

Polish enterprises in free market economy – problems, challenges and barriers.

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Introduction

Since 2004, observers of the Polish economic life have stated a marked economic growth. In 2006, the following economic indicators were reported: GDP increased by 6.1%, unemployment dropped to 14.9%, investment raised by 16.5%, and annual average inflation rate was about 1.0%¹, being maintained at a minimum level. As a matter of fact, many economists are of the opinion that a basic reason of decrease in unemployment rates is labour migration of Poles who have made their way, in a number difficult to be precisely estimated (about one million and a half), in search of job to a number of European Union countries (Ireland, Great Britain, Sweden and other countries), but an important role of strong rise in demand can not be denied, in particular domestic demand as well as export one, followed by the investment activity of enterprises, which creates new workplaces.

A question arises therefore – through which factors these successes are born. Most frequently, three standpoints are present among researchers studying economic problems: in the first place – political transformation and changes on macroeconomic scale, in the second place – accession to the European Union, which has allowed Poland to open itself to extensive market and enlarged access to EU funds, and in the third place – enterprises, which have been capable of developing perfectly their export, notwithstanding an unfavourable exchange rate of the Polish zloty to American dollar and Eurocurrency, and are starting up their investment expansion at present.

If we accept that success in economy development process of a given country, or its lack, will be decided by what happens within enterprises, then one can agree that evaluation of enterprise's condition should take into account close relationships between the whole of economic policy of a country and the rate of adaptive processes at an enterprise level. This is the macroeconomic policy that makes the environment for enterprise functioning, while structural reforms eliminate market mechanism inefficiencies, creating conditions for the growth of enterprise competitiveness.

However, as E. Mączyńska has rightly stated, correlation between the rate of microeconomic transformations (enterprise level) and the rate of macroeconomic consolidation is extremely complex².

¹ A source of statistical data, until stated otherwise, is Central Statistical Office in Warsaw,

² More extensive information on this see: Enterprise restructurisation in the process of economic transformation of the Polish economy (in Polish), E. Mączyńska (Ed.), Wyd. DIG, Warszawa, 2000,

On the other hand, it is much said about insufficient competitiveness of the Polish economy, but less weight is attached to the question whether competitiveness of economy exists and how to measure it. One can speak only, repeating after M.E. Porter, about competitiveness of enterprises³. This is well-founded as the subjects taking part in competitive market game are enterprises (companies) and not states. States are interested only in that that their economic entities have a position strong enough to compete internationally, which in turn has a bearing on the strength and international position of states. Therefore, the concept of economy competitiveness is a generalisation referring to the position of most enterprises of a given country.

Poland, entering the family of countries with market economy, has faced the necessity of keeping pace with global processes of development in the field of modern character of production structure and management systems. We observe that, according to M.E. Porter referred already to, medium-developed countries enter a higher stage of development stimulated mainly by innovations. The present-day competitive race in highly developed countries is based thus on innovation processes, the role and importance of which was noticed nearly one hundred years ago by Joseph A. Schumpeter when he pointed out, as the first one, to the role of innovation in economic development⁴.

While accepting that stimulation of innovation processes and management of innovative activity is an extremely important factor of economic development in macro scale and at enterprise level, it should be emphasised that examination of relationships between the level of innovation management and the innovation performance of economic entities and state is still an open question in economic literature, thus requiring further studies.

1. Stage one – polish enterprises in the transformation period.

The irreversible opening of economy on market and the opportunity of its active participation in the system of global economy was a consequence of political transformations initiated in Poland at the end of 1989. The point of reference was a packet of reformist actions (10 acts implemented by Leszek Balcerowicz, called the “shock therapy” or the “big-bang”), the objective of which was to establish a strong and complete programme, covering typical stabilisation policies (bias towards reinstatement of economic balance), and liberalising solutions, creating foundations of the market system.

The first decade transformation (1990-1999), covering most existing enterprises, has seen many reviews in the Polish economic literature – from praises,

³ Vide Porter M.E., *The Competitive Advantage of Nations*, Macmillan, New York: Free Press 1990,

⁴ Schumpeter J.A., *The theory of economic development* (in Polish), Edition of January 1912, after the OWN Polish edition, Warszawa 1962, p. 104 and next pages,

through well-balanced analyses and reports, to sharp criticism⁵. Their authors point out that transformation falling between two economic downturns was rather shallow and did not connect with intense technological changes. The restructuring process (in majority of state enterprises) was of defensive character, i.e. it did not allow enterprises to function in longer time perspective. A characteristic feature was that that enterprises privatised through capital-based procedure regarded their success to be: successful privatisation (1), market expansion (2), access to new markets (3), and survival in case of state enterprises.

