4
Population Dispersal: Forecasting and Reality in the 4 Million Population Plan for Israel

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Population dispersal plans have been found to achieve only limited success throughout the world. The Israeli case deserves special attention because of Israel's political economy, policies, population structure, and plan monitoring. The 4 million population plan for Israel with a target year of 1981 is presented and analyzed in comparison with reality. The plan, approved by government, called for a modest continued population diffusion from the highly urbanized coastal plain to outlying regions. Although the forecast for the total population was almost accurate, the ratio between Jewish and Arab populations was different from that predicted because the behavior of parameters was different from that assumed. The geographical distribution by district has only partially achieved the planned goal. This is true also for metropolitan areas.

Population dispersal has become a policy objective of almost all countries in the developed and developing worlds, though in different ways and with different emphases (Fuchs and Demko, 1979, 1983). A recent UN survey identified only 19 out of 158 countries that were satisfied with their population distribution (UN, 1980), so that population maldistribution may be identified at the microlocal and macroregional levels (De Jong, 1975), the latter consisting of two components, regional disparities and imbalanced urban networks (Fuchs and Demko, 1979).

The policies adopted by governments for the modification of population maldistribution differ. Socialist governments base their policies on Marx and Engels, calling for equal population distribution in the urban and rural sectors. Thus, these countries use stricter measures for directing both people and industries to desired locations. Western European countries do not base their policies on ideology but, rather, on the historical experience of the depression, World War II, and the postwar period.

These have all led to the rise of national and regional planning and to a transition from market to mixed-welfare economies, so population dispersal is mainly guided by incentives to both people and firms (De Jong, 1975; Fuchs and Demko, 1979). In North America, Canada, and Australia population dispersal policies have been weaker than in Western Europe, though recognition of a need for such policies has become law in the United States (Sundquist, 1975, vii, 4–5). There are several reasons for the reluctance of the United States to adopt explicit population policies, though measures such as mortgage insurance and interstate highways could be considered as such at least implicitly (De Jong, 1975). Compared to European nations, the United States is larger in area and population, heterogeneous, and federal rather than unitary, and has no tradition of social and economic planning that could lead to influence on locational decisions of firms (Sundquist, 1975, 33).

Fuchs and Demko, in their two wide-ranging reviews (1979, 1983), concluded that policies for population dispersion have limited effectiveness in general. This could be attributed to the fact that population distribution has usually been considered as subsidiary to national and regional planning, so that policy monitoring and evaluation were weak and very few quantitative studies were undertaken to compare targets and realities. It is the purpose of this paper to provide a quantitative evaluation of Israel's most recent population dispersal plan because Israel presents an interesting case within the international context of population policies.

The Nature and Characteristics of the Israeli Case

The Israeli case regarding population dispersal involves several specific features when compared with the experience of other countries. These can be summarized under four major headings: political economy, policy, population, and monitoring. These four aspects are, obviously, interrelated, but it is important to differentiate among them for the purpose of this paper because they are the major issues regarding population dispersal plans.

The Political Economy Context

The difference between market economies and socialist countries concerning population dispersion can be presented crudely as a lagged relationship between people and government. Under socialism people are supposed to follow government in their locational decisions. The opposite is true for capitalist economies, where government is expected to follow population distribution with services-provision activities; this prevents

it from applying a direct population dispersion policy. Most Western European countries have taken a middle course in this regard, and Israel is no exception to the trend. However, the Israeli desire to distribute population resembles the socialist motive more than the capitalist (North American and Australian) or mixed-welfare (Western European) types. Unplanned population distribution in North America and Australia has always had a strong economic stimulus. People went west in the United States, for example, to look for real gold or for golden economic prosperity. The Western European governmental desire for population redistribution, on the other hand, has been an issue of economic and social policy attempting to prevent urban overconcentration and rural and/or peripheral area decline. Although Israel has wished to exploit the minerals in its southern periphery and although it deliberately attempted to reduce population pressures on its major urban areas, neither goal has ever been presented as mere public policy, and peripheries have never served as attracting areas (Matras, 1973); rather, it has been a national ideology that has served as a major factor for population distribution policies. In this regard, Israel has resembled the socialist countries even though its ideological motive was not communist social equality, and it has maintained a free and democratic governmental system. Zionist ideology has called, since its inception, for the settlement of the Land of Israel accompanied by a philosophy of border defense by civilian settlements. These goals were coupled with preference given to rural communities, again as a matter of ideology, followed later by the wish to promote small urban communities in the peripheries.

