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ul. Jana Heweliusza 14, 10-718 Olsztyn
tel.: 89 523 36 61, fax 89 523 34 38
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e-mail: wydawca@uwm.edu.pl

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ASSESSMENT OF POLAND'S ECONOMIC POLICY DURING THE CRISIS

Stefan Krajewski

Institute of Economics
University of Lodz

K e y w o r d s: crisis, the role of government, fiscal policy, monetary policy.

A b s t r a c t

The rapid weakening of economic activity, covering most states in the world, gives rise to a lively discussion on the choice of methods to tackle the crisis, the legitimacy and effectiveness of various economic policies, the role of the state and the scope of its intervention in the economy.

The paper evaluates the Polish economic policy in recent years. This refers to the situation prevailing in the EU and the USA. I conclude that the Polish economy during the crisis remained relatively stable, without having to provide the emergency aid from the outside.

The development of such a situation has been affected by different reasons, including:

– The benefits of the so-called "backwardness rent", which resulted, among others, in the inflow of EU funds (Poland was in 2007–2013 and in will be in 2014–2020 the biggest beneficiary of the EU budget);

– The effects of decisions on changes in the tax and social security, taken for political reasons (before the crisis);

– The controversial withdrawal from the funded pension system, reducing the budget deficit and public debt;

The prudent monetary policy and anti-inflation policy pursued over many years.

Actions taken in Poland are primarily focused on reducing costs, which differs quite significantly from the economic policy dominant in the U.S. and the "old" EU countries which generally pursue expansionary fiscal policy and a policy of cheap money. Polish solution facilitates the achievement of short-term fiscal sustainability, but does not create favorable conditions for the development in the long-term (insufficient investment, petrification of economic structure, lack of innovation).

OCENA POLITYKI GOSPODARCZEJ POLSKI W OKRESIE KRYZYSU

Stefan Krajewski

Katedra Funkcjonowania Gospodarki
Uniwersytet Łódzki

S ł o w o k l u c z o w e: kryzys, rola państwa, polityka fiskalna, polityka monetarna.

Abstrakt

Gwałtowne osłabienie działalności gospodarczej obejmujące większość państw świata staje się powodem do ożywionej dyskusji dotyczącej wyboru sposobów walki z kryzysem, zasadności i skuteczności różnych polityk gospodarczych, roli państwa i zakresu jego ingerencji w gospodarkę.

W artykule oceniono politykę gospodarczą Polski w ostatnich latach. Nawiązano przy tym do sytuacji występującej w UE i USA. Autor stwierdził, że gospodarka polska w okresie kryzysu zachowała względną stabilność, bez konieczności udzielania jej nadzwyczajnej pomocy z zewnątrz.

Na ukształtowanie się takiej sytuacji złożyło się oddziaływanie zróżnicowanych przyczyn, w tym głównie:

– korzyści wynikających z tzw. reszty zacofania, w czym zawiera się m.in. dopływ środków pomocowych UE (Polska była w latach 2007–2013 i będzie w latach 2014–2020 największym beneficjentem budżetu unijnego);

– skutków decyzji o zmianach w systemie podatkowym i ubezpieczeniowym podjętych jeszcze przed kryzysem z przyczyn politycznych;

– kontrowersyjnego wycofania się z systemu emerytur kapitałowych, zmniejszającego deficyt budżetowy i dług publiczny;

– prowadzonej konsekwentnie od wielu lat ostrożnej polityki monetarnej i antyinflacyjnej.

Działania podejmowane w Polsce są nastawione przede wszystkim na ograniczanie wydatków, co odbiega dosyć wyraźnie od polityki gospodarczej dominującej w USA i „starej" UE, gdzie prowadzi się na ogół ekspansywną politykę fiskalną i politykę taniego pieniądza. Rozwiązanie polskie ułatwia osiągnięcie krótkookresowej równowagi budżetowej, ale nie tworzy dogodnych warunków do rozwoju w długim okresie (niedostateczne inwestycje, petryfikacja dotychczasowej struktury gospodarczej, niska innowacyjność).

Introduction

The discussion concerning the role of the state in economy, the scope of its intervention, applied measures and their effectiveness, etc. usually intensifies in the period of sharp slowdown in economic activity (FREEDMAN et al. 2010, FUKUYAMA 2008). The presented text is an attempt to show how the Polish economy has coped in the period of the current economic crisis, what has most significantly influenced its standing, as well as the occurring processes, and what economic policy the state has pursued. The situation existing in Poland will be compared to the situation in the European Union.

The aim of this paper is to show that a relatively good situation of the Polish economy in the current crisis is more a consequence of specific internal conditions than the anti-crisis policy. The text has been prepared on the basis of the Central Statistical Office statistical data, Eurostat, Polish and English-language literature on these topics and materials presenting and analyzing economic policy solutions.

Economic policy in Poland and the EU – comparative analysis

In this paper, the following aspects of economic activity have been taken into account:

a) GDP growth rate,
b) unemployment rate,
c) budget deficit level,
d) national debt level,
e) inflation.

Poland has recorded a relatively high rate of GDP growth in the recent years (Tab. 1).

Table 1

GDP growth rate at constant prices [%]

Years	2004	2005	2006	2007	2008	2009	2010	2011	2012
Poland	5.3	3.5	6.2	6.8	5.1	1.6	3.9	4.5	1.9
EU-27	2.6	2.1	3.2	3.2	0.4	-4.5	2.1	1.6	-0.4

Source: http://eurostat.ec.europa.eu (5.08.2013)

Even prior to the crisis, the rate of GDP growth in Poland was one of the highest in the EU, and in the years 2008 and 2009 it was the highest. In 2010, only Sweden (6.1%) and Slovakia (4.2%) recorded a higher growth rate. In subsequent years, the rate started to level with the EU average. Preliminary estimates for 2013 indicate that the rate of GDP growth in Poland (approx. 1–1.2% or below) may be lower than the average in the EU.

Prior to the crisis (in 2006), the rate of unemployment in Poland was the highest in the EU. It is characteristic that it fell at the beginning of the crisis. Then, it began to rise again and is currently relatively high, yet it is still not one of the highest in the EU (in 2012 in Spain and Greece above 25%).

Table 2

Unemployment rate-annual averages [%]

Years	2004	2005	2006	2007	2008	2009	2010	2011	2012
Poland	19.0	17.9	13.9	9.6	7.1	8.1	9.6	9.7	10.5
EU-27	9.3	9.0	8.3	7.2	7.1	9.0	9.7	9.7	10.1

Source: http://eurostat.ec.europa.eu (5.08.2013)

The level of the budget deficit (public finances) in Poland and EU-27 is illustrated in Table 3.

Table 3

Budget deficit as % of GDP

Years	2004	2005	2006	2007	2008	2009	2010	2011	2012
Poland	-5.4	-4.1	-3.6	-1.9	-3.7	-7.4	-7.8	-5.0	-3.9
EU-27	-2.9	-2.5	-1.5	-0.9	-2.4	-6.9	-6.5	-4.4	-4.0

Source: http://eurostat.ec.europa.eu (27.07.2013)

In the years 2004–2005, the budget deficit in Poland was relatively high. For example, in 2005, it was higher in only four other EU countries: in Hungary (7.9%), in Portugal (5.9%), Greece (5.2%) and Italy (4.4%).In Poland in the next two years, the deficit decreased, which was the result of the high at the time budget revenues driven by strong GDP growth. In the first years of the crisis, the deficit increased and reached 7.8% in 2010. The deficit in the EU, however, also rose at the time, though in most countries the highest level of deficit was already achieved in 2009. Yet in 2010 a downward trend was observed. The reduction of Poland's deficit has been proceeding so swiftly and consistently that already in 2013 the deficit should reach the level below 3%, which will mean the fulfilment of the Maastricht Treaty criteria.

The level of public debt in Poland is illustrated by the data put in Table 4.

Table 4

Public debt as % of GDP

Years	2004	2005	2006	2007	2008	2009	2010	2011	2012
Poland	45.7	47.1	47.6	45.0	47.1	50.9	54.8	56.3	53.0
EU-27	62.2	62.8	61.5	58.7	61.8	74.0	80.0	82.5	85.3

Source: http://eurostat.ec.europa.eu (14.06.2013)

The public debt is growing, yet at a moderate pace, slower than in most EU countries. The level of this debt is also moderate. For example, according to the Polish methods, debt was lower in 2011 by almost 2 percentage points (53,5%), compared to the Eurostat accounting methods. (*Statistical Yearbook* 2012, p. 633). So, according to Polish accounting methods, it has not reached 55% in any given year. Poland, therefore, meets the Maastricht criterion on public debt. It should be noted that in 2010 as many as 14 EU member states exceeded the 60% level of debt. It should also be noted that, apart from the years of 2009–2010, the debt level in Poland has reached high stability.

The inflation rate in Poland (taking into account prices of goods and services) has been relatively stable over the last ten years and remains at a moderate level (Tab. 5).

Table 5

Inflation rate (%)

Years	2004	2005	2006	2007	2008	2009	2010	2011	2012
Poland	3.5	2.2	1.3	2.6	4.2	4.0	2.7	3.9	3.7
EU-27	2.6	2.3	2.3	2.4	3.7	1.0	2.1	3.1	2.6

Source: http://eurostat.ec.europa.eu (14.06.2013)

In the period when the rate of GDP growth was high, the rate of inflation decreased to even 1.3% in 2006. It was then the lowest inflation rate in the EU. A visible increase in the rate of inflation observed in Poland since 2008 indicates a correlation with the severity of the crisis and the employment of financial resources stimulating demand (SKIBA 2011). The rate of inflation rose then also in most EU countries. However, at the turn of 2012–2013, inflation in Poland fell to approx. 2.0%, and to 1,0% in first quarter of 2013, that is, to the level set in the Polish constitution as the inflation target of the central bank (a 1 percentage point deviation up or down from the inflation target set at the level of 2.5% is allowed).

On the basis of this synthetic information, it can be concluded that the Polish economy has been going through the period of the crisis in a relatively mild way, without excessive shocks or instability. It should be noted that Poland is one of the ten post-socialist countries which are now part of the EU. Before 1990, all these countries functioned within a system in which state ownership dominated and the state (not the market) set, as well as regulated, mechanisms and rules of business activity. Although that system has been non-existent for more than twenty years, a clear aversion to increasing state intervention in economy remains in most of these countries. The belief that the interference of the state in economy brings more negative consequences than positive ones is widespread. And difficult issues (also in times of crisis) can best be solved by creating more favourable conditions for the operation of market mechanisms and by privatising the remaining state assets. The supporter, or even a symbol, of this way of thinking in Poland is still Leszek Balcerowicz, the creator and implementer of the Polish economic reform after 1989 (BALCEROWICZ 2010). This outlook influences to a certain extent the character of the economic policy in post-socialist countries. The economic policy in these countries, however, is also determined by their structural features that result from a relatively low level of development and the effects of decisions made in the system existing before 1990.

Regardless of the causes and determinants, the state of the economies in most of the post-socialist countries (including Poland) in recent years can be characterised as follows (*Recovery and Reform* 2010):

– a decline in GDP is relatively high, with the exception of Poland,
– the unemployment rate is generally moderately high and slightly increasing,
– the public finance deficit is low and generally does not show an increasing trend,
– the public debt is low and does not show a rising trend,
– the inflation rate is moderate and shows a rather decreasing trend.

This characterisation indicates that these countries (in which mechanisms and institutions of a market economy based on private ownership have been operating for only 20 years) have shown significant resistance to negative external shocks occurring in recent years. It can be seen as optimistic that these economies do not cause the EU the most trouble and do not require the greatest number of recovery measures. It can be said though that at the initial stage of the crisis (2008–2009), a certain (sudden) downturn was observed in three post-socialist countries. It was short-term, however, and concerned the small economies of Estonia, Latvia and Lithuania. The size of aid was not big and the basis for stability was achieved largely due to drastic austerity programmes implemented consistently without any serious social protests (*Recovery and Reform* 2010).

The specificity of Poland's economy and its anty-crisis policy

Poland belongs to the group of EU countries that have managed in recent years to avoid sudden shocks in their economies. There are also negative processes observed, yet they run their course in a relatively mild way and do not lead to tensions that seriously affect social stability. This raises the question what the reasons for this relatively favourable situation of Poland are and whether it can be expected that this situation will either improve of deteriorate in the coming years. The answer to this question is important since there are significant differences between the economic policy pursued in Poland and in many other EU countries (particularly more developed ones), as well as in the USA. Which country, therefore, has chosen the correct method to handle the current crisis?

