CHAPTER X

INDUSTRY

THE AGGREGATE VALUE of industrial output[1] increased in 1957 by 23 per cent and was estimated at IL. 1,515 million as against IL. 1,230 million in 1956. This rise is partly the result of price increases, which did not exceed 7 to 8 per cent, and partly of the expansion in real output by 15 per cent. This expansion was initially generated by the higher demand for industrial products serving the building industry, which expanded very considerably during the period under review. However, the general rise in personal income also augmented the demand for industrial products which have no connection with building activity. A number of industries, in particular the producers of durable consumer goods, benefited from demand stemming from personal restitution payments from Germany, the flow of which to Israel increased considerably in 1957. As a result there was a marked boom in almost all branches of industry. The increase in output was rendered possible mainly by additional imports of industrial raw materials which rose somewhat less than the real increase in output. A further factor was the exploitation of considerable reserves of unutilized productive capacity available in many industrial branches. Part of the increase was also the result of the maturing of investment made in new plants in the past, and of the operation of new equipment, mostly installed in the last two years.

The expansion in output, which was destined largely for the domestic market, was accompanied by a rise in the exports of industrial products, which exceeded by far the rate of increase in total output. The export of industrial goods (excluding diamonds) rose from $33.4 million in 1956 to $45.4 million in 1957—an increase of 33 per cent in real terms. However, the share of industrial exports in total industrial output remained small, and including diamond exports did not exceed 10 per cent.

During the period under review, investment in industry remained more or less on the same level as in the previous year. It amounted, at 1957 prices, to IL. 122.5 million as against IL. 112.0 million in 1956. However, in 1957, contrary to former years, there was a marked tendency towards greater investment

[1] Including quarrying and mining, but excluding electricity and petroleum. The data shown in this Chapter are not strictly comparable with the estimates shown in the Annual Report for 1956. The classification by branches is based in general on the Industrial Census of 1955. Moreover, the estimates included in this Chapter generally refer to producer prices and exclude the excise and purchase taxes included in a number of previous estimates prepared by the Central Bureau of Statistics.

in existing enterprises as opposed to investment in new undertakings, whose share within total investment declined. Part of the investment made by existing enterprises was carried out with a view to complete and to improve the methods of production, in order to adjust them to the market conditions which have changed considerably since these enterprises were first planned and established. A larger part of investment than in previous years was designed for the replacement of obsolete or worn-out equipment. It will be remembered that there were two particularly large waves of investment in Israel industry: the first immediately succeeding World War II, in 1946–1947, and the second in 1950–1951 after the War of Liberation. After seven to ten years the obsolescence and the wear and tear of a substantial part of the equipment installed in those years is making itself felt.

There was little substitution of new domestic products for imported raw materials during the period under review. On the other hand, there was a continual process of improvement and diversification in output. This phenomenon is in part the result of factors which are essentially technological in character, such as the use of better equipment. It was also due to other economic causes which will be analyzed in the course of this Chapter.

The boom which prevailed in industry in 1957 began mainly towards the middle of the year, when building construction reached its peak. Whereas the distortions caused by the Sinai campaign—in particular in the metal branch, whose activities contracted from the end of 1956 until the second quarter of 1957—were still in evidence in the early part of the year, the rapid increase in production was conspicuous from the beginning of the second quarter. Industrial activity did not fall off by the end of the year. It may thus be said that the considerable boom in 1957 was accompanied by an increase in output per worker and by a rise in profits.

1. Output

The increase in output was marked in almost all branches of industry. In certain branches, stepped-up output was due to an increased demand for building materials. Quarries, non-metallic minerals including building materials, the timber industry and part of the metal industry were chiefly influenced thereby. Other branches, mainly those supplying durable consumer goods, were affected by the heavy demand engendered by the rise in incomes. The large number of immigrants and their different countries of origin was to a certain extent also responsible for the increase in demand. This demand was mainly felt by the textile and clothing industry, by household machinery and appliances, and by the furniture branch: it was less noticeable in the leather branch. The food industry was responsible for the largest absolute contribution to the increase in industrial output, as it carries the largest weight in total industry. However, it expanded less as compared with other branches supplying consumer goods to the domestic market. Whereas the value of output in most industrial branches rose by 20-30 per cent, that of the food industry rose, at current prices, by only 13 per cent. Two opposed tendencies were operative in the diamond and transport equipment industries, closely linked to the export industry. Whereas the processing and export of diamonds rose by 36 per cent, the output of transport equipment remained almost unchanged, as in this sector there was no real increase in exports. That part of the metal branch, machinery and electrical appliances, which was not influenced by the two demand factors outlined above—the requirements of the building industry and the demand for durable consumer goods—registered a certain decline, as a result of the reduction in Government orders. However, output in the metal branch as a whole rose, at current prices, by 21 per cent. The output of industries essentially working for branches manufacturing finished products, varied in accordance with their output. This was true for the paper and printing industry, for part of the chemical industry and for some secondary branches of other industries.

In some branches, increased output was rendered possible both by the maturing of investments made in previous years and by new investments. This was particularly true for the mining, chemical, spinning and plastic industries. In recent years, these branches have expanded rapidly and, as a result, output is now higher. On the other hand, the increase in output in other sectors is mainly attributable to the intensified use of available productive capacity.

Table X-1 shows provisional estimates for industrial output and added value by branches in 1956 and 1957[1].

The estimates by main industrial branches were derived from about a hundred secondary branches covered by the industrial census of 1955. Added value has been estimated on the assumption that the ratio of added value to output is not likely to change over a short period. Even if it is reasonable to expect that changes took place in the ratio of 1955, a cumulative error need not be assumed in such an estimate.

The difference between the estimates of added value shown in this Chapter and those of national income published by the Central Burau of Statistics (on which the National Accounts shown in Chapted II are based) are due to different methods of estimation. However, the difference between the results arrived at by these two methods does not exceed 2.5 per cent as far as total income originating in industry is concerned.

In 1957, the expansion of output was accompanied by a marked improvement and diversification of the manufactured commodities. This was true not only for the branches manufacturing current consumer goods, but also for the producers of durable and of intermediate goods, of instruments and of machinery. The diversification of products was not only the result of the entry

1 Based on data supplied directly by a number of enterprises and on an input-output analysis of selected manufactures. Information was also furnished by Government offices and by other institutions. A separate note on sources and methods will shortly be published.

into the market of new producers, but also of new production processes introduced by existing enterprises.

The available data do not permit an estimate of the real change in the output of secondary branches in the absence of an adequate price index allowing the derivation of the increase in real terms. However, partial information on price changes received from the producers in different branches, points to the fact that the average price increase, estimated at 7-8 per cent, was more accentuated for current consumer goods than for raw materials and durable goods.

TABLE X-1

Estimates of Output and Added Value in Industry, by Branches,[a] *1956–1957*

(At current prices—millions of IL.)

