Chapter 2

Aggregate Activity: GDP and Employment

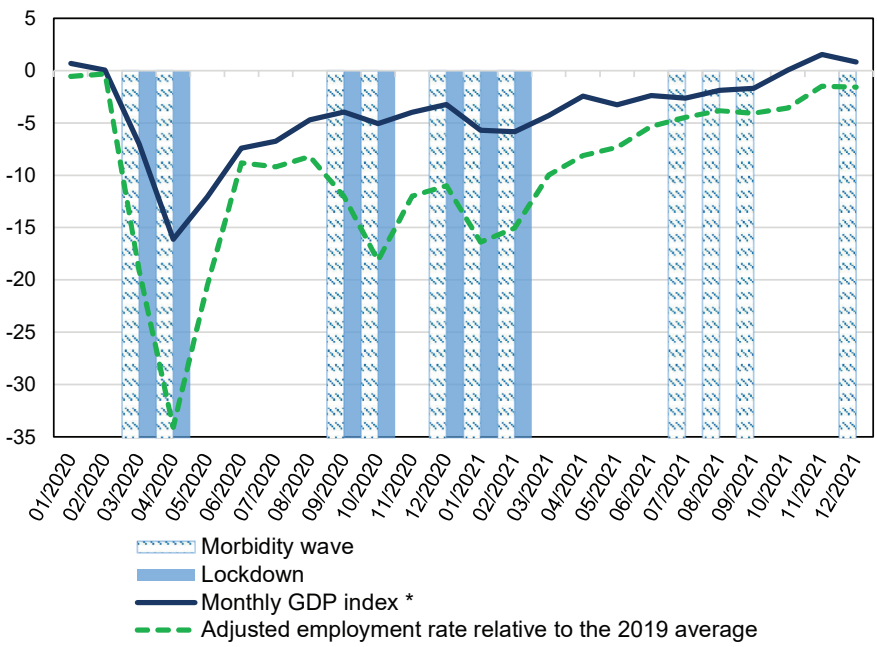
- GDP grew by 8.2 percent in 2021, due to the rapid growth of private consumption and of exports in view of the vaccination program, the government's policy to maintain economic activity with relatively few restrictions, the accommodative monetary policy, and businesses' adaptation to work during the pandemic.
- On average over the year, GDP was 2.0–2.5 percent lower than potential. At the end of the year, GDP was slightly higher than potential.
- The number of employees in the economy increased by about 400,000 from the end of the third lockdown in February until the end of the year. The adjusted employment rate (as defined during the COVID-19 period) increased during the period from 55 percent in March 2021 to 60.1 percent in December, and was just one percentage point lower than its precrisis trend.
- There was less impact to GDP and to private consumption in Israel in 2020–21 than in most other OECD countries.
- Private consumption grew by 11.7 percent in 2021, but since it declined sharply in 2020, it was only slightly higher in 2021 than it was in 2019, before the crisis. The moderate growth mainly reflected a decline in the consumption of transportation services, accommodation and food, and art and recreation.
- Exports by the high-tech sector continued to increase rapidly in 2021. Its share of GDP increased from 10.5 percent in 2019 to 12 percent in 2021.
- The global increase in maritime shipping prices had a small impact on aggregate macroeconomic activity. In terms of income to the economy, it seems that the effect was even positive, since Israel is a significant exporter of maritime shipping services.
- The surplus in the current account of the balance of payments increased slightly in 2021, as a result of the growth of high-tech services exports and the export of startup companies. This increase was moderated by the increase in oil prices, the reversal of the net balance of tourism, and the resumption of the increase in vehicle imports.
- The composition-adjusted average wage increased in 2020–21, similar to its precrisis trend, indicating that there are no signs of wage pressures.

1. MAIN DEVELOPMENTS

In 2021, Israel recovered from most of the COVID-19 crisis's effects, and economic activity increased rapidly.

In 2021, Israel recovered from most of the COVID-19 crisis's effects, and economic activity increased rapidly. Following the end of the third lockdown in February, and with the increase in the vaccination rate in the population, a "COVID-19 routine" took hold, in which, despite the pandemic, the economy operated without lockdowns and with relatively few restrictions that had only a small impact on economic activity. Growth and employment recovered rapidly until the beginning of the fourth wave of morbidity in July 2021, remained relatively stable during that wave, and continued to increase thereafter (Figure 2.1). Some restrictions were reimposed during the fourth wave, chiefly the imposition of "Green Pass" requirements, but no lockdowns were imposed. Alongside this, the government approved a third vaccination (booster), expanded vaccinations to children, and instituted rapid COVID-19 testing. Thanks to these, the fourth wave had only a minor impact on economic activity. In October, at the end of the fourth wave, activity increased further, with the economy at the end of the year reaching record GDP and employment since the beginning of the crisis in 2020.

Figure 2.1
Lockdowns, Morbidity Waves, and Differences in GDP and Employment from the Precrisis Trend, 2020–2021 (percent, monthly data)



* The index of monthly GDP calculated by the Bank of Israel based on T. Ginker and T. Suhoy (2022), "Nowcasting and Monitoring Real Economic Activity in Israel", Discussion Papers Series 2022.07, Bank of Israel Research Department.

SOURCE: Based on Central Bureau of Statistics.

In 2021, GDP increased by 8.2 percent, as a result of growth in private consumption and continued high growth of exports, particularly services exports. Following this strong growth, the average annual growth rate in 2020–21 was 2.9 percent (5.9 percent over the two years). The average GDP level in 2021 was 2.3 percent lower than potential GDP (as calculated based on the 2014–2019 growth trend), mainly because the private consumption of services did not return to its normal level and because tourist entries to Israel was very low throughout the year. In contrast, goods and services exports (excluding tourism), which are practically independent of COVID-19 restrictions, created demand that surpassed the precrisis trend. In the fourth quarter of the year, the level of GDP was about one percent above potential GDP.

GDP increased by 8.2 percent in 2021, and was 2.3 percent lower than what would have been expected according to the trend.

The industries most harmed by the COVID-19 crisis are tourism and transport services attached to it, particularly the aviation industry. Even after the cancellation of most restrictions, there remain in Israel, and in many other countries, restrictions on aviation entries in general and on tourist entries in particular, which became more stringent during each morbidity wave in 2021. The number of tourist entries to Israel in 2021 was therefore just 9 percent of what it was in 2019, and the export of tourism services was just 16 percent of its 2019 level. Outgoing tourism was also hit hard, which had a large impact on private consumption. Israelis' consumption abroad (and with it the import of tourism services) declined greatly, as did the consumption of aviation services for those traveling abroad (which is part of the consumption of transport services). Israeli travel abroad resumed partially in 2021, but the number of people flying abroad was still just 32 percent of the 2019 level. While the decline in outgoing tourism has a direct impact mainly on imports and not on GDP, it does affect GDP and employment in a number of ways. It affects the output of Israelis providing services to outgoing tourism, such as travel agents and Israeli airlines, while it partially compensates the hospitality industries for the lack of incoming tourism, since some Israelis replaced vacations abroad with local vacations.

The tourism industry was the most hard-hit by the COVID-19 crisis. Outgoing tourism began to recover in 2021, but incoming tourism continued to decline.

The continued sharp increase of Israeli services exports, particularly those of high-tech services, contributed greatly to the growth of economic activity. High-tech exports continued to grow during the COVID-19 crisis, partly because the restrictions imposed due to the crisis had a relatively slight impact on both the production and consumption of high-tech services, and apparently even increased demand for these services. The opening of the economy led to a large increase in goods imports, demand for which was not significantly affected by COVID-19, and to an increase in services imports, a large part of which was in the import of maritime shipping services.

The export of high-tech services continued to grow during the COVID-19 crisis, and contributed greatly to the increase in activity.

The importance of world trade to Israel, as a small and open economy, raised concerns that the sharp global increase of maritime shipping prices that began toward the end of 2020 would hamper the economic recovery in 2021. As of now, it seems that these concerns have dissipated, and that the net macroeconomic impact on the Israeli economy was small, and may have even led to an increase in national income to some extent. This is thanks to the high rate of services in Israeli exports (which naturally do not require shipping), and because alongside the international shipping services that

The macroeconomic impact of the increase in maritime shipping prices was small, and may have even been positive.

Israel consumes, there are Israeli shipping service providers, whose income increased in 2020–21 with the increase in shipping prices. However, it is important to note that alongside those profitable companies, the increase in shipping prices does harm the profitability of goods importers and exports, and may trickle down to an increase in the prices of end-user consumer and investment products.

Following the end of the third lockdown and the removal of most COVID-19 restrictions, employment recovered rapidly and came very close to its precrisis level.

Following the end of the third lockdown and the removal of most COVID-19 restrictions, employment recovered rapidly and came very close to its precrisis level. The adjusted employment rate[1], which was 55 percent in March 2021 immediately after the third lockdown, reached 60.1 percent in December 2021, an increase of 400,000 workers and just one percentage point away from the adjusted employment rate in 2019. The increase in employment was accompanied by rapid growth in the rate and number of job vacancies, which in many industries reached levels significantly higher than before the crisis, and remained very high through the end of the year. Even so, the average wage per employee post, which increased greatly in 2020, increased by just 2.1 percent in 2021, because a large portion of workers who left employment in 2020 (mainly under furlough arrangements) were from industries that typically pay relatively low wages. According to an index put together by the Research Department of the average wage adjusted for the composition of employees (Box 2.2), the average wage per employee post increased in 2020–21 by an annual average of 4.4 percent. This is similar to the trend of recent years, and there are no signs of prolonged pressures to increase wages.

In the second half of the year, the government promoted vaccinations and expanded the use of COVID-19 tests, while avoiding the imposition of stringent restrictions on economic activity.

Government policy in 2021 was divided into two parts. During the first half of the year, the government continued with the programs it built in 2020 to deal with COVID-19, built a vaccination system, and encouraged vaccinations. It also continued supporting those who were hard-hit by the pandemic, through special COVID-19 budgets that were set outside the normal budget. In June, the government decided not to extend most of the "safety net" assistance programs for employees and employers that were in place since mid-2020. (Exceptions were the arrangements making it easier to obtain unemployment benefits, including for furloughs, for those over age 45, which were extended until September.) Beyond that, the government focused on promoting vaccinations and expanding the use of COVID-19 tests, while avoiding the imposition of stringent restrictions on economic activity, even during the fourth and fifth morbidity waves. At the beginning of November, the new government that had been established in June brought the State Budget for 2021 and 2022 to the Knesset

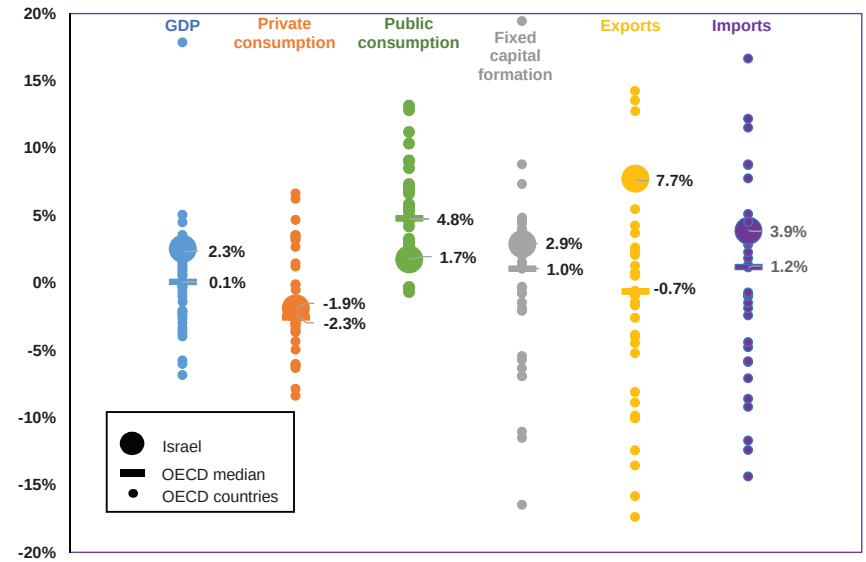
[1] The adjusted employment rate relates to working-age employees minus employees who were temporarily absent due to reasons having to do with COVID-19—primarily furloughs. The ordinary employment rate (which is not adjusted) relates to these absentees as employed. This practice is logical during normal times, when absentees are mainly employees who were voluntarily absent from their jobs (such as those on maternity leave or on private vacations), and are expected to return regardless of the state of the economy. However, during the COVID-19 period, most absentees (furloughed workers) were sent home from their jobs involuntarily due to being nonessential, for a duration that depends on neither the employer nor the employee.

for approval, which contributed to the growth in public consumption at the end of the year.

