

METROPOLITAN PROCESSES IN GREATER TEL-AVIV IN LIGHT OF THE WESTERN EXPERIENCE: SOME GENERAL REMARKS*

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The current size of metropolitan Tel-Aviv, 1.2 — 1.5 million inhabitants (depending on definition), makes it a medium-sized metropolitan area compared to European and North American metropolitan cities. It is of interest, therefore, to study the various processes relating to the organization of the urban space of Tel-Aviv in light of the Western experience. More specifically, a few questions may be asked: 1. What are the dynamics of the spatial redistribution of people, retailing, and employment, given a situation of a rather large and still growing metropolitan area? 2. Are these dynamics similar to those of Western metropolitan areas, in both their composition and their spatial and temporal context? 3. What are the implications of these processes for forecasting and for policy making?

The following discussion will examine each of the three sectors (population, retailing, and employment) separately, presenting the relevant processes and proposing some explanations. The purpose of this discussion is to point out general trends only, using available census data. More detailed and specific conclusions are left for further study.

POPULATION DISTRIBUTION AND CHARACTERISTICS

Recent data clearly show that metropolitan Tel-Aviv has been undergoing changes similar to those typical of Western metropolitan areas in the matter of population distribution and characteristics. The major trends known from other countries include: 1) a slowdown in the growth rate of the general metropolitan population; 2) a spatial differentiation of the population growth rate, so that central cities and inner-ring suburbs decline while outer-ring suburbs and exurbs grow; 3) a concentric pattern of age differentiation and sectoral pattern of segregation (see, e.g., Johnson, 1974; Muller, 1976).

Metropolitan Tel-Aviv had some 1.239 million inhabitants by the end of 1978, an increase of 1.59 percent from 1977. The percentage change between 1976 and 1977

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was 1.6 percent. The Tel-Aviv district (Fig. 1), which includes all the inner suburbs but only a few of the outer ones, had 984,900 residents in 1978, an increase of 0.9 percent from 1977; this growth rate has prevailed for the last three years. These two figures are lower than the national growth rate, 2.31 percent in 1978, with similar rates since 1975. The share of the major metropolitan area of Israel in the total population of Israel continues, therefore, to decline, and stood at 26.35 percent by the end of 1978.

The core area of metropolitan Tel-Aviv, namely the city of Tel-Aviv-Yaffo (Fig. 1), has suffered from an absolute population decline since 1974. At that time the City had 394,400 people; by the end of 1978 it had only 339,800, a decrease of 14.3 percent. In recent years, the decline has been one to one — and-a-half percent annually (Table 1). Until the last few years, this loss of population in Tel-Aviv was gained mainly by the inner-ring suburbs. Recently, however, the inner-ring has also started to decline, another phenomenon typical of Western metropolitan areas (Johnson, 1974; Muller, 1976) (Table 1).

Table 1: Recent Population Growth Rates in Metropolitan Tel-Aviv (Percentages of Selected Towns)

ZONE	TOWN	1977	1978
Core	Tel-Aviv	-1.4	-1.0
Inner Ring	Ramat Gan	-0.7	-0.5
	Giva'tayim	-0.6	-0.6
Outer Ring	Ra'anana	10.8	10.5
	Rishon Le'Zion	7.6	5.9
	Rehovot	6.7	5.9
	Ramat Hasharon	6.6	5.4

This redistribution of town sizes in metropolitan Tel-Aviv has been accompanied by changes in housing standards. In place of the former overall pattern of buildings of three to four stories, a geographical differentiation has emerged, so that Tel-Aviv city and some inner suburbs are characterized by high-rise construction, while in outer suburbs one or two family houses are preferred (Lev-Ari, 1977). These trends, experienced by other Western urban societies as well, are an outgrowth of an increase in incomes, motorization rates, and new social values (Lev-Ari, 1977).

This socio-economic differentiation and segregation of the metropolitan population is also apparent when a social area analysis is performed (Borochoy et al., 1978). Using 1972 census data, it has been found that like Western metropolitan cities, socio-economic differentiation in Tel-Aviv presents a sectoral pattern, while the life-cycle or demographic variation follows a concentric pattern. In other words, four socio-economic sectors can be identified, namely the relatively wealthy north, the northeastern middle-class, the southeastern lower-class, and the southern lower middle-class. The center of Tel-Aviv is characterized by small families, surrounded by rings of larger families and lower ages.