Branch	Value of output		Percentage increase	Added value		Percentage increase
	1956	1957		1956	1957	
Quarries and mining	21.6	30.4	40.7	12.3	17.4	41.5
Foodstuffs	289.5	327.1	13.0	75.1	84.5	12.5
Diamonds	47.1	64.1	36.1	9.4	12.8	36.2
Textiles	152.3	194.1	27.4	58.5	74.4	27.2
Clothing	118.0	147.0	24.6	43.8	54.2	23.7
Wood, cork and furniture	75.8	98.1	29.4	34.8	44.9	29.0
Printing and paper	51.5	69.5	35.0	27.9	37.8	35.5
Leather and leather goods	57.4	67.7	17.9	18.6	22.1	18.8
Rubber and plastics	28.9	38.5	33.2	12.0	16.1	34.2
Chemicals	90.5	113.7	25.6	30.8	36.7	19.2
Non-metallic minerals	74.5	99.4	33.4	36.4	48.4	33.0
Metal	113.7	137.5	20.9	53.6	63.7	18.8
Machinery	38.2	49.5	29.6	16.5	21.1	27.9
Electric appliances	27.0	31.2	15.6	12.8	14.8	15.6
Transport equipment	26.9	27.9	3.7	12.7	13.5	6.3
Miscellaneous	19.0	20.5	7.9	10.9	11.7	7.3
All branches	1,231.9	1,516.2	23.1	466.1	574.1	23.2

[a] The classification of the Industrial Census of 1955 prepared by the Central Bureau of Statistics has, in general, been followed in this table. According to this classification tricot knitting is not included under clothing but is covered by the textiles branch; wood and furniture includes metal furniture as well; leather and leather products include shoes; chemicals include edible oil refining, while oil products are included under foodstuffs; non-ferrous minerals include glass and ceramics; machinery includes service and household machinery, such as electric refrigerators; transport equipment includes repairs of ships and aeroplanes, but excludes garages; and the "miscellaneous" branch includes ice manufacture but excludes cold storage installations.

2. Input

Only partial data on input from other economic sectors are available, but it would seem that the real increase in the volume of main input materials generally corresponded to the real expansion of industrial output.

The volume of agricultural input materials rose in 1956/57 (the crop year does not correspond to the calendar year) by about 10 per cent, and amount ed to about IL. 97.3 million, as against IL. 88.1 million (at 1956/57 prices) in 1955/56. In view of the fact that agricultural input materials are almost wholly intended for the foodstuff industry, the rise in input may be assumed to correspond to the rise in output (of 13 per cent, at current prices) in this industry. The main agricultural input materials for industry are shown in Table X-2.

Table X-2

Inputs of Agricultural Products to Industry, 1955/56–1956/57

(thousands of IL.)

Product	*1955/56*		*1956/57*	*Percentage increase or decrease (–) at 1956/57 prices*
	Current prices	*1956/57 prices*		
Grains	12,259	12,001	10,990	– 8.4
Groundnuts	1,086	1,099	2,472	124.9
Sunflower, sesame and other oilseeds	3,134	3,073	4,238	37.9
Cotton and other fibres	6,701	7,831	10,162	29.8
Tobacco	2,011	2,179	2,736	25.6
Sugarbeet	1,474	1,636	3,241	98.1
Fruit and vegetables, including olives for the canning industry	7,145	7,569	4,382	–42.1
Citrus for juices and concentrates	2,360	2,690	1,765	–34.4
Wine grapes	3,692	3,692	6,103	65.3
Milk (including goat milk)	41,970	44,274	48,238	9.0
Fish	442	521	668	28.2
Other products	2,550	1,582	2,266	43.2
Total	84,824	88,147	97,261	10.3

Electricity input was 387.4 million kWh in 1957, as against 339.7 million kWh in 1956, or an increase of 14 per cent. The increase in industrial electricity consumption more or less corresponded with the real increase in industrial output, as derived from the output estimates. However, changes in electricity consumption by selected branches should not be considered as an indicator of precise changes in real output.

The real volume of raw material imports for industry (with the exception of liquid fuel) rose by 12.2 per cent, slightly below the real increase in industrial output. Imports of raw materials for the food industry registered a real increase of 5.7 per cent, while imports of raw materials for other industries rose by 14.7 per cent. These changes were in line with the developments in industrial ouput, where the expansion of the foodstuff branch was more moderate than that of the other branches. The volume of imports rose less than the real volume of output, since in 1957 the largest increase was in industrial branches having a low import component. Furthermore, the greater value increase in output compared with the value of imports was due to the stability of import prices relative to the increase in domestic prices. Prices of imported input materials were hardly affected by the levies imposed at the end of the year on specified industrial raw materials.

Foreign exchange outlays on liquid fuel (excluding fuel for the generation of electricity for industrial consumption) roses by 24.6 per cent and amounted to $11.5 million in 1957 as compared with $9.2 million in 1956. Most of this increase was the result of the rise in world market prices, while industrial fuel consumption rose by 5.2 per cent at constant prices.

Transport inputs appear to have risen less than industrial output, as output of the transport sector increased by about 9 per cent at current prices during the period under review. Available data do not permit to gauge the volume of transport input; hence it is not possible to estimate the value and changes in transport input in 1957 as compared with those of the preceding year.

TABLE X–3

Imports of Raw Materials for Industry, by Destination, 1955–1957

(millions of U.S.$)

Destination	*1956*		*1957*	*Percentage increase*
	Current prices	*1957 prices*		
Foodstuff industry	42.6	43.4	45.9	5.7
Other industries	107.8	110.0	126.2	14.7
Total	150.4	153.4	172.1	12.2

SOURCE: Central Bureau of Statistics.

3. WAGES AND EMPLOYMENT

The outlay on wages in industry is estimated to have risen in 1957 by 17–18 per cent. This increase was due to a rise in numbers employed, estimated at

5-6 per cent, and to a rise in average daily earnings[1]. The increase in wage rates was smaller than that in average daily earnings, as the latter also include premium payments.

The moderate increase in wage rates in 1957, as compared with previous years, was the result of the new wage agreement which came into force in the early part of 1957, fixing basic wages for a period of two years. Furthermore, the cost-of-living allowance was raised only once during the period under review. The allowance was increased by 3.2 per cent of total wages paid to wage and salary earners in December 1956 (which was higher than the average for 1956). This supplement raised the average wage rates in industry by about 4 per cent above the average level in 1956. Other increases in wage rates resulted from higher seniority and family allowances and from upgradings. For the time being, these supplements continue to rise, apparently because of the addition of new adult immigrant workers which is not accompanied by a corresponding exit of workers of retirement age. The increase in wage rates due to fringe benefits was estimated at about 3 per cent. It appears that the overall increase in wage rates exceeded that of last year by 7 per cent.

The difference between the increase in employment and the increase in real output was about 8–10 per cent, which points to hidden reserves in the labour force. In a number of enterprises, production is based on a high level of skill; these enterprises necessarily have to keep a permanent team of workers irrespective of output fluctuations. The operation of equipment, even at a low exploitation rate, obliges other enterprises to maintain a minimum team of workers whose wages represent fixed costs. Insofar as such equipment is not fully utilized, this too indicates hidden reserves of production capacity. The production process of industrial branches which work for orders and not for current production is frequently diversified. Such enterprises do not rely on labour trained to carry out one operation in a chain of complicated processes, but on workers whose technical skill permits the carrying out of numerous and differentiated operations. There is a permanent shortage of such workers who are not dismissed even when not working to capacity.

Partial data relating to the composition of earnings in industry, point to an increase in the share of premium payments within total wages in 1957. Thus, the rise in earnings per gainfully employed contained an element of the increase in output per worker. The same was true for piece work wages paid in a number of branches. Hence, the increase of 11 per cent in average earnings per gainfully employed, according to the data of the Central Bureau of Statistics,

[1] The index of wages in industry published by the Central Bureau of Statistics shows an increase of only 3.6 per cent. It should, however, be borne in mind that this index covers enterprises employing more than 15 workers. It is, furthermore, based on a sample which is assumed not to have adequate coverage. The estimated increase shown in this Chapter should, therefore, be interpreted with due reserve.

does not represent a rise in wage rates, but rather a change in average daily earnings.

The real increase in output per worker during the period under review was estimated at 8-9 per cent. This increase was the result of different factors which cannot be measured independently. They were: the intensified use of equipment and of the existing labour force; additional investment and the renovation of the production system; and an increase in workers' skill. The last factor is certainly far from negligible in a young and inexperienced labour force that consists in part of workers who have only recently entered industrial employment and are still in the learning and training stages. On the other hand, investment, even if not in new assets but as a replacement of obsolete or worn-out equipment, mostly leads to an increase in production capacity.

