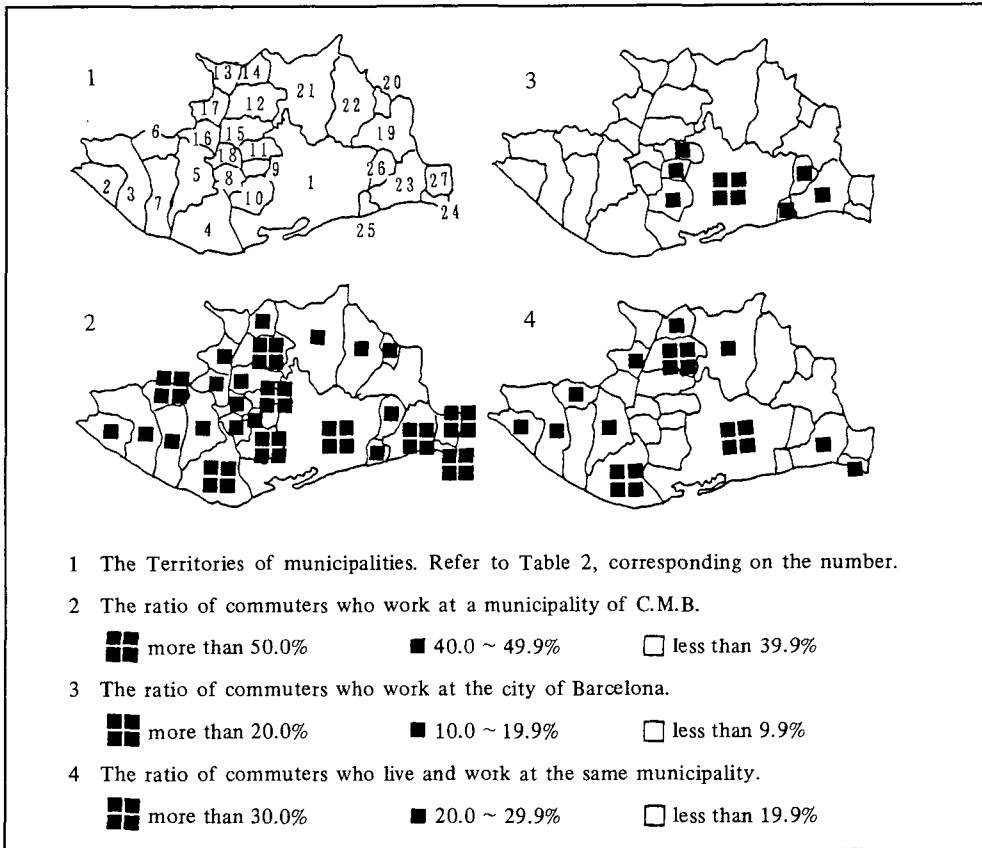
Source: *Àrea metropolitana de Barcelona, datos básicos*, p. 40

Figure 2 The Attraction of Labor Forces (1983)

In recent years the secondary industries have tended to decentralize from traditional industrial centers to the area surrounding the Barcelona Metropolitan Area,¹⁴ but the principal tendency towards spatial concentration of economic activities is likely to persist in the city of Barcelona. Referring to Table 3, it becomes apparent that both economic activities and laborers are accumulated in the city of Barcelona. There is a clear cut difference between the city of Barcelona and the peripheral areas regarding job opportunities. Figure 2 illustrates where the job opportunities exist by calculating the ratio of the labor force to the total active population in 1983. The result shows that the central business district of the city of Barcelona is the largest contributor to attract labour forces. This spatial pattern of job opportunities clearly has influence on the daily flow of commuters. Next, let us refer to the daily flow of commuters in order to survey the actual levels of the daily move-

¹⁴ *Ibid.*, 11, pp. 41-43. BELIL, Mireia y Isabel CLOS: "La Decentralització industrial a Catalunya; L'eix el Vendrell-Valls-Montblanc," *Documents d'Anàlisi Geogràfica* (la Universitat Autònoma de Barcelona), Vol. 6, (1985), pp. 3-44.

ment of labor force and to consider the spatial relationships between the city center and the peripheral areas.



Source: *Enquesta de mobilitat intermunicipal obligada dades del Padró 1981.*

Figure 3 The Spatial Pattern of Commuters (1981)

3. Daily Flow of Commuters

Although the flow pattern of commuters is varied and complex, we can identify some specific features (see Figure 3). In every municipality nearly 40 percent of total commuters move daily between different municipalities within the Barcelona Metropolitan Area. In the western coastal municipalities the commuters to the city of Barcelona accounts for a relatively high percentage (more than 20 percent). In contrast to this, the commuters whose residence and office are in the same municipality hold more than 50 percent share in the city of Barcelona, Gavà, Morins de Rei, Palleja and el Pariol. It clearly indicates that the spatial patterns of daily flows of commuters are underlined by the spatial inequality in the allocation of job opportunities.

