

CHAPTER IX

INVESTMENTS AND CONSTRUCTION

I. MAIN DEVELOPMENTS

The main investment trends discerned in 1976 continued in 1977, and some even intensified. They all entailed a significant curtailment in most investments. Total investments in fixed assets decreased by 13 percent, as against some 11 percent in 1976. The drop in non-residential investments took place at a rate similar to that of last year while the decrease of investments in housing accelerated. These downward trends are reflected in the slowdown in the growth of gross capital stock: from a growth rate of about 8 percent in 1975, to about 7 percent in 1976, and 5 percent in the year under review.

Non-residential investments decreased by about 8 percent, and when investments in ships and aircraft are excluded, the decline was sharper, about 10 percent. Three central factors affected the development of these investments: (a) the government's policy of restraint, expressed by a deliberate curtailment of investments by the public sector¹; (b) the slowdown in economic growth which affected primarily investments by the private sector; (c) the availability of directed financing, the influence of which was contrary to that of the former two factors, in that it encouraged investments by the private sector and by companies of the public sector, thus preventing an even sharper drop of non-residential investments.

Non-residential investments by the public sector decreased this year by about 8 percent, after declining by about 15 percent in the previous year. As mentioned, this development reflects the government's policy of restraint, which, in addition to its direct restraining influence, also has an indirect influence on investments: it contributes to the slowdown in the growth of the GNP, thus exerting a secondary influence on the level of investments. The volume of investments in the private sector, which was down 12 percent, is determined endogenously: A slowdown in the growth of the GNP eventuates a corresponding slowdown in the growth of the required capital stock, a deceleration in the growth of capital stock is derived from decreasing investment levels. The economy's rate of growth had slowed in 1973 and 1974 to about half the average annual rate of

¹ The government, local authorities, "National Institutions", government enterprises and nonprofit institutions (see Table IX-2, line 5).

growth in the years 1968 to 1972; since 1975, there has been an additional slowdown leading it to the brink of stagnation. The influence of the slowdown on investments by the private sector was perceived for the first time in 1976, when their volume decreased by 10 percent. It is quite possible that the reaction of investments by the private sector to the slowdown in economic growth would have been faster and stronger, save for the availability of directed financing, which increased in volume in the last two years. In particular, financing allocated to investments in industry exceeded the amount of investment which has actually taken place. It should be noted that as a result of the accelerating inflation rate, the subsidy element in this financing has also grown considerably during the last years. This fact may have contributed to the growth of non-residential capital stock over and above that indicated by the growth in GNP.

There was a slight decline in investments by companies of the public sector (2 percent), following a considerable expansion in 1975 and 1976. The volume of these investments, in comparison to those by the private sector, is influenced to a greater extent by developments in world markets, and to a lesser extent by home market developments; and their financing, too, depends more directly on the government. In companies of the public sector, considerable amounts are being invested during recent years in a small number of large projects, and the decrease in investments by those companies in 1977 reflects mainly the stage these projects have reached.

The decrease in investments embraced in 1977 all sectors of the economy, with the exception of power. The accelerated decline recorded in industrial investments and – for the first time since the beginning of the decade – in agriculture, stood out in particular. It may be possible that the estimate of industrial investments is deflected downwards, particularly in the last two years². However, even if one accepts this reservation, the substantial growth in the proportion of directed credit required to finance these investments is most pronounced. The value of industrial investments (at current prices) increased in 1977 by 16 percent, while the volume of directed credit for their financing increased by 47 percent.

An accelerated downturn in housing investment took place. This arose mainly from a 50 percent reduction in public construction, as compared with 1976. The 7 percent drop in private housing investments was only slightly higher than the corresponding rate in 1976.

This year, for the first time since the beginning of the decade, a significant decrease (about 23 percent) was recorded in the volume of house completions. The 17 percent drop in private house completions was reflected by a corresponding reduction in the

² See below: "Investments by Economic Sectors".

TABLE IX-1

PRINCIPAL INDICATORS OF CAPITAL INVESTMENT DEVELOPMENT IN THE ECONOMY, 1970-1977

	Increase or (-) decrease in quantity ^a							
	1976	1977	Average 1972-1968	1973	1974	1975	1976	1977
	(IL million, at current prices)			(percent)				
1. Gross fixed investment	25,723	30,970	19.4	10.3	-2.8	-0.5	-10.6	-12.9
2. Gross investment in housing	9,270	9,648	34.0	4.8	-2.8	3.3	-12.8	-21.5
3. Nonresidential investments (1-2)	16,453	21,322	13.3	13.8	-2.8	-2.7	-9.2	-7.9
4. Nonresidential investments excluding ships and aircraft	16,216	20,355	14.5	5.2	3.8	1.1	-8.9	-9.9
5. Investment in inventories	1,308	3,474	7.1	-74.9	-40.0	x6	-37.3	40.0
6. Total gross domestic investment (1+5)	27,031	34,444	18.4	5.2	-3.3	5.0	-12.5	-10.2
7. Depreciation	12,729	19,301	9.4	10.8	11.4	10.2	8.8	6.7
8. Total net investment (6-7)	14,302	15,143	23.8	2.8	-10.3	2.1	-25.4	-25.3
9. Gross capital stock	323,581	474,918	9.3	10.4	9.1	8.3	6.6	5.0
10. Gross capital stock in housing	122,235	175,929	9.6	11.3	9.9	9.3	7.3	5.2
11. Gross capital nonresidential stock (9-10)	201,346	298,989	9.2	9.8	8.6	7.6	6.1	4.8
12. Gross capital stock in business sector	156,514	232,053	8.6	9.3	7.7	6.6	5.5	4.2
13. Net capital stock	243,955	352,786	9.6	10.9	8.9	7.6	5.3	3.4

^a The quantity changes in 1976 and 1977 was calculated at 1975 prices.

