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The growth of the small and medium-sized enterprises in the Polish economy and their influence on the labour market

Abstract

The small and medium-sized enterprises and self-employment significantly contribute to pro-employment growth in the economy. The main aim of the paper is to describe the determinants of development of SME sector in Poland and to show its significance as a generator of jobs.

The article has been structure as follows. Section 2 provides the characteristics and importance of the small and medium-sized enterprises. Section 3 outlines the main provisions of the European Charter for Small Enterprises. Section 4 presents data illustrating SMEs' growth trends and significance in Poland in the years 2003-2007 by the type of an enterprise, employment, and the share in GDP, foreign trade and investment. Section 5 discusses government's policies towards utilising the sector's growth potential for Poland. Section 6 presents major conclusions derived from the earlier discussion.

1. Introduction

Measures expediting the establishment of new enterprises and a system promoting entrepreneurship are particularly important for Poland, as they would help improve the situation in the Polish labour market and support government's active policy on increasing employment and combating unemployment. They are

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indispensable for making adaptations necessary to follow the Community's guidelines ensuring the achievement of the European employment and entrepreneurship support policy's objectives through the European Charter for Small Enterprises.

Experiences of the developed EU member states show that small and medium-sized enterprises (SMEs) and self-employment significantly contribute to pro-employment growth in the economy. SME formation and growth boost entrepreneurial activity and promise a better labour market situation, because of the new, more productive jobs they create.

The article sets out to describe the significance of the SME sector as a generator of jobs and to present the prerequisites for the sector's growth in Poland.

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2. The characteristics and importance of the small and medium-sized enterprises

The SMEs can be distinguished from all other business organizations functioning in the economy based on their measurable properties and qualitative properties. The former have a quantitative character and consist of the size of employment, annual turnover and a balance sheet total.

Table 1. The quantitative criteria allowing the identification of the micro, small and medium enterprises

Criteria	Enterprises		
	Micro	**Small**	**Medium**
Number of employees	0–9	10–49	50–249
Annual turnover (in million euros)	2	10	50
Annual balance sheet total (in million euros)	2	10	43

Source: an excerpt from the Commission recommendation 2003/361/EC of 6 May 2003, Dz. U. L 124 of 20 May, 2003, p. 36.

The above criteria for identifying the micro, small and medium-sized enterprises have been in force in all member states since 1 January 2005[1]. An important aspect that makes SMEs special among other organizations is their qualitative characteristics, particularly the way they are managed, the in-house relations and the relations between them and their environment (Zadora, 2009, p. 18). Their owners usually perform executive and management roles, mainly within the operational sphere, at their own risk and responsibility. As far as their structure is concerned, SMEs are simple and informal, and the contacts with the employees are both diverse and direct (Safin, 2008, p. 39). SMEs usually do business in the local and regional markets and contact their customers without any intermediaries. Decisions are made promptly, production processes are flexible and the organizations themselves act independently of other entities. The SMEs' main source of finance is savings that the owners and their families have accumulated, because of the limited cooperation between financial institutions and the SME sector and the sector's difficulty in getting external funding.

The above allows drawing some conclusions on SMEs' significance for the economy. SMEs create new jobs, thus increasing employment and making society wealthier. Their direct contacts with customers enable them to respond quickly to the changing market demand, which additionally ensures a more

[1] The freedom of economic activity act of 2 July.2004 harmonised the Polish definition of the enterprises with the EC's regulation (Dz. U. 2004, no. 173, item 1807).

rational allocation of economic resources (Piasecki, 1998, p. 101). Besides, they function as a resource for the large firms, providing them with various goods and services in fields such as marketing, advertising, transport, data processing, and distribution of goods. Using local labour force and raw materials, SMEs help their regions grow. SMEs are more willing to employ people who are disadvantaged in the labour market (young and older persons, women). Because they are more adaptable and need less time to decide about entering into new areas of business activity, including innovation, they exert an increasingly strong influence on economic restructuring and competitiveness. Besides, SMEs help cushion economic crises.

3. Provisions of the European Charter for Small Enterprises

The European Charter for Small Enterprises was passed by the European Council in Santa Maria da Feira in June 2000 to ensure the effective implementation of the Lisbon Strategy's objectives concerning entrepreneurship development (Strategia Lizbońska (Lisbon Strategy), 2002, p. 10-11). The Lisbon Strategy follows two major lines of action, one addresses the regulatory obstacles to business while the other tackles the enterprise establishment process. The document additionally points up that the legal and administrative regulations should be coordinated and simplified for entrepreneurship development to receive appropriate support. Besides, the need to provide SMEs with better access to finance, mainly the micro loans, and new technologies is emphasised.

The European Charter for Small Enterprises makes the Lisbon Strategy's objectives more specific. Among the ten lines for action, there are the calls for solutions expediting the establishment of new enterprises and for giving them support, particularly in the start-up period. The main lines for action target the following areas (Strategia Lizbońska, (Lisbon Strategy) 2002, p. 202):

- education and training for entrepreneurship,
- cheaper and faster start up,
- better legislation and regulation,
- development of vocational education and long-life learning,
- improving on-line access,
- better conditions for the functioning of enterprises in the Single Market,
- simplification of tax systems and making funding more accessible,
- better access to new technologies,

- promotion of successful e-business models and top-class small business support,
- stronger representation of entrepreneurs' interests at the national and Community levels.

To expedite the implementation of the above priorities, the European Commission has obligated the member states to submit annual progress reports related to the European Charter for Small Enterprises. Besides, a report with the best practices is drawn up annually, for all EU member states to be able to use the best models and the most efficient ways of applying them.

At its summit held in Brussels between 20 and 21 March 2003, the European Council evaluated the progress in implementing the European Charter for Small Enterprises (Hardt, 2004, p. 55). It was agreed then that the laws and enterprise registration requirements were already significantly simplified. The member states reduced their registration charges and some of them even gave them up completely. The introduction of e-registration systems considerably shortened the time the entrepreneurs needed to register their organizations. It was admitted, however, that it was still necessary to improve the introduction of new technologies, simplify tax systems, facilitate access to finance, decrease operational risk and create entrepreneurial culture. Another recommendation concerned the necessity of spreading the idea of entrepreneurship among young people (secondary and tertiary students), who should be made ready to run their own firms. It was also acknowledged at the summit that the SMEs significantly contribute to the Community's economic growth and to the attainment of its employment policy's objectives, owing to the jobs they create and to their increasing competitiveness.

Poland approved the European Charter for Small Enterprises in April 2002. The Charter's lines for action are compatible with the Lisbon Strategy's objectives and they aim at helping SMEs grow. In implementing the lines for action, the structural funds will have an important role to play, as well as Polish enterprises' eligibility for aid under the EU programmes. An active government's policy towards this group of enterprises backed by policies implemented by local governments and the mobilisation of individual initiatives will also be necessary. In Poland and in other member states measures reducing the institutional and administrative, capital and educational obstacles are important to improve the conditions for starting and running SMEs and to boost their growth.

4. The SME sector's influence on the basic macroeconomic indicators in Poland

Entrepreneurial activity started expanding dynamically already in the first years of the systemic transition in the Polish economy, resulting in a fast growing number of micro, small and medium-sized private enterprises that became an important factor shaping the ownership restructuring processes in Poland and increasing the private sector's share and role in the economy. Moreover, owing to the jobs they created, the enterprises helped mitigate the negative economic and social effects produced by the liquidation and restructuring of the state-owned enterprises, such as mass redundancies and growing unemployment.

The growth of the SME sector in Poland shows quite strong, although varying dynamics.

Table 2. Enterprises entered into the REGON system in Poland between 2003 and 2007

Years	Total	0–9	10–49	50–249	>249
2003	3643992	3463245	144618	30106	6023
2004	3670915	3485970	149159	30029	5757
2005	3718521	3528198	154643	30174	5506
2006	3740741	3548677	156408	30219	5437
2007	3794422	3599259	159426	30266	5471
Year 2003 = 100					
2004	100.7	100.6	103.1	99.7	95.6
2005	102.0	101.9	106.9	100.2	91.4
2006	102.6	102.5	108.1	100.4	90.3
2007	104.1	103.9	110.2	100.5	90.8

Source: Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce w latach 2007–2008, the Polish Agency for Enterprise Development, Warsaw 2009, p. 265, calculated by the author.

Between 2003 and 2007, the total number of private enterprises registered in the REGON system increased by 4.1%; for the small enterprises the rate was 10.2%, but for the micro firms the increase was not so marked (less than 4%). The medium-sized organizations did not significantly change their number, growing by 0.5% only (160 new entities), and the number of the large ones decreased by 9.2% (by 552).

Table 3. The micro, small and medium enterprises as shares of all REGON-registered firms in Poland between 2003 and 2007 (%)

Year	Total	0–9	10–49	50–249
2003	100.0	95.0	3.9	0.8
2004	100.0	94.9	4.1	0.8
2005	100.0	94.9	4.1	0.8
2006	100.0	94.9	4.2	0.8
2007	100.0	94.8	4.2	0.8

Source: Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce w latach 2007–2008, the Polish Agency for Enterprise Development, Warsaw 2009, p. 265, calculated by the author.

With a rate ranging from 94.8 to 95%, the micro firms were the largest group among all registered private businesses. In the period 2004-2007, the micro and small firms together constituted 99% of the entire population of registered private firms. The shares of the medium and large organizations were stable (0.8% and 0.2%, respectively).

Not all enterprises filing for registration become really active organizations in the same year.

Table 4. The active SMEs as shares of the REGON-registered firms between 2003 and 2007

Years	0–9	10–49	50–249
2003	48.1	29.6	47.7
2004	47.4	29.7	46.6
2005	45.8	28.8	47.2
2006	46.6	28.3	48.7
2007	47.6	28.3	51.1

Source: see table 1, p. 266.

The data in table 4 show that less than half of the micro and medium-sized firms were active. In 2007 the situation was better than in the previous years, particularly regarding the share of the active medium-sized enterprises that exceeded 50%. The proportion of the active small enterprises in the registered population was relatively low, slightly exceeding 28%, but the fact that the rate stopped falling is a good sign.

Generally, measures are needed to support active functioning of the registered, micro, small and medium enterprises, as this approach will increase the number of steadier jobs in the Polish economy. It is worth noting that the share of

the active large organizations in their registered population was growing systematically between 2003 and 2007 (from 44.9 to 59.3%), thus contributing to a larger number of active jobs.

Table 5. Employment in the SMEs and in large enterprises in Poland between 2003 and 2007

Year	Total	Micro 0–9	Small 10–49	Medium 50–249	Large >249
2003	8,139,235	3,396,685	953,636	1,478,707	2,310,207
2004	8,160,688	3,383,470	967,301	1,461,519	2,348,398
2005	8,287,502	3,403,095	972,030	1,494,052	2,418,325
2006	8,556,132	3,474,574	976,451	1,542,386	2,562,721
2007	8,969,302	3,592,817	1,007,453	1,619,286	2,749,746

Source: Raport o stanie…, op. cit., p. 266.

Table 6. Employment dynamics in the SME sector in Poland between 2003 and 2007 (2003=100)

Enterprises	2003	2004	2005	2006	2007
Total	100.0	100.3	101.8	105.1	110.2
Micro	100.0	99.6	100.2	102.3	105.8
Small	100.0	101.4	101.9	102.4	105.6
Medium	100.0	98.8	101.0	104.3	109.5
Large	100.0	101.6	104.7	110.9	119.0

Source: calculated by the author based on data in table 5.

From the perspective of our discussion, it is important to evaluate SMEs' contribution to labour demand. Between 2003 and 2007, employment increased in the private sector by more than 830,000 people (10.2%). In the last year of the period, the micro, small and medium-sized organizations were employing 6,219,500 persons, i.e. by 390,500 more than in 2003. Interestingly, in the medium-sized enterprises employment grew considerably (by 9.5%) following the general rate of growth, because more organizations in this size category became active. The numbers of workers employed by the micro and small firms increased similarly in 2006 and 2007, i.e. by over 2% and 5%, respectively. The large organizations considerably augmented their employment, by around 440,000 people (19%), as a result of a growing number of active jobs.

Table 7. The SME sector's shares in total employment in Poland between 2003 and 2007 (%)

Enterprises	2003	2004	2005	2006	2007
Total	100.0	100.0	100.0	100.0	100.0
Micro	41.7	41.5	41.1	40.6	40.1
Small	11.7	11.8	11.7	11.4	11.2
Medium	18.2	17.9	18.0	18.0	18.1
All SMEs	71.6	71.2	70.8	70.0	69.4
Large	28.4	28.8	29.2	30.0	30.6

Source: calculated by the author based on data in table 5.

A look at employment structure in the selected years (see tab. 7) reveals the major change trends. Most people worked in the micro, small and medium enterprises that accounted for 69-71% of total employment. In other words, they employed more people than the large organizations. The micro firms' contribution to employment was the most significant (over 40%).

Table 8. SMEs' employment structure by economic section in Poland in 2007 (%)

Employed in	Micro	Small	Medium
Total	100.0	100.0	100.0
Manufacturing	13.3	35.2	50.5
Construction	11.8	10.4	9.6
Trade and repairs	35.9	29.7	18.7
Hotel and restaurants	4.0	3.3	1.4
Transport, storage and communication	7.5	4.7	5.1
Financial intermediation	2.4	0.5	0.4
Real estate and business services, science	14.3	9.9	10.9
Education	1.4	0.8	-
Healthcare and welfare	4.5	3.0	0.9

Source: Raport o stanie…, op. cit., calculated by the author.

In 2007, most persons employed by the micro firms (around 36%) traded and provided repair services, which is a natural consequence of the large number of micro firms in this section (over 33% of all micro forms). The second largest section was real estate and business services, which accounted for 14.3% of employment and for 17% of micro firms. Regarding the small, and especially the medium-sized enterprises, manufacturing and trade and repairs had the highest percentages of employment. The same sections also had the highest rates of

active organizations. There were 22% active small firms in manufacturing and over 20% in trade and repairs; for the medium-sized the rates were around 30% and 12%, respectively. The next sections were real estate and business services and construction, where employment varied within 9-10%.

Enterprises' growth is mainly driven by investment activity that improves their market position and helps deal with their competitors, as well as providing a rationale for modernising their production processes.

The investment activity of the micro, small and medium-sized enterprises is presented in table 9.

Table 9. SMEs' investment outlays and their dynamics in Poland between 2003 and 2007

Enterprises	2003	2004	2005	2006	2007
	in million zlotys				
Total	77,397	90,392	99,972	114,340	144,279.6
Micro	10,088	11,364	11,842	14,179	18,320.8
Small	10,680	11,689	10,613	12,845	15,826.6
Medium	16,259	21,944	21,703	28,041	34,759.2
Large	40,370	45,395	55,815	59,275	75,373.0
investment dynamics, 2003=100					
Enterprises	**2003**	**2004**	**2005**	**2006**	**2007**
Total	100.0	116.8	129.2	147.7	186.4
Micro	100.0	112.6	117.4	140.5	181.6
Small	100.0	109.4	99.4	120.3	148.2
Medium	100.0	134.9	133.5	172.5	213.8
Large	100.0	112.4	138.3	146.8	186.7

Source: Raport o stanie…, op. cit., p. 270, calculated by the author.

According to the data, the enterprises spent larger and larger amounts on investment projects in the analysed period. Between 2003 and 2007, the total investment spending of the micro, small and medium enterprises rose from 37,027 million to 68,906.6 million zlotys, being, however, still smaller than in the large enterprises. Investments were growing throughout the period, but in 2006 and 2007 their increases were the strongest vis-à-vis 2003, especially in the medium-sized enterprises, by 72.5% and 113.8%, respectively. The micro firms also assigned quite considerable amounts to investments (40.5% and 81.6% in the years 2006-2007), but in the small ones the trend was less distinct (20.3% and 48.2% in the same years).

Table 10. SMES' shares in total investment activity in Poland between 2003 and 2007 (%)

Enterprise	2003	2004	2005	2006	2007
Total	100.0	100.0	100.0	100.0	100.0
Micro	13.0	12.6	11.8	12.4	12.7
Small	13.8	12.9	10.6	11.2	11.0
Medium	21.0	24.3	21.7	24.5	24.1
Large	52.2	50.2	55.8	51.8	52.2

Source: Raport o stanie…, op. cit., p. 270, calculated by the author.

The micro and small enterprises decreased their share in the volume of investments between 2003 and 2007, from 26.8% to 23.7%, but the medium enterprises' share increased. In all the analysed years, the large enterprises accounted for the largest portion of investment activity (over 50%), owing to their eligibility for a wider range of financing options, including loans.

Poland's membership in the European Union gives enterprises more opportunities to export. In the group of exporters, the small and medium enterprises can also be found. Table 11 shows SMEs as the proportion of all exporting and importing organizations between 2007 and 2008.

Table 11. SMEs [a)] as the proportion of all exporters and importers in Poland between 2007 and 2008 (%)

Enterprises	2007	2008
Exporters		
Total	100.0	100.0
Small	46.7	45.8
Medium	40.4	41.7
Importers		
Total	100.0	100.0
Small	47.2	47.4
Medium	38.8	39.5

[a)] without micro firms (0-9 employees)

Source: calculated by the author based on J. Orłowska, Handel zagraniczny przedsiębiorstw MŚP w latach 2007-2008, [in:] Raport o stanie sektora…, op. cit., p. 48.

The table shows that between 2007 and 2008 the small and medium-sized enterprises increased their share in the total number of exporters from 87.1% to 87.5%, following the growing share of the medium-sized

organizations. The number of the small and medium-sized exporters grew larger, from 13,804 to 14,262. The SME sector's share in the group of importers also rose in the analysed years, from 86.0% to 86.9%. Most importers in the sector were small enterprises (7,677 in 2008) that outnumbered the medium ones (6,396 in the same year). The total number of importing SMEs also increased between 2007 and 2008, rising from 12,685 to 14,073 organizations.

The role the SMEs play in Poland's economy can be well illustrated by the sector's contribution to GDP.

Table 12. SMEs' shares in Polish GDP between 2003 and 2007 (%)

Enterprises	2003	2004	2005	2006	2007
Micro	32.0	31.3	31.4	31.0	30.1
Small	7.5	6.8	7.3	7.4	7.3
Medium	8.5	9.5	8.8	9.3	10.0
All SMEs	47.9	47.6	47.5	47.7	47.4

Source: Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce w latach 2007-2008, www.parp.gov.pl

Table 12 shows that SMEs contributed a relatively stable portion of GDP, exceeding 47% in the examined years. The contribution was the largest in 2003, around 48%, while in 2007 it was by 0.5 percentage points lower. The numerous active micro enterprises in the SME sector contributed over 30% of GDP, the medium sized accounted for ca. 9-10%, and the small ones for approx. 7-7.5%. Their shares prove that SMEs are moderately developed, so stimulation of their investment and innovative activities, and particularly providing them with modern IT and specialist knowledge seems recommendable. Notwithstanding the growing number of enterprises having computers with access to the Internet, the tool is still underutilised in their operations.

For private entrepreneurship to expand in Poland, the obstacles impeding the growth of the micro, small and medium enterprises must be overcome. The main types of the obstacles are (Kawecka-Wyrzykowska, Synowiec, 2004, pp. 155-160):

- insufficient availability of physical and financial capital,
- entrepreneurs lacking managerial skills (necessary to manage, market, innovate),
- low creditworthiness (this particularly hurts the micro firms),
- limited investment options,
- unsatisfactory quality of products and services.

The external factors, such as legislation and the current stage of the business cycle at home and abroad, also impose constraints. Their influence suggests that the SME sector could benefit from some systemic support measures.

5. Government's policy towards the SME sector

The SMEs' role and responsibility for job creation and generating labour demand are substantial. However, to motivate them to create jobs some specific requirements have to be met in order to release their growth potential. The requirements should help reconcile the long-term job creation mission with enterprises' current aim of earning profits (Golinowska 2004, p. 32-33).

The macroeconomic factors providing SMEs with growth opportunities consist of measures rationalizing public finance, ensuring investment-friendly tax systems, reducing the bureaucratic burden and red tape, strengthening institutions that support enterprises (Training and Advisory Centres, venture capital funds, incubators of entrepreneurship, technological parks), including better cooperation between the R&D sphere and the economy (Szczepaniec, Jurkiewicz, 2009, p. 34-41).

The SME sector will not be able to grow and create jobs, if the sector-specific requirements allowing the SMEs to have better chances of competing in the free, single European market are not met. The most important of the requirements are:

- extending the advisory system for entrepreneurs to cover all aspects of a running a firm. An SME owner has to perform several functions that the large organizations carry out through their dedicated personnel (marketing, IT, financial etc.), frequently having no specialist knowledge of all the areas;
- measures improving SMEs' access to capital by extending the loan guarantee fund system. The usually low value of their fixed assets, particularly in the micro and small firms, makes it difficult for them to present collaterals and get loans. A good example of such a system is venture capital funds;
- availability of important business information, e.g. on cooperation opportunities, export and innovation opportunities, laws in force in the single European market;
- pushing for the development of a business-friendly infrastructure;
- legislative changes reducing labour costs, particularly the non-wage costs;

- financial support for innovation and commercialisation activities, as well as the introduction of quality systems to enterprises;
- promoting the concept of businesses' ethical and social responsibility for job creation;
- SMEs' participation in the working out of vocational training programmes, as well as apprenticeship, internship and vocational preparation programmes to ensure their better fit with the local labour markets' demand.

Another objective in the government's policy for SMEs is supporting their export activities. Larger exports guarantee that output will grow too and that jobs will not only be retained but also created. For the objective to be achieved, the system providing export information and spreading knowledge about the legal and administrative requirements in the single EU market should be extended. Besides, the budget funds should be used to help the participation of the Polish SMEs in foreign exhibitions and the establishment of cross-border commercial cooperation. Moreover, the Export Credit Insurance Corporation should simplify the applicable rules, requirements and procedures so that export credit insurance becomes more available to SMEs.

An important factor for SMEs' growth is increasing investment outlays that the government's policy for the sector treats has assumed as one of its key objectives. Investments help SMEs improve their production potential, increase their contribution to GDP and competitiveness, and improve job creation. A special tax policy, new regulations for asset depreciation, strengthening of the credit guarantee funds and of the non-banking, financial institutions could enhance the desired pro-investment attitudes among the SMEs.

The government implements its policy for SMEs via the Polish Agency for Enterprise Development and local governments. The public employment service plays a special role in promoting and supporting entrepreneurship. Distributing the Labour Fund's resources, the service can support financially individual entrepreneurial projects and reimburse some SMEs' expenses involved in job creation[2]. The aspiring entrepreneurs are eligible for Labour Fund grants within, but not exceeding, 500% of the average wage and for the reimbursement of up to 80% of the documented costs of legal assistance, consultations and guidance. To receive a grant, a potential beneficiary does not have to present any collateral, however the grant must be spent as indicated.

The Labour Fund supports also SME employers by refunding their job creation or recruitment costs. The main forms of this support are the following:

[2] Based on the employment promotion and labour market institutions act of 20 April 2004, Dz. U. of 1 June 2004, No. 99, item 1001.

- a reimbursement of the new or additional equipment cost for a job to be done by a previously unemployed person, provided that it is a full-time job scheduled for a least 12 months; the reimbursement may not exceed 300% of the average wage;
- a single reimbursement of employer's costs due to social insurance contributions paid for an unemployed person referred to the employer;
- a partial reimbursement of the costs of wages, rewards and social insurance contributions paid for unemployed persons working under intervention works and public works schemes, within a predetermined amount.

Employers recruiting disadvantaged workers (the long-term unemployed, people under 25 years of age, the disabled, people aged 50+) are entitled to longer periods of employment cost reimbursement; for instance, persons aged 50+ can use intervention works for as long as 4 years. Then the costs of such persons' wages and social insurance contributions are subject to reimbursement and the employer is also entitled to a single grant for purchasing the necessary equipment for their new workers[3].

6. Conclusion

The above discussion allows formulating several conclusions summarising the presented data.

Regarding the formulation of the SME policy, measures promoting entrepreneurial activity and better environment for starting new firms are particularly important, as they influence the realisation of the pro-employment policy of economic growth.

Because the micro, small and medium-sized enterprises have been becoming more and more important for the Polish economy, further support for their growth is necessary in order to utilise their capacity for augmenting GDP and employment, making structural changes, as well as boosting competitiveness and innovativeness.

The numerous obstacles impeding the establishment and functioning of SMEs must be removed, if their development trend is to go on. The obstacles are

[3] The issues are dealt with in detail in the regulation of the Minister of the Economy and Labour of 13 July 2004 concerning the details of providing intervention works and public works, as well as the single reimbursement of expenses due to the payment of social insurance contributions, Dz. U. 2004, no. 161, item 1683.

mainly: legal, administrative and fiscal, impeding access to capital, information, technologies, guidance, knowledge and innovation.

Promoting entrepreneurship as a valuable and effective form of economic activity, which is especially suitable for young persons, the unemployed and people at risk of unemployment, calls for improving education and training in entrepreneurship, creating an entrepreneurial culture in society, and for giving support by the public employment service. Under the Employment Promotion and Labour Market Institutions Act, the entrepreneurs can be granted star-up grants and reimbursement of expenses they have incurred due to legal assistance, consultation and guidance, and of costs involved in the creation of jobs and increasing firm's workforce.

With Poland becoming a EU member, the Polish small and medium-sized enterprises have become eligible for EU programmes, instruments and structural funds that are dedicated to supporting their growth. Financial aid covers measures helping the SMEs increase their export shares, facilitating new investments, improving human resource quality and creating new jobs.

References

Golinowska S. (ed.) (2004), *W trosce o pracę. Raport o Rozwoju Społecznym Polska 2004*, UNDP, CASE, Warsaw

Hardt Ł. (2004), *Zakładanie biznesu w Unii Europejskiej*, UKE, Warsaw

Kawecka-Wyrzykowska E., Synowiec E. (ed.) (2004), *Polska w Unii Europejskiej*, Instytut Koniunktur i Cen Handlu Zagranicznego, Warsaw

Piasecki B. (1998), *Przedsiębiorczość i mała firma. Teoria i praktyka*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź

Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce w latach 2003–2004 (2005), 2007–2008 (2009), Polska Agencja Rozwoju Przedsiębiorczości, Warsaw

Regulation of the Minister of the Economy and Labour of 13 July 2004 concerning the details of providing intervention works and public works, as well as the single reimbursement of expenses due to the payment of social insurance contributions, Dz. U. 2004, no. 161, item 1683

Safin K. (2008), *Zarządzanie małym i średnim przedsiębiorstwem*, Wydawnictwo Akademii Ekonomicznej im. Oskara Langego we Wrocławiu, Wrocław

Strategia Lizbońska - droga do sukcesu zjednoczonej Europy (2002), UKE, Warsaw

Szczepaniec M., Jurkiewicz T. (2009), *Kapitał ludzki a innowacje w małych i średnich firmach*, 'Gospodarka Narodowa', No. 11-12

Employment promotion and labour market institutions act of 20 April 2004, Dz. U. of 1 June 2004, No. 99, item 100

Zadora H. (2009), *Finanse małego przedsiębiorstwa w teorii i praktyce zarządzania*, Wydawnictwo C. H. Beck, Warsaw

Streszczenie

ROZWÓJ MAŁYCH I ŚREDNICH PRZEDSIĘBIORSTW W GOSPODARCE POLSKIEJ I ICH WPŁYW NA RYNEK PRACY

Istotną rolę w realizacji prozatrudnieniowego wzrostu gospodarczego odgrywają małe i średnie przedsiębiorstwa oraz zatrudnienie na własny rachunek. Powstawanie i rozwój podmiotów gospodarczych w ramach sektora MSP jest wyrazem rosnącej przedsiębiorczości i daje szanse na poprawę sytuacji na rynku pracy przez tworzenie nowych, bardziej trwałych i produktywnych miejsc pracy.

Celem opracowania jest określenie głównych czynników determinujących rozwój małych i średnich przedsiębiorstw w gospodarce polskiej, ze szczególnym uwzględnieniem ich znaczenia w tworzeniu zatrudnienia.

W opracowaniu omówione są ilościowe i jakościowe cechy małych i średnich przedsiębiorstw, z ukazaniem zalet tych podmiotów. Zaprezentowane są postanowienia Europejskiej Karty Małych Przedsiębiorstw, wskazujące główne kierunki działań niezbędnych do pokonania barier ograniczających powstanie i funkcjonowanie sektora MSP. Przy pomocy danych statystycznych zaobserwowano zmiany w liczbie zarejestrowanych i aktywnych mikro, małych i średnich przedsiębiorstw oraz ich udział w tworzeniu zatrudnienia, PKB, w inwestycjach i handlu zagranicznym w Polsce w latach 2003-2007. Na tej podstawie zostały wskazane główne bariery ograniczające rozwój sektora MSP i kierunki działań państwa wobec tego sektora w Polsce warunkujące wykorzystanie jego potencjału rozwojowego.

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The European Social Fund's influence on labour supply in Poland

Abstract

The article analyses the use and distribution of the European Social Fund's resources among the Polish regions and identifies the target groups of their beneficiaries. Operations undertaken by offices on labor market are very important not only locally but also regionally. Available forms support creation of work places, help people without professional experience to get or develop new qualification. It is proper to continue mention effects and encourage potential assigns for participation in projects.

1. Introduction

The article analyses the use and distribution of the European Social Fund's resources among the Polish regions and identifies the target groups of their beneficiaries.

Because Poland's entry into the European Union made the country eligible for ESF funds, it is worth analysing how they contribute to job creation, encourage individuals to start up businesses and activate the long-term unemployed persons, including those threatened by social exclusion. The analysis is based on information derived from publications and reports made available by the Ministry of Regional Development.

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2. The European Social Fund

The European Social Fund is the first structural fund established by the European Community in 1957. Today, it has become the main EU's instrument for implementing its social policy[4], including the Lisbon Strategy's assumptions, by improving access to employment and by „creating numerous and better jobs"[5]. The ESF' activities cover:

- active labour market policy,
- general development of life-long learning,
- improvement of human resources and of entrepreneurship,
- prevention of social exclusion and promotion of new employment opportunities,
- economic activation of women.

The active labour market policy is intended to prevent unemployment and enable the long-term unemployed to re-enter the labour market, as well as supporting young persons entering the labour market for the first time. The general development of life-long learning aims at making jobs more accessible and improving workers' occupational mobility. The third activity, improvement of human resources and entrepreneurship, is expected to encourage organizational and management change as well as the introduction of innovative solutions increasing economy's international competitiveness. Prevention of social exclusion and promotion of new employment opportunities for groups of population that need special support are an equally valid objective. It is worth noting that some of the listed activities are directed to persons that are long-standing beneficiaries of social welfare. Last but not least, the economic activity of women is intended to reduce sex discrimination in the labour market and improve their access to jobs.

In the years 2004-2006, the ESF financed in Poland projects developed under the Human Resource Development Sectoral Operational Programme (HRD SOP), the Integrated Regional Operational Programme (IROP) – Priority II – and the EQUAL Community Initiative. All activities were designed within

[4] See A. Budzyńska, M. Duszczyk, M. Garncarz, E. Gieroczyńska, M. Jadczak, K. Wójciak, Strategia Lizbońska drogą do sukcesu zjednoczonej Europy, Warsaw 2002, p. 11 and next.

[5] Regulation (EC) no. 1081/2006 of the European Parliament and of the Council of 5 July 2006 on ESF and repealing regulation (EC) no. 1784/1999 O.J. L 210 of 31 July 2006, p. 13.

the framework of the National Development Plan (NDP) 2004–2006. Strategically, the NDP aimed to „create a competitive economy based on knowledge and entrepreneurship, having the capacity for long-term, harmonious growth, ensuring job creation and improvement of the social, economic and spatial cohesion with the European Union at the regional and local levels". Hence, some of the HRD SOP's objectives built on the European Employment Strategy's priorities emphasised the need to:

- increase employment,
- improve entrepreneurship,
- facilitate employers and employees' adaptation to the labour market's varying needs (J. Skrzypczyk (ed.), Warsaw 2005, p. 101).

The ESF's resources were also used for financing the activities of the EQUAL Community Initiative for Poland 2004-2006[6]. The Initiative emphasised creation of new jobs and making them equally available to everyone. Its projects helped the unemployed enter the labour force, improved the female workers' status in the labour market, made it easier for persons withdrawing from agriculture and threatened by unemployment to find new jobs, and mitigated the adversary effects of long term-unemployment.