4. INVESTMENT

Gross investment in fixed capital goods was IL.122.5 million in 1957 as compared with IL. 111.8 million (at 1957 prices) in 1956. The real volume of gross investment in industry was, therefore, not much different from that of the previous year. In view of the fact that Israel's industry is still in its infancy (more than half of its enterprises having been established after 1948), this investment is considerable as compared with existing capital stock. However, it would appear that, in 1957, the share of investment designed for the renewal of obsolete or worn-out equipment increased. On the other hand, the share of investment in capital goods, which increases annual production capacity, somewhat declined. As a result, there was a decline in the average age of the production system, while the overall future production capacity increased. Table X-4 shows new capital goods by type and origin.

The share of locally-produced equipment within total capital goods remained unchanged during the period under review. Although domestic production supplies equipment whose import is either not worth while or is impossible in practice, the competition of imported equipment (purchased on easier credit terms than that enjoyed by domestic production) is far from negligible. If domestic production has nevertheless maintained its place within total investment, this reflects, to a certain extent, the continued progress made in the local manufacture of machinery and equipment.

When evaluating the volume of investment for the period under review, it should be borne in mind that under conditions of surplus demand for equipment, the limiting factor to such investment—the foreign exchange budget of the Government—is not connected with the business position of industry. Even investment made under appropriations from this budget is, as a general rule, not related to the current business position. The reason for this is that the decisions determining new investment are usually made well before their actual implementation. Moreover, it is obvious that the technical time-lag between

TABLE X–4

Imports and Production of Capital Goods, 1955–1957

(millions of IL.)

Type of asset and source	*1956*		*1957*	*Percentage increase at 1957 prices*
	Current prices	*1957 prices*		
Imports of equipment, machinery and spare parts	55.6	57.5	63.8	6.1
Local production of equipment, machinery and spare parts[a]	33.2	34.5	37.4	2.9
Buildings and structures	7.1	7.5	8.2	0.7
Installation costs	11.1	12.1	13.1	1.0
Total	107.0	111.8	122.5	10.7

SOURCES: Imports—Central Bureau of Statistics;
Construction—Ministry of Labour;
Other data—Bank of Israel.

[a] Excluding exports of locally produced equipment and machinery.

the decision to invest and its implementation should be much greater in an economy where most investment depends on imports of equipment from abroad, and where imports as well as the allocation of foreign exchange for this purpose are controlled. Thus, there is no relationship between the business position of the period under review, which improved mainly towards the second quarter of 1957, and the volume of investment in that year or its rise as compared with 1956.

The motives of a high level of investment in general, and of its volume increase during the period under review in particular, should not be sought in changing trends, but in the forces which are continuously operating in the economy. One of the reasons which may explain the increase in investment in equipment during the period under review is to be found in past industrial expansion. There was a particularly high wave of investment in Israel industry immediately after the end of World War II, when much worn-out equipment was replaced. The second wave of expanded investment came after the end of the War of Liberation and in 1950 and 1951 upon the receipt of the loan of the Export-Import Bank.

The ten years which elapsed since the first period of large investment and, to a certain extent also since the second investment wave are probably representative of the physical wear and tear or the obsolescence of an important part of the equipment which had then been installed. Thus, a considerable amount of the gross investment made presently does not necessarily arise from short-run economic considerations, but is frequently due to the necessity, partly technological, to maintain the production system. Moreover, the establishment of new enterprises with up-to-date and specialized equipment often forces competitors to advance the renewal of their equipment. Hence, the volume of investment in 1957 may be the result of developments which are rooted in the past.

The readiness of the Government to grant loans from the Development Budget at interest rates which are generally lower than the real return to capital, renders possible a return to own capital which exceeds by far that of total working capital. The difference between the return on working capital and that of interest paid on loans accrues to profit from own capital. The more the share of loans rises as compared to own capital, the profitability of self-financing increases. The ratio of loan capital to own capital is important not only in Israel industry, but it constitutes generally part of the goodwill of an enterprise. The volume of loans relative to capital at the disposal of an enterprise is rather limited in other countries. Lenders, whether financial institutions or individuals, generally ask for a rather large basis of own capital. This basis is very much narrower in Israel industry, largely as a result of a Government policy aiming at rapid industrial development regardless of business considerations.

Although the volume of public investment financing did not increase during the period under review (its share in total investment even declined somewhat), the Government increased the rate of their participation in specified types of new investment to a considerable extent—from 50 per cent to 65 per cent of total investment. The Government were even prepared to increase their participation in the investment in development areas and in high priority enterprises.

Thus, the public financing of private enterprises fulfills several functions simultaneously. First, where the role of the private capital market in financing is negligible, Government credit enables the entrepreneurs to obtain the investment capital they require. Secondly, the allocation or non-allocation of Government funds permits the diversion of new investment to high priority purposes. Thirdly, the extent of Government participation and the rate of interest on such loans determines to a large extent the profitability of the investment for the private investor. Consequently, it is not the return to capital as determined by the price system which is the overriding consideration of the potential investor, but rather the extent and the conditions of Government financial participation. As long as the return to capital exceeds the rate of interest on loan capital, the level of the former is not overridingly important.

It thus appears that the rate of profit on own capital is determined, in the main, by the investment policy of the Government, and not by the forces operating in the economy. As a result, the rate of profit varies from one enterprise to another, depending on the conditions on which it has been established. It is, therefore, likely that new enterprises which, owing to different causes often find it easier to fulfil the conditions required for getting Government loans, make greater profits than established enterprises. This explains the success of the Government in channelling private investment to fields the profitability of which would not have been capable of attracting the private investor without Government encouragement.

During the period under review, a number of investment plans in development areas were approved by the Government. Government encouragement frequently led to established enterprises planning and executing their expansion not in the vicinity of the existing plant, but as branches or affiliates in the development areas.

Total loans from the Development Budget during the period under review amounted to IL. 35 million—or IL.3 million more than in the previous year.

The share of public financing within total industrial investment fell to 28 per cent in 1957 as against 32 per cent in 1956. The share of self-financing in investment was thus 72 per cent. As, on the whole, the Government increased its participation in investment during the period under review, the reason for the decline was the increase of that part of investment which did not benefit from Government loans. This applies mainly to the renewal of equipment in existing enterprises. Available data do not permit a close analysis of private financing methods. The phonemenon can, to a certain extent, be explained by the continued increase in reserves for depreciation resulting from the rise in industrial capital. It is also likely that, in 1957, part of the finance for new investment came from personal restitution payments from Germany. Finally, it may be assumed that the greater profits made during the period under review contributed, insofar as they were not distributed, to self-financing, even if this was probably not taken into account at the time such investment was planned.

5. Industrial Exports[1]

Industrial exports amounted to $45.4 million in 1957 as compared with $33.4 million in 1956, at 1957 prices, or an increase of 33 per cent. This increase reflects the ever-growing tendency of certain producers to look for foreign markets. It was particularly true for producers whose exports represented, right from the beginning, a considerable share of their total sales. The expansion of exports also reflects the results of the Government's export promotion policy which was expanded during the period under review. The increase in exports of industrial commodities was rendered possible by the intensified use of existing production capacity. A number of new enterprises, whose production was geared to the export trade from the very first, was also responsible for this. As Government investment policy aims at export promotion, the technological conditions of production of some enterprises call for output on a scale exceeding domestic demand.

[1] This section reviews only exports of industrial commodities and excludes the export of scrap, postage stamps and diamonds.

Most of the increase in export is attributable to a relatively small number of leading exporters. Available statistics do not permit a verification of this assumption; but some light is shed on it by a comparison of exports of the main commodities in recent years. As these commodities are generally produced and exported by a limited number of large-scale producers, the relative weights of these commodities in total exports may indicate the importance of these producers in the export trade.