It may be worthwhile to point out in this section that most of the urban economic activities have not sufficiently decentralized, whereas the residential areas have expanded into the peripheral areas. As we look at the fact that a part of the industrial sectors has been newly located in the areas outside the Metropolitan Area, it is important to bear in mind the problem of spatial scale. For the purpose to analyze the suburbanization of the city of Barcelona, it is necessary to consider it in an extended areal scale rather than limiting it to the territory of C.M.B.

The following section will describe how the peripheral area has been transformed into the residential area with a primary emphasis on the analysis of the local economy in order to elucidate the impacts of suburbanization. The analysis has a start in a case study of a peripheral municipality: Gavà. In Gavà the industrialization started in 1918 when a major company from the metal industry « Roca Radiadores, S.A. » constructed factories near the Gavà station. In view of the employment opportunities and daily flows of commuters, it seems that the local economy of Gavà has developed relatively as the above findings show. This is one of the reasons why the case study was carried out in Gavà, in September 1986.

III. *The Economic Structure of Gavà*

Gavà is located 16.0 km west of the city of Barcelona and is connected by the railway by a distance of half an hour. The area extends over 30.9 square kilometers. In 1981 the population was 33,624.

Before examining the structure of the local economy, we shall focus our attention to the demographic data in order to clarify how Gavà has been transformed into a residential area for the working class.

1. **Population Structure**

Gavà has experienced a rapid population increase since 1950. The total population has increased from 6,873 to 33,624 during the period of 1950 and 1981. When comparing the percent increase in the population of Gavà with the average percent increase in the peripheral areas, Gavà exceeded the average only in 1950s, but cut below the average mark in 1960s and was approximately on the average in 1970s (see Table 2). Though available data are restricted to six years between 1972 and 1979 for the migration balance, they have a certain significance because we can observe a regional pattern at the municipal level.¹⁵ The data reveal that in the two regions of Delta Occidental and Valles the net migration has recorded the positive value whilst in Delta Occidental region it was negative in 1979 following a drastic decrease in 1978. The Delta Occiden-

¹⁵ ARMENGOL, A. Jover, et al.: *Problemática de la Vivienda en la Entidad Municipal Metropolitana de Barcelona*, (1982), Barcelona, pp. 60-61.

tal and Valles have been identified as inflow regions for immigrants in contrast to others which have been transformed into the outflow regions of the inhabitants. The migration trend of Gavà is characterized by a similar pattern to that of other municipalities in Delta Occidental. As mentioned in the previous section, other statistical sources on the inhabitants' birth place and on the immigration periods provide interesting findings. Referring to the former data source, there were 68.5 percent of inhabitants whose birth places were not in Gavà. For the latter data it is indicated that immigrants in the three decades were 19.0 percent in 1950s, 30.9 percent in 1960s, and 39.9 percent in 1970s. The figure for 1950s is relatively higher, while on the other hand that for 1970s is lower than Viladecans and Castelldefels that surrounding Gavà.

Now that the population census data do not provide any clue that elucidates the occupational structure of Gavà in the long term, we have tried here to clarify the change in the occupational structure by comparing the data of 1981 with that of 1960. In 1981 the laborers engaged in the secondary industry were 55.9 percent (66.3 percent) of the total active population. The ratios of the tertiary and the primary industries were 41.5 percent (23.1 percent) and 2.6 percent (10.6 percent) respectively « figures in parentheses refer to percentages for 1960 ». The drop in the secondary industry was attributed to the reduction in construction laborers from 17.0 percent to 8.1 percent. It indicates that the manufacturing industries have accounted for a predominantly high share in the occupational structure in Gavà, though in recent years the tertiary industry has permeated into the Spanish economy on a national scale. It can be calculated that Gavà has been spatially reorganized into the residential area for the manufacturing laborers since the early period of suburbanization of the city of Barcelona.

Subsequently, we will investigate how the residential area has been reorganized and urban space has been produced in Gavà.