At present, the activities addressed to the labour market are correlated with the Human Capital Operational Programme (HCOP), while pursuing the objectives of the National Strategic Reference Framework 2007-2013 (NSRF)[7]. The HCOP puts the main stress to „increasing employment and economic cohesion" and its specific objectives are the following[8]:

- adjusting the numbers of workers to the changing situation in the labour market,
- reducing the areas of social exclusion,
- raising the level and quality of education and making it relevant to the labour market,

[6] Regulation of the Minister of the Economy and Labour of 11 August 2004, Dz. U. 189 item 1948.

[7] More in: Council's regulation (EC*)* no. 1083/2006 of 11 July 2006 laying down general provisions on the ERDF, ESF and CF and repealing the regulation (EC) no. 1260/1999, O. J. L 210 of 31 July, 2006, p. 43-52.

[8] See J.W. Tkaczyński, R. Willa, M. Świstak, Fundusze Unii Europejskiej 2007-2013, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2008, p. 493 and next.

- spreading education in society while improving the quality of educational services and ensuring their better fit with what the economic needs,
- improving the public administration's capacity for policy development and the delivery of services,
- enhancing territorial cohesion.

The ESF provides 85% of the HCOP's budget and the remaining 15% are provided by the domestic sources[9]. The budget is € 11,420 million, so the ESF contributes over € 9,707.1 million[10]. The Human Capital Operational Programme is divided into 10 Priorities that are executed simultaneously at the central and regional levels[11]. This article only deals with the regional HCOP projects providing direct assistance for individuals and social groups in the regions[12], excluding priority IX. Consequently, the analysis concentrates on activities related to Priority VI (the labour market open to all), Priority VII (promotion of social integration), and Priority VIII (regional human resources for the economy).

After setting the analytical context, it is worth identifying which target groups receive assistance, as well as its forms. For instance, the Priority VI projects are available to[13]:

[9] The HRD SOP is funded in the same way, i.e. ESF – 85% and domestic sources – 15%.

[10] Sprawozdanie roczne z wdrażania PO KL 2007-2013 za rok 2008 (The Annual 2008 Report on the Implementation of HCOP 2007-2013), p. 4, www.efs.gov.pl

[11] The central component covers Prioritises I-V and the regional component priorities VI-IX. The following Priorities are implemented under HCOP: I – Employment and social integration, II – Development of human potential and adaptation potential of enterprises and improving the health condition of working persons, III – High quality of the educational system, IV – Tertiary education and science, V – Good governance, VI – Labour market open to all, VII – Promotion of social integration, VIII – Regional human resources for the economy, IX – Development of education and competencies in the regions.

[12] See Program Operacyjny Kapitał Ludzki, (Human Capital Operational Porgramme), Warsaw 2007, p. 159.

[13] See Zasady udzielania pomocy publicznej w ramach Programu Operacyjnego Kapitał Ludzki, (The Rules for Granting Public Aid Under the Human Capital Operational Programme), Ministry of Regional Development, Warsaw, 12 January 2009, p. 29-32.

- unemployed persons (including persons registered as unemployed or job-seekers) that in the last 2 years have been jobless longer than 12 months in total, women (re-entering the labour force or entering it for the first time after childbirth and child-raising period), persons under 25 years of life, the disabled, persons aged 45+, unemployed persons living in rural / urban and rural communes,
- persons wishing to start up businesses,
- labour market institutions (county labour offices) and their personnel,
- institutions dealing in human resource development.

The following Priority VI activities are worth emphasising[14]:

- delivery of workshops and training in active job-seeking techniques,
- psychological and advisory services for persons entering and re-entering the labour market,
- placement services and/or vocational counselling,
- apprenticeships/internships,
- training designed to improve, supplement or provide the workers' with new occupational skills,
- subsidised employment,
- one-off mobility allowances for workers getting jobs farther than 50 km from their place of residence as a result of project assistance,
- support for voluntarism as an activity preparing people for taking jobs,
- grants up to 40,000 zlotys (or 20,000 zlotys per person in a cooperative or a social cooperative[15]) to stimulate entrepreneurship development,

[14] Priority VI also provides for:

- promotional and information campaigns encouraging employers to recruit persons from groups having special situation in the labour market,
- preparation and dissemination of information about available jobs, training and apprenticeship oportunities,
- training for the personnel of the labour market institutions functioning in the region,
- diagnosing training needs and vocational training opportunities in the region.

[15] The funds for setting up a cooperative or a social cooperative are available provided that all the cooperative's shareholders have graduated from a relevant project.

- bridging finance available to entrepreneurs during the first 6 / 12 months from starting a business[16],
- spreading and promoting alternative and flexible forms of employment as well as work organization methods (e.g. teleworking, part-time jobs, job rotation).

Priority VII is for projects that „help people at risk of social exclusion to enter the labour market and developing social economy institutions"[17]. Its beneficiaries are the personnel and customers of social welfare institutions and businesses of any organizational and legal form offering jobs to persons threatened by social exclusion as part of the subsidised employment projects[18]. Regarding the first type of the beneficiaries, measures are undertaken to improve the skills of the personnel providing welfare and social integration services. As far as the second type is concerned, a system of incentives is available, encouraging the economic activity of persons threatened by unemployment and social exclusion[19]. Worth noting are the activation measures improving workers' employability through social employment, training and occupational reintegration activities provided by the employer.

The Priority VIII projects are directed to the managerial staff and employees wishing to improve their skills or retrain. The following forms of assistance are notable[20]:

- general and specialist training, as well as guidance on training relevant to managers and non-managerial personnel, i.e. in management, implementation of environmentally-friendly manufacturing technologies, application of ICT, etc.,
- training and consultation for entrepreneurs facilitating business reprofiling,

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[16] The bridging finance is paid on a monthly basis to persons who started businesses in connection with the given project. Its amount may not exceed a half of the minimal wage as on the grant payment date. Additionally, the beneficiaries are advised on and assisted in using the grant effectively.

[17] Quoted after Zasady udzielania pomocy publicznej w ramach Programu Operacyjnego Kapitał ludzki, (The Rules for Granting Public Aid under the Human Capital Operational Programme), Ministry of Regional Development, Warsaw, 12 January 2009, p. 33.

[18] Quoted after Zasady udzielania pomocy publicznej w ramach Programu Operacyjnego Kapitał Ludzki, (The Rules for Granting Public Aid under the Human Capital Operational Programme), Ministry of Regional Development, Warsaw, 12 January 2009, p. 34.

[19] Sprawozdanie roczne z wdrażania PO KL za rok 2008 (The Annual 2008 Report on HCOP Implementation), p. 16. www.efs.gov.pl

[20] More in Zasady udzielania pomocy publicznej w ramach Programu Operacyjnego Kapitał ludzki, (The Rules for Granting Public Aid Under the Human Capital Operational Programme), Ministry of Regional Development, Warsaw, 12 January 2009, p. 36-39.

- advising the micro, small and medium-sized enterprises on economic, financial and HRM issues, excluding investment,
- temporary employment of the high-skilled specialists in the SMEs, including traineeships and practical training for entrepreneurs and employees in research institutions and researchers' training in enterprises.

3. Description of expenditures

In the programming period 2007-2013, the following amounts of funding have been allocated to priorities analysed in this article[21]:

- VI – The labour market open to all – € 2,256.9 million
- VII – Promotion of social integration– € 1,552.9 million
- VIII – Regional human resources for the economy – € 1,588.5 million

Among the regions, the Mazowieckie and Śląskie voivodeships received the largest allocations, while the Lubuskie and Podlaskie voivodeships were granted the smallest amounts.

[21] See Sprawozdanie roczne z wdrażania PO KL za rok 2008, (The Annual 2008 Report on HCOP Implementation), p. 5. www.efs.gov.pl

Table 1. Financial allocations to regions under HCOP's Priorities VI, VII and VII (in million euros, years 2007-2013)

Voivodeship	Human Capital Operational Programme – Priorities		
	VI	VII	VIII
	Funds in million euros		
Dolnośląskie	154.2	106.1	108.6
Kujawsko-pomorskie	127.3	87.6	89.6
Lubelskie	162.7	111.9	114.5
Lubuskie	56.8	39.1	40.0
Łódzkie	160.2	110.2	112.7
Małopolskie	187.7	129.1	132.1
Mazowieckie	288.3	198.3	202.9
Opolskie	55.4	38.1	202.9
Podkarpackie	137.4	94.5	38.9
Podlaskie	82.8	56.9	96.7
Pomorskie	119.3	82.1	58.2
Śląskie	234.6	161.4	83.9
Świętokrzyskie	100.9	69.4	165.1
Warmińsko-mazurskie	99.4	68.4	71.0
Wielkopolskie	192.6	132.5	69.9
Zachodniopomorskie	97.4	67.0	135.5
Poland	2 256.9	1 552.9	1 588.5

Source: Developed by the author based on Sprawozdanie roczne z wdrażania PO KL 2007-2013 za rok 2008, p. 12 , www.efs.gov.pl

The total number of competitive calls for proposals advertised by the end of 2008 in connection with the HCOP was 393, including 373 within the regional component. Most of them were announced in the Warmińsko-mazurskie (32) and Dolnośląskie (29) voivodeships, while the Świętokrzyskie and Opolskie voivodeships accounted for their lowest numbers (17 and 16, respectively)[22]. During the first half of 2009, 209 additional competitive calls for proposals were announced in the regions, mainly in the Dolnośląskie (51),

[22] *Sprawozdanie roczne z wdrażania PO KL 2007-2013 za rok 2008,* (The 2008 Annual Report on the Implementation of HCOP (2007-2013), p. 26, www.ESF.gov.pl

Warmińsko-mazurskie (45) and Łódzkie (43) voivodeships, while Opolskie (30), Świętokrzyskie (31), and Zachodniopomorskie (32) voivodeships were at the low end of the scale. As on 30 June 2009, 17,446 applications for projects carrying out Priorities VI-VIII were formally reviewed, but only 7,795 contracts were signed.

Table 2. The numbers of HCOP projects by Priority as on 30 June 2009

Priority	Formally reviewed projects**		Contracts signed	
	No.	ESF contribution (in billion zlotys)	No.	ESF contribution (in billion zlotys)
VI	7 801	6.5	1 690	3.0
VII	9 549	3.4	2 985	0.9
VIII	10 096	6.9	3 120	2.4

Source: Developed by the author based on Sprawozdanie okresowe za I półrocze 2009, z realizacji PO KL, p. 10, www.efs.gov.pl

By the end of June 2009, 7,801 applications for the funding for Priority VI projects were positively verified, totalling ca. 7.7 bn zlotys (with the external contribution standing at around 6.5 bn zlotys), which accounted for 75.6% of the 2007-2013 allocation[23]. Most of the applications (3,876) were submitted in connection with Sub-measure 6.1.1. *Supporting unemployed persons in the regional labour market.* Among the successful applications, 3,438 were cleared for execution. The voivodeships where the numbers of applications with approved content were the highest were the Śląskie (427), Mazowieckie (365) and Pomorskie (332) voivodeships, while in Opolskie (83), Lubuskie and Świętokrzyskie the fewest numbers of applications were given the green light (109 each). Unfortunately, only 1,690 contracts for project funding estimated at almost 3 bn zlotys (30.1% of the 2007-2013 allocation) were signed under Priority VI before 30 June 2009. The largest numbers of the Priority VI contracts were concluded in the Śląskie (203), Mazowieckie (175) and Łódzkie (166) voivodeships. In Opolskie and Lubuskie, their numbers were the lowest (40 and 45, respectively). The following voivodeships: Wielkopolskie (20.3%), Mazowieckie (21.2%) and Lubuskie (22.8%) were found to have the lowest rates of allocation utilisation[24].

[23] *Sprawozdanie okresowe za I półrocze 2009 z realizacji PO KL,* (The Interim Report on HCOP Implementation in the first half of 2009), p. 14 , www.efs.gov.pl

[24] Ibidem, p. 14.

The Priority VII projects received € 1,552.9m from the allocation for the years 2007-2013. Until the end of the first half of 2009, 9,549 applications for project funding totalling 3.5bn zlotys (the external contribution was 3.4 bn zlotys), i.e. 49.4% of the 2007-2013 allocation, were found to meet the formal requirements. After verification, contracts for the funding of 2,985 projects were signed, estimated at 947 million zlotys in total (13.6% of the 2007-2013 allocation)[25]. Most of them involved strategic projects – 1,972. The rates of contracts were the highest in the Śląskie (21.4%,) Warmińsko-mazurskie (20.2%) and Zachodniopomorskie (19.4%) voivodeships, while the lowest in the Mazowieckie voivodeship, where the concluded contracts were estimated at 8.1% of the voivodeship's allocation for the years 2007-2013, as well as in the Lubuskie and Wielkopolskie voivodeships[26].

HCOP's Priority VIII has been allocated € 1,588.5 million. By the end of June 2009, 10,096 applications for project funding totalling 8.2 bn zlotys (i.e. 14% of the 2007-2013 allocation) were accepted as meeting the formal requirements. Only 3,120 applications estimated at over 2.4 bn zlotys were given the green light, though. In the same period, 1,165 contracts for project funding were signed[27], mainly in the Lubelskie (148), Wielkopolskie (100) and Małopolskie (92) voivodeships, while in the Lubuskie (23) and Łódzkie (49) voivodeships contracts were concluded the least frequently. The highest rates of contracts can be found in the Małopolskie (20%), Opolskie (19.8%) and Świętokrzyskie (19.3%) voivodeships, and the lowest in Lubuskie (5.4%) and Łódzkie (6.3%)[28].

Each Priority, including Priorities VI-VIII analysed in this document, provides for the execution of two types of projects, i.e. strategic and competitive, that involve different procedures for application submission and evaluation. For instance, the strategic projects can be submitted by county labour offices, welfare centres and counties' family assistance centres, as well as other entities. The range of beneficiaries allowed to apply for the other type of projects includes county labour offices, training institutions, entrepreneurs, business support institutions, NGOs, and institutions within the school and tertiary education system. In total, 143 competitive calls for proposals were announced under Priority VI by 30 June, mainly in the Dolnośląskie (14), Łódzkie (13) and

[25]Ibidem, p. 15.

[26]Ibidem, p. 16.

[27]Ibidem, p. 17.

[28]Ibidem, p. 17.

Mazowieckie (11) voivodeships, but only 39 in relation to Priority VII[29]. Most contracts were concluded in the Łódzkie voivodeship (166 estimated at 35.8m zlotys), while in the Opolskie voivodeship, their number was the lowest (9 contracts totalling 4.9 million zlotys). In the analysed period, 153 competitive calls for proposals under Priority VIII were judged[30]. Most calls for proposals were announced in the Dolnośląskie (13), Podkarpackie (12) and Śląskie (12) voivodeships, while in the Łódzkie and Pomorskie voivodeships their numbers were the lowest (5 and 7, respectively).

The strategic projects covered by Priority VI are carried out in connection with Sub-measure 6.1.3 *Improving employability and increasing economic activity of unemployed persons*. The projects should boost economic activity, as well as improving employability of the unemployed and economic activity in particular regions. The range of the projects' beneficiaries includes county labour offices offering instruments and services specified in the *Employment Promotion and Labour Market Institutions Act* of 20 April 2004 (Dz. U. No. 99, item 100, as amended). Besides, the strategic mode provided under Priority VI is available to the Intermediate Bodies and the 2nd level Intermediate Bodies to implement their own projects carrying out Sub-measures 6.1.1 and 6.1.2. In all voivodeships, the welfare centres and the counties' family assistance centres execute their projects under Priority VII (Sub-measures 7.1.1 and 7.1.2). The strategic projects covered by the two Sub-measures aim to develop and promote the forms of active integration, as well as social work, while the Sub-measure 7.1.3 projects emphasise training – the projects' beneficiaries are the personnel of welfare centres and counties' family assistance centres providing the welfare and social inclusion services. By the end of June 2009, 1,972 contracts for strategic projects were signed[31]. As far as Priority VIII is concerned, the strategic projects are described within Sub-measures 8.1.4 *Anticipation of economic change* and 8.2.2 *Regional Innovation Strategies.* The first Sub-measure provides for projects investigating and analysing the current situation and development trends, forecasting socio-economic changes in the region,

[29] Priority VII applies the competitive call for proposal mode to projects covered by Measure 7.2 *Prevention of exclusion and strengthening the social economy sector* and Measure 7.3 *Local initiatives for active integration*.

[30] Under Priority VIII, competitive calls for proposals are announced in relation to Sub-measure 8.1.1 *Support for labour force upskilling and counselling for enterprises*, Sub-measure 8.1.2 *Support for the adaptation and modernisation processes in the region*, Sub-measures 8.1.3 *Supporting local partnership for adaptability* and Sub-measure 8.2.1 *Support for cooperation between science and enterprises*.

[31] *Sprawozdanie okresowe za I półrocze 2009, z realizacji PO KL,* (The Interim Report on HCOP Implementation in the First Half of 2009), p. 14*,* www.efs.gov.pl

proposing appropriate remedial mechanisms and disseminating research results. By the end of 30 June, 2009, 51 contracts for strategic projects linked with Priority VIII were signed[32].

4. The numbers of projects' participants

The numbers of people benefiting from the HCOP projects will be characterised using the following attributes: individual's labour force status, age and education.

By the end of June 2009, the HCOP projects served 807,317 people, with women accounting for 58.2% (470,260) and men for 41.8% (337,057). Unfortunately, only 46.4% of the participants (374,504, including 219,686 females) followed through the projects. As many as 26,422 people (10,944 men and 15,428 women) dropped out along the way. It is worth noting that on 30 June 2009 406,391 people (including 235,145 women), i.e. 50.3%, continued their project activities[33].

Table 3. The numbers of persons using HCOP's activating projects on 30 June 2009 by labour force status

Labour force status	As a share of assisted persons (%)	Total	Women	Men
Economically non-active	39.6	320 152	165 830	154 322
Unemployed	37	298 410	187 775	110 635
Employed	23.4	189 755	116 652	73 103

Source: Developed by the author based on *Sprawozdanie okresowe za I półrocze 2009 z realizacji PO KL*, p. 53-59, www.efs.gov.pl

As shown by the structure of the project participants' labour force status, 320,152 beneficiaries were economically inactive (39.6%), but as much as 87.6% of them were learners. Among the regions, the largest number of the economically inactive persons used projects delivered in the Warmińsko-mazurskie voivodeship (35,458), while in the Dolnośląskie voivodeship their

[32] *Sprawozdanie okresowe za I półrocze 2009, z realizacji PO KL,* (The Interim Report on HCOP Implementation in the First Half of 2009), p. 57*,* www.efs.gov.pl

[33] *Informacja miesięczna z realizacji PO KL (wg stanu na 30.06.2009),* (Monthly Information on HCOP Implementation (as on 30 June 2009), p. 43, www.efs.gov.pl

number was the lowest (5,741). The second largest group of beneficiaries was the unemployed – 298,410 people (37% of the assisted population). Among the unemployed, 32.9% were the long-term unemployed (98,117, including 69,141 women). The largest number of the unemployed beneficiaries was noted in the Śląskie voivodeship (34,505) and the smallest in the Lubuskie voivodeship (4,469). By the end of June 2009, projects attracted also 188,755 employed persons (23.4% of the participants), mostly in the Wielkopolskie voivodeship. Regarding the employed, the most willing to join projects were persons working in enterprises (93,973, including 45,540 women) and then in public administration institutions (52,782, including 41,895 women). The smallest groups of project beneficiaries were found among self-employed persons (2,404, including 1,198 women), NGOs' personnel (3,479 and 2,483) and farmers (8,432 and 4,433).

Table 4. The numbers of people using HCOP's activating projects on 30 June 2009 by age

Age	As a share of assisted persons (%)	Total	Women	Men
15-24	34.6	279,608	167,645	121,963
55-64	3.4	27,580	14,529	13,051

Source: Developed by the author based on: *Sprawozdanie okresowe za I półrocze 2009, z realizacji PO KL,* pp. 53-59, www.efs.gov.pl

The HCOP places special emphasis on two age groups whose situation is particularly difficult, i.e. people aged 15-24 years and 55-64 years. On 30 June 2009, the first group of project participants had 279,608 members, which represented 34.6% of all persons participating in the HCOP projects. As far as the regions are concerned, the Lubelskie voivodeship and the Warmińsko-mazurskie voivodeship had the largest numbers of young project participants (23,985 and 23,689, respectively), while in the Dolnośląskie voivodeship, such beneficiaries were the fewest (8,947*).* As for the older age group, the projects covered 27,580 people that accounted for merely 3.4% of all population participating in the HCOP projects; the largest group of project beneficiaries was noted in the Lubelskie voivodeship (2,987), while the Lubuskie voivodeship projects were used by 283 persons only.

Table 5. The numbers of persons using HCOP's activating projects on 30 June 2009 by education

Education	As a share of assisted persons (%)	Total	Women	Men
primary, lower secondary education or lower	39.7	320,158	164,799	155,359
upper secondary	32.1	259,258	152,926	106,332
post-secondary	9.1	73,232	47,679	25,553
tertiary	19.2	154,669	104,856	49,813

Source: Developed by the author based on: *Sprawozdanie okresowe za I półrocze 2009 z realizacji OP HC*, pp. 53-59, www.efs.gov.pl

The largest group of people that joined the HCOP projects had primary, lower secondary or lower education. There were 320,158 of them and they constituted 39.7% of all project participants. The second largest group consisted of 259,258 people with upper secondary education representing 32.1% of the project population. People with tertiary education accounted for 19.2% (154,669 people) and those with post secondary education for 9.1% (73,232 people). Most people participated in the projects in the Warmińsko-mazurskie and Wielkopolskie voivodeships (68,482 and 54,487, respectively), while the Lubuskie voivodeship had the smallest number of project participants (24,319). Among the project-assisted population, the rural residents (33% – 266,353 people including 158,631 females) and the disabled (10,359 women and 8,742 men) also represented large groups.

Because this report deals with the assistance available under HCOP's Priorities VI, VII, VIII, it gives below the actual numbers of project beneficiaries.

The Priority VI projects are devised to support unemployed workers registered at the county labour offices (these people accounted for 93.3% of all project participants), with special attention being given to the long-term unemployed at risk of social exclusion. In other words, the following persons are eligible for support under Priority VI: aged 15-24 years, without occupational experience and skills making them employable, women (particularly single mothers), persons aged 50-64 years that have problems with adapting

themselves to the varying labour market requirements and the disabled[34]. It is out of the question that these categories of population have the greatest difficulty in both entering the labour force and retaining their jobs.

By the end of June 2009, the Priority VI projects were joined by 267,993 people (166,598 women and 101,395 men), with 85,227 people signing up for the projects in the first half of 2009. 68.7% of the project participants (i.e. 184,208, including 110,139 females) followed the projects through. Unfortunately, 6.7% (18,029, women rather than men) dropped out. In the second half of 2009, 65,756 people were still involved in their project activities. Among the persons supported by Priority VI, the unemployed were the largest group: 153,753 women and 96,351 men. In this group, approximately 29% were the long-term unemployed (every third woman and every fourth man). Another group of project beneficiaries was 12,375 economically inactive persons (8,853 women and 3,522 men), in which number 2,172 people were learners. It is worth noting that the employed, farmers and self-employed were also assisted. Unfortunately, the groups were small, the first of them comprising only 5,514 (3,989 women), the second 838 and the third merely 52 participants. Among the project participants, the rural residents numbered 111,700 people (including 69,634 females). As for the regions, most project participants were involved in the projects in the Śląskie voivodeship (31,034, i.e. ca. 11.6% of all population benefiting from the Priority VI projects in Poland) and then in the Podkarpackie (24,237) and Mazowieckie (20,513) voivodeships. Almost every second project beneficiary was a young person. Regarding education, most participants in the first half of 2009 (162,462 people, i.e. 60.6%) had upper secondary education, then tertiary education (48,154, 19.9%), primary, lower secondary and lower education (35,123, 13.1%), and post-secondary education (22,254, 8.3%). It is worth noting that enterprises are also eligible for Priority VI measures, such as subsidised employment, supplementary equipment for workers, training and various courses. By the end of 2008, the Priority VI projects served 485 enterprises, including 368 micro firms, 88 small firms, 27 medium firms and 2 large enterprises.

Priority VII assists the personnel and customers of welfare institutions and enterprises giving subsidized jobs to workers threatened by social exclusion. In the first half of 2009, 46,466 people received project support (including 32,877 women), which raised the total number of project participants recorded from programme beginning to 81,944 (including 60,542 women). In the first half of

[34] Besides, special attention was paid to improving the quality of services delivered by the personnel in the local labour market institutions by enhancing their skills during courses, training, etc.

2009, 19,532 unemployed persons received support, including 13,023 long-term unemployed persons and 8,896 working persons, the latter number consisting of 976 persons working in enterprises, 4,811 in public administration, 1,165 persons employed by NGOs, 277 self-employed persons and 554 farmers. In regional terms, the largest numbers of project participants were noted in the Śląskie voivodeship (8,894, i.e. 19.1% of all participants) and then in the Mazowieckie voivodeship (7,545 persons, 16.2%). The fewest participants were found in the Opolskie (625 and 1.3%) and Lubuskie (779 and 1.7%) voivodeships. Among the assisted persons, 6,329 were disabled and 16,344 lived in rural areas. Every fourth project participant was a young person, aged 15-24 years. Most young persons participated in the projects provided the Śląskie (2,467) and Mazowieckie (2,056) voivodeships. In the Opolskie voivodeship, their number was the lowest (56). Older people, in the age group 55-64 years, usually participated in the projects in the Lubelskie voivodeship (951 persons); only few signed up for projects in the Pomorskie voivodeships (merely 37 persons). In terms of the educational attainments of the persons who joined the projects in the first half of 2009, most of them (17,583 people, 37.8%) had upper secondary education, then primary, lower secondary or lower education (17,445, 37.5%), post-secondary education (4,862 people, i.e. 10.5%), and tertiary education (6,576, 14.2%).

Priority VIII directs its assistance to the managerial staff and working persons who wish to improve their skills or retrain. By the end of the first half of 2009, 58,489 people signed up for projects, including 35,786 women and 22,703 men (between January and June 2009 alone the number of applicants reached 42,580). Unfortunately, only 24,981 people completed their projects (21,254 in the first six months), while as many as 1,808 dropped out (1,491 in the first half of 2009). The largest numbers of project participants were noted in the Wielkopolskie (11,501) and Świętokrzyskie (9,280) voivodeships, while in the Dolnośląskie (306) and Łódzkie (465) voivodeships they were the fewest. Regarding participants' age structure, until the end of June 2009 young persons (15-24 years) accounted for 7.6% and older people (55-64 years) for 7.7%. As far as the levels of education of the persons entering the projects in the first half of 2009 are concerned, most of them had tertiary education (41.2%), secondary education accounted for 37.9%, and the rates of post-secondary education and primary, lower secondary or lower education were 17.8% and 3.1%, respectively.

5. The outcomes

The actual outcomes of the projects are worth contrasting with the objectives assumed for each Priority. For instance, Priority VI assumed that the following specific objectives would be achieved:

- extended influence of active labour market policy,
- increasing the level of employment among young persons,
- lower unemployment among persons having special problems in the labour market situation,
- increased employment rate of older persons.

With respect to the first objective, 183,688 people (including 74,032 women) were activated, i.e. ca 19.3% of the target value[35], mostly in the Śląskie (19,826) and Podkarpackie (15,454) voivodeships. Interestingly, as many as 29,829 persons were supported by the start-up grants; this option was the most popular in the Śląskie (3,534 beneficiaries), Wielkopolskie (2,652) and Łódzkie (2,533) voivodeships, while in the Lubuskie and Opolskie voivodeships it was perceived as the least attractive (565 and 810)). What are the sources of the grants' success as form of assistance? One reason is certainly the special role they have been given in mitigating the negative results of the economic downturn in the country.

As regards the specific objective 2 (*Increasing the level of employment among young persons*) 72,916 people aged 15-24 who followed their projects through became economically active (29.2% of the target number), as well as 36,587 rural residents (48.8% of the target). The largest numbers of project graduates were recorded in the Śląskie (7,079) and Podkarpackie (6,560) voivodeships. It is worth adding that in the first half of 2009 the start-up grants were granted to 4,591 young persons, including 1,547 women, which accounts for almost 18.4% of the target number. Most young people used this type of support in the Śląskie and Wielkopolskie voivodeships (496 persons each) and in the Mazowieckie voivodeship (466).

Projects carrying out the specific objective 3 were completed by 115,761 persons having special problems in the labour market, i.e. 29.94% of the target. In this group, 4,708 people were disabled, 53,969 were long-term unemployed,

[35] *Sprawozdanie okresowe za I półrocze 2009, z realizacji PO KL*, (The Interim Report on HCOP Implementation in the First Half of 2009), p. 60.

and 74,541 lived in rural areas. The largest numbers of these beneficiaries graduated from projects provided in the Podkarpackie (11,388) and Kujawsko-pomorskie (11,286) voivodeships. Interestingly, the start-up grants were applied for by 17,958 people with special problems in the labour market (including 6,096 women), which accounts for 44.9% of the target value, as well as 313 disabled people, as many as 7,836 long-term unemployed persons and 11,340 rural residents (including 3,390 women). The largest numbers of project beneficiaries were recorded in Kujawsko-pomorskie (57 disabled persons), Mazowieckie (922 long-term unemployed persons) and Wielkopolskie (1,230 rural residents). In the country, the target realisation rates were 10.4% for the disabled persons, 78.4% for the long-term unemployed and 70.9% for rural residents.

Specific objective 4 (*Increased employment rate of older persons)* was achieved only partially. Its projects were completed by 14,542 people aged 50-64 years, with the Śląskie and Dolnośląskie voivodeships accounting for their largest groups (1,719 and (1,609). Regarding these project beneficiaries, 1,799 received start-up grants, mainly in the Łódzkie (180) and Śląskie (168) voivodeships.

The projects executed in connection with the HCOP's regional component under Priority VII *Promotion of social integration* were assumed to realise two major objectives:

- improving the access to jobs of persons threatened by social exclusion,
- strengthening and extending the social economy sector.

The effectiveness of the projects developed in relation to the first objective was measured by means of an indicator showing improved access to jobs through the number of welfare institutions' customers following through the active integration projects. As on 30 June 2009 that number was 29 330, including 21,868 women. The indicator was the highest in the Śląskie voivodeship (5,203 people) and the lowest in the Lubuskie voivodeships (125). Among the project graduates, 13,688 lived in rural areas, representing 6.2% of the indicator's target value.

The degree to which the social economy sector was strengthened was measured by the number of workers in institutions providing welfare and social integration services who improved their skills owing to the ESF's assistance. At the end of the first half of 2009, 8,311 workers in the institutions (including 7,700 women) improved their qualifications, mostly in the Świętokrzyskie voivodeship.

Regarding Priority VII *Regional human resources for the economy* two objectives are notable:

- the development of skilled and adaptable human resources,
- improving the system for anticipating and managing economic change.

The first objective was carried out through training projects, which were used by 24,249 working persons (including 964 women). Most working persons completed projects in the Wielkopolskie (6,712) and Świętokrzyskie (3,745) voivodeships.

In connection with the second objective, 99 entities in only two voivodeships, Wielkopolskie (89) and Podlaskie (10), were assisted.

6. Conclusion

The unsteady state of the Polish labour market calls for measures improving the fit between the labour force and the employers' needs. To take up the challenge, a profound modernisation of the labour market is necessary, as the quality of human capital determines innovation activities and economic development in the country and in the regions. The ESF provides Poland with an opportunity to deploy her resources more effectively and to prevent workers from withdrawing from labour force. The ESF is a toolbox „enabling the unemployed to re-enter labour force and a better structural match between labour supply and labour demand, thus increasing the chances of reducing unemployment"[36]. Its instruments are diverse, but they invariably address specific problem groups that have the biggest problems in the labour market.

References

Budzyńska A. (ed.) (2002), *Strategia Lizbońska drogą do sukcesu zjednoczonej Europy*, PWE, Warszawa

Informacja miesięczna z realizacji HCOP (wg stanu na 30.06.2009)

Jankowska M., Sokół A., Wicher A. (2008), *Fundusze Unii Europejskiej 2007-2013*, CeDeWu, Warszawa

Kwiatkowska W. (2007), *Zmiany strukturalne na rynku pracy*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź

[36] Quoted after W. Kwiatkowska, Zmiany strukturalne na rynku pracy, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2007, p. 216.

