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INFORMATION AND COMMUNICATION TECHNOLOGIES IN ISRAEL, 1990-2002

Galia Yohay and Nurit Yaffe, Statistics Israel



STATE OF ISRAEL
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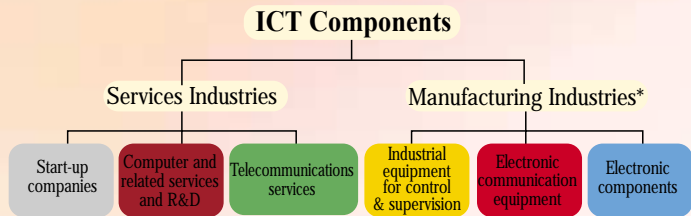
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Information and Communication Technologies in Israel 1990 - 2002

November 2003 ■ Galia Yohay and Nurit Yaffe

What are Information and Communication Technologies (ICT)?

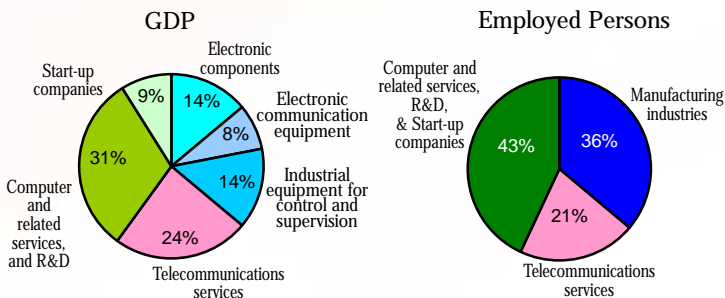
- The ICT sector is defined by the OECD as including activities of industries that manufacture hardware, or deal with software, broadcasting, and presentation of information. The ICT sector consists of manufacturing and service industries, as shown in the figure.



* Also including office and accounting machinery and computers, which are imported.

- Electronic components:** manufacture of electronic chips, semiconductors, microelectronic components, printed circuits, etc.
- Electronic communication equipment:** manufacture of telecommunications equipment, computer communications equipment, and electronic equipment such as transmitters, facsimiles, etc.
- Equipment for control and supervision:** manufacture of electronic equipment for quality control, systems for security control, equipment for control towers, etc.
- Telecommunications services:** sound, video, data, or other information by telephone, cable, broadcasting or satellite, data communications, etc.
- Computer and related services:** hardware and software consultancy, programming and system planning, data processing, preparation of database and data storage activities, etc.
- Research and Development (R&D) services** include systematic and original activity intended to generate new scientific or technological knowledge, or to develop new applications of existing scientific or technological knowledge.
- Start-up companies** are small enterprises established for the purpose of developing a new product or technology, mainly in the fields of software, Internet and telecommunications.
- High productivity of ICT: in 2002, 8% of all employed persons in the business sector produced 19% of the business sector GDP.

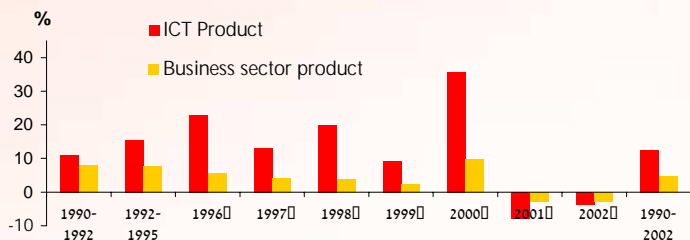
1. GDP and Employment in the ICT Sector, %, 2002



Gross Domestic Product (GDP)

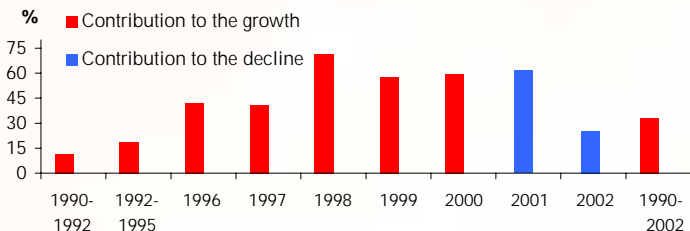
GDP increased by a factor of 4.1 between 1990 and 2002 - an average annual growth rate of about 13% at 1995 prices vs. a 5% growth rate in the total business sector. In 2002, ICT contributed 25% to the decline of the business sector GDP (vs. 60% to the growth in 2000). Over the past 12 years the GDP of the ICT sector accounted for 33% of the total increase in the business-sector product.