In the enterprises privatised through capital-based procedure, transformations were implemented gradually, but consistently. Transformations in organisation were connected with changes in employment, whereas market strategies (of growth, market share and access to new sale markets) were implemented in connection with searching for new partners, construction of distribution networks and channels, etc. Through modernisation, investment, and construction of new relations with suppliers and clients, gradual qualitative changes were accomplished. In turn, the rate of these changes was determined by market competition and occurrence of unfavourable changes in macroeconomic environment.

In the enterprises privatised with contribution of foreign capital and in public limited [quoted / listed] companies, offensive restructuring was gradually accomplished, connected with product restructuring, technological changes and innovations and changes in the area of management.

In a stout majority of state enterprises, one-man companies of the State Treasury and NFI (National Investment Fund) companies, shallow transformation was satisfied with most frequently.

In general, the picture of enterprise standing after first transformation stage is not simple in evaluation therewith that almost common approval is simplified to the thesis that the shift of companies towards export, which was distinctly winning with domestic production on the home market, was a negative factor. In macroeconomic approach, this meant a relatively smaller contribution of export in the Poland's GDP, which has effects to this day in a considerable negative balance of the trade balance. The export itself has been showing higher income flexibility for years, which is well-founded by demand from the producer and consumer side. The producers import most of all supply commodities, technologies and investment goods, whereas important contribution of foreign capital reinforces these directions of demand. Individual consumers also show a substantial disposition to buying

⁵ In 1997-2000, examination of 200 enterprises that were subjected to transformation were carried out in INE PAN (Institute of Economics of the Polish Academy of Sciences), which resulted in a number of publications analysing respective aspects of restructuring, i.a.: M. Belka, Experience of the Polish transformation – microeconomic foundations and macroeconomic determination (in Polish), *Materiały Badawcze INE PAN (INE PAN Research Materials)*, Warszawa 2000; G. Gieryszewska, The strategy of enterprise product-market restructuring (in Polish), INE PAN, Working Papers No 36, Warszawa 2000; K. Bobińska, The sectorial determination of privatisation process dynamics (in Polish), INE PAN, Working Papers No 10, Warszawa 2000; and other,

imported (durable goods, such as cars or furnishings), giving them primacy over domestic production. If the market demand was directed considerably towards import, this had to have a negative influence on domestic production, therefore on the financial standing of enterprises as well.

In macroeconomic approach, there is no such a harmony among the Polish researchers, but comparative analysis on this ground, too, allows for formulation of common elements, i.e.:

1. One of most important features of the Polish economic situation of the last decade of the 20th century was a relatively low rate of average enterprise profitability. This was the low profitability that was the factor which prevented from increasing competitiveness, as this is impossible without substantial expenditures. The production and export profitability observed recently (after 2004) has not changed yet onto propensity of enterprises to invest in HT (high-technology),

2. Low profitability of enterprises was a barrier for acquiring funds for investments, which made them to be unable to participate in innovative competition. Competition on the side of export caused that profitability, if not being reduced, did not reached an appreciable level. Companies did not have thus strength to develop export, but we can notice that export depends in turn on foreign consumers who purchase preferably such products, which are most difficult to be produced by them, i.e. goods of large labouriousness but being low processed,

3. Increase of innovation performance and competitiveness of the Polish companies will not be done without intensive investing in modern knowledge, which is at present a determinant of participation in technological progress and innovative processes. Since many enterprises did not have a sufficient amount of money resources, the state had to intervene here, according to analysts,

4. Own money resources for development should have been supplemented with the use of foreign capital investments. The opportunities of acquiring foreign capital for Poland are far from optimal ones, notwithstanding the fact that a nearly complete harmony prevails among researchers that these can play a positive part in economic development through implementation of modern technologies. A reflection comes here to mind, namely:

4.1. The hitherto prevailing inflow of foreign direct investments was favourable most of all for consumption trades, where they brought in a quick growth in production, improvement of management methods, technology ad range of products, and a quick growth of sales as a final effect,

4.2. There is no interest on the side of foreign investors in the line of high technique and HF industries as well as in developing scientific and research infrastructure. In general, tendencies to investment in modern production lines are not seen either on the side of foreign or home capital, though the reasons differ. Large supranational concerns, being main investors in Poland, pursue their own production and trade policies within the company en masse. Having own scientific and research infrastructure, they are not interested in developing such centres elsewhere. Apart from this, their policy is frequently focused on replacing the products of the Polish companies through import purchases from foreign affiliate companies that

belong to such a concern (situated for example in the Czech Republic, Hungary or in Asiatic countries), as well as on limiting the final production in favour of cooperative deliveries for foreign affiliate companies. These activities are also unfavourable for the balance of the Polish trade balance,