Policy

The strong ideological connotation of population dispersal in Israel or the immense geographical connotations of Zionism have influenced Israeli governmental policy since the establishment of the state in 1948. Thus, population dispersal has been stated, explicitly or implicitly, as one of the guidelines for all Israeli governments. It has therefore never been subsidiary to other policies, as has been observed in other countries (Fuchs and Demko, 1979). On the other hand, governmental power to implement such policies has been limited. Forced resettlement of migrants from rural areas was inconceivable, while education of young urbanites in both formal and informal educational systems to move to the periphery has been central to government policy. By the same token, free population movement has always been assumed, though an extensive program of incentives has been used for both firms and individuals (De Jong, 1975).

Population

There are two interesting aspects regarding the Israeli population when its geographical distribution and redistribution are considered. First, although most countries attempt to regulate internal migration when they apply population dispersal policies, Israel has an additional source of population, namely, new immigrants. In the early years of statehood, immigration was high and initial residential location of immigrants was determined by government. Later, immigration became much lower and immigrants have been given much wider choices regarding residence and employment, this to facilitate easier and faster absorption. A second interesting characteristic is the existence of a large Arab minority within the country. The characteristics of recent Arab migration patterns will be elaborated upon later in this paper, but it should be stated here that governmental Zionist goals have not been applied to the Arab sector, so that Arabs have received fewer incentives for preferred migration but have enjoyed unrestricted movement.

Monitoring

Israel has been looked to many times as an example of successful population distribution policies (e.g. Johnson, 1970). It is important, then, to evaluate recent trends, an objective that can be achieved through the use of target populations presented in national population plans. In this, again, the Israeli case might be different in view of the technical difficulties in performing such analyses in regard to other countries (Fuchs and Demko, 1979, 1983).

The 4 and 5 Million Population Plans

The following sections will discuss and analyze the 4 million population forecast for Israel, which is an intermediate plan of the *Plan for the Geographical Distribution of the Population of Israel of Five Million* (1972). We shall refer to national forecasts and their assumptions and to the geographical distribution by districts, metropolitan areas, and major cities. The 4 million plan provides detailed population forecasts for small planning regions and for each town, a discussion of which is beyond the scope of this paper. Before turning to the more detailed comparisons, let us first take a general look at the plan, its goals and philosophy.

The 4 million plan is described in detail in two volumes (*Plan,* 1972), and summarized by one of its editors (Brutzkus, 1973). It is not the first geographical population forecast for Israel; earlier plans were the 1949,

1951/2, 1954, 1957/8, 1963, and 1967 plans described and analyzed elsewhere (Reichman, 1973). Of these, the 1967 plan, drafted before the Six Day War, was an early version of the 1972 plan, which did not take into account the Arab population of East Jerusalem. A comparative analysis of all these plans revealed that the later the plan, the less it attempted in terms of population growth in the peripheries (Zilberberg, 1973, 21). The 1972 plan is, however, unique compared to all earlier plans because it was approved by government, on 23 May 1975 (State of Israel, 1975, 1774), a step that gave it legal status: all other national and district plans have had to be coordinated with this one (Giron, 1978). The government directed the planners to prepare updates and revisions, the first of which was published in 1977 and which will be compared below to the 1972 plan.