This issue was manifestly raised by Jacek Rostowski, the Minister of Finance, who at the end of September 2009 stated that: "...everybody is pleased with the performance of the Polish economy. Pleased even more since in the course of this year, Poland went a completely different way than the countries of Western Europe and the USA. Our performance is proof that we have chosen the right way to deal with the crisis and that this way has proved to be the only effective one" (ROSTOWSKI 2009). This is an important statement which should be analysed and verified.

This statement may be interpreted in three ways:

– the procedure adopted in Poland can be successfully used in a number of countries contributing effectively to overcome the crisis;

– Poland is actively pursuing the economic policy tailored to specific conditions of our country and these experiences cannot be used on a major scale abroad;

– the economic policy in Poland in the period of the crisis is characterised by low activity and a relatively favourable situation of the economy results from its unique characteristics and determinants which are rarely found in other countries.

Most arguments are in favour of the third interpretation (KRAJEWSKI, KRAJEWSKA 2011). The most important ones are the following:

1. Poland enjoys the following benefits of its backwardness:

a) the financial sector is relatively underdeveloped. It achieves good results based on traditional, tried and tested instruments. This weakens negative effects of the crisis and delays the time of their occurrence. The impact of the financial sector on the real economy is still limited. It is illustrated by the fact that in 2008 only 26% of small and medium-sized enterprises used bank loans (*Raport*... 2009) although entities of this size in most countries are particularly heavily dependent on external financing;

b) international connections are still limited. For instance, in Poland export constitutes approx. 37% of GDP, while in many member states of the "old" European Union, as well as in the Czech Republic, it amounts to 75% (*Statistical Yearbrok* 2012, pp. 858, 868). This means that the effects of the collapse of the economies of the developed countries are not so strongly felt in Poland;

c) as one of the least developed countries of the EU, Poland makes use of substantial, external financial assistance. Poland has at its disposal significant financial resources flowing from abroad, mostly from the European Union. The sum currently totals several billion Euro per year and the resources are allocated to finance:

– infrastructure investments, investments supporting entrepreneurship and innovation, as well as improving the natural environment;

– consumer spending (subsidies for farms, maintaining employment, severance pay for dismissed employees).

2. The high rate of GDP growth before the crisis (5–6% per annum) has lengthened the "braking distance" of the economy. This assumption, however, is probably not fully justified, even given the experience of Latvia, Estonia, Lithuania and Ireland[1].

[1] It should also be taken into consideration that these are small economies with a small scale of economic activity. The collapse of several large entities has a significant impact on the whole statistical picture.

3. Poland is benefiting from the effects of decisions made before the crisis, seriously increasing financial resources at the disposal of households and businesses. The decisions in question concerned mainly lowering disability pension contributions from 13% to 6%, which reduced the annual budget revenues by approx. 24 billion PLN, and decreasing tax rates on income (PIT) from 19%, 30% and 40% to 18% and 32%, which reduced the budget revenues by more than 16 billion PLN annually. It seems that both of these decisions had no clear economic justification. Wages grew then at a high rate (7–9% annually), entrepreneurs made relatively high profits and the lack of financial resources was not a major barrier to increased investment.

The effects of two other previous decisions – to lower rates of corporate income tax (CIT) in 2004 from 27% to 19% and the transition to a new pension system in 1999 – should be also taken into account. The reduction of CIT decreases the budget revenues by approx. 8 – 10 billion PLN annually and the necessity to make contributions to pensions funds is an annual burden of approx. 24 billion PLN for the budget. The financial resources flowing into pension funds are not immediately used to pay current pensions but they are invested (mainly in the country) thus sustaining investment demand. The budget, therefore, pays about 50 billion PLN annually for the payment of current pensions.

For a long time, there was a so-called budgetary pension system in Poland. Pension contributions were paid to the state budget which funded current pension payments under the existing rules and regulations. The institution dedicated to the payment of pensions was the State Social Insurance Institute (Zakład Ubezpieczeń Społecznych – ZUS). In 1999, the so called capital-funded pension system was introduced. Since then, pension contributions were paid to individual accounts and the thus collected funds were managed by the so called open pension funds, specifically designated for that purpose. The Social Insurance Institute still exists drawing funds from the budget to finance currently paid pensions. Thus a system was created in which on a temporary basis (yet for many years) it is necessary to double fund pension needs: to put aside in Open Pension Funds (OPF) money for payments that will be realised in the years to come and to draw funds from the current budget for current pensions.

In 2011, Poland partly withdrew from the capital-funded pension system and in practice returned to budget-funded pensions, which contributed to the reduction of the budget deficit and the rate of public debt growth. Other post-socialist countries, which, similarly to Poland, introduced years ago capital-funded pensions also withdrew from these systems during the current crisis, thus reducing their public finance debt. It is significant that none of the "old" (EU-15) have decided to introduce a capital-funded pension system

which is sensitive to the effectiveness of investing in the market and economic fluctuations.

In 2013, further decisions were taken leading to a reduction in the activity of the Open Pension Funds and the withdrawal of more than half of the funds deposited there (i.e. those invested in government bonds).There is of course a danger that this will negatively affect the capital market. However, one must take into account that the funds invested in the stocks of companies will remain in the OPF, which reduces the threat of the collapse of the stock exchange in Warsaw. The priority of the Minister of Finance and the government was to quickly reach success in balancing the budget deficit and public debt (a debt decline by about 8 percentage points). And this should have a positive impact on improving the image and position of Poland in the EU and among investors.

As a result of the economic policy outlined above, the market benefited from financial resources at the amount of tens of billions of PLN per year, which increased consumption and investment demand enabling to maintain a positive rate of GDP growth. At the same time, however, this led to the expansion of the public finance deficit. A further increase in the deficit could threaten the stability of the entire economy.

The measures concerning the public finance sector undertaken in Poland in reference to the current crisis can be presented as follows:

1. Decisions resulting in the rapid achievement of:

a) short-term budgetary expenditure savings (the reduction in government spending by approx. 20 billion PLN) in the initial phase of the crisis;

b) short-term additional revenue for financing the deficit (e.g.: the acquisition of the resources of the so called Road Fund and Demographic Fund yielded approx. 20 billion PLN)[2].

2. Measures focused on achieving in the period of a few years:

a) savings in the budget expenditures (suspension of indexation of pensions, a public sector wage freeze, elimination of some income tax deductions, withholding of payments to open pension funds),

b) additional revenue to the budget from the increase in VAT from 22% to 23%, and the increase of excise (MODZELEWSKI et al. 2010) and from the increase in disability pension contribution by 2 percentage points). These decisions are generally seen as interference with the existing system of public finance and their actual impact on the budget is still unclear. Some of the decisions probably will not be fully realised and some will start to have an effect with a delay of several years.

[2] The financial resources at the disposal of the above mentioned Funds are outside the scope of the state budget.

3. The preparation of programmes:

a) extending the working time to 67 years for women and men (including privileged professional groups, e.g.: uniformed services that currently acquire their pension rights after 15 years of work);

b) limiting the scope of the so-called bridging pensions (accelerated pensions);

c) eliminating or limiting financial privileges for certain industries, e.g.: for miners, teachers, railwaymen. These programmes (if realised) will not influence the current budget situation and their effects in the form of budget spending cuts will be delayed, even by several years.

Restoring over a few years the desired budget deficit level (slightly below 3% GDP in 2013) required at least partial implementation of the measures outlined in point 1 and 2, as well as a "hidden" increase in personal income tax burden (a freeze on tax thresholds under conditions of inflation).

It should also be noted that the current, difficult situation of public finances is largely a consequence of poorly thought-out, or even wrong, decisions from previous years. This includes, among others, the pension reform and the reduction of disability pension contributions and personal income tax rates (PIT). Their combined, total budgetary impact (the reduction of revenues or increase in spending) can be estimated at around 60 billion PLN annually in recent times. It is difficult to find a clear economic justification for reducing disability pension contributions and personal income tax. It seems that there exists in Poland a widespread belief that the duty of the government (and the parliament) is to lower the tax burden and the propagated idea that a good authority is the one that reduces taxes, while an evil authority is the one that raises them, played a big role. This outlook has a particularly significant impact on election programmes of all parties. And although – as it has been already emphasised – there was no economic necessity to reduce the disability pension contributions and personal income tax, it was done. In such an atmosphere, it is difficult to increase taxes and social security burdens during an economic downturn, when there is a lack of economic balance. It is much easier to implement such decisions in the UK and it is often practised. In Poland, it is relatively easier to make increases in VAT as they are less noticeable for the public. It is characteristic that raising VAT from 22% to 23% in Poland was supported by the argument that the UK had done the same. It was not revealed, however, that at the beginning of the crisis the UK reduced VAT to stimulate demand and then it was only restored to its original rate (*Taxation trends* 2011).

It is difficult to unambiguously determine whether at the end of the 1990's there were conditions for the reform of the pension system and whether it was wise to currently withdraw from the existing solutions in order to save the

budget balance (KRAJEWSKI 2001). This depends largely on the assessment of the current and future budget situation and the possibility to balance the budget without disturbing the balance of the pension system.

It should be remembered, however, that in the medium-term programme to repair public finances, announced in 1998, the finance minister expressed a clearly formulated opinion that there was no possibility to provide at the same time financial security for more than two reforms out of the four then considered (pension, health care, education, public administration). Ultimately, it was decided for political reasons to implement four reforms, including a social security reform, making rather unrealistic assumptions, as it later turned out, concerning the conditions of its success. It was assumed that an increase in spending on the pension system resulting from these new solutions would last for 7 years, and it is currently estimated that it should take as many as 40 years. The main source of coverage for these increased expenditures were to become unrealistically highly estimated revenues from privatisation that in practice were not reached, additionally these revenues turned out to be also needed for the realisation of other goals.

Even if the planned revenues from privatisation had been achieved, it would have been no more than 20-28 billion PLN annually[3]. The scope of privatisation also proved to be unrealistic due to political reasons as it caused protests among the opposition parties and the major part of the society. It seems that in this situation, the dismantling of the current pension system was necessary to prevent the collapse of public finances.

Prospects of Polish economy

At present (at the beginning of 2013), the answer to the question whether we can stop the declining rate of GDP growth and prevent a negative growth rate seems of crucial importance for the Polish economy. It depends on several factors of very diverse nature:

1. the rate of growth in the countries of the "old" EU, especially in Germany, with which Poland's economy is most closely connected (over $^1/_4$ of total trade exchange). In this respect, one can probably count on moderately optimistic developments, which should translate into an increase in Poland's export opportunities,

2. significant improvement in the operation of institutional factors, including business law and tax law, defective and not conducive to the development of entrepreneurship;

[3] The entire value of state assets which can be potentially sold amounts to 150–200 billion PLN under current conditions.

3. the acceleration of the growth rate of investment in the corporate sector. Since 2009, expenditures on investment in Poland have been declining. It is a slight decline, by 1–2 percentage points per year. It should be taken into consideration though that the situation differs in terms of investment funded by the government, local authorities and business entities. The investments made by government and local authorities recorded a positive trend until the mid of 2012. Since then, there has been a decline in investment, which is related to the depletion of financial resources to fund public investment (e.g.: motorways) received from the EU. Another influx of EU funds to support public investment will occur in a few years' time. At the same time, investments made by the business sector have remained at a low level and been declining in the last few years. This is despite the fact that the business sector has significant financial resources that could potentially be used to increase fixed assets[4]. Business entities, however, prefer to make financial (capital) investments perceived as safer (less risky) under the current conditions,

4. the rate of growth in household consumption. Until 2012, consumer spending grew significantly, which contributed to maintaining a relatively high rate of GDP growth. 2012 saw a slowdown in the trend and consumption increased by only 0.5%. At the end of the year, it began to decline, although in previous years, it had increased by between ten and twenty percentage points percent (purchases before Christmas).

It seems that the reasons for the decline in consumption can be found primarily in the decline in public confidence in Poland's economic policy and concerns that the economic situation may deteriorate rapidly, also due to difficulties occurring in the EU. High effectiveness of the government propaganda informing the public (including the business sector) that the situation of the Polish economy is and will be relatively good was clearly visible until 2012 (the main arguments were: the GDP growth and sound public finances). The government managed to convince some entrepreneurs not to limit their investment and employment since the economy was not collapsing and would quickly return onto the path of high growth. A large number of households continued to increase their consumption driven by the prevailing belief that there was no real threat of job loss and reduced income.

