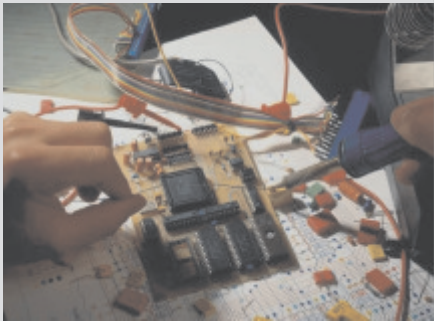




POLAND'S **ELECTRONICS**

INDUSTRY



KEY POSITIVE ELEMENTS IN POLISH ECONOMY AND ELECTRONICS INDUSTRY

- EU accession on 1 May 2004
- GDP growth rate [2004/2005] = 3.2% (vs. 1.6% in EU 25)
- GDP growth recovery forecast for 2006 = 4.6% - 5.0% (vs. 2.3% in EU 25)
- Low inflation (0.7% as at end of Dec. 2005)
- 51% of the population of the new EU members
- 50% of Polish society is under 34 years of age
- the largest market in Central Europe, 8th largest in Europe and 30th in the world

KEY INFORMATION ABOUT POLISH ELECTRONICS INDUSTRY

The electronics industry and market can be divided into 4 main segments:

- electronic products of everyday use,
- telecommunications equipment,
- computer hardware,
- electronic components.

The profile of the products supplied by the Polish electronic industry is dominated by electronic goods of everyday use, which account for nearly 56% of the total value of the industry's output. Telecommunications equipment forms the 2nd largest group of the electronics industry's products, with its share in the total value of the industry's output reaching almost 23%.¹

Polish electronics industry's sold production

POLISH ELECTRONICS INDUSTRY'S SOLD PRODUCTION

Year	EUR million
2003	2.450
2004	2.758
2005	3.275

Source: Instytut Rynku Elektronicznego (estimates based on official data published by GUS)

The value of the Polish electronics industry's sold production came close to EUR 3.3 billion in 2005. Over 90% of this value was accounted for by large and medium-sized enterprises.

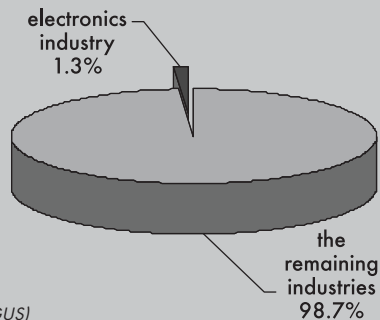
Polish electronics sector enterprises

There are about 7,400 enterprises in operation in Poland which manufacture electronic products.

- Enterprises with more than 20 persons employed - jointly employ 29,800 workers (2005).
- Companies with the participation of foreign capital play an important role in the Polish electronics sector. There were 296 such enterprises at the end of 2005. Among them are such well known international concerns as Thomson Tubes and Displays S.A., Royal Philips Electronics N.V., France Telecom, Alcatel, Vivendi Universal, Lucent Technologies Network Systems, Siemens AG, and Flextronics International.
- Electronics firms in which foreign capital is engaged belong, as a rule, to the group of large

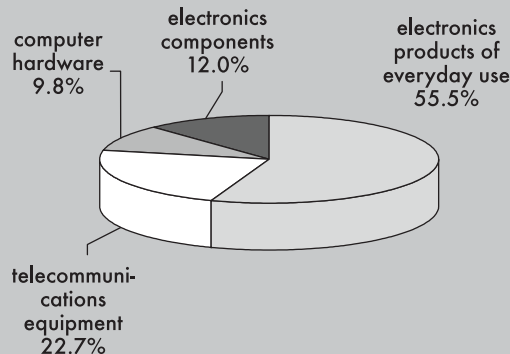
¹ Source: official data published by the Central Statistical Office (GUS)

THE ELECTRONICS INDUSTRY'S SHARE IN THE GENERATION OF POLAND'S GROSS DOMESTIC PRODUCT (GDP) IN 2005



Source: Central Statistical Office (GUS)

PROFILE OF THE POLISH ELECTRONICS INDUSTRY (SOLD PRODUCTION) IN 2005



Source: Instytut Rynku Elektronicznego (estimates based on official data published by GUS)

and medium-sized enterprises (employing more than 49 persons each), whereas the group of small firms consists mainly of Polish-owned enterprises.

Ownership profile of Polish electronics industry

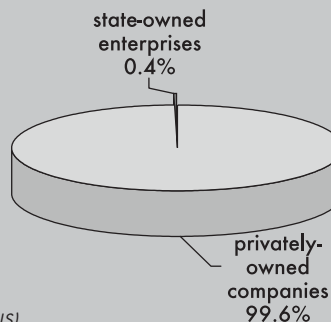
Owing to the reforms implemented in Poland the majority of enterprises from the electronics sector

are private entities. They account for 99.6% of all firms operating in this sector.

