CHAPTER VI

THE PRINCIPAL ECONOMIC SECTORS

1. BUSINESS SECTOR PRODUCT AND PRODUCTIVITY

In 1980 economic activity slowed and even turned down in most of the main sectors. The stagnation of the business sector product (excluding housing) was the combined result of a 3–4 percent decline in industry and transportation and communications—two sectors which together account for about half the total business sector product—and a modest increase (at similar rates) in agriculture and construction.

In the other sectors—trade and services—various indicators point to mixed trends: a growth in financial services, a decline in trade, and apparently a slight drop in receipts from tourist services. In 1980 there was a wide inter-sectoral divergence in the growth rates, in contrast to the more or less uniform 5–6 percent expansion the year before (apart from agriculture). This is explained by various factors unrelated to the business cycle, such as weather conditions, which strongly affected the agricultural product, as well as the volume of immigration and defense construction, which influenced construction output, in addition to the usual cyclical pattern characteristic of this sector, which generally sets the tone of the economy.

Contrasting developments in domestic demands and exports[1] led to a structural change in the business sector. This was reflected by a 3 percent decline in the contribution of domestic uses to the business sector product and a corresponding increase in the export share. The uptrend in the latter has persisted since 1975, and is evident in most of the component sectors, especially industry. The weight of exports (both direct and indirect in the form of inputs for export production) rose during this period from 26 percent of the total business sector product to 38 percent. Since construction does not contribute to exports, the striking decline in its share of the business sector product (to 9 percent—see Table VI–2)—constitutes the mirror image of the above-mentioned development. The weight of the finance, trade, and services sector also moved up during this period. The other changes which have taken place in the sectoral composi-

[1] For a fuller explanation see Chapter II. In 1980 there was a sizable difference between the change in the business sector product as measured according to sectoral indicators (as has been done here) and that measured from the uses side—a decline of 1 percent and an increase of 2 percent respectively.

tion of the product since 1975 are not significant, for most of the export advance has been accounted for by numerous commodities and services in agriculture, industry, transportation and communications, and tourism. Exogenous influences also have an effect, both directly on a certain sector and by the consequent ripple effects on other sectors. Among the factors which particularly influenced the product in 1980 were the smaller growth of the country's population and net immigration, the more sluggish expansion of GNP and economic activity in most of the developed countries, the flagging of international commerce, and another round of steep oil price increases.

The slackening of activity in the principal sectors of the economy was especially noticeable in the first quarter of the year. The slowdown in employment began in the middle of 1979, and was reflected by an average 1–2 percent decline in the total labor input in 1980, after a 4 percent rise the year before. The most striking developments were an absolute drop in the number of employed in industry and construction, which laid off workers in the first quarter of the year, and a significant rise in the unemployment rate in the economy as a whole.

The gross nondwelling capital stock expanded at a low 3 percent rate, owing to the cutting back of investment on the one hand and a sharply higher volume of discards on the other. About half the nondwelling investment last year war for replacing machinery, equipment, and transport equipment that had become obsolescent and were apparently scapped. The laggard growth of the capital stock and the decline in investment should be viewed against three central factors: a diminished supply of government finance following the stiffening of medium- and long-term credit terms through the linkage of development loans in the middle of 1979; the acceleration of inflation in the last two years, which heightened the prevailing uncertainty and the risk facing investors; and the accumulation of unutilized capital stock in each of the past few years. Since 1972 most sectors have been saddled with spare capacity; this applies in particular to industry, agriculture, construction equipment, and transport equipment.[2] This can be attributed to government policy regarding the encouragement of investment,[3] production constraints in agriculture, and nonrealization of the expectations of vigorous growth, which resulted in a larger volume of unutilized capital in the last two years. Thus, for example, the anticipated extensive military construction in the Negev led to the accumulation of a stock of idle contruction equipment, trucks, and building materials already in 1979.

The real contraction of production in the various sectors this year resulted in a much larger volume of unutilized fixed capital. On the other hand, the labor input adjusted at least partially in those segments which experienced a drop

[2] The measurement of effective capital used in production may be biased (see below).

[3] The section dealing with industry in this chapter gives a fuller explanation of the distortions in resource allocation arising because of the capital and export subsidies granted by the government and the influence of inflation on the tax system.

Table VI-1

MAIN INDICATORS OF THE PRINCIPAL ECONOMIC SECTORS, 1965–80[a]

(Percent average annual increase)

	Product[b] (1)	Labor input[c] (2)	Capital stock[d] (3)	Labor productivity[e] (4)	Capital intensity[f] (5)	Total productivity[g] (6)	Exports (7)	Output prices[h] (8)	Financing[i] (9)
Total business sector									
1965–72	9	4	8	5	4	4	13	6	
1972–78	4	0	7	4	7	1	8	36	
1979	5	4	5	2	1	1	8	72	6
1980	–1	–1	5	0	7	–2	8	136	–2
Agriculture									
1965–72	6	–2	3	9	4	6	9	5	
1972–78	7	–2	5	8	6	5	8	35	
1979	2	–2	5	4	7	7	7	65	39
1980	3	3	4	0	1	0	–15	124	–11
Industry									
1965–72	10	5	7	5	2	5	15	5	
1972–78	5	0	8	5	8	1	11	39	
1979	5	5	6	0	2	–1	9	79	–1
1980	–3	–3	6	0	10	–4	17	135	–30

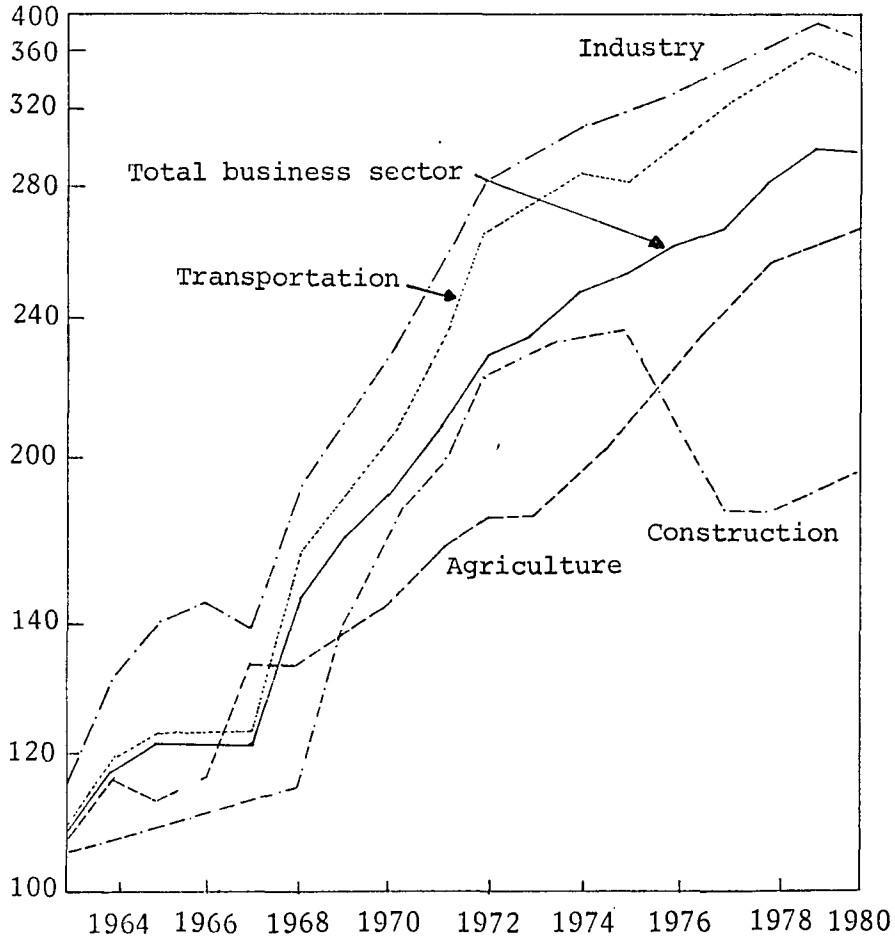
Transportation and com.									
1965–72	11	4	12	7	8	4	—	6	
1972–78	5	–1	7	6	8	3	8	35	
1979	6	5	2	1	–2	2	0	63	
1980	–4	–1	4	–3	5	–5	–3	141	
Construction									
1965–72	9	5	3	4	–2	4	—	7	
1972–78	–4	–3	5	–1	8	–3	—	36	
1979	6	9	0	–3	–8	0	—	87	–5
1980	4	–5	10	10	16	5	—	128	–28

[a] The calculations were made from unrounded data.
[b] Gross domestic product at factor cost.
[c] Actual manhours worked.
[d] Change in beginning-of-year levels.
[e] Product per manhour.
[f] Capital per manhour.
[g] Product per weighted unit of labor and capital, with labor weighted as follows: business sector—58 percent, agriculture—59 percent, industry—58 percent, transportation—60 percent, construction—72 percent.
[h] Excludes construction, for which input prices are presented.
[i] Medium- and long-term credit flows.

Figure VI-1

INDEXES OF REAL BUSINESS SECTOR PRODUCT, 1964-80

(1962=100)



Semilogarithmic scale.

in activity. This was reflected in the estimated product per manhour (labor productivity) and in overall productivity (the product per combined unit of capital and labor): there was a zero growth of labor productivity in most sectors this year and an absolute decrease in the overall productivity of the business sector as well as in industry and transportation (see Tables VI-1 and VI-3). These changes were in line with the trend evident since 1973.

This trend is not unique to Israel: since 1973 the growth of product per employed has sagged noticeably in most industrialized countries. The principal reasons for this are still not clear, but two facts stand out: first, the slowdown has occurred simultaneously in nearly all these countries and in most sectors; and secondly, it has been accompanied by a jump in the inflation rate and in the relative price of oil and other raw materials.

Table VI–2

INDICATORS OF THE GROWTH OF GROSS DOMESTIC PRODUCT AT FACTOR COST BY SECTORAL ORIGIN, 1960–80

(Percentages)

	Sectoral distribution		Average				Percent annual real increase		
	1975	1980	1960–65	1965–67	1967–72	1972–80	1978	1979	1980
Agriculture, forestry, fisheries	8	9	6.7	8.6	5.6	5.5	4.9	1.9	3.2
Industry, mining, quarrying	32	32	13.4	–0.9	15.1	3.8	6.5	4.5	–3.0
Transportation and communications	14	15	10.4	0.0	15.5	3.9	8.0	6.0	–4.0
Electricity and water[a]	4	4	10.2	4.1	11.1	4.8	4.2	5.4	–1.2
Construction	13	9	11.2	–14.5	19.6	–1.7	–0.3	6.3	4.1
Finance, trade, services[a]	29	31	4.6	1.8	12.1	4.0	10.0	6.1	0.0
Gross domestic product of the business sector	**100**	**100**	**8.6**	**–0.5**	**13.5**	**3.3**	**6.9**	**5.2**	**–1.0**

[a] The rate of change was calculated according to final demands, using the input-output table for 1975/76.

Table VI–3 gives a general picture of the development of business sector productivity. It should be stressed that the productivity estimates are residually calculated, and there are serious measurement and definitional problems; hence the estimates are not very reliable, not even the multiyear average. An analysis of developments in the short run (one or two years) therefore lacks significance, but the longer-term trends do have significance.[4]

Despite all the shortcomings, we shall present the main conclusions emerging from these estimates as a backdrop for understanding developments in production in the various sectors of the economy.

Total factor productivity in the business sector as a whole rose at a very high 6 percent average rate during the 1967–72 boom period. During the recession and in the last few years (1972–80) the figure fell almost to zero. The change between these periods was smaller in product per unit of labor than in total productivity.[5]

The interperiod variations in the weight of the different sectors did not affect the results. That is, the structural changes in the production of the principal sectors was not a direct factor in the growth of productivity in the business sector as a whole or in its slowing.

The steepest increase during the entire period in both labor and overall productivity was recorded in agriculture. The rate of change in all subperiods was stable, apart from an extraordinary rise during the recession. Agriculture was the only sector where productivity did not sag noticeably during the recent period, except for the last two years. Apparently the factors at work here differ from those influencing output and productivity elsewhere in the economy. Among other things, we should note in particular the changes in weather conditions, which are reflected by fluctuations in certain years; the protracted decline throughout most of the period in the agricultural labor input; a more intensive production in some of the branches with the increase in capital intensity; and the transformation of agriculture into part-time farming, which has also improved productivity.[6] The shifting of farmers to other occupations,

[4] For the purpose of the analysis the years 1960–80 have been divided into subperiods according to the business cycle and the development of productivity. The first subperiod is 1960–65, the second the 1966–67 recession, the third the 1968–72 boom, and the final subperiod was one of economic slowdown, extending from the Yom Kippur War and its aftermath (1973–74) until the end of 1980. During the 1967 recession and the latest period overall productivity rose to a similar extent. In order to concretize the declining trend at the end of this period, we analyzed the last two years separately.

[5] The use of more appropriate data for industry would have resulted in a slightly slower growth of productivity in this sector, as well as in the business sector as a whole. By contrast, using product data measured from the uses side (see details in Chapter II) rather than summing the product of the various sectors would have yielded diametrically different results.

[6] Note should also be taken of the bias likely to be imparted by the unmeasured input of self-employed farm labor.