Israel's economy was more successful than other OECD countries in getting through the COVID-19 crisis.

From an international perspective, Israel's economy was very successful in getting through the COVID-19 crisis relative to other OECD countries (Figure 2.2). The impact to Israel during 2020 was less than the OECD average in terms of GDP, per capita GDP, and trade (exports), but private consumption declined much more than in most of the other OECD countries (Table 2.1). In 2021, the Israeli economy recovered more than most of the other advanced economies. Private consumption increased by 11.7 percent in 2021, putting Israel above the median (and average) of the OECD countries in this measure (Table 2.3). Thanks to the strong growth, which was supported to a great extent by the high exports, Israel is among the OECD countries whose economies were least affected by the crisis.

Figure 2.2
Per Capita Growth of GDP and its Components, Israel and OECD, 2019–2021[a,b] (percent)



[a] As opposed to Tables 2.1 and 2.2, this figure shows the overall per capita change of various variables between 2019 and 2021.
[b] The figure contains the 37 OECD countries for which there are data in the organization's systems. The public consumption, investment, import, and export data for Israel are adjusted to the OECD systems' definition for this figure.
SOURCE: Based on OECD and Central Bureau of Statistics.

Table 2.1
Selected indicators of economic activity, 1995–2021

(annual change, percent)

	1995–2016	2017	2018	2019	2020	2021	Average annual rate of change, 2019–2021
GDP	3.9	4.4	4.0	3.8	-2.2	8.2	2.9
GDP of OECD countries[a]	2.2	2.6	2.3	1.7	-4.5	5.2	0.9
Per capita GDP in Israel	1.8	2.4	2.0	1.8	-3.9	6.4	1.1
Per capita GDP in OECD countries[a]	1.5	2.6	2.4	1.7	-4.8	5.1	0.1
Per capita private consumption in Israel		1.6	1.6	1.9	-10.8	8.9	-1.0
Per capita private consumption in OECD countries[a]		2.3	2.1	1.4	-6.4	5.2	-1.6
Exports excluding diamonds and startups	6.2	7.4	4.8	5.4	1.1	10.8	5.8
Domestic uses	3.6	4.3	4.3	3.7	-4.0	9.5	2.5
Unemployment rate (ages 15+, level)	7.5	4.2	4.0	3.8	4.4	5.0	
Real wage per employee post	1.0	2.8	2.7	2.0	7.5	0.5	4.0
Index of average wage per employee post, adjusted for the composition of employees[d]					2.6	6.3	4.4
Current account surplus (percent of GDP)	1.0	3.6	2.9	3.6	5.5	4.7	
Real effective exchange rate[c]	[2] -0.1	-4.4	2.1	-2.5	-3.1	-3.8	-3.5

[a] Data for 2021 are based on estimates.

[b] The figure relates to the years 1999–2016.

[c] An increase means depreciation.

[d] For a detailed explanation see Box 2.2 in this chapter.

SOURCE: Based on Central Bureau of Statistics, OECD, and IMF.

Table 2.2
Global economic developments, 1995–2021[a]

(annual change, percent)

	1995–2014	2015	2016	2017	2018	2019	2020	2021[b]
Advanced economies								
GDP	2.4	2.3	1.8	2.5	2.3	1.7	-4.5	5.0
Trade[c]	5.6	4.2	2.3	4.8	3.7	1.6	-9.0	8.3
US								
GDP	2.8	2.7	1.7	2.3	2.9	2.3	-3.4	5.6
Eurozone								
GDP	1.6	2.5	2.1	3.0	2.3	1.9	-6.4	5.2
Developing economies								
GDP	6.1	4.3	4.5	4.8	4.6	3.7	-2.0	6.5
Trade[c]	8.4	0.7	2.2	7.0	4.4	-0.3	-6.7	11.1
World trade	6.4	2.9	2.2	5.6	3.9	0.9	-8.2	9.3

[a] The averages of the various aggregates are weighted averages. Data for 2021 are based on estimates.

[b] Data for 2021 are based on estimates.

[c] Simple average of the rates of change of exports and imports of goods and services.

SOURCE: Based on OECD and IMF.

2. AGGREGATE ACTIVITY

Table 2.3
Sources and uses, 2014–2021

(annual change, percent)

	2014–2019	2017	2018	2019	2020	2021	Average annual rate of change, 2019–2021
GDP	3.8	4.4	4.0	3.8	-2.2	8.2	2.9
Imports (excluding ships, aircraft, diamonds, and defense imports)	5.0	6.3	5.5	2.9	-7.3	18.4	4.8
Domestic uses	4.4	4.3	4.3	3.7	-4.0	9.5	2.5
of which: Private consumption	4.1	3.6	3.5	3.9	-9.2	11.7	0.8
Fixed capital formation (excluding ships and aircraft)	4.6	4.1	5.9	3.4	-2.7	11.4	4.1
Investment in inventory (excluding diamonds and startups, percent of GDP)	0.2	0.4	0.2	-0.1	0.1	0.0	
Output of startup companies	17.6	-2.3	10.6	29.6	12.3	32.5	22.0
Public consumption (excluding defense imports)	3.8	4.2	4.7	2.6	2.7	3.3	3.0
Exports (excluding diamonds and startups)	3.5	7.4	4.8	5.4	1.1	10.8	5.8

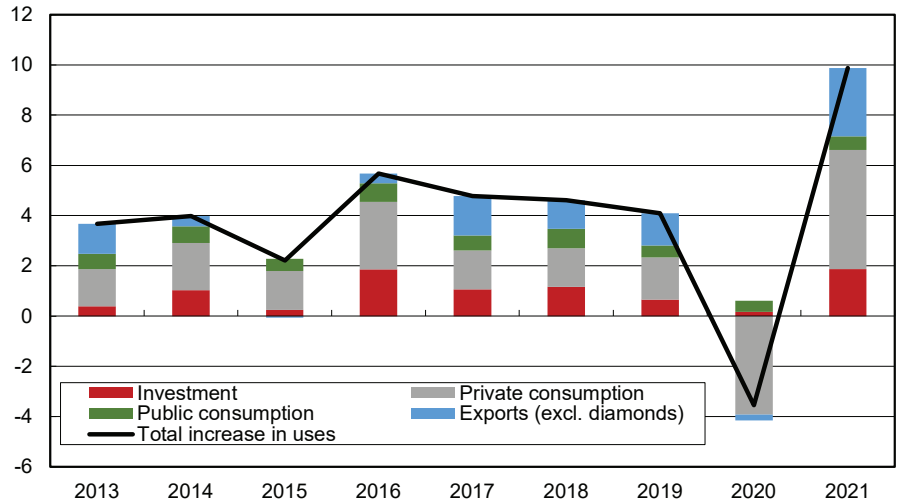
SOURCE: Based on Central Bureau of Statistics.

a. The composition of uses

Uses increased rapidly this year, led by private consumption and exports, particularly the export of high-tech services.

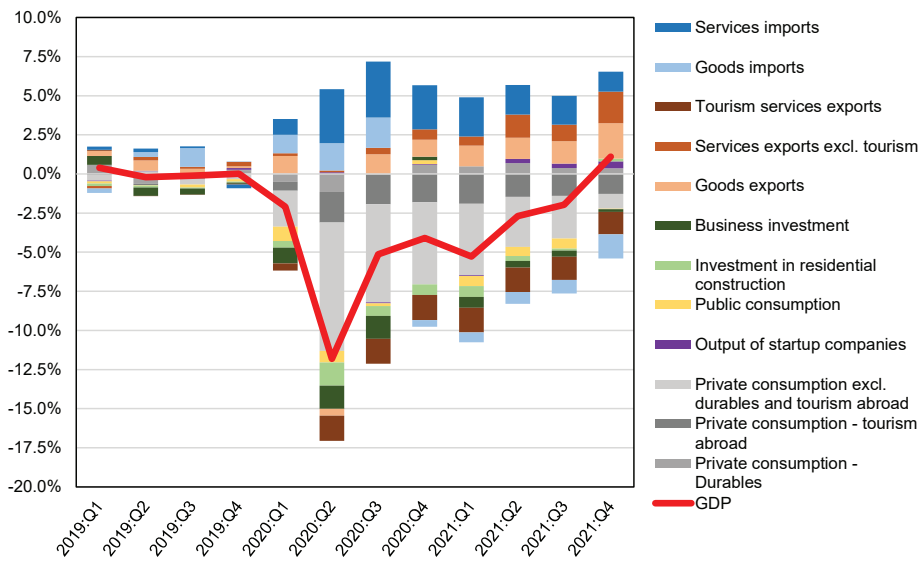
The recovery in 2021 was reflected in the rapid growth of domestic uses—9.5 percent (Table 2.3). This strong growth encompassed all main uses, led by private consumption and investment, as well as exports (Figure 2.3). Public consumption increased moderately, but this was after it also increased moderately in 2020 rather than declining like the other uses. Comparing the uses in 2021 with the precrisis state shows that despite the recovery, the average annual growth of uses in 2020–21 was lower than in previous years, due to the minuscule average increase in private consumption during the period. In contrast, public consumption, investment, and imports increased by a rate only slightly below their precrisis trends. The growth rate of exports was the highest among the uses, surpassing its trend, mainly thanks to high-tech exports. Figure 2.4 shows the contribution of each factor to the development of GDP's deviation from its precrisis trend. The declines in tourism exports, domestic private consumption of services, Israelis' consumption abroad, and Israelis' purchases of flight tickets (which is recorded in consumption excluding durable goods), were the main channels harming growth. However, some of the impact of the decline in demand, particularly the decline in outgoing tourism, was absorbed by imports, offsetting some of the harm to GDP growth during the crisis as a whole. The increase in exports, of both goods and services, also contributed to economic growth during the crisis.

Figure 2.3
Total Increase in Uses and Contribution of the Components, 2013–2021
(percentage points)



SOURCE: Based on Central Bureau of Statistics.

Figure 2.4
Nonactivity Rate as a Share of GDP (Deviation from the Precrisis Trend) and the Accounting Contribution of Uses and Import Components[a,b], 2019–2021 (quarterly, seasonally adjusted data)



[a] When imports are lower than the trend, the contribution to GDP is positive.
[b] The components of uses and imports do not include diamonds, defense imports, ships and aircraft, or the sale of startup companies.
SOURCE: Based on Central Bureau of Statistics.

(1) Private consumption

Private consumption is the use most impacted by the crisis. Despite the rapid pace of growth in 2021, its level was 6.5 percent lower than its long-term trend.

Private consumption increased by 11.7 percent in 2021, surpassing its 2019 level. The 2021 level was thus about 6.5 percent lower than its long-term trend (4.2 percent trend growth between 2014 and 2019). This use was the most impacted by the crisis both in 2020 and in 2021, since the main activity restrictions—particularly during the lockdowns of 2020 and the beginning of 2021—were imposed on private consumption, particularly of services (Table 2.4). The cumulative loss of private consumption in 2020 and 2021 (relative to potential consumption) amounted to about 10.6 percent of 2021 GDP.[2] Since disposable income increased by 4.2 percent per year in 2020–21, the additional private savings during that period amounted to 12.9 percent of 2021 GDP. It is therefore clear that a significant portion—perhaps most—of potential consumption was converted to savings, but it is not clear whether, when, or how this savings will be converted to future consumption. According to the permanent income hypothesis, since growth in savings is due to a temporary factor (the crisis) that did not significantly change the individual's income over his lifetime, the surplus savings can be expected to be used to smooth consumption over time, and will not all be immediately converted to consumption.[3] (For more discussion, see the savings section in this chapter.)