4.3. The Polish capital, apart from few exceptions – e.g. PKN Orlen, is not capable of unassisted investing in technology development as such investments are connected with a considerable risk, create serious marketing and organisational problems, as well as require a temporary lock-up of considerable capital expenditures. No wonder thus that prevail a disposition towards purchases of modern technologies for traditional production lines and directions. We can notice that this certainly serves raising the efficiency and strengthens the competitive position of the Polish companies in traditional areas but does not solve competitiveness problem in longer time horizon⁶.

2. Enterprises after transformation – basic problems

After intensive growth lasting since 1992, the Polish economy entered a phase of economic depression in 2001-2002, but not before the turn of 2002/2003 the boom symptoms could be noticed, which being strengthened in 2004 is observed until the present day. While examining an increase in the level of GDP in longer perspective, it should be emphasised that it underwent significant fluctuations. In 1994-1997, annual average rate of GDP increase amounted to 6.2%, in 1998-2001 – 3.5%, whereas in 2002-2005 – 4.2%⁷.

Following the changes in business outlook in the macroscale, the modifying processes occurred in the Polish economy and partial objectives and priorities of implemented economic policy changed – chilling out the economy and restraining the increase of home demand was replaced by attempts to activate manufacturing factors (labour and capital). Economic entities on the domestic scene had to adapt themselves to concepts initiated by the centre. Despite a temporary swing in 2005, the analysis of economic-financial situation of economic entities allows to assess the financial standing of enterprises as a relatively good. The results presented in Tables 1-5 justify moving a few general conclusions, i.e.:

1. Improving systematically financial parameters of enterprises do not change however into a continuous increase of tendency towards investment, which

⁶ Arguments for the above statements can be found in such publications as: The Innovation Performance 2006 –Report. The state of innovation performance, support methods, research forecasts (in Polish), A. Żoźniewski (Ed.), Polish Agency for Enterprise Development, Warszawa 2007; Report on the Polish economy innovation performance in 2006 (in Polish), T. Baczek (Ed.), Warszawa 2007; Stimulation of innovation performance and export capacity of the Polish economy through improving the structure of foreign investment inflow to Poland (in Polish), T. Kalinowski (Ed.), Instytut Badań Nad Gospodarką Rynkową (the Gdańsk Institute for Market Economics), Gdańsk 2007,

⁷ Own calculations based on the Statistical Yearbooks of GUS (Central Statistical Office) of 1999-2005,

have been low for years. Entrepreneurs have rather preferred accumulation of financial resources, which have affected the increase of deposits of economic entities,

2. Increased quantity of financial resources in circulation has resulted in the improvement of financial liquidity of economic entities,
3. A disturbing phenomenon is the high rate of company debt, higher than the rate of rise in income, which worsens the possibilities of repaying incurred debts. A decrease in long-term liabilities has been accompanied by a rise in short-term liabilities, which can result in accumulation of payment congestions in economy.

Tab. 1. Financial results of enterprises according to ownership sector in 1999-2005

Specification	1999	2000	2001	2002	2003	2004	2005
revenues from total activity (mrd PLN)							
all sectors	1,071.1	1,204.2	1,213.4	1,225.5	1,322.0	1,540.6	1,600.6
public sector	288.6	311.5	264.5	256.4	275.1	272.1	260.5
private sector	782.5	892.7	948.8	969.1	1,046.9	1,268.5	1,340.0
foreign ownership	195.1	231.7	307.5	342.2	408.1	523.9	557.8
gross financial result (mrd PLN)							
all sectors	15.0	20.7	7.4	6.5	41.1	88.4	78.6
public sector	-1.0	3.6	-3.0	-4.9	10.1	16.3	12.1
private sector	16.0	17.1	10.4	11.4	31.0	72.0	66.5
foreign ownership	2.1	3.9	3.1	5.1	12.8	32.3	27.3
gross profit rate (%)							
all sectors	1.4	1.7	0.4	0.5	3.1	5.7	4.9
public sector	-0.4	1.2	-1.7	-1.9	3.7	6.0	4.7
private sector	2.1	1.9	0.9	1.2	3.0	5.7	5.0
foreign ownership	1.4	1.7	1.2	1.5	3.1	6.2	4.9
assets profit rate (%)							
all sectors	0.1	-1.9	-0.4	-0.3	2.4	6.0	4.8
public sector	-1.6	-0.2	-1.9	-2.2	2.2	4.0	2.6
private sector	1.1	1.1	0.3	0.5	2.5	6.7	5.6
foreign ownership	-0.3	0.8	-0.1	0.7	2.5	7.9	5.4
participation of profitable units (%)							
all sectors	67.4	65.2	64.1	66.5	68.9	76.0	75.0
public sector	58.1	59.9	55.7	65.7	60.9	66.9	68.9
private sector	68.4	65.8	64.9	68.1	69.6	76.7	75.5
foreign ownership	59.0	57.2	55.8	67.2	62.1	75.6	70.9