Table VI-3

LABOR AND TOTAL PRODUCTIVITY OF THE BUSINESS SECTOR, 1960–80

(Percent average annual increase)

	1960–65	1965–67	1967–72	1960–72	1972–80	1979–80
Labor productivity (product per manhour)[a]						
Agriculture	8.2	14.3	6.3	8.3	6.7	2.2
Industry	6.3	6.6	6.5	6.4	3.0	–1.1
Transportation and communications	3.6	2.2	9.0	5.5	4.0	–1.0
Electricity and water[b]	10.2	–4.3	15.5	9.7	–1.9	–2.8
Construction	3.5	6.5	2.7	3.6	0.1	3.1
Trade and services[b]	–0.2	4.5	7.0	3.6	2.6	1.7
Total business sector	**3.8**	**6.0**	**6.6**	**2.3**	**2.8**	**0.8**
Productivity, with product measured by final uses			6.3		2.1	1.6
Overall productivity (Product per combined unit of capital and labor)						
Agriculture	5.0	10.4	4.7	5.6	4.1	0.6
Industry	5.6	1.7	6.9	5.5	0.2	–2.9
Transportation and communications	1.2	–2.9	7.2	2.8	1.5	–1.5
Electricity and water[b]	6.1	–3.5	10.8	6.4	–1.1	–3.5
Construction	2.1	–1.7	7.0	3.4	–1.6	2.4
Trade and services[b]	–4.9	–2.2	5.2	–0.1	0.0	–0.4
Total business sector	**1.8**	**0.4**	**6.5**	**3.5**	**0.5**	**–0.7**

[a] The change in the number of manhours in each sector is based on labor force survey data, after adjusting for classification changes during the period and including workers from the administered areas. In the case of industry the labor input, and hence productivity, differ significantly when measured according to industrial production index data (see Table VI-1). Although the latter source is more appropriate, we preferred the labor force surveys for the sake of uniformity. In the other sectors of the economy this is the only source available for estimating the labor input.

[b] The real change in the product was calculated according to final demands, using the input-output tables for 1968/69, 1972/73, and 1975/76.

such as kibbutz industry and various moshav services, is the principal reason why excess production capacity has not been reflected by a drop in productivity until recently. In addition, there is a relatively high degree of interjob labor mobility in the kibbutzim and among hired help in the moshavim, who as a rule work on a daily basis and can be easily dismissed.

In construction overall productivity has traced a fairly erratic path, broadly in line with the cyclical pattern characteristic of this industry. On average, labor and total productivity here have shown the lowest growth rates in the economy. In the recent period as a whole productivity fell off in construction, but in the last two years the trend was reversed. The short-term fluctuations can be attributed to the shifting composition of output—buildings as opposed to earthwork and renovations, the start of construction as opposed to completions, and private vs. public building.

This sector, it should be recalled, is divided into two main segments: residential and nonresidential construction, and roadbuilding and other earthwork. In the first the weight of labor is relatively high (70 percent or more), and apparently it is here that the source of the decline in productivity is to be found. Since 1967 the sector has hired more labor from the administered areas than any other sector, and this has led to a rapid turnover of workers and marked changes in their vocational composition and accumulated experience.[7] The other segment of the construction sector, roadbuilding and other earthwork, is capital-intensive, and such capital has long been underutilized, especially in the last few years; i.e. here too special external factors have had a powerful effect, in addition to the general forces at work in the economy.

In trade and services the productivity estimates are of low reliability because of the indirect method of measuring the product, and no great significance should be attached to minor differences in the productivity level and changes therein. At any rate, the estimation results are reasonable and consistent with the expected development of productivity in these sectors, which is largely dependent on developments in other sectors. In this respect the transportation and communications sector does not differ from trade and services, but it is more highly concentrated, consisting largely of big shipping, aviation, bus, trucking, and communications companies. The growth of productivity is influenced to no small degree by variations in the efficiency of the large concerns—El Al, Zim, and Egged, as well as the Ministry of Communications. An interesting characteristic of this sector is that its output cannot be accumulated for the future, and so it responds relatively quickly to economic changes. We should reemphasize the influence of the central factor in this sector, namely

[7] This reflects the problem of measuring the quality of the labor force. Productivity in this and other sectors of the economy is calculated using a uniform indicator of the labor input (hours worked), which does not differentiate between skilled and unskilled work, trained and untrained labor, etc.

the cost of fuel, which is a large component in all branches and whose relative price has risen steadily throughout the entire period.

From the foregoing it is evident that the main causes of the retarding of productivity growth in the business sector in the recent period are to be found in industry, which accounts for a third of total business sector product and employment.

Table VI–4

BUSINESS SECTOR PRODUCT AND PRODUCTIVITY, 1961–80

(Percent annual average increase)

	Product					Productivity, total business sector	
	Agriculture	Industry	Transportation	Construction	Total business sector	Product per manhour	Total productivity
1961	12.7	15.9	11.0	14.3	9.4	3.2	1.8
1962	8.6	13.1	14.0	18.7	12.1	5.6	3.6
1963	9.3	14.3	7.0	5.1	7.4	3.8	1.1
1964	7.7	13.9	12.0	11.3	9.4	4.0	2.5
1965	–4.1	10.0	8.0	7.4	4.7	2.3	–0.8
1966	3.4	1.6	–0.9	–12.1	0.0	2.8	–1.7
1967	14.1	–3.4	0.9	–16.9	–0.9	9.4	2.5
1968	0.8	28.7	24.1	25.2	20.6	4.8	10.0
1969	4.4	15.8	12.4	27.1	13.5	8.6	7.7
1970	5.4	9.5	13.5	16.8	9.9	9.0	5.9
1971	10.3	10.5	14.7	12.7	12.0	7.2	5.7
1972	7.2	11.9	13.0	16.7	11.8	3.9	3.2
1973	–0.3	4.5	4.7	2.2	3.6	5.5	1.5
1974	10.1	5.1	4.3	2.7	4.5	5.2	1.1
1975	8.9	3.1	–1.6	1.5	1.8	2.4	–0.8
1976	8.0	5.1	6.3	–13.0	2.9	2.8	0.4
1977	8.0	4.3	8.7	–14.9	2.9	2.3	0.6
1978	4.9	6.5	8.0	–0.3	6.9	3.3	3.0
1979	1.9	4.5	6.0	6.3	5.2	0.9	0.6
1980	3.2	–3.0	–4.0	4.1	–1.0	0.7	–2.2

Table

GROSS FIXED CAPITAL STOCK

Beginning of year	Percent annual increase in gross: Average 1960–65	Average 1965–67	Average 1967–72	Average 1972–80	1978
Total business sector	**10.6**	**7.3**	**7.8**	**6.3**	**4.0**
Agriculture	6.0	3.5	3.3	4.7	4.4
Water	9.9	4.5	2.5	2.2	1.8
Industry	9.9	4.0	8.4	7.8	5.5
Construction equipment	14.2	4.0	2.4	4.9	–1.0
Electricity	7.7	8.8	5.5	8.4	8.6
Transportation	15.1	12.9	11.9	6.1	1.9
Public services	15.8	14.4	11.1	9.2	6.5
Private services	16.0	13.1	9.2	7.5	6.8
Total nondwelling capital stock	**11.3**	**8.4**	**8.4**	**6.9**	**4.5**
Dwellings	9.7	8.2	7.1	8.2	5.4
Total fixed capital stock	**10.7**	**8.3**	**7.9**	**7.4**	**4.9**

[a] The calculations were made from unrounded data.

Until 1978 there was a marked divergence between product per manhour and overall productivity in industry (see Table VI–1). The growth of product per unit of labor hardly declined from its boom period level, while the rise in overall productivity sagged from 7 percent to a mere 1 percent. The implication of this change is clear: the predominant cause of the slowing of productivity in industry until 1978 lay in the capital input, i.e. in that part that was idle. Various indicators of the measured capital utilization rate[8] show a precipitate interperiod decline. It should be emphasized that measured capital stock is not identical with the effective capital used in production: it is estimated as the sum of the investments made over time (in constant prices), less discards. Discards are a function of the estimated economic life of each of the assets, and it may be that in the most recent period the estimate is biased downward (i.e. discards are too low). This is explained by the possibility that the rising cost of oil and other raw materials led to a faster scrapping of equipment.

In the event, it turned out that during the period concerned purchases were

[8] For example, a 15 percent decline in electricity consumption per unit of capital (see also the Bank of Israel Annual Report for 1979, Chapter VIII, "Investment and Construction").

VI-5

BY SECTOR, 1960–81[a]

capital stock		Change in gross capital stock in 1980 (IS billion, at 1980 prices)				Distribution of gross capital stock at beginning of 1981 (%)
1979	1980	Stock at beginning of 1980	Gross investment in 1980	Discards in 1980	Stock at beginning of 1981	
4.7	**5.1**	**180.3**	**11.1**	**6.4**	**185.0**	
4.6	3.9	20.4	0.9	0.4	20.9	9
2.1	2.8	9.5	0.4	0.1	9.8	4
6.2	6.2	46.5	3.2	1.2	48.5	20
0.1	10.0	3.7	0.4	0.3	3.8	2
9.4	9.0	11.8	1.3	0.2	12.9	5
2.4	3.8	70.8	3.4	3.4	70.8	29
6.4	5.1	54.1	2.7	0.8	56.0	23
7.8	5.1	17.6	1.5	0.8	18.3	8
5.0	**5.1**	**234.4**	**13.8**	**7.2**	**241.0**	**100**
5.0	5.5	167.7	9.8	0.4	177.1	
5.0	**5.2**	**402.1**	**23.6**	**7.6**	**418.1**	

advanced because of the sizable capital subsidy granted by the government in the form of grants and unlinked development loans from 1972 onward: the subsidy component of such credit rose as inflation speeded up, inducing the overpurchase of equipment and a greater substitution of equipment for workers, with a consequent increase in measured capital intensity.[9] The latter development was also due to the more sluggish growth of manpower in the economy in general and in industry in particular. During this period the industrial production growth rate dipped to a third of its level in the first subperiod. This can probably be attributed to supply-side constraints—full employment in the economy and the difficulty of finding suitable workers for many industrial concerns—combined with demand limitations. In addition, there was apparently a diversion of limited managerial manpower from production and marketing to finance.

In the past two years the growth of product per manhour worked in industry fell to zero; in 1980 this should be viewed in conjunction with the absolute contraction of production, for the first time since the 1967 recession. Other factors were undoubtedly at work here, such as the recruitment of workers in anticipation of a pickup in construction in 1979. It may also be that the

[9] Capital intensity is defined as the amount of capital per unit of labor.

aggravation of inflation and the consequent mounting uncertainty significantly affected labor productivity and production costs in the short run. Another possible reason for the "frictional" stagnation of labor productivity during this transitional period may lie in the changing composition of demand for industrial product (a shift from domestic uses to export).

2. AGRICULTURE

In 1979/80[10] agricultural output edged up a mere 1 percent, similar to the 1978/79 figure but far short of the multiyear 5 percent average. The net agricultural product, however, expanded nearly 4 percent. The difference between these growth rates was due to three main factors: a decline in the weight of livestock farming, plentiful rainfall, which permitted a smaller purchase of water, and to some extent the dearer cost of inputs and inventory maintenance.

Farm exports slumped 6 percent in quantitative terms in the year reviewed,[11] following a respectable 9 percent average annual gain during the past decade. The downturn occurred in both crop and livestock farming (5 and 30 percent respectively), and can be partly blamed on structural problems facing the sector (discussed below). A few branches (especially citrus and other fruits) were hurt by adverse natural conditions.

Producer prices rose 124 percent in 1979//80, while the prices of purchased input (excluding labor) soared 150 percent. This worsened the sector's terms of trade.

The real income of farm owners from agriculture fell 17 percent this year owing to a 230 percent jump in interest expenditures, which was related to the financing crisis confronting the sector. It reflected the growing shift to loans bearing market interest rates on the one hand and the treatment of linkage differentials as a cost instead of principal repayment on the other.

This year's developments should be viewed against the sector's long-range trends and its institutional structure. The number of settlers in the rural sector was and continues to be determined in the light of not only economic but also national considerations. After the desirable number of farmers had been decided, an effort was made to supply them with factors of production (land, water, and capital) in such quantities as would allow them to earn from farming a normal income compared with the rest of the economy. The limited amount of land and water available precluded the attainment of the income level per farmer deemed appropriate by the settlement authorities, except by employing highly capital-intensive techniques. As a result of this policy, production far exceeds

[10] The data on agriculture relate to the 1979/80 agricultural year, which began October 1, 1979 and ended September 30, 1980; hence these data are not comparable with the calendar year data in this Report, even for similar subjects.

[11] The data for 1979/80 are provisional.

Table VI–6

CURRENT ACCOUNT OF AGRICULTURE, 1972/73 TO 1979/80[a]
(IS million)

	Value at current prices		Percent annual increase				
			Quantity			Price	
	1978/79	1979/80	Average 1972/73-1977/78	1978/79	1979/80	1978/79	1979/80
1. Total output at producer prices	3,989	9,005	4.5	1.6	0.7	65	124
2. Intermediate inputs	283	631	0.0	-3.1	0.5	85	122
3. Agricultural output at producer prices (1–2)	3,706	8,364	5.0	2.0	0.7	64	125
4. Purchased inputs	1,614	3,919	3.4	2.7	-2.6	55	149
5. Agricultural product at producer prices (3–4)	2,092	4,455	6.3	1.4	3.2	71	106
6. Depreciation	314	656	5.8	1.5	0.1	69	109
7. Net agricultural product at producer prices (5–6)	1,778	3,799	6.6	1.4	3.8	71	106
			Percent increase in value				
			1978/79	1979/80			
8. Net agricultural product at producer prices	1,778	3,799	73	114			
9. Drought and war compensation	10	24	3	140			
10. Total income from agriculture (8+9)	1,788	3,823	73	114			
11. Interest and rent	271	892	109	229			
12. Wages of hired labor	422	897	72	113			
13. Income of farm owners from agriculture (10–11–12)	1,095	2,034	65	86			

[a] The calculations were made from unrounded data.

SOURCE: Central Bureau of Statistics.

what the domestic market can absorb. An attempt to market the entire output locally would depress prices to such a degree as to rule out the attainment of the required income level, or, alternatively, it would make it necessary to heavily subsidize the sector. Hence the need for an energetic export effort and for import substitution of livestock and livestock products. The sector did in fact develop in these directions at the start of the 1970s, but the expansion of livestock farming led to the saturation of the home market by the middle of the decade, while the export drive lost momentum toward the end, apparently because of demand constraints abroad.

