

Polska



Polish Export

2016-06-16 09:13:58



Unsurprisingly the profile of Polish exports largely coincides with that of foreign direct investment (FDI). Poland is a large market in its own right and is often seen as a convenient export platform both for Europe and Eastern Europe.

82% of Polish exports currently go to highly industrialized countries (OECD), about 79% of exports are sent to the EU, when 64% of imports are from the EU. Notwithstanding the outdated stereotype of a peasant on a cart as the typical Polish producer, still popular in the Western press, technologically advanced equipment actually makes up almost 50% of Polish exports.

For the second half of the year 2013, Poland has recorded a trade surplus confirming the global competitiveness of Polish products on the global market. From the beginning of the past decade, Poland's foreign trade turnover increased almost ten-fold.

Meantime, the strength of the national currency, the zloty (PLN) has grown, creating a healthy foundation for stable economic growth. According to the data from the Central Statistical Office (GUS) during the years 2000-2012 period the value of Polish exports has grown significantly, from EUR 34.4 billion to EUR 143.5 billion. Our foreign trade deficit is steadily being reduced along with the overall increase in the volume of trade.

Key sectors for international trade

Our top export products are: electronic, mechanical and transport equipment, steel and base metals, plastics, rubber and chemical products, food products (meat, dairy products), furniture, white goods.

We have also seen exponential growth in our services sector, largely driven by FDI. These are chiefly finance centres or shared-services centres, servicing activity in other countries. Unlike the older generation, young Poles are multilingual, so this sector is blossoming, enjoying growing popularity among European SME's. The global giants are already here.

Most attractive sectors in Poland

Business Process Offshoring (BPO), the aviation, the automotive, the electronics and IT industries are considered to be the most favourable sectors for investment in Poland. We offer a favourable investment climate, an excellent location at the centre of Europe and well-educated specialists.

According to survey "Business Services Sector in Poland 2013" prepared by Association of Business Services Leaders in Poland (ABSL), Poland is an unquestioned leader in the business services sector in Central and Eastern Europe in terms of the number of centers (over 400) with foreign capital and the number of employees (110 000). The most successful destinations for business services projects in Poland are Cracow, Warsaw and Wrocław. The great majority of centers (71%) render services for Western Europe. An important strength is the

fact that in the service centres in Poland they are 34 foreign languages used for providing services¹. A large group of centers in Poland offers innovative services in data analysis. According to ABSL, the interesting challenge facing the Polish IT services centers includes projects aimed at taking over the responsibility for development of software of large foreign companies, mainly in the automotive and telecommunications services.

According to the latest projections of Oxford Economics, the Polish IT sector will be one of the fastest growing industries in Poland during the next few years. It is expected to grow at a level of 10 - 12% per year until 2015. The Polish IT market is, following Russia's, the second largest market in Central and Eastern Europe. The main factors leading to Poland's international recognition in IT are Polish IT specialists, as well as the quality of the services provided and the level of creativity, availability of a high quality IT communications infrastructure and cost effectiveness. Did you know that almost every passenger aircraft in the world has at least one part made in Poland? Poland is one of the best locations in Europe for the development and fulfillment of aerospace projects and includes aircraft production sites, maintenance facilities, local technical universities, scientific research centres and pilot training facilities. A plethora of multinational aircraft-industry corporations are present in Poland and over 90% of production is exported.

Poland has a strong base of small and medium-sized enterprises constituting a wide chain of suppliers for companies such as Boeing, Airbus and Embraer. The automotive sector also has a long tradition. Poland has largely benefited from Western European subsidies which fueled particularly the sales of small and medium sized vehicles. The key regions for locating new automotive investment projects are traditionally those areas which are home to vehicle manufacturing operations, such as Upper Silesia, as well as the Wielkopolskie and Lower Silesia voivodships.

Aerospace

Poland has a 100-year history of aviation and a tradition of aviation industry dating back to more than 80 years. Strong scientific, academic and engineering centres were of key importance to the development of this sector. After the period of transformation in Poland, increased international business cooperation and direct foreign investments contributed to its further development. Currently, Polish aviation industry has a rich export offer of advanced aviation products. Almost every passenger aircraft in the world is equipped with at least one part manufactured in Poland.

There are over 120 aviation and aviation-related companies with annual sales of EUR 800 million, and over 23 thousand employees in total operating in Poland.

The majority of these are small and medium-sized enterprises (SMEs), companies with foreign capital, and a small group of enterprises with minority state shareholding. Around 80% of aviation plants are located in south-eastern Poland in one of three aviation clusters.

Operating plants are specialized in the production of aircraft (agricultural, training, executive), helicopters,

gliders, subassemblies (aluminium, composite, GRFP) and accessories. 90% of aviation production is exported to: USA, Venezuela, Indonesia, Italy, Greece, Canada, Spain, Germany, South Korea and Vietnam.

The competitive edge of Polish aviation companies lies in the high quality of products (expertise in treatment of materials, casting, mechanical engineering, electronics) and competitive labour costs. Polish network of production and service companies supported by R&D centres creates potential for cooperation and orders for aviation spare parts and final products.