The main reasons for the deterioration of public mood in the case of entrepreneurs:

– a growing belief that the restoration of high growth will occur much later than thought until recently (mainly due to developments in the Euro zone),

[4] After a decline in revenue in the corporate sector in 2008 by almost 30% (compared to 2007), already in 2010, Polish companies achieved the best results in the history.

– insufficient government support in facilitating access to relatively cheap credit (continuously high interest rates, difficult to meet criteria for awarding bank loans, a small scope of government loan guarantees),

– the lack of a long-term, consistently pursued economic policy which would provide the basis for investment decisions (e.g.: frequently changing priorities, unstable tax system).

In the case of consumers the main reasons for the deterioration of public mood are as follows:

– a rising unemployment rate and increasing redundancy announcements,

– declining nominal wage growth leading to stagnation in real wages,

– decreasing non-wage income (limiting privileges of certain social groups, more difficult access to benefits),

– announcements of a freeze on wages in the public sector and reducing indexation of disability benefits and pensions,

– a wide information campaign informing the public that pensions will be increasingly lower in the future,

– tightening of criteria for granting consumer loans,

– increasing employment on the basis of the so-called "junk contracts" (for a short period, with the salary which is often less than the current minimum wage). Currently approx. 26% of all workers are employed on such contracts.

The author of the paper believe that the government does not have much of a possibility to improve this public mood in the short term. In particular, if the rate of GDP growth were to decrease and result in massive layoffs[5]. The government will probably not withdraw from most of the decisions to rationalise and reduce costs. There is also no indication that there exists a prepared strategy of economic recovery attractive for the public. Positive adjustments may affect primarily the credit policy, both for investors and consumers alike.

Poland is still very careful in using its fiscal and monetary policy to stimulate its economy by increasing demand.

In most countries, possibilities of stimulating demand by lowering interest rates have been exhausted since these are generally at a low level of 0.25–1% (USA, Japan, the European Central Bank in the Euro Zone). In Poland, the basic interest rate of the central bank is relatively high, even in recent years. In 2008, it amounted to 6%, in the years 2009–2010 it was reduced to 3.5%, but in mid – 2012 it reached the level of 4.75%. In the last three months, it has been reduced frequently to reach 2,5% due to the fall in the rate of GDP growth and lower inflation.

[5] Such a situation would not necessarily lead to a drastic increase in unemployment since Poland's accession to the EU in 2004 provided a sort of safety valve on the labor market in the form of job opportunities abroad (often below employees' qualifications). Currently there are about 1.5 million Poles working in the EU countries.

The standing of the Polish economy has not created strong pressure to increase the supply of money, since:

– in the first phase of the crisis consumer demand was stimulated by the cash flow resulting from previous decisions to cut taxes and disability pension contributions,

– there was no need for large financial aid for the financial sector as its activities had not been severely disrupted (to a large extent, it was a positive effect of Polish legal and institutional regulations in force in this sector),

– there were no spectacular bankruptcies (or the threat of bankruptcy) of large companies that are important to the economy. There was, therefore, no need for financial aid from the state.

At the same time, growing financial needs of the state were realised without major difficulties due to a relatively high degree of confidence in the stability of the Polish economy. The expression of that confidence was high demand for government bonds reported by foreign and Polish investors that did not want to engage their funds in investments increasing fixed assets. This allowed to sell bonds at a relatively low rate of interest. For instance, the yield on ten-year bonds in the secondary market fell from around 5.7% at the end of 2011 to 3.9% in early 2013.

Taking into account the above presented considerations, it seems that Poland's economy has avoided violent shocks in the current crisis. The Polish economy is characterised by considerable stability and predictability, yet the falling rate of GDP growth starts to raise increasing anxiety. This favourable situation was achieved under the conditions in which the economic policy of the state was aimed at limiting rather than actively stimulating demand. Perhaps the falling rate of GDP growth is a signal indicating that Poland's success is a short-term one and negative effects of inadequately stimulated demand, particularly investment demand, selectively targeted for specific purposes, are increasingly visible.

However, in many countries (including the USA and the "old" EU), the trend for active use of fiscal and monetary policies as instruments creating in times of crisis demand for the implementation of selective objectives set by the government is clearly seen (LARCH, TURRINI 2009). While at the initial stage, the objective was to quickly boost consumer demand (starting with Bush's decision to allocate nearly $ 180 billion for bonds for the poorer part of the population), in the second phase the focus was on saving failing business entities, and not just financial ones (e.g.: General Motors). The third phase is primarily concerned with creating better opportunities for social and technical infrastructure during the crisis, as well as modern sectors of the economy based on high technology. It seems that the U.S. administration has focused more on infrastructure (social security reform, education funding, health care,

development of the Internet) and the EU concentrated on the development of technology (reduction of CO_2 emissions, renewable energy, nanotechnology).

Incurring expenditure on the implementation of the third stage, a long period of return and related high risk should be taken into account. Success, however, will allow to achieve a profitable competitive advantage in the global market in the future. Measures characteristic of the third stage were barely visible in Poland in the period of the crisis, the only examples being investment programmes financed by the EU funds. They focused mainly on technical infrastructure, particularly on spending on roads and motorways. These programmes, however, are gradually drawing to a close as the money from the EU is running out. Insufficient funds are allocated (and this has been a long-term practice) on research and development. It constitutes only 0.57 – 0.74% of GDP, which places Poland at the bottom of the EU ranking. The share of high technology products in production and export is similar. Investment plans for the coming years regarding research and development of modern technology are still treated marginally. This approach is going to consolidate the Polish position as a manufacturer and exporter of low-processed and low-tech goods, which must be seen as the most negative effect of the economic policy implemented in Poland during the current crisis.

Conclusions

1. Poland's economy during the period of the crisis has remained relatively stable without the necessity of receiving extraordinary outside aid.
2. This is due to a variety of reasons:
– advantages of Poland;s backwardness,
– influx of EU funds (Poland is the biggest beneficiary of the EU budget),
– the effects of decisions concerning changes in the tax and social security systems taken for political reasons (prior to the crisis),
– withdrawal from a capital-funded pension system,
– a cautious monetary and anti-inflation policy consistently pursued for many years.
3. Measures aimed at reducing spending prevail in the economic policy. Undertakings that stimulate consumption and investment demand are avoided.
4. The paper has raised the hypothesis that the current, relatively favourable situation of the Polish economy is more the result of its unique determinants than the economic policy pursued during the crisis differing quite significantly from the policies prevailing in the United States and the countries of the "old" EU.

5. It seems that the answer to this problem is not obvious and the next few years will probably show which option of the economic policy pursued during the crisis (Poland's economic policy or the policy of the "old" EU and the USA) is more effective.

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THE REGULARITIES OF THE REGIONAL ASYMMETRY OF SMALL AND MEDIUM ENTERPRISE DEVELOPMENT

***Vasiliy S. Bilchak*[1], *Natalia G. Duplenko*[2]**

[1] Department of Microeconomic
University of Warmia and Mazury in Olsztyn
[2] Department of Management and Marketing
Immanuel Kant Baltic Federal University in Kaliningrad

K e y w o r d s: small enterprise, medium enterprise, asymmetry of economic development.

A b s t r a c t

The aim of the conducted study was to identify the regularities of the regional asymmetry of development of small and medium enterprise. The subject of the study is the influence of the area factors on the activities of small and medium-sized businesses. The authors are proposing their own original method of assessment of the regional asymmetry of small and medium enterprise development.

The study enabled the authors to identify the following regularities. Firstly, the level of the regional asymmetry of small and medium enterprise development does not depend on the size of the area occupied by the region. Secondly, the level of the asymmetry is inversely proportional to the level of the economic development of the region.

Besides that, the case study of the North-West federal district of the Russian Federation revealed a number of features of the regional asymmetry of small and medium enterprise development in the countries having significant territorial expanse.

PRAWIDŁOWOŚĆ ASYMETRII REGIONALNEJ ROZWOJU MAŁEJ I ŚREDNIEJ PRZEDSIĘBIORCZOŚCI

***Wasyl S. Bilczak*[1], *Natalia G. Duplenko*[2]**

[1] Katedra Mikroekonomii
Uniwersytet Warmińsko-Mazurski w Olsztynie
[2] Katedra Zarządzania i Marketingu
Bałtycki Uniwersytet Federalny im. Immanuela Kanta w Kaliningradzie

S ł o w a k l u c z o w e: mała przedsiębiorczość, średnia przedsiębiorczość, asymetria rozwoju ekonomicznego.

Abstrakt

Cel przeprowadzonego badania to ocena wpływu powierzchni regionu i poziomu jego rozwoju ekonomicznego na stopień asymetrii regionalnej rozwoju małej i średniej przedsiębiorczości. Przedmiotem badania jest wpływ czynników terytorialnych na aktywność małych i średnich przedsiębiorstw. Zaproponowano autorską metodę oceny asymetrii regionalnej rozwoju małej i średniej przedsiębiorczości.

Badanie pozwoliło ujawnić pewne prawidłowości. Po pierwsze, poziom asymetrii regionalnej rozwoju małych i średnich przedsiębiorstw nie zależy od rozmiaru powierzchni terytorium, którą zajmuje region. Po drugie, poziom asymetrii jest odwrotnie proporcjonalny do poziomu rozwoju ekonomicznego regionu.

Na przykładzie Północno-Zachodniego Okręgu Federalnego Federacji Rosyjskiej ujawniono wiele właściwości asymetrii regionalnej rozwoju małej i średniej przedsiębiorczości w krajach mających znaczną powierzchnię terytorialną.

Introduction

Comparative studies of the level of the socio-economic development of regions often reveal their considerable differentiation in major parameters. A region in the article stands for a large territory administration unit of a state (a region or a kray in the Russian Federation, a voivodship in Poland).

Needless to say, the socio-economic differentiation as such is inevitable, since any area objectively features the irregularity of economic potential determined by geographic, climatic, historical and many other factors. Moreover, many scholars believe that "spatial imbalance" can have a stimulating impact on the economic development of areas. However, this is true only to the extent of a certain level of the socio-economic asymmetry. When it increases, the differences of the level and the quality of living of the population deepen, accompanied by a decline of rural areas and small towns. Without activities aimed at lowering the asymmetry it leads to the lagging municipal entities hampering the development of the whole region. On the other hand, the activities aimed at promoting the development of the lagging municipal entities result in an increase in their investment attractiveness, lowering the social strain that contributes to the region's development on the whole.

Thus, of great scientific and applied significance is the analysis of the regional asymmetry of the socio-economic development, one of the constituents of which is the analysis of the asymmetry in the level of development of small and medium enterprise in the region.

By small and medium enterprise here we mean a whole complex of small and medium-sized enterprises – both legal entities, and individual enterprises, which are not legal entities, whose average annual number of staff is not higher than 100 employees for small enterprises and ranges from 101 to 250 employees for medium-sized businesses.

The aim of the study conducted was to assess the impact of the area size of the region and the level of its economic development on the extent of the regional asymmetry of small and medium enterprise development.

The level of the topic scientific development

The significance of the issue of objective assessment and elaboration of techniques of lowering the excessive polarization of regional development determined quite a steady interest in its solving on the part of the economic science.

Among foreign researchers, it is necessary to mention S. Kalemli-Ozcan, B.E. Srrensen, O. Yosha who studied the issues of asymmetry of the regional development in the countries of the Organization of Economic Cooperation and Development (KALEMLI-OZCAN et al. 2001, pp. 107–137); Y.-H. Kim who made a contribution to the research of asymmetry of the regional development of the North-East Asia countries (KIM 2005, pp. 673–687); C. Economidou and C. Kool who studied the asymmetry of the economic development in the European Union countries (ECONOMIDOU, KOOL 2009, pp. 778–787); K. Behrens that researched the impact of interregional markets on the asymmetry of the economic development of regions (BEHRENS 2005, pp. 471–492).

However, none of the scholars did research into the asymmetry of development of small and medium enterprise of regions, its connection with the general asymmetry of the economic development at the regional level.

In Russia, the issue of assessment of the regional asymmetry of the socio-economic development was studied even more actively, that is determined by its greater significance and relevance in the conditions of a huge territorial expanse of the country, a complex administrative and territorial structure and a considerable differentiation of regions by all the vital criteria – from landscape and climate to scientific and educational potential.

