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**THE STRATEGIC BUSINESS ENVIRONMENT
OF SYSTEMIC PRODUCTS IN POLAND.
DEVELOPMENTAL CONDITIONS AGAINST
THE BACKGROUND OF THE CENTRAL/EASTERN
EUROPEAN COUNTRIES**

Introduction

After describing the essence and attributes of the new generation of products known as systemic (network) products, the conditions necessary for creating a business environment in Poland for these products are presented under the realities of the existing development gaps in relation to more highly developed Central/Eastern European countries such as the Czech Republic, Hungary, Estonia, and Austria.

The desired macroeconomic, political and economic conditions are as follows: maintaining the current policy of economic growth with an increased share in the investment rate in the Gross Domestic Product despite the threat of exceeding the inflationary target, stimulating the export of systemic products despite a rising Polish zloty, developing the export of systemic products such as foreign tourism, and a proactive policy of stimulating the development of enterprises. A fundamental and rapid change in the State's policy towards education, science, and the health care sector is also necessary. These actions should be supported by proactive marketing strategies of those companies and non-profit organisations creating and delivering the systemic products (services) to target consumers within the networks in which these entities function.

1. The essence and attributes of systemic products

The rising share of systemic products is an important feature of the modern market economy in the globalisation phase (Szymura-Tyc, 2005, p. 140). Systemic products are those which satisfy a specific set of buyers' needs and expectations rather than one related need or option (an expectation). They are to – simultaneously – solve several (many) buyer's/consumer's problems rather than only one of them. Traditionally, products (including services) mainly involved one of the buyer's/consumer's needs or one of the ways of satisfying the need in question.

Needs in a general sense (needs) are different from needs in a detailed sense (wants), i.e. from expectations, desires, wishes (Antonides and Van Raj, 2003, pp. 184-186), and from the whims and fancies. Needs in a general sense, i.e. the state of lacking something necessary for survival or prosperity, are quite accurately specified, or even hierarchised according to the order of satisfying them (see A.H. Maslow's model of the needs hierarchy). The detailed needs, i.e. specific forms of consumption (related to specific material goods or services selected for satisfying the need in a general sense) are much more specific and unlimited. In practice, they are mostly created by the marketing activities of companies (manufacturers), according to the P. Ducker's well-known thesis concerning the "reaction of the client and the value for the client".

Systemic products are those which mostly satisfy all the needs assigned to more than one level of need in a general sense. The consumers/buyers report them as sets (bundles) of needs, occurring simultaneously in a period of their life, e.g. “a set of housing needs”, “a set of needs related to relaxation outside the place of living”, “a set of needs related to one’s work,” etc. According to the classical approach of consumption economics, the sets of needs specified this way were satisfied by the “strategic goods (services)”, e.g. housing and educational or tourist services. The consumption of these goods, to be satisfying or possible at all, also required separate processes for the buying and consuming of complementary products/services. In the case of systemic products, more often than not, there is no such need because the products offer those complementary values, too.

Thus, the feature that distinguishes the systemic product is the fact that it contains, inclusive, in the physical and spatial sense, of not one, but several or more products – not one product core or basic function for the target consumer (according to the language of traditional marketing), but several or more basic values for the consumer (according to the language of modern marketing). This is the multi-product, multi-value, and multi-benefit, where the product is bought by the customer and, increasingly commonly, the product is designed and individualised with the involvement of the client*. Examples of such systemic products (multi-products) include mobile phones with functions like a radio, camera, microcomputer, web browser; intelligent houses; cars equipped like a modern office to enable managers-workaholics to run their companies while on vacation; big events (cultural or sporting events, e.g. the Olympic Games); comprehensive medical, tourist, banking services, etc.

Most systemic products use advanced technologies, especially computer and telecommunication ones. Such technologies enabled creation of multi-products. However, many systemic products, especially comprehensive services (service packages), i.e. regional branded tourist products, do not have to be technologically advanced in the scope of all the services-components that form them, which complies with the marketing thesis stating that target consumers expect perceived quality and not technological quality, including the key role of man in providing these services, especially professional ones, etc.

Another essential feature of the systemic products, or at least of many such products, is the fact that they are at the same time network products. They are usually created in networks of cooperating companies, suppliers, assembly plants, manufacturers and trade companies, ‘conducted’ by a coordinator company playing the role of a net-

* According to G. Morgan this is the result of the designers’ use of the Einstein’s world metaphor, i.e. reconsidering the role of time, space and substance in the process of designing, i.e. the possibility of compressing these factors, which resulted in, e.g. 24h customer service systems (in trading, banking, or media), “multi-dimensional” products that are smaller, smarter, and mobile, etc. (Morgan, 2001, p. 288).

work captain/conductor and a promoter of the systemic product. The network feature of modern systemic products is also a result of the fact that they are commonly designed by groups/networks of the most committed potential buyers/consumers (sometimes consumers are paid by the companies to do this).

Finally, the attribute of systemic products is that they are usually global products, yet in relation to comprehensive service products, such as sensations, events, or places, one should stress their glocality, i.e. emphasising the local specifics (regional, national, or continental) of the systemic product, skilfully composed with the dimension of universality*.

In this study we focus on the strategic environment of the systemic products business in Poland, and, more specifically, on the conditions of the environment's development against the background of the countries in Central and Eastern Europe, and the producers and consumers/buyers of the products operating within this environment (surroundings). We will fix our attention on the selected strategic attributes (features) of the environment, which in our opinion is crucial for the development of the systemic products class. The selection of the products was limited by the availability of statistical materials in the scope of international comparisons rather than by the knowledge resulting from one strategic analysis canon.