Aviation is one of the most innovative sectors in the Polish economy due to companies' large expenditure on R&D, cooperation with research centres, participation in international projects, human potential and developing clusters.

The advanced level of processes used in the Polish aviation sector is best illustrated by the participation of Avio Polska and GE EDC Poland in the development of the innovative jet engine GENx, which will be used in the state-of-the-art Boeing 747-8 and 787 Dreamliner: (Avio Polska - designer and sole producer of the GENx2 turbine blade; GE EDC Poland - engineering works).

Polish participation in such projects should increase owing to the subsidy of the National Centre for Research and Development, which in the years 2013-17 will invest EUR 75 million in research, development works and knowledge transfer to the aviation industry.

The development of the aviation sector would not have been possible without qualified workers - over 11 thousand engineers (650 graduates in aviation studies) graduate from Polish technical universities every year. Highly developed university and vocational education system and long-standing tradition contribute to the quality of the aviation personnel. Moreover, initiatives such as AREOnet (www.areonet.pl) led to closer cooperation between industry, self-governments, and school and university authorities aimed at even more effective training of personnel, for example, through preparation of training programs, and adaptation of school profiles to the market needs.

According to FT FDI Intelligence investments in the aviation sector constitute 1 % of global investments. Poland is in the forefront of the best investment destinations for aviation which is proven by 8 projects successfully implemented with PAIIZ assistance in years 2007- 2012.

It is worth to mention that Poland has also a long aerospace tradition and contributes to many international scientific and technological projects. In November 2012 Poland became a fully-fledged, 20th member of the European Space Agency with an annual budget of EUR 4 bln. This membership will allow Polish companies and researchers to fully participate in many European space programs and missions.

Automotive

Polish Automotive sector ranks second in terms of manufacturing output is a solid backbone of country's economy. Thanks to flexibility and creativity of Polish workers, healthy cost structures and strong demand for vehicles and parts manufactured in Poland the industry has emerged from the turbulent times almost intact. Three major passenger car OEMs, several bus producers and hundreds of Tier 1 and 2 manufacturers make a solid industrial base. Worth to know that every sixth Zloty in Polish export is generated by the automotive sector. Out of 40 car and engine plants located in Central Eastern Europe (CEE) 16 are based in Poland.

The numbers depicted above are not a result of coincidence or good luck. Besides an excellent cost-to-quality ratio Poland offers the biggest pool of talented people easy to reach. 1,9 million students spread across several major university hubs, young professionals accustomed to the highest quality and efficiency standards create a strong asset for new investments. Short proximity to major European motor vehicle markets, attractive incentives system, stable and predictable economy make Poland a place worth considering as an investment location.

According to the AutomotiveSuppliers.pl data in 2012 635,8 thousand vehicles were produced in Poland, 23% less than in 2011. Fiat Tychy plant manufactured 348.5 thousand units (down by 25.5% y/y, which is 55% of 2011 total passenger and light commercial vehicles production in Poland). The company is followed by Poznań based Volkswagen produced 162 thousand cars (25% market share, production down by 8,5%) and GM-Opel located in Gliwice manufactured 125 thousand units (production down by 28%). Total production of commercial vehicles in the year 2012 closed with a result of about 86 thousand units (decreased by 17% compared to 2011).

There are many operating bus manufacturers in Poland: MAN Bus, Solaris Bus & Coach, Poland Volvo, Scania Production Slupsk, CMS Auto Autosan, Jelcz Solbus and AMZ Kutno. Those companies produce city, intercity and tourism buses. Poland remains one of the leading manufacturers of buses in the European Union. According to data compiled by the Ministry of Economy, in Poland in 2012 more than 3.8 thousand buses were produced, which is about 900 units less than in 2011. The decrease in production by 20% is a result of lower export, as well as by the weaker demand on the domestic market. In 2012, the export amounted to 3.2 thousand buses (almost 600 units, 16% less than in 2011). In 2012 in Poland 1,3 thousand buses were registered, which is about 300 less than in last year (down by 18%).

Polish bus manufacturers offers a variety types of engines, including traditional diesel ones, hybrids, CNG and electric engines (e.g. Solaris).

According to AutomotiveSuppliers.pl six major motor vehicle suppliers in Poland employed in 2012 approx. 30,7 thousand workers and 2,2 thousand of temporary workers. American Lear company, top ranked in this category (7,3 thousand employees including nearly 1000 temporary staff) is currently operating six production plants (3 in Tychy, Mielec, Jaroslaw and Legnica) TRW Corporation, another American company (leading in 2011), employs 5971 workers and 364 temporary workers and operates in six factories in Poland: two in Częstochowa, one in Legnica, Tychy, Mielec and Jarosław. TRW also operates R&D centre in Częstochowa. French Faurecia employees in Poland approx. 6333 people including 788 temporary workers. Valeo, Delphi and Hutchinson employ

respectively 4,9; 4,4 and 3,6 thousand workers.

