

# INTRODUCTION

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### 1. GENERAL

Israel allocates a considerable portion of its resources to defence. A relatively high percentage of government expenditure is appropriated for defence and is reflected in a high level of general government consumption relative to other nations. Additional expenditures on defence are due to cost of compulsory military service and reserve military duty, costs of emergency stocks of essential commodities, construction of shelters and protected areas, costs of guards posted in public places, etc.

This publication presents multi-year sums of defence expenditure according to two definitions:

1. **The narrow definition**, accepted in the calculation of product in the National Accounts, is “**Defence Consumption Expenditure**,” a part of general government consumption expenditure. This item is composed of direct defence expenditure, i.e., actual payments by the defence establishment for wages and purchase of goods and services.
2. **The broad definition** is “**total defence cost**,” which, in addition to direct defence expenditure, includes imputations of the value of work performed by soldiers in compulsory service; additional payments by employers to supplement wages of employees doing reserve service; expenditure for the storage of emergency stocks, investment in construction of shelters, etc.

**The narrow definition**, general government defence expenditure, is consistent with the international definitions of Core Accounts in the New International Guide for National Accounts.<sup>1</sup>

**The broad definition** corresponds to the SNA’s recommendation of presenting issues of special interest in Satellite Accounts. Accounts of this kind were set up for education, health, culture, research and development, and environmental protection expenditure. These accounts, which focus on a specific subject that is included in several items in the National Accounts, present a detailed classification that sometimes differs from what is accepted in the Core Accounts. The definition of defence cost was discussed and finalized by a special committee that included representatives of the Bank of Israel, the Ministry of Defence, the Ministry of Finance, and the Central Bureau of Statistics.

The general government defence consumption expenditure tables include consecutive and consistent series for 1950–2001 in current prices (Table 1) and for 1955–2001 at constant prices (Tables 2 and 3). The annual changes in defence consumption, at constant prices, are presented in Table 4.

Table 5 shows the expenditure relationships between general government defence consumption expenditure, general government domestic defence consumption expenditure, and Gross Domestic Product; the resources available to the economy (GDP and imports), and net resources (GDP and import surplus = private and public consumption and gross domestic capital formation).

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<sup>1</sup>*System of National Accounts* 1993, Commission of the European Communities—Eurostat, International Monetary Fund, Organization for Economic Co-operation and Development, United Nations, World Bank, Brussels/Luxembourg, New York, Paris, Washington D.C., 1993.

Table 6 presents an international comparison of defence expenditure as a percent of GDP, as reported by the nations to the International Monetary Fund (IMF). These reports are prepared in a form that differs from that of the National Accounts (see Part 3, Definitions and Explanations).

Table 7 estimates the total cost of defence in 1993–2001.

## 2. MAIN FINDINGS

**Public defence expenditure** increased by 4.2% in 2001 after having been unchanged in 2000. Defence expenditure (at constant prices) was 25% lower in 2001 than in 1973–75, when defence expenditure consumption reached its peak.

The increase in defence consumption expenditure in the past year was affected mainly by an upturn in defence imports.

General government defence consumption expenditure in 2001 was 8.8% of Gross Domestic Product. In recent years, defence consumption has been declining in percent-of-GDP terms but increasing in quantitative terms. Thus, the proportion of economic sources pledged to defence has been contracting.

The data on the defence expenditure trend over the past forty-five years, at constant prices, show that in the first half of that period - 1956–1975 - defence expenditure increased at a swift 15%–16% annual average pace. Aberrant increases occurred in 1956 (Sinai Campaign) - 100%, 1967 (Six-Day War) - 77%, 1970 (War of Attrition) - 39%, and 1973 (Yom Kippur War) - 64%.

In 1976–1995, defence expenditure declined by 2%–3% on annual average.

An uptrend in defence consumption began in 1996 and continued up to 2001.

More detailed data on the development of defence expenditure, by sub-periods, are presented in the following table:

Defence Consumption Expenditure				
	Average annual quantitative change		Defence consumption as percent of GDP	
	Total	Domestic consumption	Total	Domestic consumption
1956–66	11.2	..	9.6	6.0
1967–72	21.1	20.3	20.6	12.4
1973–75	23.4	13.0	30.9	16.0
1976–85	-2.7	-0.4	22.1	13.8
	-2.8	-0.7	15.1	10.7
1986–90	-1.7	-1.7	10.9	8.3
1991–95	2.8	1.1	8.9	7.0
1996–2001				

In 1956–1966, defence expenditure was about 10% of GDP on average. The Sinai Campaign, which took place in 1956, did not lead to a steep increase in expenditure in the following years.