In the past decade, almost two dozens of Ph.D. and doctoral theses have been dedicated to the issues of regional asymmetry. For instance, the methodology of assessment of regional asymmetry was elaborated by M. V. Galdin, O. L. Taran and M. M. Churakova; the matters of regulating regional asymmetry were studied by M. Yu. Belikov, M. V. Boiko, S. S. Zheleznyakov, L. N. Ivanova, M. Yu. Neucheva and S. P. Subbotin; the issues of evening the asymmetry at the sub-regional level were looked into by D. N. Vorobiev, A. M. Pakhomov, O. L. Starodub, P. A. Popov and others.

It should be noted, that some of the aspects of the asymmetry of the socio-economic development were quite thoroughly researched, while some of them were not touched upon by the majority of researchers. Among the latter

is the issue of the assessment of the regional asymmetry of small and medium enterprise development, which has not been investigated until the present in terms of methodology.

Meanwhile, the modern model of market economy suggests a high level of activity of small and medium-sized enterprises since they possess a huge potential, whose implementation is one of the most important conditions of the socio-economic development of the country in modern conditions. They provide employment and self-employment for the citizens, promote an involvement of additional labour resources in the social reproduction, attract private investment and personal savings to the real economy sector, are quite active in penetrating to the innovation processes, playing the role of pioneers in the scientific-technical sphere, enhance competition and perform many other most useful functions. The significance of small and medium enterprise is confirmed by the fact that in the economically developed countries their share in GDP ranges from 60 to 70%, the share in export of goods and services is from 75 to 80%, small enterprises in the USA and Western Europe are grantors of licenses of approximately half of all the innovations in the world market.

The importance of conducting a study into small enterprise at the regional level is determined by the fact that a region, being an area within which local self-government is performed along with public administration for solving issues of local significance, is most proximate to small enterprises; it is here that activities aimed at development of small enterprise, initiated at a higher level of administration, are realized.

The combination of significance and relevance of solving the problem of optimization of the level of asymmetry of small and medium enterprise development at the regional level, on the one hand, and acute scarcity of research into the issue, on the other hand, determined the choice of the topic of the present study.

Its academic novelty lies in the fact that the methodology of assessment of the regional asymmetry is for the first time applied to the investigation of the level of small and medium enterprise development that allowed to identify a number of regularities of asymmetry of its development at the regional level.

Description of the methodology of studies

In order to reveal the regularities of the regional asymmetry of small and medium enterprise development, an original authors' method of its assessment was elaborated, including, first of all, the assessment of the level of small and medium enterprise development in the region and, secondly, the calculation of the asymmetry itself.

It is proposed to apply 11 indices for the assessment of the level of small and medium enterprise development at the regional level (Table 1).

Table 1

Indices for the assessment of the level of small and medium enterprise development

Indices	Measurement unit	Type of indices
Number of small and medium-sized enterprises	units	absolute measure
Number of employees of small and medium-sized enterprises	people	
Revenues from sales of goods (works, services) of small and medium-sized enterprises	thousand EUR	
Value of nonborrowed fixed-capital assets of small and medium-sized enterprises	thousand EUR	
Investment in fixed capital of small and medium-sized enterprises	thousand EUR	
Number of small and medium-sized enterprises per 1000 people of permanent population	units/1000 people	relative indices
Share of those employed at small and medium-sized enterprises in the total permanent population	%	
Average amount of investment in fixed capital of small and medium-sized enterprises	thousand EUR	average indices
Average annual labor efficiency at small and medium--sized enterprises	thousand EUR/people	
Average capital/labour ratio of employees at small and medium-sized enterprises	thousand EUR/people	
Average return on assets of small and medium--sized enterprises	EUR/EUR	

Source: own work based on studies.

The given indices are calculated for each municipal entity making up a region.

Then, the crest value is selected among the values of each index for a municipal entity of a region and is worked out to identity. The values of the given index for the rest of municipal entities are proportionally reduced. Eventually, the assessment of municipal entities by all the indices is reconciled, and by calculating the arithmetical average, the average value of eleven indices for each municipal entity is determined. This very average value characterizes the level of development of small and medium enterprise in the given municipal entity of the region.

Subsequently, the rates of the asymmetry are calculated; as such we propose to use the range of fluctuation and the asymmetry coefficient. In order to determine the range of fluctuation, crest and lowest values are chosen from the values of the level of small and medium enterprise development of

municipal entities of a particular region. The range of fluctuation is their difference. The asymmetry coefficient is calculated as a mean deviation – a mean modulus of value deviation of the rates of the level of small and medium enterprise development in a municipal entity from their arithmetical average.

For the assessment of the asymmetry degree, we proposed the following scale: with the value of the asymmetry coefficient from 0 to 0.04 – weak asymmetry; from 0.04 to 0.08 – average asymmetry; more than 0.08 – considerable asymmetry.

Interpretation of the results

The elaborated method of assessment of the regional asymmetry of small and medium enterprise development was put to an evaluation test in the case study of ten regions of the North-West federal district of the Russian Federation (NWFD). The rates were calculated for 211 municipal districts and urban districts being part of those regions.

Table 2

The results of assessment of the regional asymmetry of small and medium enterprise development in the NWFD

Regions	Polar points of the level of small and medium enterprise development				Fluctuation	Asymmetry coefficient
	R_{min}	municipal entity	R_{min}	municipal entity		
Republic of Karelia	0.200	Muezersky District	0.807	The city of Petrozavodsk	0.607	0.069
Republic of Komi	0.171	Knyazhpogostsky District	0.806	The city of Syktyvkar	0.635	0.111
Arkhangelsk Region	0.113	Krasnoborsky District	0.648	The city of Arkhangelsk	0.535	0.074
Vologda Region	0.175	Vozhegodsky District	0.822	The city of Vologda	0.647	0.081
Kaliningrad Region	0.147	Ozersky District	0.820	The city of Kaliningrad	0.673	0.084
Leningrad Region	0.286	Boksitogorsky District	0.715	Gatchina district	0.429	0.106
Murmansk Region	0.227	Kovdorsky District	0.898	The city of Murmansk	0.671	0.114
Novgorod Region	0.183	Demyansky District	0.870	The city of Veliky Novgorod	0.687	0.088
Pskov Region	0.155	Usvyatsky District	0.864	The city of Pskov	0.709	0.082
St. Petersburg	0.177	Kronstadt District	0.882	Central district	0.705	0.161

Source: calculated by the author based on the data of Rosstat.

In addition to that, one can see from the Table data that the degree of the asymmetry in the NWFD regions differs a lot. Two regions – the Republic of Karelia and Arkhangelsk Region – feature an average level of the asymmetry, while all the others show high level. The asymmetry coefficient ranges from 0.069 in the Republic of Karelia to 0.161 in St. Petersburg. Thus, the asymmetry level is more than twofold different.

In order to test the hypothesis about the presence in each region of a "growth pole", in which the level of development of small and medium enterprise is considerably higher than on average in the region, the relevant rates in the municipal entities were compared to the highest rates and on average for each of the regions of the NWFD. The results of comparison are presented in Figure 1.

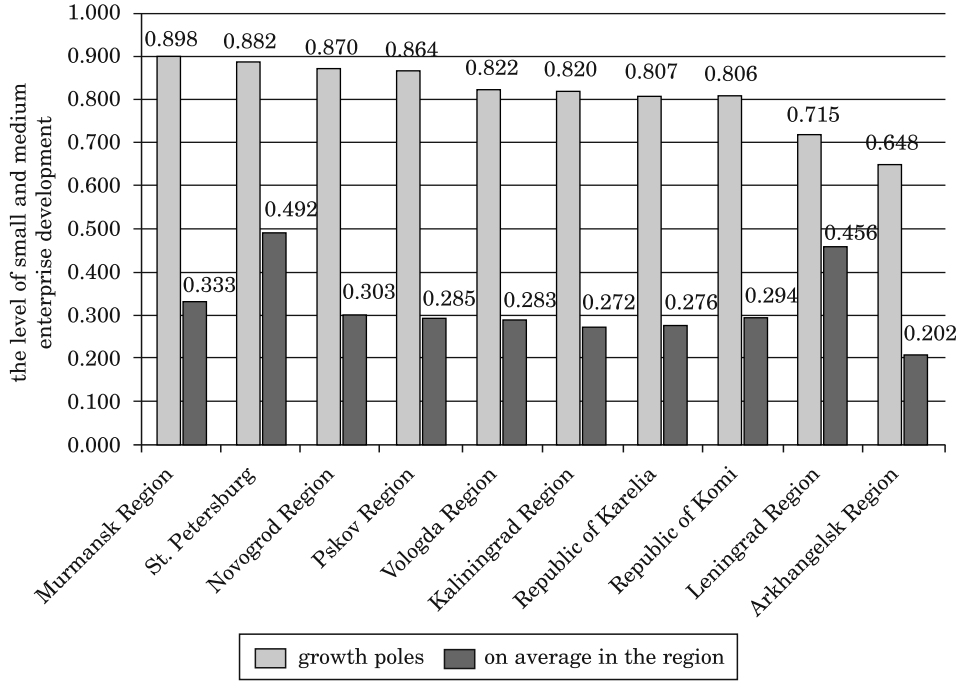

Fig. 1. The comparison of the level of small and medium enterprise development in the "growth poles" and on average in the NWFD regions without regard to the "growth poles"
Source: calculated by the author based on the data of Rosstat.

As is seen from the Figure, each region has its own "growth pole", in which the level of development of small and medium-sized enterprises is 1.6–3.2 times higher than the average in the corresponding region.

A relatively low range of fluctuation in the Leningrad Region and St. Petersburg can be explained, in our view, by the fact that their administrative-

territorial division does not match the "macroeconomic reality" which lies in the existence of a single economic region, including both St. Petersburg and the Leningrad Region. St. Petersburg, in this case, plays the role of the same pole of the region as Petrozavodsk in Karelia, Syktyvkar in Komi, Arkhangelsk in Arkhangelsk region etc. The rest of the region's territory (in this case – separated as a distinct administrative-territorial unit of Leningrad region) is characterized by a lower differentiation of the rates of the level of small and medium enterprise development (Figure 2).

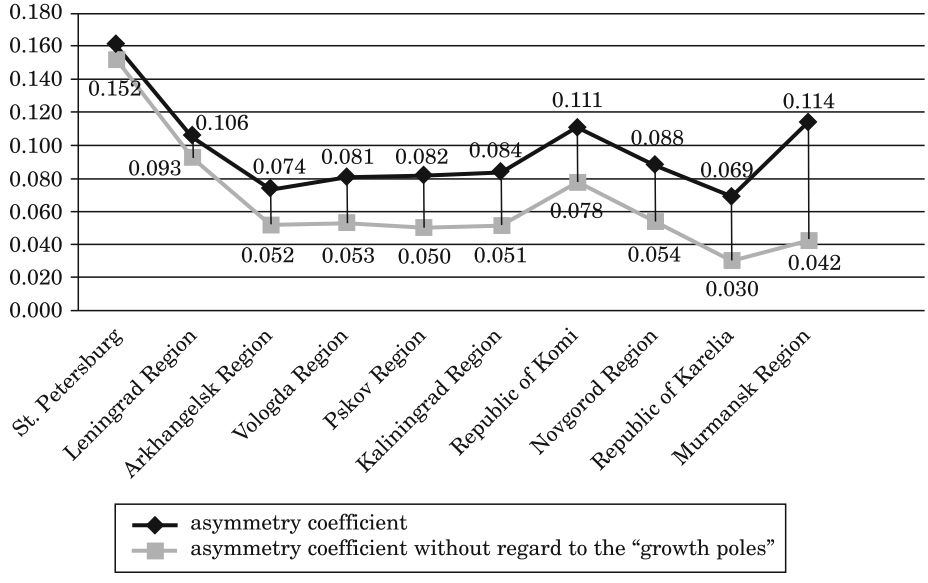

Fig. 2. The correlation of the asymmetry coefficient in the NWFD regions with and without regard to the "growth poles"
Source: calculated by the author based on the data of Rosstat.

A higher minimal value of the rate of the level of small enterprise development in the Leningrad region as compared to the other regions of the NWFD in this case can be explained, in our view, by a considerable positive impact of the proximity of the metropolitan city – St. Petersburg (DUPLENKO 2011, p. 95).

In order to determine the interconnection between the region's area and the level of the regional asymmetry of small and medium enterprise development, a linear correlation coefficient was calculated. With that, in order to attain the uniformity of the sample, St. Petersburg, whose area is 134 times smaller than the average area of the rest of the regions, was excluded from the calculation. Pearson correlation coefficient was -0.06, which testifies to the absence of a connection between the studied factors.