A comparison of the changes in 1957 with those of 1956 by groups in order of magnitude and by the volume of exports by commodities in 1956 shows that the main increase came from products whose export volume in 1956 exceeded $400,000.

The production of most commodities included in this group is concentrated in the hands of one to three producers. Even as regards other commodities, the number of the main manufacturers generally does not exceed four or five. As the homogeneity of the commodities and their degree of concentration in production and export is inclined to have a downward bias in the smaller groups, the results arrived at by comparing these exports indicate the importance of the respective producers. The smallest relative decline is shown by the group of largest producers (with the exception of the lowest group, also in absolute figures) and, as shown in Table X–5, the ratio of increase to decrease in this group was 1:17. This means that in general there was an increase in the export of commodities whose export volume had already exceeded $400 million in 1956, and that there were almost no contractions in these commodity groups. It would, therefore, appear that the tendency towards an increase in export is particularly marked in commodities (and similarly among most producers-exporters) whose export volume was also high in the past. Table X–5 also shows that in the intermediate groups—from $50,000 to $400,000—the decrease and increase almost offset each other. In other words, the commodities in these groups did not show a tendency towards either an increase or towards stability. In the light of these data there is reason to believe that the export volume is one of the conditions for the stability and the increase in exports.

An analysis of the main commodities exported in 1957 shows that 23 products, of which 19 may be considered as homogeneous, accounted for 74 per cent of total industrial exports. Thirteen commodities were exported by one to three exporters, and the remaining ten were also exported by a limited number of large exporters. The weight of these commodities continued to rise during the last four years with the exception of a relative decline between 1954 and 1955. This was due to the considerable changes which occurred in motor car exports as a result of the fall in exports to Turkey. It can, therefore, be inferred that a not very great number of exporters, whose relative weight is continually rising, is primarily responsible for exports, whereas the remainder is divided among numerous small exporters, whose absolute and relative contribution to the increase in exports was rather small.

TABLE X-5

Exports of Industrial Commodities by Groups of Magnitude, 1957
(thousands U.S. $)

Group[a]	Increase (1)	Decrease (2)	Ratio of increase to decrease (1) : (2) (3)	Net percentage increase or decrease(–) (4)
Up to $ 50,000[b]	3,494	385	9.1	3,109
$ 50,000—$ 100,000	576	524	1.1	52
$100,000—$ 200,000	820	934	0.9	–114
$200,000—$ 400,000	1,869	966	1.9	903
Above $ 400,000	8,900	520	17.1	8,380
Total	15,659	3,329	4.7	12,330

SOURCE: Ministry of Industry and Commerce.
[a] The groups of magnitude have been determined in accordance with exports in 1956.
[b] The smallest group (up to $50,000) includes commodities added for the first time to the export list in 1957. This explains the relatively large increase in this group.

The explanation of this growing rate of concentration in the export of selected commodities is probably not to be sought in the low production costs of these products, but mainly in their volume of exports and production. Only as regards the export of citrus, pharmaceuticals, textiles and clothing is there participation of relatively smaller exporters; even these exporters are among the largest producers in their branch. In most cases, exports are carried out by the producers and, in some instances, even if production is split between a number of producers, exports are made through producer associations. Exporters whose annual value of exports exceeded $100,000 during the period under review, contributed close to 80 per cent of the total industrial export. The share of the larger exporters, whose total exports exceeded in the last four years one million dollars (their annual exports amounted in 1954 to at least $200,000), contributed in these four years more than 50 per cent of industrial exports.

It appears, therefore, that the determining factors in export are the volume of production (which influences average production costs) and the volume of exports (which influences the cost of production through the effect of sales expenses on average cost per unit of production). Bigger exports reduce sales costs, which are mainly fixed costs (per unit of production, at least) up to a given ceiling. A large volume of exports is more often than not accompanied by the administrative and financial capacities required to gain access to international markets. Thus, there is a definite advantage in large-scale production as it permits the achievement of a high degree of quality, uniformity and of continuity of supply, as well as the quantitative level of manufacturing required by world trade. Hence, even if the large producer and exporter has no advantage as regards the price of his products, the export volume is inclined to influence the stability and further development of his exports.

Added value included in industrial exports (excluding diamonds) was estimated during the period under review at $21 million as against $15 million in the previous year (according to the estimates of the Ministry of Commerce and Industry which do not allow for depreciation charges and interest payments). The percentage share of added value has been estimated only for part of the commodity exports: this amount should be considered as a very rough estimate. Table X–6 shows the estimated added value of commodities whose total export value exceeded $400,000 during the period under review. It will be seen that, in spite of a considerable increase in industrial export, it has not yet become an important source of income for industry as a whole, with the exception of a limited number of producers who derived a considerable share of their income from sales abroad. Even as compared with overall receipts of foreign exchange by the economy as a whole, the weight of income derived from exports has so far remained negligible.

During the period under review, measures were adopted, both by the Government and by producers associations, to promote export. Apart from increasing the export subsidy to 850 prutot per dollar added value, a Government corporation was set up to export the products of smaller producers who are unable to make international trade contacts. The Government also established an export insurance corporation designed to facilitate the granting of commercial credit to clients abroad, thus reducing the risk involved thereby for the single exporter. Oil producers set up an organization for the joint export of olive oil and other vegetable oil. It would seem that the large increase in the export of this commodity may be partly attributed to the establishment of this body. Producers in the footwear branch also set up an association with a view to joint exports of their products. As a result, exports in this branch rose to about $340,000 in 1957 as compared with a negligible amount in previous years. Furthermore, a company has been established to trade with West African and Asian countries.

Additional encouragement to exports was provided through credit facilities, both in foreign exchange for the financing of raw material imports, and in Israel currency. Credit extended by the export promotion fund amounted to IL. 13 million at the end of 1957 at an interest rate of 7.5 per cent. Bills from export transactions to the value of $1.6 million were rediscounted at the Bank of Israel. Interest amounted to 8 per cent for bills rediscounted in Israel currency, and to 5 per cent for bills in foreign currency.

6. Industry, by Groups

The various industrial branches were not affected in the same way by the boom that prevailed in industry in 1957. Developments particular to the main industrial branches will be analysed in the following section. Mining, where the role of Government co-operation is particularly important, will be discussed in a different section.

(a) *The Foodstuff Industry*

The output of the foodstuff industry was estimated at IL. 327 million in 1957. The rate of expansion of this industry was more moderate than that of other industrial branches. But, owing to its large volume relative to total industry, in absolute terms the contribution of this branch to the increase in income from industry was considerable. The rate of increase in some of the sub-branches of

TABLE X-6

Exports and Added Value of Selected Industrial Export Commodities, 1957

(thousands of U.S.$)

Commodity	*Added value*	*Percentage of added value*	*Value of exports*
Tyres and tubes	1,891	40	4,728
Citrus juices and concentrates	1,882	70	2,688
Muriate	1,748	70	2,497
Cement	1,408	40	3,520
Pharmaceuticals	745	30	2,483
Cardboard and cardboard containers	750	47	1,596
Plywood	652	30	2,173
Tinned citrus fruit	601	70	859
Edible oil	535	50	1,070
Motor cars	529	30	1,763
Raincoats	486	35	1,389
Souvenirs	425	62	685
Olive oil	401	85	472
Woollen yarn, worsted	395	15	2,633
Ladies' wearing apparel	328	53	619
Woollen tissues	264	59	447
Nylon hosiery	233	54	431
Miscellaneous rubber products	184	40	460
Steel tubes	178	20	890
Air-conditioning equipment and fans	153	33	464
Sulphate ammonia	148	25	592
Knitwear and underwear	128	30	427
Cocoa powder	58	8	725
Total	14,122	42	33,624
Total industrial exports, excluding diamonds	21,000	46	45,459
Diamonds	6,196	19	32,611
Grand total	27,196	32	78,070

SOURCE: Ministry of Commerce and Industry.

the foodstuff industry, however, was not smaller than that in other industrial branches.

