

Israel's Defense Expenditure

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Introduction

A strong defense establishment is an existential necessity for Israel, and it is thus imperative that a relatively large portion of the state budget, certainly as compared with most other countries, be allocated to defense. At the same time, the need to set national priorities generates an ongoing debate over what percentage of economic resources should be channeled to defense at the expense of other national goals.¹ Debates over the defense economic burden have presented various components of defense spending and led to contradictory conclusions. For example, Professor Omer Moav, chairman of the Israel Council of Economic Advisers, stated, "The Ministry of Finance and all the economists who are members of the Council of Economic Advisers agree that the defense budget is too large for the country, and jeopardizes the Israeli economy."² In contrast, the Ministry of Defense budget department holds that defense spending does not jeopardize other national goals, and the defense budget must be substantially increased in order to provide an appropriate solution to the security challenges.

Hence the dilemma: if the government increases the defense budget, it is liable to cause economic collapse; if it cuts the budget, the country is liable to suffer a security disaster. This familiar conundrum results in an annual ritual that pits the Defense Ministry against the Finance Ministry. The final allocation usually reflects a compromise between the two positions, even if it is not necessarily a result of profound professional deliberation.

The purpose of this article is to present the figures for defense spending in Israel, and to clarify what the economic burden of defense (hereafter

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“the defense burden”) is on the economy. One of the conclusions is that the defense burden has fallen sharply in recent decades to the same level as in the early 1960s. In contrast to the situation in the 1970s and 1980s, the defense budget at its current level does not jeopardize economic stability.

Defense as a Commodity

Defense is a service that the state provides to its citizens who expect basic safety in daily life. Defense is considered a classic public commodity, a commodity that all consumers benefit from, regardless of their share in paying for or producing it. The use of a public commodity is usually restricted to a geographical area but not limited to a given number of people. Like other public commodities, defense cannot be divided into consumption units, and it is therefore impossible to speak of defense output units and the price of such a unit.

The principal output of Israel's defense establishment against external enemies is obvious, if difficult to measure: protection of the country's citizens and assets against war, terrorism, and hostile actions. Investment in defense is likely to improve these capabilities, both through deterrence and the ability to shorten the duration of wars and limit the damage from war and terrorist attacks. In all of these aspects, proper defense deployment protects not only human life, but also shields against large scale economic damage.

The value of investment in defense is not solely an existential matter. An unstable strategic and defense environment is liable to have a negative impact on the economy. For example, during the four years of the intifada, the economy lost \$12 billion in GDP. The loss to the Israeli economy in potential per capita growth was estimated at \$1,800.³ Without the investment in defense, which made it possible to halt the wave of Palestinian suicide terrorism, the economy would have continued to sustain increasing damage. As such, defense spending can also be regarded as an investment to reduce the level of risk to the country. Beyond the direct output, the IDF also contributes indirectly to the economy, for example by constituting a major source of trained workers, managers, and entrepreneurs (particularly for the technology and communications industries), and by contributing to technological development, education, and social integration.

In contrast to defense output, defense production costs are clearer. They can be studied in past national accounts and in the state budget figures relating to the future. The Central Bureau of Statistics (CBS) reports spending for defense consumption in the national accounts, and the Ministry of Finance reports the defense budget in the state budget. These amounts, however, are not measured in the same way, nor do they have the same composition. Furthermore, neither defense consumption nor the defense budget fully reflects defense spending. Understanding the significance of the figures, therefore, requires familiarity with what underlies these terms.

The Defense Economic Burden

The defense economic burden (“defense burden”) can be defined as follows: the domestic economic resources allocated to the production of defense⁴ at the expense of other uses, calculated as a percentage of GDP or a percentage of the economy’s total economic resources (excluding military aid). The defense burden is likely to change as a result of changes in defense consumption or in the resources available to the economy.