In order to determine the dependence between the level of the regional asymmetry of small and medium enterprise development and the level of the economic development of the region, Pearson correlation coefficient was also calculated. As a rate of the level of economic development of the region, gross regional product (GRP) per capita was used. The correlation coefficient totalled 0.67, which gives evidence of the presence of an average positive link between the given factors (Figure 3).

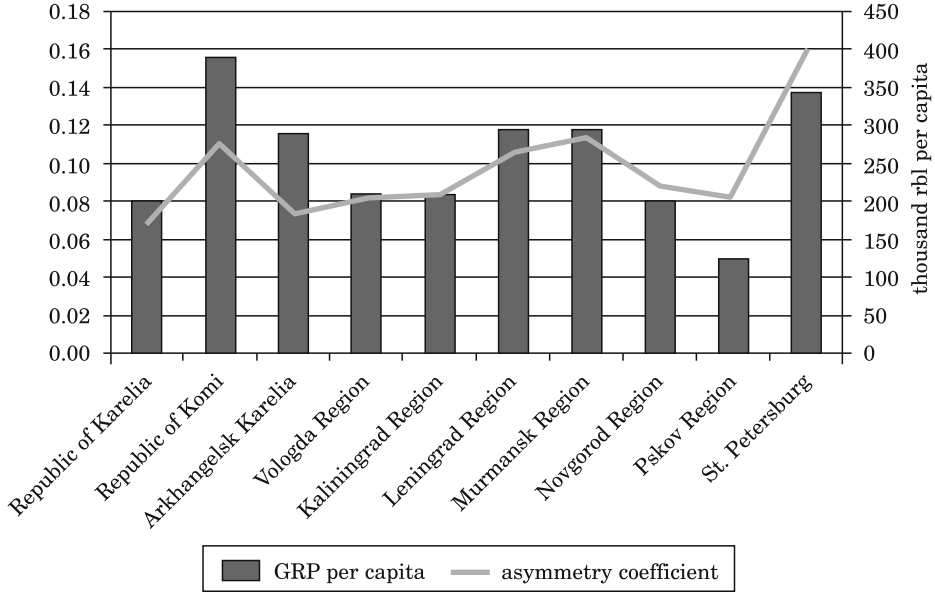

Fig. 3. The dependence between the level of the economic development and the level of subregional asymmetry of small and medium enterprise development in the NWFD regions
Source: calculated by the author based on the data of Rosstat.

Conclusion

The research conducted makes it possible to draw the following conclusions.

Firstly, the level of the regional a symmetry of small and medium enterprise development does not depend on the size of the territory occupied by the region.

Secondly, the regional asymmetry of small and medium enterprise is influenced by the level of the economic development in the region – the higher the level is, the lower the asymmetry is.

In our opinion, the asymmetry is at the same time both the reason and the effect of the irregularity of the socio-economic development of the region. It is

the reason since small and medium-sized enterprises are an important source of replenishing the local budget, they provide the population employment, saturate the local market with goods and services, perform a lot of other most important functions. On the other hand, it is the effect because the "successful" in economic terms municipal entities of the region can afford to render financial, property, information, staff and other kinds of support to the small and medium-sized enterprises acting in their territory, thus even more increasing their breakaway from the other municipal entities.

Drawing on the example of the North-West federal district of the Russian Federation, a number of features of the regional asymmetry of small and medium enterprise development were identified in the countries having a considerable territorial expanse.

They are characterized by a notable regional asymmetry, and the degree of the asymmetry differs depending on the region. In the North-West federal district of the Russian Federation with the average value of the asymmetry coefficient of 0.097, its values in individual regions range from 0.069 in the Republic of Karelia to 0.161 in St. Petersburg.

Besides that, in each region there is a "growth pole" (as a rule, it is an administrative centre), in which the activity of small and medium-sized enterprises is 1.6–3.2 times higher than that on average in the region.

A high degree of the asymmetry of small and medium enterprise development at the regional level can be considered, in our view, as negative and requires activities aimed at its evening out by means of promoting entrepreneurial activities in the "lagging" municipal entities of the region.

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PRODUCT COSTING AND PRICING METHODS APPLIED BY ENTERPRISES WITHIN THE WARMIŃSKO-MAZURSKIE VOIVODSHIP

Joanna Dynowska, Henryk Lelusz

Department of Accounting
University of Warmia and Mazury in Olsztyn

K e y w o r d s: methods of cost calculation, simple division based costing, equivalence number based costing, product pricing, costs.

A b s t r a c t

Cost is one of the main criteria of the assessment activities of the company, hence the issue of control, ways to reduce and manage costs occupies an important place in the management of business entities and constitutes the focus of managers.

The main aim of this paper was to determine the methods of costing used by the surveyed enterprises in the region of Warmia and Mazury. The paper also examines the methods of product pricing.

The research, which is based on responses from 169 companies with at least 50 employees, confirms that the application of specific costing methods depends on the type of production, the volume of production, and the organisation of the business processes. The most widely used methods were simple division based costing (23.7% of surveyed companies) and equivalence number based costing (11.2%). The research also revealed that over 14% of the surveyed companies did not use any calculation of costs, whereas pricing decisions were usually (72.8%) based on a cost formula.

METODY KALKULACJI KOSZTÓW I CEN WYROBÓW STOSOWANE PRZEZ PRZEDSIĘBIORSTWA Z WOJEWÓDZTWA WARMIŃSKO-MAZURSKIEGO

Joanna Dynowska, Henryk Lelusz

Katedra Rachunkowości
Uniwersytet Warmińsko-Mazurski w Olsztynie

Słowa kluczowe: metody kalkulacji kosztów, kalkulacja podziałowa prosta, kalkulacja współczynnikowa, formuły ustalania cen, koszty.

Abstrakt

Koszty stanowią jeden z głównych mierników oceny działalności przedsiębiorstwa, dlatego problematyka kontroli kosztów, sposobów ich obniżania i zarządzania nimi zajmuje ważne miejsce w zarządzaniu jednostkami gospodarczymi i stanowi centrum zainteresowania menedżerów.

Głównym celem artykułu było zbadanie, które metody kalkulacji kosztów jednostkowych wytwarzanych produktów są najczęściej stosowane przez przedsiębiorstwa województwa warmińsko-mazurskiego oraz jakie formuły wykorzystują one do podjęcia decyzji cenowej. Badaniem objęto 169 jednostek, zatrudniających ponad 50 pracowników.

Wyniki przeprowadzonych badań potwierdzają, że zastosowanie określonej metody kalkulacji zależy od rodzaju i wielkości produkcji oraz organizacji procesów gospodarczych. Najszersze zastosowanie znalazły kalkulacja podziałowa prosta wykorzystywana przez 23,7% badanych przedsiębiorstw oraz kalkulacja podziałowa ze współczynnikami stosowana przez 11,2% ankietowanych przedsiębiorstw. Wśród badanych firm ponad 14% ankietowanych firm nie stosowało żadnych kalkulacji kosztów. Decyzje cenowe natomiast najczęściej (72,8%) opierały się na formule kosztowej.

Introduction

Currently, businesses operate under strong pressure from competition. Market conditions are characterised by aggressive competitors and increasingly demanding clients, leading companies to question their competitive strategies and highlighting the importance of effective information and costs management systems.

In order to become more efficient and to improve internal and external communications, there is a demand for accurate financial information on internal processes and the costs associated with them. According to Réka, the quality of decisions in productivity management and measurement is closely correlated with the quality of management, costing, and productivity measurement systems (RÉKA et al. 2008, p. 1533).

Over the past two decades, the productivity of results measurement systems has evolved. Within the frameworks of these systems, three major trends have been identified:

– productivity measurement using both financial and non-financial productivity indicators has become commonly accepted;

– the relationship between the strategic planning process and measurement of the results has been strengthened at the enterprise level;

– enterprise results are no longer perceived solely from an economic perspective, they are also now measured from a social and environmental perspective (TAICU 2011, p. 293).

Enterprise results measurement is not possible without also accurately determining the associated costs of operations. In an environment with increasing requirements from managers regarding cost information, new and complex costing systems and cost computation methods represent important

innovations in an organisation. They not only allow computation of costs, but also an analysis of these costs and measurement of the results.

The main goal of costing is to determine the unit costs of the products manufactured or services provided, including a breakdown of these unit costs. Moreover, the aim of the cost computation(s) is to provide data to determine cost levels, to control costs (and pricing), as well as to generate information to identify the cheapest sources of financing and the most profitable methods of using such resources. The choice of computation may also drive the selection of an accounting policy – one that best supports the calculation of, and reflects the estimates of, per-unit product costs. Therefore, the selection of computation procedure(s) is consequential.

Computerised processing, which has increased the scope and breadth of accounting data and has unleashed the potential of software to process information, has led to a decline in processing costs, further increasing the value of costing.

Methodological assumptions of the study

Given the role that costing plays in an enterprise, a main aim of the study was to determine which manufactured unit cost computation methods for products and services are applied the most frequently at enterprises within the Warmińsko-Mazurskie voivodship. Given that an appropriate unit cost determination is also of key importance in determination of the optimal product price, the formulas that are employed by enterprises to make pricing decisions were also investigated.

The survey encompassed 169 entities that employed over 50 people, that were included on the list of 1,286 business entities prepared by the Voivodship Statistical Office in Olsztyn, that satisfied the criterion of employment, and that consented to complete the survey questionnaire[1]. Descriptive statistics elements were then used to process the data obtained from the questionnaire-based survey.

Among the enterprises surveyed, limited liability companies (LLCs – 90 enterprises) and joint stock companies (31 enterprises) were most prevalent, followed by cooperatives (15 entities). The surveyed group also included other commercial companies (partnerships, registered partnerships and professional partnerships), individuals, state-owned enterprises, and state-owned organisational units.

[1] Non-random model for sample choice was applied, the so-called sample of convenience (Frankfort-Nachmias, Nachmias 2001).

The majority of surveyed entities employed 50–100 people (converted to full time job equivalents). Almost 25% of enterprises employed 101–250 people. Enterprises employing over 250 people represented almost 20% of the surveyed sample.

Private companies funded exclusively by domestic capital represented the largest group in the sample (67.5%). Conversely, enterprises wholly owned by foreign capital represented the smallest group (5.3%).

The surveyed enterprises belonged to various segments and sectors of the national economy. Among the 169 surveyed enterprises, 32 were manufacturing companies, 31 were service companies, and 15 were trade companies. The other entities conducted mixed operations.

The enterprises were also diversified with regard to their financial results. Enterprises with profitability (ROE) within the range of 0%–5% represented the most populous group. Only three of the surveyed companies achieved profitability exceeding 20%, while almost 25% of them were operating under a deficit. Enterprises with revenues exceeding EUR 5 million formed the most populous group (31.9%), followed by enterprises with revenues within the range of EUR 0.8–2.5 million (30.8%). Enterprises with assets less than or equal to EUR 1.5 million were most prevalent (40.8%), followed by enterprises with assets exceeding EUR 5 million (21.9%).

Costing and pricing methods

Many classifications of calculation methods are found in the literature. The most prevalent methods are division based costing and cumulative costing; however, each of these methods possesses a number of variants. Assuming accrual of costs as the criterion, a single-step computation (where the unit cost of product manufacturing is determined using a single computation encompassing all components of the production cost) and a multiple-step computation (when clearly separated phases occur in the production process) are treated as separate techniques in unit cost computations (NOWAK 1996, p. 56).

Regarding the timing of the computation, the initial/ex ante computation (prospective-prepared before producing the product or providing the service) and the result/ex post computation (retrospective-made after completion of the production process) are identified (*Leksykon Rachunkowości* 1996, p. 72). Regarding the scope of costs considered to determine a unit cost, full costing (encompassing all the costs incurred, including indirect costs) and partial costing (encompassing only the variable costs related directly or indirectly to the computation units) are identified (GABRUSEWICZ et al. 2000, p. 134).

Division based costing is used to determine a unit cost for products that are mass-produced or products that are manufactured using a modular process with simple production techniques and technologies. It is calculated by dividing the sum of total costs incurred during a given period (both direct and indirect) by the number of units produced. The major variations of division based costing include:

– simple division based costing applied in enterprises that manufacture uniform or modular products, with numerous similar products, requiring similar raw materials and similar processes (standard components),

– equivalence number based costing,

– division based costing with deductions in the case of ancillary products (one main product with side products) (NOWAK 1996, p. 53, *Leksykon Rachunkowości* 1996, p. 73).

