

White Paper

RESEARCH AND DEVELOPMENT IN POLAND

F R O S T & S U L L I V A N

In Cooperation With



POLISH INFORMATION AND
FOREIGN INVESTMENT AGENCY

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About This Document

The following whitepaper outlines the findings of a study conducted by Frost & Sullivan for The Polish Information and Foreign Investment Agency (PAIiIZ) on research and development (R&D) in Poland. The paper attempts to explain R&D in Poland, what affects it, its potential and its current status.

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Executive Summary

The role of R&D is growing in importance. A knowledge-based society is seen as a key driver for economic competitiveness and growth. As a member of the EU, Poland has to meet the R&D targets set forth by the Lisbon Strategy. The country is witnessing a shift from state-led R&D to R&D led by the private sector. Although Poland has a large system to promote science and innovation, there is room for private sector enterprises and associations to get involved. Despite the challenges being faced, progress is being made.

The R&D potential in Poland is quite significant. With the state's active promotion of R&D, Poland's international cooperation in science and innovation in Europe, its active support measures for R&D within the EU Structural Funds, its significant human capital and strong economy, the country holds much potential. Due to its socialist past, the country may lag in certain aspects; however the EU's involvement by providing financial aid programs will help narrow the gap caused by this historical discrepancy.

The evidence of Poland's R&D potential is seen in the large number of foreign companies that have established their R&D centres in different areas of the country, including IBM, Microsoft, Delphi and so on.

Poland's R&D potential is highly significant, and is moving in the right direction, making it one of the most attractive countries to invest in.

1. Poland- Future Knowledge-based economy

Having been faced with the growing problem of reduced economic competitiveness, when compared to countries such as the United States and Japan, the EU decided to implement policies that would remedy this. As a result, the Lisbon Strategy was adopted by the European Commission in 2000. The goal of this strategy is to make the EU one of the most dynamic and competitive knowledge-based economies in the world by 2010. This strategy identifies R&D as the predominant source of innovation, which in turn is considered as one of the key drivers of productivity. As a result, this strategy urges all member states of the EU to increase R&D spending to 3.0 per cent of their gross domestic product (GDP). Additionally, two-thirds of this spending should come from the private sector.

Following Poland's accession to the EU in 2004, the targets set out by the Lisbon Strategy have become applicable to Poland. When comparing Poland to the other EU nations, it is clear that Poland has much potential in its different areas of R&D. The EU has an average R&D expenditure of 1.9 per cent of its GDP. Poland only allocates 0.6 per cent of GDP to R&D. According to EU statistics, in 2007, Poland ranked 24th out of 27 on the Summary Innovation Index¹. Further, the percentage of innovative companies among the businesses that are active in the EU is 51 per cent, whereas in Poland it is only 16.9 per cent.²

According to EU standards, Polish State involvement in R&D is still too high. 57 per cent of the R&D financing in the country is based on the national budget, whereas the private sector accounts for the remaining 39.3 per cent, where 26 per cent is funded by business entities and 16.3 per cent by other sources³. These figures clearly emphasise the importance and the potential that private firms have in Poland in this area. The direction of R&D activity has not changed much since 2000, with about half of the R&D budget being contributed to technical science⁴.

¹ European Innovation Scoreboard, 2007, www.europa-kommissionen.dk

² Eurostat, 2008.