Polish market of electronic goods

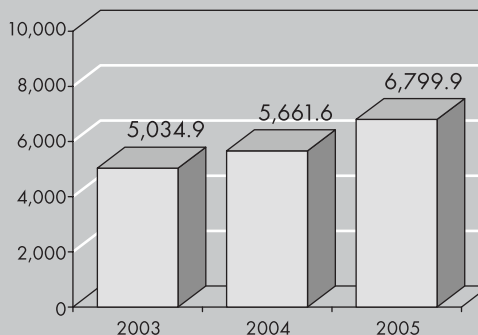
- In 2005 the value of the entire Polish market of electronic goods was almost EUR 6.8 billion.
- The largest segment of this market is the computer segment (30.2% by value). The second largest is telecommunications equipment - 29.6%.

OWNERSHIP PROFILE OF THE POLISH ELECTRONICS SECTOR IN 2005



Source: Central Statistical Office (GUS)

POLISH MARKET OF ELECTRONICS GOODS IN 2003-2005, BY VALUE (IN EUR MILLION)



Source: Instytut Rynku Elektronicznego (estimates based on official data published by GUS)

Polish market of electronic goods of everyday use

According to Instytut Rynku Elektronicznego's estimates, in 2005 the sales of electronic goods of everyday use reached EUR 1.1 billion and rose by 12% (in comparison with 2004). By volume the market rose by 17.6%. The TV set segment remained the biggest product segment of this market with market share = 57%, mostly thanks to 29-inch (and larger) TV sets as well as LCD and plasma TV sets.

POLISH MARKET OF ELECTRONIC GOODS OF EVERYDAY USE, BY VALUE (IN EUR MILLION)

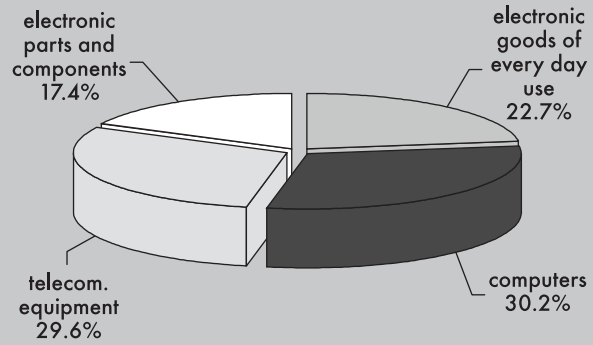
	2002	2003	2004	2005
Value in EUR million	915	810	890	1,120

Source: Instytut Rynku Elektronicznego

Polish computer market

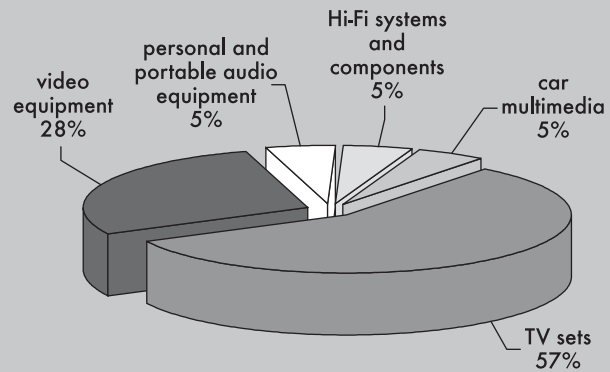
- In 2005 sales of computers (desk-top computers, notebooks and servers) on the Polish market were almost 2.05 million units. The quantitative growth in sales exceeded 23%.
- The highest growth, by over 51%, was recorded in the sales of notebook computers, which were 505,000 units.
- Desk-top computers account for over 73% of the Polish market of personal computers, with sales in 2005 of nearly 1.5 million units.

PROFILE OF POLISH MARKET OF ELECTRONIC GOODS IN 2005, BY VALUE



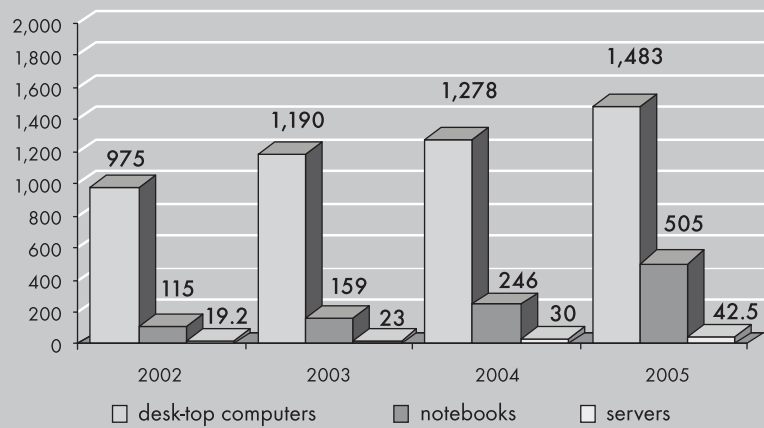
Source: Instytut Rynku Elektronicznego (estimates based on official data published by GUS)

SALES PROFILE OF ELECTRONIC GOODS OF EVERYDAY USE IN POLAND IN 2005, BY VALUE



Source: Instytut Rynku Elektronicznego

SALES OF DESKTOP AND NOTEBOOK COMPUTERS AND SERVERS IN POLAND IN 2002-2005, BY VOLUME (IN THOUSAND PIECES)



Source: Instytut Rynku Elektronicznego

Comparison of ICT usage in enterprises in Poland and other EU countries

Polish telecommunications market

- In 2005 the value of the Polish telecommunications market (equipment, devices and services) exceeded EUR 10 billion. The growth rate was estimated at about 8.1% (compared with the previous year).