Source: PONTIFICO on F-02 form basis (1999-2002) and CISG on GUS F-01 form basis (2003-2005)

Tab. 2. Financial data of enterprises according to worker number in 2000-2005.

Employment	2000	2001	2002	2003	2004	2005
revenues from total activity (mrd. PLN)						
over 9 workers	1204.2	1213.4	1225.5	1322.0	1540.6	1600.6
10-49	224.8	228.9	224.8	225.4	263.1	265.9
50-249	363.4	355.7	352.9	386.2	456.0	464.5
over 249	615.9	628.7	647.8	710.7	821.5	870.2
gross financial result (mrd. PLN)						
over 9 workers	20.7	7.4	6.5	41.1	88.4	78.6
10-49	2.7	1.7	-0.4	11.1	11.8	11.9
50-249	11.4	5.2	4.6	8.2	20.8	18.6
over 249	6.6	0.5	2.3	21.8	55.7	48.2
gross profit rate (%)						
over 9 workers	0.52	-0.51	-0.26	2.04	4.64	3.91
10-49	0.21	-0.58	-0.78	4.15	3.74	3.68
50-249	1.64	0.18	0.48	1.26	3.70	3.15
over 249	-0.05	-0.85	-0.48	1.80	5.45	4.38
assets profit rate (%)						
over 9 workers	0.66	-0.37	-0.30	2.39	6.03	4.84
10-49	0.52	-0.11	-1.01	5.80	5.31	4.95
50-249	2.18	0.54	0.62	1.59	5.33	4.41
over 249	-0.05	-0.89	-0.52	1.93	6.55	5.00
participation of profitable units (%)						
over 9 workers	65.2	64.1	66.5	68.9	76.0	75.0
10-49	64.1	63.3	65.7	67.8	75.1	74.4
50-249	67.2	66.2	68.1	69.9	76.9	75.5
over 249	66.0	63.4	67.2	74.6	81.2	79.3

Source: PONTIFICO on F-02 form basis (2000-2002) and CISG on GUS F-01 form basis (2002-2005)

Tab. 3. Indebtedness of the Polish enterprises in 2000-2005.

Employment	2000	2001	2002	2003	2004	2005
short-term debt (mrd. PLN)						
over 9 workers	322.2	335.3	351.7	335.7	345.3	364.6
10-49	58.4	62.5	62.5	60.8	69.5	66.7
50-249	90.5	94.5	94.5	99.7	99.9	103.0
over 249	173.3	178.3	191.1	175.3	175.9	194.8
long-term debt (mrd. PLN)						
over 9 workers	147.8	163.4	161.5	180.1	163.2	165.3
10-49	24.9	25.6	27.1	22.9	24.9	27.9
50-249	37.2	35.9	32.8	43.5	37.1	37.3
over 249	85.7	102.0	101.6	113.7	101.3	100.1
long-term debt per 1 enterprise (thou. PLN)						
over 9 workers	3190.6	3377.1	3664.4	4252.7	3776.5	3798.2
10-49	850.6	792.5	955.1	863.1	904.2	1011.4
49-249	2667.1	2695.5	2536.4	3294.6	2843.8	2838.5
over 249	27788.8	36038.8	37003.6	43453.1	37783.3	36346.6

Source: PONTIFICO on F-02 form basis (2000-2002) and CISG on GUS-1 form basis (2003-2005)

Tab. 4. Financial liquidity ratios of enterprises.