The product portfolio of Polish Tier 1 and 2 suppliers is very wide. It covers among others: powertrain units (two Toyota plants, Volkswagen Motor Polska, Fiat Powertrain and Isuzu Motors), steering systems (Nexteer Automotive, TRW, Delphi, Mando Corporation), lightning systems (Valeo, Automotive Lightning), cooling systems (Delphi, Valeo, Hutchinson), car body and underbody structures (Gedia, Kirchoff), tyres (Michelin, Bridgestone, Goodyear), car glasses (Pilkington, Saint-Gobain Sekurit, PGW), interior parts (Boshoku, Faurecia), seating systems (Faurecia, Sitech, Johnson Controls, Lear Corporation), safety systems (TRW, Autoliv).

Approximately 500 companies in Poland have ISO/TS 16949 certificate confirming quality management system required by automotive OEMs. Several R&D development centres operating in Poland is a testimonial of high technical potential of Polish staff. The largest R&D center in Poland was created in Cracow by Delphi company. Other R&D establishments includes: Tenneco, TRW, Valeo, Faurecia, Wabco, Eaton, Draexlmaier or Mbtech operations.

According to the PZPM data in 2011 Automotive parts market accounted to 14.5% of Poland's total export and the value of the Automotive export reached the level of EUR 19.6 billion. Passenger cars production represented 31.6% of total Polish automotive export - sales on foreign markets reached EUR 6.8 billion in 2011. Commercial vehicles, trucks and tractors (9.7%, EUR 1.9 billion) as well as minibuses and buses (4.2%, EUR 829.2 million) also play an important role of the Polish Automotive export.

Next to passenger cars, parts and accessories are the second most important area of Polish Automotive export. In 2011 foreign sales of those products amounted to EUR 6.4 billion, which constituted 32.6% of total Automotive export. High value of export was related to the sales of bodies and their parts (EUR 1.1 billion), steering systems (EUR 693.2 million), brakes (EUR 640.5 million), gear boxes (EUR 558.1 million) and safety airbags (EUR 474.8 million). Poland is the second most important exporter of Automotive parts and accessories in the CEE region. Very important part of the Polish Automotive export is played by engines, whose sales reached EUR 2.8 billion in 2011.

Export of other Automotive goods - special purpose vehicles, chassis fitted with engines, bodies, trailers, semitrailers and others, reached EUR 845.4 million in 2011.

The majority of the Polish Automotive export in 2011 was directed to European Union market (84.0%, EUR 16.4 billion).

Top Polish Automotive importers were: Germany (EUR 5.6 billion, 28.6% of Poland's total Automotive export), followed by Italy (EUR 2.5 billion, 12.9%), United Kingdom (EUR 1.7 billion, 8.7%), France (EUR 1.3 billion, 6.6%) and Spain (EUR 1.1 billion, 5.4%).

Biotechnology

Despite being one of the fastest growing sectors in Poland, biotechnology is still an emerging sector. In the coming years further dynamic growth of the domestic biotechnological market is expected, largely thanks to innovative research projects carried out by the Polish biotech companies and academic institutions, as well as by the inflow of foreign investment into biotech sector. Key reasons why Poland attracts investors is availability of highly qualified professionals and competitive labour costs.

The continuous development of biosubstances and biofuels production technologies is definitely worth mentioning. Hormones, antibodies and diagnostic tests, all generated with the use of modern genetic engineering techniques, are becoming a specialty of Polish biotechnology industry. Biopharmacological products have also gained recognition, and this branch is currently the most rapidly expanding one within the biotechnology sector.

Manufacturing processes of human proteins and peptides based on E. coli and cell cultures are constantly improving. Undoubtedly, there is still a considerable scope for exploitation of the untapped potential in the section of vaccines, protein drugs and reagents.

Sector in numbers:

- The most important reason why Poland is one of the most attractive locations for international biotechnology projects is a broad access to highly qualified researchers. Due to rapid growth of student base in Poland, we are dealing with a significant surplus of alumni, especially in the field of biotechnology. Despite that, university admission is highly competitive and over the last 5 years there were approx. 4 candidates per place. Biotechnology major is offered by 39 universities (including 30 at PhD level), which educate more than 13 thou. students, which generates about 4 thou. graduates per year (data of the Central Statistical Office for the academic year 2011/2012)
- Research facilities constitute a network of more than 110 scientific institutions employing more than 2,800 scientists, who mostly work in biotechnology and molecular biology.
- Biotech companies and research institutes generally locate their activities in one of 6 mature biotech clusters (Warsaw, Lodz, Tri-City, Krakow, Wroclaw, Poznan).
- A fact worth mentioning is that business spending on R&D in Poland has increased over the last year by 800% (from EUR 61 mn to EUR 500 mn). Also, the budget R&D expenditure noted a significant increase - Ministry of Science and Higher Education funding, including grants provided by the National Science Centre and the National Centre for Research and Development, amounted to EUR 302 mn.

According to FDI Intelligence, Poland ranked 5th (in a tie with Russia) in the world ranking of foreign biotechnological investments in 2010, having attracted 14 such undertakings. It was a huge success since a year before, in 2009, Poland managed to attract only one investment from this sector. Countries with higher positions in the rank are: USA (38 investments), China (27), Great Britain (22) and India (16).