TOTAL TELECOMMUNICATIONS MARKET IN POLAND IN 2003-2005

Year	2003	2004	2005
total telecommunications market [in EUR billion]	8.5	9.3	10.1
year / year		04/03	05/04
growth rate [in %]		9.0	8.1

Source: European Information Technology Observatory 2006 (EITO)

- The value of the total telecommunications equipment and devices market in Poland in 2005 (without telecommunications services) was over EUR 3.2 billion.

TOTAL TELECOMMUNICATIONS EQUIPMENT AND DEVICES IN POLAND IN 2003-2005

Year	2003	2004	2005
Total telecommunications equipment [in EUR billion]	2.78	2.86	3.24

Source: European Information Technology Observatory 2006 (EITO)

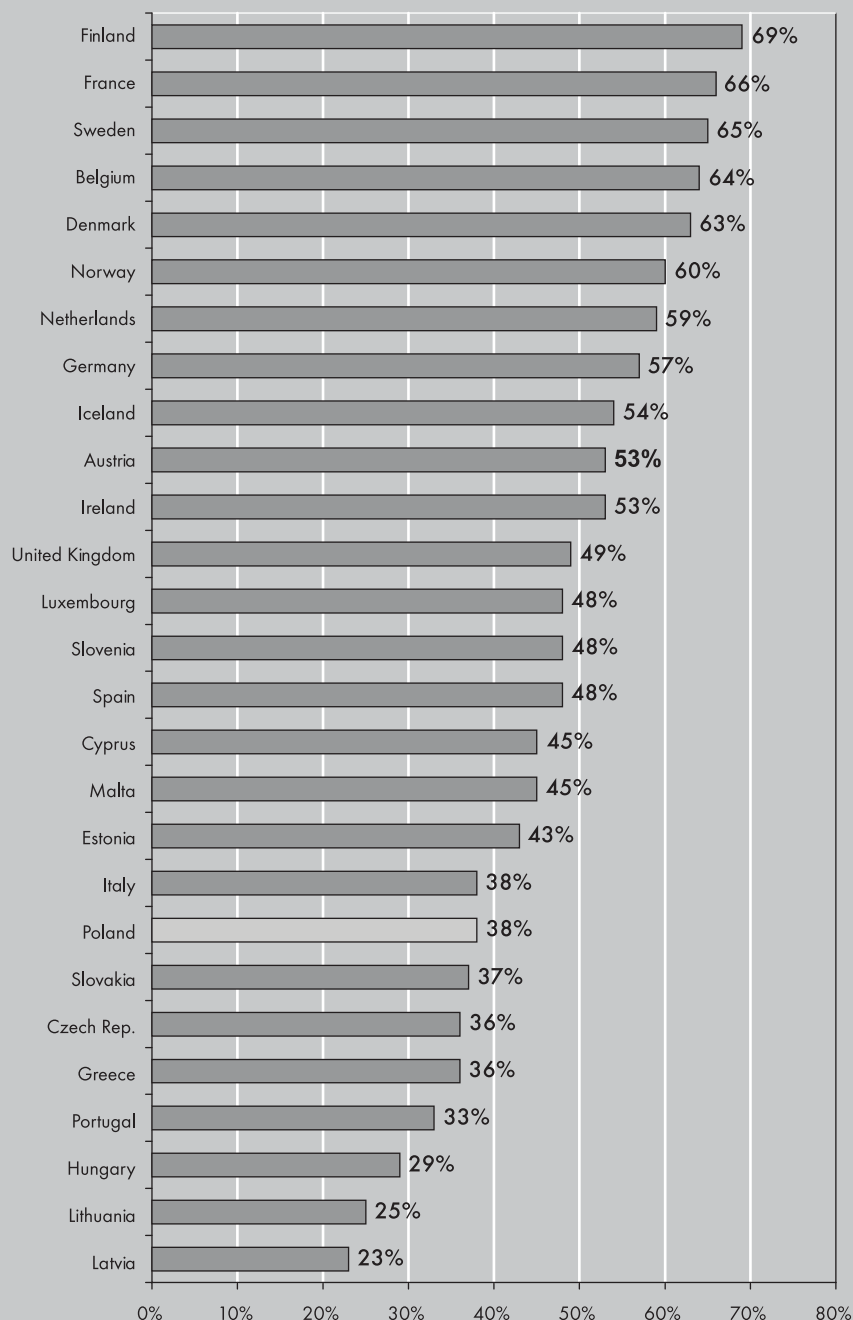
- In 2005 the value of imported telecommunications equipment and devices exceeded EUR 1.6 billion.