2. The Spatial Structure

In order to analyze the spatial structure in Gavà, we need firstly to examine the urban planning, because the local government determines the land use pattern through the implementation of urban planning. Based on the General Urban Plan of C.M.B., the Gavà government realized its urban planning. Its land use patterns were broadly classified into five categories: (I) the land for the equipment for basic infrastructures (19.2 percent), (II) the urban land including the industrial estate (6.9 percent), (III) the programmed urban land for the future use (2.7 percent), (IV) the non-programmed urban land (8.2 percent) and (V) the open space including agricultural land (62.8 percent) « the percentage figures refer to their share to the total municipal area ».¹⁶ The areas excluding open space were specified as the urbanizing land, *caso urbano*.

¹⁶ *Ibid.*, 8, *Estudio Economico*, pp. 94-97 and p. 102.

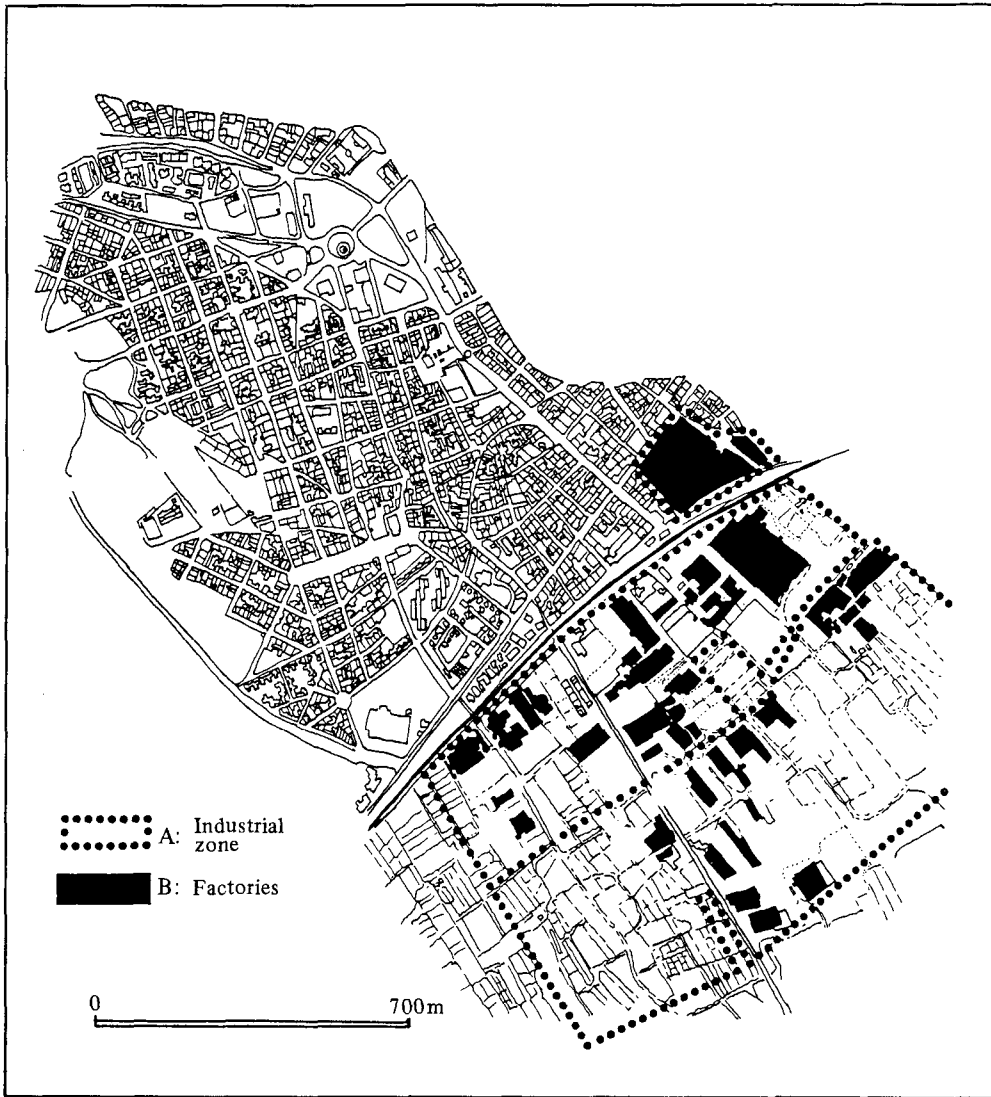
As Figure 4 illustrates, it is evident that large areas are allocated for industrial zones near the built up areas. The local government designed the zoning of industrial estates, supposedly, in consideration of the existing location of plants many of which were set up before 1969. The industrial zone is divided into two subcategories: "the industrial zone, *zona industrial*" which has been sufficiently developed and "the development zone, *desarrollo industrial*" which will be developed in the future. "The industrial zone" covers 225 hectares in which the two large companies (Cia. Roca Radiadores and la Sociedad General de Huels, S.A.) are located. Gavà is well connected by the Route 245 with Casteldefels, Viladecans and by the railway with the city of Barcelona. Given the advantages for the industrial location, Gavà developed as the industrial area since the early periods of the industrialization of the city of Barcelona. This is one of the factors which explains the high population increase in 1950s. However, the plants set up in the 1970s were a few. It seems that this is related to the stagnation of the population growth in recent year.