The country also performed well in another ranking conducted by the same organisation (11th position), prepared on the basis of location and access to research centres as well as opportunities for the development of biotechnology. Additionally, Warsaw was ranked 16th in the world and recognised as highly attractive for R&D centres' investments, partly due to its competitive quality and costs ratio.

Forms of public aid available for biotechnological projects

Polish government gives priority to the biotechnology sector, therefore investors can benefit from numerous incentives, such as:

1. **Governmental grants:** Investors carrying out new investments in biotech sector in Poland can count on receiving support under the "Programme of support of investments of considerable importance for Polish economy for years 2011-2020".

Biotech R&D investment projects which create a minimum 35 new jobs for employees with higher education and envisage a minimum of PLN 3 million in expenditures may apply for job creation grant. The amount of support varies from PLN 3 200 to PLN 15 600 per each workplace created.

In case of biotech production projects both job creation grant and new investment grant are available:

- **Job creation grant criteria:** create minimum 250 new workplaces and incur minimum PLN 40 million in expenditures. The maximum amount of support varies from PLN 3 200 to PLN 15 600 per each workplace created.
- **New investment grant criteria:** create minimum 50 new workplaces and incur minimum PLN 160 million in expenditures. The amount of support varies from 2 to 10,5% of eligible costs.

BSS Sector - Business Support Services

The region of Central and Eastern Europe (CEE) has an enormous potential in the business services sector (BSS). There are already 1000 international services centres operating in the region and the employment in the sector may be estimated at around 270 - 300 thousand of employees. Poland, where the BSS has been developing dynamically since 2005 and the yearly growth of the employment stays at the level of 20% seems to be the leader in CEE. Our country main advantages, in attracting the above mentioned projects, consists in its favourable investment climate, highly qualified human resources and the development of the modern office space market.

It is worth mentioning, that apart from already mentioned assets, Poland offers diversity of locations, what means, that, depending on the project's specific, a company has at least few places/cities to choose from. Some of the Polish cities have already such a strong position, that they are recognizable all around the world. Kraków, for example, as the only location from CEE, has been included into top ten of „Tholons Top Outsourcing Destinations 2014” and scored 9 leaving Dublin behind.

For the last few years the biggest metropolitan areas have been developing very dynamically with regard to the services investment inflow. At the moment, the modern service sector employs nearly 130 000 of highly qualified employees specialized in accounting & financial services, HR support, consulting, as well as, IT field.

It is important, that not only the number of employees in the sector has increased but the structure of services rendered from Poland has significantly changed as well. With the expansion of the sector and development of processes already serviced from Poland, moreover, because of the success stories and positive experiences of the branch, the new type of the services is developing in our country. In newly created Knowledge Process Centres and Centres of Excellence, financial and marketing analyses, software development, risk management and other know - how based services are performed. Because of the wider scope of operations and geographies offered in "Polish" centres, our country competes not only with the CEE countries but also with the Asian and South - American ones. Mainly due to the quality of the talent pool, cultural similarity to Europe and USA , knowledge of the languages and time zones similarity, our country became a trustworthy BSS centres localisation.

Total value of the outsourcing sector in Poland in 2011 exceeded 13 bln. PLN. On the basis of the ABSL survey announced in 2013, it may be said that there are 470 service centres with foreign capital employing almost 130 000 people. In the above mentioned Report, Krakow was classified on 1st place with the biggest number of employees in the sector, where more than 30 000 people found job in the modern services.

Warsaw and Wroclaw took respectively 2nd and 3rd place both with more than 20 000 employees in the sector. Slightly more than 10 000 people are employed in Lodz and Tri - City. In Katowice Agglomeration the number of people working in the reached 10 000, while in Poznan - 7 500. Besides from abovementioned locations, there are other cities, where international companies choose to start their operations, i.e.: Szczecin, Lublin, Bydgoszcz (each of them with 5 000 employees), Toruń, Opole, Kielce, Białystok.

An important differentiator of the centres operating in Poland is the number of foreign languages, in which services are rendered. The biggest number of languages that may be found in one centre is 32.

Domestic appliances

Domestic appliance manufacturing has a long-standing tradition in Poland. Well-known factories, established after WW II, include: Zakłady Sprzętu Grzejnego (Heating Equipment Plant) Wromet in Wronki (now Amica Wronki S.A.) and Zakłady Metalurgiczne (Metallurgical Plant) in Wroclaw. Wrozamet (today FagorMastercook S.A.), Zakłady Metalowe (Metal Plant) Zakrzów (which later became Polar, today it is Whirlpool Polska S.A.) and Zelmer have been also dynamically developing since the 1960s.

Since the beginning of transformation period, the sector has attracted many investors, who, on the basis of existing infrastructure, knowledge and workers' qualifications, have built an extremely modern and competitive in the global scale, industry sector.

Statistics confirm the industry's dynamic development. According to GUS (Central Statistical Office) there were

18.5 million pieces of different kinds of domestic appliances manufactured in Poland in 2012. The spectacular increase applied particularly to washing machine production. There were 4.9 million pieces manufactured, which is as much as 23% more than the year before. Such good results in the industry have a reflection in the experts' opinion. Euromonitor, a research company, estimates that Poland has become one of the European leaders of domestic appliance manufacturing.