Employment	2000	2001	2002	2003	2004	2005
liquidity ratio						
over 9 workers	0.88	0.86	1.05	1.20	1.31	1.38
10-49	0.94	0.90	1.05	1.18	1.14	1.32
49-249	0.98	0.97	1.15	1.21	1.32	1.37
over 249	0.81	0.78	1.01	1.20	1.37	1.40
increased financial liquidity ratio						
over 9 workers	0.62	0.61	0.77	0.87	0.93	0.98
10-49	0.68	0.65	0.77	0.86	0.80	0.95
50-249	0.69	0.70	0.83	0.88	0.93	0.99
over 249	0.57	0.56	0.74	0.86	0.98	1.00
high financial liquidity ratio						
over 9 workers	0.14	0.16	0.19	0.24	0.29	0.32
10-49	0.16	0.16	0.23	0.24	0.22	0.28
50-249	0.17	0.19	0.20	0.23	0.26	0.28
over 249	0.12	0.14	0.18	0.25	0.34	0.35

Source: PONTIFICO on F-02 form basis (2000-2002) and CISG on GUS F-01 form basis (2003-2005)

Tab. 5. Investment activity of enterprises employing over 9 workers in 2000-2005.

Employment	2000	2001	2002	2003	2004	2005
capital spending value (mrd. PLN)						
over 9 workers	85.6	67.2	65.6	64.7	73.8	79.7
10-49	11.9	8.3	7.6	7.6	9.5	9.4
50-249	21.7	15.9	15.5	15.5	18.3	19.9
over 249	52.0	43.0	42.4	41.7	46.0	50.4
capital spending value per company (thou. PLN)						
over 9 workers	1847.4	1388.8	1488.1	1526.9	1707.8	1810.8
10-49	407.1	257.2	269.1	287.0	345.5	339.1
50-249	1555.5	1195.1	1200.6	1161.2	1403.6	1515.2
over 249	16851.9	15195.5	15451.3	15944.0	17164.2	18308.8
relation of capital spending to revenues from sale of products and services (%)						
over 9 workers	12.94	9.98	9.49	8.68	8.47	8.73
10-49	15.96	10.45	9.98	10.22	10.93	10.37
50-249	12.68	8.94	8.69	7.91	8.23	8.74
over 249	12.51	10.34	9.73	8.75	8.19	8.52
participation of capital spending in amortisation						
over 9 workers	1.90	1.41	1.31	1.27	1.37	1.41
10-49	2.77	1.80	1.73	1.85	2.16	2.03
50-249	2.32	1.64	1.54	1.48	1.59	1.68
over 249	1.65	1.28	1.20	1.14	1.21	1.26

Source: PONTIFICO on F-02 form basis (2000-2002) and CISG on F-01 form basis (2003-2005)

Significant restraint, which can mean in a longer period of time the worsening of competitive position of the Polish enterprises in future, is a relatively low innovation performance. At present, only a small percentage of enterprises can be included into a group of innovative ones, with Poland having at the same time one of the lowest expenditure rates for research and development in the EU. Low rating of the Polish economy competition is confirmed both by cyclic EU publications and international competition ratings.

It results from the European Report on Innovation Performance 2006 published in 2006 (European Innovation Scoreboard 2006. Comparative Analysis of Innovation Performance, European Commission, Luxembourg, 2006) that Poland was classified very low, falling behind survey leaders. Poland, being scored as 24 among 25 EU members of that time with GSII index (Global Summary Innovation Index) amounting to 0.18, was only ahead of Cyprus (0.16), whereas on the ranking list expanded to 48 countries there were also Argentina, India and Romania after Poland.

The successes of societies where enterprises and sectors of the so called "new economy" are of predominant importance are pointed out by the authors of World

Competitiveness Yearbook project from the International Institute for Management and Development IMD from z Lausanne. The ranking position of countries with regard to competitiveness in 2006 is presented in Table 6.

Table 6. Competitiveness of economies of selected countries of the world in 2006

Item	Country	Ranking position (of 2005)
1.	USA	1 (1)
2.	Singapore	2 (2)
3.	Luxembourg	4 (9)
4.	Denmark	5 (5)
5.	Switzerland	6 (8)
6.	Iceland	7 (4)
7.	Holland	8 (15)
8.	Sweden	9 (14)
9.	Ireland	14 (11)
10.	Germany	16 (15)
11.	Finland	17 (10)
12.	Japan	24 (16)
13.	Czech Republic	32 (28)
14.	Slovakia	34 (32)
15.	Poland	52 (50)

Source: The World Competitiveness Scoreboard 2007

It results from the findings of survey accompanying the study of CIS index (Community Innovation Survey – the third round of survey in 2002-2004) published by GUS (Central Statistical Office) that only 1% of entrepreneurs see innovations in their development strategies as a source of future competitive advantage. As the reasons of not implementing innovations, the respondents stated most often (according to the number of responses):

- lack of financial resources for that type of expenditure,
- specific character of market does not require incurring that type of capital spending,
- specific character of product/service does not require incurring that type of capital spending,
- no access to external financial instruments,
- lack of technical infrastructure to introduce innovation solutions,
- no access to external know-how,
- lack of qualified personnel,
- other.