The residential areas are not especially differentiated and are included in the urban area (the category II) in this plan. Actual residential distribution concentrates in the *casco* which signifies the historical urban center and the intensively urbanized area. In the plan the *casco* was estimated to be 97 hectares. Though the municipal government and other public institutions are located in the *casco antiguo* (old *casco*), the new business districts and the residential areas have expanded along the main road connecting the *casco antiguo* and the railway station, and also along the road to Viladecans-Barcelona (see Figure 4). This *casco* is assumed as the planned residential areas.

Needless to say, the demand for housing provokes the development of the residential areas. Firstly, let us refer to the housing census in order to clarify how housing has been supplied in Gavà. In 1981 the number of ordinary housing, *viviendas familiares*, housing with the accommodation and collective housing were 13,679; 39 and 12 eachly, whereas the total number of families were 8,869.¹⁷ A marked difference between the number of ordinary housing and the number of families is observed. This is due to the fact that second houses and uninhabited houses are accounted as the ordinary housing. The numbers of second houses and uninhabited houses were 2,039 and 2,837 respectively. This imbalance between the demand and the supply has been commonly observed not only in the Metropolitan Area but also in Catalonia.¹⁸ Though the housing stock has increased in recent years, the problem of imbalance is becoming apparent and serious. It can be pointed out

17 I.N.E.: *Censo de Viviendas*, Tomo I; la vivienda por municipios, (1970), pp. 24-30, and Tomo IV; Resultados a nivel municipal, (1981), pp. 61-66.

18 *Ibid.*, 15, pp. 71-86. ARGANY I COMAS, I.: *Ús dels Habitages acabats a les Comarques de Catalunya (1981-1983)*, (1985), Generalitat de Catalunya, 81p.



Source: Clusa i Oriach, J.: *Localització industrial a la zona metropolitana de Barcelona*, pp. 28-40.

Figure 4 The Industrial Zone of Gavà

that housing is regarded as the preferential investment and purchased on speculation. This implies that the spatial organization in the peripheral area depends strongly on the external factors. It is worthy to investigate, however, how much the local economies contribute to the public financial sources. The autonomous public finance is relevant to the administrative autonomy in order to reorganize the territorial space by urban planning or public investment.

Table 4. The Urban Economic Activities of Gavà in 1985

Economic Sectors	Numbers of Enterprises	Total of Business Tax (pts.)	
1 Energy	1 pts.	145,318	(0.3%)
energy	1	145,318	
2 Extraction and chemicals, etc.	88	8,591,206	(20.6%)
primary transformation of metals	13	137,097	
non-metal production	6	65,098	
non-metal mineral production	21	277,484	
chemical production	48	8,111,527	
3 Metal transformation, mechanics	60	1,532,519	(3.7%)
metal production	36	672,183	
mechanical production	22	688,546	
mechanical equipment production	2	171,790	
4 Industries of others	71	3,565,810	(8.5%)
food industries	25	302,582	
textile industries	3	632,318	
leather industries	5	85,238	
wood products	13	727,553	
paper products	13	572,456	
plastic products	11	1,219,743	
others	1	25,920	
5 Construction industries	262	4,507,853	(10.8%)
plasterer, Mason	114	2,278,945	
gardener	10	301,290	
engraving of marble, etc.	4	78,459	
installation of electricity, etc.	37	607,052	
indoor construction	97	1,242,107	
6 Commercial industries	1,259	18,180,371	(43.6%)
Wholesale:			
food	21	557,568	
textile	7	498,240	
drug	3	208,800	
consumer durables	9	584,280	
pile, construction materials, etc.	26	832,000	
others	17	565,920	
Retail:			
food	410	5,223,280	
textile	132	2,107,584	
drug	72	833,778	
kitchen utensiles	75	1,093,496	
automobile, motorcycle, bicycle	45	373,536	
kerosene, etc.	44	708,684	
books, stationary	70	1,018,080	
others	58	717,696	
Services:			
restarurant, bar, cafeteria	177	1,833,638	
car repair, etc.	93	1,023,791	
7 Car tax	-	2,785,463	(6.7%)
8 Financial agencies	22	829,440	(2.0%)
bank	12	691,200	
others	10	138,240	
9 Others	143	1,584,424	(3.8%)
cultural activities	40	351,504	
barber shop, beauty salon	63	606,240	
photo studio, etc.	14	169,920	
sports studio	7	171,360	
others	19	285,400	
Total	1,906	41,722,404	(100.0%)

Source: La licencia fiscal de 1985, Gavà.

