CHAPTER XIII

TRANSPORTATION

THE REAL OUTPUT of the transportation sector rose by 17 per cent in 1962. This was the highest rate of growth in the past six years, during which it averaged 12 per cent annually. The number of persons employed in the sector rose by only 4 per cent, and hence the increase in output per gainfully employed person came to 12 per cent. At the same time, the capital stock of the sector expanded by 17 per cent, and that per gainfully employed person by 12 per cent.

Shipping and civil aviation contributed approximately half the incremental output. The rate of expansion of the shipping branch was considerably accelerated, one of the principal reasons apparently being the final integration of the large number of new ships acquired by the shipping companies. In the civil aviation branch, on the other hand, the rate of expansion slowed down. This was due chiefly to the diminished demand for air transport

Table XIII–1

CHANGES IN REAL OUTPUT AND PRICES IN THE TRANSPORTATION SECTOR, 1961–62

(percentages)

Branch	Increase in output over previous year		Rise in prices over previous year		Weight in incremental output of sector in 1962	Average annual rise in output, 1957–62
	1961	1962	1961	1962		
Shipping	17	32	8	50[a]	36	16
Civil aviation	48	27	2	38[a]	13	33
Railway	—	18	1	8	6	8
Buses	5	6	14	12	10	10
Other road vehicles (mainly trucks)	11	17	7	10	29	9
Ports	—	9	—	21[a]	6	8
All branches[b]	11	17	8	21	100	12

[a] The direct effect of devaluation upon prices stated in Israel pounds has been taken into account.

[b] Weighted according to Central Bureau of Statistics' estimate of value added in each branch.

services in the international market, which also found expression in the steep decline in the number of tourists flying to and from Israel. The number of aircraft owned by El Al increased, this being reflected by the larger share of own aircraft in the company's operations and a corresponding drop in the share of chartered aircraft.

The output of the various land transportation branches rose as compared with 1961. There was an especially striking increase in the output of the railway and the trucking industry: the two factors primarily responsible were (1) the expansion of activity in other sectors of the economy—mainly in construction (the hauling of stone for Ashdod harbor was directly responsible for the higher output of the railway); and (2) the larger quantity of cargo passing through Israel ports.

The average price level in the transportation sector went up by 21 per cent in 1962. This was partly due to the devaluation, which rendered some inputs dearer and at the same time automatically increased the prices of shipping, civil aviation, and some harbor services in terms of Israel pounds. These automatic increases were only partly offset by reductions in tax rates.

The real volume of investment in transportation contracted by 11 per cent. This was due entirely to the smaller investment in ships, that in most other branches increasing. The expansion of investment was particularly marked as regards harbor construction and commercial road vehicles.

1. Shipping

Israel's merchant fleet grew much more slowly in 1962 than during the preceding two years. It was augmented by four cargo vessels—three of them new—with a total deadweight tonnage of 17,000, while one old freighter of 5,200-ton capacity was scrapped. Total deadweight tonnage in 1962 was on the average 14 per cent larger than in 1961. The average speed of the fleet remained unchanged, and consequently its carrying capacity (derived by multiplying deadweight tonnage by speed) increased by 14 per cent as well.

Despite the continued depression in international shipping[1] and the low cargo tariffs in the maritime freight market, Israel shipping recovered slightly. This was reflected, *inter alia,* in a 32 per cent gain in real output, as compared with the 14 per cent increase in average carrying capacity. Accordingly, the downward trend in the utilization of the merchant fleet which prevailed in previous years was arrested. The higher rate of utilization was apparently due in part to the fact that in 1961 the 44 per cent growth in carrying capacity was too great to permit the efficient integration of the new ships,

[1] According to the index published by the United Kingdom Chamber of Shipping, average cargo rates for tramp shipping fell by 16.5 per cent in 1962, while those for ships on time charter fell by 20.2 per cent.

whereas in 1962 the expansion of capacity was much more moderate, making it possible to integrate and utilize the ships more efficiently.

Table XIII–2

ISRAEL MERCHANT FLEET, BY TYPE OF SHIP, GROSS REGISTERED TONNAGE, AND DEADWEIGHT TONNAGE, 1961–62

Type of ship	Number of ships		Gross registered tonnage		Deadweight tonnage	
	1961	1962	1961	1962	1961	1962
Passenger	4	4	30,853	30,853	9,184	9,184
Mixed[a]	2	2	19,708	19,708	13,153	13,153
Tankers[b]	8	8	130,747	130,747	203,006	203,006
Cargo	56	59	308,341	316,838	427,085	438,785
Total	70	73	489,649	498,146	652,428	664,128

[a] Ships used for both passenger and cargo traffic.
[b] Including five tankers operating under foreign flags, with a gross registered tonnage of 96,930 and a deadweight tonnage of 151,707.
SOURCE: Ministry of Transport and Communications, Shipping and Ports Division.

Owing to the rapid growth of the fleet, manpower recruitment has become a major problem. At the end of 1962, foreign seamen constituted 19 per cent of the total complement of Israel's merchant ships. In view of the continued expansion of the fleet scheduled for 1963 and 1964, the problem may be further aggravated. An attempt to overcome it is now being made by expanding the maritime manpower training program.