Discussions of Israeli population distribution policy can be found elsewhere (e.g. Stern, 1981), but it is important to discuss here the objectives of the 1972 plan. The overall objective of the plan was formulated by the National Council for Planning and Construction: "Balanced distribution of the population and an increase in the peopling of Galilee (North), the Negev (South) and other sparsely populated regions, while taking into consideration security aspects, avoiding overconcentration in some regions, and paying attention to the preservation of agricultural land and landscape values" (*Plan,* 1972, 1:iii). The authors of the plan took into consideration several constrasting regional development philosophies that have prevailed in Israel for many years. The first is the "ruralist" approach, which calls for continued development of the rural sector by the provision of additional industries and services (Kellerman, 1976). The second is the "metropolitan" approach, which proposes minimal governmental intervention, thus permitting the "natural" continued growth of metropolitan areas. A third approach suggests the opposite: it advocates the dispersal of population to remote and sparsely populated regions, no matter the economic and human cost (Johnson, 1970). A fourth, more compromising, approach proposed the construction of urban clusters along highways (*Plan,* 1972, 2: 8–12). The plan puts forward a compromise based on all these approaches. The objective is to provide for modestly continuing population dispersal, considering the fact that, contrary to the past, natural population increase rather than immigration will account for most of the additional population, so that population redistribution policy becomes more difficult. Also, because many of the immigrants come from Western countries, they might be more attracted to metropolitan areas. In addition, the tertiary sector was to increase, a factor tending to concentrate in metropolitan areas. The plan calls, therefore, for a continued relative growth of the

Northern District (Galilee), the Southern District (the Negev) and the District of Jerusalem, while proposing a modest decline of the Tel Aviv, Haifa, and central (around Tel Aviv) districts (fig. 1).

The compromise and the mild tone of this and of earlier plans have brought mixed reactions from several writers. Cohen (1969) thought that Israeli population dispersal plans reflect existing rather than desired trends and should be considered as projections; thus, there is a need for another more normative plan to be compared with current ones. On the other hand Giron (1978) argued that the 1972 plan is normative in nature, while Reichman and Sonis (1979) claimed that the norms put forward by the plan are guiding and directing rather than dictating; they proposed, therefore, a nonnormative alternative plan, which will be discussed below.

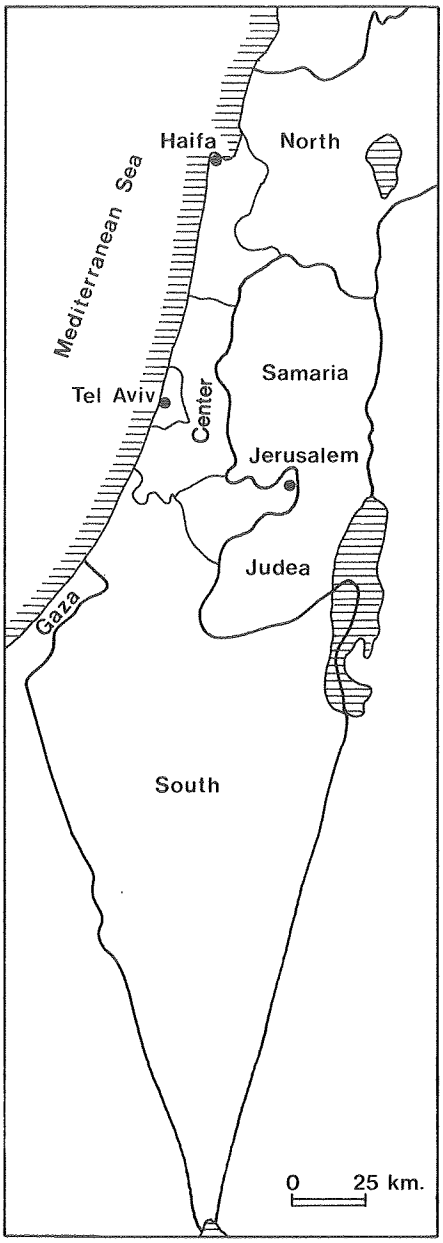
National Forecasts and Their Assumptions

The 4 million forecast was an intermediate goal of the 1992 5 million plan and had a target year of 1981. In reality, the population of Israel by the end of 1981 numbered some 3.978 million, which means a slight 0.5 percent negative deviation from the forecast, in line with the high accuracy achieved by the earlier population plans (Reichman, 1973). The 4.005 million proposed by the 1977 revised plan is 0.7 percent higher than the real 1981 population, and the 4.009 million forecast of the Reichman and Sonis (1979) model is 0.8 percent higher.