"Proximity industries", the industries most hard-hit by the crisis, recovered partially in 2021, but private consumption of services remained 13 percent lower than in 2019.

The main industries that were hard hit by the decline in consumption are the "proximity industries"—transportation (mainly flights, which are affected by the state of tourism, but also public transit services), accommodation and food services, and art and recreation. The recovery, which increased private consumption on a broad scale from the second quarter of 2021, also included a gradual return to private consumption of those services. Their consumption in the third quarter of 2021 was 70–80 percent higher than the average between the second quarter of 2020 and the first quarter of 2021, but remained significantly lower than its precrisis level, such that the negative gap in consumption narrowed, but remained far from being closed, particularly in transportation (Figure 2.5). Services consumption increased by about NIS 36 billion in 2021, remaining about NIS 36 billion below its 2019 level—a gap of 13 percent. Most of this gap comes from transportation, consumption of which was NIS 24 billion lower in 2021 than it was prior to the crisis, and from the accommodation and food and the art and recreation industries.

Despite the removal of most COVID-19 restrictions and the beginning of the recovery in 2021, some restrictions on international travel remained. In many countries, the restrictions were made more stringent for periods, to the point of

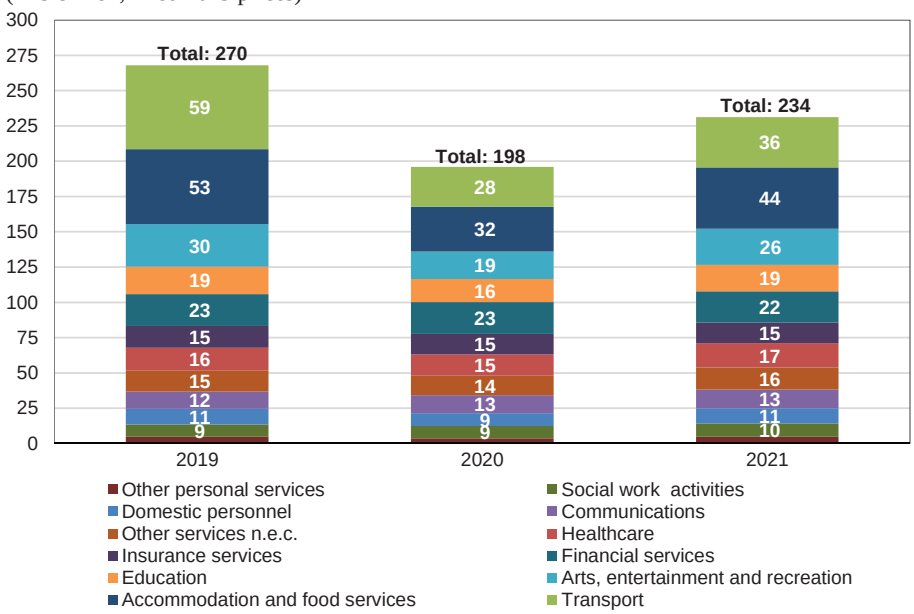
[2] The sum of expected private consumption in 2020 and 2021 (according to the trend) minus the sum of the actual levels in those years, divided by GDP, all in fixed prices. The pace of growth according to the trend is 4.2 percent per year (average annual growth from 2014 to 2019).

[3] The permanent income hypothesis argues that individuals' consumption preferences are determined by their expected income over their lifetimes. Therefore, temporary changes in consumption, income, or savings, are not expected to significantly change individuals' consumption preferences. See: M. Friedman (1957), "The Permanent Income Hypothesis", in A Theory of the Consumption Function (pp. 20–37), Princeton University Press.

Israeli travel abroad doubled in 2021, reaching one-third of its 2019 level. Tourist entries remained very low.

closing the skies (whether officially or just effectively). While Israeli travel abroad and Israelis' consumption abroad almost doubled in 2021 compared with 2020, they remain 66 percent and 62 percent (respectively) lower than they were in 2019. Despite the restrictions, relatively few Israelis shifted from consumption of tourism services abroad to consumption of tourism services in Israel. The number of Israeli stays at Israeli tourist hotels in 2021 was 7 percent higher than in 2019. This increase is reflected in the room occupancy rates at hotels in the Dead Sea and Eilat areas—Israel's domestic tourism destinations—where the occupancy rate in April–December (after the third lockdown) was close to, or even slightly higher than, its rate during the parallel period in 2019. In contrast, the room occupancy rate in the large cities was 30–60 percent lower than in 2019, and total overnight stays were about 40 percent lower than in 2019.

Figure 2.5
Distribution of Private Consumption of Services (excl. Housing), 2019–2021
(NIS billion, fixed 2019 prices)



SOURCE: Based on Central Bureau of Statistics.

The decline in outgoing travel reduced the consumption of imported tourism services, but also had a negative impact on the consumption of domestic services such as flight tickets with Israeli companies.

The decline in outgoing travel reduced private consumption through various channels—a decline in consumption of tourism services abroad, a decline in the purchase of flight tickets from foreign airlines, and a decline in such purchases from Israeli airlines. The first two are imported services and, as such, their declines as uses are reflected in offsetting declines in imports as sources, so that they had much less impact on GDP than on private consumption. However, since some of the outgoing travel services are purchases of flight tickets from Israeli companies, the decline in outgoing travel also led to a sharp decline in output of domestic transport services.

Relative to ticket purchases (from all airlines) of NIS 28.7 billion in 2019, ticket purchases in 2020 totaled just NIS 5 billion, and the amount increased to NIS 9.7 billion in 2021.

Relative to the consumption of services, the consumption of durable and semidurable goods increased in 2021, following relatively small declines in 2020. The increase between 2019 and 2021 totaled about 20 percent. Some of this increase may be a substitution for other consumption options that were temporarily unavailable. The increase in consumption of durable goods alongside the stability in the consumption of services that were not restricted due to COVID-19 and the increase in the Consumer Confidence Index in 2021 (Table 2.4) signal that there was no widespread decline in consumption either due to precautionary saving or out of concern over a prolonged impact to income. Monetary policy measures, which led to an increase in private credit[4] (table 2.4), and the economic security net deployed by the government during the crisis, also contributed to this.

Relative to the consumption of services, the consumption of durable goods increased rapidly between 2019 and 2021.

(2) Public consumption

Public consumption (excluding defense imports) increased by 3.3 percent (NIS 10 billion) in 2021, following an increase of 2.7 percent in 2020. The increase in these two years was mainly due to the increase in civilian government purchases, partly to meet the needs of the healthcare system, as part of dealing with the COVID-19 pandemic. The new government's approval of the State Budget for 2021 and 2022 in November also contributed to the increase in public consumption—particularly in the purchasing component—at the end of the year. For more details on the government's activity, see Chapter 6 of this Report.

Public consumption increased moderately in both 2020 and 2021, mainly due to the increase in civilian government purchases such as equipment for the healthcare system.

During the third wave, in the first quarter of 2021, the government continued its assistance programs (safety net) that were instituted in 2020. At the same time, it put together the vaccination campaign and encouraged widespread vaccination. Once the wave was over, the third lockdown ended and restrictions were significantly relaxed. Due to the continued decline of morbidity, the rapid growth of economic activity, and the increase in employment, the government decided to end most assistance programs as planned, in June 2021, but extended the leniencies in entitlement to unemployment benefits for those aged 45+ to October 2021. The 2021–22 budget that was passed in November allocated a reserve of NIS 10 billion in case future expenditures are needed to deal with COVID-19.

The government continued its assistance programs at the beginning of the year, during the third morbidity wave, and ended most of them in June as planned.

One of the concerns when deciding on the assistance program in 2020 was that the private sector would become dependent on assistance from the government sector over time, which could have created various distortions in the business environment. The combination of the end of assistance with growth in GDP and employment in 2021 put such concerns to rest, at least for the time being.

The concerns of creating private sector dependency on public assistance did not come to fruition.

[4] For details, see Chapter 3 of the Bank of Israel *Annual Report* for 2020.

Table 2.4
Domestic demand: Background conditions and main indicators of its development, 1995–2020

(annual change, percent)

	1995–2016	2017	2018	2019	2020	2021	Average annual rate of change, 2019–2021
Private consumption	4.2	3.6	3.5	3.9	-9.2	11.7	0.8
***of which*: Current consumption**	4.0	4.3	3.4	3.8	-9.8	11.0	0.1
Durable goods consumption	6.7	-3.8	5.4	5.1	-2.2	20.0	8.3
Gross private disposable income from all sources	3.8	3.4	6.8	4.9	4.8	3.6	4.2
Credit to households	7.1[b]	5.5	5.1	5.2	4.4	8.4	6.4
of which: Nonhousing credit	3.5[b]	4.8	3.0	2.3	-1.9	3.2	0.6
Real 1-year interest rate (government bonds, level)	2.7	-0.1	-0.8	-0.8	0.1	-1.9	
Value of the public's financial assets portfolio	10.5	4.5	4.6	6.3	5.1	14.2	13.0
Consumer Confidence Index	3.8[c]	3.7	2.9	-0.4	-14.0	12.1	-1.8
Fixed capital formation (excluding ships and aircraft)	2.8	4.1	5.9	3.4	-2.7	11.4	4.1
Credit to the business sector	4.1[b]	4.1	5.5	3.6	2.3	7.9	5.1
Real 10-year interest rate (government bonds, level)	3.4	0.6	0.5	0.0	-0.5	-0.8	
Purchasing Managers Index (level)	50.6[c]	55.2	53.3	51.3	48.5	52.6	
Public consumption excluding defense imports	2.5	4.2	4.7	2.6	2.7	3.3	3.0
Total taxes[a]	32.9	32.6	31.1	30.4	30.1	32.8	
General government budget deficit[a]	4.9	2.0	4.3	4.5	11.5	5.5	

[a] Percent of GDP.
[b] The figure relates to the years 2005–2016.
[c] The figure relates to the years 2002–2016.
SOURCE: Based on Central Bureau of Statistics, the Globes-Smith Consumer Confidence Surveys, and the Purchasing Managers Indices compiled by Bank Hapoalim and the Purchasing Managers Association.

In the second half of the year, the government changed its policy for dealing with COVID-19, and drastically reduced the restrictions on economic activity.

In the second half of the year, the government's policy for dealing with COVID-19 changed. The government decided to reduce restrictions on economic activity as much as possible, choosing instead to make widespread use of the "Green Pass" and to emphasize the importance of testing. During the fourth wave in mid-2021 and the fifth wave that began in December and continued into 2022, only moderate restrictions were imposed on mobility and economic activity. This policy had almost no effect on public consumption, but allowed the government to reduce support payments to populations groups that were hard-hit by the imposition of more stringent restrictions and that received assistance at earlier stages of the crisis.

Fiscal policy during the COVID-19 crisis was mainly anticyclical.

The decline in public expenditure and the decisions to cancel support mechanisms can be viewed as a continuation of the anticyclical policy during the COVID-19 crisis. In 2020, public expenditure was increased during the crisis, when there was negative growth, without being concurrently offset by tax increases. In 2021, public expenditure was reduced alongside the endogenous growth of revenue when growth again increased. (A broad description of fiscal developments appears in Chapter 6.)