³ Ibid

⁴ Ibid

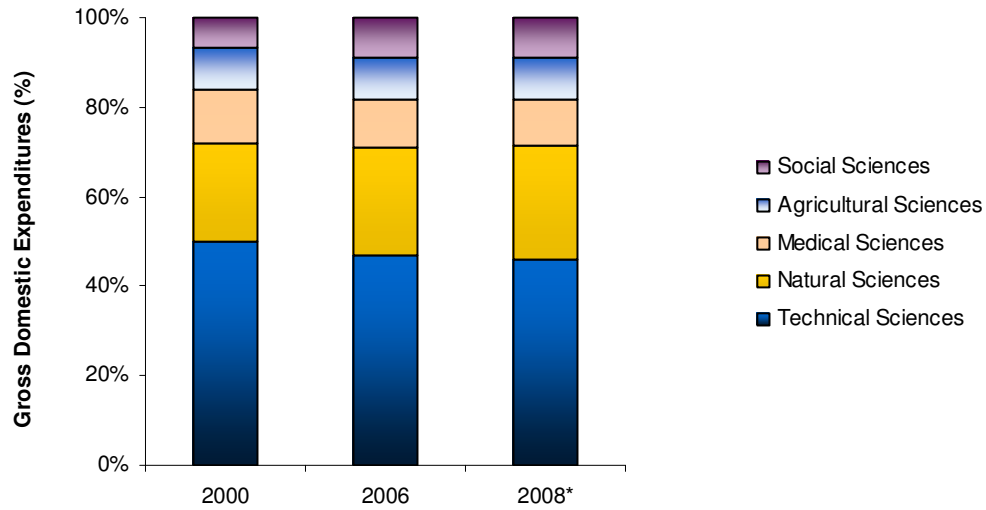


Figure 2: Structure of Gross Domestic Expenditures on R&D activity in Poland in 2000 and 2008

Source: Central Statistical Office and Frost & Sullivan Analysis, *Frost & Sullivan Estimate

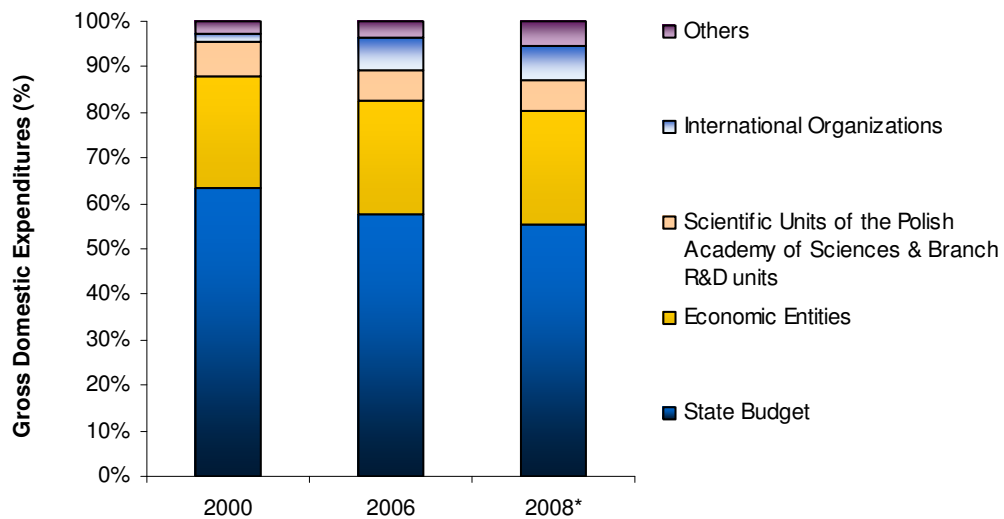


Figure 3: Areas of R&D Activity in Poland in 2000 and 2008

Source: Central Statistical Office and Frost & Sullivan Analysis, *Frost & Sullivan Estimate

2. Definition of R&D

The purpose of R&D is to:

- Carry out development projects as well as research in order to then implement them
- To publish the results of R&D projects
- To improve the methods of carrying out scientific R&D
- To organise training, collect scientific, theoretical and economic information and undertake activity related to the innovation and protection of intellectual property
- To elaborate analysis and evaluation in particular scientific and technical fields and make proposals for implementing scientific achievements from around the world

R&D units can be formed as:

- Scientific research institutes
- R&D centres
- Central laboratories

3. Overall structure of the Polish Science and Innovation System

As in most countries, the structure of the Polish science and innovation system can be divided into two segments: 1) the public sector and 2) the private sector.

With regard to science and innovation, the public sector can be divided into three entities. The first entity comprises political /governmental authorities and advisory bodies. The Prime Minister's Office and the Council of Ministers set strategic priorities identify general policy goals and then suggest the distribution of the budget accordingly. Presently, the responsibility of creating policy proposals and managing national and innovation policy was divided among two Ministries:

- The Ministry of Science of Scientific Research and Information Technology (Ministerstwo Nauki i Szkolnictwa Wyzszego): It sets research priorities and is the executive body responsible for the financing of R&D projects through grants.
- The Ministry of National Education and Sport (Ministerstwo Edukacji Narodowej i Sportu): Although not directly responsible for R&D funding, it supervises universities; in the case of state universities, it provides funding for their educational tasks.