The development of the environment for systemic products is strictly related to a given country's economic and social growth on many levels; they influence each other. It is a well-known fact that the assumed development (growth) model and strategy depends on the composition of the growth factors being triggered specifically for a given economy: natural resources, work, capital, information/knowledge, and management; the last element is today considered as the most powerful on the micro-economic level as well as in macroeconomic (governing, the effectiveness of state's and its institutions' functioning) and mezzo economic (regional and local policies, sector policies) scales. The development in question also depends, in terms of realisation, on the long-term mobilisation and maintenance of the proportions between the gross national product gained and the structure of its distribution of accumulation (investment) and consumption (including private consumption) or, more generally, for enhancing living conditions (prosperity). However, one should also remember that consumption itself, and especially the consumption of some systemic products, on a specific economic level of social and economic growth, can become an autonomous growth factor.

* The glocality dimension has become a characteristic feature of many systemic products, not only services. Increasingly, it results from the network character of the company itself. According to Castells the company is "[...] increasingly international (and not supranational), and its action of [...] controlled interaction between the global network strategy and the nationally/regionally rooted interests of the participants [...]". The control of the corporations/companies over the markets and the logic of their functioning also change "[...] not only the supply and demand rule, but also the hidden strategies and countless inventions made in global information networks..." (Castells, 2007, p. 198).

In the macroeconomic surroundings of the sphere of systemic products, besides economic growth, a special role is assigned to the selected branch and sector policies, including foreign trade (export and import of systemic products), education and science (research into development purposes), health care, forming the labour market and living conditions, and institutional solutions in these areas, as well as the changes being made.

2. Macroeconomic and political/economic conditions for the development of a systemic product business in Poland

A significant share of network products, including systemic services, in the production, export and internal consumption of individual countries becomes a considerable component in their economic, social and cultural growth. On the other hand, without the high level of that growth their economies would only play a peripheral role in the process of creating, exporting and consuming those products.

This idea seems to be untrue if we consider the example of China, the biggest rising economy in the world (with a 10% growth dynamic over the past 30 years), in which the share of processed export products reached 93% in 2005 (a quarter of the products used advanced technologies) (Płowiec, 2006)*. Commenting on this data U. Płowiec says that “[...] developed countries lost their monopoly in the production of technologically advanced products, and China is a competitor on a global scale not only in the scope of products absorbing not only poorly-qualified employees, but also those who are highly-qualified”**. As a result – Płowiec continues, “[...] as developed countries cannot be competitive in the scope of labour-intensive production, they have to change their production structure by:

- Developing new sources and technologies of fuel production (since the countries usually do not have sufficient resources of traditional fuels), and also by saving them.

* According to the quoted author “[...] the development of China, focused on the export (its share in the GDP [...] amounts to approx. 40%) and the mercenary policy of collecting foreign currency resources (at the end of the 1st quarter of 2007 [...] they reached over USD 1,200 million) – taking into consideration the size of the economy – caused various results in the global scale. It changed [...] the relations of the production factors’ prices, the structure of the income of people in developed countries and the structure of the currency resources on a global scale. The labour prices were relatively decreased and concerned qualified, as well as unqualified employees, and at the same time the prices of raw materials and fuel went up, and the role of the countries possessing those resources (e.g. Russia) became more important. The changes seem to be irreversible” (Płowiec, 2006, p. 6).

** In many areas China has become the workshop of the world. At first this concerned light industry – it is estimated that approx. 80% of the worldwide footwear production is located in China. Now the same tendency can be seen in relation to the electronics industry, including the production of microchips (Sadowski, 2006, p. 10).

- Developing a new knowledge based economy, i.e. raising the level of the society's education, professional activity of the working people, making the labour market more flexible, increasing expenditures on R&D, especially for the development of biotechnology" (Płowiec, 2009, p. 7).

The example of China seems to show that if the high growth dynamics are maintained for a long time, which is possible thanks to an advantageous combination of factors related to globalisation and a long-term, well-considered strategy of economic and social development, as well as its consequent realisation, even when starting from a low development level, a country can effectively be included in the global network economy. A country can reach, even in a global dimension, a profitable and competitive position, not only limited to the role of a producer/supplier of the components for production, including systemic products*.

The example of China is characteristic; the country plays a key role in the global production of goods for the "cheap economy" (selected branches of clothing, agricultural/food, and lately the automotive industries), and at the same time its role in relation to the highly processed goods and their components (systemic products) becomes increasingly important. It is well-known that the first sphere products are addressed towards the consumers from the "lower" market, and the second sphere products towards the "upper" and "medium" markets.

The example of China also shows that high dynamics of economic growth is not only an attribute of the small national market economies, but that it can also be achieved by concurrently creating and implementing the missing links/institutions of the economy market infrastructure, such as property rights, contractual systems and economic contracts, arbitration and economic jurisdiction, etc.

Poland's situation is especially difficult when we take the challenges of globalisation into consideration, as well as of the Lisbon Strategy (March 2005) which aims at increasing EU countries' competitiveness under global economic conditions (thanks to the knowledge-based economy and employment growth). This fact is also clear when compared to other EU countries from the region of Central and Eastern Europe (excluding the 15 "old" EU members) – taking into account our delay in developing a civil society, including a serious gap in the level of living conditions compared to those countries, a low level of professional activity by working people and the unemployment rate, which is highest in the European Community.