(a) *Cargo traffic*

The share of Israel-flag ships in the transport of cargo to and from the country continued to increase in 1962. The growth was particularly striking as regards import cargoes, where the share of the local fleet exceeded 50 per cent for the first time. In export cargoes the proportion was appreciably smaller, reaching only 34 per cent.

(b) *Passenger traffic*

The growth in maritime passenger traffic to and from Israel was smaller in 1962 than in 1961, amounting to 27 per cent as against the previous year's 41 per cent. The number of passengers on Israel ships remained the same, and the share of such ships within total passenger traffic to and from Israel declined. There was a change in the relative importance of the various lines operated by local shipping companies: whereas the number of passengers on Mediterranean lines decreased, there was an increase in the number of

Table XIII-3

MARITIME FREIGHT TRAFFIC TO AND FROM ISRAEL, BY FLAG, 1958-62*

(thousands of metric tons)

Year	Imports		Exports		Total	
	All flags	Percentage share of Israel flag	All flags	Percentage share of Israel flag	All flags	Percentage share of Israel flag
1958	1,648	30	773	26	2,421	29
1959	1,882	39	1,092	22	2,974	33
1960	2,035	41	1,179	25	3,214	35
1961	2,155	43	1,061	31	3,216	39
1962	2,402	51	1,106	34	3,508	46

* Excluding fuel carried in bulk.
SOURCE: Shipping companies and the Central Bureau of Statistics.

passengers on the transatlantic route. Since this led to an increase in the average distance travelled per passenger, there was a rise in the output of Israel shipping in the passenger branch despite the fact that the number of passengers did not change. The number of passengers carried by ships chartered by Israel companies rose very steeply in 1962.

2. CIVIL AVIATION

(a) *International civil aviation*

El Al received three new aircraft during 1962: one Boeing 707 and two Boeing 720B's. This completed the company's present development program. At the end of 1962, its fleet consisted of three Boeing 707's, two Boeing 720B's, and four Bristol-Britannia's. The total investment in aircraft during 1962 was $ 17 million—40 per cent more than in 1961.

The increase in El Al's output was much smaller than in 1961, though still very considerable—27 per cent. The lower rate of expansion was due to two factors: (a) the rate of increase in the carrying capacity was smaller than in 1961; and (b) the demand for international civil aviation services expanded rather more slowly in 1962, and this was also reflected by a fairly steep decline in the growth of tourist traffic to Israel.

The number of ton-kilometers performed by El Al, inclusive of chartered aircraft, rose by 34 per cent, reaching 187 million in 1962 as against 139 million the year before. The considerable increase in the company's own flying equipment enabled it to reduce the number of chartered planes. The proportion of ton-kilometers performed by the latter fell from 20 per cent of

Table XIII-4

PASSENGER TRAFFIC TO AND FROM ISRAEL BY SEA AND AIR, 1958–62[a]

Year	Sea			Air			Total	Per cent increase over previous year
	No. of passengers	Per cent of total passengers	Per cent increase over previous year	No. of passengers	Per cent of total passengers	Per cent increase over previous year		
1958	77,100	37	—	133,700	63	—	210,810	—
1959	77,280	32	—	167,700	68	25	244,980	16
1960	97,680	31	26	219,100	69	31	316,780	29
1961	137,985	33	41	285,970	67	31	423,955	34
1962	175,730	36	27	311,000	64	9	486,730	15

[a] Excluding immigrants.

SOURCE: Shipping companies and airlines.

Table XIII-5

OPERATIONAL DATA OF EL AL, 1959-62[a]

Year	No. of flights	Hours flown	Km. flown (thousands)	Average kilometrage per passenger[b]	Index of payload capacity[c]	Per cent of capacity exploited[d]
1959	1,750	16,950	7,507	3,714	100.0	59.6
1960	2,065	18,899	8,599	3,709	118.8	63.3
1961	3,025	23,450	11,602	3,760	190.1	58.6
1962	2,978	20,317	12,357	4,062	250,0	56.0

[a] Including scheduled and special flights.
[b] Excluding special flights.
[c] Measured according to available seat-km.
[d] Passengers-km. flown as compared with available seat-km.
SOURCE: El Al.

the total in 1961 to 7 per cent in 1962. The number of ton-kilometers performed by El Al's own aircraft rose by 56 per cent.

The average daily utilization of El Al's aircraft increased appreciably during the peak season of 1962—10.2 hours as compared with 8.5 in the 1961 peak season—but during the off-season there was a decline, from 8.7 hours per day in 1961 to only 7.4 hours in 1962. The change in average utilization for the entire year was small—from 8.6 hours per day in 1961 to 8.9 in 1962.

The increase in the number of ton-kilometers sold (26 per cent) did not keep pace with the number of ton-kilometers performed (34 per cent), and consequently the overall load factor[1] declined from 55 per cent in 1961 to 52 per cent in 1962. This reduction took place entirely on the European and South African lines, there being even a slight improvement—from 52.4 to 53.8 per cent—on the North Atlantic route. The utilizaion ratio for passenger traffic alone likewise decreased—from 58.3 per cent in 1961 to 55.8 per cent in 1962. Here too the decline was confined to the European and South African lines, while a slight increase took place on the North Atlantic line.