Table X–7 shows that the largest increase occurred in the dairy products industry. There was also a relatively large increase in the production of chocolate and sweets, as well as of alcoholic beverages and tobacco. It would appear that in 1957 the increase in demand was largely diverted to durable consumer goods rather than to food products in general, and to basic food in particular. The level of output in this branch depends in part on the size of the harvest and, in part, on the supply of agricultural raw materials to industry.

TABLE X–7

Output of the Foodstuff Industry, by Groups, 1956–1957

(millions of IL.)

Group	*1956*	*1957*	*Percentage increase*
Meat, fish and dairy products	40.4	52.0	28.7
Tinned and preserved fruit and vegetables	27.0	30.0	11.1
Margarine and compound cooking fats	13.4	16.7	24.6
Flour mills, coffee roasting etc.	58.6	61.5	4.9
Bakeries and bakery products	79.0	82.0	3.8
Chocolate and sweets	22.2	25.4	14.4
Alcoholic beverages	19.6	23.0	17.3
Tobacco	16.6	19.9	19.9
Other food manufactures	12.7	16.6	30.7
Total	289.5	327.1	13.0

The large increase in the production of dairy products was partly the result of the real increase of 8 per cent in the value of milk output. It was also due to the shift from unpasteurized milk, whose marketing is not defined as a manufacturing process, to pasteurized milk consumption. Production of margarine expanded due to the reduced imports of butter from the U.S. agricultural surplus. The canning industry showed but a moderate expansion while the production of tinned vegetables declined as compared with the previous year. In this branch, the limiting factor was the supply of fruit, which depends, apart from the harvests, on domestic and foreign demand for fresh fruit. Although the production of citrus fruit juices and concentrates showed a decline as a result of the reduction in the quantities of fruit supplies to the canning industry, supplies of grapefruit for processing increased. As a result, the production of canned fruit rose from 3,112 tons in 1956 to 5,043 tons in 1957. Production and exports of fats expanded, influenced to a great extent by the opening of Eilat to free navigation, thus permitting the import of raw materials from Asian countries.

The tobacco branch expanded its output by 5 per cent in real terms, while the chocolate and sweets industry showed an increase of 12 per cent.

(b) *Textiles and Clothing*

Spinneries increased their output considerably during the period under review —by about 28 per cent at constant prices. The greatest relative increase was in the output of carded wool, which rose from 685 tons in 1956 to 1,003 tons in 1957. However, the greatest absolute increase came from cotton spinning, which rose from 5,533 tons in 1956 to 6,929 tons in 1957. It constituted more than half of the value of output in this branch. This increase reflects the rapid development of the spinning industry in recent years, which benefited from a large measure of Government assistance. The domestic production of cotton reached 3,850 tons in 1957 as against 3,000 tons in 1956, representing about 36 per cent of the total gross cotton consumption.

There was a quantitative increase of 13.6 per cent in cotton weaving, its value represented about three-quarters of the total output of the weaving industry. The 24 per cent increase at current prices in the output of the weaving industry was due to a rise of about 15 per cent in real terms, and to price increases estimated at 7 to 8 per cent.

TABLE X–8

Output of the Textile and Clothing Industries, by Groups, 1956–1957

(millions of IL.)

Group	*1956*	*1957*	*Percentage increase*
Spinning: cotton and wool	29.9	42.1	40.8
Fabric weaving	86.6	107.2	23.8
Dying, bleaching and degreasing	16.4	21.0	28.0
Knitting and knitwear	16.5	20.5	24.2
Other textile manufactures	2.9	3.3	13.8
Total textile manufactures	152.3	144.1	27.4
Clothing	118.3	146.5	23.8

In the clothing branch, there was a continued shift to better quality and more expensive materials. This was due either to changes in demand or because many small producers found it more profitable to shift to the manufacture of more expensive products, which are demanded in relatively smaller quantities.

(c) *Wood and Furniture*

During the period under review, this branch was mainly influenced by the great increase in demand for timber for building as a result of the expanded building activity. There was also a considerable demand for furniture, which constituted part of the increased demand for durable goods.

As a result of the first factor and due to the increase in exports, the production of plywood rose by 32 per cent and that of veneers by about 48 per cent. On the other hand, the output of insulating boards somewhat declined; but, due to the relatively small weight of this commodity it did not influence the output of this branch as a whole.

The value of output of building carpentry rose at a smaller rate than that of building, as building carpentry is mostly required in the final stages of construction. It should be borne in mind that building completions during the period under review did not exceed considerably those of last year.

The boom in furniture production, which had begun in 1956, continued in 1957. It was due in part to demand generated by personal restitution payments from Germany, of which a substantial share was apparently spent on the purchase of durable consumer goods. The production of furniture showed a shift, similar to that in some other branches, to the manufacture of more expensive products.

TABLE X–9

Output of the Wood and Furniture Industries, by Groups, 1956–1957

(millions of IL.)

Group	*1956*	*1957*	*Percentage increase*
Basic wood industries	15.5	20.0	29.0
Building carpentry	21.5	23.4	8.8
Furniture	22.1	32.4	46.6
Upholstery and mattress manufacturing	4.4	6.5	47.7
Other wood manufactures and metal furniture	12.3	15.8	28.5
Total	75.8	98.1	29.4

(d) *Paper and Printing*

The basic paper industry and the production of cardboard containers continued to expand during the period under review. The output of paper rose from 13,899 tons in 1956 to 15,203 tons in 1957.

The production of cardboard containers continued to expand. Exports amounted to about $1.6 million in 1957, since the demand for these products increased particularly in Turkey, Cyprus, Greece and East Africa. In 1957, a second plant for the production of cardboard containers was set up.

The expansion of the printing industry (which generally depends on the business position of the other economic sectors) followed the general boom in industry. During the period under review up-to-date equipment was installed in many printing presses. This was rendered possible by imports through the Reparations Corporation, thus completing the extensive modernization of the printing branch.

TABLE X-10

Output of the Paper and Printing Industries, by Groups, 1956–1957

(millions of IL.)

Group	*1956*	*1957*	*Percentage increase*
Manufacture of paper, cardboard and articles thereof	26.1	34.2	31.0
Printing: newspapers, periodicals and books	9.2	12.5	35.9
Commercial printing, bookbinding and other types of printing	16.2	22.8	40.7
Total	51.5	69.5	35.0

(e) *Leather and Footwear*

The production of leather expanded in 1957 by about 26 per cent, at current prices, as a result of the intensified demand for leather by the shoe industry. This involved increased imports of raw materials. Tanneries improved considerably the quality of the leather produced, largely as a result of the equipment imported within the framework of the Reparations Corporation.

New and small producers, mainly new immigrants who specialize in the shoe industry, entered this branch during the period under review. These producers mainly specialized in the production of high quality shoes and, as a result of their activities, a shift to better quality products was also marked in this branch.

(f) *Rubber and Plastics*

The production of tyres and tubes continued its expansion mainly due to the rise in exports, which reached 6,201 tons in 1957 as against 5,060 tons in 1956. The two existing enterprises were expanded.

TABLE X-11

Output of the Leather and Footwear Industries, by Groups, 1956–1957

(millions of IL.)

Group	*1956*	*1957*	*Percentage increase*
Manufacture of footwear	41.7	48.0	15.1
Leather tanning	12.5	15.7	25.6
Other leather manufactures and leather substitutes	3.2	4.0	25.0
Total	57.4	67.7	17.9

Other rubber products—which were in the past adversely affected by the competition of the plastics industry which developed rapidly—picked up this year to meet this competition. Some of the enterprises renewed their equipment and shifted to new products.

The plastics industry continued to expand its production capacity and its output, in spite of the fact that the number of enterprises in this branch had already reached almost 80, mostly small enterprises.