In most countries, this definition reflects the ratio of defense spending to GDP or to the total resources of the economy.⁵ In the case of Israel, however, a distinction between defense spending borne by the economy (domestic resources) and defense spending funded by US aid is necessary. In addition, there are elements that are not included in international definitions of defense spending but that constitute significant costs in Israel in comparison with developed countries, such as the value of the labor of soldiers in their compulsory military service (due to the IDF’s reliance on a compulsory draft). The question of which elements should be included in defense spending is another issue that affects the types and composition of the indexes. This article will present one index that estimates the defense burden in the accepted terms of the national accounts, and another index that estimates the “full defense burden,” which includes the elements that do not figure in the national accounts.

The Defense Budget

The 2010 defense budget is part of the state budget for 2009-2010 approved on July 15, 2009. The defense budget totals NIS 53.24 billion, amounting

to 15.6 percent of the state budget and 6.7 percent of GDP. It is the largest budget of all government ministry budgets (table 1). In addition, the defense budget includes special items that are absent from other government ministries and that are unrelated to the funding of military activity, such as NIS 4.5 billion in pension payments⁶ and NIS 4 billion in spending on rehabilitation programs and families of IDF soldiers killed in active duty.

In general, the defense budget is a framework for financing the following goals:

1. The buildup and operation of the IDF, which includes preparedness and regular activity (spending on salaries, energy, food, and maintenance; procurement of spare parts and ammunition inventory; etc.) and military buildup – investment in inventory of defense capital (procurement of armaments, research and development, etc.).
2. State obligations in return for past activity – pensions for the security services and spending on the Ministry of Defense programs for rehabilitation and the families of soldiers killed in active duty.
3. Miscellaneous – construction of border zone obstacles, property taxes on IDF bases, and other spending that does not finance actual military activity.

The defense budget differs from the budgets of other government ministries in the following ways:

1. The defense budget is managed according to the principle of a budget framework, meaning that the defense authorities are authorized to distribute budget resources among a variety of programs, in accordance with changing needs.
2. In contrast to the civilian sector, defense spending as investment is also listed as consumption, and therefore there are no defense items in the state development budget.
3. US aid helps to fund the defense budget, in contrast to the budgets of other government ministries, which are funded solely from the economy's resources.
4. The budget includes spending on pensions for retirees from the Ministry of Defense, in contrast to spending on pensioners in other government ministries, which is listed under an external budget item.

The financial resources that comprise the components of the defense budget are:

1. Budget from the economy's resources ("the shekel budget"): spending from the economy's own resources. The defense authorities use this budget solely for spending in Israel. This resource finances most IDF readiness and ongoing activity. This budget totaled NIS 37.8 billion for 2010, amounting to 4.85 percent of GDP and 11.6 percent of the state budget.⁷
2. Aid from the US. Most of the aid (74 percent) is designated for defense procurement in the US. The remaining 26 percent is convertible into shekels, and is added to the shekel budget. Aid from the US for 2010, which is slated to reach \$2.77 billion, is granted to Israel under an agreement with the US administration signed in August 2007 whereby the Ministry of Defense will receive \$30 billion for 2009-2018. Civilian aid from the US ended in 2008. This budgetary resource makes a critical contribution to the IDF's buildup in capital and technology-intensive areas, such as the air force.
3. Income from internal Ministry of Defense resources, e.g., from sales of equipment and services and from dismantlement of IDF bases – a total of NIS 2.4 billion in the 2010 budget.

The Defense Budget: Planning vs. Implementation

According to the explanation of the 2009-2010 state budget, the actual defense budget in 2008 totaled NIS 56.54 billion, compared with NIS 51.57 billion in the original budget⁸ – an additional 9.6 percent. The actual 2008 defense budget amounted to 7.8 percent of GDP, while actual budgetary spending from domestic resources (excluding US aid and revenue from Ministry of Defense resources) is estimated at 6.2 percent of GDP.

Spending also greatly exceeded the original budget in previous years. Some of this spending was due to unanticipated security events, such as the Second Lebanon War (the actual 2006 budget was 26 percent more than the planned budget),⁹ which indicates that the budget does not plan for events of this nature.