CECED Poland (Member of European Committee of Manufacturers of Domestic Equipment)'s data shows that the export value of home appliances in 2012, compared to the previous year, rose by 10% and amounted to PLN 14 bn. It is also important that in the same period import worth grew only by 4%, which indicates high competitiveness of goods manufactured in Poland on global markets.

CECED estimates that there are 20 thousand people employed in Polish domestic appliances sector.

Poland is an excellent location for domestic appliances manufacturing plants, what the past investments of most of global players from the industry confirm. What is important is that those companies are still expanding their activity in Poland, by opening production facilities and introducing new products to their portfolio. Most of the production is intended for export. As for some of the categories of products such as washing machines or dishwashers as much as 80% reach foreign markets.

The following global players representing domestic appliances sector have located their plants in Poland:

- BSH Bosch und Siemens Hausgeraete GmbH
- Electrolux
- Fagor Electrodomesticos Group
- Indesit Company
- LG
- Samsung Electronics
- Whirlpool

There are also domestic enterprises representing household appliances sector in Poland, which succeeded in foreign markets. Amica, now the largest Polish manufacturer of domestic appliances, sells approximately 50% of its production on 40 foreign markets. Zelmer, leading producer of vacuum cleaners, which has a very strong position in the Eastern Europe countries, in March 2013 has become a part of BSH concern.

Electronics

The development of the electronics sector in Poland dates back to the 1930s. Among the articles manufactured

during this period was lighting equipment by Phillips Poland SA in Warsaw and electron tubes, transmission and microwave, by Electronic Plant Lamina in Piaseczno. In the post-war years, electronics became one of the fastest growing sectors of the economy worldwide, being the carrier of technological and civilization progress. It is a sector that determines the capacity of the national economy to meet the demands of international and global competition, and contributes to the expansion of other high-potential sectors of the economy.

According to Business Monitor International (BMI) experts' predictions, the value of the Polish electronics market will gradually increase, reaching approximately USD 7.6 billion in 2013. The increase will be driven mainly by the growing demand for digital products and increasing public revenues.

BMI also predicts that by 2014, the retail sales of electronic equipment will increase by 28% (to PLN 495 billion) compared to 2010, and the electronics market will be one of the fastest growing segments in Poland. More than 40% of the Polish population is 18-44 years old, and it is precisely young people that are more likely to reach for novelties from the world of electronics.

There are over 310 companies employing at least 10 people operating in the electronics sector in Poland. They employ over 53 thousand workers. Approximately 95% of production is generated by medium and large companies.

The most important foreign investors in the electronics sector in Poland are: Dell (Łódź, Łódzkie Voivodship, production of desktops), LG Display Poland (Kobierzyce, Lower Silesian Voivodship, liquid crystal displays), Jabil (Kwidzyn, Pomeranian Voivodship, electronic components), Sharp (Łysomice, Kujawsko-Pomorskie Voivodship, production of LCD modules), Funai (Nowa Sól, Lubuskie Voivodship, TV sets), LG Electronics (Mazowieckie Voivodship, TV sets and other consumer equipment), telecom equipment manufacturers: Alcatel-Lucent, as well as Kimball Electronics Poland (Tarnowo Podgórne, Wielkopolskie Voivodship, electronic components for telecommunications and the automotive industry), Flextronics International Poland (Tczew, Pomeranian Voivodship, telecommunications components and products).

IT

The Polish IT market is the second largest market in the East-Central Europe, after Russia. In 2010 the initial estimates assessed its amount at PLN 25 billion representing a 3% increase in comparison to 2009, which was less optimistic for the industry. According to the 2011 forecast, the market value is projected to increase to ca. PLN 28 billion to re-establish the two-digit dynamics.

Why is it worth to invest in this sector in Poland? On the one hand, it is worth due to the rapidly developing market and the increase of domestic demand. On the other hand, however, the presence of such global companies as Microsoft, HP, Google, Oracle, IBM or SAP confirm the increase of Poland's significance not only as a place of selling products and services.

The reason for Poland's success as the more and more valuable destination for IT services centre is most of all the availability of employees. Our unique and the most valuable resource - people - is still available, and Polish experts provide services for foreign clients more and more often.

Since 2009, when mathematics was re-established as a compulsory subject at high school final exams, the growing interest in technical majors has been observed among students. The increased activity of the Ministry of Science and Higher Education also contributes to the development of human resources - thanks to the grants for the so-called ordered specialities, the universities were additionally motivated to make technical majors' teaching programmes more attractive, and to increase the number of students.

Another, equally important factor determining Poland's international recognition is the quality of provided services and the level of creativity that repeatedly exceeds employers' expectations. Year by year the young Polish computer scientists take the highest positions in international competitions for computer programmers, such as ImagineCup, Code Jam and Central European Programming Contest (CEPC).

The availability of the high-quality communication infrastructure, both in terms of air connections and broadband infrastructure - comparable with that of Western Europe - underlines the benefits of investing in Poland.

Last but not least - attractiveness of Poland is strengthened by labour costs. It is not low wages that account for long-term competitive advantages any more. Still, labour costs being 3 to 4 times less of that in Western Europe combined with the high quality of service and increasing labour productivity complete the image of Poland as THE destination.