As a result of the entry of new and small producers into this branch, a number of the bigger producers shifted in 1957 to the manufacture of products designed for industrial purposes, such as packing materials, utensils and accessories for industry and agriculture.

TABLE X–12

Output of the Rubber and Plastics Industries, by Groups, 1956–1957

(millions of IL.)

Group	*1956*	*1957*	*Percentage increase*
Manufacture and vulcanizing of tyres	12.9	16.5	27.9
Other rubber manufactures	8.0	10.0	25.0
Plastics	8.0	12.0	50.0
Total	28.9	38.5	33.2

(g) *Chemicals*

Production of fertilizers registered the greatest increase in this branch, which rose during the period under review by 68 per cent at constant prices. There was a particularly large increase in the production of ammonia, ammonia sulphate and of calcium biphosphate, whose output more than doubled. The fertilizer plant expanded production, not only with the help of new equipment which was operated at full capacity during the period under review, but it also increased its output from existing plant. In certain cases, it even succeeded in considerably exceeding its production capacity as determined by the producers of this equipment.

Other basic chemicals also substantially expanded during the period under review, and the production of a number of new commodities reached the stage of regular manufacture. This also applied to pharmaceuticals, which expanded their output in 1957 as a result of the large increase in foreign demand. This branch is now producing a number of new and important commodities.

The production of dyes, closely linked to building activities, expanded accordingly. The production of vegetable oil, which is influenced by internal demand, rose at a more moderate rate. The production of soap remained relatively stable.

The chemical branch is undergoing a process of rapid expansion, mainly of basic chemicals constituting raw materials for industry and for other economic sectors. Among the new enterprises whose establishment was begun during the period under review, the plant for carbide production should be mentioned, as well as the production of synthetic alcohol and of plastic materials by several enterprises.

TABLE X–13

Output of the Chemical Industries, by Groups, 1956–1957[a]

(millions of IL.)

Group	*1956*	*1957*	*Percentage increase*
Basic chemicals	15.4	25.0	62.3
Pharmaceuticals and insecticides	14.0	18.0	28.6
Refining of oils, manufacture of soap and detergents	41.1	47.3	15.1
Perfumery	4.8	6.0	25.0
Dyes and lakes	5.6	8.0	42.9
Other chemical manufactures	4.6	5.6	21.7
Total	85.5	109.9	28.5

[a] Including production of the Bromine Dead Sea Works Ltd., reviewed under Section (k), Mining and Quarrying. The estimated value of output in the basic chemical industries excludes output of intermediate goods manufactured at the Fertilizers and Chemicals Ltd. plant.

(h) *Non-Metallic Minerals* (*Cement, Building Materials, Glass, Ceramics*)

This branch is closely linked to building activity as, with the exception of quarried stone, it supplies most of the building materials. Accordingly, the output of this sector rose by about 33 per cent; this increase mainly represents an expansion in real terms, the price increases being much lower.

The output of cement rose during the period under review by 17 per cent; the quantity consumed by the domestic market rose by about 23 per cent. Production capacity was expanded following the installation of a second furnace at the Shimshon cement plant.

The output of plate-glass declined as production was suspended for overhauls from April until the latter half of the year. On the other hand, the output of hollow glass increased considerably, the total output of this branch expanding by 26 per cent at current prices.

The production of cement products rose due to the increased requirements of building construction. Sanitary ceramics showed a marked improvement in quality during the period under review. In 1957, their production was wholly concentrated at Beersheba following the transfer of the Harsa plant from Haifa.

TABLE X–14

Output of the Non-Metallic Mining Industries, by Groups, 1956–1957

(millions of IL.)

Group	*1956*	*1957*	*Percentage increase*
Glass and glass manufactures	10.0	12.6	26.0
Ceramics	4.8	6.9	43.8
Cement	19.2	25.3	31.8
Cement, chalk and clay products	37.6	50.8	35.1
Other non-metallic mineral products	2.9	3.8	31.0
Total	74.5	99.4	33.4

The high level of activity in this branch remained unchanged at the end of the year in spite of some decline in the number of building starts.

(i) *Metal and Machinery*

The output in this branch increased in spite of the reduction in Government orders following the Sinai campaign, when the output of this branch, which had passed through a marked slump throughout 1955 and until the end of 1956, was at its peak. However, the decline in Government orders did not affect output for civilian purposes. Here, too, there was a development similar to that in other branches related to building construction. A marked expansion even occurred in a number of sub-branches; and the increase in demand resulting from orders connected with building construction offset the decline in Government orders. A great part of this branch remained at the high level of activity which it had achieved at the end of 1956.

The basic metal industries (casting, melting and rolling) showed marked progress at the beginning of the year in the casting of various metals. The casting capacity of steel was increased in a number of enterprises, while iron and non-ferrous metal-casting processes were improved. These products will be used by the machinery and spare parts industry. The production of pipes was expanded considerably as the result of increased demand arising from the laying of new pipe lines. Basic products of rolled non-ferrous metals also appeared on the local market.

As from the middle of 1957, the influence of building construction was particularly marked on the tin and wire industries and the manufacture of structural and metal goods for the building industry.

There was a similar development in the machinery industry; and it would appear that, in 1957, the different metallurgical branches continued to shift from imports of finished goods to their domestic manufacture. In 1957, this shift did not show striking quantitaties changes, but it applied to many sub-branches of

TABLE X–15

Output of the Metal and Machinery Industries, by Groups, 1956–1957

(millions of IL.)

Group	*1956*	*1957*	*Percentage increase*
Casting, rolling and other basic metal industries	15.7	19.8	26.1
Metal tubes	11.2	15.7	40.2
Tin and wire manufactures	19.5	25.0	28.2
Heating and cooking appliances, hollow ware, cutlery and tools	11.5	15.5	34.8
Metal manufactures for building, structures and other metal goods	53.6	58.7	9.5
Total metal industry	113.7	137.5	20.9
Pumps, agricultural, industrial and building construction machinery	20.2	24.7	22.3
Household machinery and appliances	18.0	24.8	37.8
Total machinery industry	38.2	49.5	29.6

the machinery industry and to numerous stages of production. Furthermore, the machinery branch developed new types of machines and tools specially adapted to the requirements of industry in Israel. During the period under review, there was a particularly large increase in the production of household equipment, such as electric refrigerators, washing machines, etc.

(j) *Electrical Appliances and Transport Equipment*

The output of electrical appliances remained relatively stable during the period under review. However, there was a marked increase in the production of electrical installations as a result of the high level of building construction. The production of electrical household appliances was adversely affected by the restrictions imposed on the use of current for home consumption which remained in force until the second quarter of 1957. These restrictions caused many consumers to shift to other means of heating and cooking implements. The fact that this branch did not reduce its output was due to increased demand for a number of commodities which cannot easily be replaced, it may well reflect a certain increase in prices. The production of gramophones and radio sets expanded to some extent and their quality and type improved during the period under review. On the other hand, the intensified demand for durable goods did not expand output in this sector, mainly because of a considerable import of these goods by new immigrants. As compared with the preceding year no marked changes occurred in the other sub-branches.

TABLE X–16

Output of the Electrical Equipment and Transport Equipment Industries, by Groups, 1956–1957

Group	1956	1957	Percentage increase
Motors, transformers and batteries	9.2	10.5	14.1
Electrical household appliances	3.0	3.5	16.7
Radio sets, gramophones and communication accessories	7.3	8.2	12.3
Electrical installations	7.5	9.0	20.0
Total electrical equipment	27.0	31.2	15.6
Building and repair of ships, airplanes and railways	8.5	9.4	10.6
Manufacture of motor vehicles, motor cycles and spare parts	18.2	18.2	—
Other transport equipment	0.2	0.3	50.0
Total transport equipment	26.9	27.9	3.7

Several opposed tendencies were felt in the transport equipment branch. The output of motorbuses increased during the period under review, following the approval by the Ministry of Transport and Communications of the renewal of a large part of the road transport equipment. In point of fact, the output of other commercial vehicles was reduced, following the suspended production of a former model of motor cars. The assembly of a new model, begun in 1957, did not enter the production stage before the middle of 1957. There was also a decline in Government orders. On the other hand, the output of spare parts expanded considerably and, according to plans, it would appear that this branch is destined to expand even more in the future. The volume of shipbuilding (and, above all, the maintenance and repair of ships and airplanes) expanded, which was partly the result of price increases.