In summary, therefore, metropolitan Tel-Aviv presents Western trends of geographical redistribution of population, namely central-city and inner-ring decline, outer ring growth, and sector and ring demographic characteristics.

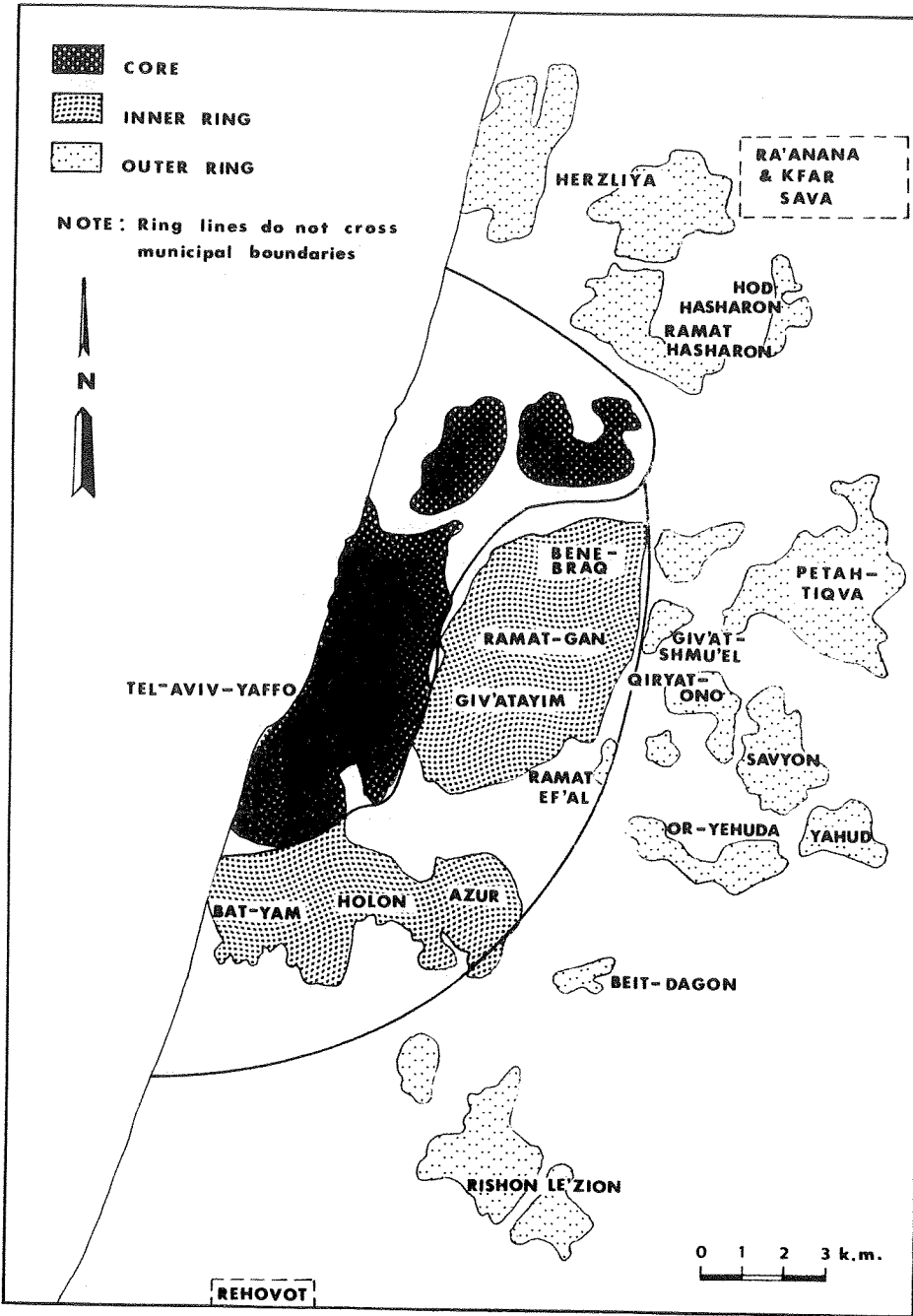


Fig. 1: TEL-AVIV METROPOLITAN AREA

EXPECTED DISTRIBUTION OF RETAIL AND EMPLOYMENT FOCI

The general pattern of population redistribution in Tel-Aviv reflected by rising population pressures on the metropolitan periphery and the creation of internal "specialization" or differentiation, follows similar patterns to those in other modern metropolitan areas. The question arises, therefore, whether the redistribution and specialization of retail-trade and employment foci also follow Western trends.