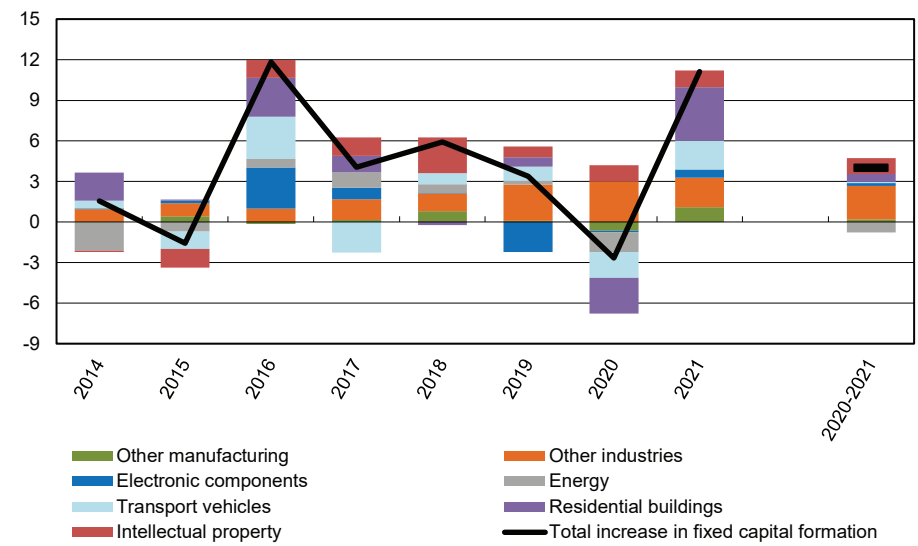
(3) Investment

Fixed capital formation (excluding ships and aircraft), which contracted in 2020, grew by 11.4 percent in 2021, surpassing its 2019 level. However, the level of investment remained lower than the precrisis trend, because the rate of growth in the precrisis trend of investment was high—more than 5 percent per year.[5]

Fixed capital formation increased rapidly in 2021, surpassing its 2019 level, but remained below the trend.

The most significant component in the growth in investments in 2021 was residential construction, which increased by 13.9 percent. Investment in residential construction nearly returned to its normal trend, after slowing in 2020 with the drop in buildings starts during the first lockdown. Following the first lockdown, building starts returned to their precrisis level—an average of about 55,000 units per year. In 2021, there were 63,300 building starts.[6] For more details on activity in the construction industry and in the housing market, see Chapter 9 of this Report.

Figure 2.6
Total Increase in Fixed Capital Formation and Contribution of Components, 2014–2021 (percentage points)



SOURCE: Based on Central Bureau of Statistics.

Investments in the primary industries also increased markedly this year, by 9.7 percent. However, unlike residential construction, they remained below the level expected on the basis of precrisis trends. A look at the contributions to the two-year (2020–21) growth rate in Figure 2.6 shows that the gap from the trend of this

Investments in the primary industries increased markedly this year, but remained below their precrisis trend.

[5] The rate of growth of the trend prior to the crisis is based on average growth between 2014 and 2019.

[6] And possibly even more, since data on building starts are generally revised upward over a number of quarters after publication of the initial estimate.

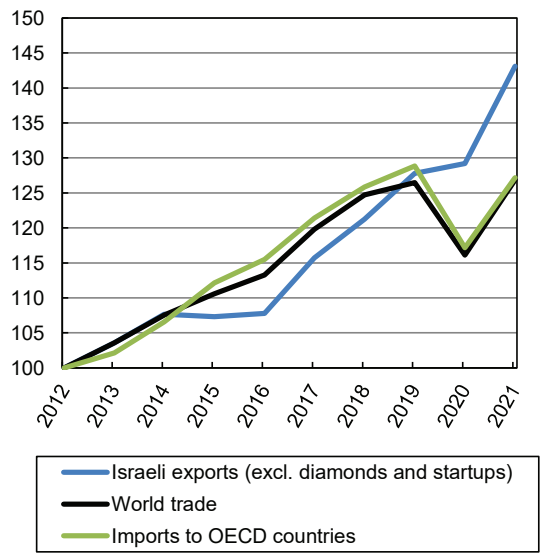
investment component was due to a decline in investments in the energy field and a relatively slow increase in investments in passenger vehicles for business. The latter may reflect a slowdown in vehicle purchases by leasing companies due to the reduction in travel during the COVID-19 period, the expanded volume of work from home, and the decline in vehicle rentals due to the decline in tourism. With that, the renewed growth of investments—particularly in the areas of machinery and equipment in the rest of the primary industries—shows that firms believed that business activity was returning to routine following the crisis, and that there would be less of an impact to it in the event of further morbidity waves.

(4) Exports

Exports increased rapidly in 2021—further to the increase in 2020 despite the beginning of the crisis—which was one of the main factors moderating COVID-19's impact on the economy.

Goods and services exports (excluding startups and diamonds) increased by 10.8 percent in 2021, following growth of 1.1 percent in 2020 that came despite the outbreak of the COVID-19 crisis and its impact on world trade, and in contrast with the development of exports in most advanced economies (Figure 2.7). This strong growth was one of the main factors moderating the crisis's impact on the Israeli economy. Most of the growth in exports came from technological exports—the export of high-tech services and the export of goods from high-technology and mixed-technology industries. Manufacturing exports excluding diamonds increased by 11.1 percent between 2019 and 2021, and the export of other business services[7] increased by 27.0 percent. In contrast, the export of tourism services declined by about 84 percent (NIS 19 billion) between 2019 and 2021. The volume of transportation services exports (excluding travel fees) increased to 2.2 percent of GDP

Figure 2.7
World Trade, OECD Imports, and Israeli Exports, 2012–2021 (quantitative index: 2012=100)



SOURCE: Based on Central Bureau of Statistics and OECD.

[7] The aggregate is defined as "Other business services", and accounted for an average of about 81 percent of services exports between 2016 and 2019. (The rest of services exports are made up of tourism services, transportation services, consumption by foreign workers, and the export of startup companies.) Most of it is exports from the high-tech industries, but it also includes the export of financial services, the export of professional, scientific, and technical services, and exports from other industries.

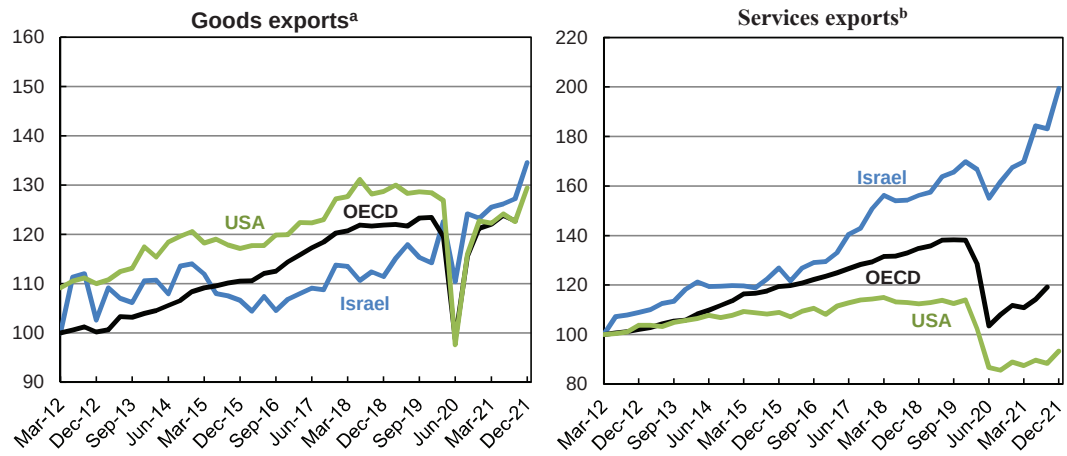
in 2021, compared with an average of 1 percent of GDP between 2016 and 2019. The increase in the share of transportation services exports was due to increased global shipping prices in 2021. (The increase in shipping prices in 2021 is discussed in greater detail later in this Chapter.) Figure 2.8 presents quantitative indices of the goods and services exports of Israel and of the advanced economies. The Figure clearly shows that Israeli services exports grew at a much faster pace than that of most OECD countries, while the growth of Israel's goods exports was not significantly different than that of the other advanced economies.

As a result of these developments, the mix of Israeli exports changed and, at least for now, so did the composition of the Israeli economy in general. The export of other business services increased from 10.5 percent of GDP in 2019 to 12 percent of GDP in 2021. By comparison, these exports accounted for 6.5 percent of GDP in 2009, and 8.2 percent of GDP in 2014.

This prolonged change in the mix of exports affects the Israeli economy in different ways. During the COVID-19 crisis, the relatively easy transition of the "advanced technological services" industry—Israel's main export industry—to work from home at very high rates prevented a deeper economic impact. The fact that the industry's products can easily be consumed from afar—whether directly by end consumers or indirectly through the remote supply of services to businesses—was one of the factors mitigating the effect of the jump in maritime shipping prices in 2020 and 2021. Alongside this, the ongoing high demand for workers in high-tech companies led to a marked increase in wages in this industry, which emphasizes the level of competition over experienced manpower throughout the economy that can enable the industry to respond to demand for its output.

This prolonged change in the mix of exports affects the Israeli economy in different and significant ways.

Figure 2.8
Goods and Services Exports from Israel, the US, and OECD Countries, 2012–2021 (quantitative index, 2012:Q1=100)



[a] In Israel, excluding diamonds.
[b] In Israel, excluding the sale of startup companies.
SOURCE: Based on OECD and Central Bureau of Statistics.

b. The composition of sources—GDP, imports, and inventory

Imports increased by 9.8 percent relative to 2019, coming close to the precrisis trend. The increase was mainly due to growth in goods imports and in the import of shipping services for those goods.

Alongside the 8.2 percent growth of GDP in 2021, imports (excluding defense imports, ships and aircraft, diamonds, and taxes) increased by 15.6 percent in 2021 and by 9.8 percent relative to 2019 (Table 2.7), so that imports this year were close to the level derived from their precrisis trend. The increase in imports was particularly influenced by goods imports—consumer goods, investment assets, and nonfuel raw materials—and services imports (excluding tourism), mainly the import of shipping services, which are themselves affected by the volume of goods imported to Israel. In contrast, the imports of tourism services and of fuels remain significantly lower than they were in 2019, despite some recovery relative to their low levels in 2020. There were only small changes in investment in inventory (excluding diamonds and startups) in the past two years, which had a negligible effect on sources (Table 2.3). Below in this section, we discuss differences between industries in the state of economic activity, as well as the effect of maritime shipping prices on the domestic economy.

Differences between industries in the recovery from the COVID-19 crisis

The crisis's impact on industries varied widely, as did the recovery of those industries.

The Israeli economy is not monolithic. Just as the COVID-19 crisis had a stronger impact on industries that require work in physical proximity or gatherings (as described in Box 2.1 of the Bank of Israel *Annual Report* for 2020), it is important to examine the recovery and growth of various industries in order to know whether the aggregate growth is broad-based, and in which industries problems remain or were created. Output, revenue, and the job vacancy rate in all industries were higher in 2021 than in 2020, but there was tremendous variance in the rates of increase according to the various indices and in the extent to which they returned to their precrisis levels (or to the trends that could have been forecast according to those levels).

The removal of restrictions enabled the recovery of proximity industries, but even among those industries, the recovery varied greatly.

The removal of most health restrictions over the course of the year enabled the proximity industries[8], which were harder-hit by the COVID-19 crisis, to recover in 2021 (Tables 2.5a and 2.5b).[9] Some of them recovered to a great extent in 2021, because they were able to operate on a broad footing subject to the remaining restrictions. For instance, the output of the education industry (which includes both the formal and informal systems) returned to its 2019 level, and the number of employees in the industry even exceeded the 2019 number. This was because closing educational institutions was avoided (starting at the end of the third lockdown) and other educational activity was permitted. The regular functioning of the education system contributes to the economy beyond what is reflected in the industry's output. It enables parents to go to work and helps achieve educational targets and increase the human capital of the future labor force. The government therefore went to great

[8] The proximity industries are transportation; accommodation and food; art, entertainment, and leisure; education; and support and management. These industries require physical proximity or gathering in order to conduct business activity, and as such, they were more hard-hit during the COVID-19 crisis.

[9] Tables 2.5a and 2.5b present those industries. Table 2.5a is arranged by the rate of decline in output in 2021, from greatest to smallest.

lengths to leave the education system open during the fourth and fifth morbidity waves by using testing and quarantine programs, although quarantines and parental concerns led to reduced attendance at educational institutions during the peaks of morbidity. In contrast, in other parts of the proximity industries, particularly those connected to incoming tourism which did not resume at all this year, activity remained limited throughout almost all of 2021. The accommodation and food services industry was particularly prominent, with output that was about 20 percent lower than in 2019.

