CHAPTER XIII

INDUSTRY

1. MAIN DEVELOPMENTS

The growth of industrial production slowed in 1979 as the result of a deceleration in production for the domestic market. Total industrial output[1] increased only 5.4 percent, compared to 7.7 percent in 1978. Production destined for export accelerated, but not enough to compensate for the slowdown in domestic demand. Moreover, it is likely that the accumulation of large inventories in 1978 also contributed to the slowdown in production growth in 1979.

The deceleration of production for the domestic market was primarily due to changes in private consumption, which accounts for approximately 30 percent of total industrial production.[2] In 1979, the industrial product derived from private consumption was down 1.5 percent, compared to an 8 percent increase in 1978. Demand for locally manufactured consumption goods grew considerably during 1978, owing to the sharp rise in import prices relative to domestic product prices, and was further stimulated by the general renewal of economic growth. This, in turn, spurred the production of goods earmarked for domestic private consumption and even encouraged the manufacture of import substitutes. In 1979, private consumption prices at home caught up with import prices, and there was a marked slowdown in the consumption of consumer goods in general, and in the proportion of domestically manufactured goods consumed, in particular. This change is reflected in the relative change of wholesale prices of industrial output for the domestic market and of consumer prices.[3] In 1978, the average consumer prices of food, textiles, clothing and wood products rose faster than the respective wholesale price, whereas in 1979 the opposite occurred: the gap between the price paid by the consumer and that received by the producer narrowed. It should be noted that in

[1] As from 1979, industrial output indices are based on a new sample of industrial enterprises, and no longer include the diamond branch.

[2] Data for the industrial product as derived from final uses are based on input-output tables for 1972/73. The data are presented in Table XIII-2. It should be noted that computation of the derived industrial product using revised input-output tables for 1975/1976 yields almost exactly the same results.

[3] See Table XIII-5.

Table XIII-1

INDICATORS OF INDUSTRIAL DEVELOPMENT, 1961-79

(Percentages)

	Annual averages						Annual increase			
	1961-65	1966-67	1968-72	1973-77	1978-79	1973-79	1976	1977	1978	1979
Industrial production, excl. diamonds[a]	..	-0.9	15.4	4.4	6.4	5.0	4.7	4.3	7.7	5.4
Revenue at current prices[a]	20.5	3.0	23.3	41.7	78.2	52.2	37.3	45.7	75.5	80.9
Number of employees	7.6	-3.7	8.0	1.8	2.7	2.0	2.5	2.3	1.8	3.5
Man-days worked[a]	..	-5.5	9.4	-0.1	2.4	0.6	2.8	-1.1	0.2	4.6
Real gross investment	6.0	23.9	31.5	-1.4	11.0	2.2	-8.0	-13.0	14.0	8.0
Real gross capital stock[b]	11.0	6.4	7.7	7.6	5.1	6.9	7.4	5.9	5.1	5.0
Output per employed[c]	9.8	3.0	6.9	2.6	3.2	2.8	2.5	2.0	4.6	1.8
Output per man-day worked	..	5.0	5.4	4.6	3.6	4.3	2.2	5.5	6.3	0.8
Output per unit of capital[c]	2.2	-6.8	7.1	-3.0	0.9	-1.9	-2.1	-1.5	1.3	0.4
Change in factor productivity[d]	4.2[e]	0.8	6.8	1.0	2.4	1.4	0.2	2.2	4.1	0.6
Domestic wholesale prices	5.0	3.0	6.3	36.2	66.1	44.7	30.9	38.6	53.2	79.0
Revenue per unit of output	6.3	3.8	7.1	35.7	68.2	45.0	30.6	39.7	64.8	71.6
Real industrial exports, excl. diamonds	13.7	12.5	16.6	11.8	9.3	11.1	30.4	18.8	8.9	9.6
Total payroll outlay	..	5.0	18.7	38.2	80.0	50.1	40.5	44.4	64.8	94.9
Wages per unit of output	..	1.9	-3.7	-2.5	1.0	-1.4	2.3	-0.9	-6.1	7.7

[a] The data for production, labor, and wages for 1978 used to compute this table differ from the data published by the Central Bureau of Statistics. The rates of change here reflect the actual change which occurred during these years, whereas CBS data relate to the changes that would have occurred in production and labor input if the number of man-days worked had been equal in every year. In fact, man-days worked numbered 305 in 1978, 303 in 1977, 309 in 1976, 307 in 1975 and 305 in 1974. The Bureau's data were adjusted in order to reflect the actual changes that occurred in output and labor input. As from 1979, data for production and employment are based on a new sample of industrial enterprises, excluding diamonds. The indices based on sample were computed according to the changes that actually occurred. Consequently, as from 1979, it is unnecessary to make the adjustment made in the past.

[b] Real gross capital stock at the beginning of the year.