The number of ton-kilometers performed per employee[2] rose by 19 per cent, and the number of ton-kilometers sold per employee by 14 per cent. However, it must be remembered that the company introduced more modern equipment during the year under review, and this reduces the significance of the above comparisons.

The lower utilization of El Al aircraft during 1962 was connected with the big increase in payload capacity following the changeover to jet aircraft. A drop in the rate of utilization has been a common occurrence among inter-

[1] Rate of utilization in respect of passenger and cargo transport alike.
[2] Including administrative staff.

national airlines in recent years, as the marked expansion of capacity due to the introduction of modern jet aircraft into service has not been accompanied by a parallel growth in demand. In 1962 the average utilization rate for international airlines on the North Atlantic route, which is one of the most important international routes, remained relatively low—50.9 per cent as compared with 50.3 per cent in 1961.

It would undoubtedly be possible to increase the rate by cutting prices, but airlines belonging to the International Air Transport Association (IATA), which determines price policy, reached the conclusion that the demand for air services is inelastic, so that price cuts would not greatly affect demand and hence would reduce revenue.

Passenger traffic to and from Israel expanded much more slowly in 1962 than in previous years. This applies particularly to those travelling by air, whose number increased by only 9 per cent, as against an increase of 27 per cent in sea passengers.

However, the number of passengers carried by El Al rose by 18 per cent, and the company's share of total air passenger business with this country went up from 55 per cent in 1961 to 59 per cent in 1962. This increase is partly attributable to the preference shown for El Al by Jewish passengers, and partly to the company's larger payload capacity following the introduction of additional aircraft into service. These two factors led to an increase in the number of passengers flying by El Al despite the supply surplus in other international airlines operating on the same route.

El Al's financial position worsened in 1962, when it showed a loss of over IL 1 million for the year. The percentage of value added declined, and the cost per dollar of value added rose. Fares and freight charges remained unchanged during the year, but since there was apparently an increase in the percentage of passengers on charter flights, the fares for which are cheaper, this was equivalent to a decline in average fares. This development is reflected by the fact that revenue (at a constant exchange rate) expanded by only 21 per cent, while the increase in real output came to 27 per cent.

Toward the end of 1962, the annual IATA Traffic Conference agreed to approve group flights to and from Israel at reduced prices, on condition that charter flights be suspended. By virtue of this agreement, it will be possible to carry on the same airplane both regular passengers and organized groups, thus increasing the utilization rate. Consequently, even should the new arrangement fail to increase average revenue per passenger-kilometer, it will reduce average expenditure per passenger-kilometer by raising the load factor.

(b) *Domestic air service*

The number of passengers on the domestic air routes operated by Arkia Airways continued to show a slower rate of expansion in 1962, the increment amounting to only 3 per cent as compared with 10 per cent in 1961 and

21 per cent in 1960. The volume of cargo carried declined sharply—from 248 tons in 1961 to 156 tons in 1962.

There were no changes in the rates of utilization: on the Eilat line it remained 80 per cent, while on the Rosh Pina line there was a slight decline, from 45 per cent in 1961 to 44 per cent in 1962.

3. Ports

The output of Israel's ports rose by 9 per cent in 1962. It had not risen at all in 1961, while in 1960 there was an increase of 8 per cent. The volume of cargo reached 3,508,000 tons, as against 3,216,000 tons in 1961. The increase in the tonnage unloaded was larger, reaching some 12 per cent; this reflects the continued rise in the proportion of import cargoes, which constituted 68.5 per cent of all freight handled in Israel's ports in 1962, as compared with 67.0 per cent in 1961 and 63.0 per cent in 1960. The decline in the percentage of export cargoes was due to very much smaller shipments of minerals and a more moderate decrease in those of cement—two commodities which accounted for a large proportion of total export tonnage.

There were no striking changes in the relative shares of the various ports: approximately 84 per cent of all cargoes passed through Haifa, as in the previous year, while the remainder was more or less equally divided between Tel Aviv, Jaffa, and Eilat.

The average level of port charges rose steeply in 1962—by 21 per cent. This was due to two factors:

1. A rise of 67 per cent, following devaluation, in those charges collectable in foreign currency;

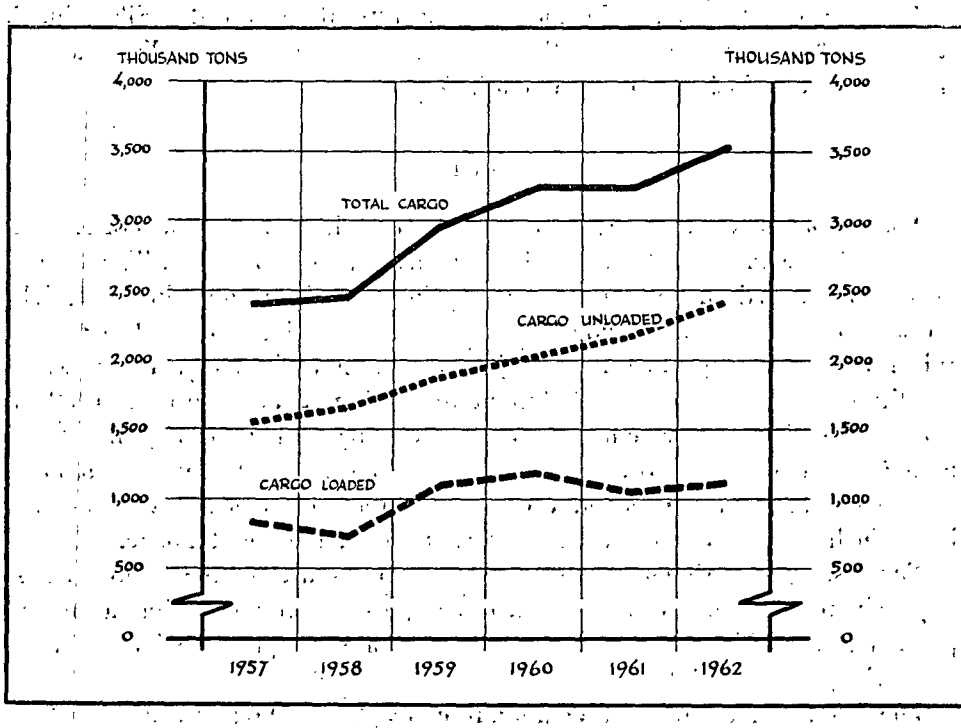
2. The raising of certain charges toward the end of 1961, namely, those for the use of port facilities, sorting and weighing, overtime, and stevedoring. This may be regarded as part of the process of adjusting tariffs to costs which began already in 1960, after some years during which the level of charges had remained unchanged.

The growth in the volume of cargo passing through Haifa Port was slightly below average, reaching 8.8 per cent. The increase was entirely concentrated in import cargoes, while export shipments contracted somewhat. There was a slight decline in the amount of grain unloaded, but the volume of other import cargoes increased appreciably, especially as regards iron, wood, minerals, and general cargo. As for exports, there was a big increase in the quantity of citrus and a decrease in minerals.

Indicators of the level of services show a continuous improvement in the performance of Haifa Port over the past few years. The total time required to turn around ships, from their entry into harbor until the end of unloading, continued to decline in 1962, while the average amount of cargo unloaded per working day continued to increase. There were also some improvements

Diagram XIII-1

CARGO TRAFFIC THROUGH ISRAEL'S PORTS, 1957–62



in loading, reflected both by the shorter time now required for this operation and in the larger quantity of cargo loaded per working day.

One of the difficult problems in the operation of ports is that of seasonal variations. Whereas during the winter months—January to March, when citrus exports are at their peak—there is great pressure on Israel's ports and they are forced to perform beyond their optimum capacity, during the summer business is slack and a large part of the factors of production are idle. These seasonal variations create problems in two areas: manpower and equipment. During the peak months, the ports find it difficult to recruit all the manpower they require, while during the slow period there is not even enough work for the permanent staff. This situation applies particularly to Israel's Mediterranean ports.

At Eilat operations are not subject to seasonal fluctuations, but they suffer from extreme irregularity, which makes manpower planning difficult. Sometimes all or most of the permanent port workers are idle, while at other times ships may be waiting in harbor because sufficient manpower is not available. A study of the problem disclosed that it is more profitable to increase the number of permanent workers than to continue operating with the present number and pay demurrage. The expected increase in the number of regular

Table XIII–6

CARGO TRAFFIC THROUGH ISRAEL'S PORTS, 1961–62

Port	Unloading			Loading			All cargoes		
	1961	1962	Per cent increase or decrease(–)	1961	1962	Per cent increase or decrease(–)	1961	1962	Per cent increase or decrease(–)
				Thousands of tons					
Haifa	1,783	2,025	14	908	903	–1	2,691	2,928	9
Tel Aviv	183	204	11	1	1	—	184	205	11
Jaffa	129	122	–5	41	63	54	170	185	9
Eilat	60	51	–15	111	139	25	171	190	11
All ports	2,155	2,402	11	1,061	1,106	4	3,216	3,508	9
				Percentages					
Haifa	83	84		86	82		84	84	
Tel Aviv	8	9		—	—		6	6	
Jaffa	6	5		4	6		5	5	
Eilat	3	2		10	12		5	5	
All ports	100	100		100	100		100	100	

SOURCE: Israel Ports Authority.

lines to Eilat, as well as in the volume of cargo, presumably will reduce the fluctuations and permit the fuller employment of the labor force.

There is also a shortage of equipment and installations—especially of wharfs—during the winter months, while during the summer they are partly idle. The shortage of wharfs during the peak season necessitates the use of lighters and work in three shifts, thus raising operating costs.