However, both the Six-Day War and the Yom Kippur War brought on significant increases in defence expenditure - to about 21% of GDP in 1967–1972 and 31% in 1973–1975. During the years 1976–1985, defence expenditure decreased to 22% of GDP and an additional significant decrease in defence consumption - to 15% of GDP - took place between 1986 and 1990, after the implementation of the government's Economic Stabilization Program. Defence expenditure continued to decrease in 1991–1995 and averaged 11% of GDP during that time. Most of the 1996–2001 period was noted for rapid economic growth, which made it possible to boost defence expenditure in quantitative terms, after years of decline, and to reduce the percent of GDP earmarked for defence.

**Domestic general government expenditure for defence consumption** - total expenditure excluding defence imports (most of which are funded by means of U.S. Government assistance) - increased by 0.7% in 2001 after increases of 3.5% in 2000 and 0.6% in 1999.

Domestic defence expenditure as a share of GDP has leveled off at approximately 7% in recent years, the lowest fraction observed since the mid-1960s.

**International comparison of defence expenditure** as a percent of GNP shows that Israel spends between two to six times more on defence than industrialized countries; among Middle Eastern countries, too, Israel has one of the highest levels of defence expenditure.

### **The cost of defence to the Israeli economy**

**The total cost of defence to the economy** is 24% higher than defence consumption. This cost reached 11% of GDP in 2001, as against 10.7% in 2000 and 11.6% in 1995. The cost of defence excluding defence imports was about 10% of GDP in each of these years.

The estimate of total defence costs includes, in addition to direct expenditure of the defence establishment for wages and purchases of goods and services, additional components of expenditure that are partly included in the regular National Accounts under Civilian Expenditure. Examples are expenditure for construction of shelters, maintenance of emergency stocks, expenditure on security in civilian government offices. Most of the added cost - which includes the value of services of soldiers in compulsory service, employers' payments for wages of reservists, and a risk premium for military service - is not imputed in the regular National Accounts. The inclusion of these items would increase GDP by about 2%. In addition to the effect on the absolute value of GDP, the inclusion of the additional and imputed defence expenditure affects the quantitative changes in defence wages, defence consumption, etc.

## **3. DEFINITIONS AND EXPLANATIONS**

This publication presents defence expenditure according to two definitions: *general government defence consumption expenditure and total cost of defence in Israel*.

A. *General government defence consumption expenditure* (Tables 1–5) is directly financed from the budgets of the defence establishment. It is divided into the following components:

### **1. Compensation of employees:**

- wage payments (including employer's contributions to National Insurance, training funds, etc.) to conscript and career soldiers, civilian employees of the Israel Defence Forces, and other defence establishment employees.
- payments to reservists, through the National Insurance Institute.
- payments in-kind to soldiers and other workers, including the cost of food, clothing, and other benefits such as tuition and rent subsidies, discounted tickets to performances, meals, etc.
- imputation of pension expenditure for career soldiers and permanent workers in the defence establishment. This outlay, which is additional to labour costs, stems from the government's commitment to pay pensions to retirees of the defence establishment from the state budget as an alternative to contributions to a pension fund.

**2. Purchase of goods and services in Israel** - this item includes current expenditure as well as additions to stock and expenditure for the purchase of equipment and buildings for military use from domestic enterprises in various industries (manufacturing, transport, construction, electricity and water, services, etc.). The expenditure on construction work includes work performed by contractors and work carried out independently by the Israel Defence Forces.

**3. Defence imports** include the value of goods and services acquired abroad by the defence establishment, as well as the value of armaments from U.S. army surplus that are supplied to Israel free of charge. In 1979–1982, defence imports included expenses for the construction of airports in the Negev (Ramon and Ovdah) by American contractors, as recorded in the Balance of Payments accounts.

**4. Sales** by the Ministry of Defence include income from sale of surplus military equipment in Israel and abroad, services provided to the civilian sector, sales of books, etc.

**B. Total cost of defence in Israel** (Table 7) includes the following components in addition to public defence consumption:

1. added economic value of compulsory service;
2. added economic value of reserve service;
3. imputation of insurance for personal risk;
4. expenditure for construction of shelters;
5. expenditure for maintenance of emergency stocks;
6. defence expenditure by civilian government ministries.