The most popular IT services centres are at the same time the biggest Polish academic centres - providing direct access to the most important assets, i.e. employees.

The increase of IT market value until 2014 should be two-digit. Rapid development of IT industry in Poland is a result of lower level of market saturation with personal computers and IT services than in the Western Europe.

Another factors contributing to it are increasing purchasing power, and relatively low level of IT-based solutions usage in companies. Also the significance of commissioning services to specialised entities is considerable for the increase of expenditures for both software and IT services, particularly with regard to outsourcing.

Specific factors stimulating the market in the nearest future cover: privatisation of companies and, thereby, unblocking decisions concerning the implementation of IT solutions in order to increase competitiveness, activation of central administration and self-governments in terms of public sector tenders. Another stimulating factor is the growing significance of the role of the sector of small and medium-sized enterprises in generating

the demand for IT services and solutions that, in order to increase their competitiveness, are forced to boost the efficiency of their activities through the application of tools management support software and enterprise resource planning. The above-mentioned factors, in the face of experts' shortage in the Western European economies, will determine Poland's investment attractiveness in this sector in the forthcoming years.

The level of employment in the IT sector in Poland in 2010 amounted to ca.100 thousand employees (without consideration of distribution network). Due to the rapid increase of outsourcing services provided for non-IT companies, further dynamic increase in employment should be expected.

As a result of the global crisis, in 2009 the hardware segment, understood as computers, monitors and peripheral devices, suffered the most since its value decreased by 19%.At the same time, this segment is expected to recover in the next two years. Its growth in 2010 is estimated at 5%.The segment's share amounted to ca. 42% with slight downturn in the last years. The second largest segment was the IT services segment with the share amounting to 35%, and the third largest was the software market with ca.22% of market share.Growth in the services and software market in the forthcoming years will be steady.Following the period of recovery in 2011-2012, growth in the IT hardware market will be slower than in the case of the two other segments.

The inflow of foreign investments and relocation of production to Poland are also the important factors generating demand for software for both process and discrete production industry. After the crisis, many companies by mid-2010, in spite of earmarked funds, withheld decisions concerning the expenditure on IT culture.This trend was reversed in the second half of the year.Another factor was the slight increase of expenditure for hardware generated by households with the growing purchasing power and caused by the further decrease in the prices of computers and peripheral devices (printers, scanners, etc.).Another market development factor covers the inflow of EU funds to the companies that will generate demand for IT solutions through the expenditure for the improvement of infrastructure and trainings for employees.The Operational Programme Innovative Economy funds are particularly significant in this field.

Industries that, due to their expenditure, have contributed to such a high level of IT market growth in Poland for several years include:

- telecommunications
- financial sector
- industrial production sector
- local and central level administration

The important trend in the IT market is the rapidly growing interest in software and IT services in the sector of small and medium-sized enterprises.On the one hand, the growing competition makes this segment of clients apply innovations and IT support of their activity. On the other hand, lowering prices of business applications determines greater accessibility for clients who up to now could not afford to buy expensive ERP solutions (enterprise resource planning).

The following feature of the Polish IT market is directly connected to the above-mentioned trend. At present, 90% of ca. 11,000 IT companies (2009) hire ca. 9 employees on average. Medium-sized enterprises (50 to 249 employees) constitute almost 10% of all companies, while there are ca. 80 companies with the number of employees exceeding 250. However, the decreasing margin and growing competition from foreign companies have an influence on the consolidation trend among companies.

At the same time, companies of Polish origin locate their investments in the foreign markets: Asseco, Comarch and Ericpol are companies with well-established position in the entire region of Central and Eastern Europe.

Renewable energy

The development of the renewable energy sector is one of the priorities for the Polish government - according to Directive 2009/28/EC all EU Member States should gradually increase the share of energy from renewable sources in total energy consumption and the transportation sector.

The specific objectives of the Polish energy policy are as follows: to increase the proportion of energy from renewable sources in final energy consumption up to 15.5% in 2020 (19.3% for electricity, 17% for heating and cooling, 10.2% for transportation fuels). Achieving these objectives requires investments in new generation capacities. Wind energy and the use of biomass for energy purposes are currently the most dynamically developing renewables.

The most active foreign investors are Vortex, EDP, RWE, E.ON, CEZ, GDF Suez, Mitsui & J.Power, Acciona (wind farms), Dalkia (biomass combustion), Poldanor, AXZON Group (biogas plants). The Polish players are also investing in renewables e.g. Enea, Energa, Tauron, PGE.

Poland is also gradually becoming an attractive destination for investments in manufacturing of devices used in energy generation. There are estimated to be more than 200 production companies working for the renewable energy sector (Institute for Renewable Energy data).

According to the Polish Economic Chamber of Renewable Energy, the share of energy from renewable sources in 2010 amounted to 8% (total gross final energy consumption amounted to approx. 756 TWh). Broken down by sectors, the targets are as follows: for electricity - 7% share of green energy, for heating and cooling - 12% share, for transportation - 5.5% share (mainly first-generation biofuels including bioethanol and biodiesel).