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

[d] Defined as the difference between the change in output and the change in a unit combining labor and capital in the ratio of 56 percent for labor (actual man-days worked) and 44 percent for capital.

[e] The change in labor input for this period is based on the change in the number of workers.

Source: Central Bureau of Statistics and Bank of Israel.

1977 wholesale prices also rose faster than consumer prices (except in the case of food), though the gap then was smaller than in 1979, when cost-push inflation was stronger.

In a number of sub-branches, producing primarily for private consumption, there were absolute decreases in output in 1979 or, at best, insignificant increases. These were branches where product demand is elastic, such as durable goods, outerwear, footwear, books, cosmetics, etc.

A slowdown occurred also in the growth of investment in locally manufactured machinery and therefore the growth of its derived industrial product slowed down as well. However, since the product derived from this final use accounts for only a small proportion of the total industrial product, the overall effect of this slowdown was limited. The development here was similar to that discussed above with respect to private consumption: a relatively moderate increase in the price of locally manufactured plant in 1978—a year of expanded investment throughout the economy—caused a sharp jump in the purchase of machinery and equipment manufactured locally which in turn stimulated production. In 1979, this trend was reversed: the rise in prices of locally manufactured plant outpaced the rise of imported plant prices, and purchases of the former expanded only slightly. Moreover, in 1979 there was a drop in agricultural investments. Since a substantial proportion of these investments are in locally manufactured capital goods, this decline was felt in a number of sub-branches which manufacture agricultural equipment.

The industrial product derived from investments in construction did not change. There seem to have been expectations that these investments would expand to a greater extent than they actually did, which may explain the accelerated growth of output in certain sub-branches supplying building materials—sand quarrying, building carpentry, ceramics, cement and structural metal products.

The continuing downtrend since 1975 in the industrial product derived from public consumption abated. Public consumption is composed of the demands of the defense, education, health and communication systems. The contraction of domestic purchases by the defense system during the period 1975 to 1978 sent the industrial product derived from public consumption into decline. This was checked in 1979 with the expansion of defense purchases. The civilian sectors continued to increase their purchases, albeit at a somewhat slower pace. It is difficult to point to specific branches that suffered from the contraction of public consumption, since the suppliers of the public sectors are individual enterprises within a fairly wide spectrum of industrial branches.

It may well be that the accumulation of large inventories, owing to overproduction in 1978, contributed to the deceleration in growth of the industrial product during 1979. This is borne out by a comparison of the value of the actual

industrial product and the value of the product derived from final uses (using input-output tables). The gap between these two values grew significantly in 1978;[4] it continued to grow in 1979, but at a much slower pace. Increased production to build up inventories reflects the manufacturers' assessment that domestic demand would continue to accelerate in 1979. Although domestic demand did indeed increase and even accelerate during the year, its emphasis changed—from domestic products to imports.

As already mentioned, industrial output destined for export[5] expanded in 1979, despite the breaking-off of commercial ties with Iran at the beginning of the year. The severing of relations with Iran closed an important market for Israel's industrial exports. The metal and nonmetallic minerals branches were particularly hard hit. Some of the exports originally earmarked for Iran eventually found other markets, but this substitution involved certain losses.

The growth of exports must be seen against the background of long-term planning to create conditions favorable to export growth, primarily through large-scale investments during the 1970s.[6] Moreover, existing conditions in 1979 further facilitated faster export growth, notwithstanding the loss of the Iranian market. These conditions included:

(a) The availability of directed credit for exports, which is a powerful export incentive, owing to the subsidy-element therein, especially as regards export funds paid out in IL. The gap between terms on free credit—whose real interest rate skyrocketed in 1979—and directed export credit, encouraged firms primarily producing for the domestic market to switch to exports.

(b) The slower expansion of domestic demand enabled firms to transfer production factors from local market production to export production—there was a striking acceleration of exports in the civilian sector of the metal industries, as well as in exports of food, textiles and clothing.

It should be stressed that only part of the export increment was due to a real expansion of output: the export increment may have also included stock accumulated by firms following the weakening of domestic demand, which was dumped on markets unlikely to be developed. It can be assumed that this was true of part of the export increment in the textile, clothing and metal (i.e. consumer durables) industries.

[4] This development becomes particularly striking when one compares the 1978 results with the results obtained using input-output tables for 1975/76: the difference between the value of the actual industrial product and the value of the derived product remained unchanged in 1976 and 1977, but was almost five times larger in 1978.

[5] For a detailed discussion of this subject and of the specific problem of export profitability, see chapter on "Exports".

[6] See section 3 below.