Program Operacyjny Kapitał Ludzki, Warsaw 2007

Skrzypczyk J., (ed.) (2005), *Projekty współfinansowane ze środków UE. Od pomysłu do studium wykonalności*, TWIGGER, Warszawa

Sprawozdanie okresowe za I półrocze 2009 z realizacji PO KL

Sprawozdanie roczne z wdrażania PO KL 2007-2013 za rok 2008

Sprawozdanie roczne z wdrażania PO KL za rok 2008

Tkaczyński J. W. (ed.) (2008), *Fundusze Unii Europejskiej 2007-2013*, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków

Zasady udzielania pomocy publicznej w ramach Programu Operacyjnego Kapitał ludzki, Ministerstwo Rozwoju Regionalnego, Warsaw, 12 January 2009

Laws

Regulation (EC) no. 1081/2006 of the European Parliament and of the Council of 5 July

2006 on the ESF and cancelling the regulation (EC) no. 1784/1999 O.J. L 210 of 31 July 2006

Regulation of the Minister of the Economy and Labour of 11 August 2004, Dz. U. 189 item 1948

Council regulation (EC) no. 1083/2006 of 11 July 2006 laying down general provisions on the ERDF, the EFS and CH and repealing Regulation (EC) no 1260/1999, J.O. L 210 of 31 June 07.2006

Employment promotion and labour market institutions act of 20 April 2004, Dz.U. of 1 June 2004 No. 99, item 100

Streszczenie

WPŁYW EUROPEJSKIEGO FUNDUSZU SPOŁECZNEGO NA RYNEK PRACY W POLSCE

Wstąpienie Polski do Unii Europejskiej i pozyskanie środków Europejskiego Funduszu Społecznego umożliwiło wojewódzkim i powiatowym urzędom pracy realizację projektów ukierunkowanych na aktywną walkę z bezrobociem. Mimo, iż EFS jest jednym z najstarszych funduszy Unii Europejskiej, to nadal pozostaje jednym z najistotniejszych narzędzi ułatwiającym osobom poszukującym pracę nabycie lub poszerzenie potrzebnych do jej znalezienia umiejętności. Wspiera projekty skierowane do tych,którzy po raz pierwszy poszukują pracy, a także tych, którzy długotrwale pozostają bez pracy.

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TOMASZ GRABIA*

Monetary Policy and Polish Labour Market in the years 1999 – 2008

Abstract

This article sets out to analyse how the monetary policy pursued by the National Bank of Poland (NBP) determined the labour market situation in the country in the decade 1999-2008. The article consists of introduction as well as five sections. Section one discusses NBP's strategy of monetary policy in the defined period against monetary strategies implemented in other countries. Section two uses the growth rates of money supply and of real GDP to verify whether the primary purpose of monetary policy, i.e. the inflationary target, was achieved. Section three generally characterises the country's labour market using the levels and dynamics of employment and of unemployment. Section four discusses major instruments of NBP's monetary policy, mainly analysing changes in the central bank's interest rates and their effect on the economic situation and on the labour market. The article concludes with a summation providing synthetic conclusions.

1. Introduction

Monetary policy can be described as an activity aimed to regulate money supply in such a way as to meet the economy's demand for finance. In almost all economies in the world, this policy is the responsibility of central banks. It is widely believed that a central bank should prevent money supply from being too

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low, as the launching of rational economic projects might be prevented then and economic growth decelerated. This requirement can be called the lower boundary condition. On the other hand, money supply should not exceed its amount beyond which inflation goes up or, say, its high rate persists in the long term – this can be viewed the upper boundary condition (Wilczyński 2000, p. 214-215).

2. The monetary strategy of the National Bank of Poland

Monetary policy in Poland is implemented by the National Bank of Poland. Its activities are regulated by the provisions of the Constitution of the Republic of Poland and of the NBP Act passed in 1997. The key constitutional rules that the central bank has to comply with are provided in article 227 of the Constitution in Chapter X *Public Finances*. According to item 1 of the article, the National Bank of Poland is obligated to secure the value of the Polish currency (*Konstytucja Rzeczypospolitej Polskiej,* art. 227, item 1). Therefore, the central bank's purpose as defined in the Constitution is precise and aligned with the bank's role described in the NBP act. However, article 3 of the act additionally stipulates that the central bank's main function should be performed while supporting the Government's economic policies, insofar as this does not constrain the pursuit of the basic objective of the NBP (*Ustawa z dnia 29 sierpnia 1997 r. o Narodowym Banku Polskim*, art. 3, item 1)[37].

This suggests that the central bank is somewhat responsible for economic growth and consequently for preventing unemployment. However, the bank cannot be called to account for its effectiveness in realizing the two objectives – it is only liable to possible criticism from the government or influential mass media. The analyses of the discussions conducted by the members of the Monetary Policy Council (the MPC – the main decision making body of the NBP) during their sessions show that the factors they actually consider to decide

[37] It must be noted that deciding to join the euro area Poland will have to change this provision, as full compatibility between the Polish legislation and the EU's laws will have to be ensured to meet the provisions of art. 109 of the Maastricht Treaty and of the Statute of the European System of Central Banks and of the European Central Bank. The 2008 convergence report shows that the major difference between the Polish legislation and the convergence requirements is that the former lacks a provision prohibiting the Polish central bank to take any external instructions. Moreover, in the opinion of the Community decision-makers the provisions allowing the monetary policy to pursue targets other than inflationary – even when this does not compromise the latter – are also defective (*Convergence Report. May 2008*, p. 242-246).

on interest rates are not only the risk of inflation, but also economic circumstances affecting the labour market situation. For instance, prior to making the decision in June 2009 about bring interest rates down by 25 basis points, the Council's members took account of further deceleration of economic growth in Poland and the risk of global economic activity remaining low for a longer time (*Minutes of the Monetary Policy Council decision-making meeting held on 24 June 2009*, pp. 3-4). Nevertheless, in the next months the interest rates were not adjusted downwards any more, because, as the members argued, better prospects for economic activity appeared (*Inflation Report, October 2009*, p. 55).

However, the discussions about correcting interest rates in response to economic factors were mainly induced by the knowledge that the factors shape employment and unemployment more weakly than inflation, as the latter can fall short or exceed the target formulated by the central bank[38] (*Inflation Report, October 2009*, p. 55). It is worth noting that, according to the NBP, ensuring a relative stability of prices is the main route leading to strong and long-term economic growth bringing the rate of unemployment down (*Monetary Policy Guidelines for the Year 2010*, p. 2).

The unfavourable consequences of inflation (especially economic calculations growing more complicated which discourages investment activity) certainly make this approach very much correct in the long term and being able to distinguish between a long term and a short term is crucial in the economy. An expansionary policy (one reducing interest rates) tends to produce the desired results, but only in the short term, while a restrictive policy (emphasising higher interest rates) frequently turns out to be beneficial in the longer term. Therefore, a frequently unpopular policy of reducing the demand for loans usually brings some short-term costs, such as higher unemployment, but then the long-term benefits offered by a "healthier" and more balanced economy can be reaped.

[38] Since 2004 it has been defined in Poland as a continuous target of 2.5% annually, allowing for symmetric deviations of +/– 1 percentage point (*Monetary Policy Guidelines for the Year 2010*, p. 1). In the earlier years the inflationary target was somewhat bigger: in 1999 – 6,6-7,8% (*Sprawozdanie z wykonania założeń polityki pieniężnej w 1999 roku*, p. 11), in 2000 – 5,4-6,8% (*Monetary Policy Guidelines for the Year 2000*, p. 1), in 2001 – 6-8% (*Monetary Policy Guidelines for the Year 2001*, p. 6), in 2002 – 5% +/- 1 percentage point (*Monetary Policy Guidelines for the Year 2002*, p. 4), in 2003 – 3% +/- 1 percentage point (*Monetary Policy Guidelines for the Year 2003*, p. 6).

It follows from the above that faced by the never-ending necessity to choose the right strategy of economic policy, the central bank has to deal with a very difficult practical dilemma. Deciding on its policy's objectives, the central bank can pick from a range of available options. One of them may speed up disinflation at the cost of slowing down economic growth, while another may decelerate disinflation to prevent recession or retarded economic growth at least. Theoretically, there are basically no criteria for deciding which option outperforms the others. The choice is frequently political and depends on the government's preferences as well as its view of the socio-economic situation in the country (Fedorowicz 2000, p. 87-89). Consequently, a universal mode of handling the situation does not exist, either, and the actual approach is usually necessitated by many factors that include – besides those mentioned above – also the state of economic theory at the given point of time.

It is worth noting at this point that even if the chosen strategy is successful, the benefits frequently disappear with changing socio-economic circumstances (Ząbkowicz 2005, p. 145). The situation gets even more complicated due to lags that occur between the making of a decision on using a given instrument and the time it ultimately starts affecting the economy and because of the relative difficulty in telling the unavoidable level of recession from that caused by overly restrictive monetary policy, etc. Obviously, the economic reality contains a whole train of economic interrelationships operating within a variable business environment.

Because of the dilemmas, not all countries decide to formulate the monetary policy's target as one having a strictly inflationary character. For instance, the ultimate target for the US 'Fed' (the Federal Reserve System) is having a monetary policy capable of ensuring full employment, price stability and a moderate level of the long-term interest rate (Gerdesmeir, Mongelli, Roffia 2007, pp. 13-14). As already mentioned, the EU's legislation does not make central banks responsible for the level of employment, but only for the rate of inflation. Therefore, a growing number of countries decide to implement a direct inflation targeting (DIT) strategy, while completely abandoning the indirect targets. The NBP chose to adopt the DIT in 1998. Considering the growing integration of the Polish economy into the global economic system, among the arguments in support of its adoption there were the possibility of verifying publicly the direction and effectiveness of the monetary policy, its consequently stronger reputation and more flexible use of particular instruments, among which the interest rates started playing a major role. A clearly defined and generally comprehensible monetary policy target is one of the pillars supporting central bank's functional independence. In addition to the growing reliability of the monetary policy, having a target may also help overcome

inflationary expectations (*Medium-Term Strategy of Monetary Policy 1999-2003*, p. 8-9) that belong to the most important factors affecting the growth rate of the general level of prices.

The analysis below shows that at the outset of the 21st c. the Polish central bank managed to constrain inflation and then stabilised it at a relatively low level. On this account, the Monetary Policy Council decided to continue the DIT strategy beyond the year 2003, while abandoning the setting of inflationary targets for the end of the calendar years in favour of pursuing a continuous target extending over a period longer than 12 months. This long-term horizon is expected to fully allow for the lags between the central bank's decisions and their effects and to improve the flexibility and reliability of monetary policy (*Monetary Policy Strategy beyond 2003*, pp. 11-12). As well as being autonomous and responsible, the policy must be transparent too (Noga 2007, p. 213). To ensure transparency, the Monetary Policy Council regularly publishes *Inflation Reports*, *Financial System Stability Reports*, as well as *Monetary Policy Guidelines* and *Reports on Monetary Policy Implementation* (year by year). Besides, the *Minutes of the Monetary Policy Council decision-making meeting*[39] have been published since 2007. The documents present the key issues discussed during the Council's sessions, as well as the arguments the participants put forward (*Report on Monetary Policy Implementation in 2007*, p. 18).

3. Inflation, money supply and economic growth in Poland in the years 1999-2008

As mentioned in the previous section, keeping inflation at a low level is the primary target of monetary policy in Poland. The transition period in the Polish economy was characterised by a distinct disinflationary trend. In the early 1990s, when the government abandoned price control, inflation stood at several hundred percent a year, declining steadily in the next years. Yet, in the first two years of the period analysed in this article, the general level of prices kept ascending at ca. 10% a year, significantly exceeding the inflationary target. The latter was somewhat exceeded also in 2004 and then in 2007. In the other sub-periods, inflation was markedly lower, sometimes even below the lower limit of

[39] The documents are published following the practice of many central banks. However, the European Central Bank did not decide to issue its *minutes*. Its main point of communication with the public is press conferences organized after the decisions have been made (Blinder, Ehrmann, Fratzscher, De Haan, Jansen, 2008, p. 20).

its fixed band. This can be seen in table 1 presenting inflation rates (annual averages and the December-to-December inflation) and data on the growth in real GDP and in M1 and M3 money supply[40].

Despite the numerous disputes over the sources of inflation, the contemporary economists essentially agree that inflation manifests itself mainly in the sphere of monetary circulation and that the average level of prices could not grow for a long time without being supported by building-up money supply[41].

The above opinion seems to be partly corroborated by comparing the growth rates of money supply and of inflation in Poland. Excluding the year 2000 (when M1 is analysed) and 2002 (for M3) money supply definitely outpaced price growth. Throughout the period in question, prices only grew by ca. 1.45 times (less than 4% a year on average), whereas the most liquid monetary components (M1) almost quadrupled (close to 15% a year on average) and broad money (M3) grew almost three times (nearly 12% a year on average).

[40] The monetary aggregate M1 consists of currency held by the public (without banks' cash) and of deposits in checking accounts (including overnight deposits) owned by households, non-monetary financial institutions, enterprises, non-commercial institutions providing households with services, local government institutions and social insurance funds. The monetary aggregate M3 additionally includes time deposits (with maturity at issue within 2 years and with 3 months' notice, reverse repo transactions and debt securities with maturity at issue to 2 years (*Information Bulletin*, no. 12/2002, p. 92).

[41] For instance, this opinion is supported by M. Friedman (1994, pp. 198-217), K. Lutkowski (1995, p. 470); J. Bauc (1995, p. 451); J. Bauc, M. Dąbrowski, P. Senator (1994, p. 9) and others. A. Wojtyna (1996, p. 50) also considers that the relationship between an increase in money supply and inflation is relatively uncontroversial. He builds his opinion on the McCandless and Weber research, where the coefficients of correlation between the analysed variables for 110 countries in the years 1960-1990 ranged from 0.925 to 0.958 (depending on the monetary aggregates used). S. Albinowski who examined the USA, Japan, the FRG, France, UK and Italy in the years 1960-1993 views the problem differently. According to his investigation, Japan was actually the only country in the sample with a one-way relationship between the growth rate of money supply and the rate of price growth (in dynamic terms), with both the values showing steep downward trends (Albinowski 1993, p. 644-652).

Table 1. Inflation, real GDP growth rate as well as money supply growth rate in Poland in the years 1999-2008

Year	CPI inflation rate (in %)		Deviation from inflation target[a]	Real GDP growth rate (in %)[b]	Money supply growth rate (in %)[c]	
	Average annual	December-to-December			M1	M3
1999	7,3	9,8	+ 2,0[d]	4,5	23,9	20,1
2000	10,1	8,5	+ 1,7[d]	4,3	- 4,4	11,9
2001	5,5	3,6	- 2,4[e]	1,2	12,3	9,6
2002	1,9	0,8	- 3,2[e]	1,4	17,7	- 1,1
2003	0,8	1,7	- 0,3[e]	3,9	15,9	5,8
2004	3,5	4,4	+ 0,9[d]	5,3	11,5	9,4
2005	2,1	0,7	- 0,8[e]	3,6	21,2	13,1
2006	1,0	1,4	- 0,1[e]	6,2	25,0	16,0
2007	2,5	4,0	+ 0,5[d]	6,8	21,5	13,4
2008	4,2	3,3	-	4,9	4,4	18,6

[a] As of 31.XII, in percentage points.

[b] In relation to previous year, in constant prices.

[c] In relation to previous year, in current prices.

[d] Above the upper limit.

[e] Below the lower limit.

Source: Sprawozdanie z wykonania założeń polityki pieniężnej w 1999 roku, p. 11; Sprawozdanie z wykonania założeń polityki pieniężnej w 2000 roku, p. 5; Monetary Policy Guidelines for the Year 2001, p. 6; Monetary Policy Guidelines for the Year 2002, p. 4; Monetary Policy Guidelines for the Year 2003, p. 6; Monetary Policy Guidelines for the Year 2010, p. 3; www.stat.gov.pl, www.nbp.pl; own calculations.

It should be borne in mind, though, that some part of the expanding money supply is usually absorbed by the growing monetary resources of businesses and by the increasing real volume of transactions that also makes GDP grow. According to the monetary theory assumptions, the inflationary processes do not have to occur even if the money supply dynamics is strong provided that the accompanying increase in real output is equally large.

The relationship between money supply and prices is therefore usually disturbed by changes in real GDP. Table 1 shows that the years examined in the article were a period of relatively good economic conditions (excluding the period 2001-2002), especially its last part. Between December 1998 and December 2008, the real national income grew by over 50%, at a rate exceeding

4% a year on average. This suggests that some part of money supply was consumed by expanding production.

However, production clearly lagged behind money supply. In other words, the dynamically growing aggregates M3 and M1 (particularly in 1999 and then in the years 2005-2007) probably partly contributed to price increases. However, from 2002 inflation was usually kept at a level below the inflationary target. The only exceptions were the year 2004, when the so-called „EU effect" occurred[42], and the period 2007-2008, when demand-supporting circumstances coincided with unfavourable changes in the prices of food products and raw fuels (*Inflation Report, October 2008*, p. 5).

In the other examined years, notwithstanding the usually high increases in money supply, inflation was decelerated by a range of advantageous circumstances, such as appreciation of the zloty vis-à-vis the US dollar and the euro, a growing share of imports from the low-cost countries (mainly Asian) and the intensifying competition from the manufacturers in those countries, as well as the quite high level of interest rates determined by the relatively restrictive monetary policy[43].

4. General characteristics of the labour market in Poland, years 1999-2008

Because the analysed period is relatively long, it is not rational to expect that the Polish labour market followed the same trend in all the years. This conclusion is made evident by the data in table 2 that shows unemployment dynamics as well as the rates of registered unemployment by year.

The table allows splitting up the situation in the Polish labour market into two distinctive sub-periods. During the first four years, the conditions were obviously worsening. Between 1999 and 2002 unemployment increased by almost 900,000 persons, i.e. around 37%. At the end of the subperiod, the rate of registered unemployment reached 20% to be one of the highest in Europe.

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[42] According to NBP's calculations, other factors also made inflation grow in May 2004, but the „EU effect" was the strongest, accounting for 44.6%. As for the other factors, the supply effects (produced mainly by the rising motor fuel prices) were estimated at 35.4% and the demand effects at 20% (*Unia Europejska – ceny. Podsumowanie akcji*). It seems, though, that some of the demand effects should also be placed under the heading the "EU effect", because a large part of the expanding demand (mainly for meat and poultry) came from the former EU-15 countries that now could buy cheaper goods from the new member states without any obstacles.

[43] This aspect is discussed more in detail in section four of the article.

This unfavourable trend started to reverse in 2003 and the number of unemployed workers was declining fast, especially in the years 2006-2008. Consequently, at the end of the examined period there were less than 1.5 million of unemployed job-seekers. Compared with 2002, this number was lower by over 1.74 millions. The rate of unemployment also dropped considerably, to less than 10%.

Table 2. Unemployed persons, unemployment dynamics as well as unemployment rate in Poland in the years 1999-2008

Year	Registered unemployed persons (in thous.) [a]	Unemployment dynamics (previous year = 100)	Registered unemployment rate (in %) [b]
1999	2349,8	128,3	13,1
2000	2702,6	115,0	15,1
2001	3115,1	115,3	17,5
2002	3217,0	103,3	A - 18,0 B - 20,0[c]
2003	3175,7	98,7	20,0
2004	2999,6	94,5	19,0
2005	2773,0	92,4	17,6
2006	2309,4	83,3	14,8
2007	1746,6	75,6	11,2
2008	1473,8	84,4	9,5

[a] As of 31.XII.

[b] The registered unemployment rate is calculated as the ratio of the number of registered unemployed persons to the economically active civilian population – as of 31.XII.

[c] A – considering persons employed on private farms in agriculture with the use of the results of Agricultural Census of 1996, B – considering persons employed on private farms in agriculture with the use of the results of Population and Housing Census of 2002. In 1999-2001 according to approach A, In 2003-2008 according to approach B**.**

Source: *Roczniki Statystyczne*: 2000, pp. 130-132, 143; 2001, pp. 139-140; 2003*,* pp. 107, 147, 160-161; 2005*,* p. 194, 233, 247-248; 2006, p. 197, 236; 2007, p. 198, 253; *Mały Rocznik Statystyczny*: 2001, p. 139-140; 2006, p. 152-153; 2009, p. 116, 150; *Pracujący w gospodarce narodowej w 2008 roku*, p. 21; www.stat.gov.pl; own calculations.

The popular opinion claims that the problem of unemployment became much less severe in Poland owing to the external emigration chosen by the earlier jobless persons who have been able to exercise this option after Poland joined the European Union. For this thesis to be verified, the levels of employment must be explored. Table 3 presents the numbers and dynamics

characterising the employed population as well as employment rates by year of the examined period.

The data clearly show that emigration reducing unemployment only slightly improved the situation in the second half of the analysed period, as declining unemployment co-existed with dynamically expanding employment. Between the final months of 2003 and 2008, the latter grew by almost 1.4 million people. This number is only little different from the outflow from unemployment. The slightly growing rate of employment seemed optimistic too.

Table 3. Employed persons, employment dynamics as well as employment rate in Poland in the years 1999-2008

Year	Employed persons (in thous.)[a]	Employment dynamics (previous year = 100)	Employment rate (in %)[b]
1999	16 008,9	98,4	68,3
2000	15 488,8	96,8[c]	66,2
2001	14 995,6	96,8	62,7
2002[d]	A – 14 923,7 B – 12 803,3	A – 99,5	A – 62,7 B – 53,8
2003	12 640,7	98,7	52,6
2004	12 720,2	100,6	52,5
2005	12 890,7	101,3	52,8
2006	13 220,0	102,6	54,0
2007	13 771,1	104,2	56,1
2008	14 037,2	101,9	57,1

[a] In 1999 as of 30.IX, in 2000-2008 as of 31.XII.

[b] The employment rate is calculated as the share of employed persons in the working age population.

[c] In 15-month period (between 30.IX.1999 and 31.XII.2000).

[d] A – considering persons employed on private farms in agriculture with the use of the results of Agricultural Census of 1996, B – considering persons employed on private farms in agriculture with the use of the results of Population and Housing Census of 2002. In 1999-2001 according to approach A, In 2003-2008 according to approach B.

Source: *Roczniki Statystyczne*: 2000, pp. 130-132, 143; 2001, pp. 139-140; 2003, pp. 107, 147, 160-161; 2005, pp. 194, 233, 247-248; 2006, pp. 197, 236; 2007, pp. 198, 253; *Mały Rocznik Statystyczny*: 2001, pp. 139-140; 2006, pp. 152-153; 2009, pp. 116, 150; *Pracujący w gospodarce narodowej w 2008 roku*, p. 21; www.stat.gov.pl; own calculations.

It is worth noting here that the improving labour market situation as observed in the second half of the examined period was strongly correlated with the economic upturn. It follows from the analysis presented in the previous section that the average rate of economic growth in the years 2004-2008 (ca. 5.4% a year) clearly exceeded the rate observed during the previous five years (approx. 3% a year). In the second case, the real output growth definitely lagged behind labour productivity, contributing to declining employment and rising unemployment.

It seems that the general improvement in business conditions in the second half of the analysed period can be attributed not only to the economic upswing, but also to Poland's membership in the EU, as some enterprises were successful in obtaining considerable funding from Brussels. This allowed some industries increase their output, so total demand also grew bigger. On the other hand, the monetary policy's influence on the economy should not be underestimated. But, as we already mentioned, its effects are short-lived.

5. The basic instruments of NBP's monetary policy and their effect on the economic situation

The set of basic instruments that help regulate money supply in the economy usually contains open market operations, the rate of mandatory reserves and interest rates. The first of the instruments consists in the central bank buying and selling public securities. When securities are sold, their buyers get rid of as much cash as they need to purchase new assets. This "freezes" their cash, decreasing the volume of currency in circulation as well as total demand (Schaal 1996, p. 393). It should be borne in mind, however, that once the securities reach their maturity dates the "frozen" funds plus the interest they bear re-enter the market. Naturally, the purchase of the government-issued securities by the NBP works in the other direction.

As the open market operations only temporarily affect money supply, using them as the monetary policy tool can only produce short-term effects (Czechowska 1999, p. 273) that cannot significantly influence the rate of price growth and the business circumstances in the long run that is analysed in this article. For a long-term analysis, the mandatory reserves policy and changes in the base interest rates seem to be more important.

The mandatory reserves policy is one of the essential instruments that the central bank can use to shape money supply. When the rates of mandatory reserves for particular types of deposits go up, all commercial banks have to increase their reserves, thus limiting the availability of loans (Borowiec, 1994,

p. 278) that are the main source of money creation. This suggests that a central bank wishing to combat inflation should try to lift the rates of mandatory reserves as high as possible. Naturally, the rates cannot be excessively high, as making loans less available, they might become "a brake" on consumer spending and investment outlays and deteriorate the labour market situation.

More relaxed requirements of mandatory reserves additionally make the domestic banking system more competitive, as large reserves favour a large gap between interest rates on loans and deposits (Nowak, Ryć, Żyżyński 1997, p. 452). If the Polish banks were required to maintain much higher rates of mandatory reserves when the financial markets are undergoing progressive liberalisation and globalisation, they would be ultimately lose some of their competitiveness (*Sprawozdanie z wykonania założeń polityki pieniężnej w 1999 roku*, p. 37).

Having the knowledge, the NBP consistently reduced the rates of mandatory reserves in the analysed period. The deepest cut took place in September 1999. The rate applied to the zloty demand deposits was lowered then by 15 percentage points (from 20% to 5%) and for the zloty time deposits by 6 percentage points (from 11% to 5%). The next two cuts were made in the years 2002 (to 4.5% for all types of deposits) and 2003 (to 3.5%, also for all types of deposits) (*Information Bulletin* no. 12/2002, p. 32; *Information Bulletin* no. 12/2004, p. 51). In the years 2004-2008, the rates did not change (*Information Bulletin* no. 12/2008, p. 22).

The above shows that the discussed instrument is applied relatively infrequently. Interest rates, the most important and most popular monetary policy tool in almost all countries, are changed by the central bank much more often. Their levels encourage individuals either to consume or save and they also influence enterprises' investment plans (Cichowicz 2005, p. 161).

The interest rate policy may aspire to achieve some macroeconomic objectives. As already mentioned, preventing inflation is the most important of them under the Polish legislation. However, other interest rates' functions are also frequently mentioned in the literature, such as effective allocation of country's economic resources (Borowiec 1994, p. 274-275), stimulation of domestic savings, improvement of investment effectiveness, controlling domestic demand, attracting new foreign capital, stimulating the demand for financial assets (Walerysiak 1997, p. 793-799), stabilizing the economy and driving structural change (Nowak, Ryć, Żyżyński 1997, p. 443), and even stimulating economic growth. Some of the objectives are strongly correlated with the inflationary target (complementarity), while others, especially the last one, are somewhat substitutive to a stable level of prices, but mainly in a short-term period.

It must be underscored here that total demand, significantly affecting price levels and real GDP, is mainly shaped by interest rates on loans and deposits charged by the commercial banks. On the other hand, their rates are strongly influenced by the interbank rates on deposits and loans that are very sensitive to the central bank's rates[44].

The NBP operates five official interest rates, i.e. the lombard rate, the rediscount rate, the refinance rate, the deposit rate and the minimum yield on open market operations (a reverse repo rate) (*Information Bulletin* no. 12/2008, p. 22). The last rate, also known as the intervention or reference rate, is recognised as the primary rate.

[44] Naturally, the transmission mechanism does not take effect immediately. The commercial banks' interest rates usually need time to follow the changes in the interbank rates and the central bank rates. The merchant banks' interest rates usually affect the volumes of loans and deposits shaping total demand also with some delay. ING Barings estimated that all the lags took effect after 6-8 months. This was the period after which the dynamics of lending for enterprises declined. K. Rybiński's investigation covering the years 1993-1999 showed that interest rate increases affected loans the most strongly after approximately 18 months (Rybiński 2000, pp. 68-70). Because loans and savings also need time to influence inflation, interest rates affect price levels at an even later time. This phenomenon was investigated by R. Kokoszczyński, T. Łyziak, M. Pawłowska, J. Przystupa and E. Wróbel (2002, p. 40) for the years 1994-2001. They showed that the strongest reaction occurred after 4-5 quarters (a VAR model) or 8-9 quarters (a structural model).

Table 4. Reference rate in Poland in the years 1999-2008

Year	NBP reference rate (in %) [a]	Real reference rate [b] (in %)	
		A	B
1999	16,5	6,1	7,8
2000	19,0	9,7	12,7
2001	11,5	7,6	11,9
2002	6,75	5,9	4,5
2003	5,25	3,5	1,5
2004	6,5	2,0	1,2
2005	4,5	3,8	4,9
2006	4,0	2,6	1,4
2007	5,0	1,0	2,6
2008	5,0	1,6	2,3

[a] Nominal annual rate: in 1999-2002 – minimum yield on 28-day open market operations interest rate, in 2003-2004 – minimum yield on 14-day open market operations interest rate, in 2005-2008 – minimum yield on 7-day open market operations interest rate; as of 31.XII .

[b] Real rate is calculated as: A – real rate = (1 + nominal rate / 1 + December-to-December CPI inflation rate in current year - 1; B – real rate = (1 + nominal rate / 1 + December-to-December PPI inflation rate in current year - 1.

Source: *Information Bulletin*, no. 12/2003, pp. 23, 26; *Information Bulletin*, no. 12/2008, p. 19, 22; Table 1; own calculations.

Table 4 presents the rate's values in the years 1999-2008. In addition to its nominal values, the real values deflated with the CPI and the PPI are shown too. Because the NBP's open market operations have short maturity periods, current inflation was used as the deflator.

According to the table, at the end of the 20th c. the NBP's base interest rate was very high, reaching almost 20% in nominal terms. Its real level was also significant, almost 10% at the end of 2000 (its PPI-deflated value was close to 13%). Unfortunately, the high interest rate policy was not followed by decelerating inflation that still oscillated at around 10% in that period (see section 2).

The positive effects of high interest rates on inflation appeared, however, already in the early years of the 21 century. Although they constrained total demand that was declining anyway, they also caused growth in the zloty/euro and zloty/US dollar exchange rates, being another significant factor stimulating disinflation. The weakening inflationary pressure made the Monetary Policy Council reduce interest rates systematically in the period 2001-2003. A number

of cuts were effected then; consequently, the intervention rate was lower by 13.75 percentage points at the end of the subperiod than three years earlier. Following that, its real level also clearly diminished.

After Poland entered the EU in 2004, the rate of inflation rose again (see section 2), making the central bank increase interest rates. Then inflation restabilised at a relatively low level, so new cuts in interest rates became possible and at the end of 2006 the nominal reference rate was only 4%. Because in the years 2007-2008 real inflation exceeded the upper limit of the inflationary target again, the central bank had to increase its rates once more. As a result, at the end of the analysed period the minimum yield on the 7-day open market operations stood at 5%, being 1 percentage point higher than two years before.

It must be noted that the central bank's actions somewhat stabilised from 2002. Even though it changed interest rates relatively frequently, the changes were usually minor, within 25 percentage points per one session of the MPC. Inflation fluctuations occurring in the second half of the analysed period, unavoidable in a dynamically growing economy, did not entail so nervous reactions of the MPC's members as in the previous years. A different thing is that inflation was relatively stable in that period. Although its rate frequently deviated from the fixed band (both upwards, in Decembers 2004 and 2007, and downwards, at the end of 2003, 2005 and 2006), its movements were usually minor and it returned fast to more or less the expected level.

Another notable phenomenon is that during the last three years of analysis the real reference interest rate varied within a relatively band interval 1–2.6%. It seems that this is approximately the level that allows the real interest rate to ensure a „sound" balance between central bank's actions pursuing two contrary short-term objectives of macroeconomic policy, i.e. the combating of inflation or of unemployment, as presented by the classical Philips curve. The favourable business conditions observed in the years 2004-2008 – and a relatively neutral restrictiveness of the monetary policy – definitely improved the labour market situation (see section 3), slightly deteriorating price stability.

Yet, from the perspective of the MPC decisions' impacts on the labour market, the Council's activity in the first part of the analysed period should be viewed differently. Even if we allow for the central bank's paramount objective, it still seems that its monetary policy could be less restrictive then.

For instance, such a conclusion arises in the context of assumptions underlying the Taylor rule, which is a very popular in economics. According to the rule, if inflation exceeds its target or output exceeds its potential level, then interest rates should be kept at relatively high levels. Otherwise, they should be low (Filar 2004; Urbańska 2002, p. 17). The other situation occurred in Poland at the outset of the 21st c. The economy grew very slowly between 2001 and

2002 (below 1.5% a year), definitely differing from the growth rate of labour productivity. As a consequence, at the end of 2002 the rate of unemployment reached a record level of 20%. In the same period, as well as in many months in 2003, inflation was below the lower limit of its band.

This situation was preceded by very high real interest rates in the previous months (especially in the years 2000-2001), so one has the inescapable impression that high unemployment at that time was significantly induced by a wrong monetary policy[45].