In enterprises that manufacture a wide range of products that are diversified with respect to volume of production, design, and manufacturing process (SKRZYWAN, FEDAK 1984, p. 204, GABRUSEWICZ et al. 2000, p. 156), i.e., in the case of unique products or products with long development, production, or manufacturing cycles, *job costing* procedures are typically applied.

Job costing is characterised by separate costing for each cost object represented by an individual job order, i.e., cost per product or project. In this computation, the direct costs are allocated directly to the appropriate cost object based on the source of the cost, while the indirect costs are added to the direct costs based on a prorated or formulated estimate.

From the perspective of the organisation of the production process and the cost objects to which direct costs are allocated, job costing is divided into: (*Rachunek kosztów*... 2003, p. 198)

– *contract job costing* (sometimes referred to as surcharge costing) (*Podstawy rachunkowości zarządczej*... 1999, p. 39), which is applied when production is for custom orders, i.e., in the case of unique units and narrow product mixes,

– *batch costing,* which is used when similar products are produced in batches (mass-produced) according to weekly or monthly production plans (batch frequency).

Another method of costing is *multistage costing,* which is applied in cases when separate phases exist within the production process during which materials and semi-finished products are gradually transformed into the finished product. These distinct production stages permit grouping of costs and accounting for each stage. Two basic methods of multistage costing exist:

– process costing, which is applied in the case of mass-production, and

– staged costing, which is applied when the production process of a given product consists of a number of technical process stages during which defined semi-finished products are produced (NOWAK 1996, s. 56).

Determining an appropriate manufactured product unit cost is also critical for determining the optimum product price, as enterprises typically use so-called cost-based methods' for making pricing decisions. In this case, the cost base that is determined using full cost accounting or variable cost accounting is the starting point for determination of the product price.

The *cost plus pricing formula* is an example of such a method. Prices are established by adding a defined (unit) profit amount to the product unit cost (*Rachunek kosztów*... 2003, p. 182, DOBIJA 1997a, p. 153, DOBIJA 1997b, p. 121, GABRUSEWICZ et al. 2000, p. 319). The *cost plus profit on capital pricing formula* is another pricing method. Although it is similar in its design to the cost plus formula, it considers a wider range of economic components. In this case, prices are related not only to the production costs but also to the invested capital necessary for product production and distribution. In making pricing decisions, management attention is focused on estimation of normal production levels and sales costs related to products, as well as on guaranteeing ROE or ROI that is consistent with the long-term profitability of the enterprise. This formula, similar to the cost plus formula, does not consider external factors in the enterprise pricing policy and consequently it should not be used in enterprises operating in competitive markets. Only enterprises with no competitors offering compatible products can apply this method (*Rachunek kosztów*... 2003, p. 185).

Conversely, the *gross margin based pricing formula* dismisses fixed costs from its formula. This formula is predicated on a demand-driven market, taking into account both internal and external relationships in setting the optimum price (*Rachunek kosztów*... 2003, pp. 187–188). Consequently, this formula is commonly applied in a "seller's market", i.e., when the market accepts virtually any price offered by the producer (SOJAK 1994, p. 190).

In determining prices, one should consider the fact that relying on cost information only, with disregard of other external factors, may lead to setting an inappropriate sales price and, consequently, to lack of consumer demand (BUCZKOWSKA 2003, p. 82).

Results of the study of costing and pricing methods used in enterprises in Warmia nad Maury

The survey indicated that simple division based costing was used by 35.5% of the surveyed enterprises and was the most frequently applied method of unit cost computation for products and services (Tab. 1).

Table 1
Scope of application of unit cost computation methods for products and services in the surveyed enterprises

Item	*N*	%
Simple division based costing	60	35.5
Equivalence number based costing	40	23.7
Job costing	19	11.2
Contract costing	32	18.9
Process costing	10	5.9
Other costing methods	5	3.0
None	24	14.2
Total enterprises surveyed	169*	X

N – number of responses, * – number of respondents
Source: own work.

Equivalence number based costing was ranked second (23.7%). Process costing was the least popular method. It is worth noting that job costing, which, in a similar survey conducted in 1998 with 200 enterprises in Poland was shown to be used in more than half of the surveyed enterprises, was used relatively infrequently as of the current study (11.2%) (RADEK, SCHWARTZ 2000, p. 67).

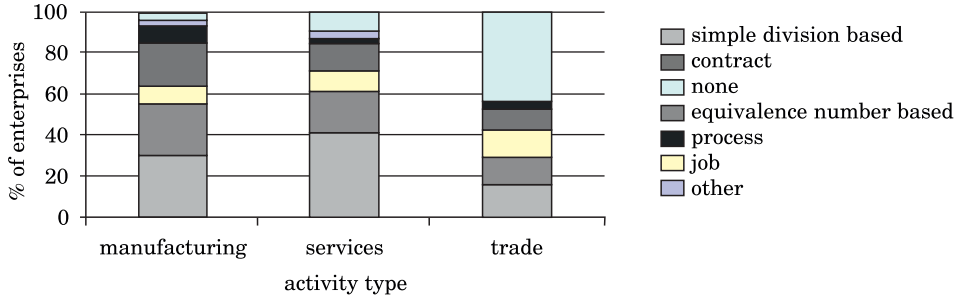

Fig. 1. Unit cost computation methods for products and services vs. the predominant type of activity in the surveyed enterprises
Source: own work.

From a predominant activity perspective (Fig. 1), the simple division based method, which is applicable mainly in the manufacturing units of departments involved in mass or long batch production facilities with a single, uncomplicated product, was most frequently used in the manufacturing enterprises. As there were only a few entities that manufactured one type of product, this

method was not highly utilized[2]. Furthermore, this cost method was often used in concert with other costing methods associated with an auxiliary production function (e.g., different cost method for warehousing, utilities, etc.) due to the complexity of the production processes. This method was also popular as a result of its simplicity and low cost of implementation. Among the enterprises surveyed, the simple division based costing was applied the most frequently by enterprises from the following industries: chemical and pharmaceutical manufacturing, textile and garment production, and water and energy supply.

The decision to use equivalence number based costing is driven by factors similar to those for simple division based costing. However, equivalence number based costing is typically applied in entities that manufacture different products on a mass scale using the same raw material and similar processes. As indicated by the survey, this method was applied most frequently in chemical, pharmaceutical, leather, food and meat processing, and service enterprises.

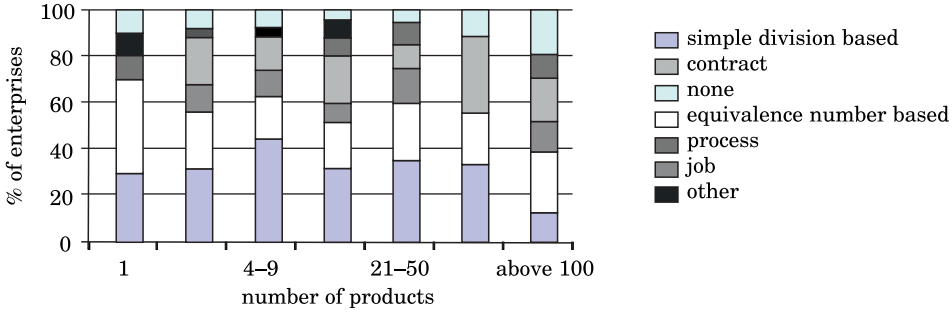

Fig. 2. Unit cost computation methods for products vs. the number of products offered by the surveyed manufacturing enterprises

Source: own work.

None of the surveyed enterprises that manufactured homogenous products used job costing. Similarly, this costing method was also not used by enterprises that offered a wide variety of products (over 50 products). Nevertheless, it was used by almost half of the manufacturing enterprises (Fig. 2).

A relatively low percentage of manufacturing enterprises applied contract costing, which implies that the majority of the surveyed companies were of the mass-production-variety, with very few of them providing specialty individualized products (or services). Another probable reason for a dearth of contract costing is the high cost associated with this method – each contract is unique

[2] Among the 200 Polish enterprises that responded to questionnaires in 1998, simple division based costing ranked second to job costing (RADEK, SCHWARTZ 2000, p. 67).

and requires the dedication of resources to link the direct costs to individual contracts. Nevertheless, this method provides more accurate product costing because the costs of an individual order (contracts) are calculated on a case-by-case basis. Contract costing was utilized mainly by construction enterprises, machine and metal industry enterprises, and paper industry and printing enterprises.

Process costing was applied in business entities in which mass or large batch production progressed through numerous consecutive production process stages. It was encountered mainly in the food and meat industry, in the textiles and garments industry, and in the chemical and pharmaceutical manufacturing industry.

Regarding other costing methods, the respondents indicated various versions of job costing, e.g., product range costing, comparative costing, and results costing. No costing was applied in more than 14.0% of the respondent enterprises, of which 66.7% were trade enterprises (which partly explains the absence of costing procedures), 20.8% were service companies, and 12.5% were manufacturing enterprises with a highly diversified range of products (more than 100). Offering a large number of products makes the application of costing procedures more difficult, but it does not justify neglecting unit cost computation for the products manufactured, as this computation is the baseline for setting the optimum prices for products and limits losses resulting from plummeting prices encountered in the free market.

The application of different costing methods for determination of unit costs for products or services is linked to the application of specific pricing formulas. The pricing formulas for products or services that were applied at the surveyed enterprises are presented in Table 2.

Table 2

Pricing formulas used in surveyed enterprises

Pricing formula	*N*	%
Cost formula	123	72.8
Comparative formula	44	26.0
Result formula	21	12.4
Other	2	1.2
None	5	3.0
Total enterprises	169*	X

N – number of responses, * – number of respondents
Source: own work.

A cost based formula was used in the vast majority of enterprises (72.8%) for pricing products and services[3]. It was applied by 75.0% of respondent manufacturing enterprises. Similarly high percentages were recorded among

service providing enterprises (73.0%) and trade enterprises (69.5%). The cost based formula was used equally extensively in enterprises offering just one product as in those offering many different products. This formula method is relatively simple and easy to apply, which allows enterprises manufacturing a diversified range of products to update their prices on a frequent and regular basis.

All of the enterprises from the leather, automotive, paper, and printing industries, as well as 80.0% of chemical and pharmaceutical industry enterprises, used a cost based pricing formula. The popularity of the cost based formula resulted from a congruency with adopted accounting principles and an ease of ability to automate the recordation of costs into financial statements (income statement). Moreover, the decision to use this method was supported by the ease of obtaining the necessary data for application of a cost based pricing formula.

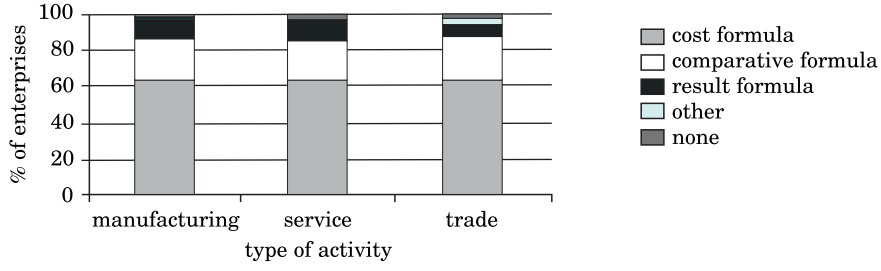

Fig. 3. Pricing formulas vs the predominant activity type in surveyed enterprises
Source: own work

One weakness of the cost based pricing formula method is that it is supply driven and ignores external relationships, e.g., competing products and their prices, in making pricing decisions. Consequently, this formula does not require an organization to rationalise its internal enterprise activities. The popularity of the cost based formula for pricing suggests that the majority of enterprises do not see the negative consequences of this particular weakness[4].

The comparative formula enjoys significant popularity (26.0%), particularly among manufacturing enterprises in which 50.0% use it, in part because of the ease of its application (Fig. 3). This formula is particularly popular among

[3] A very similar result (71.8%) was obtained from a study conducted in 1997 by the Department of Enterprise Management, Warsaw School of Economics, involving 500 of the largest Polish enterprises (MIELCZAREK 1999, p. 20). A similar result (70%) was also obtained from the survey of 60 enterprises in 1998 (SZYCHTA 2001, p. 116).

[4] Per J. Turyna and B. Pułaska-Turyna, over 30.0% of American enterprises apply the full costs method to price their products (TURYNA, PUŁASKA-TURYNA 1994, p. 90).

enterprises in the timber industry, in which 60.0% of the respondent enterprises used it.