The second entity comprises the public sector of intermediate bodies, which are often set up by the different ministries in an attempt to make it easier for Polish enterprises to progress in science and competitiveness. The Polish Agency for Entrepreneurship Development (PARP - Polska Agencja Rozwoju Przedsiębiorczosci), manages funds assigned from the State Budget and European Union for the support of entrepreneurship and the development of human resources, with particular consideration given to the needs of small and medium sized enterprises. Independently from PARP there is the Patent office (Urząd Patentowy) that provides and ensures the legal protection of industrial and intellectual property.

The third public entity comprises reform-performing institutions that can be divided into three major government-funded types:

- The Polish Academy of Science
- Higher Education Institutions
- R&D Institutes

With regard to the private sector, there are two types of actors: private sector associations and private sector enterprises. Private sector associations provide the state with consultation and consist of bodies such as:

- The Polish Chamber of Commerce (Krajowa Izba Gospodarcza): it plays an advisory role with regard to business law.
- Business Centre Club: it has lobbying power for industry oriented policy, including innovation.

- Polish Business and Innovation Centres Association: it promotes the transfer of technology and innovation as well as the popularization of new discoveries and their implementation in entrepreneurship
- The Foundation for Polish Science: it is an independent, self-financing and non-profit organization established in 1991 with a mission of providing assistance and support to the scientific community in Poland.

4. The three R&D reform-performing institutions

As mentioned previously, there are three types of reform-performing institutions:

- The Polish Academy of Science
- Higher Education Institutions
- R&D Institutes

The Polish Academy of Science (PAS)

This body was founded in 1952 with the intention of developing, integrating and promoting Polish science and acts through an elected body of scholars and research organizations. It is the major scientific advisory body in Poland and its activities are regulated by the Parliamentary Act of April 25, 1997. The Academy's supreme governing body, the General Assembly, is responsible for setting the direction of the Academy's activities and supervising them. The PAS is currently made up of 79 research establishments and supporting units such as archives, libraries and museums. PAS is mainly financed by the Polish Ministry of Education and Science. The PAS promotes R&D in Poland by dealing with the problems of a particular discipline, by contributing to the diffusion research results, and by initiating cooperation with foreign scientific centers.

Higher Education Institutions

On July 25th, 2005, the Higher Education Act was introduced stating that higher education institutions are to be able to function independently from governmental pressure and be able to perform academic research and teach freely. Between 1990 and 2003, Poland witnessed a rapid increase in the number of its higher education institutions, most of which are private, and a four-fold increase in the amount of students in Poland, making it the country with the highest amount of students in the eastern European region. Higher Education Institutions can be divided into two types of schools: higher education schools which emphasise academic work and higher vocational schools which aim at providing training in professions demanded by the market. Most of these higher education institutions are subordinate to the Ministry of Science and Higher Education, however some may be subordinate to their relevant ministries such as the Ministry of Health, the Ministry of Culture and the Ministry of National Defence. Like most other European universities, Polish Universities partake in the Erasmus and Socrates exchange programmes. In terms of R&D contribution Polish universities have been gaining international prestige. The Warsaw University of Technology has been ranked #1 in the world for coder events. In 2007 its students have also won the 3D Autodesk Student Design Challenge by designing the 21st century wheel chair. In the same competition, a student from the Krakow University of Technology has

earned international attention by winning first place in the 3D animation category of the competition and in 2008, The Warsaw University of Economics has ranked in the top 25 universities in Europe.

R&D Institutes

Poland has about 200 R&D institutes that have been established on the basis of the Act of 25 July, 1985. The objective of these institutes is to conduct research and development in the interest of their different stakeholders. These institutes may perform a wide range of research and development in various fields of study. The area of activity is determined by the Ministry to which a given institute must be subordinate too. An elected Head of Counsel represents and coordinates the institutes in order to implement the country's specific policies. Two examples of such institutes would be: 1) The Space Research Center that is involved in several European projects such as LIMES (*Land and Sea Monitoring for Environment and Security*) and PEARL (*Port Environmental Information Collector*), and 2) The Institute for Geophysics that is involved in projects such as the CEMES (*Central Europe Mantle geoElectrical Structures*) and the International Continental Scientific Drilling Program.