Comparing forecast and reality for Jews and Arabs separately reveals, however, a higher deviation. The estimated Jewish population for 1981 was 3.378 million; in reality there was only 3.320 million, or some 1.7 percent less than expected. The Arab population had been estimated to number some 622,000 by the end of 1981; it numbered some 657,000 by that time, or 5.7 percent more than expected. This also means that the Arab population accounted for some 16.5 percent of the total population rather than 15.5 percent, as expected. The numerical differences between forecast and reality for both Jewish and Arab populations are similar to those that occurred in earlier population plans (Reichman, 1973). The explanations for the differences this time are slightly different, however, and require a discussion of the assumptions behind the national forecast.

In terms of natural increase, the two populations belong to different stages of the demographic revolution. The Jewish population is in the fourth stage (low birth and mortality rates), resulting in a 1.4 percent natural increase for 1981. This represents a decline from the 1.7 percent rate for 1970, the base year for the plan, which also predicted a 1.4 percent for 1992. During the early 1970s natural increase grew to 1.8 percent in 1976, followed by a steady decline since then. It seems,

FIGURE 4.1
The Districts of Israel



therefore, that the 1.4 percent forecast for 1992 is slightly too high. The Arab population, in contrast, entered the third phase of the demographic revolution during the 1970s, declining from the 4.5 percent annual natural increase in the 1960s (with high birth rates and low mortality rates) to 3.9 in 1970 and 3.0 in 1981. Here, again, there is a difference between the early and late 1970s. The first period presented a slow decline (3.8 percent in 1976!); the latter was characterized by a relatively fast decline, so the forecast of 2.6 percent for 1992 seems too high because this rate might be true already for 1983–84. The transition of the Arab population from the second to the third stage of the demographic revolution is no doubt a direct result of a general increase in living standards and modernization trends similar to those of the Jewish population. There are some differences among certain groups within the two populations, though data for 1981 were not available. It seems however, that the Beduin population has still higher birth rates than the majority of the Arab population, resulting in an increase of the Arab population in the Southern District. This is true also for the Jewish population of Asian-African origin residing mainly in the Northern and Southern districts (in comparison to the general Jewish population) (table 1).

Another basic demographic assumption relates to migration. The plan assumed an average annual Jewish immigration of about 43,000; the average annual rate for 1971–81 was only 21,885. The plan also assumed a Jewish emigration rate of 0.4 percent of the Jewish population every year; the actual numbers vary between 0.18 percent in 1972 to 0.66 percent in 1981. Almost no consideration was given to Arab migration to and from Israel because this was assumed to number a few hundreds in each direction. There is, however, a relatively massive Arab immigration from the West Bank to East Jerusalem (which was annexed to Israel in 1967), partially causing the Arab population there in 1981 to be 9,400 higher than expected.

In summary, the Jewish population was 1.7 percent lower than expected mainly because of a 50 percent lower in-migration than predicted, offset by a higher rate of natural increase in the early and mid 1970s and by a lower than expected out-migration during part of this period. The Arab population increased more than expected because of a slower than expected decline of natural increase in the early and mid 1970s and immigration from the West Bank to East Jerusalem. Looking toward 1992, the 5 million plan predicted the Arab population to be 16.4 percent of the total population, which seems to be unreal because the 1981 rate was already 16.5 percent. The actual rate depends mainly on two factors: the continued decline of Arab natural increase and the volume of Jewish immigration.

TABLE 4.1
Forecast and Actual Distribution of Population in Israel by District, 1970, 1981

District[1]	1970 thou.	1970 % of total pop.	1981 exp. thou.	1981 exp. %of total pop.	1981 obs. thou.	1981 obs. % of total pop.	dev.[3] %
Jerusalem	323.7	10.8	500.2	12.5	457.1	11.5	-8.6
Northern	459.9	15.3	625.5	15.6	626.5	15.7	0.2
Haifa	463.5	15.4	601.5	15.0	570.0	14.3	-5.2
Central	537.5	17.9	693.9	17.3	807.4	20.3	16.3
Tel-Aviv	882.6	29.4	1065.0	26.6	1004.0	25.2	-5.7
Southern	333.3	11.1	484.8	12.1	485.6	12.2	0.2
Adminstered Territories 2	0.9	0.03	29.6	0.7	27.2	0.7	
Total	3001.4	100.0	4000.0	100.0	3977.8	100.0	-0.5

a. Rounded to nearest hundred.
b. Deviation percentage = [(1981 expected population in thousands − 1981 observed population in thousands)/1981 expected population in thousands] × 100.
c. Citizens of Israel only (Jews)

Sources: Plan (1972); State of Israel (1982).