IMPORTS OF TELECOMMUNICATIONS EQUIPMENT AND DEVICES - POLAND 2003-2005 [IN EUR MILLION], ACCORDING TO POLISH COMBINED NOMENCLATURE (PCN)

Year	2003	2004	2005
8517 - Electrical apparatus for line telephony or line telegraphy	397.3	395.2	600.9
8525 - Transmission apparatus for radio-telephony, radio-teleggraphy, radio-phony and television	857.0	844.9	1,039.4
Total	1,254.4	1,240.1	1,640.3

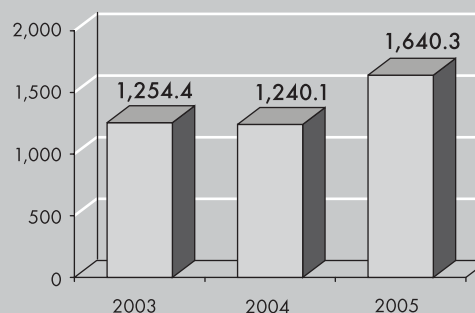
Source: Central Statistical Office (GUS)

EMPLOYED PERSONS' USE OF COMPUTERS IN THEIR NORMAL WORK ROUTINE (AS A PERCENTAGE OF THE TOTAL NUMBER OF EMPLOYED PERSONS) IN 2005 IN EU COUNTRIES



Source: EUROSTAT, Community survey on ICT usage and e-commerce in enterprises

IMPORTS OF TELECOMMUNICATIONS EQUIPMENT AND DEVICES - POLAND 2003-2005 [IN EUR MILLION], ACCORDING TO POLISH COMBINED NOMENCLATURE (PCN)



Source: Central Statistical Office (GUS)

Polish market of electronics parts and components

- In 2005 the value of the Polish market of electronics parts and components was estimated at EUR 1.3 billion.
- Domestic manufacturers have a relatively low share in this market. At present, the production of TV tubes is the most concentrated segment of the entire Polish electronics industry. The other major segments (recording significant domestic production) are:
 - production of printed circuits
 - production of magnetic and inductive elements.

Production of electronic goods of everyday use in Poland

- Poland is the largest manufacturer of TV sets among EU members (and second in Europe). In 2005 the Polish industry supplied 6.7 million TV sets. In Poland the leading manufacturers of TV sets are the international companies Jabil (commissioned by Philips), Daewoo, LG Electronics and Thomson.
- In 2005 almost all video equipment (video cassette recorders, DVD players and recorders, video cameras, etc.) and audio equipment (personal, portable, stationary and car audio devices) available on the Polish market were imported. The dominant brands on this market were Sony, Philips, Samsung, LG Electronics, Panasonic and Thomson.

SOLD PRODUCTION OF ELECTRONIC GOODS OF EVERYDAY USE IN POLAND IN 2003-2005, BY VALUE

	2003	2004	2005
Sold production of electronic goods of everyday use [in PLN million]	5,934.2	6,731.02	7,310.97
Sold production of electronic goods of everyday use [in EUR million]	1,349.4	1,484.6	1,816.2

Source: Central Statistical Office (GUS)

Production of computers in Poland

SOLD PRODUCTION OF COMPUTERS IN POLAND IN 2003-2005, BY VALUE

	2003	2004	2005
Sold production of computers [in PLN million]	730.23	953.04	1,290.55
Sold production of computers [in EUR million]	166.0	210.2	320.6

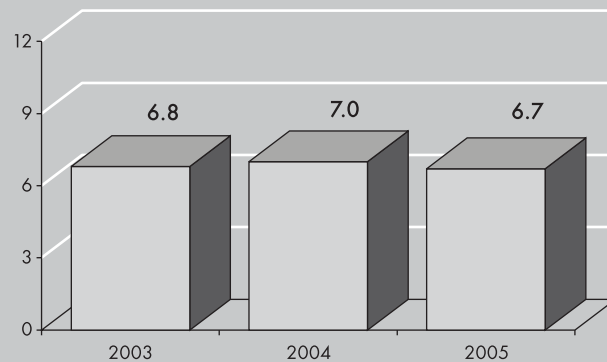
Source: Central Statistical Office (GUS)

VALUE AND GROWTH RATE OF THE POLISH EXPORTS AND IMPORTS OF SELECTED ELECTRONIC COMPONENTS IN 2005

PCN code	Item	Exports		Imports	
		USD million	EUR million	USD million	EUR million
8532	Condensers	8.6	6.9	100.6	80.8
8533	Resistors	5.1	4.1	30.7	24.7
8534	Printed circuits	25.1	20.2	132.0	106.1
8540	Electron tubes	197.1	158.4	334.7	269.0
8541	Diodes, transistors and other semiconductors	9.2	7.4	151.6	121.8
8542	Electronic integrated circuits and micro-sets	215.7	173.3	820.0	658.9
	Total	460.8	370.3	1,569.6	1,261.3