Owing to the pressure on the ports, particularly Haifa, and the large expansion of cargo traffic anticipated in the coming years, work is now going ahead to increase the capacity of Haifa and Eilat harbors, and a new deep-water port is being constructed at Ashdod. Investment in harbor development during 1962 totalled IL 21 million. Of this amount, IL 8.5 million was invested in the Haifa and Kishon harbors, IL 1.3 million in Eilat harbor, and IL 12 million in the construction of the new port at Ashdod.

4. Rail Transport

The real increase in the output of the railway branch came to 18 per cent in 1962, compared with no increase at all in 1961 and an average annual increase of 6 per cent during the five years 1957–61. The expansion in 1962 embraced both passenger and freight traffic, though especially the latter. The real increase in input was much smaller—7 per cent. The difference between the rates of increase in input and output shows that a considerable improvement has taken place in the operation of Israel Railways. However, this is not fully reflected in its financial position, since input prices have risen faster than output prices.

Investment in the railroad contracted by 45 per cent in 1962, and totalled IL 3.2 million, most of it in equipment. In recent years, the volume of investment has been small compared with the 1955–57 period, when the bulk of the railway's equipment was replaced in the course of the changeover from steam to diesel engines.

The average number of employees, including temporary staff, remained unchanged at about 2,270. Thus output per employee increased by 18 per cent—the fastest rate in recent years.

The output of the railway in passenger transport, which is measured in passenger-kilometers, rose by 11 per cent in 1962. The number of passengers increased to the same extent; thus the length of the average journey remained unchanged at approximately 80 kilometers. The average length of journey in Israel is much greater than in most European countries, since the local railway operates almost exclusively on relatively long lines, while the short lines are virtually monopolized by the buses.

The big increase in the number of passengers—from 4.5 million to 5 million—occurred almost entirely in the summer months. It was due to the running of more trains per day, which made it possible to provide the public with a more convenient timetable. A further contributory factor was perhaps the fall in the

relative price of train journeys. Whereas railway fares rose by an average of 8 per cent during the year, fares on the parallel bus routes were raised by as much as 12 per cent.

The average utilization of passenger trains (the ratio of passenger-kilometers to available seat-kilometers) did not change appreciably in 1962, remaining below 60 per cent. This is a higher rate than in most European countries. It is impossible to increase it further without adversely affecting the standard of service, since the allocation of sufficient coaches to relieve crowded trains involves the use of more coaches than necessary on the less crowded return journey over the same line.

Real output in freight transport went up 23 per cent in 1962. This increase is especially striking in view of the slight decline that occurred in 1961. The average rate of increase over the last five years was 6 per cent per annum. The big expansion of 1962 was mainly due to two factors: the hauling of stone for the construction of Ashdod harbor and the increase in cargo traffic at Haifa Port (especially as regards citrus cargoes, which are transported primarily by rail).

The financial position of Israel Railways improved in 1962. The operational deficit, including allocations for pensions, decreased from IL 2.0 million in 1961 to IL 1.6 million in the year under review. Excluding pension allocations, a deficit of IL 350,000 in 1961 was converted into a surplus of IL 370,000 in 1962. However, the total deficit increased from IL 6.1 million to IL 6.5 million.

Income from passenger traffic rose by 20 per cent in 1962 and that from freight traffic by 32 per cent; thus the proportion of the former was reduced. Expenditure increased by only 20 per cent. Outlay on wages, inclusive of pension allocations, went up by 19 per cent, depreciation and interest by 19 per cent, and expenditure on materials and miscellaneous items by 30 per cent.

Changes in input and output prices had a detrimental effect on the size of the deficit in 1962. While input prices rose by 12 per cent, the rise in output prices was only 8 per cent.

Table XIII-7

RAILWAY SERVICES, 1958–62

Year	Ton–km. (million)	Per cent increase or decrease (–) as against previous year	Passenger–km. (million)	Per cent increase or decrease (–) as against previous year
1958	203.0	11.9	348.6	4.0
1959	218.4	7.6	364.4	4.5
1960	227.4	4.1	362.8	–0.4
1961	226.0	–0.6	364.8	0.6
1962	277.7	22.9	405.2	11.1

SOURCE: Reports of Israel Railways.

At 1961 prices, the decrease in the operational deficit would have been greater, while the overall deficit would have declined instead of increasing slightly. Nevertheless, it would seem that some of the real growth in the output of the railway was due to the fact that its tariffs rose less than those of alternative transportation services, i.e. buses and road haulage. A bigger increase in railway charges would have reduced the rate of increase in real output, and it is therefore difficult to estimate the effect of such a policy upon the total income of the railway.

The developments of 1962 reflect the fact that the railway is in a position where an increase in output reduces average costs per unit of output. If the big increment of 1962 is not fortuitous but signifies that a real turning point has been reached, the railway should be able to exploit the advantages of expansion in the future with good prospects of fully covering operating costs.

Table XIII–8

INCOME AND EXPENDITURE OF ISRAEL RAILWAYS, 1961–62

(IL thousand)

	Income				Expenditure			Deficit	
	Passengers	Freight	Other	Total	Operational[a]	Depreciation and interest	Total	Operational	Total
1961	4,877	6,869	515	12,261	14,290	4,104	18,394	2,029	6,133
1962	5,852	9,033	789	15,674	17,273	4,881	22,154	1,599	6,480
Per cent increase or decrease (–)	20	32	53	28	21	19	20	–21	6

[a] Including allocations for pensions.
SOURCE: Reports of Israel Railways.