A confirmation of the downward trend in innovation index (it determines the participation of industrial enterprises in a given population that implemented tech-

nical innovations in the period of 3 years) are the data presented in next tables (Tables 7-10). The structure of expenditure for research and development activity according to its types in industrial enterprises is unfavourable and does not improve. The expenditure for research and development activity, the results of which are a basic source of innovation solutions after the growth in 2003, dropped by almost 4% in next year. In addition, a very low participation of expenditure for purchasing ready-made technologies in the form of documentation and rights is maintained, but this type of expenditure is a potentially most effective tool that elevates innovation performance.

Table 7. Comparison of entities incurring capital spending for innovation activity in Poland in 2002-2004.

Specification	2002	2003	2004
Total number of enterprises	8,448	7,997	8021
Private sector enterprises (in %)	85.5	86.4	87.3
Enterprises with employee number (in %):			
- from 50 to 249	79.5	79.8	80.2
- from 250 to 499	12.1	12.0	11.7
- over 499	8.4	8.2	8.1
Enterprises that incurred capital spending for innovation activity (in %)	40.5	39.3	39.0
Capital spending per 1 enterprise incurring capital spending for innovation activity (in thou. PLN – current prices)	4,442.8	4,932.2	4,928.7
Capital spending for innovation activity in industrial enterprises (in thou. PLN – current prices)	13,848.3	15,511.6	15,417.0

Source: GUS (Central Statistical Office), Science and Technology in 2002, 2003, 2004,

Tab. 8. Structure of capital spending for innovation activity in Poland according to type of innovation activity in 2001-2004 (in %).

Years	Research and development	Personnel training	Marketing of new products	Expenditure for machinery and equipment	Expenditure for buildings and structures	Purchase of new technology (rights)	Other expenditure
2001	10.2	0.7	2.8	54.8	26.1	1.9	3.5
2002	9.3	0.2	1.5	62.8	20.0	3.0	3.2
2003	11.1	0.2	1.4	63.3	15.6	4.8	3.6
2004	7.5	2.6	2.6	59.8	23.2	2.8	3.8

Source: GUS (Central Statistical Office), Science and Technology in 2001, 2002, 2003, 2004,

Tab. 9 Structure of capital spending for innovation activity in industrial enterprises in Poland according to financing source in 2001-2004 (in %).

Years	Own funds	Bank credits	Foreign funds (not-returnable)	State budget funds	VC funds	Other
2001	71.9	17.7	2.7	1.5	no data	6.2
2002	65.4	22.4	0.7	1.0	no data	10.5
2003	66.9	13.7	1.0	0.7	0.1	17.3
2004	78.9	15.6	1.1	1.1	0.04	3.0

Source: GUS (Central Statistical Office), Science and Technology in 2001, 2002, 2003, 2004,

Tab. 10. Structure of sold production in industrial processing section in Poland according to technology level in 2001-2004 (in %).

Years	High-technology	Medium-high-technology	Medium-low-technology	Low-technology
2001	4.8	22.6	30.8	41.9
2002	5.4	21.2	29.8	43.6
2003	5.1	23.4	30.1	41.5
2004	4.5	25.6	31.3	38.6

Source: GUS (Central Statistical Office), Science and Technology in 2001, 2002, 2003, 2004,

The major symptoms of low innovation performance stated in most analyses are:

1) The Structure of Direct Foreign Investments does not comply with innovation performance standards. It results from the Report on "Stimulation of innovation

performance” that the total number of companies with contribution of foreign capital in Poland at the end of 2005, which were classified as HT (high-technology) companies according to OECD methodology, amounted to 46. Appropriately, the number of foreign entities in medium-high-technology business lines amounted to 176, out of which over 1/3 invested in business lines of transport equipment production and aircraft production⁸.