5. Defining Poland's Attractiveness for R&D

Despite the low labour costs, the unsaturated markets and the steady economic recovery that have made regions such as Asia Pacific attractive, Poland has emerged as the R&D centre of the CEE region. In setting up R&D in Poland, companies seek to lower costs, increase efficiency, improve quality and diversify from their basic activities. The factors that make the country an attractive place for R&D are Poland's active research policy, its high level of international cooperation in the field of science and innovation, the states active support measures through the EU's Structural Funds, Poland's significant social capital and its strong economy providing the country with a stable backbone for investment.

5.1. Polish research policy

Since its ascension to the European Union in 2004, Poland's participation in the creation and implementation of scientific activity at the European level has become fundamental of the country's development strategy as well as its membership in the European Union. For this reason, the Polish government implemented the Act on Principals for Financing Science. This act allows for the financing of programmes and other types of activities that would help stimulate research, innovation, new technologies and the informatization of the country by; raising the competitiveness of Poland's human capital at a transnational level, by creating a favourable environment for inviting international researchers to train local staff and by creating new opportunities for young researchers. There are currently programmes in place to stimulate such development: The National Development Plan, The Polish Framework Programme and the Foresight Programme.

National Development Plan:

This plan was created in order for Poland to take advantages provided by its European Union membership. This plan is divided into 2 segments. The first was the “2004-2006 plan” which consisted of strengthening the bond between science and economy. The current plan is the “2007-2013” plan. Its purpose is to increase the importance and the impact of knowledge and innovation on a long-term, sustainable, basis by developing sectoral programs such as the Operational Programme “Research, New Technologies and Information Society” (2007-2013). The foreseen budget for this plan is 5,9 billion euro and aims to focus on the strengthening of research potential and applied research as well as information society development.

The Polish Framework Programme:

According the Ministry of Science and Higher Education, this program is Poland’s first attempt at focusing all significant contributions in scientific research concerning Poland’s socio-economic development. This programme consists of 3 elements which make it the fundamental instrument for the government’s research policy. The first element is that strategic research fields are determined for periods of 10 years, based on the country’s long-term research policy. These strategic fields are: health, environment, agriculture and food, country and society, safety, new materials and technologies, informative technologies, energy sources and transportation infrastructure. The second element focuses on research priorities. These priorities encompass an approach that is more focused on the short term research done in the research fields mentioned above. These short-term research priorities are monitored, reviewed and modified on an annual basis according to the needs of the given period of time. Finally the third element consists of contracted projects which can be accepted on the basis of ministerial calls for proposers within the research priorities set previously. These calls then have preferences in 4 development activities: new ideas, technologies, scientific staff and scientific equipment.

Foresight Programme:

This programme was initiated in 2003 by the ministry responsible for science and informatization. It involves a series of activities that allow for a multidimensional assignment of new development directions based on modern technological developments, social awareness and the inter-action of the two. This programme involves a wide range of actors such as public administrators, researchers, industry representatives and engineers who define the priorities and the direction of development and set the goals of the future. Its purpose is to foresee future needs, opportunities and threats associated with the social and economic development of the country. The results of such a foresight program help decision-makers and other stake-holders in society such as government, small and large enterprises, scientific and industrial communities, to coordinate their activities thus increasing societal effectiveness. The government has already usefully run a pilot project in the “health and life” research area and is planning on further continuing in areas such as “Security”, “Information and Telecommunication Technologies” and “Sustainable Development”.

5.2. International Cooperation

As a member of the EU, Poland is also involved in several pan-European R&D programmes enhancing the cooperation among EU member states.

Poland is currently involved in the “Seventh Framework Programme” which was planned for the period 2007-2013. The aim of this programme is to increase the average output of European research and to stimulate and fully exploit all possible forms of co-operation in research such as collaboration in joint projects, network coordination of national research programmes, competition at the European level and joint-implementation of significant technology initiatives with the common development of infrastructure of European dimension and interest.