Table XIII-2

INDUSTRIAL PRODUCT BY FINAL USES,[a] 1975-79
(Percentages)

	Quantitative annual increase					Weight of uses in derived product		Contribution to growth of derived product	
	1975	1976	1977	1978	1979	1978	1979	1978	1979
Private consumption	2.6	3.8	2.4	7.7	-1.6	30.7	29.2	2.3	-0.5
Public consumption	-4.1	-7.4	-4.1	-3.5	2.3	14.2	14.0	-0.5	0.3
Investments in fixed assets	2.9	-15.8	-10.9	4.2	3.8	13.4	13.4	0.6	0.5
Thereof:									
Construction	2.5	-12.4	-15.5	-0.8	1.4	8.2	8.0	0.0	0.1
Machinery	3.7	-22.3	-1.5	13.2	7.6	5.2	5.4	0.6	0.4
Total domestic uses	**0.8**	**-4.8**	**-2.7**	**3.9**	**0.6**	**58.3**	**56.6**	**2.4**	**0.4**
Exports to administered areas	15.6	11.5	21.1	-7.1	-3.8	3.7	3.5	-0.3	-0.1
Exports to rest of world	2.6	22.8	16.8	7.6	8.7	38.0	39.9	2.8	3.3
Total final uses	**1.7**	**3.4**	**4.7**	**4.8**	**3.5**	**100.0**	**100.0**	**4.8**	**3.5**
Industrial product	3.2	4.7	4.3	7.7	5.4				

[a] Based on Central Bureau of Statistics data on direct final uses (except for investment in inventories and on Bank of Israel calculations using input-output tables for 1972/73 for the derived product according to final uses. The derived product and industrial product do not include diamonds.

Table XIII-3

INDUSTRIAL EXPORTS BY MAIN BRANCHES AND EXPORT CONCENTRATION, 1976-79

($ million, current prices)

	Industrial exports			Share of direct exports in branch output[a] (%)				Export concentration (percentage of the six largest firms in branch)	
	1977	1978	1979	1976	1977	1978	1979	1976	1979
Mining and quarrying	76	79	101	46	65	57	54	100	100
Food	178	211	253	12	12	11	11	37	54
Textiles	64	77	116	31	30	29	33	58	58
Clothing	149	170	226					30	42
Leather and leather products	9	8	10	10	10	8	8	87	92
Wood and wood products	28	33	38	7	9	8	8	80	73
Paper and paper products	5	4	9	7	7	6	7	97	95
Printing and publishing	15	14	17					41	54
Rubber and plastics	68	72	85	40	44	38	41	77	59
Chemicals, excl. oil	210	270	377	43	47	54	56	59	62
Nonmetallic mineral products	10	14	10	3	4	5	3	88	90
Basic metals	34	29	38	11	17	13	14	84	87
Metal products	148	231	267	18	19	24	23	86	81
Machinery	140	158	135	41	43	35	27	52	64
Electrical and electronic products	131	137	168	23	24	20	21	77	66
Transport equipment	163	240	360	17	22	28	33	96	98
Miscellaneous	66	107	167	25	29	41	49	31	50
Total exports (excl. diamonds)	**1,554**	**1,923**	**2,503**	**21**	**23**	**23**	**24**	**29**	**32**

[a] Output and exports are at producer prices (which include subsidies, but exclude taxes) and at constant 1972/73 prices. Diamonds and oil have been excluded. The share of exports in this table is substantially lower than the proportion of the industrial product derived from exports in Table XIII-2, since here the reference is to direct industrial exports, whereas Table XIII-2 refers to the industrial product derived from the sum total of exports of goods and services.

Export concentration did not grow, and may have declined somewhat: 24 firms accounted for half of Israel's industrial exports in 1979, compared to 23 in 1978. The list of the 25 largest exporters has remained more or less unchanged in recent years. However, with the expansion of exports in 1979, the number of exporting firms[7] increased by 20 percent after having remained virtually unchanged from 1976-78. The contribution of the four largest exporters to export growth decreased

[7] It must be assumed that these were firms that benefitted from directed export credit.

from 50 percent of the industrial export increment in 1978 to only 28 percent in 1979. This drop, which occurred in most individual branches, side by side with the massive entry of new exporters into the export arena, is another indication that the weakening of domestic demand compelled producers to divert their output to foreign markets.

There was a striking increase in the number of exporting enterprises in the clothing and "miscellaneous industries" branches; in both cases many small producers are able to export since it is not necessary to have special marketing channels abroad.[8] Concentration in these branches is low,[9] with the six largest exporters in each branch contributing less than 40 percent of the export increment in 1979, a year in which exports expanded significantly.

In those branches with a high degree of concentration, the six largest exporters made a major contribution to the export increment, with the exception of the metal and electronics branches, where the contribution was negligible, or even negative. Exports in these two branches expanded due to a substantial increase in the number of exporting firms. Despite the decrease in the contribution of the large firms to the export increment in 1979, there was, as mentioned, no significant change in the degree of export concentration. The fact that large firms generally account for most of the exports underlines the critical importance of marketing abroad, which in many cases is performed by the enterprises themselves. Small enterprises find it more difficult to penetrate export markets, since this often necessitates an aggressive marketing policy, assurances of permanent customer services, and a follow-up on market response to the various products.