2. Annual Growth in the ICT Sector and Business Sector Products, %, 1990-2002, at 1995 Prices



Between 1990 and 2002, the GDP of the ICT sector grew from NIS 8.7 billion, to about NIS 36 billion at 1995 prices. Most of the growth was in electronic components (by factor of 9.4) and in computer and related services, R&D and start-up companies (by a factor of 7.4)

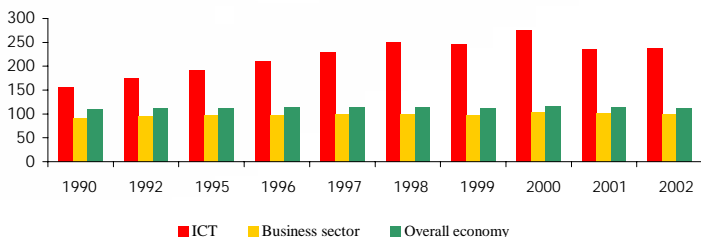
3. Contribution of the ICT sector to the Annual Growth in the Business Sector Product, %, 1990-2002 at 1995 Prices



GDP per employed person in ICT amounted to NIS 346 thousand in 2002, vs. NIS 141 thousand in the business sector (current prices). Over the past 12 years, the GDP per employed person increased by 3% in the overall economy, 9% in the business sector, and 53% in the ICT sector (1995 prices).

Thousands of NIS

4. GDP per Employed Person, Thousands of NIS, 1990-2002 at 1995 Prices



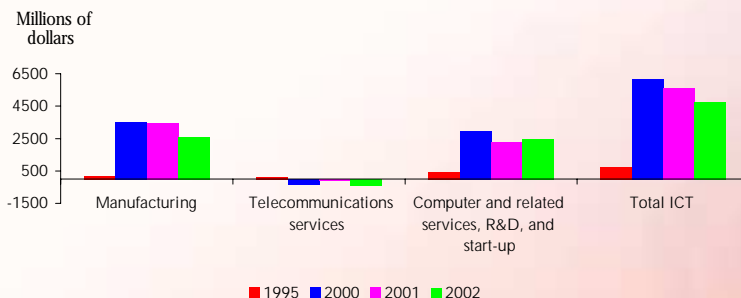
Imports and Exports of Goods and Services

- Imports in the ICT sector amounted to about 5 billion dollars in 2002, out of a total of about 43 billion dollars in the overall economy (11%). Between 1995 and 2002, ICT imports increased by a factor of approximately 1.2, vs. 1.5 in the overall economy. Most of the imports were in the category of office machinery and computers, and in electronic communication equipment.

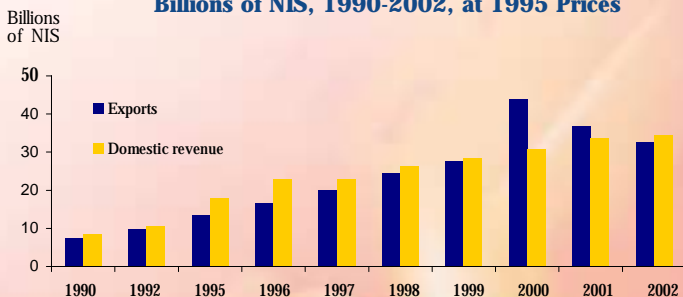
- Exports in the ICT sector amounted to about 11 billion dollars in 2002 - comprising about 26% of the total exports (compared with 14% in 1990, in fixed prices). Electronic components and electronic communication equipment rose by a factor of 7, and computer and related services, R&D, and start-up companies rose by a factor of 10 over the past 12 years. Total exports of goods and services in Israel increased by a factor of 2.3 during that period.

- In 2002, a surplus of 5 billion dollars in exports was recorded in ICT's balance of foreign trade (current prices). The surplus of manufacturing increased from 0.2 billion dollars to 2.6 billion dollars (at 1995 prices) between 1995 and 2002, while the surplus of computer and related services and R&D (including start-up) increased by a factor of 5.8. There is a surplus in the balance of foreign trade in ICT, compared with a deficit in the overall economy.

