

## APPENDIX 2

### Expenditure on R&D and Macroeconomic Indicators

In order to assess the relative importance of the national expenditure on R&D, it is common to compare this expenditure to the Gross Domestic Product (GDP). It is also common to make comparisons between countries on the basis of this relation.

It would be better to compare national expenditure on R&D to the Net Domestic Product, since depreciation is part of the production cost. The comparison to the gross domestic product is used because of the difficulty in estimating depreciation.

For specific objectives, the expenditure on R&D can be considered fixed capital formation, and it is interesting to compare it with producers' fixed capital formation. In 2007, the value of expenditure on civilian R&D reached 33% of the gross investment in the industries of the economy.

In analyzing the production function, it is also possible to use a definition which includes the output of R&D in fixed capital formation. This provides a basis for calculating the total capital inventory – fixed assets and R&D – that is used by local producers in production.

According to the definition used here, national expenditure on R&D does not include R&D products purchased abroad, whose volume is probably not large. Nevertheless, R&D produced in Israel and sold abroad is included, since resident producers can use the knowledge accumulated during the process of producing R&D.

**TABLE A. – NATIONAL EXPENDITURE ON CIVILIAN R&D,  
BY MACROECONOMIC INDICATORS**

*Percentages*

<b>Indicator</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005*</b>	<b>2006*</b>	<b>2007*</b>
<b>1. National expenditure on civilian R&amp;D, as percentage of:</b>								
<u>Domestic Product</u>								
Gross domestic product	4.4	4.7	4.7	4.4	4.3	4.4	4.5	4.7
Net domestic product	4.9	5.3	5.3	5.0	5.0	5.1	5.1	5.4
<u>Domestic Capital Formation</u>								
Gross domestic capital formation	21.3	23.3	25.8	24.9	24.5	22.9	23.3	22.8
Gross domestic fixed capital formation	23.3	26.2	26.9	26.2	26.3	27.2	26.1	25.1
Gross capital formation in industries	31.8	35.2	37.0	36.2	36.1	37.2	35.3	33.3
<b>2. General government</b>								
Civilian R&D operated, as percentage of general government consumption	0.92	0.92	0.89	0.92	0.97	0.95	0.93	0.96
Total expenditure on operation of civilian R&D, as percentage of current general government expenditure	0.55	0.55	0.55	0.55	0.58	0.58	0.57	0.59
<b>3. Business Sector</b>								
Civilian R&D operated, as percentage of gross fixed capital formation	17.7	19.9	20.2	19.2	19.7	20.8	20.2	19.7

\* Provisional data.