^b After this chapter had been set at the printer's, the Central Bureau of Statistics brought the investment data up-to-date. Thence the small difference between data in this Table and those figuring in Chapter II.

TABLE IX-2

ESTIMATED FIXED INVESTMENT^a, BY TYPE OF INVESTOR, 1975-1977

	1975	1976	1977	Changes in quantity			Distribution	
				1975	1976	1977	1975	1977
	(IL million, at current prices)			(percent, at 1975)				
1. Government, local authorities and national institutions	3,197	3,513	4,737	3	-14	-4	25	25
Government services	(498)	(595)	(640)	(3)	(-7)	(-22)		
Services of local authorities	(1,779)	(1,853)	(2,608)	(10)	(-19)	(1)		
Roads		(429)	(547)	(758)	(-21)	(-1)	(-6)	
2. Government enterprises	1,186	1,178	1,414	7	-20	-12	9	8
3. Total of governmental sector (1+2)	4,383	4,691	6,151	4	-15	-6		
4. Investment of nonprofit institutions	1,150	1,300	1,507	-4	-12	-17	9	8
5. Total (3+4)	5,533	5,991	7,658	2	-15	-8		
6. Public sector enterprises	1,866	2,450	3,132	42	4	-2	14	18
Electricity	(781)	(1,078)	(1,509)	(22)	(7)	(11)		
Public sector industrial enterprises	(617)	(970)	(1,196)	(113)	(29)	(-11)		
7. Private sector investments	5,614	6,366	7,867	2	-10	-12	43	41
Agriculture	(896)	(1,210)	(1,486)	(16)	(6)	(-11)		
Industry	(3,042)	(3,244)	(3,718)	(9)	(-15)	(-18)		
Services	(1,171)	(1,602)	(2,428)	(-8)	(6)	(6)		
8. Total (6+7)	7,480	8,816	10,999	10	-7	-9		
Total non-residential investment	13,013	14,807	18,657	7	-10	-9	100	100

^a Excluding transport equipment.

NOTE: The differences between the 1975 and 1976 figures in this Table and parallel figures in the 1976 Report stem from the following reasons:

(1) Extensive corrections and changes made by the Central Bureau of Statistics in the investment series (mainly in structures).

(2) A better estimate of public service equipment.

(3) Transition to 1975 fixed prices.

number of privately constructed apartments placed on the market in the 21 large cities. In one segment of the housing market, and apparently in the market for large apartments in the three major cities, a shortage – felt for the first time – led to an increase in prices. Expectations of a continued price increase, the monetary expansion in the first half of 1977, and the introduction of the new economic policy in 1977 all led the housing market to rebound from a three year recession. The decrease of completions of housing construction presages an additional decline in apartments placed on the market. Even if a recovery in construction starts ensues in 1978, the recovery in supply will be felt only after the long lead time, caused by the duration of construction.

Despite the marked recession in construction since 1975, the number of employees ejected from that sector was lower than expected. One apparent cause for this is the large share in the sector of public construction in recent years; the unprecedented increase in public construction (at the beginning of 1975) was not accompanied by a parallel rise in employment, a phenomenon which can be interpreted as efficient manpower utilization by public construction companies, and as in the period of prosperity, no corresponding growth of labor input occurred – a total and immediate adjustment to the recession that started in 1976 was also absent. In addition, it appears that while output fell, labor-intensiveness in the sector rose, due to the increasing proportion between the area of completions and the area of starts, and to the growth in the share of residential construction in total constructions. This development, too, apparently affected the relatively small withdrawal of employees from construction.

2. INVESTMENTS BY ECONOMIC SECTOR

A. Agriculture

Investments in agriculture, which had been growing since the beginning of the seventies, fell for the first time in 1977. This drop stems from a curtailment of investments in livestock, the expansion of which was curbed in 1976, following a considerable accumulation of surpluses³. In dairy farming, production quotas were re-imposed, leading to reduced investments in the sector. This is reflected in a decrease of 33 percent in additions to livestock inventories, and of 21 percent in the building of farm structures (mainly cattle-sheds and chicken-coops). The output of hothouse farming, mainly of flowers, is almost entirely export-oriented. The increase of investments in this branch can be ascribed to growing exports.

³ For a detailed discussion of the reasons for this development – see Chapter XIV: Agriculture.

TABLE IX-3
GROSS FIXED INVESTMENT, BY TYPE OF ASSET, 1975-1977

				Change in quantity						Change in price		
	1975	1976	1977	1972	1973	1974	1975	1976	1977	1975	1976	1977
	(IL million, at current prices)			(percent, at 1970 prices)			(percent, at 1975 prices)			(percent)		
NEW CONSTRUCTION												
Residential	8,726	9,270	9,648	23.0	4.8	-2.8	3.3	-12.8	-21.5	22.9	21.8	32.6
Nonresidential	5,804	6,682	8,787	17.1	2.2	1.1	1.8	-9.5	-3.3	33.0	27.2	35.9
Total construction and excavation works	14,530	15,952	18,435	23.3	3.8	-1.3	2.7	-11.5	-14.0	31.6	24.1	34.4
LIVESTOCK INVENTORY												
Change in livestock inventory	66	69	55	44.4	17.6	-25.0	6.7	-24.2	-36.0	50.9	37.9	24.5
PLANT AND EQUIPMENT												
Locally produced	2,402	2,484	3,261	15.1	14.2	-3.6	6.4	-14.8	-3.5	37.3	21.4	36.0
Imported	4,742	5,571	6,554	28.5	-1.9	10.2	13.6	-8.1	-18.3	44.8	27.8	44.0
Total	7,144	8,055	9,815	23.8	3.6	5.0	11.1	-10.4	-13.4	42.1	25.9	40.7
TRANSPORT EQUIPMENT												
Motor vehicles	1,021	1,410	1,698	22.7	26.3	9.2	-43.3	5.2	-19.5	68.4	31.3	49.5
Ships and aircraft	257	237	967	-73.3	222.0	-54.9	-73.0	-26.8	119.7	40.2	26.0	85.7
Total transportation equipment	1,278	1,647	2,665	-40.9	86.6	-24.9	-52.7	-1.3	1.3	54.6	30.6	59.8
Total fixed investment	23,018	25,723	30,970	13.4	10.3	-2.8	-0.5	-10.6	-12.9	32.2	25.0	38.3