The literature of metropolitan dynamics suggests a reaction of trade and employment functions to population distribution, so that these functions too will suburbanize and become more specialized in their new locations (Johnson, 1974; Muller, 1976). Mills (1970) studied the American experience, and found that suburbanization processes begin with population, and continue with industry, retail trade, services, and wholesale trade, in that order. Whitehead (1974) developed a corresponding model for Britain.

Beaujeu-Garnier (1979) and Davies (1976) in their international comparison of the suburbanization of retail trade, suggest that the rate of this process is dependent mainly on planning control over the location of retail trade. The lack of any metropolitan planning of this factor in greater Tel-Aviv makes it similar to the North American conditions, while, on the other hand, the lower rate of motorization brings Tel-Aviv closer to Western European circumstances. One can expect, therefore, a German or French type of suburbanization of commerce, namely at an intermediate rate between the vast American uncontrolled suburbanization of retail trade on the one hand, and the strictly controlled British trend of centrally located shopping centers.

Employment has undergone quite a massive process of suburbanization in most Western countries, especially with regard to industry (Johnson, 1974). We can expect, therefore, that Tel-Aviv will lose its supreme predominance in retail trade, due to the movement of some stores and the opening of new stores in the suburbs. Also, Tel-Aviv is supposed to become a smaller employment focus, with employment becoming more specialized.

The implications of these expectations are quite important, since, if they are verified, it will be possible to forecast future metropolitan dynamics of Tel-Aviv using Western experience. If, on the other hand, these expectations are refuted, the unique factors of Tel-Aviv will have to be studied in order to enhance metropolitan planning.

THE SPATIAL DISTRIBUTION OF RETAIL TRADE

The Commerce Censuses conducted by the Central Bureau of Statistics (1962 — 1976/77) provided data for geographical analysis of retail trade in Tel-Aviv. These data make it possible to differentiate between Tel-Aviv city on the one hand and the inner ring (Tel-Aviv district) on the other, though a few of the outer-ring communities (Herzliya, Ramat-Hasharon, Qiryat-Ono and smaller places), are included in the inner-ring. Since these towns are geographically closer to Tel-Aviv than other outer-ring communities, their inclusion does not distort the analysis. A more serious problem is that while the reference is to all retail establishments until 1971/72, only those employing more than four employees have been included in the census since then. This makes it necessary to provide two analyses.

The data reveal that in 1971/72, 14 percent of Israeli retail businesses were located in the inner-ring of metropolitan Tel-Aviv. At the same time, 17.5 percent of the Israeli population lived in this area. In Tel-Aviv city, however, 11 percent of the national population resided, and 24 percent of Israeli retail establishments were located there. Tel-Aviv seems, therefore, to be a national retail center, preventing retail development in the suburbs. Some 63 percent of the metropolitan retail businesses are located in Tel-Aviv, while only 40 percent of the metropolitan population live there. Between 1968—72 the percentage of retail businesses located in Tel-Aviv declined by only 2 percent, and the loss was selective in terms of type of commerce: businesses with employees and non-food establishments increased rather than declined.

Some 80 percent of the retail businesses with employees in the metropolitan area were located in Tel-Aviv in 1971—72, an increase of 3 percent compared to 1965-66. The share of Tel-Aviv is 31 percent of all employing retail trade in Israel, while only 7.5 percent of that sector are located in the suburbs. Tel-Aviv retains, therefore, its status as the central retail focus both of the country and the metropolis. At the same time, there has been some decline in food businesses located in Tel-Aviv. In 1968-69 these accounted for 40 percent of the city's businesses, compared to 38.7 percent in 1971/72. During the same period, food businesses in the suburbs increased from 50 to 58.5 percent. Non-employing food businesses remained constant at 33 percent of the total retail businesses in Tel-Aviv, while in the suburbs they increased from 46.5 percent in 1968 to 55.6 percent in 1972. If we consider that the suburbs have included more than 50 percent of the metropolitan population since 1964-65, while corresponding percentage of suburban food businesses was achieved only 5-7 years later, we shall have to conclude that the metropolitan mobility of retail trade, even with the most basic functions, is quite limited.