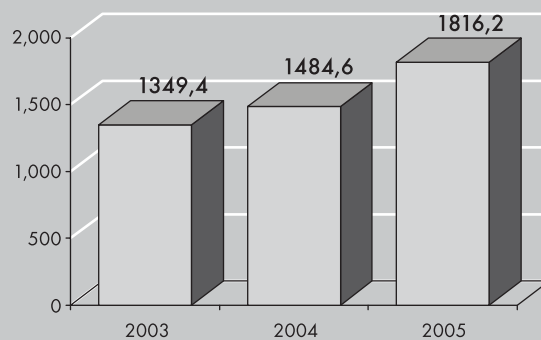
Source: Central Statistical Office (GUS)

PRODUCTION OF TV SETS IN POLAND IN 2003-2005, BY VOLUME (IN MILLION PIECES)



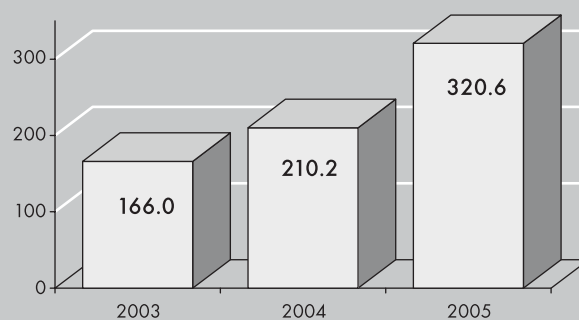
Source: Central Statistical Office (GUS)

SOLD PRODUCTION OF ELECTRONIC GOODS OF EVERYDAY USE IN POLAND IN 2003-2005, BY VALUE (IN EUR MILLION)



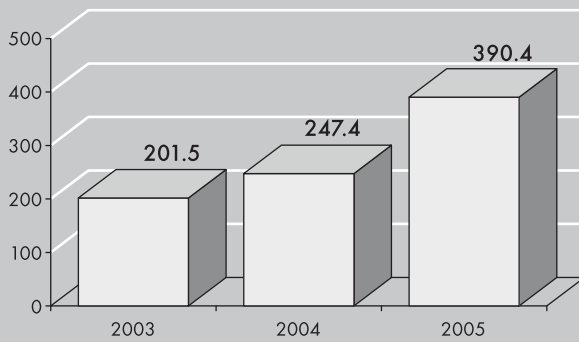
Source: Central Statistical Office (GUS)

SOLD PRODUCTION OF COMPUTERS IN POLAND IN 2003-2005, BY VALUE (IN EUR MILLION)



Source: Central Statistical Office (GUS)

PRODUCTION OF COMPUTERS IN POLAND IN 2003-2005, BY VOLUME (IN THOUSAND PIECES)



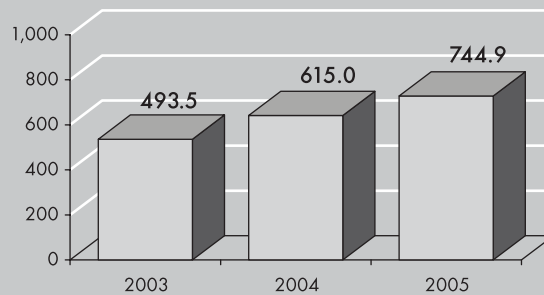
Source: Central Statistical Office (GUS)

- "Small assembly" is not registered by the Central Statistical Office (GUS) and thus is not reflected in the above data. The volume of "small assembly" is significant; according to Teleinfo 500, in 2005 it was about 911,000 pieces (compared with 903,000 in 2004). In this case, total production of computers in Poland in 2005 would be at the level of 1.3 million pieces (in 2004, 1.15 million pieces).

Production of telecommunications equipment in Poland

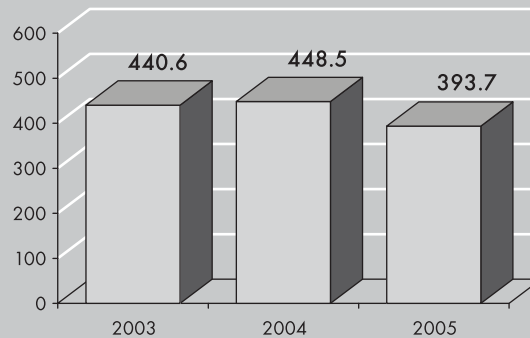
- The value of the domestic market of telecommunications equipment in Poland in 2005 was estimated at EUR 2,010.7 million.
- The value of the sold production of telecommunications equipment in Poland has been increasing steadily, from EUR 493.5 million in 2003 to EUR 744.9 million in 2005.
- The Polish market of telecommunications equipment has been practically monopolised by three foreign concerns: Alcatel, Lucent Technologies and Siemens.
- The Polish market of terminals is much more fragmented. There are the local manufacturers (Platan, Slican and DGT) as well as foreign suppliers (Panasonic, Siemens, Alcatel, Ericsson and Avaya).
- On the Polish market of fixed-line telephones in 2005, there were practically only foreign suppliers: Doro Atlantel, Panasonic and Siemens. The mobile segment is divided among the world's largest concerns: Nokia, Alcatel, Ericsson, Siemens and Motorola.