In contrast to the proximity industries, there are industries that enjoyed greater demand than usual. The information and communications, finance, and healthcare industries had the greatest increase in output and employment in 2021 for different reasons. In the information and communications industry, the sharp increase in demand for high-tech services, together with the industry's ability to work efficiently from afar, led to increased output and revenue in both 2020 and 2021, and to expanded employee recruitment even in 2020. In 2021, with the exit from the third lockdown and the reopening of the economy, global demand for the industry's services remained high, which led to a further increase in demand for workers. The finance industry was generally not impacted by the crisis, and grew rapidly in 2021, thanks to the nature of work in the industry, which enables distancing, and due to the sharp increases in the financial markets that began a short time after the start of the crisis and continued throughout most of 2020 and 2021. However, demand for the industry's services did not increase to the same extent as it did in high-tech, the increase in employment in the industry did not generate broad competition for workers, and there were no significant wage increases in it. Unlike these two industries, the healthcare industry needed to expand its activity right at the beginning of the crisis in order to deal with the pandemic, through increasing the treatment array at the hospitals and in communities and building a testing system in the field and at labs.

Compared to the proximity industries, there are industries that benefited from greater-than-normal demand—particularly information and communications, finance, and healthcare.

Table 2.5a

Change in industry revenue and output, 2020 and 2021 relative to 2019, by industry[a,b]

Main industry		Industry's weight in GDP in 2019[c]	Output		Revenue index	
		Percent of GDP	Rate of change relative to 2019		Rate of change relative to 2019 average	
			2020	2021	2020	2021
H	Transportation and storage, postal and courier services	2.5	-40.5	-22.0	-16.4	3.5
R+S	Arts, Entertainment and Recreation, and Other Services[d]	3.2	-22.1	-9.8	-30.1	-5.6
I	Accommodation and food services	3.4	-19.6	-6.3	-36.7	-13.8
P	Education[e]	6.7	-6.8	0.3	-19.1	-5.2
F	Construction	6.4	-4.1	4.2	5.8	18.6
B+C	Manufacturing, mining and quarrying	12.4	0.8	5.6	3.3	7.4
L+M+N	Real estate, professional services, and administrative and support services	13.8	-4.9	7.1	-4.0	21.9
G	Wholesale and retail trade, and motor vehicle and motorcycle repair	9.1	0.9	8.1	2.0	17.5
Q	Human health and social work services[e]	6.3	1.4	12.5	-1.1	14.6
J	Information and communication	10.5	7.9	14.4	4.5	17.6
K	Financial and insurance services	5.0	9.1	20.4	3.8	20.4

[a] Dark green on the heat map indicates a relatively large increase, while dark red indicates a relatively large decline. The distribution of the values differs between the variables, so a particular value can obtain different colors in different variables.

[b] The table is arranged by the change in output in 2021 from the largest decline to the largest increase.

[c] In addition to the industry output appearing in the table, total GDP also includes the housing services, the electricity and water industry, the agriculture industry, and public services that are not healthcare and education. The weight is calculated according to data in current prices.

[d] Output for this item includes Industry T - Households as employers.

Table 2.5b
Change in employment variables, 2020 and 2021 relative to 2019, by industry[a,b]

(annual rates of change, percent)

Main industry		Weight of industry in employment in 2019	Number of employed		Weekly labor input		Job vacancies		Wage per employee post		Estimated wage per employee post adjusted for composition[c]	
		Percent of total employees	Rate of change relative to the 2019 average									
			2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
I	Accommodation and food services	4.5	-19.5	-22.4	-43.3	-32.1	-68.2	37.2	1.7	5.2	-9.0	6.0
H	Transportation and storage, postal and courier services	4.4	-2.7	-8.0	-15.9	-11.1	-47.4	21.7	-0.7	0.6	-6.3	5.1
R+S	Arts, Entertainment and Recreation, and Other Services	4.9	-2.6	-7.7	-24.9	-5.6	-56.5	23.2	6.7	6.2	-8.4	7.2
F	Construction	5.3	-4.2	-5.4	-10.1	-6.7	-28.9	-1.3	7.5	12.5	-0.8	4.6
G	Wholesale and retail trade, and motor vehicle and motorcycle repair	10.9	-1.9	-3.4	-11.8	-6.8	-41.2	31.2	3.5	7.6	-1.7	5.4
B+C	Manufacturing, mining and quarrying	10.5	-6.4	-2.6	-9.1	-3.3	-32.6	30.6	5.8	9.3	1.4	5.3
L+M+N	Real estate, professional services, and administrative and support services	12.9	-0.3	-0.2	-11.2	-3.6	-39.0	20.2	7.4	11.6	7.2	14.0
P	Education	12.7	-0.7	1.5	-3.5	6.6	-33.6	17.4	4.4	6.6	0.8	10.7
K	Financial and insurance services	3.3	-0.5	3.8	-0.3	6.4	-37.9	25.3	4.2	4.8	1.9	6.4
Q	Human health and social work services	11.3	4.6	4.2	-5.5	3.2	-15.8	27.5	-1.3	-3.2	-0.9	-3.1
J	Information and communication	5.7	4.6	11.2	5.8	13.5	-17.3	60.4	7.0	16.3	4.0	18.4

[a] Dark green on the heat map indicates a relatively large increase, while dark red indicates a relatively large decline. The distribution of the values differs between the variables, so a particular value can obtain different colors in different variables.

[b] The table is arranged by the change in employment in 2021 from the largest decline to the largest increase.

[c] For definition, see Box 2.2 in this chapter.

SOURCE: Based on Central Bureau of Statistics.

Table 2.6
Change in industry output at base prices, 1995–2021

(annual rate of change, percent, fixed prices)

	Weight in total GDP (2021)[a]	1995–2016	2017	2018	2019	2020	2021	Average annual rate of change, 2019–2021
Total		3.9	4.6	3.7	3.6	-1.9	7.8	2.8
Public sector services	15.6	2.2	2.8	2.8	1.7	-3.1	5.5	1.1
Business sector	72.4	4.1	5.2	4.0	4.2	-2.5	9.3	3.3
Manufacturing, mining and quarrying	12.4	2.2	4.9	8.8	1.1	0.8	4.7	2.8
Trade, accommodation and food services	10.7	5.3	6.6	1.0	2.2	-8.1	10.7	0.9
Business services	18.5	4.2	5.6	0.6	4.1	-1.2	12.6	5.5
Construction	6.3	1.8	5.3	5.6	3.9	-4.1	8.7	2.1
Transportation and storage	3.1	4.5	5.8	1.7	-1.1	-19.6	16.5	-3.2
Information and communications	12.4	8.2	5.9	6.7	15.1	7.9	6.1	7.0
Agriculture	1.1	2.6	1.1	-2.2	1.4	-5.4	-2.2	-3.8
Electricity and water	1.4	3.9	-2.3	3.2	-1.4	-4.6	3.7	-0.5
Education, healthcare, and art	6.6	3.0	3.7	7.7	3.6	-7.4	13.7	2.6

[a] In addition to the output of public services and business sector output appearing in the table, total GDP also includes housing services. The weight is calculated according to data in current prices. It should be noted that GDP growth by industry is not equal to the result obtained from the National Accounts, partly because industry GDP is calculated by factor cost.
SOURCE: Based on Central Bureau of Statistics.

Table 2.7
Quantitative imports and exports of goods and services, and changes in 2020–2021[a]

(fixed 2019 prices)

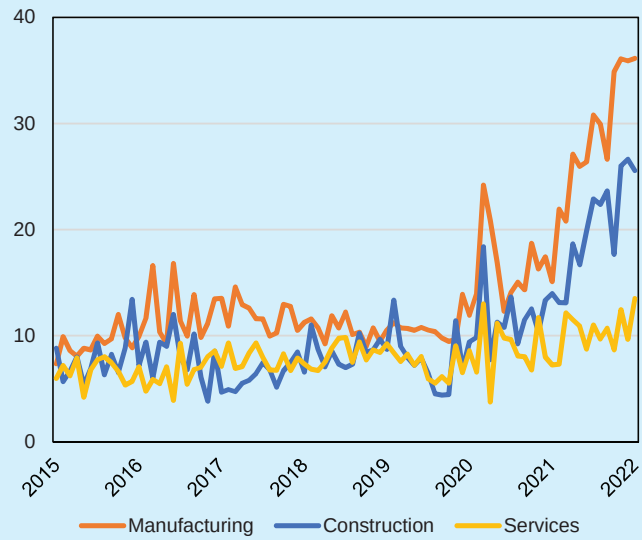
	Weight in imports/exports	NIS billion			Change in 2020		Change in 2021		Cumulative rate of change, 2019–2021	
	2019	2019	2020	2021	%	NIS billion	%	NIS billion	%	NIS billion
Imports excl. defense, ships, aircraft, and diamonds	**100%**	**354.6**	**328.7**	**389.3**	**-7.3%**	**-25.8**	**15.6%**	**60.6**	**9.8%**	**34.8**
Services imports - Tourism	8%	29.0	6.4	11.2	-77.9%	-22.6	42.7%	4.8	-61.5%	-17.8
Services imports - Total excl. tourism	25%	88.4	81.8	96.5	-7.5%	-6.6	15.3%	14.8	9.2%	8.2
Goods imports - Fuel	11%	38.4	28.3	30.9	-26.2%	-10.0	8.3%	2.6	-19.5%	-7.5
Goods imports - Other	61%	217.4	226.0	266.7	4.0%	8.6	15.3%	40.7	22.7%	49.3
Conversion from CIF to FOB	-4%	-12.8	-12.5	-14.5	-2.5%	0.3	13.9%	-2.0	13.3%	-1.7
Exports excl. diamonds	**100%**	**401.3**	**397.2**	**445.8**	**-1.0%**	**-4.1**	**10.9%**	**48.6**	**11.1%**	**44.5**
Services exports - Sales of startup companies	3%	10.9	2.4	8.0	-77.9%	-8.5	69.6%	5.5	-27.1%	-3.0
Exports excl. diamonds and startups	**97%**	**390.4**	**394.8**	**437.9**	**1.1%**	**4.4**	**9.8%**	**43.0**	**12.1%**	**47.4**
Goods exports - Manufacturing and agriculture	49%	197.8	204.6	219.5	3.4%	6.7	6.8%	14.9	10.9%	21.6
Services exports - Tourism and nonresidents' consumption	7%	27.1	8.8	7.3	-67.7%	-18.4	-20.0%	-1.5	-73.1%	-19.8
Services exports - Other	41%	165.5	181.5	210.2	9.7%	16.0	13.7%	28.7	27.0%	44.7

[a] Technical note: The numbers of the import components do not precisely add up to the headline number. This is due to a variety of reasons, mainly the handling of the conversion from CIF to FOB, which includes diamonds, ships and aircraft.
SOURCE: Based on Central Bureau of Statistics.

BOX 2.1: THE INCREASE IN MARITIME SHIPPING PRICES DURING THE COVID-19 CRISIS AND ITS IMPACT ON THE ISRAELI ECONOMY

Following the outbreak of the global COVID-19 crisis in early 2020 and the broad lockdowns in Israel and abroad during the first wave, demand for goods dropped sharply around the world.[1] In May 2020, a record 12 percent of global maritime shipping capacity was inactive, due to the low demand. In response, shipping companies took significant steps to reduce costs and maintain the level of shipping prices, including a temporary shutdown of some of their capacity. In the second half of the year, there was a renewal of global demand for goods, and world trade surged more strongly than anticipated, which led to a rapid increase in demand for container shipping. However, supply could not expand at a similar pace, so shipping prices began to rise rapidly. In September 2020, inactive capacity declined to 3.5 percent, less than the precrisis average. The rapid resumption of activity, together with the COVID-19 restrictions that slowed work at the ports, created a vicious circle. They led to backlogs at the large ports, shipping bottlenecks, and delays in unloading containers, and also limited the stock of available shipping, which raised its price even more. These problems limited the supply of available containers, led to containers piling up in importing countries (countries with positive net imports), and led to a container shortage in exporting countries (countries with large negative net imports). Various additional logistical problems, such as the blockage of the Suez Canal for 6 days in March 2021, also contributed to supply limitations in the industry and to extreme upward pressure on shipping prices (Figure 2).[2]

Figure 1
Rate of Companies Reporting a Serious or Moderate Constraint in Equipment and Raw Materials, by Industry, January 2015–January 2022 (percent)



SOURCE: Based on Central Bureau of Statistics.