(k) *Quarries and Mining*

This branch is composed of two divisions. The first division—stone and lime quarries whose volume of output depends on the building activity—increased its output during the period under review. The second division covers the exploitation of mineral resources, mainly carried out by Government corporations. The present discussion will be concerned only with the latter.[1]

Their output amounted to IL. 8.2 million in 1957 as against IL. 4.8 million in the previous year, or an increase of 71 per cent at current prices. The real

[1] This discussion refers to five enterprises operated by the Ministry of Development, see Table X–17.

increase in output was about 64 per cent. Most enterprises reached regular production or, at least, approached that stage.

During the period under review, organizational changes were introduced in these enterprises, in particular in the Dead Sea works, which led to a fuller use of their installations. As a result, output per worker increased by 50 per cent. The number of employed in these enterprises did not show any real changes in 1957, but the composition of employment was altered. The number of administrative employees and of staff employed on development work declined. On other hand, there was an increase in the numbers employed in the Bromine Dead Sea Works Ltd. and the Copper Works at Timna, where 200 additional workers were recruited.

The decline in the financing of investment in these enterprises from the State budget from IL. 19.5 million in 1956 to IL. 10.4 million in 1957 was matched by a shift to regular production, as shown in Table X–17.

TABLE X–17

Investment Financing Under the Development Budget and From Advances in Selected Government Quarries, 1956–1957

(thousands of IL.)

	1956	*1957*	*Percentage increase*
Dead Sea Works Ltd.	6,529	2,569	64
Negev Phosphates Co. Ltd.	2,213	603	73
Israel Mining Industries Company	9,424	6,703	29
Bromine–Dead Sea Works Ltd.	1,037	438	58
Negev Ceramic Material Ltd.	273	110	60
Total	19,476	10,423	48

SOURCE: The Accountant-General, Ministry of Finance.

A considerable part of the investment in fixed assets of these companies was financed by long-term and intermediate loans and only to a smaller extent through share capital and funds. This composition of capital is the result of the Government policy of investment through loans from the Development Budget rather than by subscribing shares. As a result, loans represent 87 per cent of total capital invested in fixed assets. Of these loans, about 99 per cent were granted by the Government.

(i) *The Dead Sea Works Ltd.*

Potash production rose to 78,748 tons in 1957 as against 45,295 tons in 1956, an increase of 74 per cent. Potash sales increased, from 20,000 tons in 1956 to 93,000 tons in 1957, of which 82,000 tons were exported. The income from

TABLE X-18

Fixed Assets in Selected Government Quarries by Source of Financing, as at 31.3.1957

(thousands of IL.)

	Investment in fixed assets	*Own capital*	*Government loans*
Dead Sea Works Ltd.	32,369	3,660	25,802[a]
Negev Phosphates Co. Ltd	6,869	1,000	6,362
Israel Mining Industries Company	21,668	225	21,324
Bromine-Dead Sea Works Ltd.	2,497	550	1,583
Negev Ceramic Material Ltd.	195	93	248
Total	63,598	5,528	55,319

SOURCE: Ministry of Development.

[a] Including a bond issue to the value of IL. 415,000. Total investment in fixed and in liquid assets as at the end of the financial year 1956/1957 amounted to IL. 70.8 million.

exports of potash amounted to about $2.5 million as compared with about $0.8 million in 1956.

The number of employed fell from 490 in 1956 to an average of 480 during the period under review. This decline in employment and the even more conspicuous reduction in overtime (which fell from 35,000 hours in December 1956 to 11,500 hours in December 1957) caused a fall in the wage bill. Output per worker rose from 92 tons in 1956 to 165 tons in 1957.

In 1957 wells were sunk in the Nahal Tamar area where sweet water exceeding 50 cubic meters per hour was found. It may be assumed that the finding of water in this area will contribute to the solution of the sweet water problem, which is one of the crucial problems in Dead Sea poash production.

(*ii*) *Negev Phosphates Co. Ltd.*

In the fiscal year 1957/58 the Negev Phosphates Company managed for the first time to arrive at a surplus of about half of depreciation charges and interest, after covering its current expenditure. The output of phosphates rose by 19 per cent and stood at 139,975 tons in 1957 as against 117,145 tons in 1956.

Most of this phosphate output is consumed by Fertilizers and Chemicals Ltd. to satisfy the requirements of the domestic market, although there are large foreign markets for Israel phosphates. During the period under review 26,817 tons of phosphates were exported. The competitiveness of Israel phosphates in foreign markets depends on their quality and price. The price is mainly determined by the cost of continental transport, which represents today 40 to 45 per cent of the sale price.

(*iii*) *Negev Ceramic Materials Ltd.*

In addition to the quarrying of clay destined for the ceramics industry and that of glass sand intended for the glass works, considerable quantities of flint clay, used for the manufacture of chamotte bricks for furnaces, were found in the Makhtesh Ramon. A sand washing plant was installed at Dimona in 1957, designed to improve the quality of the sand. The benefication plant will supply 15,000 tons of glass sand a year. The value of the output of this Company amounted to IL. 373,000 in 1957 as against IL. 331,000 in 1956.

(*iv*) *The Bromine Dead Sea Works Ltd.*

The plant for the extraction of bromine—the installation of which was completed in 1956—was run-in in 1957. The installation for the production of ethylene dibromine was completed during the period under review but production in 1957 did not attain the planned capacity. Bromine production was 730 tons in 1957, of which 175 tons were used for the production of 195 tons of ethylene dibromine, the basic material required for the production of bromine.

Bromine is wholly intended for exports, which amounted to 466 tons in 1957. The income from bromine exports, including premiums, was IL. 353,208. while the income from the sale of ethylene dibromine of which 80 per cent were exported, amounted to IL. 185,517.

The price of domestic inputs has a decisive influence on the level of production costs in this enterprise. The price of electricity consumed by this company is 102.2 prutot per kWh. A committee appointed by the Ministry of Development to fix the price of electricity, laid down a new price of 60–65 prutot per kWh; this had not come into force during the period under review. The price of oil fuel, chlorine and alcohol are also higher than world prices.

The marketing and storage of bromine are among the main problems faced by this enterprise. Upon the installation of the ethylene dibromine plant, a considerable part of the manufactured bromine will serve for the production of this commodity whose marketing and storage are easier.

7. Electricity

There were no considerable changes in 1957 in the production capacity of the Palestine Electric Corp. Ltd. Production capacity was 266,00 kWh at the end of 1957 as against 259,000 kWh (including Jerusalem) at the end of 1956. The number of domestic consumers rose by 32,916, as a result of development in the building sector and the completion of new housing units.

The number of additional connexious for all types of consumption was 37,499, and the total number of consumers rose from 400,898 at the end of 1956 to 438,397 at the end of 1957.

However, in contrast with the increase in production capacity and in the number of consumers in 1957, there was a decline in electricity production and sales. Electricity sales, which were 1,142 million kWh in 1956, fell to 1,113 million kWh in 1957.

This decline interrupted, for the first time since 1948, the continuous rise in electricity consumption. However, a general decline in electricity consumption was not felt, as overall consumption is affected by opposed trends, dependent on the different categories of consumers. The changes in the electricity consumption pattern were particularly reflected in the reduced domestic consumption. The restrictions imposed on electricity consumption which were still in force at the beginning of the year, and the progressive structure of the household tariff as distinguished from other tariffs, were responsible for this.