B. INDUSTRY

Industrial investments fell in 1977 at a rate of 17 percent, following an 8 percent drop in the previous year. The volume of investments enabled a 5 percent growth in industrial capital stock during the year, following a 7 percent rate of growth during 1976. It is possible that the estimate of investments in the last two years is deflected downwards⁴, although it is difficult to measure the extent of this downward bias.

Directed credit allocated for financing industrial investments increased at a substantially higher rate than the rate of increase in the nominal value of investments in the sector: 47 percent, as against 16 percent. Thus, the rate of directed credit in industrial investments increased for the second year in a row. This rate, amounting to about 45 percent in previous years, increased in 1976 to 60 percent, in 1977 to 15 percent. The increased rate of directed credit can be accounted for partially by the creation, in the

⁴ To arrive at an estimate of investments by adding up the component of facilities and the component of equipment, each measured separately, calculating the assembly and installation margin at a constant rate to the equipment component, is a method suitable for the measurement of investments in conventional firms, where these investment components can be clearly identified. This method is *not* suitable for the measurement of investments in sectors and industries where no clear differentiation between facilities and equipment is possible. This is particularly true in processing industries where the production is continuous. Here, the differentiation between investments in facilities and equipment becomes blurred, since most of the investments in these industries go to the installation and assembly of production facilities, which in many cases can not be defined as to their components. As long as the share of investments in these types of industries in total investments in industry is small and constant, the bias stemming from a faulty measurement of investments will be small and consequent; however, in the last two years, the share of these investments in total investments in industry increased, and with it the bias increased as well. Furthermore, even if equipment destined for the processing industries could be identified, an additional problem would arise, affecting only nominal measurement: the calculation of margins is effected at the time of release of the equipment from customs, if it is imported, or at the time of its sale by the local factory. In fact, the assembly of production installations may take many months, and in the meantime installation expenses grow, due to the price increases in the economy at large. Data on plant and equipment show that equipment destined for the chemical and oil sectors, or the rubber and plastics sector, constituted about 20 percent of total imported equipment in 1976 and 1977, as against 10 to 12 percent between the beginning of the decade and 1976. It can therefore be argued that investment estimates are biased downwards – a trend that has intensified mainly in the last two years.

TABLE IX-4

GROSS FIXED INVESTMENT BY SECTOR, 1975-1977

	Change in quantity								
	1975	1976	1977	Average 1968- 1972	1973	1974	1975	1976	1977
	(IL million, at current prices)				(percent, 1970 prices)				
Agriculture	1,085	1,439	1,779	11	0	12	13	4	-10
Water works	218	253	315	0	-18	-9	41	-10	-7
Industry	3,659	4,214	4,914	17	-4	1	17	-8	-17
Construction equipment	419	286	198	14	0	28	-13	-43	-52
Electricity	781	1,078	1,509	23	-8	4	22	7	11
Transportation and telecommunications	3,192	3,517	4,961	11	39	-19	-29	-14	-4
a) roads	(429)	(547)	(758)	(7)	(26)	(9)	(-21)	(-1)	(-6)
b) motor vehicles	(1,021)	(1,410)	(1,698)	(20)	(26)	(9)	(-43)	(-5)	(-23)
c) ships and aircraft	(257)	(237)	(967)	(-1)	(222)	(-55)	(-73)	(-27)	(120)
Trade and services	4,937	5,666	7,646	14	12	8	2	-10	-3
Total	14,291	16,453	21,322	13	14	-3	-3	-9	-8
Total (excl. means of transport)	13,013	14,806	18,657	14	3	3	7	-10	-9
Total (excl. ships and aircraft)	14,034	16,216	20,355	15	5	4	1	-9	-10
Housing	8,726	9,270	9,648	34	5	-3	3	-13	-22
Total fixed investment	23,018	25,723	30,970	19	10	-3	-1	-11	-13

last two years, of complementary financing funds, in addition to credit granted to investors according to criteria determined by the law, as an incentive to capital investments⁵. But this explanation is, as already mentioned, only partial. If the estimate of investments is indeed biased downwards, there is an upward bias in the calculation of credit rates, and the above mentioned rates should therefore be considered with this reservation.

In 1977 there was an additional decrease in the rate of utilization of industrial capital and the transfer to capital: intensive production methods, although a slowdown became noticeable in this trend. A trend combining the growth of capital intensiveness, and the decrease of its utilization began in 1973. It developed in the context of available directed financing which was granted to investors in industry, within the framework of the Law for the Encouragement of Capital Investments. The subsidy rates in directed credit which derive from the low interest rates on this credit, increase particularly in the last four years, following the acceleration of the inflationary process. This constitutes a relative – and considerable – lowering of the price of capital, as compared to other production factors. These circumstances apparently encourage the development of phenomena which explain the continued rapid growth of industrial capital stock for the following reasons: (a) A preference for expanding production through investment in capital-intensive processes; (b) Plants facing expansion prefer to invest in parallel production lines rather than introduce additional shifts; (c) The firm invests in plant and equipment for special processing. Had capital been more expensive, specialization would have probably developed, at the sector level, to handle specialized processing, and thus the wasteful acquisition of specialized equipment would have been obviated; and (d) Early acquisition of plant and equipment in view of future depreciation.