6. Conclusion

Every central bank has to run its monetary policy under specific economic circumstances that are sometimes difficult to recognise and understand. We need to realise that the central bank's representatives act in a world of imperfect knowledge, which makes it impossible for them to understand the whole spectrum of possible market results or their probability[46]. The complex chain of economic interrelationships existing in a variable economic environment causes that it is not possible to pinpoint the effects of their decisions (Nasiłowski 1995, p. 311).

As demonstrated by the above analysis, it is practically impossible to formulate any explicit conclusions about the influence of NBP's monetary policy on the labour market in the examined period. However, the policy's

[45] Interestingly, one of the members of the Monetary Policy Council, C. Józefiak, also believed at that time that deeper interest rate cuts were possible, or even necessary. He assumed that adopting a relaxed monetary policy was one of the conditions for accelerated investment activity. However, the relaxation should be accompanied by a fiscal policy tightened by lowering the budget expenditure to national income ratio and not by rising taxes. The decrease in the public finance sector's expenditure should be at least equivalent to the increase in the aggregate demand generated by the interest rate cuts (Józefiak 2002, p. 452, 454). Mr. B. Grabowski, another MPC's representative, tackled the critical comments on the then excessively high NBP's interest rates differently. In his opinion, the restrictiveness of the Polish monetary policy should have been viewed in terms of both real interest rates and nominal rates, because of the strong nominal illusion driving the behaviour of business organizations, and especially of individuals. Given the phenomenon, large cuts in the nominal interest rates could considerably reduce the volume of deposits and increase lending, thus enlarging the private sector's net debt to the banking sector – a negative phenomenon from the perspective of inflation (Grabowski 2002, p. 442).

[46] This is more or less the sense of the statement that the long-standing head of the Fed, Alan Greenspan, made at the conference of the American Economic Association in 2004 (Frydman, Goldberg 2009, p. 4).

significance was unquestionable, because the central bank's decisions shaped enterprises' expansion opportunities, making them better or worse. This means that the decisions largely determined consumer and investment demand (Mucha-Leszko, Kąkol 2009, p. 45). The knowledge of this mechanism seems to justify certain reservations about NBP's policy, especially about its actions taken in the first part of the analysed period. Its overly restrictive policy constrained total demand and production, thus leading to high unemployment. It is also possible that the interest rates were corrected too strongly in response to the „live" data, without the decision makers having the full knowledge of the transmission mechanisms and of the lags occurring between parameter changes and their effects on prices and real processes (Rybiński 2000, p. 56).

The monetary policy pursued in the second half of the period deserves a completely different opinion, though, as the central bank managed then to maintain „sound" balance between the short- and long-term targets[47]. The labour market situation improved considerably in the subperiod, notwithstanding the inflationary target being frequently too high or too low. In most cases, the differences were not big and inflation quickly returned within the fixed band. The reason for the inflationary target to be missed in some of the sub-periods was sometimes the appearance of favourable or unfavourable supply factors that the NBP did not control[48].

The analyses of the discussions conducted by the MPC's members show that the factors affecting the interest rates' levels are not only current inflation, but also the labour market situation. Yet, the Constitution and the NBP Act leave no doubt which target must be given priority. It may become necessary for the NBP, especially in the years to come, to tighten up its monetary policy, which will probably adversely affect output and employment in the short term.

[47] It seems that in the analysed years the National Bank of Poland managed to avoid the mistakes made by the US Federal Reserve System (the Fed) whose policy was extremely expansionary between 2002 and 2006. The US interest rates were then fixed (especially between 2003 and 2004) much below the level recommended by the aforementioned Taylor rule (Taylor 2007, p. 5, Figure 1). It is very probable that the policy at least contributed to the global crisis in the years 2008-2009. A broader discussion of the relationship between low interest rates and the crisis can be found, *inter alia*, in: Bednarczyk (2009, p. 68-70), Kacprzyk (2009, p. 81-84), Kasperkiewicz (2009, p. 36-38), Rosati (2009, p. 327-333), Więznowski (2009, p. 156-161).

[48] In addition, the Polish central bank had to struggle with other problems hampering the attainment of the target, such as the aforementioned lack of coordination with fiscal policy, limited monetization, diverse money creation and inflation sources, lags between the making of decisions and their effects, availability of forex loans (Grabia 2009, p. 190-196), variable money demand and money supply, as well as a decreasing share and importance of banks among financial intermediaries (Marszałek 2009, p. 344-349).

Poland's decision to join the euro area may influence monetary policy likewise, because of the obligatory compliance with the prescribed convergence criterion for inflation.

Then, given the economic downturn that became noticeable already in 2009, the labour market situation in Poland will probably deteriorate in a short term. The probability of deterioration is even greater because of the country's aspirations to join the Economic and Monetary Union that require the fulfilment of both monetary and fiscal criteria. In this situation, not only the monetary policy (responsible for inflation), but also the fiscal policy (concerning budget deficit and public debt) would probably have to be made more stringent.

References

Albinowski S. (1993), *Próba empirycznej weryfikacji monetarystycznej teorii inflacji*, 'Ekonomista', nr 5-6

Bauc J. (1995), *Inflacja polska w latach 1990-94 w świetle współczesnej teorii ekonomii*, 'Ekonomista', nr 3

Bauc J., Dąbrowski M., Senator P. (1994), *Pieniężne źródła inflacji w Polsce w latach 1989-1993*, 'Gospodarka Narodowa', nr 10

Bednarczyk J. L. (2009), *U źródeł kryzysu finansowego. Inne spojrzenie na politykę stóp procentowych Systemu Rezerwy Federalnej*, [in:] Bednarczyk J. L., Bukowski S. I., Misala J., *Współczesny kryzys gospodarczy. Przyczyny – przebieg – skutki*, CeDeWu, Wydawnictwo fachowe, Warszawa

Blinder A. S., Ehrmann M., Fratzscher M., De Haan J., Jansen D. J. (2008), *Central Bank Communication and Monetary Policy: a Survey of Theory and Evidence*, "NBER Working Paper Series", No. 13932

Borowiec J. (1994), *Polityka pieniężna*, [in:] Winiarski B. (red.), *Polityka Ekonomiczna*, Wydawnictwo AE im. O.Langego, Wrocław

Cichowicz G. (2005), *Stopy procentowe jako instrument polityki pieniężnej NBP oraz EBC*, [in]: Kubska-Maciejewicz B., Stępniak A. (red.), *Polska w strefie euro*, Wydawnictwo Wyższej Szkoły Bankowej w Poznaniu, Poznań

Convergence Report. May 2008 (2008), European Central Bank, Frankfurt am Main

Czechowska I. D. (1999), *Instrumentarium operacji otwartego rynku*, [in:] *Finanse w gospodarce rynkowej – Wybrane zagadnienia (Część II – Finanse banków i rynek pieniężny)*, Tom I, Wyższa Szkoła Finansów Bankowości i Ubezpieczeń im. Profesora Janusza Chechlińskiego, Wydawnictwo ABSOLWENT, Łódź

Fedorowicz Z. (2000), *Polityka pieniężna*, Szkoła Główna Handlowa, Studia Finansowo – Bankowe, Poltext, Warszawa

Filar D. (2004), *Profesor Taylor nie ceni dyskrecjonalności*, 'Rzeczpospolita', 11.09.2004

Friedman M. (1994), *Intrygujący pieniądz*, Wydawnictwo Łódzkie, Łódź

Frydman R., Goldberg M. D. (2009), *Ekonomia wiedzy niedoskonałe. Kurs walutowy i ryzyko*, Wydawnictwo Krytyki Politycznej, Warszawa 2009

Gerdesmeir D., Mongelli F. P., Roffia B. (2007), *The Eurosystem, the US Federal Reserve and the Bank of Japan. Similarities and Differences*, 'ECB Working Paper Series', No. 742

Grabia T. (2009), *Problemy polityki monetarnej NBP w okresie transformacji*, [in:] Żelazny R. /red./, *Koniunktura gospodarcza a funkcjonowanie rynków*, Wydawnictwo Akademii Ekonomicznej w Katowicach, Katowice

Grabowski B. (2002), *Bieżące wyzwania polityki pieniężnej (tezy)*, [in:] Krajewski S., Tokarski T. (red.), *Wzrost gospodarczy, restrukturyzacja i bezrobocie w Polsce. Ujęcie teoretyczne i empiryczne*, Katedra Ekonomii UŁ, Łódź

Inflation Report, July 2006 (2006), National Bank of Poland, Warsaw

Inflation Report, October 2008 (2008), National Bank of Poland, Warsaw

Inflation Report, October 2009 (2009), National Bank of Poland, Warsaw

Information Bulletin (2002-2009), National Bank of Poland, Warsaw

Józefiak C. (2002), *Warunki przyspieszenia wzrostu gospodarczego w Polsce*, [in:] Krajewski S., Tokarski T. (red.), *Wzrost gospodarczy, restrukturyzacja i bezrobocie w Polsce. Ujęcie teoretyczne i empiryczne*, Katedra Ekonomii UŁ, Łódź

Kacprzyk A. (2009), *Kryzys finansowy 2008-2009 – przesłanki, kontrowersje, perspektywy*, [in:] Bednarczyk J. L., Bukowski S. I., Misala J., *Współczesny kryzys gospodarczy. Przyczyny – przebieg – skutki*, CeDeWu, Wydawnictwo fachowe, Warszawa

Kasperkiewicz W. (2009), *Obecny kryzys – przyczyny i terapia*, [in:] Bednarczyk J. L., Bukowski S. I., Misala J., *Współczesny kryzys gospodarczy. Przyczyny – przebieg – skutki*, CeDeWu, Wydawnictwo fachowe, Warszawa

Kokoszczyński R., Łyziak T., Pawłowska M., Przystupa J., Wróbel E. (2002*), Mechanizm transmisji polityki pieniężnej – współczesne ramy teoretyczne, nowe wyniki empiryczne*, 'Materiały i Studia', Zeszyt nr 151, NBP, Warszawa

Konstytucja Rzeczypospolitej Polskiej (1997), www.sejm.gov.pl

Lutkowski K. (1995*), Uwarunkowania polskiej inflacji i proces jej wygasania*, 'Ekonomista', nr 3, Warszawa

Mały Rocznik Statystyczny, Główny Urząd Statystyczny, Warszawa, wydania z lat 2001-2009

Marszałek P. (2009), *Wybrane uwarunkowania funkcjonowania współczesnych banków centralnych*, [in:] Czech-Rogosz J. (red.), *Koniunktura gospodarcza a reakcje podmiotów*

gospodarujących, Wydawnictwo Akademii Ekonomicznej im. Karola Adamieckiego w Katowicach, Katowice

Medium – Term Strategy of Monetary Policy 1999-2003 (1998), National Bank of Poland, Warsaw

Minutes of the monetary policy council decision-making meeting held on 24 june 2009 (2009), www.nbp.pl

Monetary Policy Guidelines for the Year 2001 (2000), National Bank of Poland, Warsaw

Monetary Policy Guidelines for the Year 2002 (2001), National Bank of Poland, Warsaw

Monetary Policy Guidelines for the Year 2003 (2002), National Bank of Poland, Warsaw

Monetary Policy Guidelines for the Year 2010 (2009), National Bank of Poland, Warsaw

Monetary Policy Strategy beyond 2003 (1998), National Bank of Poland, Warsaw

Mucha-Leszko B., Kąkol M. (2009), *Polityka Systemu Rezerwy Federalnej USA i jej skutki w latach 1995-2008*, [in:] Bednarczyk J. L, Bukowski S. I., Misala J., *Współczesny kryzys gospodarczy. Przyczyny – przebieg – skutki*, CeDeWu, Wydawnictwo fachowe, Warszawa

Nasiłowski M. (1995), *Inflacjogenny charakter gospodarki w okresie transformacji*, 'Ekonomista', nr 1-2, Warszawa

Noga M. (2007), *Komunikacja banków centralnych z otoczeniem a realizacja polityki pieniężnej na przykładzie NBP,* w: Kopycińska D. (red.), *Polityka gospodarcza państwa*, Wydawnictwo PRINT GROUP Daniel Krzanowski, Szczecin

Nowak A., Ryć K., Żyżyński J. (1997), *Inflacja a stopa procentowa w procesie transformacji*, 'Ekonomista', nr 4

Pracujący w gospodarce narodowej w 2008 roku (2009), Główny Urząd Statystyczny, Warszawa

Report on Monetary Policy Implementation in 2007 (2008), National Bank of Poland, Warsaw

Rocznik Statystyczny Rzeczypospolitej Polskiej, Główny Urząd Statystyczny, Warszawa, wydania z lat 2000-2008

Rosati D. (2009), *Przyczyny i mechanizm kryzysu finansowego w USA,* 'Ekonomista', nr 3, Warszawa

Rybiński K. (2000), *Wpływ polityki pieniężnej na proces dezinflacji w Polsce*, NBP, 'Bank i Kredyt', lipiec-sierpień 2000

Schaal P. (1996), *Pieniądz i polityka pieniężna*, PWE, Warszawa

Sprawozdanie z wykonania założeń polityki pieniężnej w 1999 roku (2000), Narodowy Bank Polski, Warszawa

Sprawozdanie z wykonania założeń polityki pieniężnej w 2000 roku (2001), Narodowy Bank Polski, Warszawa

Taylor J. B. (2007), *Housing and Monetary Policy*, 'NBER Working Paper Series', No. 13682

Unia Europejska – ceny. Podsumowanie akcji (2004), NBP, Materiały z Konferencji Prasowej z 6.07.2004, www.nbp.pl

Urbańska A. (2002), *Polityka monetarna: współczesna teoria i analiza empiryczna dla Polski,* 'Materiały i Studia', Zeszyt nr 148, NBP, Warszawa

Ustawa z dnia 29 sierpnia 1997 r. o Narodowym Banku Polskim (2005), 'Dziennik Ustaw', nr 1, poz. 2

Walerysiak G. (1997), *Polityka stopy procentowej w krajach rozwijających się*, 'Ekonomista', nr 5-6

Więznowski A. (2009), *Monetarne przyczyny kryzysu finansowego w USA 2007/2008*, [in:] Noga M., Stawicka K., (red.), *Ponadnarodowa i narodowa polityka monetarna na świecie*, CeDeWu, Wydawnictwo fachowe, Warszawa

Wilczyński W. (2000), *Rynek i pieniądz w Polsce u progu XXI wieku*, Wydawnictwo Wyższej Szkoły Bankowej, Poznań

Wojtyna A. (1996), *Inflacja: sporne kwestie teoretyczne i empiryczne*, [in:] Bauc J., Belka M., Czyżewski A., Wojtyna A., *Inflacja w Polsce 1990 – 1995*, Wydawnictwa Prywatnej Wyższej Szkoły Businessu i Administracji, Warszawa

Ząbkowicz A. (2005), *Logika ekonomiczna a polityka gospodarcza*, [in:] Stacewicz J. (red.), *Problemy ekonomii i polityki rozwoju*, SGH w Warszawie, Warszawa

www.nbp.pl

www.stat.gov.pl

Streszczenie

POLITYKA PIENIĘŻNA A RYNEK PRACY W POLSCE W LATACH 1999 – 2008

Celem artykułu jest analiza wpływu polityki monetarnej Narodowego Banku Polskiego (NBP) na sytuację na rynku pracy w Polsce w ciągu dekady obejmującej lata 1999-2008. Opracowanie składa się z wprowadzenia oraz pięciu części. W pierwszej z nich omówiona została strategia polityki monetarnej NBP w badanym okresie wraz z porównaniem ze strategią przyjmowaną w innych krajach. W części drugiej sprawdzono, czy realizowany był podstawowy cel polityki monetarnej, czyli cel inflacyjny, w kontekście kształtowania się stóp wzrostu podaży pieniądza oraz realnego PKB. W punkcie kolejnym ukazana została ogólna charakterystyka rynku pracy na podstawie kształtowania się poziomu i dynamiki zatrudnienia oraz bezrobocia. W części czwartej omówiono podstawowe instrumenty polityki pieniężnej NBP. Uwaga

skoncentrowana została głównie na analizie zmian stóp procentowych banku centralnego oraz ich wpływu na sytuację gospodarczą i rynek pracy. Całość zamknięta została podsumowaniem, w którym zawarto syntetyczne wnioski końcowe.

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LUCYNA LEWANDOWSKA*

NewConnect – an alternative platform for new innovative companies

Abstract

The article discusses the attributes of innovation in the context of creating a knowledge-based economy and presents the alternative stock market NewConnect where the small and medium-sized firms may seek funds to finance their innovative projects. NewConnect's functions and goals are shown with respect to capital circulation, stock market training, education and promotion of SMEs aspiring to enter the Warsaw Stock Exchange in the future, as well as the expansion of the financial infrastructure in Poland and the EU.

1. Introduction

A knowledge-based economy is a challenge for countries and firms all over the world, but particularly in Europe (including Poland) that lags behind the progress of innovation in the USA and Japan. In a knowledge-based economy, **success depends on the creation of new knowledge that, after being materialised, triggers new ideas enhancing value added generated by management processes.** It is so, because strong relationships exist between processes transforming technological knowledge, on one hand, and structures converting outlays into results, on the other, and then between the results and policy (including knowledge policy) with its executive structures (Parwit 2001, p. 128-129). Therefore, a modern approach to knowledge and innovation requires new thinking. Firms have to open themselves up to innovation

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processes. One of the relevant lines of action is the utilisation of research projects carried out by other organizations and then abandoned or uncommercialised for the lack of skills or capital. The owners of such projects may decide to share their research results and this allows incorporating the results into a value-added creation process. Many economists, psychologists and sociologists emphasise the importance of social capital for the creation of innovation[49]. In an open society, a key aspect of knowledge policy is formation of cooperation involving natural persons and firms. A factor that particularly de-emphasises the role of human capital is the existing level of wealth, while social capital, i.e. interpersonal bonds and individuals' ability to cooperate, becomes the key factor in economic development. One of the persons that underline its importance for development is Elinor Ostrom, who was awarded the Nobel Prize in economics in 2009 for her „work on behalf of organizing and improving management in the economy". Based on her empirical research, she proved that communities managing their own assets are the most effective, make the most relevant decisions and solve arising conflicts the most efficiently.

Innovation is the main engine driving the growth of the world economy today. Firms taking up innovation challenges and realising their innovative projects may hope for steady growth of their worth. Because stimulating and promoting innovation lies in everybody's interest, the Warsaw Stock Exchange (WSE) also decided to promote innovation among the capital market players. The WSE is the first stock market in Europe to develop standards of reporting on intellectual capital for the public companies. The reports will provide a basis for building new products informing the potential investors about innovations in the listed companies from the perspective of their competitive advantages. This approach is expected to promote the WSE as a regional market for innovative companies. The NewConnect platform, a liberal alternative trading market, plays an important role in creating this image. It follows from the opinions expressed by several hundred investors about the broadly understood innovativeness of the NewConnect companies (their way of thinking, the modifications to their environment, the utilisation of new ideas, benchmarking, the degree to which the business model they apply is innovative, goods manufactured and sold, geographical coverage, R+D, investments in infrastructure, the quality of organizational solutions, etc.) that the most innovative companies are Euroimplant SA, Aton – HT SA, Read-Gene SA and Photon Energy a.s. (a Czech firm).

It is worth noting that all NewConnect companies represent industries commonly recognised as innovative (biotechnologies, IT, telecommunications,

[49] M. in. J. Czapiński, *Polska smuta*, „Polityka" weekly, 2009, no. 16, p. 18.

nanosciences, environmental protection, alternative energy sources, foreign and domestic achievements within science and technology). Much credit should be given here to the tertiary education institutions and the Science and Technology Parks that support companies regarding technology transfers and the application and commercialisation of the results of research on technological innovations. The existing data make it evident that the alternative market NewConnect perfectly matches the SMEs' demand for funds necessary to finance their innovative projects. Owing to their achievements, the NewConnect companies enrich Polish economy and steadily improve the country's competitiveness vis-à-vis other EU countries. Unfortunately, the low capitalisation (below € 10 million) prevents many of them from floating their stock on the regulated market. This barrier is insurmountable for new firms, so NewConnect is their only chance of raising capital. The introduction of identical reporting requirements for both the alternative market and the main market by the WSE Board (quarterly reports) is likely to increase NewConnect's liquidity, as well as boosting interest among the institutional investors. The unceasing evolution and changes taking place on NewConnect aim at better satisfaction of expectations of all players involved in this market.

2. NewConnect as an IPO market for small innovative firms

Ambitious firms always seek strategic solutions, allowing them to generate unique value added, hard for their competitors to copy. The relevant solutions should strengthen their reputation and position in the market that is more and more often viewed in terms of a global market. In many industries, especially those propelling the growth of whole economies (IT, intelligent technologies, nanotechnologies or biotechnologies, the power industry and the pharmaceutical industry), the largest players stopped underestimating the potential of young talented persons working for new, small firms and frequently decide to invest in the development of various ambitious projects that were initiated in small enterprises. The nature of the early growth stages of the NewConnect companies makes their investors accept higher risk, but instead they expect higher than average returns from their investments. Some of the investing entrepreneurs have noticed that by distributing their operations among different continents they can achieve unusual effectiveness, so, for instance, in the USA they deal in marketing, market surveys and customer expectations, but their new projects are developed in Poland. All these activities need capital.

NewConnect enhances the widening range of the available forms and sources of funding.

NewConnect, launched by the WSE on 30 August 2007, provides the growing high-tech firms with opportunities to raise capital. It is an open market with an alternative trading system managed by the WSE SA (Bęben 2008, p. 152). Although NewConnect has the status of an organised market, it functions outside the regulated stock market and its formula is relatively liberal. The investors can be sure of high transparency of trading, characteristic of a public market[50]. The construction of NewConnect is not unique. There are other platforms of this type that have been functioning in Europe for a time, such as AIM in London, First North belonging to the Scandinavian group OMX, Open Market, and Entry Standard affiliated to the Deutsche Boerse. The Warsaw Stock Exchange devised NewConnect for small start-ups with innovative ideas that seek funds for their implementation. By definition, NewConnect is a debut market where the small innovative firms get trained, preparing themselves to enter the WSE.

NewConnect finances small firms with potentially strong growth dynamics, helps them develop high technologies, and allows generating R+D outlays, but it also drives the expansion of financial infrastructure in Poland and particular EU regions. „NewConnect was established for new dynamic firms that can use a capital injection as a chance of exploiting their potential to innovate, and thus as a chance for growth crowned with their promotion to the group of large and valuable enterprises"[51]. NewConnect is addressed to new innovative companies that sometimes function in economic niches. The period of less than three years for which NewConnect has been in place coincides with the global financial crisis that has impeded the market's expansion. Notwithstanding, NewConnect has become very popular. Almost one hundred companies had their debuts there, from which number two have already moved to the WSE.

The NewConnect companies raise capital and sell their stocks via public or private placement. Private placement is more frequent, as its formal and legal requirements are more convenient and the time for reaping the first benefits is relatively short. In private placement, stocks are floated based on the information document[52] approved by an Authorised Advisor.

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[50] The Act on Public Offering and rules of entering securities into organized trading system and on public companies of 29 July 2005 (Dz.U. no 184) applies to both NewConnect companies and those quoted at the WSE.

[51] WSE SA SA, *NewConnect, rynek akcji GPW, przewodnik dla inwestorów*, Wyd. ART., Warsaw-August 2007.

[52] The Information Document attached to the Alternative Trading System Rules, http://www.newconnect.pl

Before a company can apply for being allowed to join the alternative trading system the issuer's Alternative Advisor has to prepare the information document.

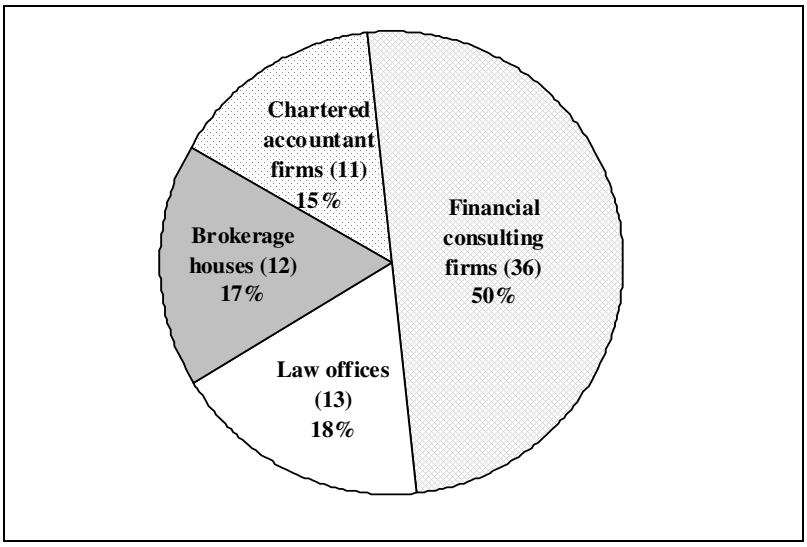
The Authorised Advisor functions in the capacity of the Polish Financial Supervision Authority. The Authorised Advisor must be accepted by the Warsaw Stock Exchange and put on the list of Alternative Advisors.

According to the WSE, the most active Alternative Advisors on NewConnect (by the number of companies they have serviced) are:

- CEE Capital,
- Inwest Consulting,
- Ruciński i Wspólnicy,
- GoAdvisers,
- CapitalOne Advisers,
- ECM Dom Maklerski,
- Kancelaria CSW Więckowska i Partnerzy Radcy Prawni,
- Dom Maklerski,
- Capital Partners,
- Łuczyński i Wspólnicy,
- Beskidzki Dom Maklerski,
- M&M Doradztwo Gospodarcze,
- Bank DnB Nord Polska,
- Chłopecki Sobolewska i Wspólnicy,
- Investin.

Graph 1 illustrates the composition of the group of Alternative Advisors.

Graph 1. Alternative Advisors on NewConnect (% and absolute numbers)



Source: WSE data.

Twenty of the listed advisors are also involved in the WSE Partner Firm Programmes.

NewConnect's experiences prove that the institution of the Alternative Advisor is a perfect response to SMEs' demand for professional advisory services regarding the accumulation of growth capital through the stock market.

The Authorised Advisors must confirm in their declarations that the issuer has provided true information. The contractual relation between these two parties, starting on the day the issuer was accepted by the continuous trading system, is scheduled for at least a year, with the Advisor performing the role of a manager. The Authorised Advisor's responsibilities are detailed in the WSE Board's resolution[53].

The entity responsible for ensuring the liquidity of the issuer's stock is a so-called **Market Maker.** Market Maker's involvement goes on for at least two years, from the day the issuer was quoted for the first time. The Market Maker's tasks on NewConnect are precisely defined under the law[54]. Their most important job is ensuring and improving the liquidity of the issuer's stock.

[53] Attachment to WSE SA Board's resolution No. 334/2007 of 25 May 2007.

[54] Attachment to WSE SA Board resolution No. 575/2007 of 6 August 2007.

Investors expect above-average profits and are aware of the risks, but they also want their investees' worth to increase in time. At the early stages of its life, a NewConnect company has to make substantial investments, hoping for large returns. Where can the investment funds come from? This question is faced by the majority of companies developing modern, frequently trailblazing technologies. Banks usually distrust projects that the start-ups found on unproven technologies (these days they are particularly distrustful). In these circumstances, a company may have recourse to EU funds[55] and/or investors (large firms), venture capital, business angels and finally NewConnect[56]. These types of financial support, especially the assistance offered under the seventh framework programme for research and technological development, inspire special hope among small, ambitious firms. There is a growing number of the IT and biotechnological firms, such as Read-Gene producing genetic tests for tumour-inducing gene mutations, or Euroimplant, a human tissue engineering company. One of the NewConnect companies is Neno that aspires to construct a futuristic car driven by an electric or even hydrogen motor (the company also holds shares in several other innovative Polish firms) (Grzeszczak 2007, p. 40). NewConnect, being part of the capital market, allows its issuers to raise capital, while enabling the investors to profit from property and corporate rights. As a result, the market and its environment expand dynamically. „From this point of view, NewConnect may also be treated as a sort of a community, because the WSE started a community portal NewConnect all the People that associates investors, entrepreneurs, advisors, market makers, stock exchange representatives and all persons interested in NewConnect" (Duraj 2008, p. 105).

Firms planning to enter NewConnect must have the prescribed organisational and legal forms (a joint-stock company or a limited joint-stock partnership), as well as presenting the aforementioned information document. Besides, they cannot be involved in insolvency or winding up proceedings and their financial expectations cannot be excessive (within ca. 20 million zlotys). The dynamics of trading during the successive sessions depends on two major factors:

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[55] In 2009, the EU's allocations earmarked for Poland under the National Operational Programmes (€ 10,147 bn) were consumed in 23% by 3 May 2009 and regarding the Regional Operational Programmes (€ 6.571 bn) it was only 6%, with the Łódź voivodeship accounting for less than 2% (the Ministry of Regional Development data). Instead of being an anti-crisis shield, the funds are wasted.

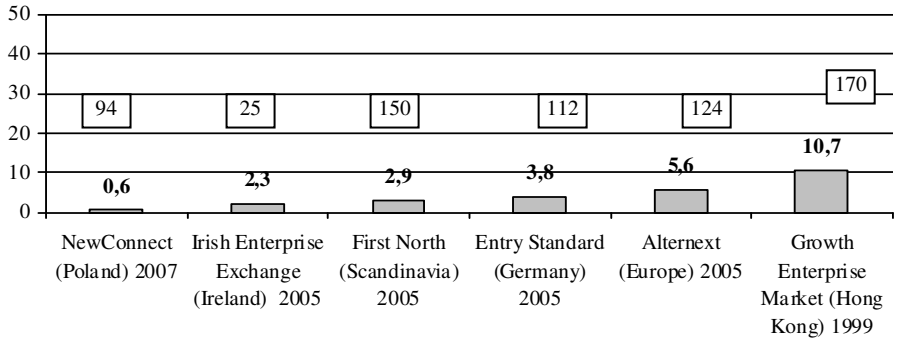
[56] More in L. Lewandowska, *Kapitałowe uwarunkowania rozwoju wysokich technologii w MSP* [in:] S. Lachiewicz, A. Zakrzewska-Bielawska (ed.)., *Zarządzanie…*, *op. cit.*, p. 44-53.

- the present market situation, and
- new issues on NewConnect.

NewConnect's trading capacity increased in December 2008, when the package deals were allowed (in the same month the deals were estimated at more than 14.1 million zlotys). Naturally, the largest companies (Pharmena, Quercus, Photon, PTI) contribute to NewConnect capitalisation the most distinctly. In total, the first ten companies account for 38% of the NewConnect issuers' market value.

Evaluated against similar markets in the world, the Polish stock market for the promising innovative firms is viewed as attractive. However, any comparisons are rather superficial, as the alternative markets do not have much in common but their name. It is unquestionable, though, that they offer more liberal environment to the small and medium-sized firms than the main markets do. In the time of crisis, their indexes do not show stronger fluctuations than those noted for the main markets. Graph 2 compares NewConnect with the smaller alternative markets.

Graph 2. Comparison of selected, smaller alternative markets. Market capitalisation ($ bn)



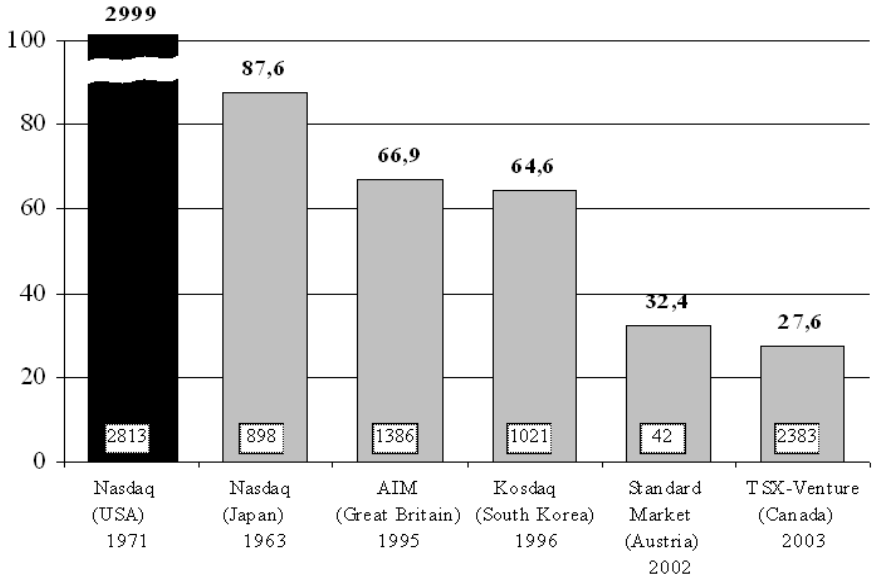
94 - the number of quoted companies
2007 - the year the market was established
0.6 - capitalisation as of July/August 2009

Source: *Giełdy*, Bloomberg; after G. Siemiończyk, *Rynki alternatywne podobne tylko z nazwy*, [in:] Almanach rynku alternatywnego, WSE – 2009, p. 7.