SOLD PRODUCTION OF TELECOMMUNICATIONS EQUIPMENT IN POLAND IN 2003-2005, BY VALUE (IN EUR MILLION)



Source: Central Statistical Office (GUS)

SOLD PRODUCTION OF ELECTRONIC PARTS AND COMPONENTS IN POLAND IN 2003-2005, BY VALUE (IN EUR MILLION)



Source: Central Statistical Office (GUS)

Production of electronic parts and components in Poland

- Although the domestic market is dominated by imports, there are several large plants in Poland manufacturing electronic parts and components. The most important represent foreign investment projects:
 - Videocon (factory sold by Thomson in 2005), manufacturing TV tubes (located in Piaseczno, near to Warsaw)
 - Philips Ferpol and Ferroxcube, manufacturing magnetic elements (located in Skierniewice)
 - Philips Lighting Poland S.A., manufacturing energy-conserving light bulbs (located in Piła)
- The value of the domestic market of electronic parts and components in Poland in 2005 was EUR 1,185.8 million.

SOLD PRODUCTION OF TELECOMMUNICATIONS EQUIPMENT IN POLAND IN 2003-2005, BY VALUE

Year	2003	2004	2005
Sold production of telecommunications equipment [in PLN million]	2,170.33	2,788.45	2,998.35
Sold production of telecommunications equipment [in EUR million]	493.5	615.0	744.9

Source: Central Statistical Office (GUS)

SOLD PRODUCTION OF ELECTRONIC PARTS AND COMPONENTS IN POLAND IN 2003-2005, BY VALUE

Year	2003	2004	2005
Sold production of electronic parts and components [in PLN million]	1,937.78	2,033.67	1,584.92
Sold production of electronic parts and components [in EUR million]	440.6	448.5	393.7

Source: Central Statistical Office (GUS)

Polish imports of electronic products

- Poland imports much more in electronics goods than it exports. The value of imports is more than twice the value of electronics exports.
- In 2005 Poland imported electronics goods worth EUR 6,911.3 million. The growth rate (over 2004) was almost 22.0%.

POLISH IMPORTS OF ELECTRONIC PRODUCTS IN 2003–2005, BY VALUE (IN EUR MILLION)

Year	2003	2004	2005
Polish imports of electronic products [in EUR million]	5,056.9	5,406.5	6,911.3

Source: Instytut Rynku Elektronicznego (estimates based on official data published by GUS)

Profile of electronics imports

- Computers and electronic goods of everyday use are the main commodity groups in Polish imports of electronic products. The value of computer imports was almost EUR 2.0 billion (EUR 1,962.9 million), whereas the value of imports of electronic goods of everyday use exceeded EUR 1,777.2 million.
- In 2005 Poland imported telecommunications equipment worth a total of EUR 1,660.1 million.
- In 2005 the value of imports of electronic parts and components exceeded EUR 1.5 billion (EUR 1,511.2 million).

Main source of electronics imports:

- China,
- Germany,
- Far East (South Korea, Taiwan and Japan).

Polish exports of electronic products

- In 2005 Polish exports of electronics products exceeded EUR 3.3 billion. The growth rate exceeded 26.0 % (compared to 2004).

POLISH EXPORTS OF ELECTRONIC PRODUCTS IN 2003–2005, BY VALUE (IN EUR MILLION)

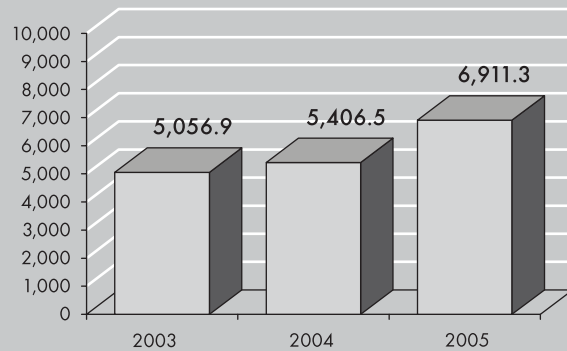
Year	2003	2004	2005
Polish exports of electronic products [in EUR million]	2,471.5	2,503.1	3,386.8

Source: Instytut Rynku Elektronicznego (estimates based on official data published by GUS)

Profile of electronics exports

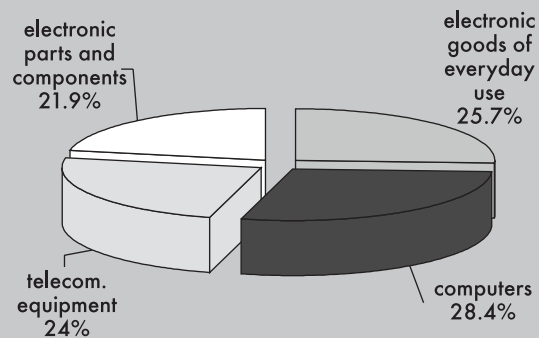
- In 2005 electronic goods of everyday use accounted for over 60% of overall Polish electronics exports. In 2005 the value of these exports exceeded EUR 2 billion (EUR 2.05 billion). TV sets still remain the main export item. Poland exports about 90% of TV sets manufactured by its plants.
- Exports of electronic parts and components exceeded EUR 700 million (EUR 719.1 million).