Apart from these factors, which are related to the low relative cost of capital to the investor, it is also possible that the decline in capital utilization is connected, to some extent, with the rapid expansion of specific sectors or the development of new ones. Such a change requires investments which mature slowly, and which are not connected with the current development of industry; to this category belong investments in the Phosphate Project (Nahal Tsin) and the Petrochemical Project.

In addition, the apparent long-term growth trend of investments proceeds at a higher rate than output, due to the broader requirement imposed on new investments to provide facilities and accessories for environmental protection.

⁵ See detailed discussion of this subject in Chapter XIX: "The Institutional System of the Capital Market".

TABLE IX-5

**INDEXES OF RELATIVE UTILIZATION OF GROSS CAPITAL
STOCK IN INDUSTRY, 1969-1977**

Year	Growth in gross industrial capital stock ^a (1969 = 100)	Growth in gross industrial capital stock necessitated by industrial branch production ^b (1969 = 100)	Index of relative utilization (3)=(2)/(1)X100
	(1)	(2)	(3)
1969	100.0	100.0	100.0
1970	110.5	110.1	100.0
1971	122.7	119.8	98
1972	136.0	132.9	98
1973	150.9	138.9	92
1974	164.5	145.0	88
1975	178.0	149.5	84
1976	194.0	157.1	81
1977	208.0	163.9	79

^a The measuring is at the beginning of the year.

^b The gross rates of industrial capital stock that are required by the growth in industrial production were calculated as follows: the estimate of capital stock in the main industrial branches at the beginning of 1969 were projected forwards by applying the growth rates that are obtained from the industrial production indexes, where the annual production is attributed to capital stock at the beginning of the year. When the industrial production index shows a decline, a maximal drop of 2.5 percent in necessitated capital stock is assumed, as the average of industrial retirements. Assuming that the industrial capital-output ratio remains constant, the result is the total necessitated capital stock from the growth of industrial output.

There was a decrease of about 11 percent in investments by companies of the public sector, following a very considerable increase in the preceding two years. Most of these investments are concentrated in a small number of large projects, where investment started, as mentioned, in recent years. The decrease of industrial investments by the private sector was accelerated this-year, amounting to 18 percent.

C. POWER

Running counter to the trends of slowdown and cutbacks in investments prevailing in the non-residential sectors of the economy during the last two years, investments in power have increased continuously for the last four years. This is reflected in the growth of capital stock in power, at an annual average rate of about 8 percent since 1974. This occurred despite the slowdown in power consumption during this period.

A considerable part of investments in power was directed at the development of the power generation system. During the last five years, investments were made in the erection of the Eshkol C and Eshkol D power stations, and in the middle of 1976 investment in the M-D power station was started. The completion and operation of most of the generation units of the Eshkol power stations is reflected in the doubling of installed production capacity, as compared with the situation at the beginning of the decade. On the other hand, there was, as mentioned, a considerable reduction in the growth of power consumption: until 1973 power consumption increased at an average annual rate of about 12 percent, and since then, following the energy crisis, consumption was reduced, its rate of growth stabilizing in the last two years around 6 percent. It should be emphasized that power stations, including the M-D station, were planned before the slowdown in the growth of power consumption. The delay in erecting the M-D station might offset, to a certain extent, the accelerated increase of installed production capacity, as compared to the actual increase of production.

D. COMMUNICATIONS AND TRANSPORTATION

Most of the investments in this sector, excluding vehicles, are in the hands of the government. Investments in roads are directly in the hands of the government and of local authorities, while investments in communications in ports, in airports and in railways are carried out by government enterprises. There was a considerable drop in these investments in 1977 (12 percent), following a decrease in the last three years as well. Since 1974, roads and communications have become the principal victim of the government's restraint policy. This is reflected in a decelerated growth of capital stock in roads. During the decade preceding the Yom Kippur war this stock grew at an annual average rate of 10 percent, and never fell below 8 percent in any year during that period. Since 1973 the rate of growth slowed down, reaching 5 percent during 1977.

Despite the existence of an increasing surplus demand, investments in communications did not increase. The number of telephone installations decrease in 1977 by about 3

TABLE IX-6

MAIN INDICATORS OF RESIDENTIAL CONSTRUCTION, 1975-1977

	1975	1976	1977	Annual increase or (-) decrease					
				1972	1973	1974	1975	1976	1977
	(IL million, at 1975 prices)			(percent)					
INVESTMENT									
Total residential construction	8,726	7,606	5,971	27.1	4.8	-2.8	3.3	-12.8	-21.5
Public	3,631	2,731	1,427	25.3	14.7	11.2	8.3	-24.8	-47.7
Private	5,095	4,875	4,544	28.1	-0.1	-10.8	-0.2	-4.3	-6.8
	(thousands)								
APARTMENTS									
Building starts	51.6	35.1	25.6	28.0	-15.8	2.5	-11.9	-32.0	-27.1
Public	27.7	12.0	5.4	70.0	-13.8	26.6	-16.8	-56.7	-55.0
Private	23.9	23.1	20.2	5.6	-17.6	-19.0	-5.5	-3.3	-12.6
Building completions	55.6	55.7	43.1	22.2	7.6	-1.2	7.5	0.2	-22.6
Public	26.5	27.5	19.8	28.3	5.4	11.2	10.9	3.8	-28.0
Private	29.1	28.2	23.3	18.0	9.3	-9.9	4.7	-3.1	-17.4
Apartments under construction	96.5	75.9	58.5	27.2	5.6	7.4	-4.0	-21.3	-22.9
Public	56.6	41.1	26.7	32.2	11.5	20.4	2.1	-27.4	-35.0
Private	39.9	34.8	31.8	23.1	0.4	-5.2	-11.5	-12.8	-8.6
	(months)								
CONSTRUCTION TIME									
Total	22.4	23.2	24.2		2.9	19.7	5.2	3.6	4.3
Public	23.5	24.0	(28.0)		4.4	17.4	2.6	2.1	(16.7)
Private	21.2	22.1	(21.0)		11.5	20.0	7.1	4.2	(-4.9)