One of the main reasons for this situation is also the poor quality of solutions and functioning of state institutions (the subjects of the State's economic and social policies, and regional local authorities), as well as a lack of a developed structure for civil society. The present state of the above conditions and factors of economic

* As above.

growth, which are fundamental in creating innovations, including innovative business strategies on the Polish market (and indirectly for the markets of other countries from Central/Eastern Europe), as well as their State expected in the accepted National Development Strategy 2007-2015 does not guarantee Poland meeting the objectives of the modified Lisbon Strategy.

In order to be closer to meeting these objectives, including building economy and knowledge-based society, it is necessary to start a third wave of reforms* (the subsequent phase of economic transformation), whose direction is established by the resolutions of the Lisbon Strategy and the conditions of participation in the EU Economic and Monetary Community, with the aim of obtaining financial assistance from the structural funds and the Cohesion Fund (Płowiec, 2009, p. 5). The strategy recommends the EU member countries to implement an innovation policy in a wider sense. This policy includes, for example, the stimulation of creating added value (in the scope of commonly realised projects of new undertakings, products, and services) by companies, universities, territorial units (regions, states, and counties) within the frameworks of local and regional innovation centres. The second basis for the actions recommended by the Lisbon Strategy, aimed at maintaining the present level of social protection, is the increase in the professional activity of its citizens with the concurrent reform of the social welfare system. Additionally, Poland has to meet the requirements resulting from its delayed participation in the economic and monetary community (i.e. joining the Eurozone). Those requirements include limiting the public finance deficit (to a value not exceeding 3% of the Gross Domestic Product (GDP), eliminating the barriers limiting the business initiatives, harmonising the actions of the home policy (National Polish Bank (NPB), the Government including the Ministry of Finances and other ministries, etc.) (Płowiec, 2009, p. 9).

Only by building solid economic foundations and a knowledge-based society in Poland, or at least activating and energising that process, can the country increase its economic competitiveness in the European Union, as well as enable profitable produc-

* “The first wave of economic and social reforms – realized mainly in the years 1995-2003 and defined by the Copenhagen criteria – aimed at the preparation for Poland’s membership in the EU (privatization of the economy, implementing the market of goods and some services [having a functioning privately-owned market economy], free rate of zloty and democratising political life). The second wave of reforms was realized in the years 2004-2006 after joining the EU (implementing competitiveness protection according to EU rules [a system ensuring that competition in the internal market is not distorted according to EU rules OR having the capacity to cope with competitive pressure and market forces according to EU rules], a common agricultural policy, VAT harmonisation, improving environmental protection, partial liberalization of the migration of people. The third wave of reforms is necessary because of the [...] global challenges (the changes in the relations of the prices of raw materials, fuel and labour due to the development of rising countries) and the internal ones (the ageing of society, low competitiveness of the country, including the limited freedom of company functioning, inefficient administration” (Płowiec, 2009, p. 5).

tion and export of products/services with a high added value, which means the systemic products/services (even under conditions where the Polish zloty appreciates against foreign currencies, including the Euro). It will also enable the development of internal (domestic) consumption of those products/services, making our country an attractive market for their production and import, and a potentially attractive investment area for international investors.

3. Conditions required for creating a strategic business environment in Poland for systemic products under the realities of existing developmental gaps^{*}

The above statement relates not only to Poland but also, to a lesser or higher degree, to all countries from the region of Central/Eastern Europe (excluding Austria perhaps, but including the eastern parts of Germany), especially when formed in the context of the strategic situation of the whole European Community. However, one has to consider if the development priority assigned to the systemic products zone will not weaken the interest in the zone of traditional products (food, raw materials, fuels, energy, etc.) right now, when they are becoming increasingly meaningful as a result of continuing globalisation, in which the largest rising economies in Asia, Russia or Brazil are already participating. Although that question cannot be completely eliminated, the arguments for treating the development of a systemic products zone as a priority, even in the realities of economies at a medium level of development (e.g. the economy of Poland) are very serious.

The Central/Eastern European countries (excluding Russia) do not have rich resources of raw materials, fuels or energy; Poland seems to be an exception here, since it still has significant resources (less available nowadays) of hard and brown coal. However, the process of technological restructuring and privatisation of the mining industry is incomplete, and the investments in the power industry have been delayed. These countries (mainly Poland) have a large potential in the scope of developing agricultural production, including ecological production, but the EU agricultural policy of payments for wasteland and the lack of actual reforms in Polish agriculture hamper their use.

If the investments and reforms in those branches, necessary over the next years, are to be effective, they have to include the use of systemic products.

The systemic products/multi-products “of the future”, as mentioned above, enable closer satisfying of the more complex needs and expectations of consumers/users

^{*} The statistical data presented in this section of the article comes from the study (GUS, 2007).

(for whom they are already available). Those products and services also enable rational (more economical) consumption of many traditional products (e.g. fuels, electric energy), or force the creation of better substitutes (biofuels, genetically modified food). They also include products/services, whose use/consumption enables a “release” time, which, according to Drucker, is the only non-renewable of all resources, or enables more effective use of time.

Although the terms of the trade relation in an international dimension seems to change to the advantage of the products of the macrosector I (to the disadvantage of traditional products from other macrosectors), it will probably take long before that tendency also concerns systemic products.