5. Foreign Trade Balance in the ICT Sector, Millions of Dollars, 1995-2002, at 1995 Prices



6. Exports and Domestic Revenue in the ICT Sector, Billions of NIS, 1990-2002, at 1995 Prices

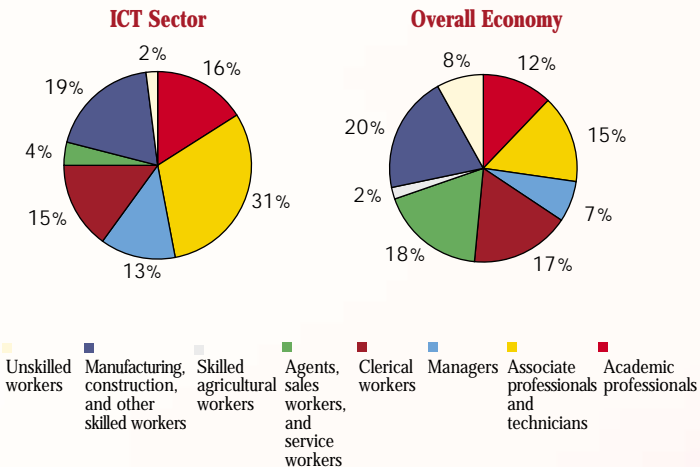


Employment

- In 2002, about 150,000 persons were employed in ICT, vs. 56,000 in 1990. Over the past decade, employment increased by a factor of 1.5 in ICT manufacturing industries, and by a factor of 4.9 in ICT service industries. Computer and related services and R&D, including start-up companies, grew by a factor of over 6.8; telecommunications services grew by a factor of 3.2; employment in electronic components grew by a factor of 2.9, employment in electronic communications equipment increased by a factor of 2.1 and In industrial equipment for supervision and control, employment increase by a factor of 1.

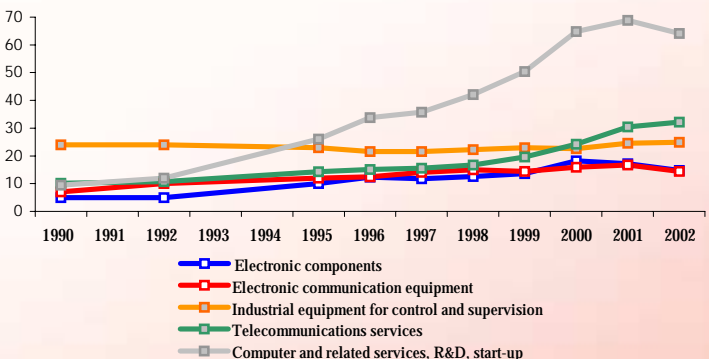
- In 2000, nearly half of the persons employed in ICT were academic professionals, associate professionals, or technicians, vs. 27% in the overall economy.

7. Employment in ICT and in the Overall Economy, by Occupation, %, 2000



8. Employed Persons in the ICT Sector, Thousands, 1990-2002

Thousands

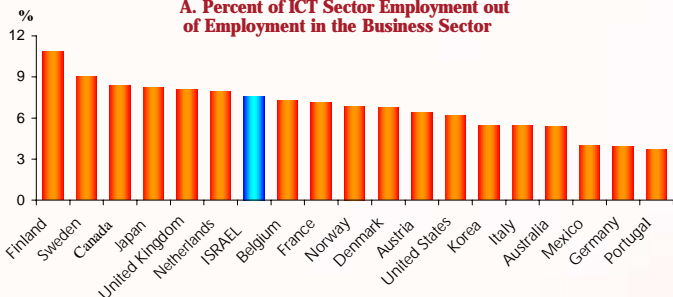


Israel in Comparison with OECD Countries

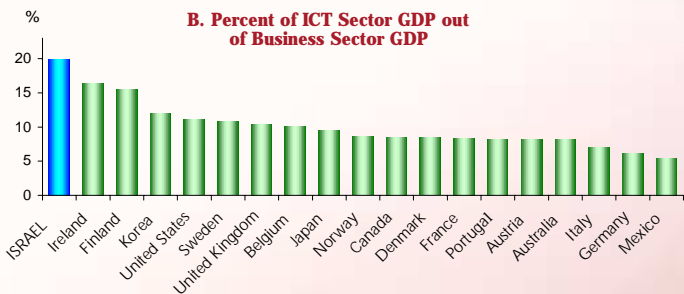
■ Despite the recent slowdown in the economy, ICT will continue to be a catalyst for growth. Of the OECD countries, Israel ranks in a leading position in the various areas of ICT.

9. Indicators of the ICT Sector, 2000/2001

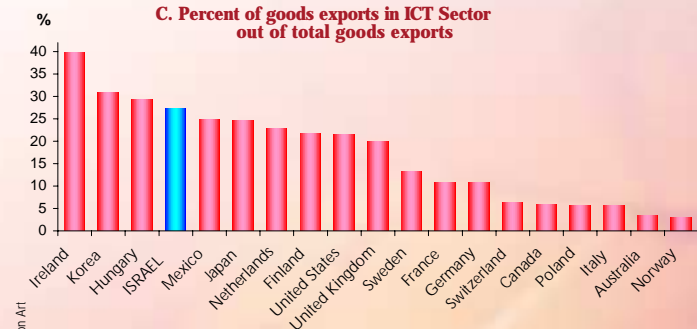
A. Percent of ICT Sector Employment out of Employment in the Business Sector



B. Percent of ICT Sector GDP out of Business Sector GDP



C. Percent of goods exports in ICT Sector out of total goods exports



For More Information:
www.cbs.gov.il

CENTRAL BUREAU OF STATISTICS

Internet: www.cbs.gov.il e-mail: info@cbs.gov.il

Jerusalem: Tel: 972-2-6592666 Fax: 972-2-6521340