SOURCE: Central Bureau of Statistics.

percent, while requests for telephone installations increased by about 5 percent, and thus the number of requests awaiting installation continued to increase in 1977 as well. The reduction of investments, stemming from budgetary restraint, was enforced despite the economic profitability of telephone services.

E. SERVICES

Investments in services fell in 1977, though their rate of decrease slowed down: 3 percent in 1977, as against 10 percent in 1976. Similar to last year, the decrease of investments in public services this year offset the increase of investments in private services. The considerable reduction of investments in services supplied by the government and the nonprofit institutions contributed to the decrease of investments in public services at a rate of about 8 percent. Investments in services supplied by local authorities, which had decreased in 1976, stabilized this year.

Investments in private services increased in 1977 at a rate similar to that of 1976, namely about 6 percent. This increase stems mainly from the expansion of investments in financial and business services. During the two years 1976 and 1977, investment in businesses and offices increased by about 16 percent, while the volume of imported equipment destined for financial and business services doubled.

3. RESIDENTIAL CONSTRUCTION

A. TRENDS IN THE HOUSING MARKET AND IN PRIVATE RESIDENTIAL CONSTRUCTION

After three years of a slump, which reached bottom in the second half of 1976, a certain recovery of the housing market became discernible in 1977. Quarterly data on the supply and sales of privately-constructed apartments in the 21 large cities, which constitute an indicator for the entire market, point to an increase in the sales of apartments at an annual average rate of 6 percent. The sales volume recorded during the last quarter of the year is the highest in the last two years. Contrary to public construction, private construction does not benefit from subsidized interim financing, and it is therefore more dependent on current sales of apartments to the public for the financing of its activities than public construction. This dependence forces private construction to respond rapidly to the changes in the trends of demand, increasing building starts when demand grows and decreasing them when it drops. Private construction starts constitute therefore an additional indicator of the trends of the market. Construction starts in the 21 large cities show an increase, in the last quarter of 1977, gaining momentum at the

TABLE IX-7

PRIVATELY BUILT HOME MARKET INDICATORS, 1971-1977

(percent)

	Index of housing sales in private construction ^a	Index of supply of new housing in private construction	Rate of sales from supply of housing in private construction	Index of housing units in private construction ^b in entire country
1971 quarterly average	100.0	100.0	48.7	100.0
1972 quarterly average	94.6	117.4	39.3	105.5
1973 quarterly average	75.0	118.2	30.9	87.1
1974 I	73.2	115.6		59.6
II	82.1	121.2		83.6
III	62.5	108.6		73.5
IV	52.9	106.8		66.1
1974 quarterly average	67.9	113.0	28.7	70.7
1975 I	47.1	90.6		56.3
II	52.8	91.9		72.2
III	50.9	86.6		63.4
IV	55.4	87.4		75.1
1975 quarterly average	52.1	89.1	27.9	66.8
1976 I	53.4	85.1		78.0
II	49.1	81.5		63.0
III	43.1	79.0		59.9
IV	38.5	79.3		57.5
1976 quarterly average	46.4	83.7	26.5	64.6
1977 I	45.3	75.0		49.2
II	54.3	72.9		58.3
III	45.4	64.4		57.4
IV	55.5	62.0		61.2
1977 quarterly average	49.2	70.6	32.8	56.5

- ^a The sales index and supply of dwelling construction is based on data for 12 large towns (Jerusalem, Tel Aviv-Yaffo, Haifa, Bnei Brak, Bat Yam, Givatayim, Holon, Netanya, Petach-Tikva, Rishon-le-Zion, Rehovot, Ramat Gan), and as of the beginning of 1974 based on data for 5 other towns (Herzliya, Kfar Saba, Kiryat Bialik, Kiryat Yam, Kiryat Motzkin), and as of the beginning of 1976 - another 4 towns (Ashdod, Beersheba, Kiryat Ata, Ramat Hasharon). The supply of dwelling includes those whose construction was begun during the period under construction and new dwellings which were not sold by the end of the previous period. Defined as newly finished dwellings includes those whose construction was begun during the period under consideration and
- ^b Starting in 1974, an estimate of illegal housing units has been included. Since the 1974 index, the quarterly average has been corrected for those indexes which did not include this illegal housing.

SOURCE: Central Bureau of Statistics.

beginning of 1978: average construction starts in the first two months of 1978 are about 40 percent higher than the monthly average in 1977.

We have discussed in detail, in previous Reports⁶, the cyclical character of the housing market. This "cyclical" nature stems from the lack of elasticity in short-term demand, due on the one hand to the duration of construction, and to short range changes in demand stemming from expectations of price increases or decreases, on the other.

For the long range, demand depends on demographic variables - the balance of net immigration and natural increase - and on changes in the level of real income. It seems that since 1974, the level of long-range demand deriving from these variables was higher than the actual level of demand (as reflected by private construction starts). This means that in the last four years, a delayed demand for apartments has accumulated, and the present recovery is being fueled by this delayed demand.