3. The Structure of Local Economy

In this section, the issues of the contribution of local economies to the public finances are mainly dealt with. The material sources for the analysis are the data file of 1968 and 1985 concerning permission tax.¹⁹ Table 4 lists the numbers of business enterprises and aggregated taxes which are calculated and compiled according to the classification of each economic activities. It is difficult to go through an accurate comparison of the data for 1968 with that for 1985, as each economic activities are categorized differently. The 1968 data, therefore, are referred only to observe some aspects of the changes that took place during 1968 and 1985. It is important to refer to the financial structure of local government prior to the analysis of the subject in this section. The total revenue account of 1985 was 993,913,107 pesetas, of which 30.4 percent was constituted by the subsidies transferred from the governments of the State (8.1 percent), Generalitat (5.5 percent) and Province (1.8 percent), and C.M.B. (11.6 percent) « figures in parentheses refer to their percentage shares ». It seems that the ratio of the financial autonomy is relatively higher in Gavà as well as in other peripheral municipalities, compared to the average of Spain. This is attributed to the increase in direct tax which is accompanied by the population growth. As a result, the proportion of permission tax to the total revenue account has become considerably small.

The evidence on Table 4 suggests clearly that the commercial sectors hold the larger shares in terms of the total numbers of the business enterprises and the taxational contributions. This sector is characterized by the rapid expansion in the number of stores. There were 586 retail and wholesale food stores in 1985, in contrast to 442 in 1968. It is clear that the population growth accompanied commercialization. Nevertheless, this did not always mean that the business scale was enlarged in each store. For example, the population which a store covered was considerably lower in comparison with the average of the province of Barcelona or Catalonia.¹⁸ In addition, it is worthy to indicate the remarkable fact that external capital invaded this sector. Near 10 percent of the stores were owned by the outsiders who lived in municipalities including Viladecans, L'Hospitalet de Llobregat, Castelldefels and the city of Barcelona, etc. This fact must be interpreted in association with the macro socio-economic factors which condition suburbanization as was mentioned in conjunction with the issue of housing.

When it comes to manufacturing industries in Gavà, the chemical, the metal and the food industries characteristically accounted for a relatively high share of the total number of the business enterprises, whereas the chemical and the plastic industries were the predominant tax contributors. This is due to the fact that some major companies were included in the chemical and the plastic industries, for instance, Formo, S.A., Lubricantes Dina, S.A., Resintex, S.A.,

¹⁹ *La Licencia Fiscal* de 1985, Gavà.

Sociedad General de Huelas S.A. from the chemical industries and Industria Resco S.A. from the plastic industries. The contributions from these companies accounted for more than 60 percent of the total tax from the chemical industries. On the other hand, many small and medium sized enterprises especially in the food, metal and machinery industries are found, excluding C.I.A. Raco Radiadores in the metal industries. It may be pointed out that the industrial structure of Gavà is comprised by the large enterprises which have led the industrialization of Catalonia since 1960s and the small-medium sized enterprises which have supported the traditional industrial sectors.

Finally, a remark will be directed to the conspicuous change in the financial business sector. The intensive spread of the national banking network that is often referred to is similarly observed in Gavà where we can find 12 financial institutions. When we consider that there was only a single of bank in the early period of the 1960s, we may visualize how rapidly most of the main banks in Spain set up their branch offices, in response to the population increase, which how occupy the best location in the urban center of Gavà.

IV. Conclusion

This article has been directed to the study of suburbanization of the city of Barcelona and its consequences in the peripheral area. Although it gives an objective description of how the peripheral area has been transformed into the residential area of the city of Barcelona, a theoretical analysis was not pursued into depth. The reorganization of an urban space is strongly affected by urban planning which is oriented to reform the contradictions accumulated in the existing socio-economic system. It will be necessary to analyze the power structure in an urban society in order to elucidate how urban planning is practically implemented, what impact it imposes and whose interest is prioritized. This article intended to provide the statistical and empirical data rather than to discuss the theoretical issues. Collection of rather complementary data not only on the peripheral area but also on the inner city and the integration of these findings into a macro socio-economic setting will be an important subject for the future studies.

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