Poland is also involved in the fellowship scheme entitled “Marie Curie Actions” which is considered to be of the most important fellowships open to researchers in Europe. With a budget of 1.6 billion Euro, its purpose is to provide training and foster career development opportunities for scientists, in all fields of study, contributing to the development of Research European Area.

The Competitiveness and Innovation Framework Programme (CIP) is another programme in which Poland is involved. The aim of this specific program is to bring together the existing EU activities supporting competitiveness and innovation to create synergies that would fulfil the objectives of the Lisbon Strategy.

Poland also partakes in EUREKA, a pan European network of market oriented industrial R&D. This programs aims to raise European competitiveness by supporting business, research centres and universities that take on pan-European projects to help develop innovative products, processes and services. EUREKA also offers it project partners easy access to large quantities of knowledge, expertise and skills and facilitates public and private funding schemes

Finally Poland also partakes in the intergovernmental framework for European Co-operation in the field of Scientific and Technical Research (COST) which in Poland is coordinated by the Ministry of Science and Higher Education and allows for the coordination of nationally funded research at a European level. Today this framework has almost 200 Actions and involves almost 30 000 scientists across Europe.

5.3. Support for R&D

In terms of financing entrepreneur in R&D, there are nine measures of support within the Infrastructure and Environment Operational Programme.

The first measure of support is the measure 1.4 of the Infrastructure and Environment Operational Programme (IE OP) within the EU Structural Funds. Support is given to entrepreneurs for goal-oriented projects such as technical, technological or organizational projects implemented by enterprises or enterprises in cooperation with research units. Small enterprises doing industrial research may receive 70% of financial support whereas large enterprises may receive 50%. It

terms of development work, small enterprises may receive 45% of financial support whereas large enterprises may receive 25%. The maximum amount of support is 7.5 million euro.

The second measure of support is the measure 4.1 of the IE OP. It supports the implementation of the outcome of R&D work. In other words, entrepreneurs that are eligible for this support measure must invest in projects with a consultancy component that are related to the implementation of the outcome of R&D work carried out under Measure 1.4. Small enterprises doing industrial research may receive 70% of financial support whereas large enterprises may receive 50%. In terms of development work, small enterprises may receive 45% of financial support whereas large enterprises may receive 25%. The maximum amount of support provided is 5.6 million euro and the value of permitted expenditures may not exceed 56 million euro.

The third measure of support is the measure 3.1 of the IE OP. It supports initiatives in innovative activities and as a result the beneficiaries are institutions that support the establishment of innovative enterprises such as incubators, including incubators of academic entrepreneurship, centers of technology and innovation transfer, technology accelerators, research and technology parks. The measure itself supports projects that are 1) related to research for, and evaluation of, innovative concepts presented by potential entrepreneurs, 2) that are preparatory work intended to establish a new enterprise based on such a concept and 3) capital investment in a newly founded enterprise.

The fourth measure of support is the measure 4.2 of the IE OP. It supports the stimulation of R&D activities of enterprises as well as industrial design. Entrepreneurs may benefit from this support if their projects are for the development of R&D activities in enterprises, including; the transformation of enterprises into R&D centers, the development of an industrial design or a utility model and their implementation in the production process. The maximum amount of support provided is 5.9 million euro for the investment-related aspect, 280 thousand euro for the training-related aspect and 170 thousand euro for the consultancy-related aspect.

The fifth measure of support is the measure 4.4 of the IE OP. It supports entrepreneurs interested in investment projects that involve a purchase or implementation of new technological solutions in production and services. This includes the projects leading to a reduction of the harmful impact on the environment, such as: reduction of the energy, materials and water consumption in a production process, or provision of services resulting in a creation of a new or substantially improved product or service. This measure also support new marketing and organizational solutions which contribute to improved productivity and effectiveness and expenses related to the introduction of organizational changes. The minimal amount of support provided is 626 thousand euro and the maximum amount of support is 10.5 million Euro for the investment related aspect, 260 thousand Euro for consultancy services and 260 000 Euro for the training-related part. The minimal amount of investment on behalf of the entrepreneur must be at least 2.08 million Euro but may not exceed 41.5 million Euro.