Despite this increase, world trade grew by 9.3 percent in 2021 (Figure 2.7; Table 2.2), and the number of containers shipped increased by about 15 percent. Due to these increases, the shipping companies' income and profits grew at particularly high rates. The industry's global profits, which totaled about

[1] See United Nations Conference on Trade and Development (UNCTAD), "Review of Maritime Transport, 2021", Chapter 5, November 2021, https://unctad.org/webflyer/review-maritime-transport-2021.

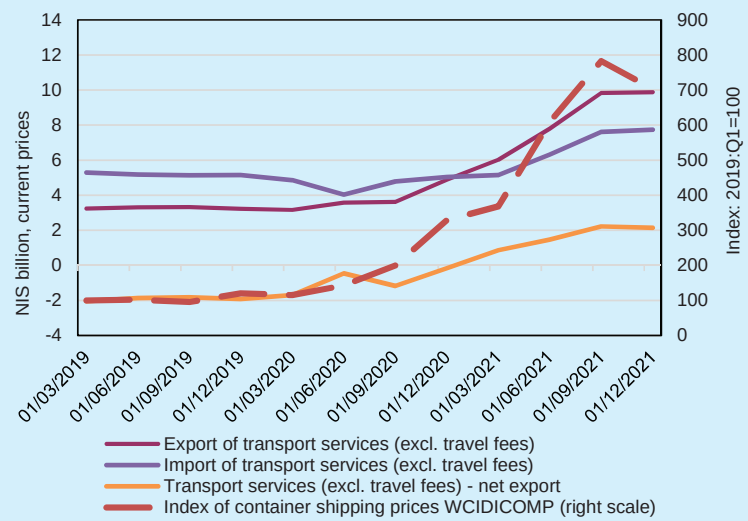
[2] The Figure shows a common aggregate index of global shipping prices. It is, however, important to note that this index does not capture the specific effect of this development on Israel. Shipping prices vary markedly according to many criteria, including destination and ship size.

$1.6 billion in the first quarter of 2020, climbed to about $27.4 billion in the first quarter of 2021. The industry's profits were about $100 billion in 2021, compared with $25.4 billion in 2020.

These developments also significantly increased the costs of import shipping to Israel. According to the Central Bureau of Statistics Business Tendency Survey, there was an increase in manufacturing and construction companies reporting moderate or serious equipment and raw materials constraints starting in mid-2020. At the end of 2021, about 30 percent of companies in those industries reported constraints, compared with about 10 percent in previous years (Figure 1). These developments had almost no effect on the reporting by services companies (which import only machinery and equipment, and not raw materials), which supports the thesis that it mainly hit the industries with large quantities of physical imports and passed over industries where the quantity of imports are relatively small but the monetary value per import unit may be higher.

Expenditures on the import of shipping services in Israel increased significantly in 2021 due to these developments. The import of transportation services (excluding travel fees) was 29 percent higher in 2021 than it was in 2019. (Change in total imports appear in Table 2.7.) Even so, the effect on Israel's GDP was apparently positive, because Israel is also a significant exporter of transportation services, particularly cargo shipping services between foreign ports.[3] Israel's export of transportation services (excluding travel fees) in 2021 was 155 percent higher than in 2019. From a macroeconomic perspective, this growth of exports more than compensated for the increase in imports, as shown by net transportation exports in Figure 2. It is also important to note that the increase in the import of shipping services was not solely due to the increase in prices.

Figure 2
Global Index of Maritime Shipping Prices, and Israel's Export and Import of Transport Services, 2019–2021 (quarterly)



SOURCE: Based on Bloomberg and Central Bureau of Statistics.

[3] This is mainly activity of the "Zim" shipping company, whose annual turnover in 2021 was about $10.7 billion, compared with $4 billion in 2020. See Zim Integrated Shipping Services Ltd. (2022), "2021 Annual Report", https://investors.zim.com/financials/sec-filings/sec-filings-details/default.aspx?FilingId=15643997

Table 2.8
The supply of gross domestic and business sector product, 1995–2021

(annual change, percent)

	1995–2016	2017	2018	2019	2020	2021	Rate of change, 2019–2021
Gross Domestic Product	3.9	4.4	4.0	3.8	-2.2	8.2	2.9
of which: Business sector product	4.3	4.8	4.4	4.3	-2.7	9.6	3.3
Output of public services	2.2	2.8	2.8	1.7	-3.1	5.5	1.1
Stock of physical capital	4.3	3.8	3.8	4.1	4.1	3.6	3.8
of which: Business sector	5.3	4.1	4.0	4.9	5.0	4.2	4.6
Labor force	2.5	1.7	1.9	1.4	-0.8	1.8	0.5
Total hours worked	2.8	2.2	1.3	0.9	-7.9	7.1	-0.7
Total hours worked in the business sector	2.6	2.0	0.8	1.1	-9.4	7.4	-1.4
Total factor productivity	0.6	1.9	1.5	1.6	2.4	1.7	2.1
Total factor productivity in the business sector	0.6	1.6	1.8	1.5	2.1	2.8	2.7
Output per work hour (nominal)	4.4	2.9	3.7	5.2	7.7	3.0	5.3
Output per work hour in the business sector	4.4	2.8	4.2	5.5	8.3	5.7	7.0
Labor compensation per hour worked (nominal)	3.9	3.8	4.7	4.1	6.7	1.1	3.9
Labor compensation per hour worked in the business sector	4.1	4.0	5.7	4.3	7.9	2.0	4.9
GDP labor share	-0.4	0.9	1.0	-1.0	-1.0	-1.9	-1.4
GDP labor share in the business sector	-0.3	1.1	1.4	-1.2	-0.4	-3.4	-1.9
GDP labor share (level)	57.7	55.6	56.2	55.6	55.2	53.9	
GDP labor share (level) in the business sector	61.3	59.7	60.6	59.7	59.9	57.3	

SOURCE: Based on Central Bureau of Statistics.

3. MACROECONOMIC DEVELOPMENTS IN THE LABOR MARKET

In 2021, employment in the economy recovered from the impact of the COVID-19 crisis, and at the end of the year, it was very close to its precrisis rate.

The recovery of demand and economic activity this year also led to an impressive recovery of employment from the unprecedented low that was recorded during the height of the COVID-19 crisis in 2020. Most workers who were furloughed (with unemployment benefits) as a solution to the financial distress of businesses that were closed at the height of the COVID-19 restrictions in 2020 returned to employment during the year. Thus, the adjusted employment rate[10], which was just 52 percent at the beginning of 2021, increased almost continuously throughout the year, to 60.1 percent at the end of 2021 (Figure 2.10), not far from the rate that was typical of the years prior to the crisis (an employment rate of 61.1 percent in 2019). The improvement in employment was temporarily halted during the fourth wave of morbidity, during which there were fewer activity restrictions than in previous waves. Many workers were not entitled to unemployment benefits, after having exhausted their eligibility

[10] For definitions, see footnote 1.

during the crisis, and there was no structured furlough arrangement, but employment did not decline. At the end of the morbidity wave, the employment rate resumed its increase. The unemployment rates (in their various definitions, both narrow and broad) declined during most of the year. The rapid recovery of employment, almost to its precrisis level, was supported by the rapid growth of demand in the economy, and also reflected the contribution of the furlough arrangement, which enabled employees and employers to maintain their connection during periods when employment was interrupted due to the pandemic and the restrictions on activity. This led to savings on job search and matching costs with the return of economic activity, and employers did not have to bear the costs of employing workers who had not worked during the crisis or of fixed payments due to employee dismissals. Alongside this, the end of furlough arrangements in the middle of the year[11]—when the economy reopened, activity recovered, and concerns over broad restrictions on activity dissipated—contributed to the return of employment to its normal level as the epidemiological situation changed (see the analysis in Chapter 5).

The return to employment varied by industry. There were industries in which employment was higher than before the crisis, while in others it remained relatively low, largely due to the lack of incoming tourism.

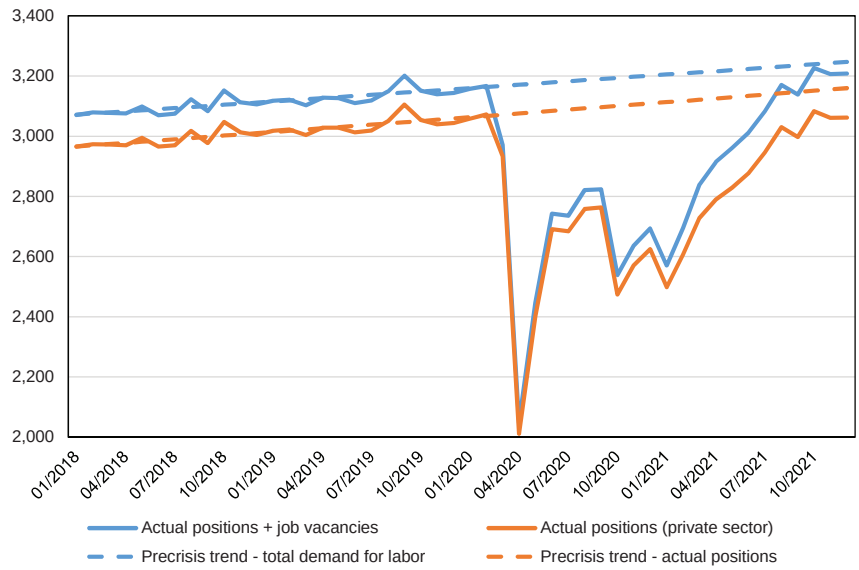
The aggregate return to almost full employment comes with variance between industries, some of which was due to the effects of the COVID-19 crisis on the composition of the labor market. Two industries in which employment was particularly high in 2021 compared to 2019 are the information and communications industry and the healthcare industry. The growth of employment in the former was directly due to the success of high-tech services during those years, which attracted more workers and led to an increase in their wages (Table 2.5b). Since high-tech services feature employees with very high skill levels, and there is a relative shortage of such employees, there are also many job vacancies in the industry, which was true in the years before the crisis as well.

In contrast, a major part of the growth in the number of employees in the healthcare industry was due to the addition of employees, which was necessary in order to staff the COVID-19 treatment system (testing, and strengthening medical services in the communities and in hospitals). This demand is likely temporary, and will decline as the COVID-19 needs abate. The growth in healthcare employment due to this demand was concentrated among workers with low wage levels relative to more veteran employees in the industry, which was reflected in a decline in the industry's average wage. We can assume that some of the workers that joined the industry worked in other industries during normal times (such as the hospitality and food industry, the construction industry, and so forth).

Over the course of the year, demand began to recover in the proximity industries as well, which made it necessary to hire new employees. As employees were drawn to industries that expanded, some of the proximity industries suffered from under-employment even at the end of the year, relative to 2019, and many positions remained vacant. Figure 2.9 indicates that while the number of filled positions in the private sector was about 80,000 away from the precrisis trend, the general demand for workers

[11] In June for those up to age 45, and in October for those over age 45.

Figure 2.9
Actual Employee Posts and Total Demand for Labor[a], Private Sector, 2018–2021 (thousands of positions)



[a] Actual positions is the number of employee posts in the private sector, calculated as the difference between total Israeli employee posts (seasonally adjusted) and the number of employee posts in the government sector (not seasonally adjusted). Total demand for labor in the private sector is calculated as actual positions plus job vacancies reported in the job vacancy survey (seasonally adjusted). It should be noted that, as opposed to actual positions, job vacancies do not include those that are among micro employers with fewer than five employees.

SOURCE: Based on Central Bureau of Statistics.

in the private sector (including both filled and vacant positions) had almost closed the gap with the trend (just 30,000 positions away). It is worth noting that in some industries, such as accommodation and food, where a large part of the workers are young people looking for relatively flexible temporary work, demand did not return to its precrisis level—particularly because of the lack of incoming tourism. However, the under-demand there was apparently less than the surplus demand in industries that expanded, which created an aggregate shortage of workers that was reflected in the general job vacancy rate—a record 4.4 percent of all employees in 2021 compared with 3.4 percent before the pandemic.