Geographical Distribution by Districts

The assumptions adopted by the 5 million plan reflect some contradicting trends that the plan attempts modestly to balance. On one hand several centripetal forces causing a preference for living in the highly urbanized coastal plain—especially in the districts of the two metropolitan areas of Tel Aviv and Haifa and in the Central District around Tel Aviv (fig. 1)—can be identified. Among these is the continued reduction in manpower needed for agricultural production despite its increasing outputs, due to further modernization of the production processes. Also, the increased shares of industries and the tertiary sector (tourism, information services, health services) call for further developments in the coastal plain. This is in addition to the self-sustained general growth and attractiveness of the metropolitan areas. On the other hand the government continues to support industrial and housing locations in the more remote Jerusalem, Northern, and Southern districts by such means as subsidies and generous loans. This is in addition to higher rates of natural increase in these areas. Weighing these contradictory trends, the plan called for a modest continuation of population dispersal from the coastal plain to the rest of the country.

Unfortunately, however, even these expectations have only partially been fulfilled (tables 1,2). Actually, percentage deviations between forecast and reality of up to 30 percent are as high as in earlier plans, though not in the same districts (Reichman, 1973). The population in the three districts of Tel Aviv, Central, and Haifa constituted some 62.7 percent of the total population in 1970 and was supposed to drop to 58.9 percent. In reality some 59.8 percent of the population lived there by the end of 1981, so that only 23.7 percent of the plan objective was met. Looking at the Jewish population separately, some 68.8 percent lived in the coastal plain in 1970, and some 64.3 percent were supposed to live there according to the plan. In reality 66.3 percent resided there by the end of 1981, so that the plan was only 55.5 percent successful. These regional deviations, with the exception of the lower than expected population in Jerusalem is in line with deviations of earlier plans (Zilberberg, 1973). The major reason for only partial success lies with the failure of the plan to recognize modern trends of metropolitanization, which have brought about an even higher than expected relative decline of Tel Aviv and Haifa, but at the same time caused the development of an exurban area in the Central District (in the form of population growth in medium-sized towns). It is of special interest to note that the Arab population appears to behave in the same manner as the Jewish population in terms of suburbanization.

TABLE 4.2
Forecast and Actual Distribution of Jews and Arabs in Israel by District

District[a]	Jews							Arabs						
	1970		1981 exp.		1981 obs.			1970		1981 exp.		1981 obs.		
	Thou.	% of Jew. pop.	Thou.	% of Jew. pop.	Thou.	% of Jew. pop.	Dev.[3] %	Thou.	% of Arab pop.	Thou.	% of Arab pop.	Thou.	% of Arab pop.	Dev.[b] %
Jerusalem	245.1	9.5	388.2	11.4	336.0	10.1	-13.4	78.6	17.9	112.0	18.0	121.1	18.4	8.1
Northern	248.8	9.7	341.5	10.1	322.0	9.7	-5.7	211.2	48.0	283.5	45.5	304.5	46.3	7.4
Haifa	391.8	15.3	490.5	14.5	464.7	14.0	-5.2	71.5	16.2	111.0	17.8	105.2	16.0	-5.2
Central	496.2	19.4	634.4	18.8	743.5	22.4	17.1	41.3	9.4	59.5	9.5	64.0	9.7	7.5
Tel Aviv	874.1	34.1	1050.0	31.0	993.5	29.9	-5.4	8.5	1.9	15.0	2.4	10.5	1.6	-30.0
Southern	304.4	11.9	443.8	13.1	433.4	13.0	-2.3	28.9	6.6	41.0	6.6	52.2	7.9	27.5
Administered Territories[c]	0.5	0.06	29.6	0.8	27.2	0.8	-8.1							
Total	2561.4	100.0	3378.0	100.0	3320.3	100.0	-1.7	440.0	100.0	622.0	100.0	657.5	100.0	5.7

a. Rounded to nearest hundred.
b. Deviation percentage = [(1981 expected population in thousands − 1981 observed population in thousands)/1981 expected population in thousands] × 100.
c. Citizens of Israel (1982).