The capitalisation of the largest alternative markets is much larger. Some of them, for instance AIM in the UK, are even able to attract companies from the main markets. Owing to the tax relieves offered to investors, AIM managed to draw 31 firms from the main market in 2006 alone, while only 3 organisations

moved the other way. Graph 3 illustrates capitalisation levels on the aforementioned markets.

Graph 3. The largest alternative markets by capitalisation ($ bn)



Source: For the legend and source see Graph 2.

3. NewConnect and free movement of capital in the EU

The homogenisation of financial markets in the EU is a natural response to globalisation.

Innovation, already discussed in the earlier part of the article, has a positive effect also on the global flows of capital. Owing to IT infrastructure, innovation allows increasing the variety of financial products and reaching a larger number of clients all over the world.

The range of measures intended to facilitate free movement of capital within the EU includes a list of projects to be carried out in the period 2005-2010 that was compiled and then published in the „White Paper"[57]. The projects

[57] http://www.pwc.com, January 2007

are hoped to encourage investment activities, particularly those involving innovative projects, and to stimulate the expansion of capital markets, including the WSE and NewConnect.

The European Union focuses on:

- integrating open, competitive financial markets,
- minimising barriers obstructing capital flows,
- harmonising legislations,
- ensuring the convergence of financial supervision,
- tightening cooperation with the global financial markets,
- increasing its share in the global market.

Fulfilling the above goals will certainly contribute to better mobilisation of capital. The WSE and NewConnect have assumed the same goals. They are even more important for NewConnect, because a larger number of investors is likely to provide its companies with better access to capital[58] translating into the implementation of innovations and the reinforcement of the companies will boost the growth dynamics of the country's economy. The empirical evidence[59] provided by the growth pattern of many NewConnect companies shows that the stock market created for the ambitious, small, innovative companies to raise capital works well and bridges the financing gap, as it provides the high-tech SMEs with a supportive financial and institutional environment they need to grow. The most recent recommendation by the Small Business Act provides for the rules of creating this type of policy by all EU governments.

Trying to assess the start-ups' market indicators (such companies predominate on NewConnect) we need to remember that because of the relatively low profits such companies have in the early years of their functioning all of them have to be allocated to innovation, which results in a high price-earnings ratio and the retention of dividends.

The year 2009 can be deemed a good year for the alternative stock market in Poland. In January 2009, its indices started from the level of 38.22 pts and reached their highest annual value, 49.82 pts, on 7 December; the annual index was 49.7 pts. The whole market grew by 30.04%.

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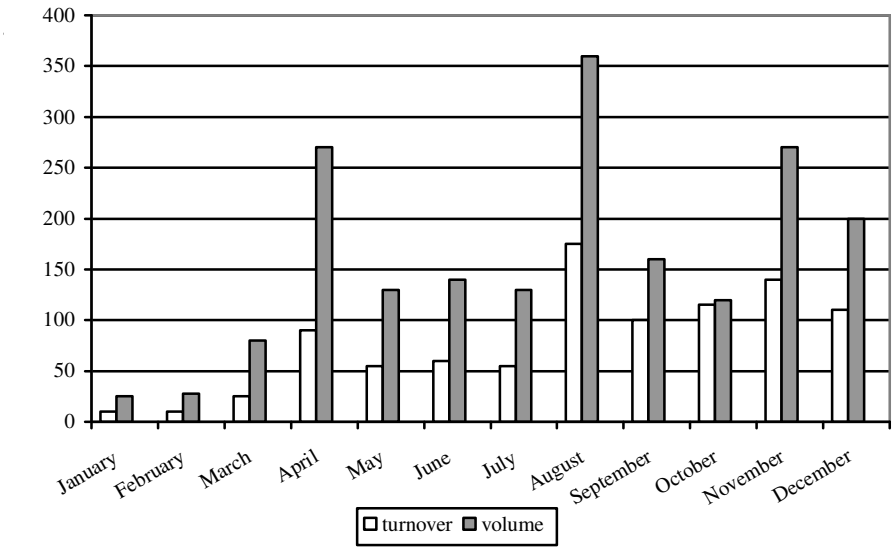
[58] Limited access to capital is reported by every fifth small enterprise in the EU (see Observatory of European SMEs. Analytical Report. Flash Eurobarometer No. 196). The Gallup Organization, May 2007, p. 16.

[59] A detailed description of Milkpol SA debut and growth on NewConnect can be found in L. Lewandowska, *NewConnect jako źródło kapitału dla obiecujących innowacyjnych firm* [in:] L. Lewandowska (ed.) Formy wspierania przedsiębiorczości w regionie łódzkim w warunkach kryzysu gospodarczego, PTE, Łódź 2009, p. 331-347.

Monthly turnover and volume by month of the analysed year are presented on Graph 4.

Graph. 4. Turnover and volume for the NewConnect companies in 2009



Source: IPO.pl based on www.gpwinfostefa.pl and www.stooq.com after W.Dembski, Ipo.pl, www.ncbiuletyn.pl

The graph omits companies that split their stock or effected rights issues in 2009. In addition to those NewConnect companies that showed growth (58), there were also companies whose worth decreased and one firm whose stock value did not change.

In 2009, 26 firms entered NewConnect (there were 61 IPOs in 2008), increasing the total number of its listed companies to 107 by the end of the year. Because the NCIndex was calculated for 10% of the largest companies, the whole market showed a 30% growth vis-à-vis 2008. Its total capitalisation was 2554m zlotys in 2009, exceeding its 2008 level by 83%.

Despite this strong growth, NewConnect liquidity continues to be relatively low. A daily turnover for all the companies is 4.6m zlotys.

The above shows that NewConnect is a marketplace where investors can earn a lot but also suffer heavy losses. Therefore, considering that the obligatory financial reports of the listed companies have a limited scope, the potential investors should take into consideration other firms' characteristics, such as the

types of innovation, human capital, projected events, issues discussed at the general meetings, etc.

Attempting to improve the operational transparency of the NewConnect firms, the WSE runs surveys to determine how innovative they are, for the time being only among the investors-members of the aforementioned community NewConnect All The People.

To promote good practices, the WSE Board's resolution no 795/2000 of 31 October 2008 made it obligatory for the listed companies to adhere from 1 January 2009 to the rules laid down in the document „Good Practices Of Companies Listed on NewConnect". According to the resolution, the NewConnect issuers have to publish annual reports with the descriptions of the applied corporate governance rules starting with the 2009 report.

4. Conclusion

NewConnect has become a platform that provides the small and medium-sized companies capable of developing innovations with financial, educational, methodological and promotional opportunities.

Therefore, NewConnect helps change and improve Polish economy via the generation of GDP, new jobs, stimulation of export activities, and by increasing the worth of small companies that want to become strong public companies one day.

Supplementing the range of financing options such as investment loans, EU funds, mezzanine finance, venture capital, and business angels with an environment where companies can seek funds to develop high technologies, NewConnect becomes part of the plan for expanding the financial infrastructure in Poland and the EU.

References

Bęben R. (2008), *Rynek „NewConnect" – źródło finansowania rozwoju nowych technologii* [in:] S. Lachiewicz S., A. Zakrzewska-Bielawska (ed.) (2008), *Zarządzanie przedsiębiorstwem w warunkach rozwoju wysokich technologii*, Wyd. PŁ, Łódź

Czapiński J. (2009), *Polska smuta*, 'Polityka', no. 16

Information Document attached to the Alternative Trading System Rules, http://www.newconnect.pl

Duraj J. (2008), *Pierwsze doświadczenia z funkcjonowania NewConnect* [in:] J. Duraj (ed.), *Przedsiębiorstwo na rynku kapitałowym*, Wyd. UŁ, Łódź, p. 105

WSE SA, NewConnect, rynek akcji GPW, przewodnik dla inwestorów, Wyd. ART., Warsaw-August 2007

Grzeszczak A. (2009), *Głową do przodu*, 'Polityka' weekly, 4 July 2009, no. 27 (2712), p. 40

http://www.pwc.com, January 2007

Lewandowska L. (2008), *Kapitałowe uwarunkowania rozwoju wysokich technologii w MSP* [in:] S. Lachiewicz, A. Zakrzewska-Bielawska (ed.)., *Zarządzanie przedsiębiorstwem w warunkach rozwoju wysokich technologii*, Wyd. PŁ, Łódź

Lewandowska L. (2009), *NewConnect jako źródło kapitału dla obiecujących innowacyjnych firm* [in:] L. Lewandowska (ed.) *Formy wspierania przedsiębiorczości w regionie łódzkim w warunkach kryzysu gospodarczego*, PTE, Łódź

Limited access to capital is reported by every 5th small-sized company in the EU (see Observatory of European SMEs. Analytical Report. Flash Eurobarometer No. 196). The Gallup Organization, May 2007

Parwit K. (2001), *Cechy gospodarki opartej na wiedzy*, [in:] A. Kukliński, *Gospodarka oparta na wiedzy. Wyzwania dla Polski XXI wieku*, KBN, Warsaw

Attachment to WSE SA Board' resolution No. 334/2007 of 25 May 2007

Attachment to WSE SA Board' resolution No. 575/2007 of 6 August 2007

Streszczenie

NEWCONNECT – ALTERNATYWNA PLATFORMA DLA MŁODYCH NOWATORSKICH SPÓŁEK

W artykule zaprezentowano atrybuty innowacyjności w kontekście kreacji Gospodarki Opartej na Wiedzy oraz alternatywny parkiet NewConnect, stanowiący szanse pozyskiwania kapitału na nowatorskie projekty przez małe i średnie firmy. Wskazano na realizowane funkcje i zadania NewConnect w dziele przepływu kapitału, treningu giełdowego, edukacji i promocji małych i średnich spółek aspirujących w przyszłości do zajęcia pozycji na GPW oraz rozbudowy infrastruktury finansowej Polski i Unii Europejskiej.

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WITOLD KASPERKIEWICZ[*] ANDRZEJ KACPRZYK[**]

The European Union Innovation Performance in View of the Lisbon Strategy

Abstract

The Lisbon Strategy was accepted by the European Council in March 2000 during the Lisbon summit. The Strategy is European Union's answer to many challenges resulting from the economic globalization and the dynamic development of information technologies. The importance of these challenges is paramount. Hence, it has turned out that new strategies based on the principle of balanced development which would modernize the European economy are indispensable.

Even though in the last decade of the 20th century integration process of Union's economies underwent considerable intensification, they still could not outweigh the American economy in the technological race. As a result European economies became less competitive in comparison with the American counterpart.

The rise in innovativeness of the EU economies plays a key role in the implementation of the major aims of the Lisbon Strategy. The ability to facilitate those innovations and to put them into practice have crucial importance for minimizing the economic distance between EU and US. The main aim of the paper is to present the innovativeness of European economies and Japan. The paper also evaluates the conditions and effects of the implementation of the strategic objectives of Lisbon Strategy.

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The paper is divided into four parts. First deals with the characteristics of the role of knowledge-based economy and innovativeness of the economic system in Lisbon Strategy. Second is devoted to the issue of innovativeness of the EU economies as compared to the US and Japan. Third presents evaluation of the Lisbon Strategy implementation. Fourth analyses the renewed Lisbon Strategy.

1. Introduction

The Lisbon Strategy launched by the European Council in Lisbon in March 2000 during the Lisbon Summit was European Union's response to numerous challenges resulting from globalization of economic processes and dynamic development of information technologies. The importance of these challenges is so huge that it was necessary to prepare the strategy for European economy based on the principle of sustainable development. Although the EU countries deepened their integration processes in the 1990s but they could not win the race with technological development of America. In consequence, the West European economies became less competitive in comparison to American economy. Additionally, the growing powers of China and India began to threaten the position of the Community.

The Lisbon Strategy has been the best developed programme increasing the competitiveness of European economies in the history of the European Union. The improved innovation performance (Radło, 2003, 2. 16) plays an important part in the implementation of the Lisbon Strategy. The ability to create and use in practice the stream of innovation is of utmost importance in an attempt to breach the economic and technological gap between the European Union and the US. This paper aims to present the essence of the Lisbon Strategy (the primary and amended version), to present innovativeness in the European Union as compared to the US and Japan, as well as to appraise the results of the up to date implementation of the Strategy.

2. The Knowledge Based Economy and Innovation of the Economic System in Lisbon Strategy

The characteristic feature of the Lisbon Strategy is a very ambitious plan to transform the European Union by 2010 into the best competitive and dynamic economic area in the world. The development of knowledge based economy

(KBE) through increase in effectiveness of research and development policy and activation of innovation will help to implement this objective (Haliżak, Kużniar, Symonides, 2004, p. 119). Other measures defined in the Lisbon Strategy involve: modernisation of European social model through investments in education and prevention of social alienation and unification of European market, liberalization of banking services, power and telecommunication sectors etc.

The most important aspect of the Lisbon Strategy is a plan to strengthen the research potential of UE countries and improve effectiveness of its use which should result in acceleration of innovative processes and consequently in bridging the technological gap between Europe and the US. The innovativeness of economy is a function of three principal factors. The first factor involves broadening the knowledge in sciences, technology and management. To this end modern public and private R&D centres underlying innovativeness of economy are needed . The second factor involves availability of highly qualified and flexible work force able to employ knowledge in order to improve work productivity. The volume of such work force is above all determined by development and efficiency of educational system. The third factor involves attitudes of entrepreneurs, whose inclination to get involved in risky enterprises determines economy's innovativeness. The significance of this factor is partly dependent on the impact power of entrepreneurship culture and partly on the openness of social institutions to entrepreneurship (Castells, 2003, pp. 121-122).

The European idea of building the knowledge based economy has gained a strong support from the European Council decisions made at the summit in Lisbon covering the implementation of "e-Europa" project adopted at a similar summit in Helsinki in December 1999. Principal decisions involved:

- Prompt enacting by the European Parliament, still in 2000, the acts of law on electronic commerce, copyright, e-money, on distant selling of financial services,
- Increased access to Internet by 2000 and reduction of Internet costs,
- Providing all EU schools with access to Internet and multi-media resources by the end of 2000,
- Providing cheap and quick Internet for all member countries with financial support from the European Investment Bank (Marliński, 2000, p. 49).

An important component of the Strategy is establishment of the European Research Area defined as an area of free research exchange where scientific potential will be used to provide new jobs and increase competitiveness of member countries. The implementation of this project requires coordinated, flexible and non-bureaucratic measures at national and EU levels. Thus, the

Council of Europe suggested the European Commission and member countries to take measures consisting in: (Płowiec, 2001, p. 10-12):

- Developing adequate mechanisms aimed at creating national and joint programmes on freely selected research issues in order to obtain greater benefits from joint R&D potentials of partner countries,
- Improving climate for individual investments in research and employing highly advanced technologies with tax policy, venture capital and support from the European Investment Bank,
- Establishing by the end of 2001 the quick trans-European network for scientific - electronic communication linking research institutes, universities, academic libraries and centres,
- Eliminating impediments to scientific mobility in Europe and attracting high-class research talents to EU countries,
- Introducing by the end of 2001 the EU patent (together with a usable model) so that protection of patents in the whole Europe would be as easy and but not so expensive as in the US or Japan.

The European Research Area was established by the European Parliament in June 2002 and was based on the 6th Research Framework Programme (2003-2006). The main objectives of the programme involved: strengthening of scientific and technological base of European industry, increase of its competitiveness, promotion of scientific research in genomics, bio-technologies, nanotechnologies, nano-science, aeronautics and space research, information society technologies etc. Programme's total budget amounts to EUR 17.5 billion i.e. by 17 per cent more than the previous 5th Research Framework Programme.

The strengthening of EU member countries' research potential should be coupled with increased R&D expenditures. The Council of Europe summit in March 2003 decided that by 2010 the whole European Union should assign for this purpose 3 per cent of its GDP (according to 2001 data it was 1.94 per cent) (Haliżak, Kużniar, Symonides, op. cit., s. 124). Such considerable increase in R&D expenditures should result in an increased annual rate of growth (0.5 per cent) and in 400 000 new jobs yearly (Gadomski, 2003). For an example the Galileo project will cost EUR 2 billion and will create hundreds of thousands of new jobs in modern sectors of economy.

SMEs innovativeness is an important component of the Lisbon Strategy. The Lisbon summit adopted the "European Charter for Small Enterprises" and the "Fourth Multiyear Programme for Enterprises and Entrepreneurship 2001 – 2005". These documents stress the need to develop research and innovativeness activity of small and medium enterprises in new industrial and information technologies. The priorities set in these documents involve: SMEs' access to

innovation funding, development of vocational and lifelong learning, development of e-learning application and coordination of business support network in particular improvement of operation, co-operation and co-ordination of Euro Info centres.

The Lisbon Strategy has also appreciated the importance of education and training in the process of building innovativeness and the most technically advanced economy in the world. The education and training are horizontal in character in the sense that they are present to a smaller or larger extent in the remaining European strategies, pertaining to social issues in detail. For the most part it concerns the European Employment Strategy adopted by the Council of Europe in 1997. Education and training are the most important methods of operation in the first Pillar (improving employability) and play an important role in implementation of the Second Pillar (developing of entrepreneurship) and the Third Pillar (encouraging adaptability of business and their employees).

The programme for modernisation of education system set out by the Lisbon Strategy postulates to adapt the system to requirements of knowledge based society and need to increase quality of employment. Hence, the Council of Europe advised the member countries to take the necessary steps (Presidency Conclusions: Lisbon European Council, 2000, Article 26) to meet the following targets:

- a substantial increase in per capita investment in human resources;
- the number of 18 to 24 year olds with only lower-secondary level education who are not in further education and training should be halved by 2010;
- popularisation of education and training with use of IT skills;
- a European framework should define the new basic skills (foreign languages, technological culture, entrepreneurship , IT skills) which should be provided through lifelong learning;
- define, by the end of 2000, the means for fostering the mobility of students, teachers and training and research staff;
- a common European format should be developed for curricula vitae in order to facilitate mobility by helping the assessment of knowledge acquired.

The Lisbon Strategy recommendations have been further developed in "The concrete future objectives for education and training systems" approved by the Council of Europe in 2001 in Stockholm. This is a very important EU document presenting comprehensive approach to education and training policies of member countries. The document defines three strategic objectives promoting, firstly, improving the quality and effectiveness of education and training, secondly, making access to learning easier, thirdly, opening these systems to the world, that is their better adaptability to the needs of vocational

and social life, improvement of foreign language teaching, developing entrepreneurship etc. (Ciechański, 2003, p. 64-65).

3. The European Innovation Performance vs. the US and Japan

While analysing innovativeness of an economy the indicators are employed defining its ability to innovation, that is development and commercialisation of innovation as well as innovation activity defining innovative position of a particular country. According to the methodology developed by the European Commission, the European Innovation Scoreboard, the innovation indicators may be divided into two groups:

- indicators reflecting outputs for innovation activities presenting ability of an economy to innovation;
- indicators defining innovation activity results evaluating particular country's innovation position, that is, the results of combining society's creativity with financial resources in a particular economic and financial environment (European Innovation Scoreboard, 2007, p. 35).

The above classification of innovation indicators is an attempt to combine macro and micro-economic approach enabling comprehensive analysis of economy's innovation. Comparing mutually linked components describing material and non-material resources determining innovation dynamics of an economy it is possible to define the European Union position in science, technology and innovation activity. The indicators describing outlays for innovation include three principal categories:

- funding (individual and public R&D outlays, companies' expenditures for innovation, IT expenditures, venture capital etc.);
- human resources (youth gross enrolment index, lifelong learning, graduates in engineering, tertiary education ratio);
- environment supporting innovation activity (co-operation in innovation activity, SMEs innovation rate, broad-line Internet lines per 100 people).

Innovation activity indicators may be classified into three categories (European…, 2008, p. 35):

- research and innovation results (patents, functional designs, trademarks);
- employment (percentage of the employed in production of goods and services of advanced technology);
- knowledge commercialisation (the share of new and modernised products in the total sales, share of exports of highly advanced products in total exports).

The above mentioned indicators express relative values (e.g. the value of particular variables in relation to GDP or population in a particular country) enabling comparability at an international scale.

The results and scope of innovation analysis of EU vs. the US and Japan are presented in Table 1. The table presents 13 indicators measuring various innovation aspects; the indicators define five dimensions of innovation: innovation engines, knowledge creation, innovation and entrepreneurship, knowledge creation, innovation and entrepreneurship, implementation and intellectual property. The first three innovation dimensions involve indicators illustrating outlays on innovation activity. The fourth and fifth dimensions include indicators presenting the results of innovation activity in a synthetic manner.

Table 1. The EU Innovation Performance vs. the US and Japan in 2007

	Innovation criteria	UE – 27	US	Japan	UE leaders
1.	**Innovation drivers**				
1.1	Science &Engineering graduates per 1000 population aged 20-29	12.9	10.6	13.7	FR (22.5), LT (18.9)
1.2	Population with tertiary education per 100 population aged 25-64	23.0	39.0	40.0	FI (35.1), DK (34.7)
1.3	Broadband penetration rate (number of broadband lines per 100 population)	14.8	18.0	18.9	DK (29.6), NL (29.0)
2.	**Knowledge creation**				
2.1	Public R&D expenditures (% of GDP)	0.65	0.69	0.74	FI (0.99), SE (0.92)
2.2	Business R&D expenditures (% of GDP)	1.17	1.87	2.40	SE (2.92), FI (2.46)
2.3	Share of medium-high-tech and high-tech R&D (total)	85.2	89.9	86.7	SE (92.7), DE (92.3)
3.	**Innovation & Entrepreneurship**				
3.1	Early-stage venture capital (% of GDP)b)	0.022	0.035	-	DK (0.051), UK (0.047)
3.2	ICT expenditures (% of GDP)	6.4	6.7	7.6	BG (9.9), EE (9.8)

4	**Applications**				
4.1	Exports of high technology products as a share of total exports	16.7	26.1	20.0	MT (54.6), LU (40.6)
4.2	Employment in medium-high and high-tech manufacturing (% of total workforce)	6.63	3.84	7.30	DE (10.75), CZ (10.33)
5	**Intellectual Property**				
5.1	EPO patents per million population)	128.0	167.6	219.1	DE (311.7), FI (305.6)
5.2	USPTO patents per million population	49.2	273.7	274.4	FI (133.2), DE (129.8)
5.3	Triad patents per million populationd)	19.6	33.9	87	DE (53.8), NL (47.4)

[a)] Chemicals, machine manufacture, office equipment, electric, electric, telecommunication equipment, automobiles, aeroplanes and other transport.

[b)] Venture capital involves company investments in seed or start-up capital. The seed capital finances research, analyses and development of the early business ideas. The start-up capital finances product idea development, its initial marketing and sale.

[c)] This kind of exports involves aviation, computers and office devices, electric machines, chemical processing.

[d)] Triad patent involves European, American and Japanese patents.

Source: European Innovation Scoreboard 2007, Pro Inno Europe, February 2008, pp. 16-17.

The analysis of innovation indicators in the European Union (average values for UE-27) in comparison to the US and Japan allows to estimate that European innovations are lower. In comparison to Japan almost all EU indicators are lower while vs. the US, the two indicators (S&E graduates per 1000 population aged 20-29 and employment in medium-high and high-tech manufacturing as a percentage of total workforce) are higher.

The level and structure of R&D outlays according to the sources of funding are important indicators of innovation performance. The share of these outlays in terms of GDP varies considerably in particular EU countries. In some countries (Sweden, Finland, Germany, Denmark, France, Austria) this indicator exceeds the EU average while in Sweden and Finland it is even higher than in the US and Japan.

The volume of R&D funding does not provide sufficient basis for evaluation of innovation performance . The innovation performance is strongly determined by the structure of the funding (central government and business

funding). The comparative analysis of the innovation system structure demonstrates that innovation performance is higher in countries where funding comes from business rather than in countries where funding comes from central government. This is due to the fact that business is funding innovation projects that directly increase their innovation activity. The funding structure in the European Union is less advantageous than in the US or Japan. This is reflected by a relatively high share of central government R&D funding accounting for 36 per cent in the European Union against 22 per cent in Japan and 23 per cent in the US. (European Innovation…, p. 40). Some EU countries indicators exceed the EU average, e.g. Portugal with about 60 per cent, Italy – about 50 per cent, Greece – about 49 per cent, Poland – 68 per cent. On the other hand in several EU countries (Ireland, Belgium, Sweden, Finland) this indicator is close to the US and Japan.

4. Evaluation of the Lisbon Strategy Implementation

The nine years that have passed since the Lisbon Strategy was declared provide sufficient time span to evaluate progress in implementation of Strategy's strategic objectives. The analysis of the up to date effects of activities under the Strategy enables to draw several conclusions and to mention the most important dilemmas of implementation processes.

The evaluation of the Strategy implementation should take into account objective macro-economic conditions that disturbed the success of this process. In March 2000, when the EU authorities adopted the Lisbon Strategy, the European economy was in a good condition, investors were optimistic, high profits resulting mainly from proliferation of new technologies in IT and telecommunication were expected and stock prices of companies in the so-called new economy soared. The average EU GDP growth rate in 2000 reached 3.5 per cent. A year late it was a mere 0.9 per cent and in 2002 about 0.8 per cent (Otachel, 2003, p. 8). The economic melt-down in the last three years and political divisions in the EU caused by a war in Iraq significantly delayed implementation of the Lisbon Strategy.

Despite numerous obstacles on the way to implementation of the Lisbon Strategy the European Union countries were successful in several cases.

Firstly, the rate of household access to Internet increased in Europe from 18 per cent in 2000 to over 60 per cent in 2007.

Secondly, the new network and the new eu. domain name were developed. This enabled to create new European domain names for websites and

e-mail addresses. The eu. domain name supplements today the whole family of national and general domain names including .com and .org. The .eu domain name may be used by companies operating in Europe. Previously, the EU institutions used the Los Angeles based .int domain name which was assigned for such bodies as the UN and the NATO

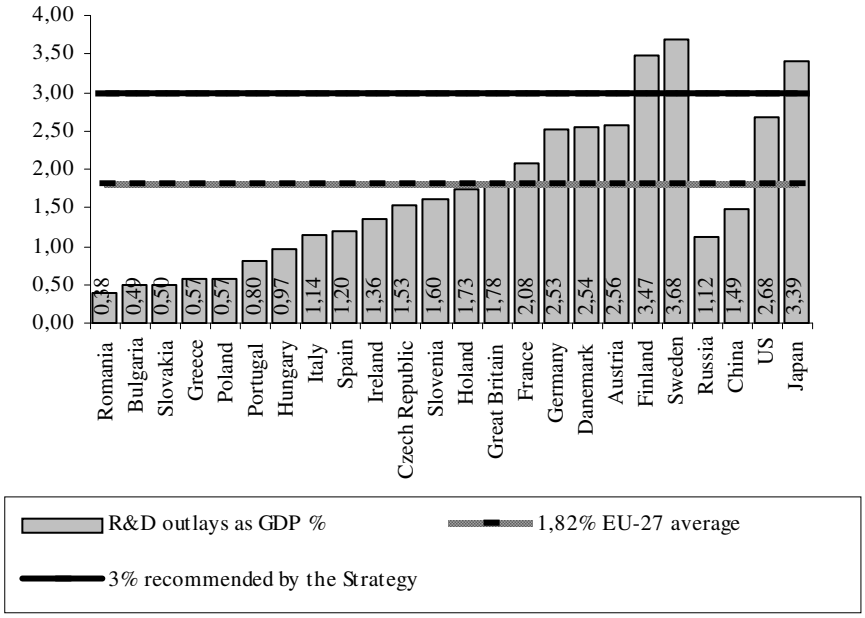
Thirdly, an important role in the integration of R&D activity of EU countries was played by the 6th Research Framework Programme 2002-2006. The Programme formed a base for co-ordination of the research, most important from the view of development of modern technologies and building knowledge based economy. The consecutive 7th Framework Programme 2007-2013 is the largest programme for funding and developing Research and Development at a European level.

Fourthly, there was progress in liberalisation in energy market, transport and telecommunication sectors. The solution was adapted in reference to energy market that starting from the early 2004 industrial power consumers, and from 2005 all business entities in the European Union will be free to choose their gas and electricity suppliers.

The evaluation of priority objectives implementation of the Lisbon Strategy in innovation and competitiveness is not favourable and raises doubts so as to the future development of EU economies. It should be noted that none of the objectives will be achieved by 2010. The R&D outlays account for a mere 1.82 per cent of the EU GDP (2007 figures) while according to initial guidelines they should oscillate at 3 per cent in 2010. The achievement of this undoubtedly excessive rate was to be a main factor enabling transformation of the European Union into the most competitive and dynamic economic region worldwide. The Figure 1 demonstrates the gap between the 3 per cent rate set by the Strategy and the R&D outlays / GDP rates in selected countries. The 2007 R&D outlays / GDP rate accounted for 1.82 per cent and was considerably lower than the 3 per cent set by the Strategy and rates achieved by the US and Japan.

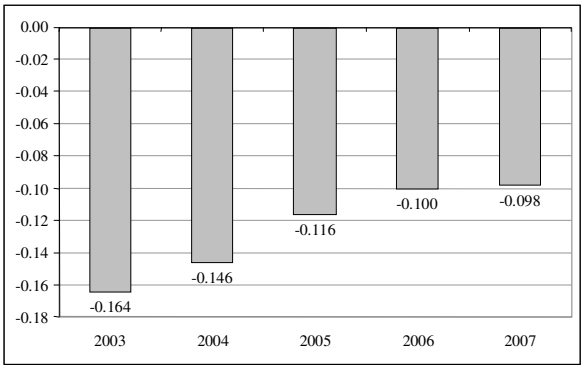
The above statistics indicate that in terms of innovation performance the US and Japan are ahead of the European Union. According to 2003-2007 figures these countries rank higher in the innovation race but the innovation gap has been declining. Summary Innovation Index is used to measure innovation gap between various countries and evaluate innovative performance. The value of the SII oscillates between 0-1 (European…, p. 15-16).

Figure 1. R&D to GDP ratio in selected countries in 2007

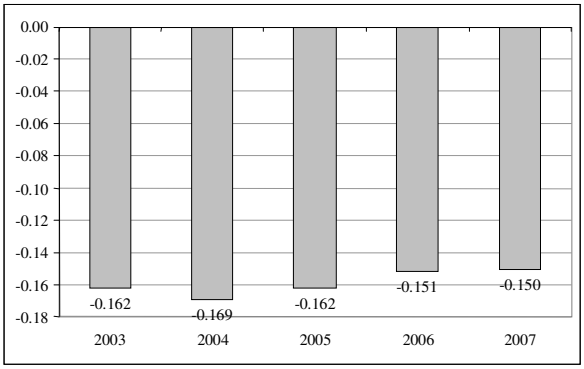


Source: Authors' own work based on: *OECD Factbook 2009*, Paris 2009, p. 165; *European Innovation Scoreboard 2007*, EC, Brussels 2008, pp. 39-40.

Figure 2. The EU Innovation gap in relation to the US and Japan (2003-2007)*



a) EU-US



b) EU-Japan

* Vertical axes show differences between the SII results for the EU, and the US and Japan.

Source: *European Innovation*…, op. cit., p. 15.

Figure 2 illustrates the European Union innovation gap with the US and Japan. The gap is set by the difference between Summary Innovation Index for the European Union, and the US and Japan. Conclusion may be drawn from the analysis of data presented in Figure 2 that the US and Japan are still ahead of the European Union but the 2003-2007 innovation gap has decreased. In the case of the EU-US gap it has dropped from 0.164 points to 0.098 points. On the other hand, the EU-Japan gap first rose in 2004 from 0.162 points to 0.169 points and then fell to 0.150 in 2007.

The lack of significant achievements in stimulating EU innovations may be attributed to numerous diverse reasons of complicated nature.

Firstly, the Strategy set out an excessive number of justified objectives resulting in antimony between the imperative to increase the competitiveness of EU economies and social objectives protecting the labour market from substantial changes.

Secondly, there is a lack of political will on part of the European Union leaders to consistently implement the Lisbon Strategy. They focus on current issues, or only on issues that can be solved between elections.