The 2009-2010 budget is also expected to deviate from the original plan. On October 1, 2009, the government requested a NIS 1.5 billion increase in the 2009-2010 defense budget and a NIS 500 million increase in the Ministry of Health budget to deal with swine flu, to be paid for

Table 1. The 2010 Defense Budget, vs. other items in the gross state budget*

	Gross Budget (NIS billion)	Percent of Gross State Budget* (NIS 328.8 billion)	Percent of "Free" State Budget** (NIS 214 billion)
Ministry of Defense***	40.2	12.2	18.8
Ministry of Internal Security	10.1	3.1	4.7
Ministry of Education and budget for institutions of higher education	40.8	12.4	19.1
Ministry of Health	21.4	6.5	10.0
Transfers to the National Insurance Institute	27.2	8.3	12.7
Development budget	16.9	5.1	7.9
Payments of debt, interest, and fees	114.8	35	–
Miscellaneous	57.4	17.4	26.8
		100	100

* Gross budget – the budget including spending that is contingent on revenues

** "Free" state budget – the gross state budget excluding payments of debt, interest, and fees

*** The defense budget from domestic resources and Ministry of Defense revenues (excluding aid)

Source: Ministry of Finance, Principles of the 2009-2010 Budget, June 2009, pp. 14-15.

by an across-the-board cut in the budgets of the other ministries. The Knesset Finance Committee eventually approved an across-the-board cut of only NIS 1 billion.¹⁰ The consistent deviations from the original budget indicate that calculating the defense burden on the basis of the original state budget is liable to result in underestimation.

An Analysis of Defense Consumption

In contrast to the defense budget, which includes planning for the future, defense consumption measures past spending. At the same time, defense consumption in a given year is not the actual spending budget

for that year. In addition to the fact that by its nature the budget deals with monetary spending, which does not necessarily correspond to actual consumption, the defense budget includes spending items that are not included in defense consumption. This is because the Central Bureau of Statistics reports defense consumption according to international accounting standards¹¹ that do not correspond to the structure of the defense budget, which is an internal Israeli decision.

According to the definition of defense consumption in the national accounts (table 2), it includes the government's direct spending on defense, as follows:¹²

1. Salary payments to conscripted soldiers and soldiers serving in the standing army, civilian employees of the IDF, and other Ministry of Defense employees; other personnel costs (food, clothing, various benefits); obligation for pension payments for soldiers in the standing army and tenured employees of the other security services; and payments through the National Insurance Institute to soldiers serving in reserve duty. All these constituted 41.8 percent of gross defense consumption in 2009.
2. Procurement of goods and services in Israel, spending on construction, etc. – 39.2 percent of gross defense consumption in 2009.
3. Defense imports – 19 percent of gross defense consumption in 2009.

According to the Brodet report, defense consumption also includes spending for the Mossad and the General Security Services (the GSS), which are not included in the defense budget.¹³ On the other hand, defense consumption does not include several items that are included in the defense budget or in other sections of the state budget, such as:

1. "Spending on the security services defined in the national accounts as spending on health and welfare": payments to IDF and other security services pensioners (in contrast, assessed costs of pensions of those serving are included in defense consumption); payments and rehabilitation services for disabled soldiers and families of soldiers killed in active duty; support grants for soldiers' families; assistance from the Discharged Soldiers Fund; and so on.
2. "Spending requiring special research to isolate the defense component": aid to defense industries (Israel Military Industries, Israel Aircraft Industries, and Rafael). Aid to these industries,

most of whose output is for export, serves multiple uses, since it includes financing for development of products sold overseas. The same is true for the transfer of funds to the Judea and Samaria Civil Administration, which is active in health, welfare, education, and the paving of bypass roads in the West Bank.¹⁴

Table 2. Composition of Defense Consumption in 2009

Spending Component	NIS billion
Remuneration for employees (salary and assessment for pensions)	22.01
Procurement of goods and services in Israel	20.63
Total domestic defense consumption	42.64
Defense imports	9.97
Total gross defense consumption	52.61
Deduction of sales by the Ministry of Defense	-1.99
Net defense consumption	50.62

Source: Central Bureau of Statistics, press release, "Preliminary Estimates for the 2009 National Accounts," December 31, 2009

Domestic Resources Allocated to Defense

Figures for defense consumption do not show the amount of domestic resources allocated to defense. For this purpose, consumption funded by US aid, specifically, almost all defense imports and domestic defense consumption funded by aid converted into NIS, should be deducted from defense consumption. For example, total domestic resources allocated to defense in 2009 were estimated at NIS 39 billion. Calculation of the defense burden according to the index of defense consumption from domestic resources as a percentage of GDP or of total resources (excluding defense aid) shows that the defense burden on the economy in 2009 was 5.1 percent of GDP, or 5.3 percent of total resources (excluding aid).