Israeli agriculture therefore finds itself saddled with spare capacity, since the number of farmers and their income have been set at such a level that there is no market at present for all the potential output. The problem is being exacerbated by the establishment of new settlements (most of them based on agriculture), a policy dictated by national considerations.

The kibbutzim (communal settlements) have accommodated to the aforementioned constraints, systematically lowering the percentage of members engaging in farm work and shifting more to industry and services. Had they not done so, the excess farm capacity would have been far greater than it already is. The moshavim (cooperative smallholders' villages) are less flexible in this respect because of their organizational structure, and they have sought different solutions. Those close to population centers have turned farming into a part-time occupation, and some of their members make their living from outside sources. Some moshavim have been pushed into developing branches employing extensive cheap farm labor, especially from the administered areas. Moshavim more distant from the population centers, which are also usually poorer in land and water, have turned, with the encouragement of the settlement institutions, to capital-intensive farming (poultry growing and hothouse cultivation).

The problem of excess capacity has become much more serious in the past three years due to a combination of factors.

(a) Poultry farming expanded rapidly at the start of the 1970s. Table fowl production, for example, was stepped up at an 11 percent average rate between 1969/70 and 1975/76; this far outpaced the growth of meat consumption in Israel (less than 5 percent a year during this period), and so there was a sizable substitution of poultry-meat for imported beef. When surpluses began to appear in the mid-1970s an effort was made to increase consumption by supporting the price more heavily—at an approximately 25 percent rate in 1976/77, in contrast to a mere 5–7 percent at the start of the decade. Even so, surpluses continued to pile up, and these were sold abroad at a loss. The authorities nevertheless continued to expand poultry farming in the second half of the decade, since it was remarkably well suited for consolidating the "new" settlements of the 1950s and for creating an immediate economic base for the settlements established in the 1970s. Although a regime of production

Table VI-7

DIRECT AGRICULTURAL EXPORTS,[a] 1978/79 AND 1979/80

(IS million, at current producer prices)

	Value			Percent annual increase			
				Quantity		Price	
	1978/79	1979/80	Average 1972/73-1977/78	1978/79	1979/80	1978/79	1979/80
Field and industrial crops	378	816	20.0	12.0	-2.2	84	121
Vegetables, potatoes, melons	93	168	8.0	-5.8	-24.8	66	141
Fruits (excl. citrus)	104	214	14.2	30.5	2.2	52	101
Flowers, seedlings, ornamental plants, vegetable seeds, etc.	122	341	35.6	46.9	1.5	7	176
Total crops, excl. citrus	**697**	**1,539**	**19.3**	**19.0**	**-3.9**	**57**	**130**
Citrus	522	910	0.8	7.1	-5.9	68	85
Total crops	**1,219**	**2,449**	**9.7**	**13.8**	**-4.8**	**62**	**111**
Livestock and livestock products	69	126	12.5	-8.1	-30.1	61	161
Total agricultural exports	**1,288**	**2,575**	**8.2**	**12.4**	**-6.1**	**62**	**113**

[a] Includes exports to the administered areas; the calculations were made from unrounded data.

SOURCE: Central Bureau of Statistics.

Table VI-8

AGRICULTURAL OUTPUT MARKETED BY ECONOMIC DESTINATION, 1978/79 AND 1979/80[a]

(IS million, at current producer prices)

	Value		Percent annual increase			
			Quantity		Price	
	1978/79	1979/80	1978/79	1979/80	1978/79	1979/80
Output marketed						
Crops						
Direct domestic consumption	595	1,572	2.6	2.1	62	159
Industry	370	1,109	-23.1	28.8	71	133
Direct export	1,219	2,449	13.8	-4.8	62	111
Total	**2,184**	**5,130**	**2.7**	**2.8**	**63**	**128**
Livestock						
Direct domestic consumption	549	1,171	-6.9	-3.4	62	121
Industry	672	1,444	4.7	0.5	65	114
Direct export	69	126	-8.1	-30.1	61	161
Total	1,290	2,741	-1.3	-2.8	64	119
Total agricultural output marketed	**3,474**	**7,871**	**1.2**	**0.7**	**63**	**125**
Output retained on farms						
Own consumption	107	248	-0.3	-2.4	65	137
Capital goods	116	249	36.1	8.0	65	99
Raw materials[b]	292	636	-3.1	-1.5	85	122
Total output	**3,989**	**9,004**	**1.6**	**0.7**	**65**	**124**

[a] The calculations were made from unrounded data.

[b] Intermediate goods, including the value of crops destroyed.

SOURCE: Central Bureau of Statistics.

quotas had been instituted in poultry farming, this was not intended to shift production capacity from settlements in the center of the country to those in more remote areas. Thus capacity was expanded whenever it was necessary to create sources of income for the new settlements.

Output in the poultry branch peaked in 1977/78, and since then it has turned down moderately owing to low profitability. The decrease has occurred in production that is not advantageous to the economy—surplus broilers and even eggs.

(b) The growing of flowers developed at a hectic pace from the early 1970s until 1977, under the stimulus of expanding exports. The righ rate of return

was the primary factor behind its expansion at annual two-digit rates. This attracted less efficient farmers, who were able to make a profit thanks to the high prices fetched. The entry of still more farmers enlarged the supply to such an extent that in 1977/78 it overtook demand. This led to serious marketing difficulties, which in 1977/78 and 1978/79 depressed the prices in foreign currency terms and hence the return. The growth of volume was arrested in 1979/80, with the result that prices firmed somewhat.

(c) In recent years there was an adverse change in the terms of trade for agricultural exports. The much dearer cost of inputs contributed to this, and the relative exchange rate changes in the international market in 1980 probably also had an effect. But the basic cause was the real decline in export prices in agriculture as a whole in 1978 (for flowers in 1979 too).

The terms of trade deterioration hurt the economy. A loss of this type cannot be redressed by exchange rate policy, for any compensation granted to farmers must be at the expense of other sectors. The solution lies either in a new export breakthrough or in some contraction of the branch affected.

(d) In 1978/79 agriculture began to experience liquidity difficulties, which persisted in the following year. Investments in the rural sector exceeded the long-term financing available from the development budget and the Jewish Agency, and so it was necessary to turn to short-term borrowing to fill the gap. The tight monetary policy adopted made it hard to maintain the real volume of short-term credit or to convert it into long-term credit.

Each of these four factors taken separately had its effect; the fact that they were interrelated magnified the crisis in agriculture.

Types of Farming and Purchased Input

In 1979/80 the share of crops in total agricultural output continued to rise, not so much because of the expansion of crop cultivation as the further reduction of the output of livestock and livestock products in order to adjust it to domestic demand. This change in relative output shares contributed to the growth of the agricultural product (even if output did not increase), since there is a higher value added in crop than in livestock farming. The reduced weight of the latter resulted in a 2 percent smaller purchase of feedstuffs from abroad; such a decline adds 0.5 percent to the product, holding output constant.

A noteworthy development was the sizable increase in field crops, which are a distinct import substitute. Wheat production, for example, nearly doubled in 1979/80, due to the abundant rainfall and a rise in the relative price of grains in comparison with other field crops.

Purchased input in the crop branches declined appreciably in the year reviewed. In the case of water this was due to the ample rainfall, while in other inputs, such as fertilizers, there were apparently two factors at work; the adjustment of input use to the new relative prices, and the running down of

Table VI-9

INPUT OF MATERIALS AND SERVICES IN AGRICULTURE, 1978/79 AND 1979/80[a]
(IS million, at current prices)

	Value		Percent annual increase			
			Quantity		Price	
	1978/79[b]	1979/80	1978/79[b]	1979/80	1978/79[b]	1979/80
Feed	**669**	**1,623**	**3.0**	**-2.1**	**53**	**148**
Water	141	380	-1.5	-5.0	59	183
Packing materials	115	267	4.0	-6.8	35	149
Fertilizers	65	134	7.9	-6.2	51	119
Transportation	118	268	3.0	-5.3	57	140
Spare parts, repairs, tools	66	134	-3.6	-10.0	73	125
Fuel, lubricants, electricity	98	271	5.0	2.2	55	172
Pesticides and veterinary preparations	175	416	0.5	-1.7	56	141
Insurance and government services	97	247	2.0	1.0	64	153
Miscellaneous	70	179	12.2	2.9	77	147
Total purchases from other sectors	**1,614**	**3,919**	**2.7**	**-2.6**	**55**	**149**
Wages of hired labor	422	897				
Interest and rent	271	892				
Intermediate goods	283	631	-3.1	0.5	85	122
Depreciation	314	656	1.5	0.1	69	109
Grand total	**2,904**	**6,995**				

[a] The calculations were made from unrounded data.
[b] Revised data.
SOURCE: Central Bureau of Statistics.

Table VI-10

AGRICULTURAL OUTPUT SUBSIDIES, 1977/78 TO 1979/80
(IS million, at current prices)

	Value		Rate of subsidy, at producer prices[a]			
			Average 1970/71-1976/77	1977/78	1978/79	1979/80
	1978/79	1979/80				
Eggs	**60**	**50**	**17**	**26**	**33**	**13**
Poulty (for meat)	62	103	12	30	19	15
Milk	228	74	33	43	55	9
Total livestock[b]	**350**	**227**	**16**	**21**	**24**	**7**
Crops	15	13	1	1	1	0
Total subsidies on output	**365**	**240**	**7**	**9**	**9**	**3**

[a] The subsidy divided by the total output of the branch.
[b] Includes other livestock and livestock products.
SOURCE: Ministry of Agriculture.

stocks owing to the higher cost of maintaining them.[12] Because of the smaller purchase of inputs, the agricultural product expanded faster than output.

Output Subsidies

The subsidization of agricultural production was slashed from 9 percent of output value in 1978/79 to 3 percent in the year reviewed (see Table VI–10). This step, implemented under the government's revised policy, depressed farm proprietors' real income from agriculture, especially in milk and egg production. Nearly 60 percent of the milk subsidy in 1979/80 was paid in the first two months, before the desubsidization policy went into effect; this subsidy is now very small and is given through the surplus absorption fund. Only mountain settlements receive direct subsidies for table eggs; the others receive them through this fund. The price support for frozen poultry was the only one not changed to any significant degree; that for live poultry was discontinued.

3. INDUSTRY

Two contrary trends characterized industrial production[13] in 1980: a steep 17 percent rise in output for the foreign market and a 10–12 percent contraction of output for the domestic market. This pattern of contrasting trends was evident throughout the year. In the first quarter, when production and sales to the local market retreated noticeably, this was partly compensated by a healthy increase in exports; in the third quarter domestic sales picked up smartly, but exports dipped significantly (see Figures VI–2 and VI–3).

The dent in production occurred mainly in the first quarter of 1980, with the general weakening of the economy, but even for the year as a whole industrial activity was depressed: production sagged at an estimated 4 percent annual average rate,[14] the number of employed and the labor input declined 4 percent (about 12,000 workers), total factor productivity fell at about the same rate as production, and gross investment was cut back 15 percent. The slump in activity was accompanied by a change in the output destinations, which, to some extent at least, is likely to persist in the years ahead.

[12] The income tax relief on inventories granted to industry has not been introduced in agriculture.

[13] Industrial production excluding diamonds.

[14] This year, more than ever, the rates of change in production depend on whether the calculation is made on a calendar or fiscal year basis. For example, a comparison of 1980/81 with the previous fiscal year shows an increase of 1.5 percent instead of a 4 percent decline. The change in product derived from final demands, using the 1975/76 input-output table, also does not correspond to the industrial production index figure (see Table VI–12).

Table VI-11

INDICATORS OF INDUSTRIAL DEVELOPMENT, 1960–80

(Percentages)

	Average				Annual increase				
	1961–65	1966–67	1968–72	1973–80	1976	1977	1978	1979	1980
Total industrial production[a]	13.4	–0.8	15.4	3.8	5.1	4.3	6.5	4.5	–3.0
Industrial production, excl. diamonds	—	–0.9	15.4	3.9	4.7	4.3	7.7	5.4	–3.7
Number of employed	7.6	–3.7	8.0	1.2	2.5	2.3	1.8	3.5	–3.9
Mandays worked	—	–5.5	9.4	0.2	2.8	–1.1	0.2	4.6	–3.2
Real gross investment	6.0	–23.9	31.5	–0.9	–8.4	–12.8	14.2	4.7	–14.7
Real gross capital stock[b]	11.0	6.4	7.7	7.8	9.1	7.2	5.5	6.2	6.2
Output per unit of capital[c]	2.2	–6.3	7.1	–3.7	–3.7	–2.7	1.0	–1.6	–8.7
Real industrial exports, excl. diamonds	13.7	12.5	16.6	11.7	30.4	18.8	8.9	9.3	17.4
Revenue, at current prices	20.5	3.0	23.3	58.0	37.3	45.7	75.5	80.9	123.6
Domestic wholesale prices	5.0	3.0	6.3	52.8	30.9	38.6	53.2	79.0	135.1
Total payroll outlay	—	5.0	18.7	57.2	40.5	44.4	64.8	94.9	125.3
Rate of return on capital	—	13	20	19	18	21	19	21	17
Return on capital as a percent of the product	—	34	43	43	43	44	43	43	38

[a] The data on production, labor, and wages for 1978 have been adjusted for actual mandays worked; for further explanations see the Bank of Israel Annual Report for 1979, note [a] to Table XIII-1.

[b] At the beginning of the year.

[c] The term "output" in this table refers to industrial production.