The sixth measure of support is measure 4.5 of the IE OP. It supports investment of considerable importance to the economy. It is broken down in two sub-measures: 4.5.1 that is directed towards investment in the production sector and 4.5.2 that is directed towards investment in the modern services sector. Overall, this measure also supports new investment related to a commencement of R&D activity. For sub-measure 4.5.1 the support accounts for 15% of eligible expenditures,

with maximum expenditures reaching 41.5 million Euro, whereas for sub-measure 4.5.2 accounts for 30% of eligible expenditures, excluding R&D projects. However, for R&D projects realized under sub-measure 4.5.2 the maximum amount of support that may be provided is 70% of eligible expenditures for the investment part of project (please see the Map of Regional Aid for more details). As for the training part of project, 260 thousand Euro may be provided (35% of the total value of eligible expenditures of the training part of the project for large enterprises and 45% for SME). And finally the consultancy aspect of the project may receive 157 thousand Euro in support (50% of the total value of eligible expenditures of the consultancy part).

The seventh measure of support is measure 8.1 of the IE OP. It supports business activity in the field of electronic commerce. Therefore it supports entrepreneurs of small and medium sized businesses that have been conducting business activity for no longer than one year since the date of registration and that intend to provide services in the electronic form and, possibly, create digital products necessary for the provision of such services. Such projects are eligible for up to 85% of support but the value of investment must be of at least of 5.3 thousand Euro and should not exceed 260 thousand Euro.

The eighth measure of support is the measure 8.2 of the IE OP. It supports the implementation of electronic business of the B2B type in micro, small and medium businesses. Therefore this measure supports entrepreneurs of such businesses in projects of technical (IT) and organizational nature, leading to an implementation of business processes in the electronic form, involving three or more co-operating enterprises. Such projects will be provided with co-financing for a maximum period of 2 years. The minimal amount of investment on behalf of the entrepreneur must be of 5.3 thousand Euro and is not to exceed 526 thousand Euro in order to obtain support.

The ninth measure of support is the measure 8.4 of the IE OP. It supports access to the Internet at the “last mile” stage for micro, small and medium-sized enterprises as well as non-governmental non-profit organizations. This measure co-finances the development and maintenance of a dedicated data communications infrastructure, created between the nearest or the most effective Internet distribution point and the target group(s). The minimal amount of support provided is 7.8 thousand Euro.

It should be noted the Polish Agency for Enterprise Development (PARP) is the institution responsible for most the evaluation and acceptance of project proposals. Projects falling in the support measure 4.5 are evaluated by the Ministry of the Economy and projects falling in the support measure 8.4 are evaluated by the Implementation Authority for European Programmes.

5.4. Human Capital

Traditionally, Polish R&D can be associated with the ingenuity of Nicolas Copernicus or Marie Curie. Although these historical figures are important, it is important to realise that the Polish contribution to the world of research is quite important to this day. There are several significant Polish achievements, including:

- The discovery of the first extra-solar planetary system
- The creation of the technology responsible for the production of the blue laser, creating a production process to make the world's smallest synthetic diamonds
- The ability to isolate queen cells from bone marrow

In terms of social capital, Poland's potential is significant. With a total of 448 institutions of higher education, the country is the regional leader with regard to number of students.

Table 1: Number of Higher Education Students per Country

Country	Number of Students Availing Higher Education (in thousands)
Poland	1,941.4
Hungary	424.2
The Czech Republic	321.2
Slovakia	171.3

Source: GUS Statistics, Statistics Bureau's of Hungary, the Czech Republic and Slovakia 2007

The number of doctoral and habilitated doctoral graduates is constantly on the rise.

Table 2: The Number of Scientific Degrees Granted in Poland

	Number of Scientific Degrees Granted					
	Habilitation (second doctorate necessary for obtaining the title of professor, particular to Poland)			Doctor		
	2000	2005	2006	2000	2005	2006
Total	829	955	860	4,400	5,917	6,072
Natural Sciences	171	157	192	709	916	997
Technical Sciences	137	184	163	728	987	1,068
Medical Sciences	181	146	112	1,157	1,325	1,351
Agricultural Sciences	70	102	102	410	510	457
Social Sciences	270	366	291	1,396	2,179	2,199

Source: GUS Statistics 2008

After 2000, there has been a marginal decrease in R&D employment. However, the number of total R&D units has grown, mainly due to the increase in development units and higher-education institutions.