5. ROAD TRANSPORT

(a) *Trucks*

The real output of the trucking industry grew by 17 per cent in 1962, which was the highest rate in the last five years. This very considerable expansion was due to the fact that other sectors of the economy expanded their activities to a greater extent than in the previous year (this applies particularly to the construction sector), while the increase in cargo traffic through Israel ports was also greater than usual. These factors were reflected in railway operations too, and since the expansion of railway freight traffic was even more pronounced, reaching 23 per cent, the share of road haulage in total overland freight transportation declined somewhat.

At the end of March 1962, there were 25,331 trucks in Israel—about 9 per cent more than a year earlier. The trend toward smaller trucks, characteristic of recent years, was still in evidence in 1962: the average authorized load per truck decreased from 3.3 tons in 1960 to 3.2 tons in 1961 and 3.1 tons during the year under review. The increase in the total authorized load of the truck fleet was smaller than the increase in the number of trucks, reaching only 5.5 per cent.

Road haulage rates rose by 10 per cent in 1962. This was partly due to the higher prices of various inputs after the devaluation. A further factor was the big increase in demand for transportation services, which caused output to rise much faster than authorized tonnage (17 vs. 5.5 per cent).

The structure of the truck fleet from the viewpoint of authorized cargo shows a rise in the share of the lower categories. This is connected with the breakdown according to type of fuel used: over 80 per cent of all trucks in the country are gasoline-driven, while the remainder use diesel oil. However, the relative share of these two categories in the volume of cargo carried is just the reverse: most of the haulage is done by diesel trucks, which have big authorized loads and operate on long routes.

Table XIII-9

TRUCK FLEET, BY AUTHORIZED CARGO, 1961-62

Authorized cargo (tons)	No. of trucks March 31, 1961	No. of trucks March 31, 1962	Per cent increase or decrease (–)
Up to 2.4	13,734	15,323	11.6
2.5 to 4.9	5,394	5,457	1.2
5.0 to 7.9	2,660	3,058	14.6
8.0 to 14.9	864	912	5.6
15.0 to 19.9	127	108	–15.0
20.0 and over	469	473	0.9
All trucks	23,248	25,331	9.0

SOURCE: Central Bureau of Statistics.

From the economic aspect, trucks may be divided into two categories: (a) those supplying transportation services on a commercial basis, and (b) those owned by various enterprises and working solely for them. Though the majority belong to the second category, the share of the first in total freight carried (in ton-kilometers) is greater.

As regards ownership, the first category may be subdivided into two groups: (a) those owned by private individuals or partnerships; and (b) those owned by companies or cooperatives. The first group comprises 80 per cent of the total

number of trucks in this category, but its share of total cargo transported against payment does not exceed 50 per cent. This reflects the fact that trucks owned by companies and cooperatives are larger than average and are utilized chiefly for long inter-urban hauls, while the first group operates mainly in urban areas and on short inter-urban routes.

As to the character of operations, there is a striking difference between privately-owned trucks and those owned by companies or cooperatives. Among the former there is very intense competition, which finds expression in the granting of credit on easy terms, the non-collection of demurrage charges, and outright discounts. On the other hand, road transport companies and cooperatives have divided some of the inter-urban routes among themselves, thus reducing competition. The position of the trucking industry improved somewhat in 1962, and the big increase in the demand for transportation services was reflected in the limiting of concessions, particularly in respect of demurrage charges.

An examination of the exploitation rate in the various size categories brings out two salient points: (a) the percentage of empty trips is lower in the case of small trucks; and (b) the rate of exploitation of the authorized cargo on fully loaded trips is higher in the case of heavy trucks. The first of these phenomena may be explained by the fact that small trucks operate mainly within urban areas, and the second, by the intense competition between small trucks which induces their owners to accept any order covering current costs. On the other hand, companies and cooperatives operate on more or less fixed routes on the basis of an agreed pooling of the market, and are therefore able to adjust the operation of their trucks to the volume of available cargo. The routes are not always divided in a manner assuring the efficient exploitation of the factors of production. Thus, for example, one company may be executing orders in one direction and another company in the opposite direction—on the same line. If competition were greater, transport prices presumably would drop—at least in the short run.

Owing to the low utilization and the failure to make adequate provision for depreciation, the problem of renewing the truck fleet—whose average age exceeds 11 years—has become acute of late. This problem is especially grave for private truck owners, many of whom only cover current costs. In order to help in the replacement of old trucks, the Ministry of Transport and Communications is planning to set up a credit fund which will be financed jointly by the carriers and the Government.

But under the conditions presently prevailing in the branch, it is doubtful whether such Government aid is justified. The low utilization of road haulage vehicles indicates the existence of excess supply, while the fact that the prices obtained are insufficient to cover depreciation is due to the operation of the market mechanism, which in the long run may force out some carriers, until an equilibrium between supply and demand is established. On the other hand, it may be possible to reduce current costs by the more efficient utilization of trucks (e.g. by

better coordination between the various companies, which would reduce the number of empty journeys).