When more recent data, referring to stores with more than four employees, are analysed, a more complex situation, consisting of two trends, is revealed. Between 1973-74 and 1976-77, the number of these stores increased by 35 percent nationwide, by 45 percent in metropolitan Tel-Aviv, and by 54 percent in the city of Tel-Aviv. Sales data, however, on opposing trends. The national growth rate (in *constant* Israeli pounds) was 57 percent, while the metropolitan growth rate was only 32 percent, and the value for Tel-Aviv proper only 12 percent. In other words, the average sales volume per store in Tel-Aviv in 1973-74 was 107 percent higher than the national average, and dropped to just 15 percent higher in 1976-77 (not taking into account the changes in the number of stores of all kinds nationally and in Tel-Aviv). This may be explained by the risk-taking behavior of retail entrepreneurs. The risk of opening a large store in Tel-Aviv, the major retail center, is small, but due to the more intense competition, sales are lower too. In the periphery, on the other hand, where the risk of opening a large store is greater because the suburbs have not yet gained a reputation as major retail centers, the increase in their number is slower than in Tel-Aviv, although due to relatively less competition, the returns may be larger.

The general trend of retail concentration in Tel-Aviv city, rather than the American and Western European pattern of a full or partial suburbanization of the retail sector following population, may be related to a number of basic factors unique to Tel-Aviv.

First, Tel-Aviv is a national retail center. Though the share of Tel-Aviv in national trade is no longer growing, still the very fact that the city serves as a national periphery blocks the development of large suburban centers. The second factor is the small geographical size of the metropolitan area, a result of dense residential development in the inner suburbs. This small area is accompanied by a third factor, namely the radial pattern of the metropolitan road system with Tel-Aviv at its center. Only one ring road (Geha Road) exists; it is not a limited access expressway and lies between the inner and outer rings. The construction of the proposed limited access beltway in a corridor lying between Tel-Aviv and the inner ring (the Ayalon Project) is rather slow. A fourth factor is the radial pattern of the public transport network around Tel-Aviv. The heavy use of public transportation and the short distances between city and suburbs make Tel-Aviv more attractive to potential suburban consumers, compared to other metropolitan areas.

The retention of retail trade by Tel-Aviv, in spite of its population decline, has many implications for metropolitan planning policy. Suburbanization of commerce at a rate similar to that of the suburbanization of population could have caused socio-economic problems similar to those of metropolitan cities in other countries, such as the United States and West Germany. The interruption in the construction of the new central bus station, with its adjacent shopping center, could cause a gradual decline of public transportation to crowded Tel-Aviv city, so that retail trade will shift more heavily to the suburbs. By the same token, the future opening of the Ayalon Project (the inner beltway), without carefully prepared retail planning regulations, could bring much commerce to the inner suburbs, which will then enjoy excellent interconnections among themselves and with Tel-Aviv. Also, if the trend of rapid outer ring residential construction continues, then much consideration should be given to metropolitan transportation planning. A change in the pattern of radial connections could lead to stronger inter-suburban interaction, with a loss of retail trade in Tel-Aviv city.

THE SPATIAL DISTRIBUTION OF EMPLOYMENT

The annual surveys of the Central Bureau of Statistics (1967-1977) and complementary data of the city of Tel-Aviv (1973, 1977) provide a solid basis for the analysis of possible changes in the distribution of employment foci in greater Tel-Aviv.

The suburbs increased their share of the metropolitan population from one-half to two-thirds between 1967 and 1976. At the same time, however, the increase in the number of persons employed in the suburbs was from one-quarter to one-third only. Moreover, if the suburban shares of population and employment in 1967 are compared, a 27 percent "deficit" is found in the employment percentage. This "deficit" increased to 28.5 percent in 1976, so that the suburban employment growth rate is slower than that of population. If current trends continue, therefore, it will take many years for the suburbs to become a larger employment center than Tel-Aviv.