For the first time since the beginning of the decade there was in 1977 a significant decrease (about 23 percent) in the volume of construction completions. A decrease of 17 percent in private completions is reflected in a corresponding decrease in the supply of privately-constructed apartments in the 21 large cities. A shortage of large apartments in the main cities was felt apparently for the first time, and this brought in this wake price increases in this area. Signs of relative price increases encourage demand, by creating expectations of additional price increases. Despite the fact that the price index for apartments, which is a country-wide average, points to a slowdown, the reports of real estate agents and building contractors in the large cities show a considerable increase of price for large apartments in the Tel-Aviv, Jerusalem and Haifa areas; demand for them increased already in the middle of the year, and the reduced supply supported this increase. Monetary expansion in general, and wage increases and retroactive payments obtained in the first half of 1977 in particular, constituted a convenient background for this increased demand for large apartments, and it is possible that uncertainty concerning the general situation after the elections stoked it even more, as reflected in sales data in the second quarter. The economic policy measures taken at the end of October apparently gave an additional push to demand by owners of foreign currency deposits and buyers of apartments from abroad: The devaluation at a rate of 45 percent, which was one of the measures which constituted this policy, and perhaps also expectations of peace arrange-

⁶ See, among others: Bank of Israel Annual Report 1975, pp. 162-163.

TABLE IX-8

**INCREASE IN APARTMENT PRICES, CONSUMER PRICES,
AND PRICES OF CONSTRUCTION INPUTS, 1971-1977**
(average percent)

	1971	1972	1973	1974	1975	1976	1977
Apartment prices ^a	29.1	34.9	27.1	38.4	30.3	12.4	8.1
Consumer prices	12.0	12.9	20.0	39.7	39.3	31.3	34.6
Construction input prices	10.5	16.0	28.5	47.2	30.6	26.5	30.9
Changes in apartment prices as a ratio of the change in consumer prices	15.3	19.5	5.9	-0.9	-6.5	-14.4	-19.7
Changes in apartment prices as a ratio of the change in construction input prices	16.8	16.3	-1.1	-6.0	-0.2	-11.1	-17.4

^a The changes in apartment prices are based on surveys in 21 large towns (see details in footnote a of Table IX-7) as registered in the Land Registry Office. The surveys are semiannual and have an overlapping period of 3 months, i.e. 4 surveys are held each year, and the rates of the change relate to the middle of the survey period. Due to the delay in registering transfers in the Land Registry Office, a considerable number of transactions concluded towards the end of the period are not included in the current survey. Survey findings of the semester 1.10.77-30.3.78 (which are not included in the calculation of the 1977 average price increase rate) indicate an increase of 9.7 percent compared to the previous survey (1.7.77-31.12.77). The last similar rate increase occurred at the beginning of 1974.

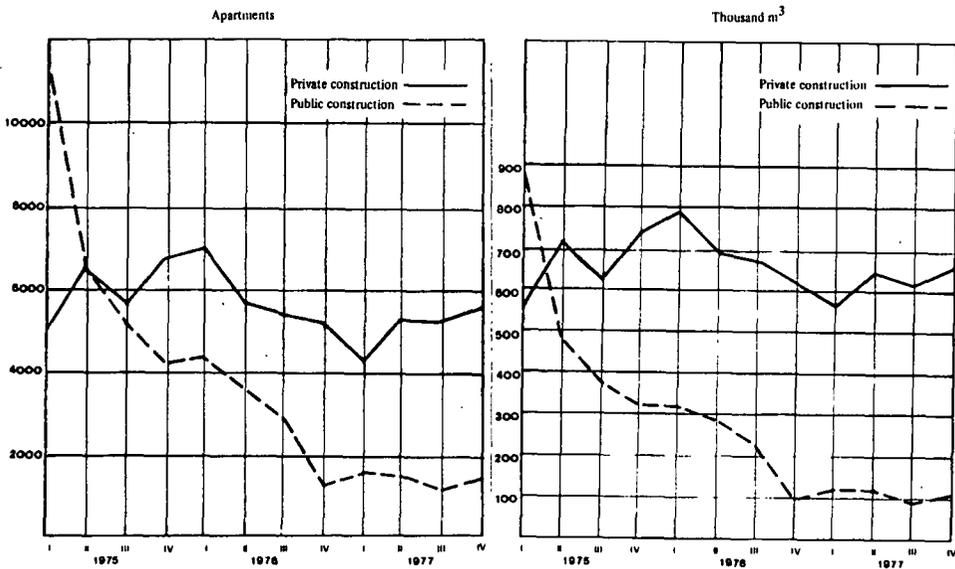
ments with the Arab countries – all contributed to this increased demand for apartments⁷. The housing market also resumed its role as an alternative for financial investment, due to the price appreciation it showed, expectations of further price increases, a considerable drop in the value of stocks; and the abolition of the purchases financing tax, at the beginning of April (the imposition of which in 1975 had reduced the profitability of holding apartments as investment assets). The gradual increase of demand also found

⁷ The influence of these factors is reflected in an increase of 22 percent in sales, in the 21 large cities, in the last quarter (as compared to the quarter preceding it).

expression in the rate at which those entitled to housing from the Ministry of Housing exercised their rights⁸.

It should be noted that a contraction in the supply of apartments will continue to increase, for the following year or two. Even if the number of construction starts increases there will still be a drop in completions. Past experience shows that if steps are not taken to curb demand, it may increase owing to expectations of continued shortages in apartments and of price increases.