Thirdly, the co-ordination of national economic policies, under the open methods of co-ordination adopted by the European Union, is ineffective (Giddens, 2009, p. 202-203).

Fourthly, at time when the Lisbon Strategy was drafted, various stages of innovation development within the European Union were not taken into account. This became clearly visible after the European Union's extension in 2004.

5. The Renewed Lisbon Strategy

The Lisbon Strategy, although optimal in terms of theory and in conformity with EU philosophy of combining economic growth with social and ecological objectives, in practice, turned out to be not feasible. In 2004, the European Commission established the so-called High Level Group chaired by W. Kok. In November 2004 the group issued the report with critical appraisal of hitherto implementation of Strategy objectives. The report prepared foundation for future redefinition of Strategy's objectives.

The report authors found the reasons underlying the Lisbon Strategy still valid. Europe still needs strong innovation impulses, fundamental for development of competitiveness of European Union economy. The Strategy should be understood as a method of transformation of European economic systems and adapting these systems to meet globalisation and demographic challenges.

Recommendations entailing from the report prepared by W.Kok served as a basis for the European Commission for submitting a new version of the Lisbon Strategy, adopted later by the Council of Europe. The European Union abandoned the ambitious objective to outrun the leading world economies in terms of competitiveness. Delivering stronger, lasting growth and creating more and better jobs were set as priority policies of the Strategy. The following three

guidelines serve to this purpose (Polska wobec redefinicji Strategii Lizbońskiej, 2005, p. 15-16):

A. Making Europe a more attractive place to invest and dwell.
B. Taking advantage of knowledge and innovation for economic development.
C. Creating more and better jobs.

A. Making Europe a more attractive place to invest and work:

- Extending and deepening the internal market;
- Ensuring open and competitive market inside and outside Europe;
- Improving European and national regulation;
- Expanding and improving European infrastructure.

B. Knowledge and innovation for growth:

- Increase and improvement of investments in R&D;
- Facilitation innovation, the uptake of ICT and the sustainable use of resources;
- Support for establishment of strong European industrial base.

C. Creation of new, better jobs:

- Attracting more people into employment and modernisation of social protection systems;
- Increasing the adaptability of workers and enterprises and the flexibility of labour markets;
- Investing more in human capital through better education and skills.

The renewed Lisbon Strategy explicitly stresses the need to further strengthen the „knowledge triangle", that is research, innovation and education. In 2006 the European Commission adopted the new innovation strategy for Europe, called " a broad-based innovative strategy for Europe". The strategy set out integrated plan of action for promoting innovation in Community countries and above all for improving effectiveness of research in practice (Putting knowledge into practice, 2006). The Strategy sets out several priority policies, most of them closely related to research and innovation:

- The establishment of the European Institute of Technology, modelled after American MIT;
- Creation of open, competitive and uniform labour market for researchers;
- Improvement of knowledge transfer between universities, and business and public institutions;

- Financial support for innovation development at a regional level;
- Setting out new framework for state aid for research and innovation, and more effective application of tax incentives for R&D and innovation;
- Development of strategy for innovation friendly, lead markets, (IT, electronic equipment, precision instruments, telecommunication etc.).

In order to increase responsibility of member countries for implementation of the Lisbon Strategy objectives the Commission proposes to introduce a new method of managing the reform process. The most important changes involve:

- Introduction of National Action Plans for economic growth and new jobs, adopted by governments of member countries after consulting their national parliaments (reform plans);
- Appointment by each member country within their own government the persons responsible for co-ordination of actions related to implementation of the Lisbon Strategy („Mr or Ms Lisbon");
- Facilitating and streamlining the reporting process on implementation of the Lisbon Strategy (a single EU report on the progress made in implementation of the Strategy and a national report – the reporting part of the National Action Plan, combining the most important reporting duties now in force, in one package);
- Commencement of a new three-year cycle of co-ordination of economic and employment policies.

A new problem emerged, even more clearly visible after the EU extension, the issue of differences in priorities of old and new members. The most important objective of the EU-15 countries is to make the European Union the most competitive and dynamic economic region in the world. Whereas for the new countries it is more important to gradually even the wealth level. These objectives do not have to be mutually exclusive. On the one hand the increase in wealth of the EU-10 will also be advantageous for the EU-15 since the common market will get bigger. On the other hand more investments in modern technologies and R&D activity in new countries will contribute to the development of other partners. The new member countries will co-finance the construction of the Trans-European Transport Network (TEN-T) and research under the European Research Area.

6. Conclusion

From these considerations it may be concluded that despite its many drawbacks the Lisbon Strategy still remains the sole Europe wide project supporting economic transformation of the European Union. The arguments that once contributed to the establishment of the Strategy still remain valid. Europe should improve its innovation performance, strengthen knowledge based sectors of industry and streamline technology transfer between EU member countries. The present trends in the European Union focus on creating systemic approach to innovation, increasing complementarity of national and regional policies and promoting new high-tech enterprises.

The reduction of priorities adopted by the original Lisbon Strategy and the premise to decentralise the Strategy (nationalisation) should improve implementation effectiveness of Strategy's objectives. The increased flexibility of the Strategy in terms of national preferences and conditions is of vital importance for Poland's economy. Owing to these decisions, the Poland's National Action Plan can adopt more feasible objectives for R&D expenditures and employment rate.

References

Bielska A., Kwasowski M., Serafin P. (2003), Analiza propozycji reform w raporcie 'An Agenda for a Growing Europe' - ocena z perspektywy Strategii Lizbońskiej i rozszerzenia UE, www.biuletyn.ukie.gov.pl

Castells M. (2003*), Galaktyka internetu*, Rebis, Poznań

Ciechański J. (2003), *Otwarta metoda koordynacji w Unii Europejskiej*, Instytut Stosunków Międzynarodowych Uniwersytetu Warszawskiego, Warsaw

Communication to The Spring European Council 'Working Together for Growth and Jobs. A New Start for the Lisbon Strategy' (2005), Brussels, February

European Innovation Scoreboard 2007 (2008), Commission of European Communities, Brussels

Gadomski W. (2003), *Między Wschodem a Zachodem*, 'Gazeta Wyborcza', 15 December

Giddens A. (2009), *Europa w epoce globalnej*, PWN, Warsaw

Haliżak E., Kuźniar R., Symonides J. (2004), *Globalizacja a stosunki międzynarodowe*, Oficyna Wydawnicza Branta, Bydgoszcz – Warsaw

Leonard D. (2003), *Przewodnik po Unii Europejskiej*, Studio EMKA, Warsaw

Marliński W. (2000), *Inicjatywa „e Europa" jako narzędzie przyspieszenia transformacji w kierunku społeczeństwa informacyjnego*, 'Wspólnoty Europejskie', No. 4

Otachel B. (2003), Rezultaty spotkania Rady Europejskiej w Brukseli w dniach 20-21 marca 2003 - ocena dotychczasowej realizacji Strategii Lizbońskiej, www.biuletyn.ukie.gov.pl

Płowiec U. (2001), *Wyzwania dla Polski wynikające z przewidywanego rozwoju Unii Europejskiej*, Kongres Ekonomistów Polskich, Warsaw, January, zeszyt 3

Polska wobec redefinicji Strategii Lizbońskiej, Zielona Księga PFSL (2005), Warsaw-Gdańsk

Presidency Conclusions: Lisbon European Council (2000), 23–24 March, Article 26

Putting knowledge into practice. A broad - based innovation strategy for the EU (2006), Brussels

Radło M. J. (2003), *Wyzwanie konkurencyjności. Strategia Lizbońska w poszerzonej Unii Europejskiej*, Instytut Spraw Publicznych, Warsaw

Streszczenie

INNOWACYJNOŚĆ GOSPODAREK UNII EUROPEJSKIEJ W ŚWIETLE STRATEGII LIZBOŃSKIEJ

Strategia Lizbońska, przyjęta przez Radę Europejską w marcu 2000 roku podczas szczytu w Lizbonie, stanowi odpowiedź Unii Europejskiej na liczne wyzwania wynikające z globalizacji procesów gospodarczych i dynamicznego rozwoju technologii informacyjnych. Znaczenie owych wyzwań jest tak duże, że niezbędne okazało się przygotowanie strategii modernizacji europejskiej gospodarki, opartej na zasadzie zrównoważonego rozwoju. Wprawdzie w dekadzie lat 90. ubiegłego stulecia pogłębieniu uległy procesy integracyjne gospodarek Wspólnoty, to jednak nie potrafiły one dorównać gospodarce amerykańskiej w wyścigu technologicznym. Wskutek tego gospodarki zachodnioeuropejskie stały się mniej konkurencyjne w porównaniu z amerykańską.

Strategia Lizbońska jest najbardziej rozwiniętym w historii Unii Europejskiej programem zwiększenia konkurencyjności gospodarek europejskich. Istotną rolę w realizacji celów Strategii Lizbońskiej odgrywa poprawa innowacyjności gospodarek Zdolność tworzenia i praktycznego wykorzystania innowacji ma kapitalne znaczenie dla zmniejszenia dystansu ekonomicznego i technologicznego między Unią Europejską a USA. Celem artykułu jest przedstawienie istoty Strategii Lizbońskiej (wersji pierwotnej i zmodyfikowanej), ukazanie poziomu innowacyjności gospodarek Unii Europejskiej na

tle USA i Japonii, a także dokonanie oceny dotychczasowych rezultatów w zakresie realizacji postanowień owej Strategii.

Artykuł składa się z wprowadzenia, czterech części i zakończenia. Część pierwsza poświęcona jest prezentacji roli gospodarki opartej na wiedzy i innowacyjności w Strategii Lizbońskiej. Część druga zawiera analizę poziomu innowacyjności gospodarek UE na tle USA i Japonii. W części trzeciej przedstawiono ocenę realizacji głównych celów Strategii Lizbońskiej, a w czwartej założenia nowej wersji owej Strategii.

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VYACHESLAV P. STOLBOV*

Models of Russia's Macroeconomic Policy at the Turn of the 21st Century

Abstract

At present the modelling of macroeconomic processes appears to hold theoretical as well as applied interest. Hence, in the present article this method is used with regard to the Russian economy, presenting its actual economic practice in the last decade of the 20th and at the beginning of the 21st century. The author describes three macroeconomic models, taking into consideration the fact that the country is being profoundly influenced by the global financial crisis. The discussed models are: transition economy model, economic growth model and crisis-management model.

1. Introduction

The current state of Russia's economic development attracts the attention of many analysts, both at home and abroad. The country's steady advance and progressive development since 2000 has rather inspired hope than apprehension. Some have, however, understood that macroeconomic policy aimed mainly at exporting hydrocarbon feedstock – in consideration of global high prices – could neither last long, nor continually feed economic growth. Long-term orientation towards such policies poses the danger of preserving the low-tech sectors of national industry, whose products would not be competitive in the global market. The fact that the Russian Federation has recently been influenced by the

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global financial crisis and the noticeable accompanying social processes make it necessary to analyze macroeconomic models applied in the Russian economics and to compare the present state of economy with the practices and results of the crisis economics of the 1990s.

The author analyses three macroeconomic models, taking into consideration the fact that the country is being profoundly influenced by the global financial crisis. The discussed models are: transition economy model, economic growth model and crisis-management model.

2. Models of the Russian Macroeconomic Policy

With the use of retrospective macroeconomic analysis principle in regard to the development of Russia's economics in the years 1991-2008, **three models** can be marked out in the macroeconomic policies. The models present concisely the totality of measures that define the country's course of development as outlined by its elites.

Firstly, it is the **transition economy model**. Its application consisted in: 1) taking measures to dismantle the soviet planned-economic administrative-command system of control over all sections of public production, and 2) forming the foundations of the market – on the basis of international experience, since, unlike many of its East European neighbours, Russia had broken ties with its pre-revolutionary market economy. Main thesis for the creators of this model – from the "500-days Programme" to free-market economy ideologists – has been the motto of the classics of economic thought of the early 20th century: "The less of the state – the better!"(Koncepciya i Programma... 1990).

Secondly, there is the **economic growth model**. It envisages developing the domestic economy on the basis of market institutions already established, new legal system, opportune high global demand on hydrocarbon feedstock and on agricultural products. The guidelines for the ideologists of this model have been the propositions of the necessary structural reorganization of economy, doubling economic growth and increasing the country's competitive ability in the global market, overcoming the uncontrolled liberalization in economics and the grab-what-you-can privatization, acknowledging economic globalization as an objective process and enhancing Russia's participation in the world's economic ties.

Thirdly, there is the **stabilizing crisis-proof development model**. It stipulates the measures to minimize the scope of crisis and to mitigate its impact

on the population and on economy. The premise for taking these actions is deploying the "economic safety cushion" formed with the use of the economic growth model measures. The stabilizing model also refers to the traditional idea, advocated by J. M. Keynes and N. D. Kondratyev, that in the times of crises the state must interfere as a regulating force.

Macroeconomic model of the transition period (1991-2001), encompassed the transition from the soviet administrative-command centralized control system to the market model of socioeconomic development, and was being realized in the conditions of a general crisis in the whole country. Severed industrial and commercial ties between the economies of the former Union Republics; sharp decrease in production in all sectors of economy; accepting foreign debt by the RF as the USSR's legal successor; inflation degenerating into hyperinflation; budget deficit, depreciation of the currency and a dramatic emergence of unemployment – all these factors had lead the country's economy to the verge of disaster. A general crisis became apparent in all the vital activities of the society: industry, banking, commerce and in the social sphere. The following indicators testify to this: labour efficiency went down by 30%, GDP per capita (in terms of parity of purchase power, PPP) fell behind the US by 5 times, behind Japan and Germany – 4 times; the flight of capital intensified, inflation soared, pauperization of the populace escalated. Such conditions necessitated taking extraordinary macroeconomic measures in order to lead the state out of crisis.

Making the transition to the market-oriented economy was accompanied by the formation of the new normative, legislative base. The "Property Rights in the RF" law was passed, followed by an act on privatization of state-owned and municipal enterprises, a bill on encouraging entrepreneurship and antimonopoly law. In the mid-1990s the civil code, the tax code, and the land law were passed. As a result, legal basis was established for the denationalization of economy, and for the growth of private property, for the transference of the state-owned and municipal property into the hands of new managing subjects. Until the late 1990s around 90,000 enterprises had been privatized, which made up to 60% of all the economic units on entity accounting. At the beginning of the 21st century about 10% of the enterprises in Russia belonged to the government or municipalities, over 70% were privately owned and 3.5% were Russian joint ventures (Rossiyskiy statisticheskiy... 2007). Implementation of the above measures also helped to organize new forms of enterprises (joint-stock company, company limited, close corporation, limited liability partnership, etc.), supported the functioning of small and medium-sized businesses and facilitated agrarian reform.

The above was supplemented with the formation of new banking and tax systems and with liberalization of the foreign-economic activity. The described steps of the transitory period resulted in laying the foundations for free enterprise and for the new relations in foreign trade policy. The total economic monopoly of the state was overcome. Instead, a heterogeneous economy has been formed with its new forms of management, and the economy of deficit gave way to the economy of growth (Stolbov 2005).

The macroeconomic model of accelerated economic growth and modernization was proposed by the political elites in 2001. It was put forward on the strength of the following facts: market institutions had already consolidated in the socioeconomic life of the country; a breakthrough was manifest in the dynamics of the GDP growth (in 2000 – 6.4%, 2001 – 10%, 2002 – 5%, 2003 – 4.7%, 2004 – 7.3%, 2005 – 6.8%, 2006 – 6%, in 2007 – 8%; average annual increase in GDP in Russia for the period 2001 – 2007 amounted to 6 %, while in the global economy it was 2.5%, and in the US – 3.1%); foreign trade turnover had risen, and the state's budget had moved from the condition of deficit to the one of surplus. In all fairness, it should be noted that these economic successes were mainly due to deploying the country's potential of resources (Russia's resources potential per inhabitant exceeds the same indicator for US by 2-2.5 times, for Germany – 6 times, for Japan – 10-20 times).

As regards the components of the growth model, they were as follows:

1. Modernizing the manufacture in the leading sectors of economy by means of all kinds of investments (national and foreign, government and private, gross, direct, portfolio investments, production investments). The necessity of modernization resulted from the fact that production facilities had gone beyond the verge of moral depreciation by 60% (in some branches more: in oil processing – by 75%, in gas processing – by 80%), while the physical depreciation had been exceeded by 1/3. The wear-life of basic production assets had reached 21 years, as opposed to 7 to 8 years in the developed countries. Introduction of new facilities had shrunk threefold, and in the power industry even fivefold.
2. So that the modernization of production programme could be realized, a special Investment Fund was established, into which 3 trillion roubles (1.14 billion USD) were transferred from the national budget and another 70 billion roubles were allotted from the Stabilization Fund. Also the policy of encouraging foreign investment complied with the objectives of modernization. The volume of investment increased between 2000 and 2007 from 11 to 21 billion USD, including **FDI** – from 4.43 bn to 27.8 bn USD;

portfolio investments –145 million USD to 4.2 bn USD; **other** investments from 6.4 bn to 89 bn USD[60].

3. Implementing new technology policies, in accord with which industrial parks (the town of Dubna, Zelenograd, Tomsk, St. Petersburg) and industrial zones (Yelabuga and Lipetsk Oblast) were allotted, and federal task programmes "**National technological base for 2007 – 2011**" and "**Electronic computer base development 2007 – 2011**" were issued. Financial and organizational support for these policies came from establishing the Development Bank (with authorized capital stock of 2.5 bn USD), Venture Company and Nanotechnology Corporation.
4. Accepting the programme for improving living standards and social sphere for the populace by means of creating a surplus in the national budget, which would result in income rise.
5. A programme for improving credit, financial and tax routines was endorsed.
6. Increasing foreign trade turnover (in 2007 export and import amounted to over 500 bn USD). An export potential has formed in Russia by way of selling *software products* (sales volume of 1.56 bn USD, that is world's fourth biggest), *energy resources* (petroleum and gas) and *primary agriculture products* (9.1 bn USD). Russia keeps the leading position in the nickel, titanium, palladium, cement, glass, asbestos and mineral fertilizers export. The trend continues as regards a relatively high proportion of export depending on the products of heavy engineering industry, energetic engineering industry and electrical products (cables, wires, electrodes, generators, transformers, light bulbs, microwave equipment). Foreign buyers still show interest in the Russian space technology (space communications systems, Galileo-GLONASS navigation).
7. Increase of the GDP and national income, including the GDP per capita. Since the beginning of 2000 a breakthrough has been observable in the economic dynamics, marked by GDP increase from 1.16 to 2.08 trillion USD (in terms of PPP in 2005). Only in 2006, however, the level of GDP approached that of 1990; GDP per capita rose accordingly from 7973 to 11900 USD (by PPP in 2005). Among the major countries Russia ranks the eighth, and its share in the world's GDP is 3.09% (Miroyaya ekonomika ...No 12, 2008, pp. 35).
8. A package plan was outlined with the view to competitive recovery of several branches of economy. The issue of competitiveness is an important

[60] www.gks.ru; www.akdi.ru [Federalnaya sluzhba gosudarstvennoy statistiki; Agentstvo konsultacyi i delovoy informacyi].

point in the structural reorganization of Russia's economy, since at present in the global competitiveness ranking Russia rates 58th among 121 countries (Miroyaya ekonomika ...No 12, 2008, p. 35) Such a low position is determined by a number of coefficients, including: quality of the macroeconomic policy (11th place), openness of the economy (30th place), effectiveness of the labour market and innovations (35th place), effectiveness of the financial markets (91 place), effectiveness of the public administration (93rd place). The **reasons of the fairly low competitiveness level** can be traced to the 1990s' neglect of scientific and technological advance: the federal expenditure on NIOKR (Research and Development) in the last 17 years has slightly risen, amounting to 12 bn USD (1.2% of GDP and 0.6% of global R&D input), which is 7.5 times less than in Germany, 22 times less than in Japan, and 45 times less than in the US. Expenditure on innovations is also insufficient: 5-10%, compared to 34.6% in the US, 42.3% in Japan, or 50.0% in the EU (Miroyaya ekonomika ...No 7, 2008, p. 14).

All the above figures point to the **competitive weaknesses of the Russian economy**. This is also manifest in other symptoms: outdated technologies remaining implemented in most branches of the national economy, exceeding material intensity and costliness of manufacture, great depreciation of the fixed assets, and very limited possibilities of internal accumulation, which makes modernization of economy strongly dependent on international capital inflow. Other negative factors pertaining for the competitive weakness of the economy include rampant bureaucracy, a surge of criminal activities in the economic sphere, gross inequality in the economic and social development between Russia's regions, etc. Thus, as regards information technologies and communications, in the international ratings Russia takes as low a position as the 52nd. The country's export consists predominantly of: petroleum, oil products and natural gas – 60.6%, metals and metalware - 13.9%; more than 60% of exports are low-tech products.

All the instruments for diversifying the economy are exclusively at the disposal of the government. Improving the situation of the Russian science is an absolute necessity, since it would be impossible to build a postindustrial economy without it.

Given the economic crisis, political instability and pervasive social problems in the country, the opportunities to solve the low-competitiveness problem are rather limited at present. Nevertheless, these opportunities should be fully exploited, as they will be conducive to real or potential competitiveness of Russia's economy in the global market.

Raising the question of competitive ability is also connected with the objective analysis of the potential advantages in the economy, which matters for

the construction of the macroeconomic policy. Among **Russia's potential competitive advantages** the following can be enumerated: 1) having at one's disposal such natural resources (mineral, land, water and forest resources) that are in some respects of global importance, combined with abundant human resources of high education level and good professional training; 2) considerable scale of accumulated basic production assets of national economy; 3) the existence of unique advanced technologies based on the achievements of Russian science – in some branches of industry (mainly in the military-industrial establishment). In the structure of Russian industry and services there are several sectors that, given their unique high-tech, could easily act as an **export battering ram**, boosting further export. Such a role could be played, first of all, by the space, laser and nuclear industries, shipbuilding, space technologies, software engineering services and conducting geological surveys. To the greatest extent the unique technologies are employed in the defence industry output. It can be seen in the results of Russia's participation in various international armament exhibitions in the last years, confirming the high international competitiveness of Russian weapons.

In the macroeconomic policy of **modernization and enhancing competitive ability**, the RF Government relies on several steps:

- The federal law "**On Special Economic Zones**" was passed. Under this law, residents of SEZ are exempt from land-tax, real estate tax and VAT, as well as from import duty on equipment.
- **Four technology-innovation zones** (in Dubna, Zelenograd, Tomsk, St. Petersburg) and **two industrial zones** (Yelabuga and Lipetsk Oblast) are being established with the view to effect a breakthrough in modern technologies.
- The **"Start" project**, oriented towards the new innovative policy, is under realization. To this effect the large Development Bank has been founded, with authorized capital stock of 2.5 bn USD.
- Efforts are being made to strengthen the country's position as energy supplies exporter. Thus, the building of **international pipelines** is being pushed: the "Blue Flow" ("Goluboy potok", Tuapse – Samsun), "Southern Flow" ("Yuzhnyi potok", Russia – Bulgaria), "Northern Flow" ("Severnyi potok", Russia – Germany, along the bed of the Baltic Sea), as well as a pipeline through Siberia to China, etc.
- Russian investments are directed into the potentially competitive sectors: 55.7% into extractive industries, 3% into transportation equipment manufacture, 2% into electronic and optical equipment. Foreign investments are directed into: extractive industries – 58.4%, transportation equipment

manufacture – 2.3%, production of machines and industrial equipment – 1.2%, electronic and optical equipment – 0.8%.

To bring Russia up to the developed postindustrial countries standard as regards competitiveness, it is necessary to increase the share that high-tech sectors have in GDP, from the current 10.5% to 17-20%, while reducing the oil and gas share from 22% to 11.8%. This could be achieved if the share of innovation implementing companies grows fourfold – up to 40-50% of the total number of Russian companies, and if the export of machine building output rises by 4.6 – 5.6 times. The foundations of nanoindustry have been laid. Currently, more than 150 scientific centres are conducting the prediscovery and research in this field, and around 70 organizations carry out production using nanotechnology elements. In order to bust the breakthrough in the nanoindustry, budget allotments of c. 200 bn roubles are intended until 2015.

Modernization and growth acceleration in the Russian economy slowed down in mid-2008 because the world was facing a financial crisis, which at the beginning of the year 2009 became global. Such circumstances made it necessary to work out a package for modelling the economy's development that would allow for the processes typical of the economic crises (decrease in GDP production, economic growth slowdown, unemployment rise, shrinking of the revenue in the state budget, fall in exchange for the national currency, inflation rate increase), as well as for extraordinary measures on the part of the state aimed at leading the country out of depression.

The model of economic development in the conditions of a global financial crisis consists of a set of macroeconomic measures which reflect the world community's experience in combating the crisis phenomena. Yet it also takes into account the specific character of a given country, of its opportunities to alleviate the crisis processes.

Russia could not have averted the global depression because its economy had been bound with financial institutions in the US and in other countries. The losses in the RF's financial sector amounted to 1 trillion USD according to Russian assessments, while IMF experts assess it to be 2 trillion USD. National GDP decrease expressed in roubles is projected at 2% rate, calculated in dollars, debts included – 20% (Ekonomika i zhizn, No 4, 2009, p.2, 4) State budget deficit for 2009 may amount to 8-10% GDP.

Changes took place in the labour markets of many countries, consisting especially in the surge of unemployment, which reached the number of 198 millions of people (Ekonomika i zhizn, No 6, 2009, p.2). In Russia the unemployment rate rose from 5.9% at the beginning of 2008 to 7.7% early in 2009. Officially registered unemployed numbered 1.8 million, (the expected rate could reach 2.2 millions of unemployed). According to the Russian Federal

Service of State Statistics (Rosstat) data, the total number of jobless citizens amounts to 6.1 million. According to the regional placement services, in 2008 around 12.5 millions of Russians sought help from the public employment offices. Women of all ages constituted 65% of the unemployed, persons of both sexes aged 45-54 – 44%, those aged 30-40 – 30% (Ekonomika i zhizn, No 3, 2009, p.18).

In the conditions of the global financial depression, a crisis-management model for developing the economy was worked out in Russia. Its manifestation is the government's Programme for minimizing the scope of crisis and mitigating its impact on economy and on the whole population. An important part of the programme is constituted by measures connected with the government's interference into the economic processes. To effect the interference 10 trillion roubles were reserved from the national budget, Central Bank and reserve funds.

Among the macroeconomic measures taken stand out those which are connected with **supporting national financial system, especially supporting the leading banks** (similar actions are carried out in many countries). On the strength of the RF Government's decision, over 1 trillion roubles was assigned for these purposes, especially to supplement the banks' capitals: for Sberbank – 500 bn, for VTB Bank (Bank vneshney torgovli) – 200 bn, for Rosselkhozbank ('Russian Agricultural Bank') – 25 bn, and for other banks – 225 bn roubles. Other 430 bn roubles are to be placed in deposits in commercial banks or in the securities of state corporations, while 3 trillion roubles are earmarked for granting unsecured loans.

Measures aimed at **supporting national economy branches** include:

- **A list was drawn up of 295 enterprises** (including holding companies) of socioeconomic importance, being big employers. The businesses will be supported by means of government contractual work, subsidizing credit interest rates, state guarantees and restructuring outstanding taxes. To stimulate production and to forestall bankruptcy of the enterprises, steps were taken to loosen the "credit curb" by means of lowering lending rates and by providing the banks with 4.5 trillion roubles for issuing credits to the leading businesses.
- For **crediting Russian debtors**, Vnesheconombank (VEB, 'External Economy Bank') was provided with 50 bn USD meant to refinance the foreign loans secured against assets located in the territory of Russia. The aim is to protect Russian businesses against hostile takeovers.
- For **oil extraction**: tax holiday has been announced for new field developments in the shelf seas and in certain districts in Siberia. Exemption limit was raised to 15 USD per barrel when calculating the tax rate.

- For **motor industry**: subsidies for interest rates have been offered to citizens buying cars worth 350,000 roubles on credit. The freight tariffs are to be nullified for rail and road transits from the European territory of Russia into Siberia and the Far East. Financing public purchase of motor vehicles, fleet replacement for municipalities and enhancing leasing through 43 bn roubles' credit is also planned.
- For **agricultural sector** actions include: the recovery of expenses on fuels, lubricants, fodders and fertilizers to the sum of 28 bn roubles; crediting agrarian-industry complex up to 860 bn roubles; supplementing the Rosselkhozbank's capital by 75 bn roubles and Rosagroleasing (The State Agro-Industrial Leasing Co.) by 25 bn roubles; lifting prepayment on leasing for 12 months; introducing new import quota on raw meat; augmenting government purchases of crops.
- For **air transport** the following measures are outlined: crediting individual airlines up to 30 bn roubles and compensating the cost of passenger traffic from the Far East and North of Russia in the amount of 1.7 bn roubles.
- For **retail trade network** it is planned to mitigate VAT with the view to containing the rise in provisions prices.
- For the sake of **small and medium-sized enterprises development**: measures are taken to increase the line of credit to 30 bn roubles and to support the creation of new efficient small enterprises with 10.5 bn roubles. Preference is given to small businesses when buying out a government or municipal rental property. SMEs also benefit from lowered fees for connecting to lower-power electricity networks.
- To **support the enterprises in the productive industries:** reducing tax burden is provided (VAT payment scheme has been changed from quarterly to monthly one and income tax is now based on actual profit, not on the profit of payment); optimizing VAT advance payment charging; easing the rules of outstanding taxes repayment. Amortization allowance was raised from 10% to 30%, while income tax rate was lowered from 24% to 20% (in the constituent territories of the RF tax rate may be defined within the range of 5-15%).

To protect the regions from crisis phenomena around 300 bn roubles have been allotted.

The crisis-management programme reflects the country's specificity in that the support for the populace is socially-oriented, 460 bn roubles being earmarked for these purposes. In the first place, such orientation is realized through arrangements for the labour market:

- In 2009 the law was passed, which includes amendments to the 1991 "**On National Employment**" act. It regulates the protecting measures over citizens in case of losing a job.
- The volume of financial support for labour-market situation was determined at 44 bn roubles.
- Russian Jobs Bank was formed, collecting 750,000 vacancies.
- Actions were fixed for retraining in advance 114,000 people who are at risk of losing their jobs.
- Financing was allotted for the 27,000 citizens ready to move to other regions of the country in order to obtain jobs.
- Efforts to create new jobs for 40,000 Russians are being financed.
- The amounts of unemployment benefits were fixed (the maximum amount being 4900 roubles), as well as two modes of drawing the benefit: either depending on unemployment duration (for the first 3 months – 75% of the average monthly salary, next 4 months – 60%, last 5 months – 45% of the same), or receiving for 12 months the same benefit settled as the minimum amount of the allowance calculated against the regional coefficient, defined in the specific region). The benefit would also be paid, in full, to the citizens who have resigned, not lost, their positions.
- Up to 50 bn roubles have been earmarked to organize public works (Ekonomika i zhizn, No 3, 2009, p. 18).

To protect the citizens' deposits, the rate of covering in the case of bank's bankruptcy was defined (as 700,000 roubles).

In the conditions of crisis every state faces the dilemma of deciding on budget deficit. The 1929-1933 depression was the first to pose the problem for F.D. Roosevelt's administration. Then, the deficit proposal, put forward by J. M. Keynes, initially got cold reception, but the harsh reality of life was to prove Keynes right (Keynes 2007). In those years in the US it was a forced decision: it was necessary in view of the package plan adopted, and to relieve the social tensions (marches of farmers and hungry people on Washington). Nowadays, budget deficit will be acknowledged in many countries. It is, however, important to fix its rate, lest the financial condition should cause

a burst of inflation. In the Russian economy the state budget deficit for 2009 is projected at the rate of 7.4 GDP (3 trillion roubles), which is equal to a half of its revenue.

Since mid-2008 the citizens, afraid of losing their deposits, have withdrawn from their accounts over 300 bn roubles and begun to actively buy hard currency. The latter resulted in the fall in rouble exchange rate. To relieve the tension and to support the exchange rate a dollar intervention was carried out. On the foreign exchange market several million dollars were sold by the Central Bank. The double-currency exchange rate was ordered – against both dollar and euro within each specific exchange rate. Currently the situation on the exchange market is stable.

Finally, among the measures taken by the government two more should be stressed: tight control over inflation (preventing the issue of banknotes) and employing Reserve Funds (the means of which are partly invested in foreign bonds, 30% are in national banks, 15% in international financial organizations, 30% in deposits).