Sources: Plan (1972); State of Israel (1982).

This, however, is misleading because the Arab population growth represents rural growth, and the plan has assumed that Arab concentrations within the districts of Tel Aviv and Haifa will increase. On the other hand the decline of natural increase, stemming from an increase in living standards, reduces the demographic-geographical differences between the two groups. Thus, the deviations between forecast and reality in the Arab sector are higher than in the Jewish sector.

The district of Jerusalem has not increased as predicted because of slower Jewish migration to the city, and Arab migration from the West Bank increased this population more than expected. In the Northern District the percentage of the Jewish population in the total population decreased from 54 percent in 1970 to 51.3 percent in 1981, though the plan called for it to remain the same. By the same token the Arab population increased so that the total share of the district in the national population remained the same. These deviations stem mainly from slower than expected Jewish migration into the area, and Arab birth rates that have not declined as fast as predicted. The two remotely located districts, Northern and Southern, have both achieved their goals in terms of share of total population, but if Jews and Arabs are studied separately, then both regions show the same pattern, namely, lower than expected Jewish growth and much higher than expected Arab growth, related mainly to high birth rates among the Beduins in the Negev desert and to Arab migration to southern cities, especially Eilat, which offer jobs in construction and tourism.

An interesting point is the comparison between forecast and reality with regard to Jewish settlement in the Administered Territories. The planners were instructed by government to refer to Israel in its pre-1967 borders. However, because settlement activity took place in the early 1970s especially in the Golan Heights, the Sinai Peninsula, and along the Jordan River, they gave a general estimate without going into detail concerning its geographical distribution. This estimate was too high by some 8.1 percent, though one would expect the opposite, considering that the 1970 plan was prepared under a ruling of the Labor Government, which prohibited the settlement of the West Bank (Judea and Samaria), and that by the end of 1981 the Sinai settlements had not yet been evacuated. This settlement process has, therefore, been slow and of small magnitude in terms of the number of settlers.

Alternative Forecasts

It is interesting, at this point of the analysis, to compare the 1972 regional forecasts to the 1977 updated regional forecasts (*The Distribution*

of Population in Israel, 1977) and to those offered in the Reichman and Sonis (1979) model. The 1977 revised forecasts only attempted to correct the 1972 ones based on actual developments; the Reichman and Sonis (1979) model was based on different assumptions, so that past trends have been the key for their forecasts, not assuming any normative guidelines. In addition, they assumed interregional dependence of population growth, an element missing in the 1972 and 1977 plans. Forecasts made closer to the target year should be more accurate but, as table 3 reveals, there are still some deviations. First, the total population proposed in the original plan was more accurate than the respective figures in the later forecasts. Second, the 1977 plan differs from the 1972 one only in the Northern, Central, and Southern districts: in the two peripheral districts the 1977 deviation was larger; in the Central, smaller. In other words, expectations for the peripheries in 1977 were even higher than in 1972, but they were lower for the center. The share of the three metropolitan areas was assumed to be unchanged. The Reichman and Sonis (1979) model does not present any high positive or negative deviations. This means that the normative power of the plans was low and that existing trends of population movement were more powerful.

Metropolitan Areas and Major Cities

Because most of the population concentrates in the two metropolitan areas of Tel Aviv and Haifa and in the city of Jerusalem, a forecast-versus-reality analysis for these areas is in order (tables 4,5). It can be seen that actual population in 1981 in all three cities and their metropolitan areas was lower than expected. The two metropolitan areas of Tel Aviv and Haifa together in 1970 accounted for some 47.7 percent of the total population, declining to 41.9 percent by the end of 1981, which is 5.2 percent lower than the expected 44.2 percent. This does not necessarily reflect an out-migration to the outlying regions. The process of relative decline in metropolitan Tel Aviv is counterbalanced by a high population growth in the exurban towns of the Central District, and the relative decline of Haifa is due mostly to a continued concentration around Tel Aviv. Exurban developments around Haifa in the Northern District are still very modest and are not yet reflected in the population data for that region.