Similarly, the index that reflects the defense burden in terms of public consumption is defense consumption from domestic resources as a portion of public consumption (excluding consumption financed by military aid). This measure expresses the defense burden in terms of public sector spending (education, health, local authorities, and so on).

It is likely to change not only as a result of defense spending, but also for other reasons. For example, a tax cut leading to cutbacks in public consumption that is not accompanied by a cut in defense consumption will increase the defense burden. According to this measure, the defense burden on the public sector in 2009 was 22.5 percent of public consumption (excluding military aid). This indicates that the defense burden has a substantial effect on the government's room for maneuver (table 3).

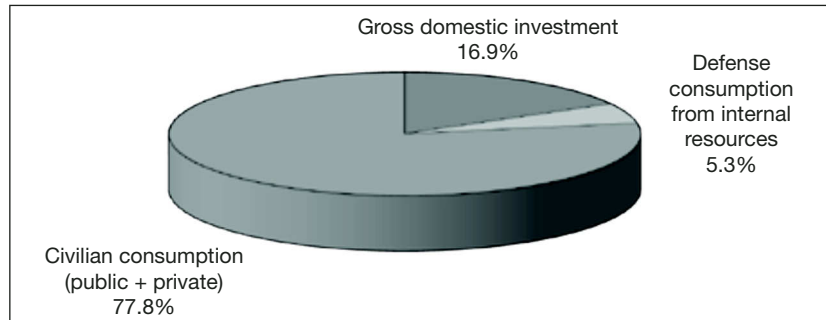
Table 3. Defense Consumption Compared with Total Public Consumption in Israel (2009)

	Consumption including Military Aid (NIS billion)	Consumption excluding Military Aid (NIS billion)
Civilian public consumption	134.7 – 72.7 %	134.7 – 77.5 %
Defense consumption	50.6 – 27.3 %	39* – 22.5 %
Total public consumption	185.3 – 100 %	173.7 – 100 %

* Defense consumption from domestic resources

Source: Central Bureau of Statistics

Figure 1 presents another perspective regarding the relationship between defense consumption from domestic resources and other uses in the economy. The portion of defense spending from domestic resources is relatively small, and therefore, theoretically, even if a deep cut is made in defense consumption from domestic resources, the resulting gain will not facilitate any significant change in the macroeconomic figures. For example, if defense consumption from domestic resources is cut by 15 percent (NIS 5.85 billion), which is then distributed proportionately among other uses, it will lead to an increase of less than 1 percent in civilian consumption and gross investment. This means that now, in contrast to the situation in the 1970s and 1980s, it appears that even a large cut in the defense budget would cause no real change in Israel's standard of living and economic growth.

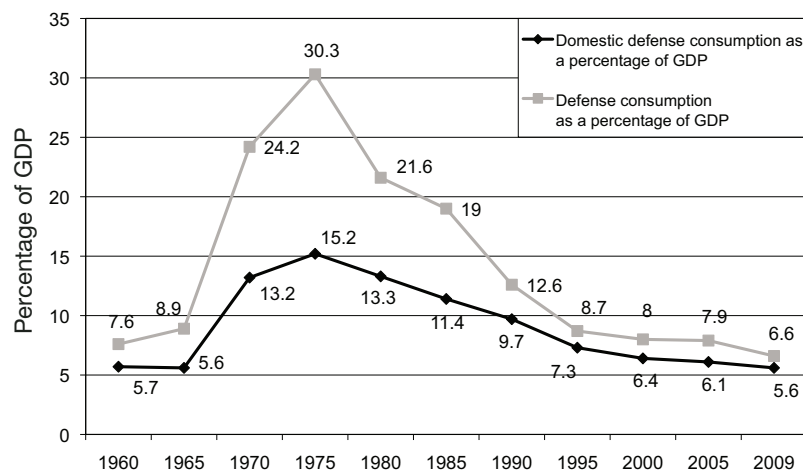
Figure 1. Distribution of Uses in Israel, 2009*

* Excluding US aid

Source: Central Bureau of Statistics

Multiyear Trends

The Central Bureau of Statistics provides multiyear data on defense consumption as a percentage of GDP, and on domestic defense consumption as a percentage of GDP, which can be regarded as an index that reflects trends in the defense burden on the economy.¹⁵ Figure 2 shows the downward trend in the two indexes since the mid-1970s.