It is worth mentioning that according to EurObserv'ER Poland is ranked 5th in the EU in terms of production of primary energy from solid biomass. Poland is also a leader among the new EU member states in terms of total installed capacity of wind farms.

Research & Development

Investments in R&D sector are the key factor of steady innovation-driven economy and growth of added value of products, processes and services. They contribute to the lasting economic development and creating new valuable workplaces.

The inflow of foreign capital with the aim of creating research and development centers proves that foreign investors appreciate economic potential of Poland. According to the latest analysis of UNCTAD, the foreign direct investments' inflow to Poland increased in 2011 by 46,7%, while the growth of FDI worldwide accounted for 17% (14,2 billion USD in 2011 and 9,7 billion USD in 2010).

Peer comparison of Poland and the other EU countries shows great opportunities for an extension of R&D sector. The average expenditures on R&D in EU countries accounted for 2% of the GDP in 2012, while in Poland the figure was 0,9%.

Positive experiences and great results of R&D centers are the reasons why companies decide to expand their research activities. Among those entrepreneurs are e.g. NSN, Motorola, Samsung, Kainos, or Polish entities such as Transition Technologies or SMT Software. The two last companies chose Białystok and Lublin as the locations for software developing centers, what proves that also smaller academic centers are able to provide excellent labour force for such projects. Recently, an increasing interest in opening new R&D centers could be observed, both in industry sector (e.g. Delphi in Krakow or Rockwell Automation in Katowice) and also in strongly developing business services sector, wherein according to PAliIZ data, more than 33,000 people are employed in approximately 182 existing R&D centers, so far.

Among all EU countries, Poland records one of the most significant increases in the number of young employees in R&D sector (in group between 25 and 34 years old). The number of Polish employees in this sector exceeds the EU average.

There are currently 450 colleges in Poland, 132 of them are state institutions (25 of them are technical universities) and 328 private institutions. The number of students in Poland equals 1,764 million.

Students can choose one of 200 faculties, most of them prefer economic and management faculties - 23%, social sciences - 13.9%, education - 12%, humanistic faculties - 8.8%, engineering and technical studies - 6.8%, medical faculties - 5.8%, IT - 4.9%, personal services - 3.7%, law - 3.1%, environmental protection - 1.4%, other faculties - 16.4%. Recently, an upward trend in interest in technical faculties, among high school and college students can be observed.

Overall there are more than 170 thousand college employees, 84 thousand of them in state institutions, 16

thousand in private colleges. There are also 200 R&D centers in Poland (with 98 thousand scientists) and to them belong Polish Academy of Science, specialized and autonomous Research and Development Units and other supporting institutions.

According to Central Statistical Office, in 2012 there were 2 733 R&D units, 1 101 of them were companies (23,1% increase comparing to previous year). Similar growth has been registered in R&D expenditures in the amount of 14,4 billion PLN. In R&D sector, there was 139.7 thousand people employed in the end of 2012 (slight increase compared with 2011), more than 432.4 thousand of them in enterprise sector, 26.9 thousand in public sector and 80.1 thousand in science sector.

Number of people employed in R&D sector in Poland in 2011 compared to the previous year increased by 4 759 people (3,7%), reaching a level of 134 551 people. Research and development activities in 2011 were funded primarily by the government (6,5 billion PLN) which financed 55,8% of expenditures of all entities. Public expenditure on R&D equals 71% of the EU27 average.

Sector of Polish companies investing in research and development in 2011 included 795 firms. In comparison with the previous period, the number of companies increased by 18,48% (671 firms in 2010). In the four-year period of 2008-2011 studied sector grew on average by 10,36%.

The most innovative production companies in Poland are the pharmaceutical companies producing coke, refining oil and producing chemicals and chemical products. In the services sector, the most innovative are insurance and reinsurance companies, financial services firms, and companies operating in the field of information services. Innovative enterprises accounted for 16,1% of industrial companies and 11,6% of service companies.

The companies that invest the most in research and development in Poland are: Fiat Auto Poland, Polish Defence Holding (former Bumar), IT companies Asseco Poland and Oracle and pharmaceutical manufacturer Polpharma.

Number of listed companies incurring expenditure on research and development in 2011 amounted 139 companies. Their number grew on average by 16,9% and was higher than the growth of companies outside Warsaw Stock Exchange.

Most patents granted in the category of chemistry and metallurgy, various industrial processes and transport, and basic human necessities. In 2009 the percentage of high-tech applications to the European Patent Office equaled 14,5% in Poland, compared to 17,1% in the EU.