Despite the deceleration in the growth of industrial production, the number of employees and of actual man-days worked increased by 3.5 and 4.6 percent, respectively. Even more surprisingly, despite the decline in productivity, real wages rose, and, as a result, wages per unit of output also grew.[10]

There is no reasonable explanation for this phenomenon, although during the second half of the year wages and employment adjusted themselves to the slowdown of output: the number of employees and working days stabilized, as did industrial production. This stabilization was accompanied by a slight decrease in wages per unit of output.

[8] Many export transactions are contracted during "Fashion Week" and "Jewelry Week".

[9] Export concentration is measured as the percentage of total branch exports contributed by the six leading firms in a branch. It should be noted that the ranking of the branches by degree of concentration is only slightly affected by changes in the number of large firms. Alternatively, a ranking based on the three biggest firms per branch yields almost similar results.

[10] The total payroll outlay divided by the value of industrial production.

Indicators of Industrial Growth in 1979
(Percent change from previous period[a])

	1st quarter	2nd quarter	3rd quarter	4th quarter	1st half	2nd half
Industrial production	-0.1	1.2	-3.2	4.9	3.1	-0.2
Industrial exports	-5.6	13.4	-1.9	4.5	6.0	6.6
Employees	1.0	0.8	0.2	-1.1	2.2	0.1
Man-days worked	4.0	-1.0	-0.9	3.2	4.4	0.2
Output per working day	-3.9	2.2	-2.3	1.7	-1.1	-0.4
Wages per unit of output	6.2	-2.8	5.1	-8.3	5.6	-0.7
Real wages	2.1	-0.6	2.8	-6.5	4.2	-1.0

[a] Based on seasonally adjusted data.

2. DEVELOPMENTS BY MAIN BRANCH

(a) Food Industry

There was an accelerated growth of output in the food industry—10 percent compared to 6 percent in 1978 and 7 percent in 1977. On the other hand, food consumption decelerated noticeably, increasing only 2 percent, as against 6 percent in 1978. Consumption of locally produced foodstuffs was down even more, while the import component of total food consumption rose.

This discrepancy between the rates of growth of output and of consumption in a branch which markets most of its products locally means that a sizable proportion of the output increment was stockpiled. This is confirmed by the fact that there was no growth in total sales at constant prices. In other words, the output increment in 1979 (earmarked for domestic consumption) was not marketed but put into storage. The growth in branch output is chiefly due to a 34 percent increase in processing and freezing of poultry meat, accounting for over half of the output increment in the entire branch. The output of the dairy industry and bakeries contracted. This was certainly due to the cutting of subsidies on milk and bread—at the present levels of consumption, the demand for these products is still elastic.

In 1978 food consumption accelerated, while food imports declined in absolute terms. In 1979, as said, the opposite was true. In 1978, there were demand pressures on branch output and consumer prices rose faster than wholesale prices. In 1979, the demand for local foodstuffs weakened, and the food item in the consumer price index showed a smaller increase than in the case of the wholesale price index.

(b) **Textiles, Clothing, and Leather**

The deceleration in the growth of private consumption of clothing and leather products in 1979, and the real decline in the consumption of locally manufactured products of this kind, is reflected in the output of these branches: the rate of growth dropped from 9 percent in 1978 to some 2 percent in 1979. Changes in output in the clothing branch—in this case a fall—influence developments in the textile branch, which produces input for the clothing branch. Almost the entire production increment in 1978 was due to the demands for locally manufactured output. During that year, the general recovery of private consumption, and the rising demand for import substitutes following the rise in relative import prices, stimulated production for the domestic market. In 1979, import prices dropped, contributing to the weakening of demand for locally manufactured goods. In the case of the branches referred to, output destined for the domestic market actually contracted, and the entire output increment was due to the expansion of exports. This is reflected in a comparison of the changes in the consumer and wholesale prices of industrial output for private consumption: during 1978 wholesale prices rose less than consumer prices, whereas in 1979 the opposite was true—wholesale prices rose faster, making imports relatively cheaper and profit margins smaller.

As already mentioned, the entire increase in industrial production in 1979 was due to the expansion of exports. An examination of the various sub-branches reveals that in some cases total output actually contracted while exports grew: in outer garments, production decreased by 4 percent while exports expanded by 13 percent; spinning and weaving contracted by some 6 percent while exports jumped 21 percent. In both of these branches, production expanded considerably in 1978, and it is possible that some of the exports in 1979 were from inventories which accumulated as a result of over-production during the preceding year.