Throughout the COVID-19 crisis in 2020–21, the impact to employment was significantly greater than the impact to GDP. This reflects an increase in average labor productivity in the economy.

Throughout the COVID-19 crisis in 2020 and 2021, the impact on employment was significantly greater than the impact on GDP (Figure 2.1). This was reflected in an increase in average labor productivity in the economy. In the first year of the crisis, the increase in productivity primarily reflected a composition effect since the proximity industries that were particularly impacted (in both output and employment) by the COVID-19 restrictions and the lockdowns were characterized by workers with low labor productivity and low wages, who were furloughed. The composition effect declined in 2021 with the return to high employment levels, and we can assume that some of the increase in productivity was due to adjustments made by employees and employers in order to deal with the pandemic—including working from home, remote meetings and classes, and the expanded digitalization of various government systems,

and of part of the business sector—which increased work efficiency (see Box 1.1 in Chapter 1 of this Report).

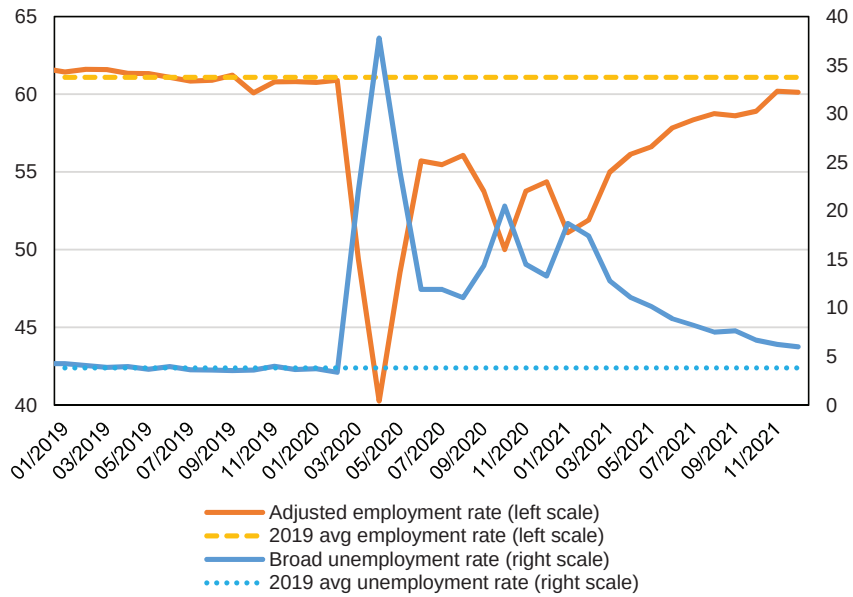
There were no significant wage pressures in the economy.

Despite to the emergence of the shortage of workers toward the end of the year, the increase in inflation, and the increase in labor productivity, there were no significant wage pressures in the economy this year. The average wage, net of the composition effect, increased by 4.4 percent between 2020 and 2021, similar to its growth rate prior to the crisis. (An explanation of the unique necessity of looking at composition-adjusted wages, and a discussion of its development over the course of the crisis, appear in Box 2.2.) The jump in productivity alongside the moderate increase in wages led to a decline in the GDP labor share, to 53.9 percent, compared with 55.1 percent prior to the crisis (Table 2.8). This may reflect a number of factors: some wage rigidities that have an effect later on if the labor shortage persists and the labor market does not return to full equilibrium, or nonmonetary compensation such as the ability to work from home. It is difficult, for now, to determine the weight of each factor.

There were concerns that the serious impact to employment in the first year of the crisis would leave scarring in the labor market. In retrospect, these concerns seem to have abated.

The strong recovery of the employment indices alongside the increase in productivity greatly reduced the concerns over scarring in the labor market—concerns that the temporary impact due to the crisis would become a long-term impact on employment and on workers' income. These concerns arose in the first year of the crisis (March 2020 to February 2021) due to hundreds of thousands of workers being placed on furlough for many months. In June 2020, about a month after the end of the first lockdown, about 350,000 men and women were underemployed, and this figure remained very high until the middle of 2021. Moreover, the persistence of this phenomenon for more than a year was perceived as presaging a long-term impact on the ability of people who had lost their jobs, particularly older workers, to return to the labor market, and the erosion of human capital that furloughed employees had accumulated while they were working. Even so, in retrospect it seems that there were no significant macroeconomic scars in the labor market. (See Chapter 5 in this Report.) This was partly thanks to the policy implemented during the crisis to maintain the connection of furloughed employees with their employers, support businesses to prevent their collapse, and return the economy to activity that was as open as possible along with the broad deployment of vaccinations.

Figure 2.10
Adjusted Employment Rate and Broad Unemployment Rate[a], 2019–2021
(percent)



[a] Before March 2020, the broad unemployment rate is equal to the regular unemployment rate.
SOURCE: Based on Central Bureau of Statistics.

Table 2.9
Principal labor market data, 1995–2021

(annual change, percent)

	1995–2016	2017	2018	2019	2020	2021	Average annual rate of change, 2019–2021
Population aged 15+	2.2	1.9	2.0	2.1	1.9	1.8	1.9
Labor force participation rate aged 15+ (level)		64.0	63.9	63.5	61.8	61.8	
Employment rate aged 15+ (level)		61.3	61.4	61.1	59.1	58.7	
Unemployment rate aged 15+ (level)		4.2	4.0	3.8	4.4	5.0	
Job vacancy rate (level)		3.8	3.7	3.5	2.4	4.6	
Employed persons (Including non-Israelis)	2.7	2.4	1.7	1.7	-1.9	1.4	-0.2
of which : Employed in the business sector	2.6	2.2	0.8	1.5	-3.8	1.4	-1.2
Employed in the public services	2.9	2.8	3.5	2.0	1.9	1.6	1.7
Total work hours (including non-Israelis)	2.8	2.2	1.3	0.9	-7.9	7.1	-0.7
of which : Total work hours in the business sector	2.6	2.0	0.8	1.1	-9.4	7.4	-1.4
Total work hours in the public services	3.2	2.8	2.9	0.4	-3.0	6.2	1.5
Hours per employed person (including non-Israelis) (level)	36.7	36.9	36.7	36.4	34.2	36.1	
of which : Hours per employed person in the business sector (level)	42.1	42.4	42.4	42.2	39.7	42.1	
Hours per employed person in the public services (level)	24.9	25.7	25.6	25.2	24.0	25.1	
Employee posts (including non-Israelis)	2.8	3.3	2.5	2.0	-10.0	7.4	-1.7
of which : Employee posts in the business sector	2.6	3.0	2.1	1.4	-14.6	8.1	-3.9
Employee posts in the public services	3.1	3.8	3.4	3.2	-0.8	6.3	2.7
Nominal wage per employee post	3.8[a]	3.0	3.5	2.9	6.5	2.3	4.4
Real wage per employee post	1.0	2.8	2.7	2.0	7.5	0.5	4.0

[a] Between 1995 and 1999, the nominal wage was affected by high inflation, and from 2000, the nominal wage has increased at an average annual rate of 2.5 percent.

SOURCE: Based on Central Bureau of Statistics.

BOX 2.2: THE DEVELOPMENT OF THE AVERAGE WAGE IN 2020-21

The average wage per employee post was very volatile in the past two years. It increased during the three lockdowns (sharply during the first one) and declined following each, but during the entire period it remained significantly higher than it was in 2019. The numerous restrictions imposed on activity during the first year of the COVID-19 pandemic, and particularly during the lockdowns, led to a large decline in employment, mainly through the furloughing of hundreds of thousands of workers. The decline in employment was mainly concentrated in industries that involve physical proximity between people and/or closed spaces (particularly in the hospitality, culture, and trade industries), in which the average salary is low. Since wage data are available only regarding people who actually worked, the departure of many workers with low average wages from their jobs led to an increase in the average wage in the economy, influenced by the composition of positions that remained in the labor market. Therefore, tracking the changes in the average wage in 2020–21 does not faithfully represent the development of the wages of workers who remained active during the crisis.

The average wage as reported officially by the Central Bureau of Statistics has a number of structural effects on the economy. There are regulations and rules that are directly linked to the level of the average wage, particularly with regard to National Insurance payments—such as setting National Insurance payment brackets and criteria for income tests and granting various benefit payments. For instance, some of the programs to encourage a return to work at the end of 2020 and the beginning of 2021 indexed the level of government support to the average wage. However, to understand the state of the labor market in terms of identifying excess supply or demand for workers and identifying wage pressures that may generate inflationary pressure, we must examine the development of wages in positions that remained in the economy, meaning net of the effect of composition. Understanding the labor market from this important angle helps policy makers examine the need to provide support during an economic crisis, or determine the extent of anti-cyclical policy. This box presents two composition-adjusted wage indices and how they are calculated.

a. Adjusting for the effect of composition under the assumption that the "excess" unemployed would have continued to work

In this method, we calculate the average wage in a hypothetical situation in which the additional unemployed—those beyond the usual number[1]—would have continued to work at the wage that they received prior to the crisis, in 2019. Thus, we essentially "cancel out" the composition effect through a hypothetical return of low-wage earners to the group of workers.[2]

The advantage of this method is that it imputes wages only to the group of additional unemployed, who are a minority of the labor force. (Excluding April 2020, they constituted up to 20 percent of employees

1 The number is calculated according to the adjusted number of additional employees necessary in order to return to the employment level that prevailed prior to the crisis: 61.1 percent in 2019.

2 The technical calculation: Using paired data from the Central Bureau of Statistics monthly Labor Force Survey with individual-level wage data from the employer-employee file for 2019, we calculate for each month in 2020–21 the average wage received in 2019 by individuals who in the current month (in 2020–21) were identified as unemployed (in the broad definition). This gives us the average wage that the additional unemployed would have expected to receive had they worked (their hypothetical wage). In the next stage, we calculate the average wage in the economy as a weighted average of the hypothetical wage (the weight of which is determined by the volume of additional unemployed) and of the actual average wage (the weight of which is determined by the number of actual employee posts).

in the economy, and in 2021, the rate declined to below 10 percent.) The disadvantage is in the attempt to mimic wage changes in the positions that remained staffed by calculating a hypothetical situation in which people who were not working would have worked and earned what they did in 2019. Another limitation is that underemployment data are by definition not seasonally adjusted, since this phenomenon has not existed long enough to enable a statistically reliable adjustment, while wage data are seasonally adjusted.

b. Direct calculation of the composition effect and netting it out from the wage data

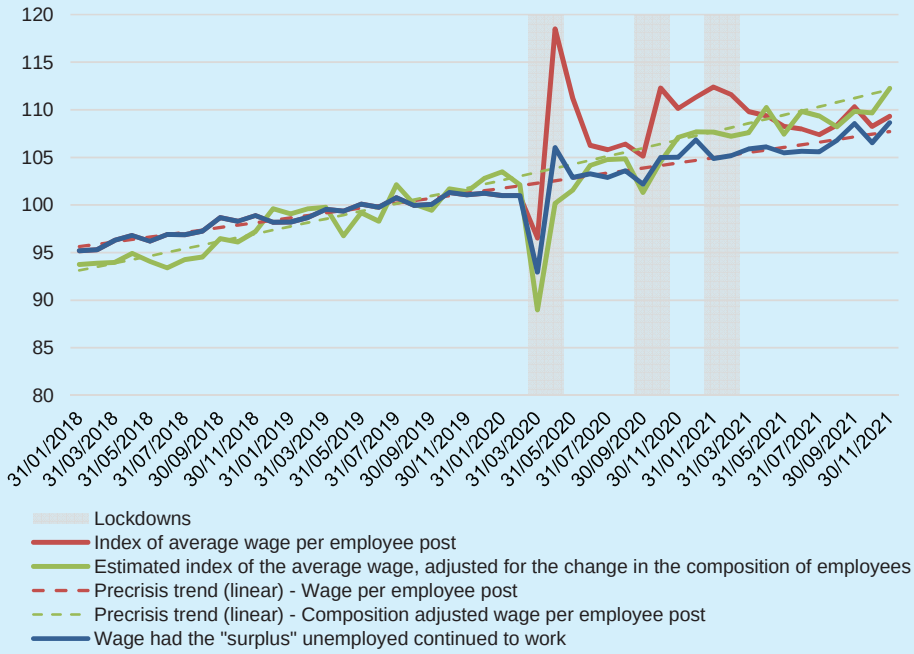
In this method, we directly calculate the effect of the composition of workers on wages, and only then do we adjust the official average wage data by the calculated effect. In other words, the gap between the change in the average wage of employees who worked in a given month and the change in the wage of those same employees had their wage remained similar to what it was before the crisis reflects only the effect of the changes in wage that were not due to the change in the mix of workers. Like in the first method, the composition effect is calculated using a paired file of the Central Bureau of Statistics Labor Force Survey and the employer-employee file for 2019. For each month from 2018 through 2021, we calculate the average wage of salaried employees who were sampled in the survey, using the individual's 2019 wage. The development of this average wage over time at the individual level is fixed, but the composition of employed individuals changes from month to month, reflecting the composition's effect on wages. In the last stage, the actual average wage is divided by the calculated composition effect, giving us an index of the average wage adjusted for the composition effect.