Figure 2. Defense Consumption as a Percentage of GDP (1960-2009)

Source: Central Bureau of Statistics

The trends indicate that in the period following the Yom Kippur War (1973), the economy suffered an excessive burden that could not be sustained in the long term. The peace agreement with Egypt caused the burden to decline, but the 1982 Lebanon War and the subsequent embroilment in Lebanon moderated this downward trend. The burden fell sharply following the economic crisis in Israel and the formulation of the stabilization plan in the mid-1980s. The defense burden again dropped sharply in the 1990s and after 2000, and is now at about the same level as it was in the early 1960s.

The causes of the decline in the defense burden are as follows:

1. Growth in GDP: Israel's GDP grew consistently, while Israel's defense spending did not increase in real terms (there were ups and downs over the years) and even fell, compared with the peak years following the Yom Kippur War.¹⁶ The ratio of defense spending to GDP therefore declined.
2. Military aid from the US: since the mid-1980s, the US has given all its aid to Israel as a grant, and therefore Israel is not funding its overseas defense procurement and even receives aid to pay for part of its domestic defense spending.

The burden of defense consumption on the public sector shows similar though less pronounced trends, since the ratio between public consumption and GDP also fell over the years (table 4).

Table 4. Defense Consumption in Comparison with Public Consumption in Recent Years

Year	Defense Consumption as a Percentage of Public Consumption*	Domestic Defense Consumption as a Percentage of Public Consumption	Public Consumption as a Percentage of GDP
2003	30.8	24.1	27.8
2005	29.5	22.8	25.8
2007	28.8	23.1	25.0
2009	27.4	23.0	24.3

* Public consumption – total consumption of the civilian and defense public sector (including aid)

Source: Central Bureau of Statistics, press release, "Preliminary Estimates for the 2009 National Accounts," December 31, 2009

Total Cost of Defense

Since neither the defense budget nor defense consumption fully reflects the cost of defense, the Central Bureau of Statistics and the Finance Ministry present their own estimates, which include additional elements.

The CBS estimate includes defense consumption, plus the following “additional costs”:

1. Additional personnel costs in the IDF (about 90 percent of the estimate): the value of the labor of conscripted soldiers, additional payments by employers to supplement the salary for reserve duty, and cost assessment for insurance in respect of personal risk to soldiers – a kind of national insurance against loss or damage to earning power liable to occur in the future.
2. Security areas – public bomb shelters, the cost of security areas in apartments (the added price of constructing a security room, compared with an ordinary room), inventory for emergencies (medicine, fuel, food – more than necessary at ordinary times).
3. Defense spending by other government ministries: in the Ministry of Internal Security, spending on the Border Police and the Civilian Guard; in the Ministry of the Interior, security in local authorities, the National Emergency Authority, regional defense, and civil defense; in the Ministry of Education, security in schools and field guides; in the Ministry of Finance, partial funding of the multinational force in the Sinai.

Total additional costs (not included in defense consumption) were estimated in 2009 at NIS 10.5 billion, amounting to 1.4 percent of GDP,¹⁷ compared with 1.7 percent of GDP in 2005, 1.8 percent in 2000, and 2.7 percent in 1993. The main reason for the decline in these ratios is growth in GDP.

The estimate for domestic defense consumption (excluding imports) plus the additional costs amounted to 7 percent of GDP in 2009, compared with 7.8 percent of GDP in 2005, 8.2 percent in 2000, and 10 percent in 1993.