Creating strategic environment (surroundings) for a systemic products business in Poland requires intensive cooperation of the State (government), regional authorities, and companies, including foreign investors. Above all, it requires the occurrence of specified conditions (factors) in the area of the real and regulative economy. A diagnosis of those conditions against the background of the existing development gaps rather than that of the advantages in relation to selected countries of Central/Eastern Europe is as followed:

1. In spite of the relatively high dynamics in economic growth in the years 1995-2005 reaching 151.0% (the leaders in that group of countries included Latvia at 211.2% and Estonia at 203.1%)*, Poland had a selectively low share of accumulation in the structure of the GDP distribution (19.2% in 2005, 32.6% in Latvia, 31.8% in Estonia, 28.4% in Slovakia, and 26.4% in the Czech Republic)**.

To maintain current growth dynamics and meet the increasing investment requirements over the next few years, this share will have to be much bigger, and the current consumption will be limited. However, the level of that share in the market economy depends not only on the decisions of the State (government), but also on the decisions of companies and citizens (consumers), and also concerns the investment directions.

Currently, the National Development Strategy 2007-2015 is being realised in Poland (along with the related document – National Strategic Reference Frameworks 2007-2013, which is the basis for Poland receiving financial aid for realising the strategy at the amount of over EUR 85 billion); the funds for the whole Strategy amount to approx. EUR 108 billion. Most of the funds will be used for the realisation of the National Operational Programs (approx. EUR 65 billion); the funds for the development of human capital and the innovative economy amount to approx. EUR 18 billion (30%). Higher amounts of EUR 27.8 billion (approx. 42%) and

* In that period, the countries with lower growth dynamics included Ukraine (138.2%), Slovakia (150.6%), the Czech Republic (129.4%), Austria (122.4%) and Germany (113.5%) (GUS, 2007, p. 527).

** A lower share of the accumulation in GDP in 2005 was observed in Germany (17.2%), and slightly higher in Austria (20.8%) (GUS, 2007, p. 535).

EUR 18.3 billion (over 30%) are to be used as follows: firstly for financing the development of technical infrastructure (communication networks, power industry) and environmental protection, and secondly for regional operational programs and developing Eastern Poland (highly underdeveloped in relation to other regions) (Płowiec, 2009).

Such an approach is used with regard to the priorities in the Polish National Development Strategy 2007-2015, in connection with a deep analysis of its detailed assumptions (it is too complex to be included in this study) and leads to several unambiguous conclusions.

Firstly, the accepted priorities of investing in the technical and power industry infrastructure and in the enhancement of the quality of regional integrity policy, and then for the intangible assets (human capital) and the innovative economy, which, in spite of the stated declarations, do not mean focusing on a knowledge-based economy. Thus, they will not cause a change in the hierarchy of economic growth factors, and they will not cause speeding up the growth above the assumed average yearly level of 5% of the GDP. In 2015 the Polish GDP per capita is estimated to be 66% of the CE-25 average value (the starting level is 50%) (Płowiec, 2009). On the other hand, one should remember that contrary to the assurances of the “soft capitalism apologists” full activation of human capital is not possible without the required, optimal level of technical infrastructure; without this, the resources will remain “locked”.

Secondly, the priority of enhancing a regional cohesion policy, focused on the activation of the economically neglected regions (Eastern Poland) and rural areas, can result not only in the development of small and medium-sized business, but also in creating regional service products, including tourist ones – these branded products can also be offered outside the region, addressed to specific groups of tourists, including tourists from other countries. Again, the condition is the proper development of the technical and service infrastructure, and the effective cooperation of the interested local authorities and companies. One of the forms of such cooperation, applied in many Western countries and known as clusters, has already been implemented in many Polish regions.

2. An analysis of the functioning of the foreign tourism industry in Poland clearly indicates its low effectiveness, measured by the income generated from that form of tourism. While the number of foreign tourists visiting Poland in 2003 was higher than compared to other Central/Eastern European countries (Poland at 50.7 million, Hungary at 31.7 million, Austria at 18.6 million tourists), the income connected with foreign tourism in these countries was as follows: USD 4.0 billion, USD 3.5 billion, and USD 13.7 billion (GUS, 2007, p. 282-286). Although the key factors for those results include the attractiveness of the aforementioned countries for tourists and the level of development of their so-called tourist infrastructure,

the developed environment of the tourist industry, cooperation of the regional authorities with tourist companies in creating, promoting and delivering tourist products to appropriate target markets, and the level of managing the tourist companies are also significant elements. Thus, for Central/Eastern European countries, including Poland, foreign tourism can become an increasingly important factor for economic growth, the area of creating attractive and branded tourist network products.