The advantage of this method is that it estimates, though only as an approximation, the change in the wages of persistent workers, which we would be able to calculate if all individual-level wage data were available to us on an on-going basis. The disadvantage of this method is that it is based on assumptions regarding all salaried employees in the labor force survey, and particularly that the employees in question did not change jobs since 2019, since if they had, their 2019 wage would not represent their potential wage. Like in the previous method, this one necessarily mixes seasonally adjusted data (actual wages) with nonadjusted data, as well as between data sources.

Figure 1 shows the actual average wage alongside the average wage adjusted for the composition effect in each of the two methods. The precrisis trend of each series is also shown. (By definition, in the pre-COVID-19 period, the composition-adjusted wage in the first method is identical with the actual average wage, because there were no "additional unemployed" then.) There are a number of technical distinctions in the Figure: In the second method, the increase in the wage trend prior to the crisis was greater than the ordinary wage that is not adjusted for the composition effect. This is because even during normal times, there is a negative composition effect on wages, since older workers with higher salaries retire while younger workers enter the labor market at lower wages. The Figure also shows that in March 2020, and to a certain extent in September of that year, the composition-adjusted wage according to both methods declined sharply. This was a completely technical result that is not dealt with when adjusting for the composition effects.[3]

[3] It is due to the fact that the lockdowns that resulted in the furloughing of workers were imposed in the middle of the month (March and September), and many workers did work at the beginning of those months. The result is that during the month as a whole, there were more positions than are reflected in wage payments (some of which were halted in mid-month due to the furloughs), so the calculated average wage declines greatly. As stated, the methods do not quantify this technical and temporary effect.

Figure 1
Estimated Index of the Average Monthly Nominal Wage per Employee Post (Israeli workers only) Adjusted to the Change in the Composition of Employees 2018–2021 (seasonally adjusted, index: 2019 average=100)



SOURCE: Based on Central Bureau of Statistics Labor Force Surveys.

As for the material results, both adjusted indices show that when taking the composition of employees into account, the average wage increases at a pace similar to the normal precrisis trend. This means that during the crisis, there were no downward pressures on wages, despite the high unemployment, and at the end of 2021 there were no special upward pressures despite the return of employment to a level close to where it was before the crisis. The results of the calculations in both methods also show that the composition effect greatly dissipated in the second half of 2021, as the actual average wage came close to the adjusted wage. The methods outlined here are not perfect, but thanks to the consolidation of their results into one message, they can help us understand the state of the labor market and its development.

Table 2.5 in this Chapter shows the second index for various industries. It also shows the differences between the ordinary average wage index and the composition-adjusted index. The Table also shows that the index is particularly relevant to understanding wages in industries where the volume of employment remained low.

4. SAVINGS, INVESTMENT, AND THE CURRENT ACCOUNT

In view of the increase in disposable income during the crisis, private savings increased dramatically, beyond the decline in private consumption.

Gross private savings as a share of private disposable income from all sources declined to 38.6 percent in the first half of 2021 (compared with 41.5 percent in 2020), but remains very high by historical comparison (Figure 2.11). Gross private disposable income from all sources increased by 3.6 percent in 2021. The combination of the significant increase in disposable income and the high savings rate as a share of that income shows that the Israeli public has resources for greater consumption, but is not interested and/or is limited in such consumption. Moreover, a significant portion of the increase in disposable income was due to government grants and transfer payments to low-income individuals, whose marginal propensity to consume (according to economic theory) is high. Even so, savings increased and remained higher than the long-term trends of disposable income and the savings rate. The cumulative surplus private savings in 2020 and 2021 (savings above the long-term trend) was NIS 188 billion (12.9 percent of 2021 GDP), which is greater than the decline in private consumption.[12]

It seems that forced savings remained a significant factor in savings in 2021.

There are a number of possible reasons for the high savings: (1) precautionary savings (a decline in demand) due to uncertainty regarding the continuation of the crisis (morbidity and/or economic impact); (2) forced savings, meaning a reduction in supply due to the restrictions (particularly at the beginning of 2021, during the third lockdown); (3) savings due to concern of future tax increases in view of the high government expenses to deal with the crisis (Ricardian response).[13] These three reasons became less valid in 2021. Uncertainty regarding continued morbidity declined with the availability and effectiveness of the vaccinations (although it is unclear how the fifth—"omicron"—wave affected this perception); uncertainty regarding the economic impact of the crisis declined; consumption opportunities increased with the end of the third lockdown and the start of the recovery; and the expectation that the new government would increase taxes upon exiting the crisis declined. The latter was in view of the government's announcements that taxes would not be increased at this stage and the publication of the proposed budget, which included relatively few tax increases, and large surpluses in tax revenue in 2021 that greatly reduced the deficit relative to forecasts and even led to a decline in the debt-to-GDP ratio in 2021. In 2021, the savings rate declined from its peak in 2020, but remained higher than its historical range. The fact that private consumption in 2021 was low in industries that were at least somewhat restricted, such as hospitality and food and transportation services (mainly flights abroad), supports the argument that a significant part of savings in 2020–21 was forced savings. It is likely that some restrictions in consumption opportunities (mainly restrictions on travel abroad and on participation in large events), which are reflected in forced savings, and perhaps in concerns of the continuation of the crisis, are still contributing to the high savings.

[12] Private savings in 2020 and 2021 totaled NIS 950 billion. Had disposable income and the savings rate continued to increase according to their precrisis trends in 2020 and 2021, private savings in those years would have totaled NIS 762 billion.

[13] John J. Seater (1993), "Ricardian Equivalence", *Journal of Economic Literature*, 31(1): 142–190.

a. The current account of the balance of payments

The current account surplus was much higher than in 2019, mostly due to the increase in high-tech exports.

The current account surplus totaled $22.5 billion in 2021—$0.3 billion more than in 2020 and $8.2 billion more than in 2019 (Figure 2.12 and Table 2.10). The increase was due to strong growth in the export of high-tech services and the export of startup companies, while it was mitigated by a number of developments: the increase in oil prices, the reversal of the net balance in tourism, and the resumption of the increase in vehicle imports.

Expenditure on the import of energy products increased by $3.5 billion in 2021. The vast majority of this increase ($3.2 billion) was due to the increase in oil prices during the year, together with a small increase in distances traveled. In parallel, there was a renewed increase of $1.1 billion in the volume of passenger vehicle imports, and a smaller increase in commercial vehicle imports. The sharp increase in goods imports, along with the global surge in delivery prices, increased the cost of imported transportation services (excluding travel fees) by $2.4 billion relative to the same period in 2019, and by $2.8 billion relative to 2020. During the same period, the export of transportation services (excluding travel fees) increased by $6.6 billion relative to 2019 and by $5.9 billion relative to 2020. These increased the current account surplus by about $3.1 billion.

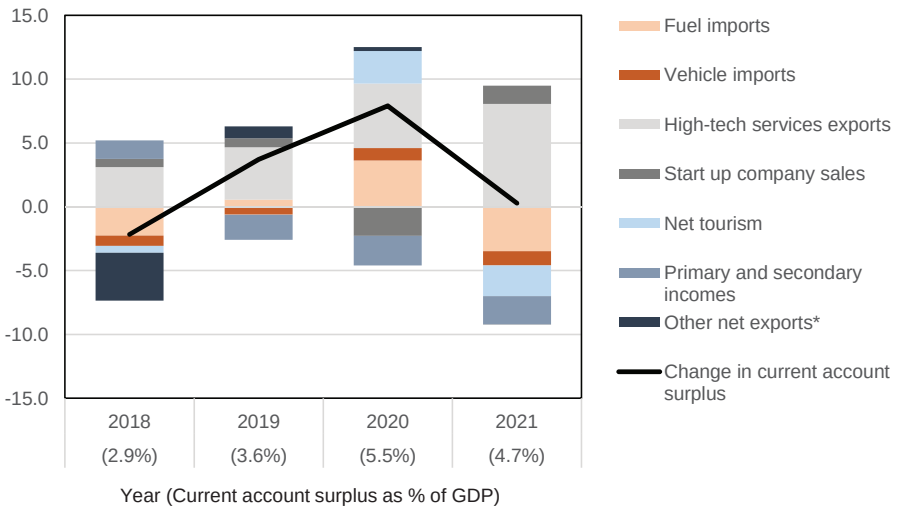
The increase in fuel prices and the resumption of the increase in vehicle imports moderated the increase in the current account surplus.

The easing of COVID-19 restrictions, which began at the end of the third lockdown, enabled Israelis to again travel abroad, and led to a doubling of the import of travel services relative to 2020. However, its 2021 level was only about 40 percent of its precrisis level. In contrast, incoming tourism continued to decline in 2021. The combination of these two developments reduced the current account surplus by $2.4 billion.

The high level of savings and the net export surplus caused pressure for a real appreciation of the shekel. The Bank of Israel's foreign exchange purchases mitigated this pressure.

The continuing high rate of domestic savings, together with the continuing surplus in net exports and domestic investment that did not grow at the same rate as savings, created continued pressure for real appreciation of the shekel. The Bank of Israel purchased foreign currency, at least in part, in order to somewhat mitigate this pressure.

Figure 2.12
The Change in the Current Account Surplus and the Contributions of its Main Components, 2018–21 (US$ billion)



* Net exports of goods and services that are not detailed above.
SOURCE: Based on Central Bureau of Statistics (Balance of Payments and Foreign Trade).

Table 2.10
Savings, investment and the current account, 1995–2021

(percentage of national income)

	1995–2016	2017	2018	2019	2020	2021
Gross national savings	22.2	24.3	24.3	24.6	27.4	27.4
of which: Public	-1.3	1.1	-0.9	-1.3	-7.4	-2.1
Private	23.5	23.2	25.2	25.8	34.8	29.5
Gross investment	21.2	20.8	21.5	21.0	21.9	22.7
of which: In principal industries	14.5	13.4	14.5	14.2	14.4	14.8
of which: General government's investments[a]	3.9	3.8	3.9	3.8	4.7	4.0
In housing	5.9	6.6	6.4	6.3	5.9	6.3
In inventory	0.8	0.8	0.6	0.5	1.6	1.7
Net current account	1.0	3.5	2.8	3.6	5.4	4.7
of which: Balance of goods and services	-0.9	1.9	0.8	2.2	4.6	4.4
Net income account	-2.4	-0.5	-0.1	-0.6	-1.0	-1.5
Net current transfers	3.5	2.0	1.8	1.7	1.5	1.6
Terms of trade[b]	0.2	-1.5	-3.3	3.7	2.2	1.6
Real effective exchange rate[b,c]	[4] -0.1	-4.4	2.1	-2.5	-3.1	-3.8

[a] Including investment grants.
[b] Rate of change in annual terms, percent.
[c] An increase refers to depreciation.
[d] The figure relates to the years 1999–2016.
SOURCE: Based on Central Bureau of Statistics.