The defense burden including “additional costs”: Estimated defense consumption from domestic resources, plus the above-mentioned additional costs, totaled NIS 49.5 billion in 2009 – 6.5 percent of GDP in 2009. I believe this estimate comes closest to reflecting the full defense burden in Israel. This estimate also indicates a sustained decline in the

defense burden in Israel. For the sake of comparison, the 1999 estimate was 7.7 percent of GDP.

The Ministry of Finance estimate also includes spending in the defense budget plus “additional defense costs.” Outlining the principles of the budget, the Ministry of Finance states, “Other than the spending included in the defense budget, the economy bears other defense costs, such as the budgets of the Home Front Command, the Discharged Soldiers Fund, the Ministry of Internal Security, and various defense agencies; spending on civil defense; aid to ailing defense industries; and so on. To these should be added the supplemental cost of conscripted soldiers (the difference between the salary in compulsory military service and the market wage that conscripted soldiers would have earned had there been no compulsory service) and that of soldiers doing reserve duty.” The Ministry of Finance therefore calculated that actual total defense spending from the economy’s resources in 2009 (excluding US aid) would reach approximately NIS 60 billion – 8.1 percent of expected GDP in 2009.¹⁸ The principles cite spending of NIS 63 billion in 2010, which is also 8.1 percent of the (then-projected) GDP.

There is a wide gap between the Finance Ministry’s estimate and the estimate based on the Central Bureau of Statistics. This gap is probably due to several items included only in the Finance Ministry’s estimate, including the budget of the departments for rehabilitation and for families of soldiers killed in active duty in the defense budget (NIS 4 billion); the budget of the Ministry of Internal Security (NIS 10.6 billion in 2010), only part of which is included in the estimate of the Central Bureau of Statistics (the Border Police and the Civil Guard); aid to ailing defense industries; and the Discharged Soldiers Fund (NIS 1.57 billion in 2010). While defense consumption does not include payments to IDF retirees (as it appears in the budget), it does include pension payments obligations to those are serving.

Israel’s Defense Spending vs. that of Other Countries

Israel bears the heaviest defense burden of any developed country. According to both measures – the ratio of defense consumption to GDP and the ratio of domestic defense consumption to GDP – Israel is at the top of the global list, together with Saudi Arabia, Syria, and Jordan (table 5).¹⁹ The global average defense burden is estimated at 2 percent of GDP;

Table 5. A Comparison of Israel's Defense Spending vs. Other Countries

Industrialized Countries	Defense Spending in Billions of Dollars	% of GDP
US	607.3	4.0
UK	65.3	2.9
France	65.7	2.3
Germany	46.7	1.3
Italy	(40.6)	(1.8)
Canada	19.3	1.2
Spain	19.2	1.2
Greece	12.6	3.3
Netherlands	12.2	1.5
Middle East ²¹		
Saudi Arabia	38.2	9.3
Israel	13.3	6.6
Turkey	(15.8)	(2.1)
Iran	9.2	2.9
Syria	7.7	4.4
Jordan	1.3	6.3

Note: The figures for Israel are for spending on defense consumption in 2009 according to the Central Bureau of Statistics. The figures for other countries are for defense spending in 2008 and the percentage of spending in 2007 GDP, according to the SIPRI Yearbook. The figures in parentheses are estimates.

Israel's defense burden is 5-6.5 percent of GDP. Israel thus bears an excess burden of 3-4.5 percent of GDP, compared with the rest of the world. This is a wide gap, but it is much smaller than it was in previous decades, and the negative effect of the defense burden on Israel's ability to compete in the global economy is therefore much less than it was in the past.

Israel's place in the absolute spending rating is much lower than its place according to the defense burden. More than a few countries with smaller defense challenges greatly exceed Israel in defense consumption, because countries with strong economic capabilities can afford relatively high defense spending in order to reduce the level of risk still further. In

actuality, it appears that each country determines its defense spending according to both the specific threats that it faces and its economic capabilities.