Table 3: Units of Employment in R&D in Poland

Units and Employment in R&D								
	2000	2005	2006	2000	2005	2006		
	Units			Total Employed			Of which are researchers	Of which are technicians
Total	860	1097	1085	78925	76761	73554	59572	8662
Scientific and R&D Units	321	296	313	30277	23483	22610	15661	3878
Scientific Units of the Polish Academy of Science	81	76	78	7233	5681	5817	4536	631
→Scientific Institutes	58	59	59	6492	5228	5166	4043	519
→Independent Research Departments	23	17	19	741	453	651	493	112
Branch R&D Units	222	194	190	22719	17546	16330	10809	3140
→Research Institutes	137	133	132	18930	15701	14626	9739	2833
→Central Laboratories	11	8	8	357	171	162	98	38
→R&D Centres	74	53	50	3432	1674	1542	972	269
Others	18	26	45	325	256	463	316	107

Science Support Units	18	34	31	130	238	255	205	12
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Development Units	402	603	573	6906	8121	8955	5901	2314
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Higher-education Institutions	114	143	147	41499	44763	41535	37653	2429
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Other Units	5	21	21	43	156	299	152	29
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Source: GUS Statistics 2008

5.5. Strong Economy

Although the economy is not a direct factor influencing Poland's R&D, it is nevertheless important for it acts as a strong incentive for investors interested in Poland. It should be pointed out that Poland has been economically stable for the past few years, experiencing strong economic growth. In 2007, the real GDP growth rate was 6.6 per cent. FDI is considered to be the underlying reason for strong growth. Although slightly reduced from the previous year's sum, the value of FDI inflow into Poland amounted to EUR 12 834 million in 2007. The greatest amount of FDI was invested in areas such as manufacturing (20 per cent), real estate and other business activities (19.8 per cent), financial intermediation (15.3 per cent) and trade and repairs (11.9 per cent). According to the Polish National Bank, 85.3 per cent of the FDI flow came from EU member states, primarily from France, Germany, Austria, Italy and Sweden. With regard to FDI flow from other states, the main contributors were the United States, the Netherlands, Antilles, South Korea and Japan.

Poland's strong GDP growth has also correlated with its strong exports. The total value of Polish exports has been rising steadily. In 2006, exports grew by 20 per cent when compared to the previous year. In 2007, exports grew by 17.7 per cent from 2006, totalling 118.8 billion EUR.

6. R&D Centres in Poland

With more than 1,000 R&D units and over 70,000 employed in R&D, R&D may develop in any economic sphere, but due to certain industrial traditions and scientific developments, R&D in Poland is particularly attractive in the following sectors:

- Aviation
- Automotive
- Electronics
- Telecommunications
- IT
- Biotechnology
- Biochemistry
- The Internet
- Medical Engineering
- Pharmaceutical engineering
- Innovative technology
- Building and construction
- Robotics
- Nanotechnology⁵

The evidence of Poland's significant R&D potential is the fact that a large number of international companies have decided to establish R&D centres in Poland. The following table lists the location of most of the major research and development centres established by foreign investors such as Siemens, IBM, Microsoft, Nokia, Philips and LG.

Table 5: Examples of R&D Centres set up by foreign investors in Poland

Location	Companies present
Cracow	IBM, Lurgi, Motorola, Pliva, Sabre, Delphi, CH2M Hill, ABB
Warsaw	Oracle, Microsoft, Samsung Electronic, SAS Institutes, TopGan, General Electric Service
Czestochowa	TRW Automotive
Katowice	Bombardier, Ontrack
Wroclaw	Capgemini, HP, Nokia-Siemens, Siemens, Remy International