Government assistance to the branch would be justified only if the price obtained by the carriers did not reflect the full benefit accruing to the economy from their operations. It is difficult to prove that such is the case.

(b) *Buses*

The output of the bus cooperatives showed a real increase of 5.8 per cent in 1962, as compared with 5.2 per cent in 1961. At current prices, the value of output in 1962 totalled IL 126 million. Bus fares were raised at the beginning of February, and on the average were 12 per cent higher for the year than in 1961. A IL 2.2 million subsidy was granted to the cooperatives in 1962, owing to the rise in input prices following devaluation. In the previous year subsidies to this branch were virtually abolished, and therefore the gross earnings of the cooperatives during the year reviewed increased at a greater rate than bus fares.

Investment in buses during 1962 totalled IL 15 million—30 per cent more than in 1961. This investment enabled the cooperatives to increase the number of buses and available seats. The trend toward vehicle standardization, which reduces maintenance costs, continued during the year. The increase in the output of buses was also reflected in their kilometrage, which totalled 165 million in 1962 as against 153 million in 1961.

Table XIII-10

INDICES OF NO. OF BUSES, EXPENDITURE ON BUS SERVICE, NO. OF SEATS, AND KILOMETRAGE, 1958-62[a]

(1958 = 100)

Year	No. of buses	Expenditure on bus service[b]	No. of seats	Income per seat[c]	Annual kilometrage	Revenue per km.[d]
1959	106.8	110.1	108.9	101.1	115.6	94.2
1960	109.5	116.6	115.0	101.4	123.7	94.2
1961	113.9	122.7	120.4	101.9	132.4	90.1
1962	118.8	129.9	128.1	101.4	143.3	88.2

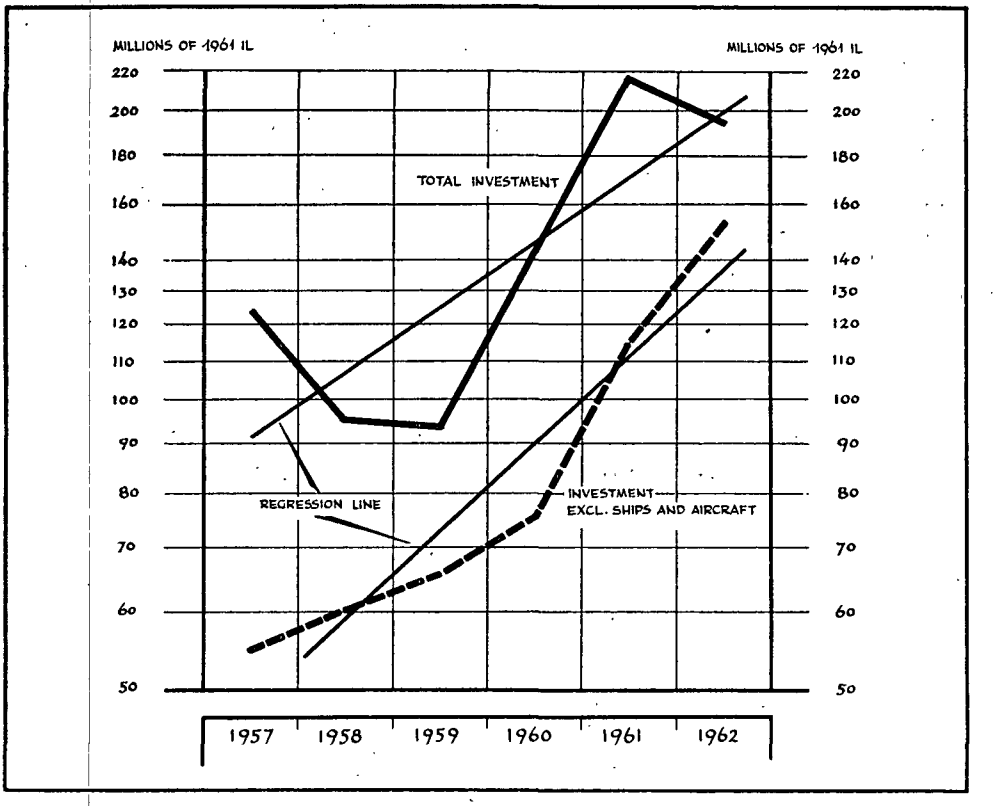
[a] The data relate to the three bus cooperatives: Eshed, Dan, and Hamekasher.
[b] At constant prices, excluding parcels and sundries.
[c] At constant prices.
[d] Total receipts of the companies, at constant prices.
SOURCE: Ministry of Transport and Communications, Central Bureau of Statistics, and the bus cooperatives.

6. Investment in Transportation

Gross investment in the transportation sector[1] totalled IL 244 million in 1962, at current prices. The rise in investment prices reached 27 per cent, so that at constant prices the figure came to IL 192 million, as compared with IL 217 million in 1961. In real terms, investment in transportation contracted by 11 per cent, while that in the economy as a whole expanded by 10 per cent. Thus this sector accounted for only 12 per cent of total domestic investment in 1962, as against 15 per cent in 1961. The decline was entirely due to the much lower investment in ships.