The nature of these items and methods used to calculate them appear in Appendix 1.

The separation of defense expenditure from other purposes expenditure from budgets of the Ministry of Defence and other government ministries follows UN guidelines (see Appendix 2):

United Nations, Department of Economic and Social Affairs, *Classification of the Functions of Government*, N.Y., 1980.

## **The following items were not included in defence consumption and in defence cost:**

**A. Defence establishment expenditure that is defined in the National Accounts as expenditure for welfare and health purpose:**

1. Actual pension payments to defence establishment pensioners, as opposed to pension imputation for defence establishment personnel, which is included in defence expenditure.
2. Benefits for and rehabilitation of disabled persons, bereaved families, welfare grants to soldiers' families, etc.
3. Aid from the Fund for Demobilized Soldiers. This fund was established in 1995 to aid demobilized soldiers in studies, housing, and business formation.
4. Therapy for soldiers in civilian health institutions. This expenditure was deducted from total defence costs (but is still included in defence consumption).

**B. Expenditures in which the defence component cannot be separated without special investigation:**

1. Aid to defence enterprises (Israel Military Industries, Israel Aircraft Industries, and Rafael). Aid to these enterprises, which manufacture mainly for export, is multi-purposed, including financing for the development of competitive ability,

development of new products for civilian use, and financing of pensions and severance pay for discharged employees.

2. Transfers to the Civil Administration in Judea and Samaria and Gaza areas. The Civil Administration performs a variety of civil tasks, including education, health, and welfare activities for local residents.
3. Building of bypass roads for residents of Jewish settlements in Judea and Samaria; these roads are also used by the Arab population.

**C. Expenditures that were not estimated due to lack of relevant data:**

1. Alternative expenditure for use of lands occupied by the defence establishment, i.e., the added cost stemming from allocation of land for the defence establishment without payment or at reduced cost.
2. Expenditure for guard serviced supplied by private companies and purchase of personal weapons.

**The international comparison of defence expenditure** (Table 6) was prepared on the basis of countries' reports to the International Monetary Fund (IMF) on government expenditure by purpose.<sup>1</sup>

There are significant differences between the method of recording expenditures in IMF reports and the method used in the National Accounts. The main differences are:

- a. Expenditure for defence imports is recorded in the IMF reports according to actual payments and after deduction of local import tax, as opposed to recording at the time of supply and at full price, in accordance with the National Accounts.
- b. Wage data in IMF reports do not include imputation for pension, payroll tax, and part of employers' National Insurance contributions.

Due to these differences, direct defence expenditure was 20% lower according to the IMF definition than the level of direct defence expenditure recorded in the National Accounts.

## **4. SOURCES AND METHODS**

### **4.1 Sources of data**

*Estimates of domestic defence consumption expenditure* were prepared on the basis of periodical and annual financial reports of the Ministry of Defence. Estimates of pension imputation were based on actuarial calculations that take into account retirement age, professional advancement track, and special retirement terms that are available to defence establishment personnel.

The use of additional sources and details on Ministry of Defence expenditure made it possible to improve the estimates since 1964 but disrupted the consistency of the series. To allow correct comparison with estimates for previous years, the data for 1964 before the corrections are also presented. The data for 1974 are also shown twice, due to the reclassification of consumption expenditure components between imports and domestic consumption.

*Estimates of defence imports* were also prepared on the basis of the Ministry of Defence reports at the value of actual supply of heavy equipment, which has relatively high value, upon its arrival in Israel and on the flow of payments for items with lower value. This treatment (which corresponds to the records in the balance of payments accounts) differs from the records in the report of Ministry of Defence budget expenditure and from the report of the Accountant General, in which defence imports are recorded according to the flow of payments.

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<sup>1</sup>Government Finance Statistics Yearbook 1995, International Monetary Fund, Washington, D.C., 1995.

## **4.2 Estimates at constant prices**

The estimates were calculated separately for each type of expenditure. Quantitative changes in wages were estimated in accordance with the changes in the number of persons serving in the defence establishment and the change in number of days of reserve service. Expenditure at constant prices for purchases of goods and services was obtained by deflating the expenditure at current prices by the weighted price index, using the appropriate price indices selected from the Consumer Price Index, the Wholesale Price Index of Industrial Output, and the special index for defence construction prices, which contains the Price Index of Input in Residential Construction and contractual prices of the Ministry of Defence.