⁵ PAIIZ, 2007

Zielona Gora	ADB
Gdansk	Intel, Compuware, GEInterlogix
Lodz	Alstom, Bosch-Siemens
Garwolin	Avon
Radzymin	Cederrath
Poznan	GlaxoSmithKline
Ciechanow	LG Electronic
Bydgoszcz	Lucent Technologies
Pila	Philips
Ketrzyn	Philips
Elblag	Alstom
Rzeszow	Pratt&Whitney

Source: PAiIZ, 2007 and Frost & Sullivan 2008

7. Poland's R&D Potential

Poland's R&D potential is quite significant, and should not be ignored by investors. The Lisbon Strategy has set out new levels of R&D (3% of GDP) to be reached by all member states and Poland has been actively taking the necessary steps to achieve these EU requirements. With a developed science and development system, both the state and the private sector have been providing a large amount of input into R&D.

Firstly, it can be witnessed that the Polish state is slowly giving more room for the private sector to develop Poland's R&D potential. However it is still quite involved, not only financially but also by attempting to create national conditions favourable for R&D. This is being done through different policies such as the National Development Plan (2007-2013), the Polish Framework Programme and the Foresight Program. The goals of these programmes are to increase the importance of innovation in the economy and to coordinate the different research and innovation activities in such a way as to meet future goals.

Secondly, the state is providing favourable conditions for Polish research and innovation to expand and cooperate with other actors at the European level. Poland actively cooperates in EU led programmes such as "The Seventh Framework Programme", "Marie Curie Actions", "The Competitiveness and Innovation Framework Programme", "Eureka" and "European Cooperation in the field of Scientific and Technical Research" (COST).

Thirdly, the state, with the help of the EU and its Infrastructure and Environment Operational Programme (IE OP) within the EU Structural Funds, provides several measures of support for entrepreneurs interested in further developing Poland's R&D potential such as measures 1.4, 3.1,

4.1 and 4.2 which are all designed to support entrepreneurs interested in furthering Poland's R&D potential.

Fourthly, with the largest amount of students in the Eastern European region and a growing number of doctoral graduates and employment in R&D, Poland's R&D potential is quite significant and attractive to international companies wanting to establish R&D centres in the region.

And finally, Poland's strong economy is the backbone for R&D investment in Poland. Strong GDP growth, increased exports and large inflows of FDI make Poland a very attractive destination for R&D. Around 40 foreign companies, many of them world renowned, have established their R&D centres in Poland; companies such as HP, IBM, Siemens, Philips and LG Electronics have all noticed Poland's R&D potential and have decided to take advantage of the conditions.

About Frost & Sullivan

Frost & Sullivan, a global growth consulting company, has been partnering with clients to support the development of innovative strategies for more than 40 years. The company's industry expertise integrates growth consulting, growth partnership services and corporate management training to identify and develop opportunities. Frost & Sullivan serves an extensive clientele that includes Global 1000 companies, emerging companies and the investment community by providing comprehensive industry coverage that reflects a unique global perspective and combines ongoing analysis of markets, technologies, econometrics and demographics. For more information, visit <http://www.frost.com>.

About PAIiZ

The Polish information and Foreign Investment Agency (PAIiZ) has been serving investors for 15 years. Its mission is to increase Foreign Direct Investment (FDI) by encouraging international companies to invest in Poland. It guides investors through all the necessary administrative and legal procedures along the way to setting up their business in Poland.

PAIiZ offers investors:

quick access to comprehensive information about the economic and legal environment, assistance in finding appropriate partners and investment locations and support at every phase of the investment process.

Another one of **PAIiZ**'s roles is the creation of positive image of Poland and the promotion of Polish products and services abroad by organizing conferences, visits for foreign journalists and trade missions. **PAIiZ** also promotes Poland's regions. It has established a network of *Regional Investor Assistance Centres* throughout Poland. Their goal is to improve the quality of regional services for investors and to provide access to the most up-to-date information, such as the latest investment offers and regional microeconomic data. These specialized offices are staffed by **PAIiZ** trained employees and financed from local funds.

In order to help support and encourage FDI, the Polish government has passed many new resolutions this year. 90 billion Euro of EU funds has been allocated to Poland for the years 2007-2013. There has never been a better time to invest in Poland.

Come and see for yourselves. We are here to help you!

Contact us to learn more about how your company can profit from the unique business potential of Poland.

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