On the national scene, Tel-Aviv accounted for 26.3 percent of national employment in 1967, declining to 21.4 percent in 1976. During the same period the suburban percentage increased from 9 to 11 percent. This percentage is not too high, however, when we consider that 17.3 percent of the Israeli population resides in suburban Tel-Aviv.

The slow suburbanization of employment in metropolitan Tel-Aviv is accompanied by an increasing two-way commuting pattern. On the one hand, the population decline in Tel-Aviv and the rising age of the remaining population result in more commuters working in Tel-Aviv, if factories and offices have not responded to these changes by moving to the suburbs. In 1973 the percentage of Tel-Aviv residents among all those employed in the City dropped for the first time below 50 percent. Between 1966 and 1976 the drop was from 60 to 40 percent. On the other hand, with the gradual development of employment centers outside the city the percentage of Tel-Aviv residents commuting to the suburbs increased from 10.6 percent in 1976 to 16.8 percent in 1976. Some change may also be indicated in the residential origin of suburbanites commuting to Tel-Aviv. The Percentage of inner ring residents among those employed in Tel-Aviv has been level in recent years at around 32 percent, after an increase of 6 percent since 1966. The proportion of outer-ring residents among those working in Tel-Aviv has increased steadily, from 8 percent in 1966 to more than 19 percent recently. This may be explained both by the development of employment centers in the inner suburbs, which causes many of their residents to work locally, and by better connections from the outer ring suburbs to Tel-Aviv, a result of rapid population growth in the suburbs.

No significant differences between national trends and local trends relating to employment specialization in the suburbs could be found. Tel-Aviv, however, does continue to lose its specialization in industry. In 1970 25.9 percent of those employed in Tel-Aviv worked in industry; in 1977 the figure was 23.6 percent, which is slightly lower than the national average of 23.9 percent. The same is true for construction, where there was a decline from 7.1 percent in 1970 to 5.0 percent in 1977. Tel-Aviv increased its share, however, of financial and business services, from 11.4 percent in 1970 to 17.3 percent in 1977.

To summarize, metropolitan Tel-Aviv has become an integrated urban area concerning the location of employment foci, though this process has not yet reached Western levels, and the pace of this process has not been fast. Commuting patterns reflect this integration, but the suburban employment gain is not yet commensurate with suburban population gain. The suburbs have yet to develop their own employment specializations, while Tel-Aviv has already developed the accent on financial services typical of metropolitan area central cities.

There may be several reasons for the slow suburbanization of employment. First there is the transportation factor, which has already been mentioned with regard to retail trade. The radial road network followed by the radial public transport network makes Tel-Aviv relatively accessible. Second, the suburbs are not endowed with vacant areas which would permit extensive industrial and storage developments. Thus moving out of Tel-Aviv may mean moving away from the metropolitan area altogether. Third, since employment in industry is declining nationally, it would be difficult to identify employment growth in the suburbs as a result of a decline in Tel-Aviv.

The integration of the metropolitan area, and the beginnings of specialization in regard to employment, should be of much importance for the planning process. Through encouragement of current trends, locational needs of different functions could be met somewhere in the metropolitan area, according to the relative advantages of its several parts.

CONCLUSIONS AND POLICY IMPLICATIONS

Greater Tel-Aviv follows the Western pattern of suburbanization and "specialization" of population. Processes of suburbanization of retail trade have not yet been strongly identified, however, and the process of suburbanization of employment is rather slow.

These trends present two major advantages for metropolitan planning. They enable planners to prevent the decline of Tel-Aviv city, and they give them enough time to plan for further functional integration of the metropolitan area. Since the decline of population in Tel-Aviv is a process going on for 16 years already, the strengthening of the retail sector and employment in Tel-Aviv may save the city from an overall decline. The city has to encourage and attract large, high-threshold and specialized retail businesses in order to compensate itself for the loss of food-stores. In addition, it has to adopt a policy of attracting specialized employment sources, mainly in the financial sector. In general, Tel-Aviv is increasingly becoming a central city of a growing metropolitan area. Thus, instead of fighting lost battles over possible major population increase, it has to identify its merits as a central city and draw up a growth policy based on them.

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