Given Israel's unique security environment, an international comparison of the defense burden (as those judging defense spending are wont to make) contributes little to the debate over the size of the defense budget in Israel.²⁰

Conclusion

The use of various data and indexes for defense spending and the defense burden is likely to broaden the perspective required to understand the influence of defense spending on the economy and the public sector. At the same time, the figures and indexes published by state agencies are not necessarily compatible. Extracting meaning effectively from these figures and indexes requires familiarity with the composition of the data and the indexes, a correspondence between the issues discussed and the indexes relevant to them (table 6), and an analysis of the change that has taken place in the indexes over the years. In contrast, an international comparison is of limited importance.

The defense burden in terms of the ratio of domestic defense consumption to GDP shows that while Israel is still high in the international ratings, the gap is much narrower than it used to be. The defense burden declined between the mid-1970s and the present, and is currently similar to what it was before the Six Day War (1967). It therefore appears that the effect of defense spending on the current macroeconomic situation in Israel is limited.

The defense burden has a greater effect on the public sector. The measure of defense consumption from domestic resources as a percentage of public consumption (22 percent in 2009) shows that defense spending has a significant effect on the government's room for maneuver. Nevertheless, here too the defense burden has dropped over the years.

US aid (\$2.775 billion in 2010) has no great macroeconomic influence (it constitutes a small portion of resources, and Israel currently has no shortage of foreign currency). However, the aid has a significant effect on the state budget and the government's financial room to maneuver.

Table 6. Indexes of the Israeli Defense Burden

Index	2009	1999	Comments
1. Indexes based on ratio of defense consumption to GDP			
a. Ratio of defense consumption from domestic resources to GDP	5.1 %	5.9 %	An index that estimates the defense burden in terms of the national accounts figures. It does not include consumption funded by US aid converted into shekels or consumption funded from internal resources of the Ministry of Defense.
b. Ratio of domestic defense consumption to GDP	5.6 %	6.3 %	A CBS estimate that presents defense consumption excluding imports.
c. Ratio of defense consumption from domestic resources, plus additional costs, to GDP	6.5 %	7.7 %	An index that attempts to estimate the defense burden more completely. It includes the estimate in 1a above, plus additional costs not included in the national accounts (also included in measure 1d). The index does not include a number of spending items appearing in the defense budget, such as Ministry of Defense expense on rehabilitation of wounded soldiers and on remuneration for families of soldiers killed in active duty.
d. Ratio of total cost of defense to GDP – CBS model	7.0 %	8.3 %	Domestic defense consumption (excluding imports), plus additional costs according to the CBS model.
e. Ratio of total cost of defense to GDP – Finance Ministry model	8.1 %	9.4 %	An index that includes elements excluded from defense consumption, (such as rehabilitation and remuneration) and spending on international security. It does not include US aid. The 2009 estimate is based on the 2009-2010 budget; I have calculated the 1999 estimate using the same method.
2. Ratio of domestic defense consumption to total public consumption			
	23.0 %	23.2 %	According to CBS figures.
3. Ratio of compensation of employees in the defense sector to total compensation of employees in the public sector			
	23.9 %	26.0 %	According to CBS figures.

The defense budget provides an incomplete picture of planned defense spending in Israel. Each year the government should consider the budget situation of the IDF and all other defense agencies in the country from an overall perspective. In an era in which trans-border threats such as terrorism are handled by several different agencies, an integrated picture of the cost of all defense efforts is likely to help maximize the benefit from overall defense spending. It is also best to present the IDF budget to the public as part of the defense budget, so that it becomes clear what is and is not subject to IDF control.

Without undermining the need to make the IDF expenditure more efficient, it appears that defense needs will continue to dictate a higher defense burden than that prevailing in other countries. Currently, the potential substitution of defense consumption for civilian consumption appears quite limited. The principal way of improving Israel's situation and welfare is therefore to raise the yield curve through development and cost cutting in areas with sizeable potential for boosting GDP, such as increasing the portion of the population in the work force, boosting labor productivity in the public sector, and so on. Israel can simultaneously maintain both sufficient military power and a high level of competitiveness in the global economy.²²