3. In spite of a slight improvement, foreign trade in Poland, as opposed to our southern neighbours, has not yet become an important factor of the economic growth; its share in GDP in 2004 was 38.5% (in Slovakia at 78.1%, in the Czech Republic at 71.5%, in Hungary at 67.3%, in Austria at 48.5%), and the balance of its turnover was negative – in 2005 its value was equal to USD –12.1 billion (GUS, 2007, p. 467). However, such balance also means an import of advanced technologies, and investment and consumption products based on such technologies, which can stimulate their manufacturing (by imitation) and modernising of domestic consumption. On the other hand, still increasing foreign direct investments in Poland (USD 12.8 billion in 2004, while USD 34.3 billion in Austria, USD 4.4 billion in the Czech Republic, USD 4.1 billion in Hungary, and USD 1.1 billion in Slovakia) (GUS, 2007, p. 517), which, taking into consideration that the investments focuses on exports, can cause more than a necessary increase in the investment rate (in 2006 its value was only approx. 20% of the shared GDP). They can enable (estimation for 2015) an increase in the very low share of technologically advanced export products, which in 2005 in Poland was only 2.3% (21.72% in Hungary, 14.74% in Austria, 13.66% in the Czech Republic, 10.07% in Estonia, and 4.62% in Slovakia) (GUS, 2007, p. 495). Although today the appreciation of the Polish zloty in relation to Euro and US dollar is not good for exports, including the export of technologically advanced products, too low domestic (internal) demand for these products, with the use of marketing methods effectively applied on international markets, including the EU, can significantly weaken the export barrier.
4. The next three key, or even fundamental, factors for the development of the environment (surroundings) of a systemic product business are as follows: the labour market and the related policy of its activation, the development of science and education at the university level, and the current living conditions, including the potential markets of buyers of those products/services.
 - a) The potential of the labour sphere in Poland, measured by the number of professionally active people, which amounts to 17.0 million (2003) is one of the biggest in Central/Eastern Europe (excluding Russia); it is higher than in Ukraine (22.6 million), but the professionally active people index expressed in % is the lowest in comparison to other countries of the region (44.6%, while in the Czech Republic it reaches 50.3%, in Slovakia at 49.4%, in Austria at 49.0%) (GUS, 2007, p. 154-155). The long-

-term unemployment rate is also the highest, amounting in 2005 to 10.2% (excluding Slovakia at 11.7%, but in the Czech Republic at only 4.2%, in Hungary at 3.2%, and in Austria at 1.1%) (GUS, 2007, p. 183).

The employment structure in the macrosectors of the economy is exceptionally out-of-date, similarly to the situation in Ukraine. In both countries in 2003 over 18.0% of all employed people worked in agriculture (only 4.5% in the Czech Republic, 5.8% in Slovakia, 5.6% in Austria). Both Ukraine and Poland had also the lowest shares of employment in their service sectors (51.2% and 53.0% respectively in the region of Central/Eastern Europe, 64.8% in Austria, 60.7% in Hungary, 55.8% in the Czech Republic and Slovakia) (GUS, 2007, p. 168). Thus, services are still a secondary factor of the economic growth; they also hamper the development of many systemic products, including other network services (such as tourist products of that type). The above analysis leads to a negative assessment of what is known as the active policy of the labour market used in Poland by consecutive governments (including the present one). In relation to agriculture, without a deep analysis, it should be additionally stressed that the current EU policy of payments for non-cultivated arable lands (above 1 ha), the so-called CAP, results in the fragmented structure of agriculture to be maintained (the average area of an individual farm in 2005 in the European Union was 16 ha, while in Poland this was 7.6 ha) and prevents people from changing their professions. Another factor with a similar influence is the lack of consequent reform of the current Agricultural Social Insurance Fund (KRUS), which is applied due to the interests of peasant parties that are coalition parties in consecutive Polish governments. Paradoxically, such a situation may cause an increase in the demand for new systemic products (although mainly consumption ones) in the situation of rising incomes for farmers, caused by a continuous increase in agricultural produce prices over the past years. However, the demand would be higher and it would also include more systemic equipment/products for production purposes, if the structural reforms in Polish agriculture were really realised.

The reasons for the slow development of the service sectors in the Polish economy are complex in relation to the sphere of the “basic consumption” services, as well as to that of qualified professional services. A migration to the first type of services is related to the fear of lower pay in comparison to work in industry (in spite of the rising prices of the services). Employing new specialists in professional services (e.g. lawyers) is connected with barriers created by professional corporations; in the case of doctors, the relatively low wages in public health care institutions encourage multi-job work – employment in several places. More and more professionals leave the country to work abroad and to improve their standard of living.

The individual enterprise index in Poland is the highest in the region; it can be expressed by the number of employers and self-employed people, which in 2003

amounted to 21.8% of all employed people (16.9% in the Czech Republic and Lithuania, 10.7% in Austria, 9.6% in Slovakia) (GUS, 2007, p. 169). However, the development of new, private, one-man or family companies in Poland is hampered by clerical and court bureaucracy, e.g. longer time and procedures of registering new companies in comparison to other countries, and complicated tax or insurance procedures. Some of those companies may also only exist “on paper”, or function on a seasonal basis. The social work efficiency in Poland, measured by GDP per 1 hour worked (in USD in 2004) was rather low and amounted to 11.41% (11.82 in the Czech Republic, 12.65 in Slovakia, 19.88 in Estonia, 30.92 in Austria) (GUS, 2007, p. 171). This could mean a low level of work organisation in many companies and institutions and a continuing low level of managing those entities.