Diagram XIII-2

GROSS INVESTMENT IN TRANSPORTATION, 1957–62[1]



Between 1957 and 1962, investment in transportation expanded at an average annual rate of 18 per cent,[2] while total domestic investment increased at an

[1] Excluding investment in postal services and oil pipelines.
[2] The logarithmic regression coefficient.

average rate of 8 per cent per annum, and investment other than in residential construction, at 9 per cent.

The fluctuations from year to year are quite sharp in the case of transportation (see Diagram XIII–2). This is due to the still more pronounced fluctuations in investment in ships and aircraft, which accounts for a considerable proportion of total investment in the sector. The investment in items other than ships and aircraft fluctuate much more moderately. The average annual rate of increase for the 1957–62 period was much higher in these items than for either the entire sector or the economy as a whole, reaching 23 per cent.

Table XIII–11

INVESTMENT IN TRANSPORTATION, BY BRANCH, 1957–62

(IL million; at 1961 prices)

Branch	1957	1958	1959	1960	1961	1962
Railways	7.3	6.5	4.6	2.1	4.5	2.5
Ports	2.6	2.8	4.8	8.2	9.7	18.2
Airfields	0.2	0.4	2.0	2.5	5.2	4.2
Transportation services of local authorities	3.2	3.1	5.2	0.4	2.3	2.3
Ships	46.5	23.4	24.2	67.3	80.4	9.9
Aircraft	22.3	11.8	3.6	—	21.4	29.9
Commercial vehicles	25.0	30.1	30.4	43.3	66.7	99.0
Roads	16.4	16.9	18.4	18.2	26.3	26.3
Total	123.5	95.0	93.2	142.0	216.5	192.3

As regards the composition of investment by type of asset, the contraction took place entirely in equipment, which declined from IL 174 million in 1961 to IL 144 million in 1962, while investment in construction increased from IL 42 million to IL 48 million. Since equipment has a very high import component (80 per cent), while the major input in construction is labor, the change in the structure of transportation investment caused an increase in the demand for manpower and a boom in the construction sector. This change is also connected with the slower growth of the deficit in the balance of payments during 1962.

The import component of transportation investment averaged 65 per cent, as against 32 per cent for total domestic investment. Owing to this high import component, as well as to the fact that for part of this investment (ships and aircraft) the effective exchange rate prior to devaluation was IL 1.80 to the dollar, devaluation had a marked effect on investment prices in the transportation sector: they rose by 27 per cent during 1962, as compared with 20 per cent in the general level of investment prices.

The proportion of transportation investment financed from public sources remained virtually unchanged—32 per cent as against 33 per cent in 1961. The smaller investment in ships, which is largely financed from public funds, was compensated by larger investments in other items wholly financed by public bodies.

If the definition of public financing is extended to cover also loans guaranteed by the Government, the weight of public financing in this sector becomes very much greater.

Shipping investment showed a real decrease of 88 per cent—from IL 80 million in 1961 to approximately IL 10 million (at 1961 prices). The 1962 figure is the lowest in the last seven years. However, no special significance should be attached to this development, which is partly due to the chance timing of ship deliveries from the shipyards executing the orders. A larger investment is again anticipated in 1963, when several ships now under construction in foreign shipyards are due for completion. While investment in shipping contracted, that in civil aviation expanded, reaching IL 30 million in 1962, at 1961 prices. This is the largest amount ever invested in civil aviation in Israel during a single year.

Investment in ports totalled IL 18 million in 1962, at 1961 prices. The investment in the construction of the deep-water harbor at Ashdod totalled IL 10 million, while that in a new quay at Haifa Port reached IL 7 million. The remainder was invested in the Jaffa and Eilat ports.

The total investment in land transportation (including the railway, road vehicles, roads, and the transportation services of local authorities) reached IL 130 million in 1962, at 1961 prices; this compares with IL 100 million in 1961. These investments constituted 68 per cent of the total investment in the transportation sector, as compared with 46 per cent in 1961.

Investment in the railway was smaller than in previous years, totalling IL 2.5 million, at 1961 prices. During the period 1955 to 1957 big amounts were invested in the replacement of a considerable proportion of the rolling stock, with the aid of German reparations. In 1962 some of the investment was designed to enable the railway to carry stone and gravel for the construction of the harbor at Ashdod.

Gross investment in commercial road vehicles totalled IL 99 million, at 1961 prices, constituting the largest single investment item. Of this amount, IL 86 million was in trucks (52 per cent more than in 1961), and IL 13 million in buses. Investment in commercial road vehicles has been expanding continuously over the last few years. This is partly due to the age structure of vehicles now in service, which necessitates a high percentage of replacements.

Investment in the road network did not expand in 1962, remaining at the level of IL 26 million. Some of this investment was made within the framework of a highway improvement program, financed in part by a $ 22 million World Bank loan. This program is mainly concerned with the widening of existing highways, on which traffic is very congested, but will also finance some new roads.