Notes

- 1 See Imri Tov, "The Defense Budget Debate, Yet Once More?" *Strategic Assessment* 8, no. 3 (2005): 19-25; Giora Eiland, "The Defense Budget," *INSS Policy Brief* 6 (June 1, 2007).
- 2 Omer Moav, chairman of the Israel Council of Economic Advisers, "The Defense Budget is Too Large for Israel," *TheMarker* TV, October 6, 2009.
- 3 Shmulik Shelah, estimate by the BDI research company, *Ma'ariv* online, December 14, 2004.
- 4 Domestic resources allocated to the production of defense are resources that are not based on foreign aid or recycling of the defense system's sources (sales of equipment and services). Inclusion of the "defense production" concept in the definition is designed to distinguish between spending to finance defense systems and spending resulting from the security situation (reconstruction of war and terrorism damage, the cost of insurance for transportation to Israel during periods of security tension, etc.).
- 5 Total economic resources equal GDP plus import minus export.
- 6 In September 2003, the government decided that the IDF would switch to funded pensions, starting with soldiers who enlisted in the standing army from January 1, 2004 onwards. This measure fits in with the transition to a

new standing army model, including a higher retirement age.

- 7 Ministry of Finance, "Principles of the 2009-2010 Budget, Structure of the Defense Budget," p. 83. In addition to the shekel budget from the economy's resources, the defense budget also includes other resources in shekels: conversion of US aid into shekels and income from Ministry of Defense resources received in shekels or converted into shekels.
- 8 Ministry of Finance, "Principles of the 2009-2010 State Budget," p. 65.
- 9 Ministry of Finance website, Budget Department, online inquiries system for the state budget and its implementation.
- 10 Zvi Lavi, "The Reduced Across-the-Board Cut – Approved in the Committee," Ynet, November 10, 2009.
- 11 Defense consumption is recorded according to international definitions, as listed in the international guide "System of National Accounts 1993," a joint publication of the world's leading international entities.
- 12 Source: "Defense Spending in Israel 1950-2006," Introduction – explanations, definitions, and resources, Central Bureau of Statistics website, May 2007.
- 13 2007 Report of the Committee for Investigating the Defense Budget, headed by David Brodet, Chapter 4, p. 46.
- 14 "Defense Spending in Israel 1950-2006," Introduction – explanations, definitions, and resources.
- 15 The trends in domestic defense consumption reflect trends in the defense burden, particularly since US aid was turned into a grant, because domestic defense consumption does not include defense imports, which are funded almost entirely by this aid. Domestic defense consumption includes primarily consumption from domestic resources in shekels, but also includes domestic consumption funded by US aid converted into shekels (NIS 2.25 billion in 2009) and consumption in shekels funded by sales by the security services (mostly sales of equipment and services). On the other hand, it does not include defense imports from domestic resources (a small proportion of imports). Domestic defense consumption is slightly higher than the consumption from domestic resources calculated in the article. For example, domestic defense consumption in 2009 was higher by about 0.5 percent of GDP than defense consumption from domestic resources in 2009. Nevertheless, neither domestic defense consumption nor consumption from domestic resources includes additional defense spending that is not recorded in the national accounts.
- 16 "Defense Spending in Israel 1950-2006," Table 2 – Spending on Public Defense Consumption.
- 17 The Central Bureau of Statistics has not published a revised estimate. The estimate for additional defense spending in 2009 is presented, based on the Central Bureau of Statistics estimate for 2005 plus linkage to the increase in the prices of domestic defense spending. Source: "Defense Spending in Israel 1950-2006," Table 6 – The Cost of Defense to the Israeli Economy."

- 18 The 2009-2010 budget proposal, "Principles of the Budget," June 2009, p. 86.
- 19 CIA, *The World Factbook*, 2009.
- 20 A comparison of Israel with other countries that takes into account defense spending (according to purchasing power) and the order of battle and military activity is likely to prove interesting in the context of the efficiency of defense spending in Israel.
- 21 A more precise comparison of defense spending in Israel to that of Middle Eastern countries requires additional examination. Some countries do not include military procurement in their budget; others convert their defense budget according to the official exchange rate, which does not reflect the purchasing power of the currency.
- 22 See Benny Landa and Shmuel Even, *The Israeli Economy in the Era of Globalization: Strategic Implications*, Memorandum No. 91 (Tel Aviv: Institute for National Security Studies, July 2007).