(c) **Wood and Nonmetallic Minerals**

The branches included in this group market most of their products locally. A sizable proportion of their output is input for the construction sector. Data for their derived product (a 1 percent increase), actual industrial output[11] (a 4 percent increase) and total sales at constant prices (a 7 percent increase) are not consistent: the expanded volume of sales and the growth of labor input (5 percent) indicate that the registered increase in industrial output has a downward bias. Data from the cement industry support this assumption: the index of industrial production rose by 1 percent, while sales grew by 13 percent in real terms. The quantity of domestically produced cement marketed[12] shows a real increase of 6 percent. It is not likely that the large amount of cement sold came

[11] Ceramic and lime products for construction have not been included in the indexed. In the sub-branch, the number of wage-earners increased by 50 percent, while output grew by only 10 percent.
[12] Source: Nesher Cement Company.

Table XIII-4

ANNUAL CHANGES IN PRODUCTION, EMPLOYMENT AND WAGES PER WORKING DAY, 1973-79[a]

(Percentages)

	Production				Man-days worked				Wage per man-day worked			
	Average		Annual increase		Average		Annual increase		Average		Annual increase	
	1973-77	1978-79	1978	1979	1973-77	1978-79	1978	1979	1973-77	1978-79	1978	1979
Mining and quarrying	-2	10	10	9	3	4	-4	12	35	85	59	110
Food, beverages & tobacco	5	10	9	10	2	1	-1	3	36	68	63	73
Textiles	4	6	9	3	1	-2	-1	-2	35	67	62	71
Clothing	3	5	10	0	0	-1	-2	0	34	65	61	68
Wood and wood products	-1	7	13	1	0	3	2	3	34	66	59	72
Paper and paper products	4	8	8	7	1	4	-1	8	38	67	61	73
Printing and publishing	4	9	15	2	1	-1	-1	-1	34	76	62	89
Leather and leather products	1	-4	6	-13	2	-13	-13	-12	36	80	64	96
Rubber and plastics	2	3	9	-4	1	1	-2	3	38	71	71	71
Chemicals and oil	6	6	6	5	11	5	5	5	39	68	55	81
Nonmetallic mineral products	0	2	0	4	-1	3	-2	8	37	71	64	77
Basic metals	0	5	10	0	0	1	-2	3	37	74	68	79
Metal products	3	9	8	9	1	5	1	9	38	78	63	92
Machinery	4	9	19	-1	-2	4	8	0	39	70	61	79
Electrical and electronic products	9	7	11	2	2	7	2	11	39	89	82	96
Transport equipment	11	10	1	19	2	8	3	12	48	76	52	99
Miscellaneous	5	-3	-14	9	2	-2	-9	6	40	75	71	78
Total, excl. diamonds	**4.4**	**6.6**	**7.7**	**5.4**	**-0.2**	**2.4**	**0.1**	**4.6**	**39**	**76**	**65**	**86**
Diamonds	6	..	-18	..	0	..	7	..	37	..	46	..
Total industrials	**4.4**	..	**6.5**	..	**-0.2**	..	**0.2**	..	**38**	..	**64**	..

[a] See note (a) to Table XIII-1.

Table XIII-5

AVERAGE ANNUAL CHANGES IN CONSUMER AND WHOLESALE PRICES OF INDUSTRIAL PRODUCTION FOR PRIVATE CONSUMPTION[a], 1977-79
(Percentages)

	1977		1978		1979	
	Wholesale price	Consumer price	Wholesale price	Consumer price	Wholesale price	Consumer price
Food, beverages, tobacco	38	40	43	54	81	75
Furniture and wood products	38	30	52	51	85	64
Clothing and textiles	38	29	45	50	67	62
Paper, printing and publishing	..	46	..	54	89	70
Leather and rubber	43	34	59	53	99	66
Chemicals	36	30	68	51	82	78
Metals, machinery, and electrical equipment	37	36	58	57	60	47
Transport equipment	39	47	80	102	63	45
Miscellaneous	45	41	64	53	78	67

[a] Changes in consumer prices were computed on the basis of the index of industrial production prices in the consumer price index, while changes in wholesale prices were calculated on the basis of the wholesale price index of industrial output for domestic uses. Only those sub-branches whose products were aimed at private consumption were taken into consideration.
Source: The Central Bureau of Statistics and Bank of Israel computations.

from stocks, since cement can only be stored for a limited period. Consequently, it must be assumed that in fact cement production expanded more than the index of industrial production indicates. The difference between the actual expansion of output and the increase warranted by its final uses is difficult to explain. It may be that production in this branch expanded at a higher rate than expected from the input-output analysis owing to expectations of a building boom, following I.D.F.'s reallocation in the Negev.

As for wood products, trends were mixed, although on the whole, this branch's level of production remained stable. Production for domestic uses continued to expand, albeit at a slower rate than in 1978. An examination of the sub-branches shows that building carpentry registered some growth, as expected after the contraction of previous year, while furniture production dropped—probably as a result of the decline in domestic demand.