The city of Jerusalem was supposed to achieve a massive relative growth according to the plan, which proposed an increase in its Jewish population; because of a reduced in-migration, this was not achieved. The more than expected increased share of the Arab population has been already attributed to migration from the West Bank. In both other cities,

TABLE 4.3
Forecast and Actual Alternatives for Population Distribution in Israel by District

District	1977 Plan Thousands	1977 Plan % of total pop.	1977 Plan Dev.[a] %	Reichman & Sonis Thousands	Reichman & Sonis % of total pop.	Reichman & Sonis Dev.[a] %	1972 Plan Thousands	1972 Plan % of total pop.	1972 Plan Dev.[a] %
Jerusalem	500	12.5	-8.6	467	11.7	-2.1	500	12.5	-8.6
Northern	641	16.0	-2.3	615	15.4	1.9	625	15.6	0.2
Haifa	601	15.0	-5.2	581	14.5	-1.9	601	15.0	-5.2
Central	704	17.6	14.7	826	20.6	-2.3	694	17.3	16.3
Tel Aviv	1065	26.6	-5.7	1020	25.5	-1.6	1065	26.6	-5.7
Southern	495	12.4	-1.9	500	12.5	-2.9	485	12.1	0.2
Total	4006	100.0	-0.7	4009	100.0	-0.8			-0.5
Mean Regional Deviation			-1.5			-1.5			-0.47
Standard Deviation			7.58			1.56			8.14

a. Deviation percentage = [(1981 expected population in thousands − 1981 observed population in thousands)/1981 expected population in thousands] × 100.

Sources: The Distribution of Population in Israel (1977); Reichman and Sonis (1979); *Plan* (1972); State of Israel (1982).

TABLE 4.4
Forecast and Actual Distribution of Population in Major Urban Areas of Israel

Urban Area	1970 thou.	1970 % of total pop.	1981 exp. thou.	1981 exp. % of total pop.	1981 obs. thou.	1981 obs. % of total pop.	1981 obs. dev. % [a]
Metro-politan Tel-Aviv	1109.2	36.9	1354.0	33.8	1288.8	32.3	-4.8
Tel-Aviv	384.0	12.8	440.0	11.0	329.5	8.2	-25.1
Metro-politan Haifa	322.3	10.7	413.5	10.3	379.6	9.5	-8.2
Haifa	217.1	7.2	275.0	6.9	227.4	5.7	-17.3
Jerusalem	291.7	9.7	446.0	11.1	415.0	10.4	-7.0

a. Deviation percentage = [(1981 expected population in thousands − 1981 observed population in thousands)/1981 expected population in thousands] × 100.

Sources: ***Plan*** (1972); State of Israel (1982).

TABLE 4.5
Forecast and Actual Distribution of Jewish and Arab Population in Israel by Major City

City	Jews							Arabs						
	1970		1981 exp.		1981 obs.			1970		1981 exp.		1981 obs.		
	thou.	% of Jew. pop.	thou.	% of Jew. pop.	thou.	% of Jew. pop.	dev.[a] %	thou.	% of Arab pop.	thou.	% of Arab pop.	thou.	% of Arab pop.	dev.[a] %
Tel-Aviv	376.8	14.7	425.0	12.5	320.9	9.6	-24.5	7.2	1.6	15.0	2.4	8.6	1.3	-42.7
Haifa	203.9	8.0	250.0	7.4	211.1	6.4	-15.6	13.2	3.0	25.0	4.0	16.3	2.4	-34.8
Jerusalem	215.5	8.4	338.0	10.0	297.6	9.0	-12.0	76.2	17.3	108.0	17.3	117.4	17.8	8.7

a. Deviation percentage = [(1981 expected population in thousands − 1981 observed population in thousands)/1981 expected population in thousands] × 100.

Sources: Plan (1972); State of Israel (1982).