Conversely, the results based formula application requires higher management awareness. Pricing with this formula is only possible in those enterprises that maintain fixed and variable costs accounting. Among 28 enterprises possessing variable costs accounting, 21 used this formula to price its products. The results based formula is more popular in service enterprises than in trade ones, and is more popular in "modern" industries such as chemical, pharmaceutical, paper, and printing. This method is predicated on knowledge of the relationships between turnover and costs (separation of fixed and variable costs), which translates into the (target) profit level. It is worth noting that those enterprises that priced their products according to the result based formula showed the highest profitability (exceeding 20.0%) over the study period.

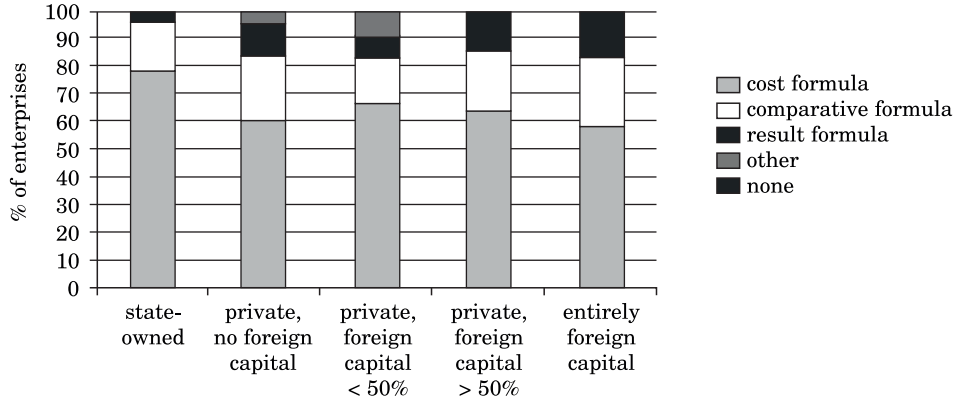

Fig. 4. Pricing formulas vs. the form of ownership of surveyed enterprises
Source: own work.

The cost-comparative formula was another pricing method used in some of the surveyed enterprises (Fig. 4). The use of no formula' was used by 3% of the surveyed enterprises. All enterprises in this no formula subgroup were private enterprises that were funded entirely by domestic capital and that suffered from low profitability, either operating under a deficit or with a return of less than 5.0%. Furthermore, almost half of the enterprises in this subgroup were trade enterprises. Lack of a pricing formula may be a consequence of the fact that major suppliers in the market dictate prices.

Summary of the results of the study

Costs are one of the main metrics used to evaluate the operations of an enterprise and, consequently, the costing function is important in the management of business entities and represents an area of focus for management.

The conducted study confirms that the application of specific costing methods depends on the type of production, the volume of production, and the organisation of the business processes. The division based costing method was found to be the most popularly used method within the surveyed enterprises:

– Simple division based, used most frequently by manufacturing enterprises in the following industries: chemical and pharmaceutical manufacturing, textile and garment production, and water and energy supply.

– Equivalence number based, used by enterprises in the following industries: chemical and pharmaceutical, leather, food and meat, and service enterprises.

Job costing was also used relatively frequently in the surveyed enterprises. It was utilized mainly in manufacturing enterprises with a small number of products. It is worth noting that over 14% of the respondent enterprises applied no costing methods. The lack of a costing procedure equates to the lack of a baseline for control of incurred costs and for optimal pricing of products.

In the vast majority of enterprises (72.8%), pricing decisions were based on a cost based pricing formula. The comparative pricing formula, characterized by an ease of application, was applied in only 25% of the surveyed enterprises. Conversely, 3% of the surveyed enterprises used no formulas to price their products or services.

Faced with extensive competition and environmental pressure, and knowing that cost information is imperative to making appropriate business decisions, every enterprise must consider which of the available costing and pricing methods best fit its specific needs. These methods should help organisations improve costing systems and establish a means of auditing managements; efforts to accurately measure costs, profitability, and results.

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BARRIERS FOR LOCAL DEVELOPMENT STRATEGIC MANAGEMENT RESULTING FROM PERSONAL QUALITIES OF LOCAL AUTHORITIES

Andrzej Sztando

Department of Regional Economy
Wrocław University of Economics

K e y w o r d s: commune, local development, development strategy, management barriers.

A b s t r a c t

The article discusses the problem of barriers in local development strategic management related to personal qualities of local authorities. In its initial parts the author presents the rationale for their research as well methods he has applied. Then, discusses the key article categories: local development and local development strategic management. Next he lists all identified groups of barriers, referring to such management. In the main part of study, he focuses on these which refer to personal qualities of local authorities. The article results from several years of practice and research conducted by the Author in the domain of local development strategy conceptualization and implementation.

BARIERY ZARZĄDZANIA STRATEGICZNEGO ROZWOJEM LOKALNYM WYNIKAJĄCE Z OSOBOWYCH CECH LOKALNYCH WŁADZ

Andrzej Sztando

Katedra Gospodarki Regionalnej
Uniwersytet Ekonomiczny we Wrocławiu

S ł o w a k l u c z o w e: gmina, rozwój lokalny, strategia rozwoju, bariery zarządzania.

A b s t r a k t

W artykule omówiono problem barier zarządzania strategicznego rozwojem lokalnym związanych z cechami osobowymi lokalnych władz. We wstępie autor prezentuje przesłanki ich badania, a także zastosowane przez niego metody. Następnie omawia najważniejsze pojęcia: rozwój lokalny i zarządzanie strategiczne rozwojem lokalnym, oraz wymienia wszystkie zidentyfikowane grupy barier wspomnianego zarządzania. W głównej części opracowania koncentruje się na tych, które wynikają z cech osobowych władz lokalnych. Artykuł jest wynikiem kilkunastoletniej praktyki i badań prowadzonych przez autora w zakresie konceptualizacji i wdrażania strategii rozwoju lokalnego.

Introduction

Contemporary Polish local self-governments exert significant influence on many occurring social, economic and environmental processes, as well as on objects located in the area of communes. They frequently initiate such processes and create these objects. The results of such influence are significant enough to refer to local self-governments as the most important creators of multidimensional evolution in local structures. What is more, the discussed effects often extend, by far, the communal borders and are reflected in transformations of other territorial systems therefore, for this reason, they may be referred to as factors or components of their development. In this perspective it seems founded to present an opinion that they exert an important influence on regional, national or even international transformations.

Such knowledge encourages to focus attention on decision making processes carried out by local authorities, as well as on the effects of these decisions since the structure, directions, scope and also final evaluation of the discussed changes depend on these processes. It mainly refers to decisions resulting in long-term, deep and diversified effects. There are many, elaborated and accepted by science, concepts for decisions' optimization, including these made by public units. Among them an eminent position is taken by strategic management. Additionally, important progress has been made in adapting such management rules for the needs of communes, particularly with reference to their development strategy conceptualization. Numerous publications, devoted to these problems, were also issued, both abroad (the interesting examples are as follows: BRYSON 1995, CAULFIELD SCHULTZ 1989, GORDON 1993, 1994, HEALEY 1997, SCHÖLER, WALTHER 2003) and in Poland (the following examples may be quoted: BINIECKI, SZCZUPAK 2004, NOWIŃSKA 1997, NOWORÓL 2007, WYSOCKA, KOZIŃSKI 1998, ZIÓŁKOWSKI 2000). Therefore, it may be expected that in view of local and supra-local high rank results of communal self-government activities and the availability of widely recognized recommendations, strategic management – in the full understanding of this concept – will spread and become common practice for them with its quality presenting high standards. Unfortunately, the Author's knowledge and experience gained as the result of scientific-research work and academic teaching practice, in the process of constructing and implementing development strategies for several dozens of communes, districts and regions, while conducting many trainings and workshops about territorial development planning for self-government authorities, as well as in the process of performing the function of a self-government legislative body member, altogether provide a multitude of arguments confirming that a real life practice is different. It happens so, because the large majority of Polish communes do not carry out

numerous activities which constitute the component of strategic management, while in those communes where such activities are undertaken, their realisation does usually not extend beyond the planning phase. Additionally, the quality of some, or all of these activities implementation is, by far, lower than the one recommended by professional literature (more on the subject in: SZTANDO 2008, pp. 193–202). In other words, strategic management of local development by local self-governments, understood in line with the contemporary scientific output, occurs quite rarely. The less often it occurs the smaller social and economic potential a given commune has at its disposal. Such situation results in many negative consequences, among which the most important factors are: lower, than possible to accomplish, efficiency and effectiveness of self-government activities, as well as its non-optimal range, which results in lower speed of local development and supra-local developmental processes. Similar observations are presented by other researchers (e.g.: KŁOSOWSKI, WARDA 2001, pp. 63–75, PYTLAK 2011, pp. 353–356, KOT 2003).

The purpose of research and methods used

Therefore, there are justified and substantial reasons to investigate the real scale and structure of this phenomenon and later identify barriers occurring on the way to strategic management application in Polish local self-governments as well as the most important features of such barriers, and also the consequences of their occurrence. Improprieties in the construction and implementation of the strategy of Polish municipalities have already been partially explored. However, the process of identifying causes of these improprieties (mentioned above barriers) is only just starting. Therefore the knowledge in this subject matter, in an objective meaning, is unfortunately missing. Obtaining it will help in finding theoretical solutions which, after their practical verification and introducing improvements, will facilitate such management to become common and, in this way, enhance local and supra-local development. The Author focuses his attention on this particular research problem. Their first step is to identify the types of barriers of local development strategic management. On this basis, it will be able to carry out studies that provide answers to questions: what is their frequency of occurrence, what are their real sources, effects and how they can be effectively and efficiently eliminated. The hereby article aims at the presentation of identification results one of several such barriers groups. It was performed by processing the data collected by means of cause-result analysis and logical reduction methods. These data were:

1. The author's observations made by him in the years 1996–2013 during the construction of 59 development strategies of territorial self-government units[1], particularly during the:

a. 105 full-day strategic workshops leaded by author with the participation of about 5 thousand participants,

b. about 300 working meetings with the authorities of self-government leaded by author and dedicated to shaping the final content development strategies.

2. Information collected by individual in-depth interviews conducted by the author with 155 members of decisive and executive bodies of self-government units mentioned in subsection 1, in which development strategies have been drawn up in the years 2004–2013.

3. The content of 399 local law acts as the key for local development strategic management accepted in all communities mentioned in subsection 1, such as: budget, long-term investment programme, waste management plan, environment protection plan, promotion plan, public safety plan, ecological education plan, programme of cooperation with non-governmental organizations and entities engaged in public utility activities, local development plan, long-term financial schedule, the study of conditions and directions for spatial management, local spatial management plan, revitalization programme (usually referring to part of a town), the plan for spatial arrangement of farming areas, education development programme, local economic policy programme, development plans for particular villages.

The concept of local development strategic management

The construction of local development strategic management category requires prior explanation of the local development concept importance since, in spite of its common usage, it is often incorrectly understood or partially misunderstood. It happens so, because the concept itself is a complex one covering a multitude of meanings. It should be applied by means of considering

[1] Regional development strategies for: dolnośląskie (2001, 2005); district development strategies for: jeleniogórski (2000, 2006, 2007), zgorzelecki (2000, 2004), polkowicki (2000, 2008), przeworski (2007), bolesławiecki (2000); commune development strategies for: Dzierżoniów (1996), Dziwnów (2008), Jelenia Góra (1998, 2000, 2004), Nowogrodziec (2001, 2011), Starachowice (1997), Wojcieszów (2004), Wronki (1998), Bogatynia (2006, 2009), Bolków (2004), Chocianów (2001), Jelcz-Laskowice (2007), Lądek Zdrój (1998), Lubawka (2001), Pieńsk (2000), Polkowice (2000/1, 2002/3, 2007/8, 2010), Przemków (2008, 2010), Stronie Śląskie (2013), Świerzawa (2004), Węgliniec (1998, 2007), Długołęka (2011), Dobromierz (1999), Grębocice (2001, 2006), Janowice Wielkie (2002), Jeżów Sudecki (2000), Łomazy (2009), Piszczac (2008), Mały Płock (2009), Marciszów (2003, 2010), Podgórzyn (2000), Radków (2008), Radwanice (2001), Rokitno (2009), Rudna (2004), Sulików (2005), Urzędów (2008), Waganiec (2007), Wądroże Wielkie (2008).

jointly the elements of a certain set composed of similar or different, but related to each other, components of real life practice, processes illustrating its transformations and the idea of its creation, which present or potential significance for the broadly understood life quality of societies and ecosystems functioning, turns out to be very high. Following this path of reasoning two ways of local development understanding may be distinguished which do not exclude each other, but even happen to be strictly complementary for each other.