3. Conclusion

In the paper three models of the Russian macroeconomic policy have been presented. They refer to different periods of economic development in Russia. They underlie different approaches in macroeconomic policy due to main economic purposes taken in these periods. Whereas the transition economy model indicated to the transition from the central plan to the market and the economy growth model focused on the factors aimed at accelerating of economic growth, the crisis management model concentrated on the active role of the state in the economy. Generally speaking, one can say that the changes of macroeconomic policy models in Russia were in line with the changes in macroeconomic conditions and the basic macroeconomic goals of the government.

References

Ekonomika i zhizn, Moscow, No. 3, 2009

Ekonomika i zhizn, Moscow, No. 4, 2009

Ekonomika i zhizn, Moscow, No. 6, 2009

Keynes J. M. (2007), *Obshchaya teoriya zanyatosti, procenta i deneg*, Moscow

Koncepciya i Programma, razrabotannye gruppoy S. S. Shatalina (1990), Moskva

Mirovaya ekonomika i mezhdunarodnye otnosheniya (2008) Moscow, No. 7

Mirovaya ekonomika i mezhdunarodnye otnosheniya (2008), Moscow, No. 12

Rossiyskiy statisticheskiy yezhegodnik [The Russian Statistical Yearbook] (2007) Moscow

Stolbov V. (2005), *Ekonomika: Uchebnoye posobiye*, Ivanovo

www.akdi.ru

www.gks.ru

Streszczenie

MODELE POLITYKI MAKROEKONOMICZNEJ W ROSJI NA PRZEŁOMIE XXI WIEKU

Modelowanie procesów makroekonomicznych przyciąga ostatnio uwagę teoretyków i praktyków gospodarczych. Podejście modelowania zostało zastosowane w niniejszym artykule w odniesieniu do gospodarki rosyjskiej przełomu XX i XXI wieku.

Autor analizuje w artykule trzy modele makroekonomiczne polityki gospodarczej: model gospodarki transformującej się, model wzrostu gospodarczego i model zarządzania kryzysem.

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JOLANTA MŁODAWSKA*

Japan's new competitive advantage: the arguments and proposals for structural reorientation

Abstract

As forecasted by the Japanese government, the country's economy will grow, although slowly. This expectation is determined by the risk that the labour market situation and the worldwide business cycle will keep deteriorating. It is believed that the economy will not be spurred by exports growing as a result of worldwide recovery, but rather by a series of stabilization packages and gradually expanding domestic demand[61]*. The expectations should be treated with a great deal of cautiousness, because of the highly unpredictable rate of unemployment, the concerns about deflation and the probability of the global recession turning out more serious than expected.*

According to the AFP (Gazeta Wyborcza of 08 Dec. 2009), in the third quarter of 2009 the Japanese economy finally showed some signs of recovery and reached positive values; unemployment also dropped from 5.3% to 5.1% between September and October. The widespread opinion is that the recovery is very fragile, as proved by the steadily falling prices, deflation, and the rising yen exchange rate (the highest in the last 14 years – 84 yen to 1 US dollar), threatening the Japanese exports.

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[61] Based on the Key Points of the Japanese Economy, internal documents of the Economic Section of Japan Embassy in Poland, 15 July, 2009.

1. Introduction

The present recession in Japan, induced by the global crisis, is the most serious of all recessions noted in the years of post-war development. The falling foreign trade turnover rapidly reduced exports and private investments, while growing unemployment and falling wages negatively affected the level of consumption. Even though it is believed that an expansive fiscal policy may have a positive, although limited, effect on economic growth, its rate will be below 1% throughout the year 2010 (see table 1).

The Bank of Japan is determined to counteract inflation by „injecting" additional funds into the economy, until a stable upward trend appears. However, once the economy is back on the growth trajectory, the primary goal will become the consolidation of government's revenues, considering the large budget deficit and the huge public debt (around 140% of GDP). Some of the paramount strategic goals include the tax system and social security system reforms as well as a necessary structural reform addressing mainly the service sector, because of the aging of Japanese society.

Table. 1 Japan's real GDP as estimated by various institutions (%)

Calendar year	**2008**	**2009**	**2010**
IMF „World Economic Outlook" (July)	- 0.7	- 6.0	1.7
OECD „Economic Outlook 85" (June)		- 6.8	0.7
Fiscal year	**2008**	**2009**	**2010**
Government (January)	-3.3	0.0	-
Prime Minister's Office (July)		- 3.3	-
Council on Economic and Fiscal Policy (July)		-	0.6 [1]
Bank of Japan (July)		- 3.4 [2]	1.0 [2]

[1] data presented only for the 2010 budget discussion

[2] a median derived from the projections of the Council on Economic and Fiscal Policy

Source: Internal documents of the Economic Section, Japan Embassy in Poland, 15 June 2009.

The short-term goals of the Japanese economic policy were laid out in the „Anti-crisis Package" of 10 April 2009. The package is valued at ¥ 15.4 trillion (the national budget) and ¥ 56. 8 trillion (local budgets)[62], equivalent to US$ 81 bn, to be spent in a twelve month period. The impact of this huge money supply is estimated at additional 1.9% of real GDP. The target amount in a long-term perspective is at least US$ 274 billion. However, the Stimulation Package does not address the essential problems, such as the weakness of the global economy and deflation.

The main measures included in the Package are public works undertaken on an unprecedented scale, employment-supporting projects (re-employment and retraining assistance, creation of new jobs, unemployment benefits, social security benefits), as well as financial support for the qualifying entities and lines of economic development (SMEs, the stock exchange, residential building and transactions involving land). „Investments in future" are proposed, such as the development of alternative energy source (e.g. solar energy), the construction of low fuel consumption vehicles and new methods for storing and transporting energy. There are plans to support financially healthcare, the longevity of the nation and measures improving the rate of natural increase. An important goal is exploitation of reserves based on the development of the backward segments of Japan's economy, such as agriculture, forestry, fishery, and on the creation of new technologies.

From the wide range of the long-term problems, the article (Parts I and II) will discuss:

1. the „aging" of Japanese society,
2. the redefinition of economy's competitiveness,
3. capital flows – foreign direct investments (FDI),
4. the „dual" character of the Japanese economy,
5. the necessary structural reform and privatisation,
6. the concept of new industries.

The above subject will be discussed in relation to the traditional Japanese-continental (Rhine) model of corporate governance functioning in Japan in contrast to the Anglo-American model.

[62] Ibidem.

2. The Japanese corporate governance model

H. Funabashi[63] indicated eight principles underpinning a traditional Japanese firm:

- clear, well-defined values, vision of operation and mission,
- long-term planning,
- accentuating the human factor in an enterprise,
- focus on customers,
- social functions of an enterprise,
- continuous innovation and improvement,
- frugality and effective use of resources,
- special organizational culture, tradition.

The above list well corresponds to the known characteristics of the Rhine corporate governance model[64]:

- workforce plays a vital role in an enterprise,
- pay inequalities are insignificant (i.e. the income differences between the managers and the workforce),
- dismissals are occasional,
- the major source of investment funds is bank debt,
- the in-house managers are promoted.

The above structure contrasts with the Anglo-American model where:

- the shareholders' rights prevail over the employees' rights,
- information on a firm is readily available and accessible,
- the short-term results are prioritized, which leads to employee dismissals in the downturn periods,
- managers' incomes are closely related to performance,

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[63] H. Funabashi, Longevity of Corporations in Japan, in: proceedings from the conference „Corporate Cultures; Universality and Differences" , Akademia im. L. Koźmińskiego, 13-14 May 2009.

[64] This is the traditional model – the socio-economic development in Japan and the globalisation processes have been inducing numerous modifications and major adjustments to it. See J. Młodawska, Reński model nadzoru koroporacyjnego w Niemczech i w Japonii – charakterystyka i perspektywy zmian, „Gospodarka w praktyce i teorii", 2006, no. 2.

- the investment funds are mainly raised on the stock exchange,
- the directors are recruited in the market,
- mergers and acquisitions are deemed a guarantee of good economic results.

3. The demographic situation and the necessary reform of the pensions and social security system in Japan

Why is the aging of the Japanese society and the declining natural increase such an important problem at the present stage of development? In the 1990s, soon after the speculative bubble burst, the Japanese economy plunged into recession that continued for more than a decade, relieved by short spells of recovery that mainly resulted from the large-scale public works, tax cuts and other measures „feeding money" into the economy. Their influence radically diminished when the government reduced its expenditures. The stimulating package of 2006 was estimated at a still large amount of ¥ 15.4 trillion, though.

The business cycle improved in 2002 as a result of other developments, mainly the energetic activity of the private sector with the weakening fiscal impulse. In the next four years, Japanese businesses almost completely dealt with three excesses: surplus employment, production capacities inflated in the period of *prosperity* and bad debts. However, a continued growth calls for measures other than the extensive ones. The macro economic policy (fiscal and monetary) fell short of energizing the economy. The recession that followed the „bubble-driven growth period" had two special characteristics. Firstly, the annual rate of growth was ca 1%, i.e. much below its values in the other post-war decades, and the period of still noticeable decline is much longer. Secondly, deflation appeared (the GDP deflator was negative starting with the third quarter of 1994, excluding the fiscal year 1997, when the VAT rate was raised). After 2006, Japan's economic situation deteriorated again.

Deflation stayed at a moderate level of around 0.5% a year for a long time. In 1991, the Bank of Japan (BOJ) started following a zero interest rate policy, a solution without precedent in the world. Before the policy was abandoned in 2006, the BOJ had reduced interest rates as many as twelve times. The base interest rates stood at 0.1% from the year 1999. As they could not be reduced still lower, they lost their stimulating influence on the economy. At the same time, the "cheap money" policy pursued from 2001 completely lost its *announcement effect*, i.e. the ability of informing the public about the planned changes in the government policy. Although the negative growth trend in Japan has been slowly receding for seven years now, a structural reform seems to be

more and more desirable. The Japanese economy has today the highest unit labour cost in the world[65] and in 2005 the number of the Japanese population started to decrease for the first time. This is the main problem of the country where population aging is faster than elsewhere and where the rate of natural increase is also falling the fastest.

The present Nippon's population of 128 million is likely to fall to 118 million by the year 2030 and the percentage of seniors (aged 65+) is predicted to grow from 19.9 to 29.6%. This course of events will reduce the amount of savings that have been the major source of investment funds so far. In 1991, savings still increased at 15% a year, but in 2003 the rate was 7.3%. As projected, households' savings will reach negative values by 2030. The aforementioned necessity of launching structural reforms means therefore that the way of increasing capital gains should be FDI intensification as well as improved allocation of resources: seeking new high-tech branches and restructuring the ineffective parts of the economy.

Within the Japanese pension system, a range of problems and inconsistencies can be spotted. There are at least four issues that are worth raising. Firstly, although the average life expectancy of the Japanese population is the longest in the world, many firms still stick to the statutory retirement age of 60 years. The regulations introduced in 2006 obligated the employers to keep their workforce until 63 years of age, with the law becoming effective as of April 2007, when a large number of baby boomers were to turn 60 years old. This solution was a provisional remedial measure and most firms kept the age limit of 60 years, allowing only the interested persons to extend their employment contracts every year.

Secondly, the young Japanese are losing their trust in the public social security system. Almost half of persons older than 29 years usually build their retirement plans on personal savings and not on public mechanisms. Around 36 % of the citizens running their own firms and students aged 20+ do not contribute to the pension system at all[66].

With the longest life expectancy among the developed countries of the world, the Japanese also have the lowest old-age pensions. Besides, most citizens still want to work in their middle adulthood – 70% of males aged 60-65 years are economically active or seek employment. In the USA the rate is below 60% and for Germany it is only 30%. Thirdly, measures aimed at reducing youth unemployment are still relatively rare, because many enterprises have kept the

[65] See A. Kojima, A New Development Model for Japan. Selected Essays, 2000-2008, 2008.

[66] Ibidem.

lifetime employment approach despite the amended laws, and the financial crisis of 1997 limited the recruitment of graduates. Fourthly, the Japanese corporations have substantially extended their use of temporary workforce at the expense of workers with employment contracts, thus deteriorating the situation of young persons again.

Natural increase is still another problem – the 2005 fertility rate in Japan was only 1.25. To maintain the present size of population at least, the rate should be 2.07. The following measures are therefore necessary to induce the required change:

1. friendly economic and social solutions addressed to the fertile-age population,
2. a reform of the pension and social security system, allowing older persons to work longer and thus reducing the burden carried by the younger generation,
3. better conditions for mothers raising children.

The detailed solutions in the state pension system decide about the credibility of the whole decision-making mechanism and about its daily management. Regarding the latter aspect, the large number of deficiencies, or even scandals, that were discovered recently in SIA functioning (Social Insurance Agency) made the public distrustful in the actions devised by the officials. The situation is aggravated by a much more serious issue – the possible inefficiency of the whole system resulting directly from the rapid aging of the Japanese population and indirectly from the fact that Japanese pensions are paid out "on a current basis", which means that their source is contributions submitted by the economically active population. Another important factor is that many firms still exercise the retirement age limit of 60 years.

The authorities have launched many measures to alleviate the present situation; for instance, higher contributions and lower old-age pensions were enacted, and the employers are encouraged to raise the retirement age significantly, or to conclude three years' contracts with older workers. Notwithstanding, as mentioned, the number of persons, especially the young ones, who completely withdraw from the government system has been growing, Unlike the older generation that will recover the amounts it has paid to the system during the entire period of economic activity, the younger people cannot be sure of that. This situation has given rise to the problem of social injustice embedded in the intergenerational context. So it cannot be surprising that although all Japanese turning 21 years are expected to contribute to the pension fund, a growing percentage of such persons refuse to do so.

Each time the demographic projections overshoot the actual rate of natural increase, the government tries to fix the situation by increasing the level of

insurance contributions and reducing the amounts of the benefits. It is being proposed now that the entire amount of an old-age pension (a so-called base pension) be funded from taxes, instead of the present solution where two thirds of the pension comes from the obligatory contributions and one third from taxes[67]. If this variant were to be implemented, then the present VAT rate of 5% would have to be increased by as many as five percentage points. A monthly pension would remain at the level of ¥ 66,000 (ca US$ 600), but only in the case of those retirees who have contributed to the system for 40 years. Contributions paid regularly for the whole period of 25 years would entitle to a reduced old-age pension and any negligence (e.g. a month contribution missing) would deprive the potential beneficiary of any equivalent!

The government pension is now granted to persons reaching the age of 65 years, but raising the limit to 67 years is proposed, so that considerable VAT increases can be avoided. Consequently, private entrepreneurs are also expected raise the retirement age. In the transition period, the beneficiaries covered by the old system would draw their old age pensions in proportion to the number of pensionable years. Such persons would be included in both the new and the existing system. There are also plans to limit the income tax exemptions in the case of persons drawing old age pensions so as to decrease government's net subsidies to the well-off seniors. Today, employers are obligated to finance half of the obligatory workers' contributions to the base pensions. The proposed modification of the system for financing pensions, where tax revenues replace enterprise resources would considerably reduce employers' liabilities. The Nikkei Inc. Panel suggests that some of the savings thus obtained could be used to extend the pension system over the temporary and seasonal workers. The Panel's report also proposes to replace the term „a base pension" with „a universal pension" to accentuate the direction of the changes.

4. The competitiveness of the Japanese economy – a definitional change. The Japanese FDI as illustrated by the case of Poland

Globalization preferences successively reshape the character of a competitive advantage. Competitiveness depends today on having a knowledge-based economy with flexible modes of operation and structures. In the past, Japan paid special attention to the cultural factors and the role played

[67] Proposed by the so-called Nikkei group associating scientists, journalists and other experts; Nikkei Inc. is the publisher of the Nihon Keizai Shimbun (Japan's Economy Daily).

by institutions. Why has Japan lost so much of its competitiveness in the last two decades?

Competitiveness seems to have much deeper roots than culture and tradition alone, and **the export of capital services and technologies outweighs low manufacturing costs**. Notwithstanding, contemporary Japan concentrates on routine operations, unlike the other developed economies that build strategies and oversee institutional changes. The real challenge is investment-driven development, but in Japan the number of investments has been falling alongside the declining rate of savings.

„The World Competitiveness Yearbook" of 2002 recognized the USA as the most competitive economy in the world and Finland was ranked second[68]. Japan, ranked 26th in 2002, slid into the 30th position a year later (Poland oscillates around the 45th position). It is worth mentioning that in 1991 Japan was the leader in the same ranking, with the USA and Germany being second and third, respectively. The year 1991 marked a watershed in the speculative growth of the Japanese economy, opening at the same time the longest period of US expansion after World War II.

Dynamically growing FDI is believed to have a strong, spurring effect on country's competitive advantage. The incoming and outgoing investments in Japan are imbalanced, as the outgoing FDI largely exceeds its inflow[69]. In 1996, the incoming and outgoing flows of investments accounted for US$ 23.4 bn and only US$ 200 million, respectively, growing in 2000 to US$ 31.5 bn and US$ 8.2 bn. The White Paper on International Trade of 2001[70] presents "shocking" comparative data. In 1998, the received FDI's share in gross capital assets averaged 11.1% in the world, 10.9% in the developed countries and 15.3% in the EU (see table 2). Regarding the particular countries, the rate was 12.8% in the USA, 12.9% in China and 5.5% in Korea. Among the European countries, Sweden had the rate at the level of 59.8%, in the Netherlands it was 55.2%,

[68] See The World Competitiveness Yearbook 2002, International Institute for Management Development, 2002.

[69] The literature treats the outgoing FDI more at length, perhaps not only because their value is higher, but also because of their larger (compared with the incoming investments) importance in the past. For instance, A. Drzymała examines in his article: „Wybrane aspekty oddziaływania japońskich bezpośrednich inwestycji zagranicznych na japońską gospodarkę", Gospodarka w praktyce i teorii, no. 2, 2008, the traditionally understood benefits offered by the outgoing FDI with respect to the following areas: trade, technology, manufacture and employment.

[70] The White Paper on International Trade 2001, METI (Ministry of Economy, Trade and Industry), 2001.

51.3% in Finland, and 25.7% in the UK. In Japan the rate was extremely low – 0.3%!

Japan's focus on boosting the outbound FDI and her underestimation of the inbound FDI separate the country from the world trends and make it less appealing to foreign firms. Perhaps this situation should entail an adjustment of the country's broadly understood investment environment and infrastructure? However, this course of action is inseparable from launching a fully fledged structural reform.

Table 2. The incoming FDI values (in US$ billions)

Ranked (1999)	Country	1990	1995	1996	1997	1998	1999
1	USA	479	675	770	1060	1863	2755
2	UK	324	225	324	370	637	848
3	Sweden	20	149	55	103	194	594
4	Germany		120	32	117	201	522
5	France	132	237	220	231	295	388
6	China	35	359	402	442	438	388
7	Belgium/Luxembourg	81	105	147	120	227	384
8	Netherlands	123	115	78	118	372	342
9	Brazil	10	49	99	197	319	327
10	Canada	76	108	64	118	217	251
11	Argentina	18	42	43	88	67	236
12	Hong Kong					148	231
13	Ireland	6	15	25	27	110	191
14	Japan	18	0	2	32	33	123

Source: IMF data, International Financial Statistics.

Japan's current account balance still shows the largest surplus in the world that reached ¥ 18 trillion (around US$ 150 bn) in 2005. However, its structure has been changing in time. The capital incomes, i.e. capital gains and dividends, exceeded the incomes derived from foreign trade for the first time in 2005

(¥ 11.4 trillion and ¥ 10.4 trillion, respectively). The current account surplus represented around 4% of the Japanese GDP. However, the growing investment incomes were still accompanied by small amounts of the incoming FDI. The amounts of the received FDI are very important for Japan's further economic growth, considering that its population is aging and the natural increase is falling.

Japan's weak interest in the outgoing FDI can be illustrated with the magnitudes and structure of the Japanese FDI in Central and Eastern Europe, particularly in Poland. The national characteristics of the Japanese and their patterns of behaviour largely determine their business attitudes: they tend to take group actions, revealing a sort of a „herd instinct". They have difficulty launching overseas projects on their own account but willingly join other initiatives, such direct investments, portfolio investments or strategic alliances.

Some of the reasons encouraging Japanese businesses to invest in the CEE countries are the following[71]: 1) attractive markets; 2) lower labour costs compared with Western Europe – although Poland cannot compete against China or the former USSR countries as far as the low-skilled labour costs are concerned, the professional bearing and the language skills of the Polish „white collars" are ranked high among other nationalities; 3) the possibility of acquiring production facilities that allow the Japanese firms to make and sale their products (e.g. Magyar Suzuki in Hungary and NSK, the producer of ball bearings and spark plugs, in Poland).

The incoming investments substantially increased across Central Europe following the admission of the regional states to the European Union. The investments almost doubled in 2004 compared with the previous year, reaching the level of US$ 16.3 bn. A year later, their maximal value went up to US$ 28 bn[72]. Although the absolute numbers may show Poland as the largest beneficiary among the CEE countries, her relatively large population makes the Polish FDI *per capita* vary from one third to one fourth of its value in Hungary, the Czech Republic or Estonia. The inflow of investments in relation to Polish GDP is around 25% and it does not compare, for instance, with the Estonian 78.6%[73].

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[71] From the discussion with Yoji Koyama, a professor emeritus of the university in Niigata, Japan.

[72] See G. Kozuń-Cieślak, "Kapitał zagraniczny w Specjalnych Strefach Ekonomicznych", in: Kapitał zagranicznych w Polsce w dobie globalizacji, E. Freitag-Mika (ed.), Wydawnictwo Instytutu Technologii Eksploatacji, Radom, 2006.

[73] See Y. Koyama, Direct Investment of Japanese Companies in Poland and Other Countries in Central and Eastern Europe and Their Strategies, proceedings of the conference Corporate Culture. Universality and Differences, L. Koźmiński Academy -14 May 2009.

At the end of 2004, the Polish investments of 15 foreign firms were estimated to exceed US$ 1 bn, the largest investors being, by their size, France Telecom, EBRD and Fiat. The main type of business in the group was financial intermediation. The Japanese were almost imperceptible in the CEE region, with their turnover with the CEE countries estimated at only 0.2% in the early 1990s, i.e. 0.4% of the value of the Japanese trade with abroad. In this decade, the Japanese FDI (excluding few firms such as Suzuki) were mainly represented by the wholesaling and retail business, as well as exports of the Japanese manufacturing industry, predominantly the machine-building industry (Japanese manufacturers operating through their EU branches).

In the mid-1990s, the Japanese boosted their investment activity in this part of the world, focusing their attention on the manufacturing industry, but even then, the Japanese FDI in the CEE region was estimated at only US$ 2.8 bn as of the end of 2000. Because of the forthcoming admission of 12 new countries to the European Union in 2004, the Japanese raised their CEE investments to US$ 24.4 bn in 2002, but this number still accounted for only 0.5% of their outgoing FDI. Most of the investments were made in the Czech Republic, Hungary, and Poland[74]. This policy intended to secure the potential markets and export opportunities for the mother companies in Japan. The Japanese investments in CEE were "narrowly" channelled into two favoured branches of industry: automotive and electromechanical engineering, as it was expected that the more restrictive environmental laws specific to the European Union would boost the demand for new cars in the recently admitted countries and that the better-off citizens would choose to have a second car in the family. At first, the Polish government promoted capital privatisation with the participation of foreign investors (mergers and acquisitions), but with legislation amendments in the second half of the 1990s that „warmed up" the investment climate in Poland the major types of the incoming FDI changed.

The relaxation of the tax rules applying to foreign firms and the abandonment of regulations limiting the ownership of stocks, the values of new issues, or employment, etc., increased the number of investments with foreign-owned majority stake, mainly of the greenfield projects. At the end of 2006, over 150 Japanese corporations traded and manufactured in the territory of Poland. Between 2000 and 2007, the number of the manufacturing enterprises grew from 14 to 58. Poland probably ranks fifth as the European recipient of the Japanese investments, after the UK, France, Germany and the Czech Republic[75].

[74] Ibidem.

[75] JETRO's internal documents (Japan External Trade Research Organization), 2007.

The major Japanese projects in Poland include the Toyota Motor Poland plants in Wałbrzych that manufacture gear boxes and low-compression engines and the so-called Crystal Park near Toruń where the production of plasma TV sets started in 2006; the major player in the Crystal Park is Sharp. Unfortunately, the Japanese invariably underline several disadvantages that make our country less attractive as a destination for investments: 1) a very low share of R+D outlays in GDP (0.58% in 2006) compared with the EU average of 1.9%[76]; 2) some shortage of highly-qualified labour (the middle-level management); 3) the slow implementation of investment incentives that are applied in the EU; 4) the poor condition of roads.

5. The microeconomic operational effectiveness *versus* strategic effectiveness

Japan's problems with economic growth are due to the errors in macroeconomic policy, but primarily to the low microeconomic effectiveness of many branches of industry, services and agriculture. This is not to mean that the government's measures aimed at stimulating growth and restoring banking sector's liquidity are unimportant; yet, the macroeconomic policy tools alone cannot bring the expected results. The Bank of Japan followed the policy of a short-term zero discount rate for a long time; public works, tax cuts, subsidies for the „lame" banks, and even food vouchers consumed almost US$ 1.5 bn. All the extraordinary measures failed the hopes that were vested in them.

As regards the operational competitiveness, many Japanese firms still adhere to the cost minimization principle while lacking distinct long-term strategies. Naturally, there are some positive exceptions in their group, but these are **not** the powerful, well-established corporations, but the relatively new firms that started up in the 1980s or 1990s and are "infected" by the traditional model of a Japanese enterprise to a rather low degree. Unable to use the resources and power arising from the connections with the industrial-financial groups „*keiretsu*", they had to specialise themselves and fill in the identified production niches that were rejected by the dominating investors[77]. The group of the global market leaders comprises today organizations with **definite** strategies, such as Nintendo, Sega and Sony – video games; Toray – carbon fibres, or Juki with its

[76] See Y. Koyama, Direct Investment of...., op.cit.

[77] This is how individual entrepreneurship developed in the Kioto region, far away from the industrial centres of Tokyo and Osaka.

industrial sewing machines. Toray decided to meet the needs of a selected group of sports equipment manufacturers, giving up orders from the defence and space sectors. Regarding sewing machines, Juki chose the industrial segment, abandoning household sewing machines.

Developing a programme where the products and the buyers are clearly differentiated is a necessity today, also for the Japanese giants. For instance, in the industry producing fax machines, the leading manufacturers undermined the profitability of the business by not selecting the distribution channels and by introducing standard products unattached to a specific producer to the market. As a result, rather indistinguishable advertising campaigns launched by behemoths such as Matsushita, Canon, Toshiba, Ricoh, NEC, Sharp, Mitsubishi, Fujitsu, Hitachi, Murata and Minolta did not emphasise specialization and diversification. The large corporations usually favoured price competition, which reduced the average price of a fax machine in Japan from ¥ 78,717 to ¥ 42,498 yens between 1992 and 1998[78].

Replacing the focus on the present, on the volume of production, with a strategic approach emphasising originality and ensuring expected revenues involves appropriate readjustment of the corporate governance system, the enterprise model and the role of the government[79]. In Japan, around 60% of the large firms' stocks are held by stable, long term shareholders (banks, insurance institutions, and cooperating enterprises). They do not demand particularly high returns and resale their holdings quite rarely, tending to treat the assets as a secure deposit rather than an investment. The main advantage of the cross-shareholding system is a stable and expanding network of contacts within the capital group. It is not surprising therefore, that with this ownership structure firm expansion (sales boosting) and job creation in the cooperating organizations motivate the managers more strongly than the short-term profitability.

Japan certainly needs a new **corporate governance model**, because its economy shall not be able to solve the competitiveness problem without placing a stronger emphasis on a more effective use of capital and satisfying profits. Increased transparency and openness of the decision-making processes are necessary, likewise more independent boards of directors and shareholders with a true influence over the companies' strategies.

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[78] See Asahi Shimbun, (Asahi Daily) 29 July, 1999.

[79] More on the theory of changes in the continental-Japanese corporate governance system can be sought in J. Młodawska's „Tradycja i współczesność-model nadzoru korporacyjnego" in: Meandry japońskiej polityki, J. Marszałek-Kawa (ed.), Toruń, 2008.

To build a new **model of the Japanese enterprise** a different system of accountability is needed. In the post-war period, firms were controlled by the government ministers and banks. The cross-shareholding mechanism existing within the powerful financial-industrial groups promoted friendly terms between their participants rather than economic responsibility for the corporation. The risk of bankruptcy or hostile takeover actually did not exist and the nature of corporate governance frequently encouraged overinvestment, careless approach to profitability and never-ending support for the profitless products and enterprises running at a loss. However, it has been found recently that the system of traditional ties is changing – the numerous scandals and the resistance to the proliferation of the laws has eroded the power of bureaucracy and, additionally, the commercial banks have lost their substantial power over enterprises that radically reduced their debts originating in the „bubble economy" period.

At the same time, **new priorities for the government role have appeared**, particularly in the field of innovation. The Japanese economic policy traditionally favoured large-sized enterprises and powerful *keiretsu.* As mentioned earlier, in the past the Japanese government actively participated in identifying modern products and technologies and created the R+D cartels responsible for distributing the government funding. At present, the Ministry of Economy, Trade and Industry (METI) has shifted its operational focus and works on providing conditions conducive to the development of an innovative economy, improving the scientific and technical staff's skills (human resources), removing the various barriers impeding economic growth and on withdrawing the protection of the unprofitable sectors.

6. Conclusion

As indicated in the main theme of the article, to build her new competitive advantage and spur growth, Japan will have to harness her potential reserves hidden in the components of the socio-economic system by[80]:

1. organizing the state universities as the centres where new ideas and new products are created (knowledge and basic research),
2. recognizing that the small and medium-sized enterprises are as important for economic progress as the large firms are,
3. following an innovation strategy based on rivalry rather than cooperation,

[80] See M. Porter, H. Takeuchi, M. Sakakibara, Can Japan Compete?, London 2000.

4. increasing the number of the small-sized enterprises through the improvement of their access to the nominal capital in the form of guaranteed bank credits, as well as making it easier for them to raise funds on the stock exchange,
5. initiating clusters that stimulate economic growth, containing both the cooperating and competing organizations, and abandoning the "large-firm obsession", with the consequent departure from the maximisation of shares in the domestic sales towards the participation in the global competition in selected products.

Summing up, in the past the Japanese government performed the allocation, control and domestic competition **restraining** functions, in line with the orderly growth theory that promotes equal opportunities for particular organizations and branches in the economy. To enterprises and economic segments being especially promising exporters the theory of infant industry protectionism was applied. The existing economic growth determinants call for the radical reworking of the practical goals and their theoretical context. The formation of a competitive business environment, stronger competition among the micro firms and modern understanding of the term 'innovation' turn out to be as precious as gold.

References

Asahi Shimbun (Asahi daily), 29 July 1999

Drzymała A. (2008), *Wybrane aspekty oddziaływania japońskich bezpośrednich inwestycji zagranicznych na japońską gospodarkę* [in:] 'Gospodarka w praktyce i teorii', no. 2

Funabashi H., *Longevity of Corporations in Japan*, [in:] proceedings from the conference *Corporate Cultures. Universality and Differences*, Akademia im. L. Koźmińskiego, 13-14 May 2009

Gazeta Wyborcza daily of 08 Dec. 2009: *Japonia ogłasza wart 81 mld dolarów pakiet stymulacyjny*

Key Points of the Japanese Economy, internal documents of the Economic Section of the Japan Embassy in Poland, 5 July 2009

Kojima A. (2008), *A New Development Model for Japan. Selected Essays, 2000-2008*

Koyama Y. (2006), *Direct Investment of Japanese Companies in Poland and other Countries in Central and Eastern Europe and their Strategies*, proceedings from the conference *Corporate Cultures. Universality and Differences*

Kozuń-Cieślak G. (2006), *Kapitał zagraniczny w Specjalnych Strefach Ekonomicznych,* [in:] *Kapitał zagraniczny w Polsce w dobie globalizacji*, E. Freitag-Mika (ed.), Wydawnictwo Instytutu Technologii Eksploatacji, Radom

JETRO (Japan External Trade Research Organization) internal documents, 2007

Młodawska J. (2006), *Reński model nadzoru koroporacyjnego w Niemczech i w Japonii – charakterystyka i perspektywy zmian,* [in:] 'Gospodarka w praktyce i teorii', no. 2

Młodawska J. (2008), *Tradycja i współczesność-model nadzoru korporacyjnego* [in:] *Meandry japońskiej polityki*, Marszałek-Kawa J. (ed.), Toruń

Nihon Keizai Shimbun (Dziennik Gospodarki Japońskiej), January 2008

Porter M.,Takeuchi H., Sakakibara M. (2000), *Can Japan Compete?*, London

Discussions with Yoji Koyama, professor emeritus at the University of Niigata, Japan

The White Paper on International Trade 2001, METI (Ministry of Economy, Trade and Industry)

The World Competitiveness Yearbook 2002, International Institute for Managment Development, 2002

Streszczenie

NOWA PRZEWAGA KONKURENCYJNA JAPONII: ARGUMENTY I PROPOZYCJE NA RZECZ PRZEORIENTOWANIA STRUKTUR

Zgodnie z prognozami rządowymi gospodarka Japonii będzie dźwigać się w górę, chociaż w powolnym tempie. Istnieje bowiem niebezpieczeństwo dalszego pogarszania się sytuacji w sferze zatrudnienia i koniunktury na rynkach zagranicznych. Panuje przekonanie, że nie należy się spodziewać pobudzenia gospodarki wskutek wzrostu eksportu, będącego z kolei efektem ożywienia w skali międzynarodowej, a raczej w wyniku kolejnych pakietów stabilizacyjnych i stopniowego wzrostu popytu wewnętrznego. Te prognozy należy traktować z dużą ostrożnością ze względu na znaczną nieprzewidywalność co do wysokości stopy bezrobocia, obawy odnośnie deflacji oraz prawdopodobieństwo, że recesja światowa może się okazać głębsza, niż się przypuszcza.