(d) **Rubber and Plastics**

The contraction of production in this group was caused by a drop in domestic demand, particularly for plastics. Exports expanded slightly. The plastic products industry—which accounts for some 60 percent of this group's total out-

put—decreased by about 3 percent. Most plastic products serve as inputs for other industries; plastic production rose in 1978 as these industries expanded their purchases in anticipation of continued economic growth. These expectations failed to materialize, and so demand fell off in 1979 as firms were left with large inventories from the previous year. In addition, it is likely that the plastic and rubber industries—which include manufacturers of rubber and plastic pipes for irrigation networks and of polyethylene sheets for export crops—were hurt by the recession in the agricultural sector. The export-oriented branch of tire production suffered severe cutbacks, reflecting the world-wide slump affecting this sector. The slight increase registered in the exports of rubber and plastic goods was thus the result of export expansion by branches hit by a decline in domestic demand for their products.

Despite the contraction of output in the rubber and plastics group, the number of employees and working days per employee in these industries increased, a fact which remains unexplained.

(e) **Chemicals and Petroleum Products**

In the chemical industries, production accelerated, with the major part of the output increment directed toward exports. Exports of basic chemicals, pesticides and insecticides increased sharply, and output in these branches expanded substantially. The expansion in basic chemicals was partly due to the maturing of investments in the petrochemical industry; aromatic materials began to be manufactured and exported in 1979. There were fluctuations in the oil refining branch, chiefly related to the export of refined products. These exports contracted sharply during the year reviewed, and the refineries' output decreased by some 10 percent.

(f) **Basic Metal and Metal Products**

The production of basic metals remained stable, after a sizable growth in 1978. Most of this branch's output is destined for the domestic market; it is likely that the lack of growth in 1979 was due to over-production in 1978 caused by over optimistic expectations concerning construction and investments. An examination of sub-branches reveals a considerable slowdown in iron and steel smelting, a sharp fall in pipe production, and continued growth, albeit at a slower pace, in non-ferrous metal production. The continuing decline in pipe production reflects, among other things, a technological change in this sphere: the growing changeover from metal pipes to pipes made of petrochemical materials (PVC). The increase in the production of non-ferrous metals was partly due to the expansion of various aluminium products for export. Production of metal goods also increased, although their exports suffered from the Iranian crisis. There was a striking acceleration in the light metal working branch and in the production of structural metal products.

Table XIII-6

ANNUAL CHANGES IN WHOLESALE PRICES OF INDUSTRIAL OUTPUT FOR THE DOMESTIC MARKET BY MAIN BRANCHES, 1977-79
(Percentages)

	Annual increase			Increase during the year[a]		
	1977	1978	1979	1977	1978	1979
Total	**38.6**	**53.2**	**79.0**	**49.7**	**49.1**	**117.5**
Mining and quarrying	44.8	77.6	100.3	65.5	75.9	124.8
Food, beverages, tobacco	38.1	43.4	80.5	51.7	38.7	140.4
Textiles	38.3	47.4	65.2	39.0	49.2	99.6
Clothing	38.0	44.8	67.6	41.1	43.0	77.6
Wood and wood products	37.0	48.9	78.4	43.6	43.6	118.7
Paper and paper products	43.7	31.9	66.8	41.6	32.4	119.1
Printing and publishing[b]	—	—	80.7	—	63.3	98.3
Leather and leather goods	48.6	59.4	100.1	52.1	60.1	106.8
Rubber and plastics	36.4	45.8	93.0	41.8	45.6	140.0
Chemicals and petroleum products	37.0	58.3	77.3	54.0	48.4	120.2
Nonmetallic mineral products	37.9	68.6	92.0	54.8	67.3	133.7
Basic metals	36.2	58.8	85.6	45.2	58.4	117.3
Metal products	38.0	58.1	81.1	48.1	53.8	107.0
Machinery	38.6	55.2	67.9	53.6	46.2	87.8
Electrical and electronic equipment	40.2	67.0	77.7	61.1	55.9	108.5
Transport equipment	38.4	68.3	75.1	62.1	51.6	105.3
Miscellaneous	44.8	56.7	76.1	55.4	46.9	118.7

[a] Computed on the basis of the price index for December of the year concerned and for January of the following year, compared to the average for January of the following year concerned and for December of the preceding year.
[b] The index for this branch was computed for the first time in 1978.
Source: Central Bureau of Statistics.

(g) Electrical and Electronic Products

The production of machinery contracted by 1 percent, following two years of impressive growth. A significant proportion of this branch's output is exported, and this was detrimentally affected by the Iranian crisis. Production for the domestic market slowed, chiefly because less locally manufactured machinery was purchased for investments in industry and agriculture.