The flagging of domestic demands for industrial goods in 1980 was due to the downturn in both private consumption and investment, especially in finished goods and raw material inventories (see Table VI–12). The decline in real disposable income and the sharp change in the relative price of food following the cancellation of subsidies were the chief causes of the smaller consumption of such locally produced industrial items as processed food, textiles, furniture, and other household articles. The industrial product originating in these commodities declined 7 percent, pulling down the industrial product as a whole by 2 percent. The stagnation of nondwelling investment, as stated, also had a dampening effect, especially the running down of inventories after a sizable buildup in 1979. The change in the level of inventories was related not only to a cyclical adjustment, but also to the higher cost of maintaining them following the rise in real interest rates in 1980. Preliminary indicators show that stocks were drawn down in most branches. Evidence of this can perhaps be found in the smaller output this year of products for the building industry, even though investment in construction (housing and nonhousing alike) did not tail off, and total output of this industry (including military construction) even rose a notch. Apparently the excess stocks that had accumulated in 1979 were used for current production, after the previous year's exaggerated expectations failed to materialize and it became more expensive to keep inventories.

The export share of the total derived industrial product moved up steadily in recent years, from a 28 percent average in 1968–72 to 41 percent in 1977–79 and 48 percent in 1980.[15] In other words, nearly half of industrial production was destined, directly or indirectly, for the foreign market. This year the rise in the weight of exports encompassed virtually all branches, instead of being confined to isolated products or branches, including even the "traditional" export branches. Furthermore, in contrast to the past, relatively small enterprises were responsible for most of the headway made this year, while only a quarter of the increment came from the 25 largest export enterprises (which account for more than half of total overseas industrial sales). The main factors in this year's respectable export performance were probably the subsiding of domestic demands and the increased sale of Israeli goods in existing markets and the penetration of new ones, apparently including the U.S.[16] It is noteworthy that these gains were scored despite the faltering of economic activity in the countries heading the list of Israel's customers: their national product hardly rose at all and their foreign trade shrank. The weakening of demand in these countries is one of the principal factors thwarting a further expansion of exports

[15] The reference is to the total value-added component of the export goods, including the intermediates used in their production (see Table VI–12).

[16] For a detailed discussion of total and industrial exports see the relevant section in Chapter VII.

Table VI-12

INDUSTRIAL PRODUCT BY FINAL USES,[a] 1968–80

(Percentages)

	Weight of uses in derived product				Annual increase		Contribution to growth of derived product	
	1968–72[b]	1973–75	1979	1980	1979	1980	1979	1980
Private consumption	37	27	26	23	–1.9	–7.5	–0.5	–1.9
Public consumption	15	21	15	15	–0.4	1.3	–0.1	0.2
Investment[c]	18	18	14	11	13.5	–19.7	1.7	2.7
Thereof: In fixed assets	18	18	13	11	5.9	–3.9	0.7	–0.5
Total domestic uses	**70**	**66**	**55**	**49**	**2.0**	**–8.1**	**1.1**	**–4.4**
Exports	30	34	45	51	6.9	17.0	3.0	7.6
To administered areas	2	3	3	3	–4.7	10.1	–0.2	0.3
To the rest of the world	28	31	42	48	7.9	17.5	3.2	7.3
Total final uses	**100**	**100**	**100**	**100**	**4.1**	**3.2**	**4.1**	**3.2**
Industrial production index (incl. diamonds)					4.5	–3.0		

[a] The product attributable to each use is the value added generated directly or indirectly in the production of goods destined for that use, i.e. it includes the estimated value of the intermediates used in production. These estimates are based on Central Bureau of Statistics data on final uses and Bank of Israel calculations of the derived product based on the 1975/76 input-output table.

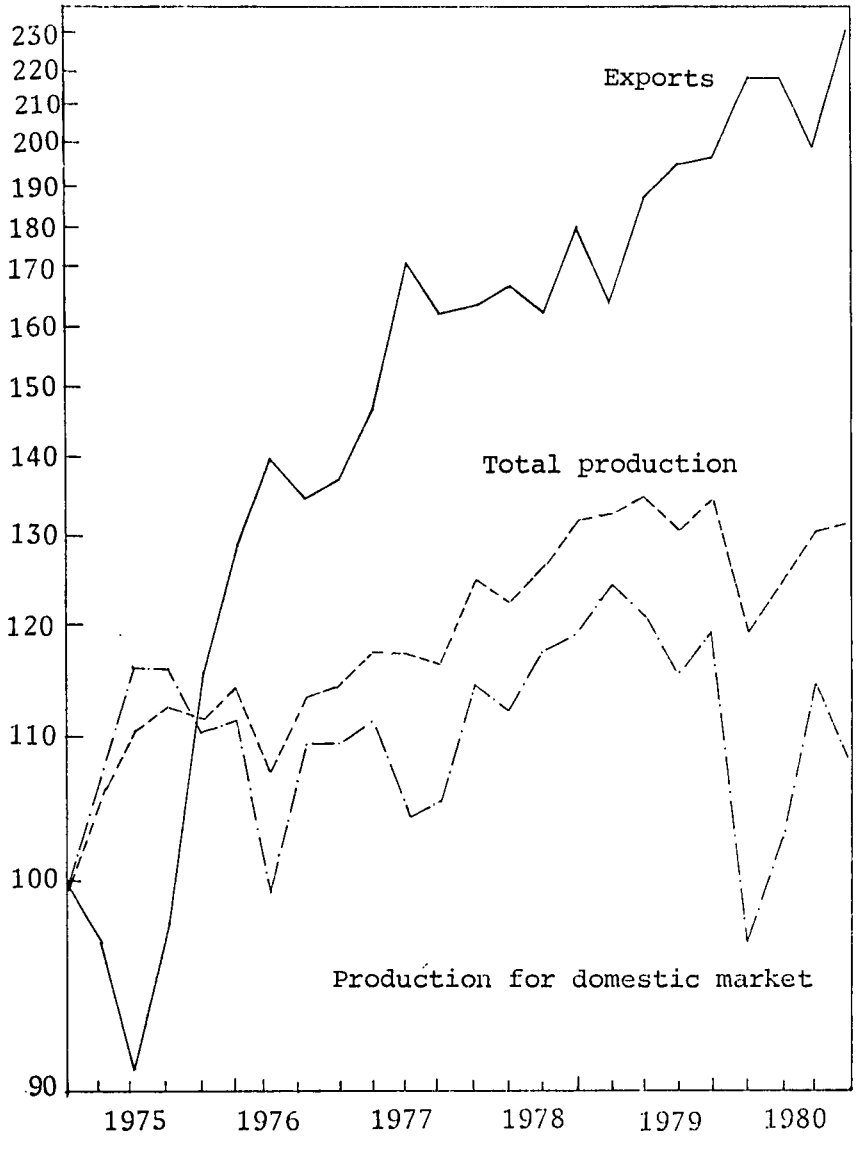
[b] The average for these years is based on the 1968/69 input-output table.

[c] Includes changes in industrial inventories in 1979 and 1980 only.

Figure VI-2

INDEXES OF REAL INDUSTRIAL PRODUCTION (EXCL. DIAMONDS) FOR EXPORT AND THE DOMESTIC MARKET, 1975–80

(Quarterly seasonally adjusted data; 1975I=100)



Semilogarithmic scale.

and the maximum exploitation of economies of scale in numerous export industries.

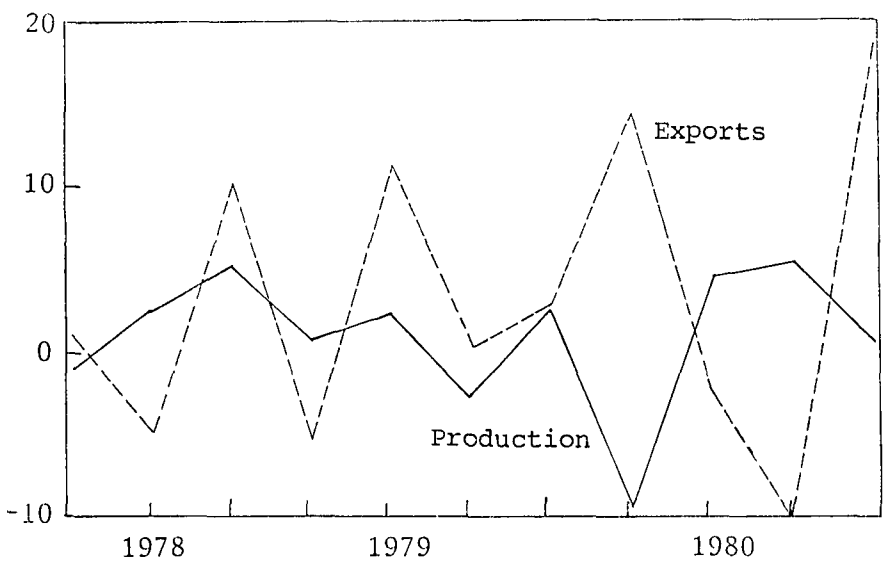
The government, under its policy of encouraging industry in general and industrial export in particular, employed three basic tools in the financing of the sector in recent years: long-term development loans on very soft terms, investment grants, and short-term directed export credit. These were aimed especially at stimulating exports while generally discriminating against production for the domestic market (and even the production of import substitutes). Two of these tools support a single factor of production—fixed capital—and every one of them was responsible for a highly distorted domestic resource allocation. Development loans and investment grants brought about a striking expansion of the capital stock and capital intensity in export industries, but at the same time idle production capacity accumulated in many industries, including those oriented to the foreign market.

The measured capital utilization rate[17] in industry fell in 1980, after rising a bit in the previous year. The downturn clearly reflected the standstill, and even decline, in total factor productivity. The incentives given to industrial investors in the form of grants and unlinked loans (which quickly eroded as inflation accelerated) contributed in no small measure to this problem. A rough

Figure VI–3

INDUSTRIAL PRODUCTION AND EXPORTS (EXCL. DIAMONDS), 1978–80

(Percent real quarterly change, seasonally adjusted)



[17] As distinguished from the effective capital used in production (see section 1 in this chapter). Central Bureau of Statistics survey data on shift work confirm these capital utilization trends. According to this source, the "shift coefficient" rose 4 percent between 1966 and 1970, and fell 10 percent from 1970 to 1979.

estimate reveals that these concessions amounted to as much as a third, half, or even more of the investment. It is not surprising that capital goods were purchased before they were actually needed, equipment was acquired for use during brief periods of peak production or in place of adding an additional shift using existing equipment, and there were other manifestations of overinvestment. The outcome was a big increase in the measured gross capital stock without a corresponding growth of output, and hence the flattening and even a decline in total productivity.

Investors obviously regarded this subsidy, which rose with the rate of inflation, as a temporary factor, which would disappear sooner or later. Indeed in mid-1979 development loans were indexed, depressing industrial investment demand in 1980.[18] Other contributory factors were apparently the mounting uncertainty of investors with the escalation of inflation and the pessimistic outlook regarding the growth of the domestic market.

At the same time the expansion of fixed assets permitted a respectable advance in foreign sales even in 1980, and they constitute a potential for sustaining this trend.

The promotion of exports through directed credit has also been largely based since 1977 on a subsidy whose size is a function of the inflation rate. One of the worst distortions this has created is the encouragement of the manufacture of goods without any relation to their value added: many products with a small value added have enjoyed a hefty subsidy relative to other products with a high value added.

One possible economic justification for subsidizing export production lies in the high risk confronting the individual enterprise compared with that faced by the economy as a whole. This risk deters establishments that are willing and able to step up their foreign sales—to capture a foothold in new markets and manufacture new locally developed products. Expanding exports in these directions usually requires considerable time, knowhow, and a substantial investment in market research and R&D. These deserve public support in the form of an assured supply of credit and government participation in the risks.[19] It is important to ensure that the promotion of new Israeli-developed products, which are exposed to high risks, does not discriminate between the different factors of production or between the various market destinations, and that it is based on the value-added component of the products concerned. Industrial research and development is labor-intensive and requires highly educated personnel; public funding of R&D is therefore largely confined to this factor of production. At present labor is taxed excessively compared with the heavy subsidization of physical capital.

[18] The real decrease in total development loans reached 30 percent in 1980. About a third of this credit is still not linked, since the approvals were granted before the change went into force.

[19] Government support for research and development added up to IS230 million in 1980, compared with IS100 million the year before. For comparative purposes it should be noted that government development loans to industry totaled IS1.2 billion this year.

To this day no appropriate method of government participation in the risks has been worked out.

The emphasis on the encouragement of fixed capital by the government may also have stemmed from bureaucratic considerations in carrying out this policy. That is, it is easier for government departments to deal with a small number of export enterprises (export production is highly concentrated) than with thousands of relatively small firms.

Even in comparison with the concentration of manufacturing as a whole, that in export production is remarkable; the 50 largest exporting enterprises accounted for nearly two-thirds of total overseas industrial sales this year, while the 50 largest manufacturing firms contributed only some 30 percent to total output (and a quarter of the output for the domestic market), as can be seen from the following table.

CONCENTRATION OF INDUSTRIAL PRODUCTION AND EXPORT (EXCL. DIAMONDS) IN 1980

(Percentages)

	Largest manufacturing enterprises			Largest export enterprises		
				Percent of total export		
	Percent of total output	Percent of output exported	Export share of output	1977	1980	Export share of output 1980
25 largest firms	23	40	37	51	53	55
50 largest firms	30	49	34	62	65	54
Other firms	70	51	16	38	35	16
Total industry	**100**	**100**	**22**	**100**	**100**	**22**

The high degree of concentration in exports has other organizational implications: it is easier for large enterprises to operate the sales networks required for penetrating new markets and for distributing a new product, especially when they already produce a wide variety of products and can maintain their own networks. Most of the large export firms are also numbered among the leading manufacturers, and a sizable share of their production is destined for the local market; in this category are such firms as Israel Aircraft Industries, Israel Military Industries, Tadiran Israel Electronics Industries, the Oil Refineries, Polgat Woolen Industries, Makhteshim Chemical Works, and Fertilizers and Chemicals Ltd. A weakening of domestic demand for their goods prompts them to turn immediately to foreign markets, and sometimes even enables them to make deliveries ahead of schedule. The organization of large companies and integrated concerns also has significance from the financing standpoint, as it permits

internal capital flows from the parent company to its subsidiaries and between the various subsidiaries themselves.