Jak podaje agencja AFP (Gazeta Wyborcza z 08.12.2009) japońska gospodarka wreszcie ożywiła się w trzecim kwartale bieżącego roku, wychodząc na wielkości dodatnie, spadło też bezrobocie z 5,3% we wrześniu do 5,1% w październiku. Przeważają głosy że ożywienie jest bardzo kruche. Mogą o tym świadczyć wciąż spadające ceny, deflacja, a także rosnący kurs jena (najwyższy od 14 lat w stosunku do dolara: 84 jeny na 1 dolara), co zagraża japońskiemu eksportowi.

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IWONA LASKOWSKA*

The impact of health on professionally active people's incomes in Poland. Microeconometric analysis[81]

Abstract

In contemporary world human capital is one of the basic elements of development. In a broad understanding it means "the resource of knowledge, skills, health and stamina in the society" (Domański, 1993). Health, besides education, is one of the determinants of its quality. It determines work efficiency, physical and intellectual development, and conditions the average lifespan. It is the resource influencing the functioning of individuals, enterprises - having a connection with their competitiveness - and the whole economy.

The impact of health on economic processes may be observed both on macroscale level and on the level of individuals. In the presented research an attempt was made to verify the hypothesis that the state of health is one of the factors determining professionally active people's incomes. It was assumed, that there is a possibility of the health state impact on decreasing incomes, not only on their complete loss.

In the analysis the micro data gathered in the research "Social Diagnosis 2009" were used. The function was estimated basing on Mincerian wage equation with the logarithm of personal income as a dependent variable and respondents characteristics (gender, work experience, practiced profession) as independent variables. Above all, however, variables connected with respondents health were included in the model.

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The outcome of the research confirms the occurrence of positive interaction between professionally active people's incomes and the self-assessed state of health. People declaring a bad state of health have incomes by 20% on average lower than people who enjoy good health (assuming that the remaining characteristics of the surveyed person are the same). In case of men, the impact of health state on incomes is slightly greater than in case of women.

1. Introduction

In contemporary world one of the basic factors of development is human capital, in a broad interpretation meaning " the resource of knowledge skills ,health and stamina of the society" (Domański 1993). Health, besides education, is one of the determinants of its quality. It determines work efficiency, physical, emotional and intellectual development of the man, conditions the average lifespan. It is a resource influencing on the functioning of individuals, enterprises- affecting their competitiveness - and the whole economy.

The conception according to which the health condition is an inseparable element of the human capital was initiated in the seventies of last century by M.Grossman (1972). Grossman was the first to emphasize the value of good health state permitting, similarly to education, to take up professional activity and to be an efficient worker.

A significant contribution to the studies on spreading the role of health as the economic development factor were submitted by the reports of the World Health Organization "*Macroeconomics and health: Investing in health for economic development"* from 2001 and "*The contribution of health to the economy in European Union*" from 2005 concerning of the European Union countries before its enlargement (EU15). It resulted from both of them that there is a necessity of investing in health as a carrier of economic growth not only in the countries of low economic development, but also in developed countries.

The impact of health on the economic processes can be observed on the macroscale and on the level of individuals. On the level of national and regional economy the research involves the connection between differentiation of health indicators (characterizing lifespan, the sick rate of selected illnesses, the death rate caused by defined illnesses) and differences in the level and dynamics of GDP growth.

Microeconomic analyses basing usually on the research of household budgets, concentrate on the assessment of the influence of illnesses or subjective

health feeling on the achieved incomes, professional activity or the probability of the retirement.

A much worse health state of people in Poland than in other countries in Europe, excluding the countries of Middle-East Europe, and the high coefficient of sick absenteeism at work bring about the necessity of conducting broader analyses for our country.

In the presented research an attempt was made to verify the hypothesis that health status is the one of the factors determining individual incomes of professionally active people. It was assumed that there is a possibility of health state influence on the lowering of incomes, not only on their complete loss.

In the analysis micro data gathered within the frames of the research *Social Diagnosis 2009*, were applied. The function based on Mincerian wage equation with the logarithm of personal income as a dependent variable and respondents characteristics (gender, work experience, practiced profession) as independent variables was estimated. Above all, variables connected with the respondent's health status were included in the model.

The analysis was preceded by a short presentation of potential channels of health influence on the economic development and a characteristic of health situation in Poland with a special regard to health state aspects of working age people.

2. Potential channels of health impact on the economic development

The role of health as a human capital element may be shown by its impact on:

1. work supply,
2. productivity,
3. education,
4. savings (Suhrcke et al., 2006).

On the micro scale health is a necessary condition of personal development. Affecting earnings, participation in the labour market (Gannon, Nolan, 2003), earlier retirement (Jimenez-Martin, Labeaga, Grando, 1999) and limited possibilities of working for people nursing the sick (Charles, 1999), it creates the bases ensuring suitable economic status.

Numerous researches prove a negative impact of ill-health on earned incomes (Contoyannis, Rise, 2001; Pelkowski, Berger, 2004). Stern (1989) using the data for United States showed that limited possibilities of employment

connected with ill-health reduce earnings by 11.7% in case of men and as much as 23.8% in case of women, after taking into account the correction of selection regarding participation in the labour market. Moreover, the probability of remaining outside the labour market increases by 13%. It results from the researches conducted by Smith (1999, 2003, 2005) that in the whole lifespan every decrease in incomes is connected with worsening of the health state.

The present and past health state influences on taking the decision to retire (Disney, Emmerson, Wakefield, 2006). Illnesses limit savings made in lifetime (Strauss, Thomas, 1998).

On the scale of the whole economy the positive health influence may be seen in the increase of employees productivity, reduction of costs connected with absenteeism caused by illnesses, and thus may lead to the increase in the welfare level. Health shapes labour force supply measured by the employment level or the number of working hours. A better health state of the society means limiting negative for the economy consequences of illness and connected with them medical treatment costs.

The already conducted in many countries researches prove the positive impact of health capital on the rate of economic growth (Barro, 1997; Bhargava, Jamison and Murray, 2001; Bloom, Canning, Sevilla, 2001; Jamison, Lau, Wang, 2004), savings (Bloom, Canning, Graham, 2003), or the increase in efficiency (Bloom, Canning, Sevilla, 2004).

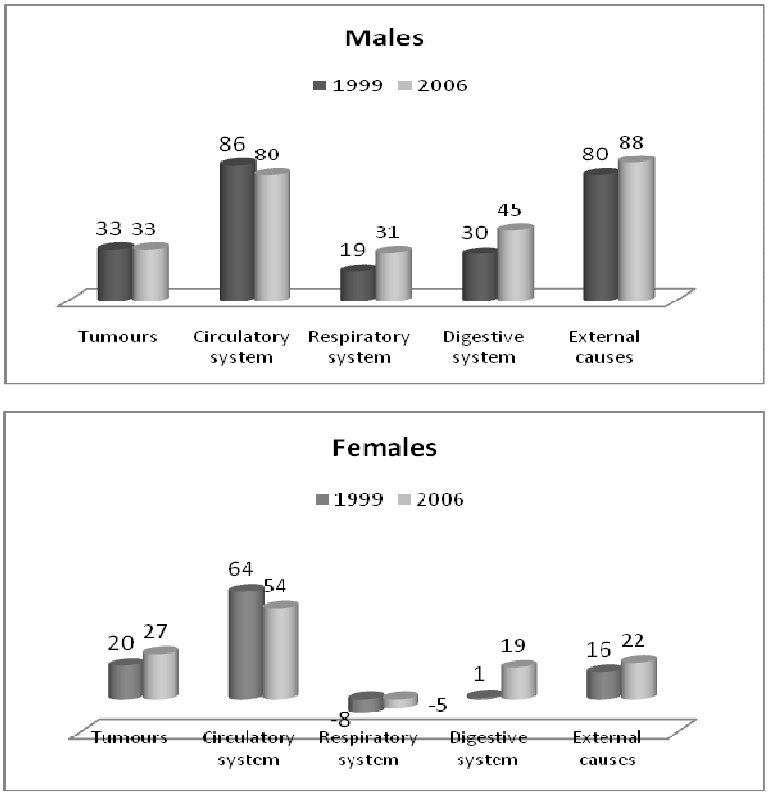
3. Health situation in Poland in the international context

In comparative analyses the so-called negative measures (showing ill-health) are generally applied. To the most popular ones belong the measures based on deaths, including average lifespan and mortality caused by selected reasons.

The average lifespan and its different variants are used in international comparisons. In Poland, both the average lifespan as well lifespan in good health are much shorter for men and for women than in the European Union countries- in case of men about 4,6 years, and in case of women about 2 years. The Polish live in good health 65.8 years on the average (women 68.5 years and men 63.1 years). Inhabitants of France or Germany live 6 years longer in good health (data come from 2002).

In Poland, at the background of the situation in the 27 European countries, premature deaths of working age people are serious problem. The available data permit to illustrate the situation for the age 25-64[82].

Chart 1. The surplus of mortality (in percentage) of people aged 25-64 in relation to the average in the 27 EU countries according to causes of deaths



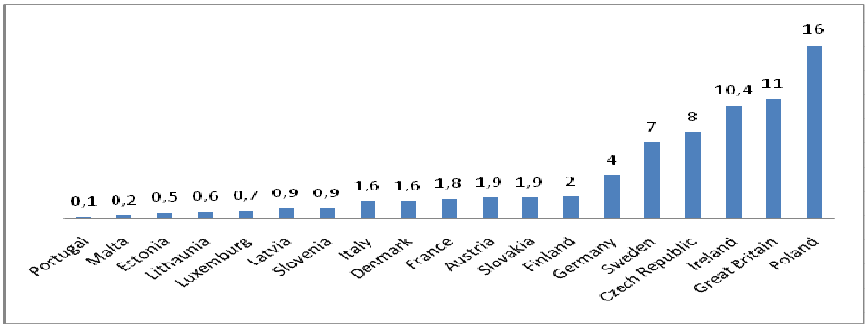
Source: *Health Status of Poland's Population*, B.Wojtyniak, P.Goryński (ed.), The National Institute of Public Health, the National Department of Hygiene, Warsaw 2008, p.74.

In case of all considered causes of deaths (except the respiratory system among women) the excess of premature mortality with reference to the average mortality in the EU is significant. The least advantageous situation concerns deaths connected with circulatory system diseases. The level of premature mortality caused by circulatory diseases is 76% higher than the average in the EU (80% in case of men and 54% in case of women).

[82] The above data were taken from *Health Status of Poland's Population*, B.Wojtyniak, P.Goryński (ed.), The National Institute of Public Health, the National Department of Hygiene.

In Poland there is very high share of disabled in the total working age population amounting to 16%. According to the European Union assessment it is the highest value among the membership countries.

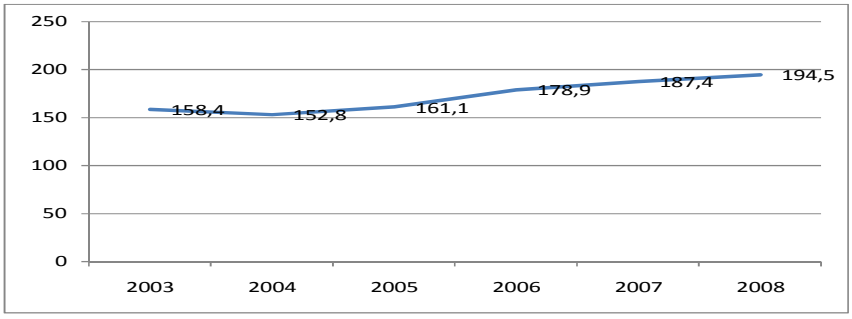
Chart 2. Share of disabled in the total working age population in 2005 (in %)



Source: As for Chart 1, p. 173.

The sick absenteeism rate (the relation of days on sick leave to the number of working days) is also very high. In 2008 it amounted to 5% and surpassed by 1.2 percentage point the European average[83]. The average yearly sick absenteeism per one person insured in the Social Insurance Institution amount to 34,41 days and is higher than in previous years. The total number of days of sick absenteeism for people insured in the Social Insurance Institution is on the increase (Chart 3).

Chart 3. The number of sick absenteeism days caused by one's own illness of the insured in the Social Insurance Institution 2003- 2008 (mln)



Source: *Sick absenteeism in Poland*, the Social Insurance Institution yearbooks of the selected years.

[83] G.Jabłońska *Healthy as a Pole – sick absenteeism in Poland,* www.labourmarket.pl, The date of publication: 13.03.2009.

The health situation in Poland, in spite of its improvements in recent years, is still worse than in the European Union.

4. The concept of the health state measurement for the needs of empirical analyses

Measuring health capital is an extremely difficult task. It is a complex, multidimensional idea consisting of the assessment of physical and mental condition as well as social health[84] (Golinowska, 2007; Tobiasz-Adamczyk, 2000) and there is no characteristic reflecting the health state in a complete way. To measure it various indicators presenting different aspects of health state are used. Their application requires meeting the following conditions:

- health should be a category indirectly measurable,
- there exists certain arrangement of health state differences.

To define health state in empirical analysis information resulting form demographic, epidemiological and sounding researches are applied. Among demographic and epidemiological measures there are sick rates and death rates.

For the needs of analysis synthetic measures are created. They express by means of one indicator different aspects of the health state, usually arising by assigning points to certain categories defining health (Feeny et al., 2002; Salomon et al., 2002). A few point indices were worked out to assess general health problems (eg. EQ-5D).

In sounding researches the following measures are used: occurrence of ill-health conditions or chronic diseases, descriptions of ability range. Limitations of abilities in the context of economic consequences of ill-health assessment are essential, considering the fall in productivity they cause and treatment costs of people suffering from them.

However, the most often applied in surveys indicators of health state consists in self-assessment. Self- assessment of health state, being an aggregate of many factors known only to an individual, deciding about its self-related health, in spite of subjectivity connected with it, is convergent with measures which can be considered as objectives ones, eg. a doctor's diagnosis or the

[84] Limitation of performing public functions may testify the lack of social health.

probability of death (Mossey, Shapiro, 1982, Golinowska (ed.), 2007)[85]. The application of this measure, besides given above arguments, is supported by the fact of including in the conducted in Poland statistical reports concerning the population's heath state only serious cases of illness leading to hospitalization or death. There is not enough information on disorders in health condition of a less dramatic character which can determine chances on labour market.

5. Econometric analysis

In the research individual data gathered within the project *Social Diagnosis 2009* (Czapiński, Panek ed., 2009) were applied. The data basis comes from the individual questionnaire (questionnaire addressed to all member of a household over sixteen years old). The initial base was limited to people 18-64 years old. The research covered only professionally active people. There were excluded pensioners, retired employees, full-time students, the unemployed and maintaining from non-earned sources (N=9311)[86].

The questionnaire used in the research *Social Diagnosis* contains questions concerning different aspects of the health state: disabilities, limitations in doing everyday activities, occurrence of physical complaints, somatic symptoms and self-assessment of health. The last mentioned was used in the econometric analysis as the indicator of health condition. Respondents assessed their health state answering the questions according to the 6-point scale: from very satisfied to very dissatisfied, it means with the application of the ordinal scale. Due to criticism of this tape of scale, as an approximation of health status in econometric analysis an artificial variable *ill- health state,* combining health assessed as rather bad, bad and very bad, was applied (Shurcke at al., 2006) [87].

Differentiation of incomes in groups separated in respect of health state is shown by Chart 4.

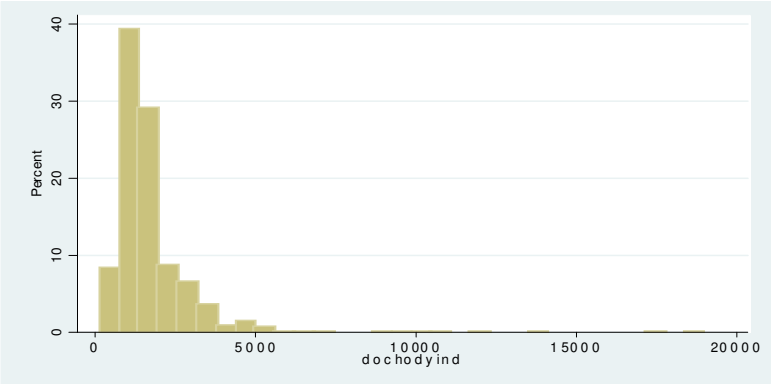
[85] Research carried out at a regional level indicates a strong correlation between the average life expectancy in the region and self-assessment of state of health of inhabitants of the region (Golinowska, 2007).

[86] Required data have been obtained from the website*:* www.diagnoza.com (17.11.2009).

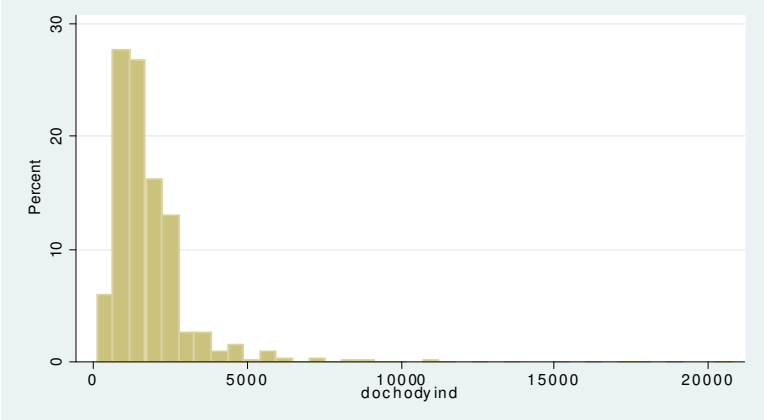
[87] It is connected with the loss of some information and requires an arbitrary defining the cut point.

Chart 4. Distribution of income (in zl) for people of good and bad health

Ill-health state



Good state of health



Source: Own calculations based on: *Social Diagnosis 2009.*

The graphic analysis indicates the existence of differences in distribution of incomes between people of good and bad health state. Among people of ill-health there is a higher percentage of those having low incomes, while the percentage of people having incomes above 5 thousands in considerably lower.

To verify the hypothesis, that health influences economic outcomes, measured as individual's income, there was estimated a model of individual wages based on the Mincerian equation (1974) extended by the variables characterizing the respondent's health:

$$\ln W_i = \beta_0 \ + \beta_1 \ \mathbf{Z}_i + \beta_2 \ \mathbf{X}_i + \varepsilon_i ,$$

where W_i are monthly personal incomes at constant prices from 2005, $\boldsymbol{Z}_i$ vector of variables reflecting the health state, $\boldsymbol{X}_i$ vector of variables representing both an employee's characteristics and those of employing him/her company.

Besides the state of health, as independent variables, socio-demographic characteristics of surveyed people were applied:

- *work experience* - continuous variable defining total work experience in years,
- *education:* binary variables defining respectively education: vocational/ lower secondary, secondary, higher/post-secondary (reference category: primary/lower education),
- *gender* – binary variable (1- male),
- *ownership of the employing institution:* binary variables – state ownership or territorial self-government entities, cooperative ownership (the reference category: private ownership),
- *class of the inhabited place* (introduced to approximate conditions of the local labour market- binary variables corresponding to the respective size of the inhabited place (reference class is the country),
- *practiced occupation*: binary variables for the defined below large professional groups consistent with the applied by the Central Statistical Office classification of professions (excluding armed forces):

Group_1	Representatives of public authorities, senior officials and managers
Group_2	Professionals
Group_3	Technicians and associate professionals
Group_4	Clerks
Group_5	Service workers and shop and market sales workers
Group_6	Skilled agricultural and fishery workers
Group_7	Crafts and related trades workers
Group_8	Plants and machine operators and assemblers
Group_9	Elementary occupations

In this case elementary occupations are the reference category.

Additionally the model includes binary variables for: the mazowieckie voivodeship- the region of the highest average earnings, full-time employment, married people, people with active knowledge of English or active knowledge of other foreign languages.

The method of estimation

The choice of methodology results mainly from the availability of statistical data and the possibility of taking into consideration the problem of endogeneity, that in this context may signify a simultaneous interdependence between the accepted for the analysis approximation of the health state and incomes.

From the purely point of view, the income affects health. It secures such basic determinants of health as a flat, food and the possibility of participating in social life. Higher income enable better satisfying of health needs (financing health care). Low incomes are often accompanied by anti-health behavior (eg. smoking) often caused by stress resulting from a difficult economic situation.

Therefore, none of the hypothesis: ill-health causes low incomes or inversely should be rejected by assumption.

One of the solutions applied in case of endogeneity is the instrumental variables method. As instruments for *ill-health* binary variables were used showing occurrence of limitations in doing everyday activities, physical ailment and disability as well as the indicator connected with the occurrence of somatic symptom and their intensity.

Table 1. Estimation results of individual incomes model including health capital (dependent variable: logarithm of net individual monthly income)

Exogenous variable		Estimated parameters		
		Full sample (N=9311)	**Males** (N=4991)	**Females** (N=4320)
Ill-health state		- 2169***	- 2170***	- 1908***
Age		0301***	0306***	.0398 ***
Age squared		- 0005***	- 0005***	- .0005 ***
Gender (1 in case of male)		2618***	-	-
Class of the inhabited place	Towns 500 thous. and more	2143***	1963***	.2318 ***
	Towns 200 - 500 thous.	1327***	1561***	.1129 ***
	Towns 100- 200 thous.	0949***	1243***	.0708 **
	Towns 20- 100 thous.	0648***	0678***	.0663 **
	Towns below 20 thous.	0379**	0367**	.0409 **
Mazowieckie		1215***	0881***	.1625 ***
Years of education		0238***	0235***	.0235 ***
Education	Higher and post-secondary	1516***	1370***	.1478 ***
	Secondary	0642**	0715**	.0469
	Vocational	0142	0139	.0087
Married		0768***	1708***	-.0083
Active knowledge of English		0543**	0732**	.0315
Active knowledge of another language		0210	0246	.0083
Full-time Job		3327***	3353***	.3114 ***
State ownership		- 0402***	-.0173	-.0655 ***
Self-government ownership		- 0957***	-.0545	-.1262 ***
Occupational group	Group_1	3830***	3290***	.5116 ***
	Group_2	2210***	1983***	.2902 ***
	Group_3	1518***	1121***	.2165 ***
	Group_4	0121	-0546	.0888 ***
	Group_5	- 0624***	-1356***	.0114
	Group_6	- 353***	-3544	-.3206 ***
	Group_7	-0558**	- 0412	-.0623 *
	Group_8	0274*	0096	.0611
Work experience		0102***	0088 ***	0103 ***
Cons.		5.6421***	5.642***	5.5311 ***
Adjusted R^2		321	282	332

*p < .05, **p < .01, ***p < .001

Source: Own calculations based on: *Social Diagnosis 2009.*

The main results from conducted researches may be formulated in the following way. Professionally active people's incomes grow with age (after surpassing certain age they begin to fall), work experience and the number of learning years. Better educated people earn higher incomes. The performed profession is of importance. In towns incomes are higher than in the country (the reference category) and the difference increases with the growth in size of town. Women's income remain lower than men's income.

The most important effect of the conducted research is confirming an essential impact of the health state on the earned incomes. The negative estimate of the parameter at the variable connected with health indicates that ill- health is a cause of lowering incomes. People declaring a bad state of health have incomes by 20% on average lower than people who enjoy good health (assuming that the remaining characteristics of the surveyed person are the same. It is the outcome similar to the analogous researches conducted in other countries (Suhrcke at al., 2007).

In case of men the dependence of incomes on the health state is slightly stronger than in case of women.

6. Conclusion

The presented results confirm that there is a positive dependency of professionally active people's incomes on the self-assessed state of health. It allows to recognize health as one of the indispensable conditions of economic development. Activities directed at improving one's state of health may be beneficial for an individual, but as it seems, also on a larger scale.

To improve economic outcomes it is necessary to invest not only in human capital in the form of education, but also in human capital in the form of health, in Poland considerably worse than the average level of the European Union. From this perspective the sphere of health care should be treated not as an area burdening the budget, but giving a chance of economic development.

References

Barro R J., (1997) *Determinants of economic growth: a cross-country empirical study*, Cambridge, MA: MIT Press

Bhargava A, Jamison DT, Lau L, Murray C. (2001), *Modelling the effects of health on economic growth*, 'Journal of Health Economics' no. 20

Bloom D, Canning D, Graham B. (2003), *Longevity and Life cycle savings*, 'Scandinavian Journal of Economy' no. 105

Bloom D, Canning D, Sevilla J. (2001), *The effect of health on economic growth: theory and evidence*, Cambridge MS, National Bureau of Economic Research (NBER Working Paper 2001 No. 8587) (http://www.nber.org/papers/w8587)

Bloom D., Cannining., Sevilla Y.(2004), *The Effect of Health on Economic Growth: A Production Function Approach*, 'World Development' no. 32

Charles KK. (1999), *Sickness in the family: health shocks and spousal labor supply*, Working Paper no. 2000-011,
http://www.fordschool.umich.edu/research/papers/PDFfiles/00-011.pdf:,Gerald R. Ford School of Public Policy, University of Michigan
Contoyannis P, Rise N. (2001), *The impact of health on wages: evidence from British Household Panel survey*, 'Empirical Economy' no. 26

Disney R, Emmerson C, Wakefield M. (2006), *Ill health and retirement in Britain: a panel data-based analysis*, 'Journal of Health Economics' no. 25

Domański S. (1993), *Kapitał ludzki i wzrost gospodarczy*, PWN, Warszawa

Feeny D., Furlong W., Torrance G.W., Goldsmith C.H., Depauw Z., Deaton M., Boyle M. (2002), *Multiattribute and Single-Attribute utility Functions for Health Utilities Index Mark 3 System*, 'Medical Care' no. 40

Gambin L.M. (2005), *The impact of health on wages in Europe –does gender matter?* HEDG Working Paper 05/03

Gannon B, Nolan B. (2003), *Disability and labour market participation*. HRB Working Paper, June (www2.eur.nl/bmg/ecuity/public_papers/ECuity3wp8Gannon.pdf)

Golinowska S.(ed.) (2007), *Polityka zdrowotna wobec dostępności opieki zdrowotnej, wykluczenia oraz nierówności w zdrowiu*, IPiSS, Warszawa

Grossman M. (1972), *On the concept of health capital and the demand for health*, 'Journal of Political Economy' no. 80

Health Status of Poland's Population (2008), Wojtyniak B., Goryński P.,(ed.), The National Institute of Public Health, the National Department of Hygiene

Jabłońska G. (2009), *Healthy as a Pole – sick absenteeism in Poland*, www.labourmarket.pl, The date of publication: 13.03.2009

Jamison D, Lau L, Wang J. (2004), *Health's contribution to economic growth in an environment of partially endogenous technical progress, disease control priorities project*, Working Paper 10 (www.fic.nih.gov/dcpp), Bethesda, MD: Fogatry International Centre, NIH

Jiemenez-Martin S, Labeaga JM, Martınez Granado M. (1999), *Health status and retirement decisions for older European couples*, http://www.ceps.lu/iriss/documents/irisswp1.pdf

Macroeconomics and health: Investing in health for economic development, (2001) Commission on Macroeconomics and Health, Geneva

Mince J. (1974), *Schooling. Experience and Earnings*, Columbia University Press, New York

Mossey J.M., Shapiro E. (1982), *Self-Related Health: a Predictor of Mortality Among the Elderly*, AJPH, Vol.72 no. 8

Pelkowski J. M, Berger MC. (2004), *The impact of health on employment, wages, and hours worked over the life cycle*, 'Quarterly Review of Economy and Finance' no. 44

Salomon J.A., Murray C.J.L., Ustun T.B., Chaterji S. (2002), *Health status valuations in summary measures of population health*, [in]: Health systems performance assessment: debates, methods and empiricism, ed. C.J.L.Murray, B.D. Evans, WHO, Genewa

Sick absenteeism in Poland, the Social Insurance Institution yearbooks of the selected years.

Smith J.P. (1999), *Healthy bodies and thick wallets: the dual relation between health and economic status*,' Journal of Economic Perspectives', Vol.13, no. 2

Smith J.P. (2003), *Consequences and predictors of new health events*, The Institute for Fiscal Studies (IFS), WP03/22

Smith J.P. (2004), *Unravelling the SES: health connection*, 'Population and Development Review', Vol.30, Supplement: Aging, Health, and Public Policy

Social Diagnosis 2009. Conditions and Quality of Life of Poles, edited by J.Czapiński, T. Panek, Warsaw: Social Monitoring Council 2009

Stern S. (1989), *Measuring the effect of disability on labor force participation*, 'Journal of Human Resources', 24(3)

Suhrcke M., Rocco L., Mazzuco S., Urban D., Steinherr A. (2007), *Economic Consequences of Noncommunicable Diseasesand Injuries in the Russian Federation*, WHO

Suhrcke M, McKee M, Sauto Arce R, Tsolova S, Mortensen J. (2006), *The contribution of health to the economy in the European Union*, 'Public Health' vol. 120, no. 11

Tobiasz-Adamczyk B. (2000), *Wybrane elementy socjologii zdrowia i choroby*, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków

The contribution of health to the economy in the European Union (2005), Brussels, European Commission

Streszczenie

WPŁYW STANU ZDROWIA NA DOCHODY OSÓB AKTYWNYCH ZAWODOWO W POLSCE. ANALIZA MIKROEKONOMETRYCZNA

We współczesnym świecie jednym z podstawowych czynników rozwoju jest kapitał ludzki, w szerokim rozumieniu oznaczający „zasób wiedzy, umiejętności, zdrowia, energii witalnej zawartej w społeczeństwie" (Domański, 1993). Zdrowie, obok edukacji, stanowi zatem jeden z wyznaczników jego jakości. Determinuje wydajność pracy, rozwój fizyczny, emocjonalny i intelektualny człowieka, warunkuje przeciętną długość życia. Stanowi zasób wpływający na funkcjonowanie poszczególnych osób, przedsiębiorstw-poprzez związek z ich konkurencyjnością- oraz całej gospodarki.

Wpływ zdrowia na procesy ekonomiczne może być obserwowany w skali makro i na poziomie jednostek. W prezentowanych badaniach podjęta została próba weryfikacji hipotezy, iż jednym z czynników determinujących dochody indywidualne osób aktywnych zawodowo jest stan zdrowia. Przyjęto założenie, że istnieje możliwości wpływu zdrowia na obniżenie dochodów, nie tylko ich całkowitą utratę.

W analizie wykorzystane zostały mikrodane zgromadzone w ramach badania Diagnoza Społeczna 2009. Oszacowana została funkcja bazująca na równaniu płac Mincera z logarytmem dochodu osobistego w charakterze zmiennej objaśnianej i charakterystykami respondenta (płeć, staż pracy, wykształcenie, wykonywany zawód) w charakterze zmiennych objaśniających. Przede wszystkim jednak, do modelu włączone zostały zmienne związane ze zdrowiem respondenta.

Wyniki badań potwierdzają istnienie pozytywnej zależności dochodów osób aktywnych zawodowo od stanu zdrowia mierzonego jego samooceną. Osoby deklarujące zły stan zdrowia osiągają dochody przeciętnie o 20% niższe niż osoby, które cieszą się dobrym stanem zdrowia (przy założeniu, że pozostałe charakterystyki badanej osoby są takie same). W przypadku mężczyzn zależność dochodów od stanu zdrowia jest nieznacznie silniejsza niż w przypadku kobiet.

Contents