Summing up, in the labour market sphere in Poland (including the government policy in relation to this market), in spite of the EU aid in implementing active policies for creating new jobs, changing the employment structure, or gaining new qualifications by the unemployed, those objectives have not been met yet, and the speed of their realisation is not sufficient. This situation does not help in creating a modern business environment in Poland, including the sectors of new systemic products and services.

b) The educational State policy applied from the beginning of the system transformation in Poland, as described below using an example of a university-level education, as well as the policy in the sphere of science and scientific research development does not favour the realisation of the last objective. Seemingly, the quantitative results of the development of education at the university level in Poland since the beginning of the 1990s, described as the “educational boom”, are impressive, as illustrated by the index of the number of students per 10 thousand people in the academic year of 2003/2004 (535 students – it was higher only in Latvia at 552 students; in Hungary at 422, in the Czech Republic at 312, in Slovakia at 306, in Austria at 294) (GUS, 2007, p. 259). In Poland, students who are not full-time students (studies for working people form a significant share of the student population, constituting almost half of the people studying in public (state) schools). Another big group in that population includes students in non-public (private) schools, who pay for their studies but who in most cases get the “worst” educational products (although there are some exceptions), and who are less prepared for studying (there are no entrance exams). The fact that these students pay for their studies results in drastic limitations in financing public education on a university-level by the national budget (yearly 0.2% of GDP on average). The average expenses per student in public schools (according to PPP – Purchasing Power Parity) in Poland in the academic year of 2002/2003 amounted to 4,653.0, in comparison to 5,781.5 in the Czech Republic, 3,992.4 in Slovakia, but 10,838.4 in Austria, and 9,894.9 in Germany (GUS, 2007, p. 264). The low participa-

tion of the budget for education at the university level in Poland combined with the multi-job work of university teachers (mainly with PhD and professor degrees) hinder the realisation of their own scientific research, and can generally (although it might not be true in individual cases) result in a lower quality of education in different fields of studies, especially concerning social, economic and liberal studies. Although these fields of studies are also important, and the candidates are free to make their own choices, one must observe that in Poland the structure of the educational system is adjusted towards certain fields of studies, which can have serious consequences in the future (against the background of selected Central/Eastern European countries and Germany). In Poland in the academic year of 1994/95, 40.7% of all students studied social sciences or law (36.1% in Austria, 27.6% in the Czech Republic and Germany, 22.3% in Russia in the years 1994/95).

As far as formal and natural sciences are concerned, they were studied in Poland by 6.8% of students – 12.0% in Austria, 9.5% in the Czech Republic, 14.9% in Germany, and 48.5% in Russia. Medical science students in Poland constituted only 3.2% of all students, 9.6% in Austria, 10.0% in the Czech Republic, 14.6% in Germany, and 8.2% in Russia (GUS, 2007, p. 261)*.

That structure, combined with the still low share of Polish students studying in technical fields, can in the near future result in a significant lack of technical and engineering, science and research specialists with knowledge in the fields of formal, natural and medical sciences. The results of such a situation for the development of advanced technologies in Poland and for the implementation of new systemic products and services (including medical ones), even assuming the “necessary” import of specialists from the East, can be very serious. The actions taken only this year by the Ministry of Higher Education and Science, in favour of enrolment for studies in technical and formal sciences fields, are totally insufficient.

Moreover, Poland does not have a modern sphere of science and development research that would satisfy the needs of the economy and social life. Although there is a developed system of schools with higher education, in the sense of quantity, including PAN (Polish Academy of Sciences), science institutes, science and research institutes and R&D facilities in Poland, but financing research is at a very low level. The expenditures on R&D activities in Poland in 2004, according to its share of the GDP amounted only to 0.56% (in Austria at 2.2%, in the Czech Republic at 1.3%, in Hungary at 0.9%, in Slovakia at 0.5%, in Russia at 1.2%, and in Germany at 2.5%). The share of people working within this branch (the number of employees per 1,000 working people) was also low; in Poland it amounted to 4.6 (in Austria to 9.4, in

* According to the data included in the National Development Strategy for the years 2007-2015, graduates studying in mathematical, natural and technical fields in 2004 constituted 15% of all graduates of higher schools in Poland, while the average index for the whole EU was 24%.

the Czech Republic and in Hungary to 5.9, in Germany to 12.2, and in Russia to 14.7) (GUS, 2007, p. 289).

The authors of system transformation in Poland completely underestimated the strategic question of the share of the economy, including industry, in financing science and development research. The same goes for the share of foreign economic entities operating in Poland (in the host country) in making use of local (domestic) science and research resources, such as being a condition of their activity in Poland (in contrast to Hungary, where such conditions were applied in relation to direct foreign investments). As a result industry in Poland in 2003 participated in 12.7% of the total expenditures on R&D, and foreign entities only in 2.5%. The data for other countries were as follows: Hungary at 30.7% and 10.7%, the Czech Republic at 51.4% and 4.6%, Estonia at 33% and 15.2%, and Austria at 43.9% and 21.0% (GUS, 2007, p. 292).

Another index illustrating the weakness of Polish science and research resources is the number of inventions reported to the European Patent Office in 2003. For Poland the index was 71.7 inventions, for the Czech Republic 75.2, for Hungary 88.5, for Austria 835.5, and for Germany 12,872.5 (GUS, 2007, p. 293).

This brief, fragmentary diagnosis of the condition of the Polish sphere of science and development research shows an enormous delay in the scope of its functional conditions in comparison to Poland's neighbouring countries. Without fundamental, or even crucial changes in these conditions (which constitute the main, or even the first priority of the national development strategy until the year 2015, and not later) that sphere together with higher education will decline, and the economy will not be able to produce modern systemic products/services or even to develop (imitate) imported ones.

c) The sphere of health care is a social and economic field in which promotions are created and the most valued products of the future are made available to the consumers (patients), in the form of public/social services financed wholly or partially by national (health) insurance funds created from the employers' and employees' contributions, or as strictly market services financed wholly by the buyers*.