Tel Aviv and Haifa, the increase in Arab population was much lower than expected, following the trends of decline of the Jewish populations of those cities. The city of Tel Aviv continued its constant absolute decline, begun in 1963. The plan called for a reversing of this trend, if it could be achieved. The plan's assumption that a central city would grow massively while the metropolitan area will not, seems illogical. The city of Haifa grew modestly between 1970 and 1981, though far less than expected, because of massive suburban growth. Altogether, however, the relative weight of metropolitan Haifa has declined.

Operational Means for the 4 Million Plan

The major factors for population growth hardly lend themselves to government control in free modern societies. Rates of natural growth, assuming that low mortality rates have already been achieved, are completely out of government control. In- and out-migration, assuming free population movements, have to do with changing attractiveness of a country, but this, too, cannot always be attributed to one government action or another. The partial success of the 4 million plan, especially its proposals for the geographical distribution of population, has therefore a lot to do with the Jewish population being short of target by some 58,000 persons, some of whom, as new immigrants, would be more willing to locate in the outlying regions. This basic fact is accompanied by another traditional policy principle held by all Israeli governments, namely, the absence of any geographical planning for the Arab population, so that forecasting for its geographical distribution is even more difficult.

The major means recommended by the plan referred to "regionalization" of governmental actions. This should include the drawing of a development map pointing at priority levels for all towns and regions, thus serving as a guide for all government departments. In addition, annual national budgets and development funds should fit the geographical dimension of allocation in the plan. Such a map has been prepared but the recommended geographical budgetary allocation has not been implemented, so there is still a great lack of coordination among government departments, especially those in charge of housing, communications, and industry. This is part of a more basic problem within the Israeli governmental system (Akzin and Dror, 1966). Apart from these more structural problems, the Likud coalition that took over in 1977 has emphasized aspects of development from other geographical viewpoints. A nationwide urban renewal and reconstruction project was started, taking care mainly of blighted neighborhoods within existing towns, many of them along the coastal plain. The project has attracted much support from world

Jewry. The plan, however, called for directing efforts to the development of outlying regions. In addition, many efforts and resources have been directed toward the development of infrastructure and settlements in the West Bank (Judea and Samaria), so that fewer resources have been available for rapid settlement of the North and the South. At the same time many efforts have been directed to creation of a modern infrastructure in both the North and the South, mainly in the road and communications networks; in the South (Negev) this was part of the relocation of army camps from the Sinai. It might well be that these efforts will prove fruitful in attracting industries and population to the peripheries during the 1980s. Developing infrastructure to attract industries could prevent the mistakes typical of government development policies in early statehood, namely, that the construction of infrastructure has not met the needs of population and industries in developing regions.

Conclusion

The 4 million population plan for Israel predicted that this population figure would be achieved by the end of 1981. The target was almost met, but the ratio between Jews and Arabs differed from that forecasted as a result of some unreal demographic assumptions adopted by the plan. The regional distribution of population was also different from that proposed, so that the major goal of population dispersal has been only partially achieved and there has been a relative decline of the metropolitan areas in favor of exurban towns around Tel Aviv. It might well be that a careful study of the patterns dominating the population of Israel in the 1970s would make it necessary to change the proposals of the 5 million plan for 1992. As mentioned, the government endorsed the plan, with a requirement for further revisions, so that a new plan for the year 2000 is under preparation.

The comparison of actual and predicted regional population figures could serve as a starting point for further research on the social and geopolitical ramifications in a country with a large and growing Arab minority and with development efforts by government directed more toward the Administered Territories than the more traditional northern and southern peripheries.

Turning back to the comparison made earlier between circumstances in Israel and those elsewhere, one notes the Israeli plans' only modest success, as has been found in many other countries, despite the ideological and policy importance that have traditionally been attributed to population dispersal in Israel. It can be concluded that if limited governmental intervention is assumed, and if market forces are permitted to operate,

then population dispersal policies cannot achieve more than already demonstrated. It remains to be seen whether changing social values, such as the trend to semirural life, coupled with the introduction of a telecommunications infrastructure and improved transportation networks, could lead to changes in existing population trends.

Note

This paper was written while the author served as visiting lecturer in the Department of Geography, University of Maryland, College Park.

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