POLISH IMPORTS OF ELECTRONIC PRODUCTS IN 2003–2005, BY VALUE (IN EUR MILLION)



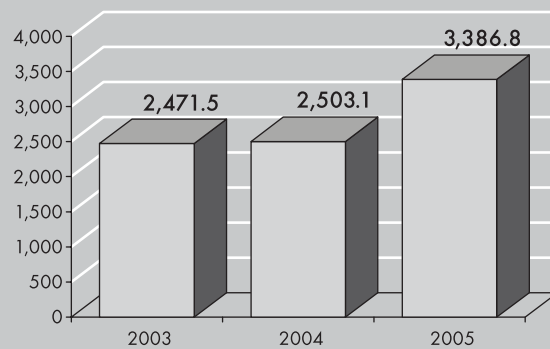
Source: Instytut Rynku Elektronicznego (estimates based on official data published by GUS)

PROFILE OF ELECTRONICS IMPORTS IN 2005 IN POLAND



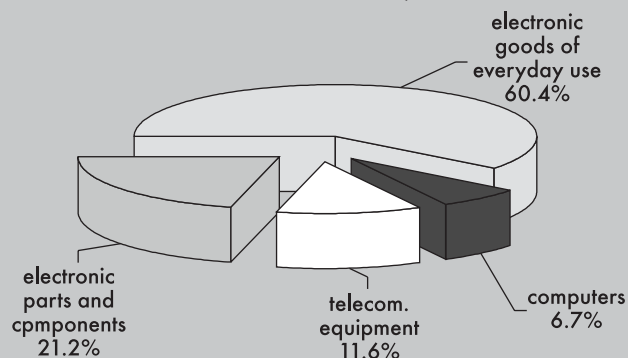
Source: Instytut Rynku Elektronicznego (estimates based on official data published by GUS)

POLISH EXPORTS OF ELECTRONICS PRODUCTS IN 2003–2005, BY VALUE (IN EUR MILLION)



Source: Instytut Rynku Elektronicznego (estimates based on official data published by GUS)

PROFILE OF POLISH ELECTRONICS EXPORTS IN 2005, BY VALUE



Source: Instytut Rynku Elektronicznego (estimates based on official data published by GUS)

- Exports of telecommunications equipment were almost EUR 400 million (EUR 394.2 million).
- Exports of computers were EUR 226.7 million.

Main destinations of electronics exports:

- Germany,
- France,
- United Kingdom,
- the Netherlands.

Main exporters:

- manufacturers of TV sets: LG Electronics, Daewoo, Thomson (TTE) and Jabil,
- TV tube manufacturer: Videocon,
- electronic components & devices: Philips (energy-saving lighting bulbs and magnetic elements)

Balance of Poland's trade in electronic products

- In 2005 Poland recorded a deficit in its foreign trade in electronic goods of EUR 3,524.5 million. This deficit was higher than in 2004.

TOTAL BALANCE OF TRADE IN ELECTRONIC GOODS IN 2003-2005

Year	EUR million
2003	-2,585.4
2004	-2,903.3
2005	-3,524.5

Source: Instytut Rynku Elektronicznego (estimates based on official data published by GUS)

- A deficit is recorded for 3 out of the main 4 groups of electronic products in the Polish foreign trade. The highest deficit, exceeding EUR 1.7 billion, is recorded for computers.
- A surplus is recorded only for electronic goods of everyday use, EUR 269.6 million.

BALANCE OF POLAND'S TRADE IN PRINCIPAL ELECTRONIC GOODS IN 2005

	EUR million
electronic goods of everyday use	269.6
computers	-1,736.3
telecommunications equipment	-1,265.8
electronic parts and components	-792.0
Total	-3,524.5

Source: Instytut Rynku Elektronicznego (estimates based on official data published by GUS)

Foreign investment in the Polish electronics sector

- The Polish electronics market is one of the sectors that have attracted the largest amounts of foreign capital in the form of direct investment (FDI) over the last 15 years.

Among the foreign concerns investing in the Polish electronics sector there are:

- manufacturers of TV sets and TV tubes: LG Electronics, Daewoo, Thomson (TTE, Videocon) and Philips/Jabil,
- manufacturers of electronic devices & components: Philips (energy-saving lighting bulbs and passive elements)
- foreign concerns investing in the Polish telecommunications services sector (France Telecom, Vivendi Universal) and telecommunications equipment sector (Lucent Technologies, Siemens, Alcatel)

In 2005-2006, agreements were signed concerning two large new investments:

1. LG Philips LCD²:

LG.Philips LCD declares investment outlays of EUR 429 million. The company plans to start mass production in the first half of 2007 with an initial capacity of 3 million modules per year; by 2011 the plant will reach annual production capacity of 11 million TFT-LCD modules (thin-film transistor liquid crystal display).