Past experience has shown that in periods of slack industrial activity the downturn in output is accompanied by a drop in the rate of return on capital and in its share in the product.[20] This happened in 1980, when the return to industrial labor moved up from 57 percent[21] in the three preceding years to 62 percent. The rate of return on capital, which comprises operating profit, interest paid, and rent, fell from 21 percent in 1979 to 17 percent in 1980 (see Table VI–11); this reflected the 4 percent decline in total factor productivity.

Total real interest expenditure rose this year. The protracted uptrend in the weight of loan capital in industrial financing apparently slowed. This type of financing became increasingly worthwhile as inflation accelerated, especially since interest and other expenditures connected with loans for the purchase of assets are recognized as a tax-deductible expense. As a result, financial leverage in industry increased in the past few years, i.e. the weight of loan capital grew at the expense of equity.

From the aforegoing it is not clear what changes took place in the profit-equity ratio. It should be noted that we are dealing with pretax returns, and therefore account must be taken of two contradictory influences on net profit: the taxation of inflationary profits and the inventory tax relief. Partial indicators show that income tax payments by industrial firms were very small in 1980,[22] but profitability was also low. This may have affected investment already in 1980, and will constitute a disincentive for expanding industrial capital in the coming year. It should be noted in this context that, together with the sagging rate of return on industrial production, manufacturers may have enjoyed an increase in other income, notably from investment in the stock market. Until recently it was possible for them to obtain unlinked credit, besides deducting financing expenses for tax purposes. In certain cases they could also purchase securities the gains on which were either tax-exempt or taxed at a reduced rate.

Gross daily wages rose 133 percent in 1980, about the same as both the index of industrial output prices (an average of wholesale domestic prices and export prices) and the consumer price index. Real wages per worker therefore held more or less steady,[23] even though labor productivity in industry increased only negligibly in the past two years. In the last eight years (1973–80)

[20] The return is calculated as the difference between value added at factor cost and total wage outlay, including the imputed wages of owners who work in their enterprise. Capital consists of total fixed assets and inventories in industry after revaluation. The return to capital does not include capital gains originating in grants and unlinked investment credit.

[21] Of value added at factor cost, including the subsidy component of directed credit.

[22] See the section on taxes in Chapter V.

[23] Employers' real daily wage outlay rose 8 percent this year. The discrepancy arises from the fact that the price index of the product at factor cost lagged behind the

Table VI-13

INDUSTRIAL PRODUCTION AND EXPORTS AND WEIGHT OF EXPORTS IN DERIVED OUTPUT, 1979-80

(Percentages)

	Percent annual quantitative increase[a]				Export share of derived output			
	Production		Direct exports		Direct exports[b]		Total exports[b]	
	1979	1980	1979	1980	1979	1980	1979	1980
Mining and quarrying	**9**	**8**	**2**	**3**	**52**	**52**	**63**	**65**
Food, beverages, tobacco	10	-4	8	5	13	14	17	18
Textiles	3	-7	27	20	25	28	56	65
Clothing	0	4	13	31	48	58	49	59
Wood and wood products	1	-13	-4	3	9	9	14	15
Paper and paper products	7	-10	88	17	6	11	31	39
Printing and publishing	2	9	-5	13	8	9	22	24
Leather and leather products	-13	-2	27	25	19	23	26	31
Rubber and plastics	-4	-4	2	23	35	43	47	55
Chemicals and refined petroleum products[c]	5	-3	8	19	29	34	48	54
Nonmetallic minerals	4	0	-34	38	2	3	6	7
Basic metals	0	-7	17	77[d]	13	22	28	38
Metal products	9	-4	-14	20	22	25	35	40
Machinery	-1	-1	20	38	26	35	37	47
Electrical and electronic equipment	2	-3	11	40	27	35	33	42
Transport equipment	19	-9	38	-3	35	41	40	47
Miscellaneous	9	-14	14	3	48	52	52	57
Total industry, excl. diamonds[c]	**5**	**-4**	**9**	**17**	**24**	**28**	**35**	**40**
Total industry, incl. diamonds[c]	**4**	**-3**	**-2**	**15**	**28**	**32**	**38**	**43**

[a] Based on Central Bureau of Statistics data. The classification of exports has been adjusted as far as possible to conform to that of production.

[b] Bank of Israel estimates based on the 1975/76 input-output table and CBS data on final demands. The weights were calculated as the share of exports (direct or total) in derived output at factor cost (including subsidies but excluding taxes) in each branch, as classified in the 1975/76 input-output table.

[c] Exports include the sale of fuel to foreign ships and planes in Israeli ports. In the table in the balance of payments chapter these sales are included in "other exports".

[d] The reliability of this figure is doubtful and hence it should be accepted with caution.

Table VI-14

INDICATORS OF INDUSTRIAL GROWTH, 1979-80[a]
(Percent quarterly increase; seasonally adjusted data)

	1979				1980			
	I	II	III	IV	I	II	III	IV
Industrial production	0.8	1.3	-2.9	2.2	-9.6	4.3	5.1	0.2
Industrial exports	-5.2	1.1	0.6	2.5	14.4	-2.2	-10.5	18.7
Number of workers	1.0	0.8	0.2	-1.1	-3.8	-0.3	0.4	1.0
Mandays worked	4.0	-1.0	-0.9	3.2	-7.0	0.6	0.7	1.2
Output per working day (labor productivity)	-3.9	2.2	-2.3	1.7	-2.8	3.7	4.4	-1.0

[a] Excludes diamonds.

capital intensity (the capital stock per worker) went up at an average 6.5 percent rate, while labor productivity and real earnings both advanced about 4 percent a year. The absence in the last two years of any connection between variations in workers' real earnings and those in labor productivity is also evident from an interbranch comparison. In 1980 in particular daily wages changed to virtually the same extent in all branches, in contrast to a wider dispersion of the growth rates (even in the multiyear average) in the previous period. This can be attributed to the high inflation and the fact that the industrywide labor agreement was not breached during the present period of recession and layoffs in the sector and increased unemployment in the economy as a whole.

The prices of imported inputs other than oil also rose in 1980 to almost the same extent as the price of output and labor (128 percent). Energy prices (electricity and oil) went up faster (close to 200 percent), but notwithstanding the relative increase in oil prices since 1975, the weight of energy in industrial production is still rather low, standing at only 3.5 percent in 1980, compared with 2.5 percent in 1975. The insignificant weight of this input may be the main reason why electricity consumption in industry increased at about the same rate as production during this period, and there was no apparent tendency to economize on energy, as might have been expected following the change in its relative price.

rise in the output price index, owing to the paring of domestic production and export subsidies.

4. TRANSPORTATION, COMMUNICATIONS, AND TOURISM

The product and output[24] of the transportation and communications sector fell 4 percent this year, following a gradual tailing off of the growth curve in 1977–79 (see Table VI–15). Most of the passenger and freight branches, domestic and international alike, fared more poorly, as the flagging of activity in several sectors and a drop in total private consumption dampened demand, especially for inland transport. The sector also suffered from the contraction of imports, which reduced shipping and port activity, and from the recession in most developed countries, which depressed international aviation, including El Al's operations.

Domestic transport prices moved up relatively steeply in 1980 following the paring of public transportation subsidies. The average rise in fuel prices continued to outdistance the consumer price index; gasoline went up 15 percent faster than the index, and heavy fuel oil 24 percent faster; aviation and shipping fuel also became much dearer. Since fuel accounts for 20–30 percent of total operating expenses in the various branches, the increased cost of this input was apparently the principal factor driving up both the producer and consumer prices of output, while depressing the equipment utilization rate.

Gross investment in the sector was more than 28 percent lower in 1980; expenditure on motor vehicles and roads, which represents 55–60 percent of the sector total, was down 30 percent. Part of this decline can be ascribed to cutbacks in the public sector's development budget. The smaller investment should be seen in the context of the excess production capacity in some of the branches. Hence it is not surprising that gross capital stock in the sector as a whole hardly changed this year and there was even a decline in ships and aircraft.

Along with the downturn in output, the labor input fell off, but at a more mild average 1–2 percent rate.[25] This implies a real reduction in labor and total productivity of the sector.

Tourism to Israel increased 5–6 percent, similar to the gain in 1979 and to the growth of international tourism this year.

(a) Domestic Passenger Conveyance

Output of the domestic passenger branches (bus,[26] taxi, railway, and aviation services) slumped 9 percent in 1980, following a slight advance the year before. On regular bus routes there was an unprecedented and inexplicable 9–10 percent drop, after a 4–5 percent expansion in 1978–79. Data on private vehicles,

[24] Total revenue at constant prices.

[25] According to labor force survey data, which measure the input of hours worked, and National Insurance Institute data, which measure the number of employee posts in the sector.

[26] Earlier Bank of Israel Annual Reports have noted the deficiency of the statistical data on local bus transportation. There are more than 20 companies that do not provide

which are not directly included in the customary measurement of the product, also shed light on developments in passenger transport in 1980: the number of private cars rose only 5 percent (compared with 12 percent in 1979),[27] although they became relatively much cheaper. Average mileage per car declined 9 percent and gasoline consumption also fell, for the second year in a row. These changes were consistent with the real decrease in private consumption in 1980, but the contraction of output was also influenced by the sharply higher relative prices of all public transportation services. Maintenance costs for private cars also rose, but more slowly than public transportation fares. Gasoline prices outpaced the consumer price index by 13 and 15 percent in 1979 and 1980 respectively.[28]

Bus fares went up more than three times as fast as in 1979 (and 32 percent faster than the consumer price index) due to the paring of the subsidy. The direct subsidization of public transportation totaled some IS500 million; after deflating by the index of bus input prices, this represented a real decrease of more than a third. As a result, the subsidy rate on regular routes fell from 90 percent of revenue in 1979 to 48 percent, accompanied by an improvement in the branch's terms of trade.

In earlier Annual Reports we discussed the objectives of the public transport subsidy policy and its implications from the economic and transportation standpoints. We stressed the importance of moderate fare increases in urban transit relative to interurban fares; in practice, just the reverse took place. (Interurban taxi fares, on the other hand, rose faster than those charged for urban services.) Despite the decline in bus output, which was also reflected in a lower annual mileage, the number of mandays worked rose 1.5 percent in 1980 (compared with 3.8 percent the year before); this matched the average increase in the number of buses (also 1.5 percent). These supply and output developments point to a lower productivity in bus transport in 1980, even though a larger input permits an improvement in the standard of the services.

(b) **Domestic Freight Transport**

Freight transport output, 95 percent of which is accounted for by the trucking industry, was down 2–3 percent in 1980, following a 2 percent drop in the previous year. The 1979 decline was largely due to the reduced throughput of the oil pipelines following the Iranian crisis, and was not related to domestic

public transportation services, specializing in tours and excursions. Their output has so far not been estimated. Even the available data on output are statistically deficient, especially as regards their distribution between calendar years.

[27] The number of private cars per 1,000 persons was 106.6 at the end of 1980, compared with 103.6 in 1979 and 95.2 in 1978.

[28] One of the causes of the output decline was a smaller demand for passenger transport by the defense establishment. The fact that since mid-1980 soldiers pay part of the fare on interurban lines, after having been exempt since 1976, has also affected demand.

Table VI-15

CHANGES IN REAL OUTPUT, PRODUCT, AND PRICES OF THE TRANSPORTATION AND COMMUNICATIONS SECTOR BY BRANCH, 1973–80

(Percentages)

	Estimated weight in gross product of sector in 1979 (at 1972/73 prices)	Weight in revenue 1979	Change in output					Change in prices	
			Average 1973–76	1977	1978	1979	1980	1979	1980
Domestic services	**59**	**47**	**3.0**	**7.1**	**8.0**	**3.5**	**–1.0**	**68**	**156**
Land transport	36	28	–0.8	2.9	6.2	2.4	–5.6	78	166
Buses	11	8	0.6	1.4	8.5	—	–11.1	85	206
Taxis	4	3	–0.9	5.0	3.0	2.0	–5.0	76	147
Trucks	19	16	–1.7	3.4	5.4	3.5	–3.6	74	154
Railway	2	1	4.1	8.6	13.1	7.8	8.1	100	127
Other	23	19	9.3	12.8	10.4	5.0	5.9	56	142
Oil pipelines	1	0	–2.2	4.7	15.4	–69.4	24.9	37	97
Domestic air services	0	1	0.5	—	5.7	37.2	–10.3	81	119
Communications	22	18	11.0	13.5	10.5	12.2	6.0	56	143

International services	**41**	**53**	**6.1**	**11.8**	**7.6**	**10.3**	**–6.8**	**58**	**127**
Shipping and ports	26	36	6.0	6.4	7.4	8.2	–5.8	57	118
Shipping	19	30	7.1	7.5	6.0	6.1	–4.0	58	121
Ports	7	6	0.6	0.8	15.2	19.1	–14.2	54	101
Civil aviation and airports	**15**	**17**	**6.7**	**26.1**	**8.1**	**15.0**	**–10.2**	**59**	**146**
International aviation	13	15	6.6	28.2	8.3	15.4	–10.2	59	149
Airports	2	2	7.5	23.6	5.7	11.5	0.1	61	122
Total output at market prices	**100**	**100**	**4.4**	**9.4**	**7.8**	**7.1**	**–4.1**	**63**	**141**
Total gross product at 1972/73 prices			3.4	8.7	8.0	6.0	–4.0		

NOTE:

1. Output is at market prices, including the defense stamp duty (until April 1978) on bus, railway, and postal services, and excluding bus subsidies, the deficit of the railway, and the air travel tax (until October 1977). Since 1976 the data include VAT collected from the various subbranches.
2. The change in the sector's product is estimated on the basis of data from the 1972/73 input-output tables: the annual output changes in the subbranches are used as an indicator of changes in the product at constant prices.
3. The 1977 and 1978 data have been revised. For the bus, domestic air services, communications, ports, international aviation, and airport subbranches the base year has been changed to 1978. This explains the discrepancies between some of the data in this table and those published in previous years.
4. In 1979 the definition of the airport subbranch was revised, with part of the freight operations being reclassified as storage, which is not included in this chapter.
5. The 1978 and 1979 output data for taxis, trucks, oil pipelines, and shipping were calculated by the Bank of Israel from figures provided by the Central Bureau of Statistics and internal industry sources.
6. The calculations were made from unrounded data.