* According to P.F. Drucker "The first thing we should say is that [...] is no future for the expansion of free markets as we know them today [...], for the markets on which goods and services are exchanged [...] those markets will shrink [...], because the developing sectors of the future society will be two fields related to knowledge. Health care and education, none of which was or will be offered in a really free market [...]. We can also expect that a decrease in demand for industrial articles (the allocation of purchasing force) will be continuous and increasingly rapid [...]. In the years 1960-2000, the real prices (adjusted for inflation) of the industrial articles fell by almost 2/3, i.e. by about 60%. During this time the prices of the two main intellectual »products« i.e. health care and education rose three times faster than inflation. The demand for industrial products in the year 2000 was five times lower in relation to the demand for intellectual products compared to forty years earlier (2002, p. 510-511).

However, regardless of the form of the benefit, especially the services related to hospital or sanatorium health care, which are of the system products nature.

That sphere in Poland (as the second or even the first, together with the sphere of science and education, including higher education) also requires fundamental, radical system changes in the sense of strategic priorities in the period to the year 2015; the changes cannot be postponed beyond that point (as was “silently” done in the case of the National Development Strategy, planned for the years 2007-2015). The results of the changes should be seen as real actions, and not just written down in strategic documents. The reasons for the absolute necessity for these changes are characterised by two aspects: on the one hand, the quickly increasing demand for health care services, and on the other the significant development gap of Poland in relation to other Central/Eastern European countries in the scope of personnel and material potential of the sphere (i.e. services supply).

The expenditures on health care concerning individual consumption in Polish households in the year 2003 expressed in percentage of total expenditures was 4.6 (1.7% in the Czech Republic, 2.1% in Slovakia, 3.7% in Hungary, 3.3% in Austria, and 4.4% in Germany) (GUS, 2007, p. 236).

On the other hand, the potential of the Polish health service was clearly lower in comparison to other Central/Eastern European countries. In Poland, in 2003, the number of people per one doctor was 432, per one dentist was 2,167, and per one nurse was 182, while in the Czech Republic respectively this was 257, 1483 and 125 people, in Slovakia this was 305, 2297 and 153, and in Austria this was 296, 2007 and 166 people.

The situation in Hungary was also better (308, 1514 and 179 people) (GUS, 2007, p. 267). The index of the number of beds in general hospitals per 100 thousand people in Poland was also the lowest at 480 beds, while in the Czech Republic it was at 847.4, in Slovakia at 698.7, in Hungary at 782.8, and in Austria at 834.1 (in the year 2000) (GUS, 2007, p. 270).

Because of the personnel and material limitations, as well as for the reasons specific for given health care services the number of specified and most qualified, professional medical services is relatively smaller than other countries of the region. For example, in 2002 the number of heart transplants per one million inhabitants amounted to 2.9, in the Czech Republic to 4.8 (2001), and in Austria to 8.8 (GUS, 2007, p. 275).

d) Last but not least, the factors essential for creating a strategic environment for the systemic products business in Poland include nowadays the conditions that people endure, including the level of their income, living conditions, present structure of consumption, supplies of some systemic products, etc. The higher the level of living conditions, the greater the inclination to purchase and consume those products. And in

the case of products already owned (or consumed), the inclination for the development of the demand in the future or for further purchasing and consuming of systemic products will also be greater. On the other hand, a low level of such conditions (absolute and related to other countries of the region) can mean a restriction in the consumption of traditional products, searching for systemic products substitutes, and finally independent composition of separately purchased “strategic goods”. Of course, the latter situation weakens the speed of creating a business environment, and can stimulate the development of the “cheap economy”.

The synthetic measure of the income situation of a country’s population used in international comparative statistics is provided by the gross national product per one inhabitant expressed at current prices according to the Purchasing Power Parity (PPP). The income in Poland in 2004 per one inhabitant amounted to 10,800 units and was lower than in Slovakia (12,000), in the Czech Republic (15,100), and Austria (27,000), where it was higher than in Germany (24,300) (GUS, 2007, p. 235). Another measure, the Gini coefficient, also described as the poverty index, illustrates the level of income stratification in a given country. In Poland it was already high (34.5 in 2002), among the Baltic countries Latvia had the highest index (37.7 in 2003), and in Russia its level was even higher (39.9 in 2002). In the Czech Republic (25.4)* and Slovakia (25.8)***, Hungary (26.9 in 2002) and Austria (29.1 in 2000) the values were less diversified (GUS, 2007, p. 245). The high values of the index illustrate, from the perspective of marketing theory, the shrinking of the medium market, and the expanding of the upper and lower markets (quality/prices).

Although the number of apartments in Poland (12.6 million) was higher in comparison to other countries in the region during 2003 (the Czech Republic at 4.3 million, Slovakia at 1.7 million, Hungary at 4.1 million, and Austria at 3.3 million), the average number of people per one apartment was also the highest (3.0). In the other countries that index reached the following values: the Czech Republic at 2.3 people, Hungary at 2.5 people, and Austria at 2.4 (GUS, 2007, p. 227).

The symptom of positive changes in that scope, in relation to new apartments being sold, was their usable space expressed in m², higher in Poland (115.8 m²) than in Austria (101.1 m²) or in the Czech Republic (104.9), and comparable with Germany (114.6 m²) and Slovakia (114.3 m²) (GUS, 2007, p. 233).

The structure of individual income in Polish households in 2003 expressed as a percentage of expenditures in individual categories of the products/services significantly varied in many elements from the structure of consumption of those subjects in comparison to the other Central/Eastern European countries. In Poland, the expendi-

* The values refer to the year 1996.