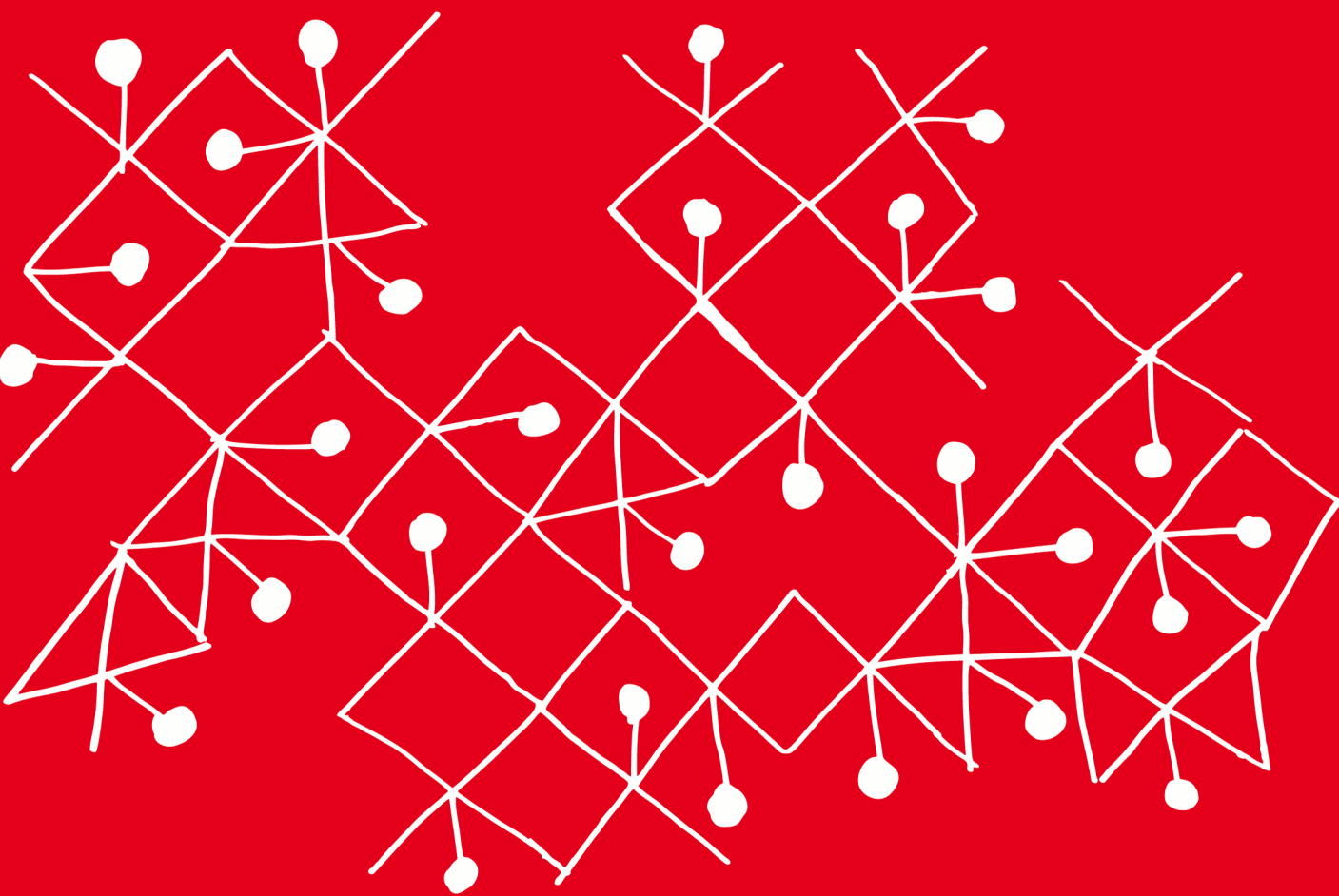
The number of patents that were granted in the Polish Patent Office in 2012 was 556, a year to year increase of 29,3%, and compared to 2010 - increase of more than twofold. The leader of the list of patenting companies in 2012 was a company of Bumar Group (now renamed as Polish Defence Holding) - Bumar Electronics. The

company had a total of 12 patents in the Polish Patent Office. The second place with 11 patents was taken by Lerg, leading manufacturer and exporter of synthetic resins. The third company in the ranking with 9 patents was taken by International Tobacco Machinery Poland, a company engaged in the design, manufacture, installation and servicing of machines and complex production lines mainly for the tobacco industry. In the long term, covering the period of 2007-2011, the most active patenting company was ABB. The other leaders were the Sigma, Pulawy, KGHM Cuprum and Polin.

Foreign Direct Investment

Poland is an increasingly attractive destination for FDI. We offer an excellent entry point for global companies looking to access the single EU market. There are many greenfield and brownfield investments. In 2012, total FDI positions in Poland totalled at EUR 178.3 billion. More than 87.6% of the total cumulative FDI in Poland are from the EU countries, particularly: Germany, Netherlands, France, Luxemburg, Italy, Spain. Poland is the largest magnet for FDI in Central Europe. Our large and rapidly developing domestic market is an attractive feature however the country is increasingly being targeted as a trade hub for the region. Large companies think very carefully where to place strategic investment. IBM, Volkswagen, LG, Procter&Gamble, France Telecom, Siemens, GM and Samsung Electronics have all expanded their activity in Poland recently. According to the latest developments 2013 is the year of outstanding investment of EUR 40 million and 9000 job places made by the Amazon.

More: PAIiZ (<http://www.paiz.gov.pl>)



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Projekt jest współfinansowany przez Unię Europejską ze środków Europejskiego Funduszu Rozwoju Regionalnego