FIGURE IX-1
PUBLIC AND PRIVATE HOUSING CONSTRUCTION STARTS, BY QUARTER,
1975-1977



B. PUBLIC CONSTRUCTION

The number of starts for public residential construction in 1977 was reduced to about 5,400, as against 12,000 in 1976, and about 27,700 in 1975. At the end of 1977 there were about 27 thousand apartments under construction, namely a decrease of about 35 percent, as compared to the end of 1976.

⁸ Until the beginning of October 1976 about 6,000 of the 25 thousand entitled to housing within the framework of the housing plan for young couples and in development areas exercised their rights. In the last quarter of the year, 4,600 substantiated their rights, and the number of those entitled to apartments increased by 6,800.

TABLE IX-9

INDEXES OF EMPLOYMENT AND CONSTRUCTION INPUT, 1964-1967, 1972-1977^a

	(Index 100 = 1964)				(Index 100 = 1972)					
	1964	1965	1966	1967	1972	1973(9)	1974(9)	1975	1976	1977
1. Output of the construction branch	100.0	109.5	94.4	73.1	100.0	107.0	108.4	105.1	90.2	77.6
2. Total output of the construction branch	100.0	108.4	93.9	77.9	100.0	104.0	106.8	105.1	90.8	78.4
3. Israeli employed	100.0	105.7	87.7	72.4	100.0	97.6	91.5	90.8	86.9	85.9
4. Employed from administered areas	-	-	-	-	100.0	131.7	151.0	139.4	125.9	110.8
5. Total employed	100.0	105.7	87.7	72.4	100.0	104.6	103.8	100.9	95.0	91.1
6. Labor input - Israelis	100.0	102.7	84.6	66.8	100.0	95.3	85.2	84.0	79.5	77.6
7. Total labor input ^b	100.0	102.7	84.6	66.8	100.0	101.7	96.8	94.5	88.8	83.7
8. Output/labor input (2)/(7)	100.0	105.6	111.0	116.6	100.0	102.3	110.3	111.2	102.3	93.7
9. Cement marketing	100.0	106.5	88.5	66.3	100.0	98.6	110.2	112.2	99.2	91.2
10. Capital stock in construction equipment ^c	100.0	107.9	118.4	116.6	100.0	106.4	112.4	122.5	131.7	135.2
11. Finished area/start area (housing construction)	100.0	128.1	191.7	182.7	100.0	125.9	121.6	155.6	192.2	196.4
12. Housing construction/buildings	100.0	101.6	95.1	82.0	100.0	103.1	99.8	100.1	100.9	91.1

^a 1973: Annual estimate according to first 3 quarters; 1974: annual estimate according to last 3 quarters.

^b Weekly average of work hours.

^c Beginning of year compared to beginning of previous year.

The large volume of public construction for residential purposes in the previous years, and the partially financed construction in particular, led, despite the trend of decreased demand, to the creation of an unsold stock of finished apartments and apartments under construction. This aggravated the liquidity position of public construction companies, which were unable to sell their stock. This trend deteriorated and reached its nadir at the beginning of 1977, when a stock of about 12,500 unsold finished apartments had accumulated in the hands of construction companies. The government then came to their rescue, both by granting additional credit as interim financing and through the outright purchase of 2,500 apartments from their stock. This government subsidy derived from budgetary funds destined for financing real activity in public construction. According to the government's budget, the public sector was supposed to start the construction of some 9,000 apartments, while in fact only about 5,400 were started.

The decrease of public building starts, which has been going on since 1975, is reflected for the first time in completions in 1977: the construction of about 19,750 apartments was completed in the year under review, compared with 27,500 apartments in 1976 (a decrease of 29 percent). The decrease of construction completions, on the one hand, and the considerable growth in the sales volume of apartments built under the bond scheme⁹ in the second half of 1977, on the other, enabled construction companies to dispose in the course of the year of more than half of their unsold stock. Furthermore, it is possible that the stock remaining in the hands of these companies at the end of the year is partially "directed" stock, which will be sold when an increase of apartment prices sets in. The sharp decrease in the volume of public construction for residential purposes is in line with the government's restraint policies, although it appears that long-range considerations would dictate to desist from such a steep decrease.

4. EMPLOYMENT AND INPUTS IN THE CONSTRUCTION SECTOR

A decline took place in the activities of the construction sector, and this for the third consecutive year¹⁰. The estimated output for the sector includes investments in residences, non-residential buildings, roads and other paving and siteworks, as well as constructions for defence purposes (which is not defined as an investment), and an esti-

⁹ The building of apartments under the bond scheme coordinated to some extent with the Ministry of Housing regarding location and construction standards, with directed interim financing, which covers about half of the construction costs, and which is given at terms which constitute a subsidy.

¹⁰ This activity was at its peak during the last nine months of 1974: 1974(9).

TABLE IX-10

REAL GROSS CAPITAL STOCK, BY SECTOR, 1977-1978
(IL million, 1977 prices)

	Capital stock at beginning of 1977	Gross investment in 1977	Discard in 1977	Capital stock increment in 1977	Capital stock at beginning of 1978
Agriculture	31,388	1,779	456	1,323	32,711
Water enterprises	13,383	315	73	242	13,625
Industry	62,898	4,914	1,688	3,226	66,124
Construction equipment	5,320	198	255	-57	5,263
Electricity	13,880	1,509	370	1,139	15,019
Transportation and communications	82,546	4,961	2,955	2,006	84,552
Public services	66,936	5,209	701	4,508	71,444
Private services	22,638	2,437	974	1,463	24,101
Total nonhousing stock	298,989	21,322	7,472	13,850	312,839
Housing	175,929	9,648	424	9,224	185,153
Total fixed capital stock	474,918	30,970	7,896	23,074	497,992

mate of building maintenance. Since 1974(9), this output decreased by about 27 percent, and the component of structures – being labor-intensive in the estimate of the sector as a whole – decreased by about 29 percent. As displayed in Table IX-9, the employment level for the sector decreased in the same period by only about 12 percent, a rate of decrease representing a lay-off of about 15 thousand employees. The discrepancy between the decrease in output and the decrease in the level of employment is contrary to developments in the slowdown years, 1965 to 1967. Then, when output for the entire sector had decreased by some 28 percent, (and about 33 percent in structures), the level of employment had dropped by 32 percent.