2) Low ability to implement new technologies in the export and import of HT products in total export and import. As results from GUS (Central Statistical Office) studies that are based on OECD analyses, Poland – starting with 1990 – belongs to the countries with the highest superiority only in the business lines of medium-low-technology and low-technology. This situation is illustrated by the fact that participation of high-technology products is maintained at the level of 2-3% (in 2004 – 2.3%)⁹, but also in 2006 – which was very profitable for Poland – participation of the export of HT products in total export was still maintained at the level of 2.3%. For comparison, this indicator for the former countries of the Eastern Europe amounted to, as follows: Hungary – 21.72%, the Czech Republic – 13.66%, Estonia – 10.07%, Slovenia – 5.20%, Slovakia – 4.62%, whereas for the selected “old countries”, EU members, respectively.: Ireland – 29.08%, Great Britain – 22.79%, Finland – 17.77%, Germany – 15.35%, and Sweden – 14.14%¹⁰.

3) Relatively low effects of inventive activity. According to GUS (Central Statistical Office), the number of inventions submitted to the Polish Patent Office was maintained at a low level for years, fluctuating around a figure of 2,000. In 2004, 1,794 patents were granted in Poland, which gives an indicator of 46.9 when converted to 1 mln of population.

4) In 2004, budget expenditure for science amounted to 0.31% GDP, whereas public one to 0.25% (5,155.4 mln PLN), i.e. 0.56 in total¹¹. When compared to the European Union (EU-25) in 2004, this indicator amounted to 1.9%, with most funds being granted to R&D in Sweden (3.74% GDP) and Finland (3.51%). The expenditure for R&D in Poland constituted thus only about 14% of average expenditure for R&D *per capita* in the European Union¹².

5) At the same time, the structure of expenditure for R&D studies in Poland according to financing sources is opposite to that stipulated by the Lisbon Strategy!

⁸ Ibidem, p. 18,

⁹ After GUS (Central Statistical Office), Science and Technology in 2004 (in Polish), Warszawa 2005,

¹⁰ After GUS (Central Statistical Office), Information on the innovation performance in foreign trade in 2006 (after EUROSTAT report) (in Polish), Warszawa 2007,

¹¹ Statistical Yearbook of the Republic of Poland 2005 (in Polish), GUS (Central Statistical Office), Warszawa 2006, p. 423,

¹² Vide EUROSTAT news release, 156/2005, 6 December 2005,

(2/3 of expenditure for R&D should come from outside the budget). In 2004, the majority of expenditure came from the state budget (61.7% of total expenditure in 2004), while economic entities participated only in 22.6% and foreign resources in 5.2%. On the other hand, the budget expenditure in EU-25 countries constituted about 25% of total expenditure for R&D, with the expenditure of private business being 54.3%¹³.

6) If one assumes that the level of investments in information and communication technologies is a measure of modernity, we can see that the value of those investments *per capita* in Poland in 2005 was at a level of EURO 374, whereas 563 in the Czech Republic, 639 in Hungary, with a mean value for EU-25 countries being EURO 1,376¹⁴, which is evidence of high undercapitalisation of information technology in Poland.

From the moment of Poland's accession to the EU, the sector of enterprises, in particular of small and medium-size (SME) ones, has obtained an opportunity of gaining financial resources within the offered support from the EU structural funds, for investment increase, modernisation, productivity improvement, export increase and international cooperation. It is estimated that small and medium-size enterprises have obtained a subsidisation in the amount of about PLN 4,536 mln, based on 21,898 applications submitted, within the Sectorial Operational Programme: *Increase of Enterprise Competitiveness 2004-2006*, which in the future should direct a huge potential residing in SMEs towards creation of new workplaces and increasing their contribution in generation of GDP.

In the Polish literature have been published a number of reports presenting some aspects of functioning of the Polish companies, in particular those referring to economy and enterprise innovation performance, while less interest, apart from professional mass media, has been aroused by enterprise business outlook and planning issues. No wonder that business optimism indicators presented (during 2006 and in particular in June and July 2007) have surprised many observers of the Polish economic scene. Although managers of the Polish companies, as stated by GUS (Central Statistical Office), are slightly more cautious in their statements, the total business outlook index in 2007 shows the upward trend, which is presented in Table 11. In the sector of industry, over 34% of surveyed have pointed out to improvement of company functioning conditions, whereas the number of negative responses has been maintained at a stable level of 9%. Even better results have been obtained in the poll for building engineering sector – only 40% of companies observe improvement in business outlook, while its worsening sees only 6%. Symptoms of a certain recession are pointed out by retail trade; the number of optimistic answers in this business line decreases decidedly, while that of statements

¹³ Report of budget execution in 2004 (in Polish), Ministry of Scientific Research and Information Technology, Warszawa, March 2005, p. 14,

¹⁴ Report of European Information Technology Observatory ICT Markets, March 2006,

anticipating the worsening of business outlook increases – the total index dropped to a level of 8%.