** As above.

tures on food were much higher (19.1% of total expenses) than in the Czech Republic (16.0%), in Hungary (18.2%) or in Austria (10.9%) (GUS, 2007, p. 236). The share of the expenditures on apartment and energy usage (24.4%) was also the highest among the studied countries, while the share of the expenditures used to furnish the apartment was relatively low (4.4%). The latter index amounted to 5.4% for the Czech Republic, 6.7% for Hungary, and 7.7% for Austria (GUS, 2007, p. 236).

A positive aspect was seen in the already mentioned high share in the expenditures on education (1.7%); in Austria at 0.6%, and on health care (4.6%; while 3.3% in Austria) (GUS, 2007, p. 238 and n.). However, it seems the expenditures were caused by the extended use of market educational services, where the quality of education is on average higher than in public primary and secondary schools, and the development of paid studies (intended for working students) and studies in private higher institutions (where the education quality is on average lower in comparison to public schools). The increase in the share of health care expenditures could result from the extended use of commercial medical services and may be caused by the immorality of the public (state) system of the health care in Poland.

On the other hand, consumption related to recreational and cultural expenditures in Poland is rather disappointing. The share of such expenditures in Polish households amounted only to 7.1% (the same as in Latvia, while in Lithuania it was even lower), while in the Czech Republic it was 11.7%, and in Austria it was 11.9%. Together with restaurant and hotel expenditures, the share amounted in Austria to 24.1%, in the Czech Republic to 18.1%, in Slovakia to 16.1%, and in Poland to only 10.0% (GUS, 2007, p. 238).

The number of personal computers per 1,000 people in Poland was also relatively low. In 2004 it amounted to 193 and was (except for Hungary) the lowest in comparison to the other countries (in Austria at 418, in Slovakia at 296, in the Czech Republic at 240, and in Estonia as many as 921 – more than in Germany and the USA!). Similarly, the index of Internet users per 1,000 people was also the lowest and amounted to 236 inhabitants (while Slovakia had 423, the Czech Republic had 470, Austria had 477, Estonia had 497) (GUS, 2007, p. 244). It is also interesting that the number of TV sets being used in Poland per 1,000 people was also the lowest among the compared countries (except for Slovakia) and amounted to 422 units (in the Czech Republic: 538, in Austria: 637) (GUS, 2007, p. 243). On the other hand, in 2001 cable/satellite TV was available in 49.8% of Polish households – more than in Austria (48.3%), but less than in Hungary (56%) (GUS, 2007, p. 242).

In Poland (2004) 650 inhabitants per 1,000 people were mobile phone network subscribers, this being a “flagship” systemic product. That number was relatively lower than in the Baltic States; in Estonia (the leader), it was much higher (966 subscribers per 1,000 people), also higher than in Germany (864/1,000) or even in

the USA (617/1,000), and a little lower than in Austria (978/1,000). As far as this aspect is concerned, the situation was better in the countries that are Poland's southern neighbours (the Czech Republic at 1054/1,000, Slovakia at 794/1,000) and in Hungary (863/1,000) (GUS, 2007, p. 461). In 2003, the number of cars being used in Poland per 1,000 people was relatively low and amounted to 294.4. The index was higher in the Baltic States (e.g. in Lithuania – 363) except for in Latvia (279.3), in the neighbouring countries (Germany 540.6, the Czech Republic 363.3) except for Slovakia (251.0) and Austria (503.4) (GUS, 2007, p.447).

Conclusions

1. The level of development of modern national economies and of the modernity of their societies' consumption is reflected in the increasing share of systemic (network) products. Since they are mainly global or glocal products, their share can also indicate a level of globalisation of a given economy, its individual sectors, businesses and markets.
2. The development of the sphere of systemic products is not only the consequence of the technological breakthrough that took place in the West as the result of the popularisation of advanced computer and digital technologies, rising consumption expectations of buyers with high and medium levels of income, and continuous globalisation of the economies and companies. It probably is the only possible strategy of continuing the high competitive position applied by developed countries on the global markets, which results from the fact that they have no chance in effectively competing in the low cost sphere (and labour-intensive products) with the quickly rising Asian economies, especially with China.
3. Development of the systemic products in the countries admitted to the European Union in 2004 results from a necessity caused by the depletion of "simple production factors" in those countries (including labour resources), the growing aspirations of potential buyers, and shrinking distances in the relation to the developed EU countries.
4. Creating and strengthening the business environment of systemic products especially in Poland, which is far less developed in many fields, also in relation to the countries of the Central/Eastern European region (the Czech Republic, Estonia, Hungary – in many aspects, not to mention Austria) requires: maintaining the previous policy of economic growth (with an extended share of the rate of investments and the orientation of direct foreign investments focused on exports), stimulation of exports and increasing the share of products created on the basis of advanced technologies (in spite of the appreciation of the Polish zloty), the development

of “export” systemic services (e.g. in the field of foreign tourism), releasing enterprises from government and court bureaucracy, a fundamental revision of the State’s policy on education and science, and also in the sector of health care.

5. The National Development Strategy for the years 2007-2015 accepted by Poland focused on the absorption of EU aid mainly, and due to the applied investment priorities assumes the achieving of the strategy’s directional objectives by 2015 based on the level of the dimensions of those objectives being met by the European Union in the year 2005. Even if the strategy is successfully realised within that period, the conditions for effective development and functioning of the sectors and markets of the systemic products at an adequate level of competitiveness (not only in the scale of the whole of the European Union, but also in the region of Central/Eastern Europe) will not be achieved by Poland in that period.

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