In the production of electrical and electronic equipment, there was a modest increase compared to the previous year. This group includes sub-branches manufacturing consumer durables: the electrical household goods industry and the television and radio industry. In both, production greatly expanded in 1978, when there was a run on locally manufactured durable goods. These purchases proceeded more slowly in 1979, while imports of similar items expanded. This was reflected by a drop in the production of radio and television sets and a deceleration in the

production of electrical household goods. The substantial increase in exports of radio and television sets in 1979, despite the decrease in local production, probably indicates that stocks from the preceding year were exported.

Production of communications equipment rose appreciably, owing to investments in the communications sector. This sector has been investing more heavily in locally manufactured equipment during the last two years.

3. FACTORS OF PRODUCTION

There was a substantial increase in the number of man-days worked and of employees—4.6 and 3.5 percent respectively[13]—during 1979, compared to only 1.8 and 0.2 percent in 1978. This was a surprising development in view of the deceleration in the growth of industrial production in 1979. Output per man-day worked increased by less than 1 percent (the average annual increase during the 1970s was about 5 percent). There is no satisfactory explanation for this phenomenon. The increase in the number of employees could perhaps be attributed to the fact that the various branches, which expanded production in 1978,[14] engaged additional labor in 1979 in anticipation of continued growth. However, this explanation is not consistent with the fact that in precisely these industries the number of man-days per worker also increased. Increasing the labor force beyond actual requirements should obviously have been reflected by a smaller labor input per employee.

The rate of growth of industrial capital stocks[15] has held steady at 5 percent for the past two years. The derived increase in overall industrial productivity is 0.6 percent—a lower figure than the average for the past few years. Nevertheless, it would appear that the continuous decline in the utilization rate of industrial capital—a phenomenon prevalent since 1972—has been checked. The factors responsible for this decline have already been discussed at length.[16] Large investments were made, despite the deceleration in production, due to the availability of directed credit granted within the framework of the Law for the Encouragement of Capital Investments. The subsidy-element in this credit, as a result of its low, fixed nominal interest rate, became much larger with the intensification of the inflation-

[13] Manpower surveys show even higher rates of increase: 8.2 percent for labor input, and 5 percent for the number of employees.

[14] Chemicals, mining and quarrying, rubber and plastics, paper, wood products, basic metals, and electrical and electronic industries.

[15] The growth rates for industrial capital stocks cited in this chapter differ from those which appear in the chapter on "Investments". The rates cited here are derived from a time-series of capital stocks in 18 branches of industry, based chiefly on estimates of investments appearing in industrial surveys, which are not necessarily the same as the industrial investment estimates from the national accounts. Further differences stem from the fact that capital stocks in the various branches of industry also include an estimate for transport vehicles and that different life spans are assumed for equipment in different branches.

[16] See chapter on "Investments" in the *Bank of Israel Report* for 1976, 1977 and 1979.

ary process after 1973. Thus, capital services for industry were heavily subsidized, while at the same time the complementary factor—labor—was not subsidized. This discrimination caused the emergence of two phenomena: a decline in the capital utilization rate[17] and a preference for using capital-intensive processes to expand production. This was chiefly true of branches which expanded their exports. In order to examine whether the expansion of production for export was characterized by an accelerated increase in production factors, the branches of industry were classified into two groups: export industries and other industries.[18]

In the group of export industries, exports nearly tripled between 1972 and 1979, growing at an average annual rate of 16 percent, compared to only 3 percent in the other group's branches. The cumulative increase in the index of industrial production was 50 percent for the export group and 37 percent for the other group. This was accompanied by an increase in capital stock of 67 and 38 percent, respectively.

In other words, in the export industries the annual expansion rate of capital was approximately 1.5 percent higher than the annual rate of increase in output, whereas in the other branches output and capital stocks increased at similar rates. The capital utilization index shows the growth rate of capital imputed from the expansion of output, assuming that the capital intensity of each branch remained unchanged relative to the actual growth of capital. In the export industries group, this index shows a steady decline. In 1979, only 84 percent of the capital was utilized relative to the base year (1972). In fact, this decline in capital utilization reflects a changeover to capital-intensive production processes in each of the export branches. On the other hand, in the other group's industries, capital utilization declined until 1976, but has climbed since 1977 and is now almost back to the 1972 base year level. It would seem that in this case the fall in the index largely reflects a real decrease in capital utilization, which is at least partly due to the slowdown of domestic demand for industrial goods. The recovery of domestic demand, which

[17] The index of relative capital utilization rates presented in Table XIII-7 is obtained by dividing the index of capital imputed from industrial production by the index of actual capital. The imputed capital is estimated by classifying the capital stocks in the main industrial branches in 1972 according to the growth of production in each branch. Imputed capital stocks are increased when the cumulative index of industrial production rises above the highest level previously attained. This assumes that the capital-product ratio at the main industrial branch level is fixed, and that investments undertaken to replace scrapped equipment proceed even during years when output is not being expanded. It is worthy of note that the utilization trend which emerges from this calculation is similar to that obtained by the alternative method which was used in the chapter on "Investments".