Tab. 11. Business outlook in industry and building engineering in January-July 2007 (in %).

Month	Industry	Building engineering
January 2007	19.8	25.1
February 2007	21.5	19.0
March 2007	24.4	23.5
April 2007	24.5	28.0
May 2007	23.8	32.3
June 2007	24.1	34.0
July 2007	23.0	34.0

Source: own elaboration based on GUS (Central Statistical Office) – current data,

Next determinant illustrating the increase of confidence of the Polish enterprises in favourable business outlook is investment credit boom, which has been maintained at a level of PLN 120 mrd for several years; on the other hand, a rapid investment growth occurred in the period of June 2006-June 2007, which is reflected by the fact that investments of large companies in the first quarter of 2007 were by 47% larger when compared with the same time period of 2006. According to NBP (National Bank of Poland) information, companies purchase mainly machinery and means of transport, but also buildings and structures, which is imposed by the requirement of production increase. For a part of borrowers, the credits do not serve a purpose of financing current purchases but, being left on bank accounts, are to support implementation of EU structural projects. For a microenterprise, the operational leasing becomes more and more frequently a source of fundraising. Within it, not only means of transport and machinery are leased, but also warehouses and immovable properties. The value of credits given to enterprises is presented on Table 12, while that of means given in lease in Table 13.

Tab. 12. Value of credits given to the Polish enterprises in 2004-2007 (data in mrd PLN at the end of a given time period).

Item.	Time period	Credits
1.	1st half of 2004	118.8
2.	2nd half of 2004	116.0
3.	1st half of 2005	120.1
4.	2nd half of 2005	119.2
5.	1st half of 2006	126.2
6.	2nd half of 2006	136.5
7.	1st half of 2007	153.8

Source: own elaboration based on NBP (National Bank of Poland)

Tab. 13. Value of means given in lease in 2000 – 2007 (in mrd PLN).

Item	Time period	Lease
1.	2000	7.6
2.	2001	8.3
3.	2002	11.1
4.	2003	13.8
5.	2004	14.2
6.	2005	16.3
7.	2006	21.6
8.	1st half of 2007	15.5

Source: own elaboration based on GUS (Central Statistical Office) and Lease Enterprises Federation

Recapitulation and conclusions

The problems connected with functioning of the Polish enterprises in free market economy are an important component of economic policy of the state in efforts after maintaining a high economic growth rate. Therefore, it is extremely important to understand the mechanisms that determine enterprise adaptive processes to the requirements of competition at the home market, within the European Union and in the global scale.

While evaluating enterprise adaptive processes in the transformation period, it should be emphasised that in spite of no support from the centre they were able to find their place in the market, although they encountered basic problems with obtaining such fundamental parameters as production and sale profitability, which in turn was reflected in low disposition to investment and reluctance or inability to introduction of new production techniques and technologies. A characteristic feature of the first stage of transformation was the use of simple reserves of production factors, which forced enterprises, under competition conditions at the home market and in international circulation, to search for restructurisation strategies, both on the side of production and sale and on the side of human factor.

A factor slowing down the rate of changes was the process of economic recession in Poland at the turn of 21st century, which revealed however that the enterprises being settled in the market for good could not only function, but also efficiently search for their place under conditions of intensified competition; this refers practically to enterprises from all sectors.

Acceleration of the Poland's economic growth in 2004 shows that the Polish enterprises, through obtaining a relative supremacy in low-advanced technologically production areas, can develop considerably their sale, which transposes to a visible improvement of all financial indicators as well as liberates investment processes.

Under conditions of the open market, however, a trouble task which enterprises will be facing in the perspective of the nearest 10 years is a distinct improvement of production innovation performance (i.e. to keep pace with the leading EU countries).

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- 16.The Lisbon Strategy, UE, Lisbon 2000,

Summary

Polish enterprises in free market economy – problems, challenges and barriers.

In the paper were discussed main problems connected with the functioning of the Polish enterprises in the market economy. The influence of changes in the state's macroeconomic policy was analysed on financial results of enterprises – from relatively low profitability of production, low level of investments, lack of interest in factors affecting the increase of enterprise competition (which occurred in 1990-2003) to clear economic growth in enterprises (rise in revenues and export, improvement of management efficiency indicators, increase of investment, increase of demand for credits and other forms of capital financing).

Underestimation of innovations in the macro scale, which are the motive power of modern economies open to the market, has been found a factor that can restrain development of enterprise in future (and the same that of the Poland's economic growth).

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