SOURCE: Central Bureau of Statistics.

economic developments. By contrast, the poorer 1980 performance is explained by the smaller demand this year by those branches of the economy that are heavy users of trucking services. Transport for the construction industry, which accounts for a quarter of total trucking output, was responsible for 0.5 percent of the decline. Agricultural freights, processed food, and wood and wood products each pulled down the level to a similar extent. Other industrial branches also played a part in depressing truck carrier output, which altogether dipped 3–4 percent.[29] Some diversion of the haulage of quarried products from trucks to the railroad, especially in the case of phosphates, was one of the reasons for the relative rapid 12 percent advance in rail freight output. The downturn in total freight transport was also caused by the much smaller import cargo volume passing through the ports.

In the second half of 1979 and early 1980 the truck fleet was greatly enlarged, mainly because operators hoped to participate in the projects connected with the military redeployment in the Negev. When these expectations failed to materialize and civilian demand also subsided, trucking activity weakened. According to a provisional estimate,[30] the number of trucks grew 5 percent in 1980, while carrying capacity (which depends on the size and age of the vehicles) expanded even more. The average annual increase in trucking tariffs approved by the government came to 155–160 percent.

Despite the appearance of spare capacity and sharper competition among the carriers, they upped their haulage charges to almost the full extent authorized. As in 1979, the increases were relatively mild in the case of tenders, especially for earthmoving jobs. A further indication of the existence of surplus haulage capacity is the fact that the decontrolling of transport prices in December 1980 did not lead to extreme price hikes.

In October 1980 the regulations allowing haulage in excess of the authorized load capacity were rescinded. This change was intended to ensure a more efficient use of the road infrastructure and vehicles and to effectively reduce surplus capacity. So far this change has been only partly enforced, thus adding another dimension to the competition between carriers—between those companies and organizations that abide by the regulations and those that do not. Full enforcement of the regulations is likely to make freight transport more efficient also from a technological standpoint, *inter alia* because it will encourage the selection of vehicles more suitable for the types of freight and the road infrastructure.

[29] Changes in the trucking industry's output are measured indirectly by means of indicators; this estimate should therefore be treated with caution. For more details see the Bank of Israel Annual Report for 1979, p. 272.

[30] When this chapter was written only provisional data were available on the truck fleet in 1980.

(c) Communications[31]

The output of the communications industry (measured as revenue at constant prices) rose 6 percent, as opposed to 12 percent in 1979. This was accompanied by an unprecedented drop (an average of 9 percent) in the number of employees, after a 2 percent increase in 1979. The output gain in telephone services, which account for roughly 80 percent of the branch total, slowed from 15 percent in 1979 to 8–9 percent.

The number of meter pulses recorded, which is the best indicator of the current utilization of telephone services, grew at a sluggish pace in 1980. The average number of pulses per direct line fell in the past two years, as most of the new telephones installed went to households, which use such services much less heavily than do the business and public sectors; this trend was accentuated by economic developments in 1980. The number of new direct exchange lines connected increased appreciably in 1979 and 1980 (25 and 28 percent respectively), after three straight years of decline.[32] This is explained by a greater balance between the investment components (exchanges, buildings, line networks, etc.), without any significant change in total real investment. There was also a greater utilization of the available exchange capacity, with the criteria for customer priority (such as waiting time) being ignored. All this was in accordance with a plan to quickly reduce the backlog of outstanding applications for telephones and in the context of preparations to reorganize the telephone services as a commercial enterprise. The rapid growth in the number of installations has apparently left very little unused exchange capacity, which adversely affects the standard of the service. In line with the real downswing in durable goods consumption in 1980, the number of requests for telephones dropped significantly (16 percent). The backlog of outstanding applications thus shrank, for the first time, by 6 percent. Nevertheless, there were still 207,000 persons on the waiting list at the end of 1980.

The average increase in communication tariffs eclipsed the rise in the consumer price index—a reversal of the situation in 1979. Taking the last two years together, the increase in communication tariffs more or less kept pace with the general price level.[33]

[31] Excluding the operations of the Post Office Bank. The 1980 data are provisional; those for earlier years have been revised. It should be noted that the distribution of financial data between calendar years is of limited statistical reliability; there is also a time lag in updating some of the physical data.

[32] However, if the number of external transfers of telephone lines is included in the measurement of revenue from telephone installations, then the growth of output slowed somewhat in 1980, when 76,000 new lines were installed.

[33] According to the communications item in the consumer price index, which differs from the measured change in output prices.

(d) **Shipping and Ports**

Real shipping and port output was down 6 percent in 1980. Whereas the slump in oil transport was the main factor depressing shipping activity in 1979, in 1980 the dominant factor was the contraction of nonoil import tonnage.[34] The 20 percent drop in revenue from import cargo carried by Israeli shipping was only partly offset by the growth in export tonnage, which was slower than in 1979. The share of the local shipping industry (Israeli-owned and chartered vessels) in the country's international waterborne commerce rose from 52 percent in 1979 to 55 percent.

This year's much slower real growth of income from charter hire should be viewed against the steep increase in 1979; it was primarily related to the transport of oil at the international rates in force for voyage charters. It is noteworthy that despite the unfavorable developments in the world shipping market in recent years,[35] international maritime trade accounted for 55 percent of total Israeli shipping income in 1980.

Output prices (including fuel surcharges and averaged over all branches of shipping) were up 13 percent in dollar terms in 1980.

Investment in ships was smaller than in 1979, and the carrying capacity of the Israeli fleet averaged 3 percent lower (the net effect of a reduction in tanker capacity and the expansion of freighter capacity). Much of the tanker fleet has been laid up since the Iranian crisis and discontinuation of the pumping of oil through the pipeline for the transit trade.

Most of the financial data on the local shipping industry for 1980 were not available when this chapter was written, but partial figures do not show any significant change in the companies' profitability. Zim engages in a wide range of activities, notably the haulage of cargo to and from Israel and the operation of container and other specialized vessels in the liner trade in various parts of the world and within the framework of shipping conferences; El Yam engages mainly in tramp shipping on a time charter basis. The com-

[34] The real output change in shipping is measured as the change in revenue at constant prices. Changes in shipping prices are estimated by weighting the changes in freight and oil transport tariffs (Central Bureau of Statistics calculations) and charter hire (Bank of Israel calculations). Since the index of freight rates is actually an index of revenue per unit of output, which is only partly adjusted for changes in the cargo mix, any comparison of these prices with indexes of world shipping rates should be treated with caution.

[35] In 1980 world waterborne commerce was down 3.3 percent (5.5 percent in ton-kilometer terms). Particularly steep declines were recorded in shipments of crude oil, refined petroleum products, and iron ore; other freights continued to increase, although at a slower pace. Available tanker capacity decreased this year, but other cargo capacity rose. As a result, tanker freight rates fell, while tramp bulk cargo and liner shipping rates went up more moderately than in 1979. These developments should be viewed against the existence of surplus world shipping capacity.

Table VI–16

ISRAELI SHIPPING REVENUE AND OUTPUT GROWTH, 1978–80[a]

(IS million, at current prices)

Revenue by type of shipping	1978[b]	1979[b]	1980	Distribution of revenue (%) 1978	1979	1980	Percent annual increase in real output[c] 1978	1979
Cargo (incl. oil)[d]	1,141	1,689	3,650	93	82	83	–0.4	–6.4
Imports	351	648	1,216	29	31	28	21.5	–17.9
Exports	148	278	648	12	14	15	22.9	12.1
Between foreign ports	642	763	1,786	52	37	40	–17.5	–1.3
Charter hire[e]	70	329	634	6	16	15	100.7	7.5
Miscellaneous	20	45	100	1	2	2	15.7	0.8
Total revenue	**1,231**	**2,063**	**4,384**	**100**	**100**	**100**	**6.1**	**–4.0**

[a] The calculations were made from unrounded data.
[b] Revised data; the 1980 data are provisional.
[c] Calculated by the Bank of Israel and the Central Bureau of Statistics.
[d] Includes crude oil in transit.
[e] Excludes revenue from the chartering of vessels between Israeli companies.
SOURCE: Central Bureau of Statistics.

mercial risk confronting Israeli shipping is thus relatively small, and it has been able to hold its own even in the present depressed state of world shipping.

While real shipping output fell 4 percent in 1980, port output shrank 14 percent. The bulk of the ports' income is derived from import cargoes (which subsidize exports), and they declined 19 percent in 1980. The 11 percent gain in export tonnage had a limited effect on port revenue. Total cargo movement through Israel's ports was 5 percent lower this year.

(e) International Aviation and Airports

Israel's international aviation and airport output (measured as revenue at constant prices) dipped more than 10 percent in 1980. There were several reasons for this: El Al flew fewer passengers this year, and this depressed its share of air passenger traffic at Ben-Gurion Airport from 48 to 46 percent; total air passenger conveyance to Israel hardly increased this year; the uptrend in airborne tourism to this country flattened somewhat; and airfreight movement in both directions slumped by a steep 26 percent.

The real decline in El Al's passenger output (on scheduled and charter

Table VI–17

OUTPUT AND UTILIZATION OF EL AL AIRCRAFT, 1978–80 [a]

(Owned and chartered aircraft, scheduled and charter flights)

				Percent annual increase		
	1978	1979	1980	1978	1979	1980
1. Available seat-km. (million)	7,183	8,050	7,712	1.7	12.1	-4.2
2. Revenue passenger-km. (million)	5,001	5,674	5,298	2.3	13.5	-6.6
Passenger load factor (2/1) (%)	69.6	70.5	68.7			
3. Available ton-km.—freight (million)	586	684	593	8.5	16.7	-13.3
4. Revenue ton-km. (million)	398	448	412	12.1	12.6	-8.2
Ton-km. load factor (4/3) (%)	67.9	65.5	69.5			
5. Available ton-km.—passenger and freight (million) [b]	1,232	1,408	1,287	4.8	14.3	-8.6
6. Total revenue ton-km.—passenger and freight (million)	842	959	889	5.9	13.9	-7.3
Overall load factor (6/5) (%)	68.3	68.1	69.1			

[a] The calculations were made from unrounded data.

[b] Includes equipment chartered to CAL. For passengers, based on an average passenger weight (including baggage) of 90 kg.

SOURCE: El Al Israel Airlines.

flights) came to 7.5 percent, compared with gains of 5 and 13 percent in 1978 and 1979 respectively. There was also a 10 percent decline in cargo output handled by El Al and CAL, in glaring contrast to the 33 percent growth chalked up in 1979. (El Al held its own this year, but CAL's output tumbled 48 percent owing to a much smaller agricultural export.)

Israel's national airline was hit particularly hard on the all-important North Atlantic route. In 1979 it accounted for 29 percent of the company's passenger traffic (and an even higher percentage of its passenger-kilometers flown); in 1980 the number of persons carried on scheduled El Al flights on this route dropped by a quarter, with the growth in charter flight passengers bringing the overall decline to 10.5 percent. This downturn stands out when viewed against the 2 percent general expansion of scheduled traffic on this route (this too was well below the 1979 growth rate). The decline in airborne tourism from the U.S. to Israel in 1980 was only party responsible for the drop in El Al's business on this route. The recession in the industrial countries and global inflation slowed the growth of demand for international aviation services, while soaring fuel costs and excess seating capacity of the aircraft (some of which are not fuel-efficient) sharpened competition between carriers. The diminished effectiveness of IATA (International Air Transport Association) and the deregulation policy of the U.S. also contributed to the more aggressive competition in the past two years. In a sluggish market, with sharply higher costs (especially fuel) and the lagged adjustment of scheduled flight fares, international aviation slid into a recession, and most airlines ended up in the red; those affiliated with the IATA had total losses estimated at $2.5 billion in 1980.

These developments exacerbated the objective problems facing El Al, whose operations are based mainly on tourist transport, especially on the North Atlantic route, the most competitive of all. The airline continued to pile up losses in 1980 (to the tune of some $50 million), only part of which were unavoidable and related to the general situation in the industry. Uncertainty as to the continued existence of the company and the negative image created by repeated labor troubles adversely affected El Al's share in the transport of both foreign and Israeli tourists. Excess productive capacity (relative to the scope of its operations) in both flying equipment and manpower continued to plague the company this year, despite the sale of some of its obsolete equipment and the trimming of its staff by 450 workers (9 percent of the total). The carrier's marketing organization has still not adjusted to the changed conditions.

In 1980 El Al faced stiffer competition from European airlines, which took advantage of unutilized capacity on the Europe-Israel route to fly passengers from the U.S. to Israel, filling seats by offering exceptionally low fares. Given the sluggish but highly competitive market, El Al was unable to take advantage of the additional landing rights awarded it in the U.S. under the 1978 aviation pact between the two countries.

This year competition was particularly fierce between scheduled and charter flights to Israel. More than 20 percent of the air passengers arrived on charter flights, accounting for some 25 percent of all tourist arrivals. Although El Al more than doubled its total passenger traffic, part of its charter business, especially from the U.S., can be attributed to the diversion of customers from scheduled to charter flights. Under El Al's present operational setup this can only harm the company, as no additional marketing channels have been developed or new passenger sources tapped. Since the company in any case enjoys a relatively high passenger load factor, average revenue per passenger declined in 1980. (Only under the best of circumstances is traffic diverted from regularly scheduled services to El Al's own charter flights.)