[18] The criterion for this classification was the proportion of exports within total output: The export industries group included all the branches where the percentage of exports within total output increased between 1972 and 1979. The branches where the proportion of exports remained stable or decreased have been included in the other group. The following branches are included in the exports industries group: Mining and quarrying, rubber and plastics, chemicals, basic metals, metal products, electrical and electronic products, machinery, transport equipment, and miscellaneous industries. The second group includes the food industry, textiles and clothing, leather and leather goods, wood and wood products, paper and printing, and nonmetallic mineral products.

Table XIII-7

FACTORS OF PRODUCTION AND THE RELATIVE UTILIZATION OF CAPITAL STOCK, 1972-79

(Indices: 1972 = 100)

	1973	1974	1975	1976	1977	1978	1979	Average annual change (%)
Total industry								
1. Industrial production[a]	105.3	110.4	113.6	118.3	125.7	134.8	142.9	5.2
2. Industrial exports[a]	94.7	109.6	113.9	142.5	165.4	180.0	195.7	10.1
3. Weight of exports in output (%)	16.2	17.4	17.5	21.1	23.0	23.1	24.2	—
4. Actual capital stock[b]	108.2	116.5	125.2	133.8	140.4	147.0	154.0	6.4
5. Relative utilization of capital stock[c] (%)	96.8	94.0	91.3	88.7	87.9	89.6	89.3	—
6. Man-days worked	98.4	98.9	100.7	102.4	101.4	101.0	105.0	0.7
7. Productivity	102.9	104.0	103.5	103.4	105.7	111.1	111.5	1.6
8. Number of employees	101.7	104.7	105.5	108.5	110.6	112.8	116.6	2.2
9. Man-days per employee	96.7	94.5	95.5	94.5	91.7	89.5	90.1	-1.4
10. Output per employee	103.5	105.4	107.7	109.0	113.6	119.5	122.5	2.9
11. Wage per man-day worked	125.8	179.6	253.4	776.1	555.7	909.1	1609.0	48.8
Export branches								
1. Production	103	113	120	124	132	140	150	6.0
2. Exports	100	130	143	189	231	256	282	16.0
3. Weight of exports in output (%)	17	20	20	26	30	31	32	—
4. Actual capital stock	109	117	127	137	147	159	167	7.5
5. Relative utilization of capital stock (%)	95	94	93	90	86	85	84	—
6. Man-days worked	96	100	107	105	104	105	113	1.7
7. Number of employees	101	110	113	113	115	120	127	3.5
8. Man-days per employee	95	91	94	93	90	88	89	-1.6
9. Output per employee	102	103	106	110	115	117	118	2.4
10. Wages per man-day worked	129	180	250	384	586	956	1835	51.5

Other branches								
1. Production	107	109	108	113	120	130	137	4.6
2. Exports	95	91	88	102	108	110	124	3.2
3. Weight of exports in output (%)	16	15	15	16	16	15	16	—
4. Actual capital stock	107	115	123	130	133	133	138	4.7
5. Relative utilization of capital stock (%)	99	94	89	87	90	97	97	—
6. Man-days worked	100	98	95	100	100	98	99	-0.1
7. Number of employees	102	100	98	104	107	106	107	1.0
8. Man-days per employee	98	98	97	96	93	92	93	-1.0
9. Output per employee	105	109	110	109	112	123	128	3.6
10. Wages per man-day worked	123	177	250	357	504	818	1430	43.1

[a] See note (a) to Table XIII-3.
[b] Based on average capital stock at the beginning and end of each year.
[c] An explanation of the method of computing capital utilization is given at the end of this chapter.
[d] For the definition of productivity, see Table XIII-1.
[e] For the definition of export industries, see note (18) in text.

began in 1977 and gained momentum in 1978, is manifest in the rise in utilization, though it is possible that this rise was also due to the maturation of investments.

The expansion of production for exports was thus accomplished through capital-intensive means, as reflected by the relative changes in the number of employees and labor input. In the export industries group, the number of employees increased continuously throughout the 1972-1979 period. The cumulative increase in the number of employees during this period reached 27 percent, while actual man-days worked increased by only 13 percent. Though in the other group, the number of employees also outpaced labor input, the gap between the two was much smaller: the number of employees grew by 7 percent between 1972 and 1979, while the number of man-days worked did not increase at all. Output per employee rose much more slowly in the export industries than in the other branches.

Thus we reach the conclusion, that the path of capital-intensive development in the export industries was accompanied by a decline in labor-intensiveness and a relatively slow increase in productivity per employee. Yet, paradoxically, this created a greater demand for workers which was entirely out of proportion to the demand for actual work. The same process is reflected by developments in wages, which rose faster in export industries than in industry as a whole over this period.