Allowing for the increase in the number of domestic consumers and the decline in consumption, it appears that the decline in electricity consumption per domestic consumer was 30 per cent.

Contrary to the development of average domestic electricity consumption, the consumption of electricity for commerce, irrigation and industry rose by 7.9 per consumer, or at an overall rate of 13 per cent for industry as a whole.

Chemical production was responsible for the largest increase in industrial electricity consumption, acounting for over 26 per cent of the increase.

These changes in electricity consumption considerably affected the income of the electricity corporation.

The following tables show changes in the number of consumers and in electricity consumption by type of consumption.

The changed consumption pattern of electricity was due to several factors. On the one hand, industrial development led to a relative rise in total electricity consumption. On the other hand, the restrictions imposed on the use of electricity (which came into force at the end of 1956 and continued until the early part of 1957) together with the changes in household tariffs, caused an absolute decline in the latter type of consumption.

TABLE X–19

Consumption of Electricity, by Type of Consumer, 1956–1957

(numbers)

End of period

Type of consumption	*1956*	*1957*	*Number of new connection in 1957*	*Percentage increase*
Households	337,804	370,720	32,916	9.7
Commerce, public institutions, etc.	48,786	52,594	3,808	7.8
Industry	11,876	12,551	675	5.7
Pumping	2,432	2,532	100	4.1
Total number of consumers	400,898	438,397	37,499	9.4

TABLE X–20

Electricity Consumption, by Type of Consumption, 1956–1957
(millions of kWh)

Type of consumption	1956		1957		Percentage increase or decrease (–)
	million kWh	Percentages	million kWh	Percentages	
Households	325.5	28.5	250.7	22.5	–23.0
Commerce, public institutions, etc.	135.1	11.8	124.7	11.2	– 7.7
Industry	339.7	29.7	387.4	34.8	14.0
Pumping	342.2	30.0	350.1	31.5	2.3
Total consumption	1,142.5	100.0	1,112.9	100.0	– 2.6

The household tariff is composed so that additional consumption over and above a specified minimum (determined by the size of the apartment) is more expensive for the consumer. This tariff differs from that for other types of consumption: it does not encourage the use of electric appliances. As a result of the restrictions in the early part of the year, many domestic consumers grew accustomed to saving electricity and shifted to the use of other types of heating equipment.

The continuously rising number of industrial consumers—among whom there are large consumers of electricity—will tend under prevailing tariffs (even after the changes introduced in the early part of 1958) to reduce the income of the electricity corporation insofar as there will be no increase in domestic and commercial consumption.

The increasing importance of industry in electricity consumption causes, with the existing structure of the tariff, not only a reduction in the company's income, but also contributes to greater pressure for the increase in production capacity. This production capacity is necessary in order to meet the peak requirements of industry.

On the other hand, income from domestic consumption permits the maintainance of low tariffs for industrial production. Its peak loads are, however, more or less the same as those of other consumers, and are concentrated in the very hours in which restrictions are called for.

Investments of the electricity corporation were estimated at IL. 44 million in 1957 against IL. 49 million in 1956. In other words, the volume of investment declined by 10 per cent.

The time-lag between the placing of orders for electric generating equipment and the beginning of its operation is four to five years. Investment in electricity has, therefore, to be planned well in advance of industrial investment plans. A lag in generating capacity is bound to cause difficulties in the rational exploitation of other industrial investments. There is great pressure for additional generating capacity in view of the increase in the number of industrial consumers resulting from new investments and due to the average increase in total electricity consumption.

Investment in power stations and in the electricity network should, therefore, be considered as closely related to the expansion of industrial production as a whole.

The production capacity of power stations has to be adjusted to the annual peak load (at mid-day during the summer months), in addition to a reserve in it equal in size to the largest operating unit. The estimated load required in 1961 calls for the doubling of the generating capacity of power stations between 1957 and 1961. According to the estimates of the committee for determining the peak load, 75 per cent of the additional generating capacity required by 1961 will arise from the increase in industrial electricity consumption. The available information on industrial development shows that the increased demand for electricity will be caused mainly by a limited number of large enterprises, among a) new enterprises such as the "Koor" steel works and the carbide and rayon plants; b) existing enterprises such as cement and paper, which will expand output in 1958; and c) enterprises which until now had been generating their own electricity but which will be connected to the national network, such as the Negev Phosphate Works Ltd., the Dead Sea Works and the Bromine–Dead Sea Works.

The expansion of heavy industry, much of which is working in three shifts owing to the nature of its manufacturing processes, is likely to lead to a further improvement in the exploitation of plant. Even though today this rate is one of the highest in the world, an increase can help considerably to improve the company's financial position.

8. Petroleum

Eight petroleum companies were operating in Israel in 1957 under the petroleum law. Of these, four were Israeli companies and four foreign companies. Two further companies are being established.

The number of oil wells exploited in 1957 was 15 of which 7 werc brought into production in that year. The average output per well was 75 barrels a day: annual output at the Heletz field was 62,500 tons of crude oil amounting to $1.15 million[1]. In 1957, domestic output supplied about 4.5 per cent of the annual consumption which is 1.4 million tons.

The foreign exchange saved through the use of domestic crude oil is about 40–50 per cent of the cost of imported oil.

A large number of drillings made in the coastal plain encountered signs of natural gas. In the middle of 1957 measures were adopted to analyze production

[1] Calculated at a price of $2.5 per barrel of crude oil.

possibilities. The first experiments at the "Beeri 6" well proved that it can yield about a quarter of a million cubic meters per day with a calorific content equal to a daily output of 400 barrels of crude oil.

Between 1953 and until the end of 1957 expenditure on oil drillings, on the development of the Heletz field and the acquisition of drilling equipment amounted to about IL. 60 million. Half of this amount was spent in foreign exchange, either by foreign or by Israeli companies.

Over half of this amount was spent abroad on running costs, such as wages, administrative expenses, etc.

TABLE X-21

Expenditure on Oil Drilling during 1954–1957

	Million IL.	*Thousand U.S.$*
Oil drilling equipment	5,188	8,200
Current expenditure in Israel	22,312	2,100
Current expenditure abroad (excluding equipment)	—	7,700
Total	27,500	18,000

SOURCE: Fuel Division, Ministry of Finance.

In 1957, the outlays on oil drilling amounted to IL. 14 million, as against IL. 27 million in 1956. Outlays in foreign exchange fell from $5.4 million in 1956 to $3.9 million in 1957.

TABLE X-22

Expenditure of Petroleum Companies, 1956–1957

	Million U.S.$		*Million IL.*[a]	
	1956	*1957*	*1956*	*1957*
Purchase of machinery and equipment abroad	3.5	1.5	6.3	2.7
Purchase of machinery and equipment inIsrael	—	—	2.1	2.2
(including grading and building foundations at oil well locations)	—	—	15.2	5.1
Other current expenditure abroad	1.9	2.4	3.4	4.3
Total	5.4	3.9	27.0	14.3

SOURCE: Fuel Division, Ministry of Finance.
[a] IL. 1.800=U.S. $ 1.00.

The lion's share of current expenditure on oil drilling was spent on deep drilling. According to the opinion voiced by experts, a portion of the high expenditure on oil drillings in Israel and the considerable number of dry wells was caused by inadequate preliminary research. Contrary to the practice in other countries which have recently engaged in oil drilling, where the cost of preliminary surveys amounts to 40 per cent of total current expenditure, the cost of such surveys in Israel represented only 25 per cent of current expenditure. Apart from the higher costs caused by the absence of preliminary surveys, the number of dry bores made in geological strata which were not adequately surveyed is no evidence that there are no chances to find oil in other areas.