The difference between rates of adaptation in the two periods is somewhat smaller, when examining the labor input (the total of weekly work-hours), which decreased by about 18 percent as compared to the peak level of 1973 (9), and some 14 percent, as

compared to 1974 (9), a fact that reflects the decrease of work-hours per Israeli employee¹¹.

However, even if one includes these calculations the decrease in the intensity of labor, the disproportion in relation to the decreased output is still large. Since this discrepancy is pronounced when compared to the slowdown years, an explanation should be sought in the differences between present and past development. The explanation apparently lies in two main differences:

a. The Share of Public Construction for Residential Purposes.

Recent years differ from the slowdown years with respect to the high rate of public construction in total construction for residential purposes. In 1974, public construction for residential purposes constituted about 42 percent of total investments in housing, as against about 36 percent in 1965, and some 33 percent in 1966. Its share rose to 44 percent in 1975, and started to decrease only in 1976. The considerable growth of public construction for residential purposes that had, in fact, started already in 1972, countered the trend of decline in private construction for residential purposes. This increase apparently was not accompanied by a parallel increase in labor input, and this can be construed as an intense utilization of the manpower potential of the public construction companies (a decrease in latent unemployment, and a better exploitation of work-hours). Just as no proportional growth of labor input had taken place in the period of prosperity, neither was the adjustment to the slowdown immediately and fully expressed, starting from 1976¹². Corroboration of this argument can be found in the growth of the share of these workers whose professions are not related to the construction process itself in the total number of employees in the sector, from 10.5 percent in 1972 to 13.5 percent in 1976.

b. Variation in the Composition of Output

The relation between the areas of completions and starts in construction for residential purposes, expressing the relative intensity of labor of construction for residential purposes, has shown since 1974 a tendency to increase (the ratio doubled between 1974 and 1977).

¹¹ This trend had begun in 1972, and since then the decrease of work-hours per employee in Israel amounted to about 11 percent.

¹² The major construction companies cannot dismiss most of their employees due to the special status of construction workers in these companies: "entitled to work privileges", "permanent", or "yatzivim" (literally – "stable").

This offset to a considerable extent the anticipated decrease in the level of employment as a result of the absolute decrease of construction for residential purposes. Although this index did indeed increase during the period of slowdown (in 1966), in the two following years it decreased at a considerable rate. The proportion of construction for residential purposes in total construction, too, expresses the relative intensity of labor. This index, which started decreasing only in 1977, is higher than the same index during the years of slowdown, when it started immediately to decrease.

In addition to these two factors it is quite possible that there also was an increase in the scope of illegal construction, beyond the recorded volume, and that improvement and maintenance, which are not included in the definition of investments, increased in volume as well. It is reasonable to assume that this type of activity should increase in times of slack in ordinary construction, since the required manpower is more available, and relative prices are lower. During the period of restraint of the sixties demand for workers in this type of activity was apparently small, both due to the smaller stock of structures, and due to lower income levels and a heavier blow to relative income as compared to the present. If indeed there was an expansion of this type of activity, it also explains, at least partially, the discrepancy between the consumption of cement and the decrease of the are of building starts. Cement consumption decreased between 1974 (9) and the end of 1977 by 17 percent, while the area of building starts decrease during the same period by about 40 percent. The building boom in the administered areas also helps explain the discrepancy in the consumption of cement.

THE DEVELOPMENT OF CAPITAL STOCK¹³.

The slowdown in the growth of capital stock has continued gradually for four years. From an annual growth rate of about 10 percent in 1973 the rate decreased during 1977 to 5 percent. This deceleration reflects adjustment to the decrease in the growth of the product that had started already in 1973. It should be noted that, compared with the slowdown of the sixties, the present adjustment process is slower; in the last slump the lowest growth rate amounted already in 1967 to 5 percent.

Growth rates of capital stock in the last years were not uniform in all sectors of the economy. Thus, for instance, capital stock in industry, power and services increased more rapidly than the growth of capital stock in the economy as a whole, while transport and

¹³ Estimates of capital stock are calculated for 1977, for the first time, by the distributed retirement method. The series of capital stock were re-calculated according to this method as from 1968.

water projects showed a rate which was well below average. In stocks of construction equipment there was in 1977 even an absolute decrease. From this vantage point, too, this period differs from the slump of the sixties. Then, industry contributed to the deceleration of capital growth in all sectors of the economy, while capital stock in transportation continued to grow at an accelerated pace.

In absolute contrast to the rapid acceleration in the growth of capital stock per employee from 1965 to 1967, there was a slowdown in the rate of growth in 1977: 3 percent, as against a growth of about 6-7 percent in the two preceding years.

The long-range trends in the development of gross capital stock continued in 1977. The share of capital stock in agriculture and water projects, out of the total capital of the economy as a whole, continued to decrease, while the share of services, and mainly public services, continued to grow. The development in transportation is exceptional. The share of this capital, out of total capital, increased continuously until 1975, and then it started to decrease. The share of the other sectors in total capital stock has remained stable. The relation between net and gross capital stock expresses the weight of future capital services embodied in capital stock, and since 1974 it has been undergoing a process of decline.