Output prices in this branch averaged 23 percent higher in dollar terms in 1980, nearly triple the 8 percent figure recorded the year before. Fuel became 28 percent dearer between 1979/80 and 1980/81, and average pay per employee (in Israel) was 140 percent up on 1979, a real rise of 3–4 percent.

(f) Tourism

The number of visitors to Israel (including cruise travelers) was, at 1.2 million, only 3 percent higher this year, as opposed to a 6 percent increase in 1979. The rapid uptrend in tourism to Israel relative to the world tourist trade has slowed in recent years, and is now similar to the growth rate for Europe.[36]

Income from this source fell 4–5 percent in real terms in 1980 and totaled $863 million, or 19 percent of total service exports. (The estimated change in income should be accepted with reservation, as it seems to be downward-biased.)

The number of bed-nights in hotels recommended for tourists rose more slowly in 1980, especially in the two highest grades. This was offset by an increase in the number of bed-nights by Israelis. Since the number of new rooms expanded more sluggishly this year, the occupancy rate of tourist hotels did not change significantly. The slower 1980 increase in bed-nights in such hotels despite the larger number of tourists is explained by some shortening of the average length of stay, in part because some sought alternative accommodations, such as room rentals in private homes. The increase in the proportion of young tourists also had an effect. All these factors, together with a decline in the number of visitors from the U.S., an increase in the percentage of charter flight tourists, and a change in the average tourist consumption basket (for example, a preference for lower-grade hotels), depressed real average income per visitor in 1980.

The number flying from the U.S. fell for the third consecutive year. The decline was steeper in 1980—5 percent, including a 14 percent drop on scheduled

[36] Partial data on incoming tourists to Western European and Mediterranean countries point to a slacker growth of tourism and in some cases a decline (Spain and Greece).

Table VI-18

INDICATORS OF INTERNATIONAL TOURISM TO ISRAEL, 1977-80[a]

			Percent annual increase			
	1979	1980	1977	1978	1979	1980
Foreign visitors[b] (thousands)	1,139	1,176	23.8	8.5	6.3	3.3
Thereof:						
Cruise travelers	129	110	45.0	21.0	15.3	-14.9
Tourists arriving	1,010	1,066	24.7	4.9	5.3	5.6
Thereof:						
U.S. and Canada	287	278	19.1	1.1	-1.7	-3.0
Europe	594	647	24.4	12.3	12.2	9.0
U.K.	111	123	15.7	30.6	20.9	10.9
France	118	130	13.3	-3.1	7.3	10.6
West Germany	115	135	51.9	23.7	17.7	17.3
Scandinavia	72	69	37.6	5.0	6.2	-4.4
Bed-nights in hotels recommended for tourists (thousands)	7,888	7,231	21.7	3.3	5.4	2.0
Thereof: In two top grades	4,599	4,638	21.9	3.3	7.7	0.8
Average number of bed-nights of tourists who stayed:						
Up to one month	12	11.5[c]				
Up to three months	16	15.2[c]				
Number of rooms in tourist hotels (monthly average, thousands)	24.6	25.2	4.2	5.3	4.4	2.4
Thereof: In two top grades	13.8	13.8	5.1	7.3	6.2	—
Occupancy rate in tourist hotels (%)	54.7	54.0				
Employees in tourist hotels (monthly average, thousands)	17.4	17.1	10.7	11.8	3.5	-1.7
Income in foreign currency ($ million)	795	863	31.5	5.9	34.3	8.6
Average income per tourist ($)	698	734	6.2	-2.5	26.2	5.2

[a] The calculations were made from unrounded data.

[b] Excludes arrivals from Lebanon (citizens of southern Lebanon, U.N. troops, and diplomats); also excludes foreign tourists to the administered areas.

[c] Provisional estimate.

SOURCE: Central Bureau of Statistics.

flights. But if account is taken of American tourists reaching Israel via Jordan (most of whom got there by air, which is apparently cheaper), the 1980 decline was a relatively mild 2 percent. U.S. tourism in general seems to have been affected by the recession in that country, judging from data on the number of Americans traveling abroad in 1980: traffic to Europe, for example, slumped 4 percent (a 2 percent rise on scheduled flights and a steep 60 percent drop on charter flights). Tourism from the U.S. is of major importance because Americans spend more time and money in Israel per person than do the others.

The uptrend in the proportion of Europeans carried over through 1980, although it tapered off somewhat. They accounted for 61 percent of all incoming tourists in 1980, compared with only 26 percent for North America. They also accounted for most of the charter flight traffic to this country. While total airborne tourism from Europe increased only 7 percent in 1980 (as against 13 percent the year before), the number coming on charter flights rose from 29 percent in 1979 to 49 percent; scheduled flight arrivals, on the other hand, were down 6.5 percent.[37] In evaluating government aviation policy one must take into account the overall contribution of charter flights to the balance of payments (foreign travel to Israel, the amount spent abroad by Israelis, and the overall air transportation account), as well as the preferences of Israeli tourists. Considering all these factors (which have not been quantified here), charter flights may be profitable to the economy, despite El Al's losses in this sphere.

5. CONSTRUCTION

Construction output expanded 4 percent in real terms in 1980. This was the net result of contrasting trends: a higher output of construction started in the previous two years and a decline in new starts in 1980, in line with the trend which appeared during 1979 and signalled the end of the upswing begun at the end of 1977 (see Table VI–19).

[37] Total airborne tourism to Israel grew 3.4 percent this year (6.2 percent in 1979). Some 237,000 persons came on charter flights (of whom 28,000 flew directly to Eilat); this was 59 percent more than last year. The number of scheduled flight passengers, on the other hand, was down 7.3 percent, after a 1.2 percent increase in 1979. Data on airborne tourism from the major European countries show that the number of Germans increased 15 percent. Charter flights accounted for most of the increment; the number of scheduled flight passengers also rose, but much more slowly than in 1979. The growth of tourism from the U.K. slackened, with a 30 percent drop in scheduled flight passengers offsetting much of the 86 percent increase in charter flight tourists. The number coming from France (where the share of charters is low) grew at about the same rate as last year, with scheduled flight arrivals rising 2 percent and charter arrivals increasing somewhat faster. The number of Scandinavians fell, the net effect of a rise in charter and a drop in scheduled flights.

Investment estimates also reflect this pattern: the figure for residential building was up 8 percent due to the crash public housing program undertaken in fiscal 1979/80 in response to an apparent shortage of homes at the end of 1978 and early 1979. Nonresidential construction, on the other hand, showed a continuation of its long-term downtrend, which intensified in 1980 owing to the smaller subsidization of such investment (the linkage of development loans) and the generally weaker tone of the economy since mid-1979. Defense construction in the Negev augmented the sector's output.

Table VI-19

PRINCIPAL DATA ON CONSTRUCTION ACTIVITY, 1975-80[a]

	1975	1976	1977	1978	1979	1980
Total output (IS million, at 1975 prices)	**1,658**	**1,442**	**1,228**	**1,223**	**1,300**	**1,354**
Investment in housing	873	763	601	587	676	731
Investment in nonresidential construction	581	517	498	507	467	411
Output of other construction[b]	204	162	129	129	157	212
Construction starts (million m^2)	6.3	5.6	4.7	5.4	5.9	4.7
Residential	4.7	3.7	3.0	3.6	4.3	3.6
Nonresidential	1.6	1.9	1.7	1.8	1.6	1.1
Number of homes started (thousands)	52	35	27	31	38	32
Number of homes completed (thousands)	56	56	43	35	30	31
Employed (thousands)	126	119	114	111	116	113
Israelis	90	86	85	80	82	79
From administered areas	36	33	29	31	34	34
Average number of hours worked per week (Israelis)	39.6	39.2	38.2	39.1	41.3	40.8
Cement sales (millions of tons)	2.4	2.1	1.9	2.0	2.2	2.3
Stock of construction equipment, beginning of year (IS million, at 1975 prices)	282	304	312	309	309	340
Annual average percent change in price indexes						
Housing construction inputs	30.7	26.4	30.9	57.3	87.4	127.6
Road construction inputs	49.1	26.0	36.3	75.1	91.9	144.5
Output per employed (1970=100)	107.6	99.0	88.1	90.1	91.7	98.0
Output per manhour (1970=100)	113.9	106.0	96.6	96.6	93.0	100.6

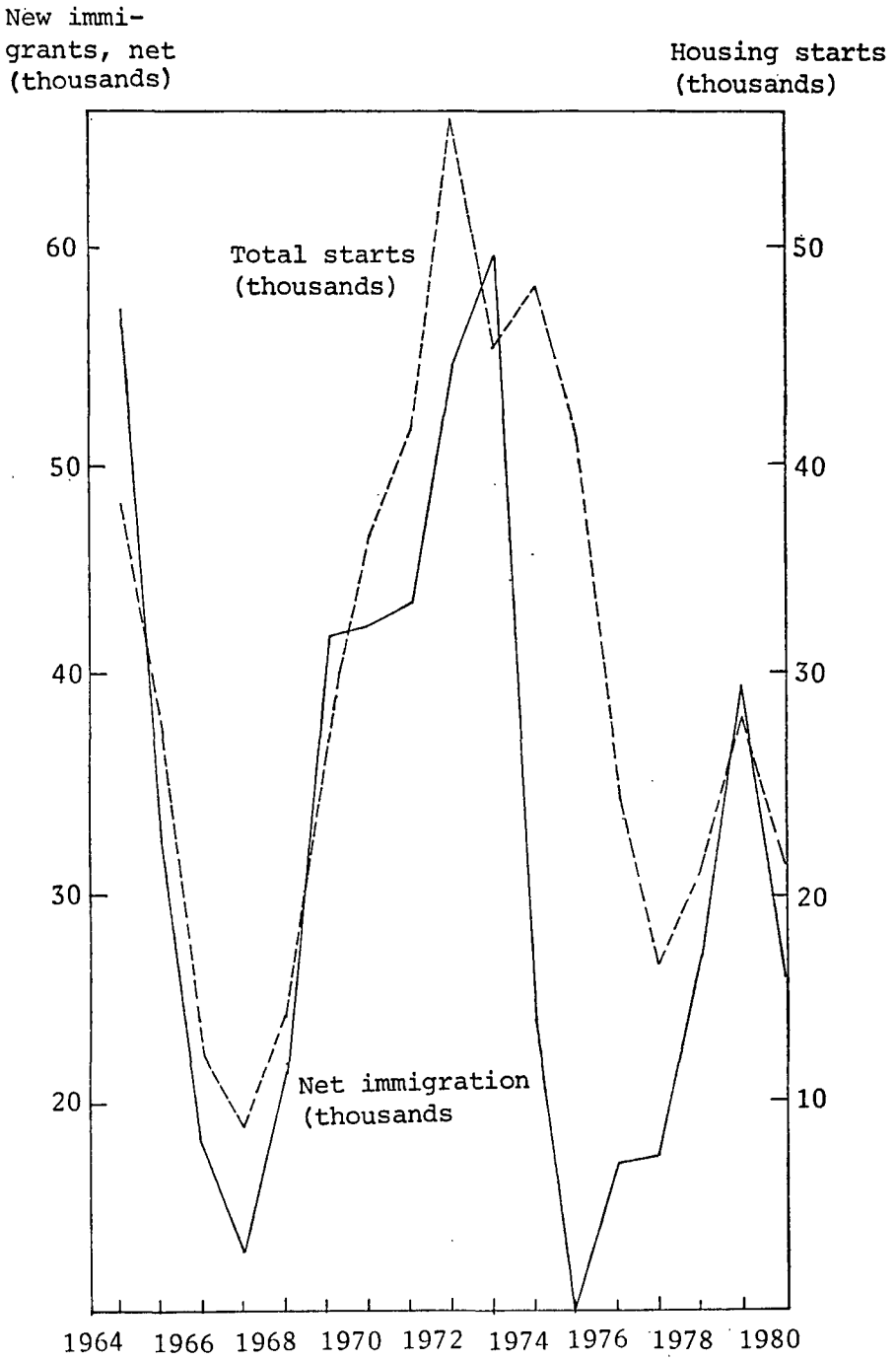
[a] The calculations were made from unrounded data.

[b] Defense construction and a partial estimate of maintenance work.

SOURCE: Central Bureau of Statistics.

Figure VI-4

NET IMMIGRATION AND HOUSING STARTS, 1964-80



Since the years of peak building activity (1972 and 1975) there has been a clear downtrend in new starts. This can be mainly attributed to the lower rate of population and income growth during the past decade, which influenced demand for both residential and other construction. Another long-term trend seems to be at work here: since the 1960s the relative demand for buildings and earthwork has eased following the completion of the basic infrastructure and the accumulation of a stock of industrial and service buildings (structures have a much longer life than equipment).

Three major factors were responsible for the moderation of housing demand last year:

(a) The 1977–78 immigration wave subsided (see Figure VI–4). The volume of construction starts is closely correlated with fluctuations in immigration, not only because of the direct housing needs of the newcomers but because accelerated population growth has an expansionary effect on the economy.

(b) Housing ceased to be more attractive than financial assets as a saving or long-term investment medium. Until the last few years housing was preferred (both in Israel and the world in general) due to the low risk of a price decline even during periods of depressed construction activity. It was assumed that this type of durable asset would not fall in value. Furthermore, experience had shown that in the long run the relative price of housing tended to rise (because of the limited supply of land in choice locations and the relative lag in productivity growth in labor-intensive residential building). With the escalation of inflation in recent years it transpired that the relative price of housing may fluctuate sharply, even in a downward direction (e.g. a drop of 40 percent between 1974 and 1977), without any softening of the nominal price.[38] This occurs when there is a general price rise but housing fails to move up in step. The reduction of the subsidy element in housing credit following the indexation of mortgage loans in mid-1979 also made housing less advantageous as a long-term investment compared with other channels available to households. The component of housing demand that fell off was apparently purchases for long-term investment purposes.