2. Sharp

Initial investment value is expected to be approximately EUR 44 million. Eventually the entire investment will reach EUR 150 million and will

² The LG.Philips LCD plant in Kobierzyce is the largest production investment in Poland and the first LG.Philips LCD's factory in Europe. The location, Kobierzyce, is near Wrocław.

MAJOR FOREIGN INVESTORS IN POLISH ELECTRONICS SECTOR AS OF THE END OF DECEMBER 2005 (IN ALPHABETICAL ORDER)

Investor name	Country of registration	Country of origin	Comments
Alcatel	France	France	Alcatel Polska S.A., Alcatel Business Systems Poland Sp. z o.o., Alcatel Setel Sp. z o.o. - Warsaw, Alcatel CIT Polska Sp. z o.o. - Poznań
Bates Telecom Ltd.	UK	UK	Energis Polska Sp. z o.o., Cel Polska Sp. z o.o., Telrise Sp. z o.o.
D. Chase Enterprises	USA	USA	Polska Telewizja Kablowa S.A. - Warsaw, Katowice, Gdańsk, Cracow and Lublin
Daewoo	South Korea	South Korea	Daewoo Electronics Manufacturing Poland
France Telecom	France	France	47.5% stake in Telekomunikacja Polska S.A., PTK Centertel (Orange - head office in Warsaw), DITEL S.A., ITI Lublin Sp. z o.o. (Lublin), TP Internet Sp. z o.o. (including Wirtualna Polska), TP Invest Sp. z o.o., TP MED Sp. z o.o.
Kimball Electronics Manufacturing Inc.	USA	USA	Kimball Electronics Poland Sp. z o.o. - Poznań
LG Electronics Inc.	South Korea	South Korea	LG Electronics Polska Sp. z o.o. (Warsaw), LG Electronics Mława Sp. z o.o. (Mława)
LG Philips Displays Holding B.V.	The Netherlands	The Netherlands	LG Philips Displays Poland Sp. z o.o. - Skierniewice
Lucent Technologies Network Systems Netherlands B.V.	The Netherlands	USA	Lucent Technologies Poland Sp. z o.o. - Warsaw and Bydgoszcz
Siemens A.G.	Germany	Germany	98.3% stake in Siemens Sp. z o.o.
TDC Mobile International A/S	Denmark	Denmark	Polkomtel S.A.
Telia AB	Sweden	Sweden	Telia S.A., Eniro Polska Sp. z o.o.
Vivendi Universal	France	France	15.04% stake in Elektrim S.A. - office in Warsaw, 50% stake in Carcom Warsaw Sp. z o.o. - office in Warsaw
Vodafone Americas Asia Inc.	USA	USA	Polkomtel S.A.

Source: Polish Information and Foreign Investment Agency (PAIiIZ)

create 3,500 jobs. It will be capable of producing 100,000 LCD modules per month. The modules will be used in the production of large-screen LCD TVs manufactured at other Sharp facilities: Sharp Electrónica España S.A. in Spain and Loewe Opta GmbH in Germany.

Regulatory environment

The principal legal act governing business activity in Poland is the Economic Freedom Act of 2 July 2004. It regulates undertaking, running and closing businesses in Poland, as well as related tasks of the public administration.

For the electronics sector the EU directives RoHS and WEEE are very important.

Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) and Directive 2002/96/EC on waste electrical and electronic equipment (WEEE) are designed to tackle the fast-increasing waste stream of electrical and electronic equipment, and complement EU measures

on landfill and incineration of waste. Increased recycling of electrical and electronic equipment will limit the total quantity of waste going to final disposal. Producers will be responsible for taking back and recycling electrical and electronic equipment. This will provide incentives to design electrical and electronic equipment in an more environmentally efficient way, which takes waste management aspects fully into account. Consumers will be able to return their equipment free of charge. In order to prevent the generation of hazardous waste, Directive 2002/95/EC requires the replacement of various heavy metals (lead, mercury, cadmium, and hexavalent chromium) and brominated flame retardants (polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE)) in new electrical and electronic equipment put on the market from 1 July 2006.

Legislation

- Directive 2002/95/EC of the European Parliament and of the Council of 27 January

2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

- Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE).
- Directive 2003/108/EC of the European Parliament and of the Council of 8 December 2003 amending Directive 2002/96/EC on waste electrical and electronic equipment (WEEE).

RoHS and WEEE directives are in force across all 25 EU member states, plus Iceland, Liechtenstein and Norway.

The RoHS Directive came into force on 1st July 2006.

From 2007 manufacturers and retailers will be responsible for recycling waste electrical and electronic products under WEEE (the Waste Electrical & Electronic Equipment directive).



Polish Information and Foreign Investment Agency (PAIiIZ)

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