(c) The stringent policy of restraint introduced at the end of 1979, combined with the contraction of real disposable income in 1980, dampened demand for housing along with the general weakening of purchases of durable goods, the timing of which is relatively flexible.

As stated, residential construction data show a drop in total starts during the year surveyed, with the level dipping from 13,000 units in the first quarter to 6–7,000 per quarter during the rest of the year. These figures reflect not so much the variations in demand during the year as the sharp oscillations in public housing construction. The government, it will be recalled, decided to step up residential construction in response to the feeling of a shortage which

[38] See also Chapter III and Figure III–5.

arose at the end of 1978 and start of 1979. Because of the protracted decision-making and planning involved, this program began to produce a sizable volume of starts only in the first quarter of 1980 (the final quarter of the 1979/80 fiscal year). In 1980/81 public housing starts fell off. Private construction, which operates under market conditions and complements public construction activity, offset part of this decline.

As in other economic sectors, private contractors had to contend with the problem of inflationary taxation. A nominal change in the value of their land holdings (some of which they have owned for many years) is treated as taxable income. The problem was partly solved through the expedient of a legal device whereby a contractor built on a plot he did not own, forming a partnership with the private owner, who is not liable to such a tax (he has to pay the land betterment tax, which allows for inflation). In the year reviewed the Israel Lands Administration followed the same practice, thus increasing the supply of private construction under inflationary conditions (this problem will probably be largely resolved with the amendment of the income tax ordinance in accordance with the recommendations of a special committee established to study the problem of taxing profits in periods of high inflation).

In mid-1979 housing credit for those eligible for public assistance was partially indexed, while nondirected (free market) credit supplied by mortgage banks was fully indexed. With this change it was possible to significantly increase the rate of financing (total credit as a percent of the dwelling price). This made it much easier for young couples lacking independent sources of finance and unable to shoulder a high current repayment burden to purchase housing.

Table VI–21 presents data on the rate of Ministry of Housing mortgage financing, expressed as a percent of the price of a privately built 1½–2 room home, according to eligibility group. Before indexation of such loans in June 1979, the financing rate for a dwelling this size ranged between 16 and 45 percent (depending on the eligibility category); after indexation it ranged from 34 to 78 percent (and even as high as 95 percent in certain towns). The rate was lower for a home with more than two rooms. In 1980 the financing rate fell, especially in the first half, with the decline being sharper for the highest eligibility group. Toward the end of 1980 and early 1981 the rate again rose following the updating of loans.

Along with the updating of such loans, the maximum prices of homes that may be purchased by those entitled to such financing were also updated, and this tended to push up housing prices in general. A less frequent updating of the ceilings would not affect those with limited resources, who in any case purchase the less expensive units on the market.

Increasing the loans also induced a higher percentage of eligible persons to take advantage of such financing—70 percent at the end of 1980 as opposed to 31 percent at the start of 1979. This underscores the differential effect of

indexation on those entitled to assistance compared with other home buyers. Before indexation the demand for housing for both immediate and future occupancy was greatly influenced by the mortgage credit subsidy. However, it did not benefit very much those eligible for Housing Ministry aid, since they were unable to exercise their rights: the loan constituted only a small fraction of the price of the average home and the repayment terms were stiff—the initial interest payments were very high, far beyond the borrowers' capacity.

Factors of Production

Changes in the construction industry's factors of production and productivity are mainly determined by the composition of output:[39] buildings as opposed to roadbuilding and earthwork, the start of construction as against completions,

Table VI–20

RESIDENTIAL CONSTRUCTION BY INITIATING SECTOR, 1977–80
(Thousands of units)

	Starts			Completions		
	Total	Private construction	Public construction	Total	Private construction	Public construction
1977	26.7	20.9	5.9	42.8	23.3	19.6
1978	30.8	23.7	7.1	35.5	20.6	14.9
1979	38.4	23.4	15.0	30.5	20.9	9.7
1980	31.8	19.6	12.3	30.9	21.5	9.4
1979						
I	9.2	6.3	2.9	7.8	4.9	2.8
II	8.9	6.2	2.8	7.6	5.1	2.5
III	10.6	5.6	5.0	7.5	5.5	2.0
IV	9.7	5.3	4.4	7.7	5.4	2.3
1980						
I	13.1	4.0	9.1	7.8	5.3	2.5
II	6.2	4.8	1.4	7.8	5.6	2.2
III	5.5	4.9	0.6	7.0	4.9	2.1
IV	7.0	5.8	1.2	8.4	5.7	2.7

SOURCE: Central Bureau of Statistics.

[39] Apart from statistical deficiencies in measuring output and inputs. The estimate may also be biased by Arab construction in the administered areas, which is not included in the statistics; by defense construction, only part of which is included; and renovation

Table VI-21

RATE OF GOVERNMENT HOME FINANCING FOR YOUNG COUPLES BY ELIGIBILITY GROUP, 1979-80

(Total loan as a percent of the price of a privately built 1½-2 room home)

	Group A	Group D	Goup F
1979			
First half			
Jerusalem	16	29	45
Rest of country	14	29	45
Second half			
Jerusalem	34	56	78
Rest of country	42	70	95
1980			
First half			
Jerusalem	29	50	68
Rest of country	34	56	79
Second half			
Jerusalem	38	58	70
Rest of country	47	70	94

NOTE:

1. Those eligible for such finance are persons who have served in the Israel Defense Forces.
2. Group A—persons with 0 to 599 points; Group D—1,000 to 1,199 points; Group F—1,400 points or more.
3. The prices are from the Central Bureau of Statistics survey of dwelling prices.
4. The total amount of loans is from Ministry of Housing data, including both indexed and nonindexed loans.
5. In no case did the loan exceed 95 percent of the price.

SOURCE: Ministry of Housing and Bank of Israel.

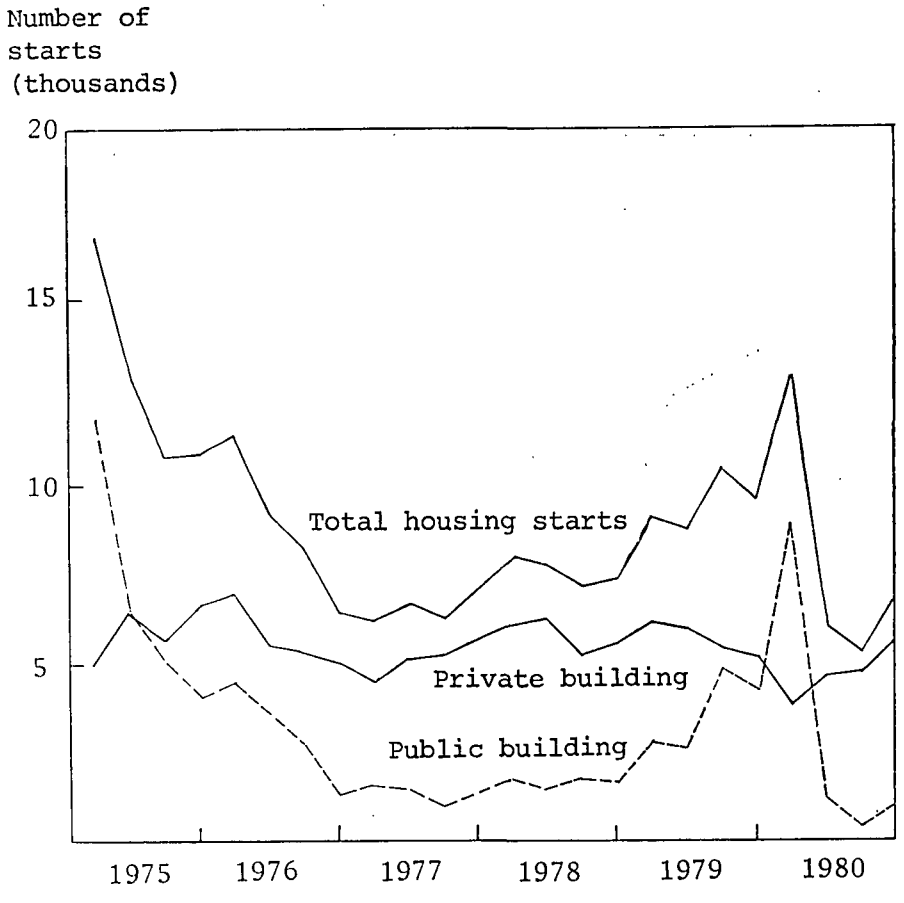
and public vs. private building. Roadbuilding and earthwork are equipment-intensive, in contrast to the final stages of home construction, where the weight of labor is high (even in comparison with the initial stages). Relatively larger inputs of equipment and cement are required for the initial stages of construction. In public construction the number of workers employed is more stable than in private building, and the labor input does not change drastically with fluctuations in output. All this goes a long way to explain the decline in output per worker and per manhour between 1975 and 1978/79, when the area of starts fell steadily relative to the area of completions, the weight of public construction declined, and the weight in output of earthwork and road-building (where output per unit of labor is relatively high) fell off. Productivity rebounded in 1980 as a result of the increase in capital-intensive "other con-

work, which has been greatly stepped up (renovation of the growing stock of buildings, which has expanded relative to new construction).

Figure VI-5

HOME CONSTRUCTION STARTED, BY INITIATING SECTOR, 1975–80

(Quarterly data)



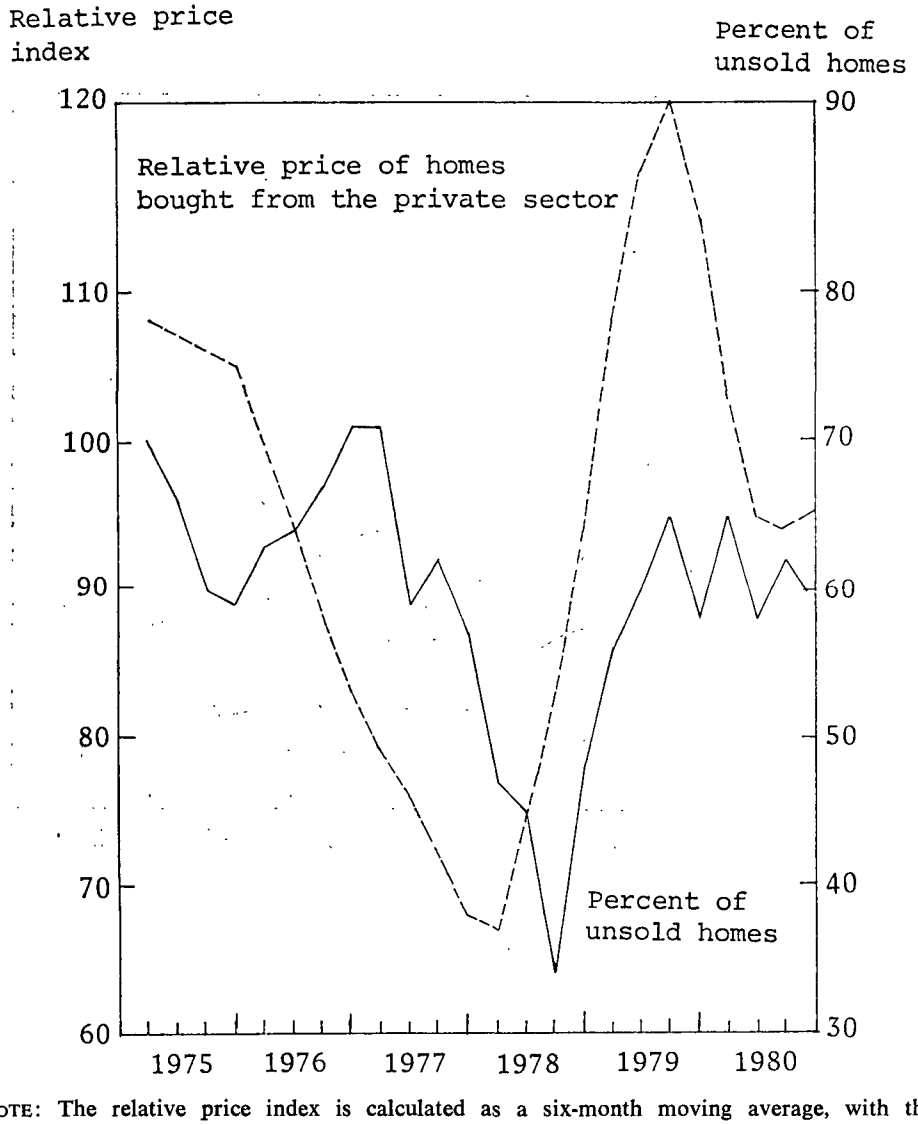
struction", in particular that for the defense establishment. The ratio between the area of housing completions and starts rose somewhat, but on the other hand the utilization of productive factors in public construction also increased, so that average building time per dwelling unit was cut from 34 months in 1979 to 27 months in 1980.

Cement sales are generally correlated with changes in construction output. In 1976 and 1977 the sector's output dropped sharply, pulling down such sales. In 1978 output held steady, but there was a heavier sale of cement owing to a much larger area of construction starts (which, as stated, require large quantities of cement). In 1979 and 1980 sales rose more or less in step with output.

Last year's Annual Report noted that the expectations that the Negev military redeployment would spark an upsurge in construction activity and lead to a shortage of productive factors did not materialize. The early estimates were

Figure VI-6

UNSOLD HOMES AS A PERCENT OF SUPPLY OF UNFINISHED PRIVATE HOMES AND RELATIVE PRICE INDEX OF HOMES BOUGHT FROM THE PRIVATE SECTOR, 1975–80



NOTE: The relative price index is calculated as a six-month moving average, with the midpoint being the first day in the second quarter of each period measured.

in any case exaggerated; when work on the airfields was assigned to foreign contractors, the construction industry was left with idle capacity. In 1980 efforts were made to let the local economy participate in the project, but most of the orders went to manufacturing concerns while the bulk of the construction activity continued to be carried out by foreign workers and contractors.