The first approach, which may be defined as the narrow one, consists in perceiving local development as desirable and positive quantitative, qualitative and structural properties of local social and territorial composition, made up of economic, spatial and cultural attributes which characterize it, where the social component expresses its own needs and hierarchy of values. Having applied necessary simplifications, this composition is most often identified with a commune, despite the fact that, according to L. Wojtasiewicz, many components of development do not balance themselves in a local scale (WOJTASIEWICZ 1996, p. 14). The above mentioned Author;s definition, quoted in professional literature, may serve as the example of such local development perception, according to which local development refers to complex qualitative transformations occurring in a given area and related to its inhabitants life quality level and local economic entities functioning (WOJTASIEWICZ 1990, p. 38). On the other hand, B. Gruchman claims that local development refers to the development of production forces, mainly industry, and also economic and social infrastructure in a given location and areas which surround it (GRUCHMAN 1990, p. 117), while R. Brol defines local development as harmonious and systematic activities of local community, local authorities and other entities functioning in a commune, aimed at establishing new and improving the existing functional communal advantages, at creating favourable conditions for local economy and providing spatial and economical order (BROL 1998, p. 11).

The second approach to local development understanding – a broad one – consists in perceiving it as one of complementary ideas for establishing new model of contemporary society and new concepts of social and economic development, which the society is supposed to follow. In this understanding it not only refers to developmental processes occurring in diversified local systems, or even to their supra-local "final output", but to creating such conditions, from state level, or even international arrangements, which facilitate establishing, making available and applying rationally the overall local capital. Local development represents here a partial alternative for a uniform development model created by large economic entities functioning in liberal conditions of an imperfect market. It is a partial alternative because in the

process of long lasting, scientific debate consensus was reached regarding the concept of local development optimization, also called remote development, combined with supra-local processes such as capital spatial concentration, corporations development, unification, international work division, globalization etc., which jointly form the, so called, top-down development. Statements by I. Pietrzyk may serve as the example of such local development perception, who claims that local development means contradicting extreme liberalism and conciliation between entrepreneurship and inter-human solidarity, improving market defects and imperfect information, encouraging social initiatives and taking advantage of overall local developmental potential, stimulating local actors to focus on their "own" development programme and obtaining synergic effects which strengthen the general growth dynamics (PIETRZYK 1997, pp. 89–90).

Both, in the first and second approach, local development represents the process of multidimensional changes in a large set of diversified components constituting altogether a contemporary society, economy and environment, as well as even more extensive relations between these components. All these elements and their mutual relations are influenced, among others, by public entities established in order to shape the mentioned above changes in such way that their evaluation could be positive and therefore they could be regarded as developmental processes. It means that these entities perform their mission consisting in direct or indirect and total or partial management of these components and their relations so that the goal in the form of local and supra-local development is obtained. In other words their mission is to manage local development. Having considered the large number, complexity and changeability of the above components and their relations, changeability and negative influence of diversified factors originating in their environment, as well as the changeability of development evaluation criteria, it seems quite easy to reach the conclusion that an optimum method to accomplish this goal is by means of strategic management application. Owing to the described above way of local development category perception, and the presence of more than one type of entities managing it, two respective definitions of local development strategic management may be presented. According to the first one it is represented by a complex process of obtaining, processing and generating information by local authorities (commune, district) the final effect of which are their own decisions and the decisions of entities they cover, resulting in the development of a local system characteristic for them (commune, district) in a long time perspective. As far as the second approach is concerned, it is the complex process of obtaining, processing and generating information by supra-local authorities (regional, state, international) the final effect of which are their own decisions, as well as the decisions of entities they cover, resulting

in common application of local development processes in the due administrative area. As it has already been illustrated, strategic management objectives, referring to local development of particular public entities, are quite concurrent. Differences refer to spatial scale of influence and – partially – to the applied tools. Commune or district authorities aim at the development of one local system, while the state government is focused on the development of all local systems and on obtaining supra-local synergic effects which may stem from local potential enhancement. Instruments used by all types of authorities cover both, the tools for local development direct creation (e.g. infrastructural investments) and the tools used for creating favourable conditions stimulating such development (e.g. legal), however, in case of local authorities one deals with a more extensive involvement of the first type of tools.

Barriers for local development strategic management resulting from personal qualities of local authorities

Barriers for strategic management of local development may be discussed in the context of both, supra-local and local authorities functioning. However, owing to the scope in the merits of the hereby article attention will be focused exclusively on the latter ones. At the level of local authorities these barriers take the form of all possible factors which are crucial and, at the same time, influence strategic management processes negatively which results in their incorrectness or absence. A few, listed below, groups of such barriers may be distinguished:

1. methodological barriers, i.e. faults of local development strategic management concept consisting in e.g.: their non-adjustment to the capacity and needs of communal authorities representing small social and economic potential;
2. legal barriers, i.e. imperfections of the self-government legal system constructed by state authorities;
3. barriers in cooperation between local self-government and strategic cooperation partners, such as e.g.: their perception of the environment exclusively in terms of their own interests, as well as the lack of knowledge regarding potential advantages of such cooperation;
4. barriers resulting from insufficiencies of local social capital and local human capital – e.g. lack of social involvement in the construction and implementation of communal development strategy;
5. information barriers reducing the availability of data indispensable for strategic management, such as e.g.: imperfections of public statistics;
6. financial barriers limiting the potential of communal instruments for strategic management below its optimum level;

7. human resources barriers referring mainly to insufficient qualifications of self-government administration staff;

8. barriers in standards, i.e. discouraging information and behaviours of other public entities;

9. support barriers covering mainly imperfections in the quality of performed services for local self-governments by consultancy entities and weaknesses in relations between research centres and communal self-governments;

10. barriers in local development policy conducted by state government and the European Union authorities consisting in incomplete, incoherent activities or other disadvantages;

11. barriers resulting from personal qualities of local authorities.

The scope of further discussion, following the objective of the hereby study, will be limited to the last of the above mentioned groups. With reference to research presented at the beginning of the article, the below discussed barriers were identified as the most frequently occurring ones and related to personal qualities of local authorities, i.e. people functioning as members of legislative or executive bodies in communes.

The first barrier of this type refers to lack of proper knowledge. Many representatives of local authorities do not represent the adequate knowledge about strategic management of local development, which refers not only to management processes, but also to potential advantages that could result from them, both for economy, local community, communal environment, and for themselves.

The second barrier, undoubtedly often related to the first one, is the absence of trust for all long-term plans. The aversion of local authorities to making plans in long time perspective frequently stems from their bad experiences associated with long-term planning which they were a part of in the previous social and economic system. These plans, in many cases, were not executed in line with their assumptions, and even more often they were not reflecting the real needs of local communities at all. Additionally, their implementation was frequently superficial or even pretended. They also played political functions and focused on supra-local targets ignoring real, local needs.

Another barrier of the discussed type refers to the aversion towards the risk of management processes negative evaluation in the future. Accepting and making development strategy available for the public, especially at the beginning of the new self-government term of office, is observed as equal to specifying distinctive criteria which may be commonly applied to later, multidimensional local authorities verification. It is relatively easy to decide which part of obligations included in the strategy, e.g. planned investments, or organizational solutions, turned out, in fact, true and which were left at their planning stage. Each strategy, provided correctly prepared, represents the set

of concurrently numerous, long-term, diversified, significant obligations, and also declarations addressed to local community, local businesses, and frequently also to external cooperation partners. In practice, the mentioned above verification and making its negative results publicly available are the centre of interest for those of the above addressees who do not accept both management processes and (more often) the local authorities in power.

The next barrier also refers to the aversion towards risking negative evaluation of management processes, but in this case it is these processes which occurred in the past, or take place currently. The process of local development strategy construction requires social consultancy to be carried out, however, in order to obtain the objectives for the sake of which such consultancy is performed, at least some of the activities they cover have to be of an open nature and take the form of e.g., so called, strategic workshops. In many cases it means an automatic involvement of opposition groups, as well as local scene actors representing only themselves, who are at the same time dissatisfied with the currently functioning authorities. In consequence is means allowing them to criticize local authorities publicly, which is often reflected by the media.

Another frequently occurring barrier, related to personal qualities of local authorities, is their low inclination to delegate decision competencies in cases of strategic importance. One of the key properties of the participation type of strategic planning, considered by science as the optimal one, is the involvement of social, economic and political partners in the decision making process regarding directions for future local economy development. It means that correct strategic planning results in the need to give up some of the powers by current executive and legislative bodies, and mainly the majority of powers held by the latter, in specifying strategic and operational local development goals, as well as in defining projects which are supposed to help in obtaining them. In practice, however, this process does not always follow the theoretical assumptions. Some of the mentioned above local authorities representatives do not respect this idea, or accept it only in a very limited scope. Such standpoint is based on one, or two following attitudes – whether justified or not is a matter of opinion. According to the first attitude cooperating partners are not capable of bringing in added value to strategic planning and their participation may, at the most, decrease the quality of planning effects, while the second attitude claims that their intentions are of destructive nature. In the latter case the crucial issue is the concern about the introduction of such goals and tasks to development strategy planning, by the planning partners, which are characterized by particularly low implementation capacity, in order to emphasize negative evaluation of both implementation strategy and local authorities themselves after some time, e.g. in the final part of their term of office. Apart

from the above reasons the aversion towards delegating decision making competencies sometimes stems from personal qualities of individuals responsible for performing functions in an executive body. It refers to the strong feeling of possessed powers and more or less conscious desire to keep all prerogatives resulting from it.

The sixth of the discussed barriers refers to weak inclination of local authorities to carry out optional tasks and take responsibility for them. The participation of different local community representatives in the strategic participation oriented programming process (more on the topic: SZTANDO 2010, pp. 99–110) is, almost always, connected with their desire to introduce such development goals to strategic planning which are not directly connected with the implementation of obligatory tasks listed in the Acts regulating communal activities. These pursuits have two pillars. The first of them refers to the general competence resulting from Art. 6, par. 1 of the Act on communal self-government[2] following which local self-government is capable of carrying out tasks in diversified areas of public activities on condition they are not legally restricted to other entities. The second pillar refers to high intensity of needs characteristic for social, economic and environmental sphere of local economy, which according to legal regulations should be fulfilled by other entities than communal self-government, but the degree of their fulfilment is currently significantly unsatisfactory for their beneficiaries. In such situations different proposals, for communal involvement in processes aimed at providing missing services and goods, occur based on the mentioned above general competence. They reflect the desire to obtain social and economic sustainable development in a commune, combined with distrust in quick and independent, from communal self-government, increase in the degree of the above needs fulfilment. They also reflect the perception of a strategy as the plan aimed at the development of territorial social-economic-natural system represented by a commune and not only the programme of executing, by communal self-government, just the tasks resulting from the Act. In practice it happens that these proposals are faced with the lack of acceptance from local authorities. Three main reasons of their negative attitude may be distinguished which are most often concurrent and of equal proportions. The first refers to limitations in financial resources at the disposal of a commune which frequently become an obstacle in performing its own, obligatory activities. The second reason is the aversion of a commune and self-government structures towards undertaking these additional tasks which are not obligatory. The third reason is lack of acceptance for taking the risk of becoming responsible for partial or overall

[2] Art. 6, par. 1 of the Act dated 8th March 1999 on communal self-government (Journal of Laws of 2001, no. 142, item 1591).

failure in carrying out optional activities and public criticism which will most probably be associated with it.

One of the most important of the discussed barriers is the inclination of local authorities towards conflicts of political nature. Self-government practice indicates their relatively frequent occurrence inside legislative bodies, or between legislative and executive ones in communal self-governments. The main components of such situation are extensive differences between members of these bodies regarding past experiences and their evaluation, values, visions of the future and its implementation programmes or just current struggle to win electorate votes. Lack of agreement inside self-government bodies makes it very difficult to undertake strategic planning initiatives, as well as efficient and effective development strategy implementation. In the conditions of intense conflict it is impossible to obtain consensus in key stages of strategic management, i.e. in the evaluation of current situation, in the identification of factors and determinants for future development, in programming directions and methods for local system changes, and also in current execution and monitoring of strategic decisions. Time periods for taking decisions become extended, some of the indispensable decisions are not undertaken at all, opportunities for implementing these already taken are purposefully limited, facts are deliberately interpreted in a wrong way, and also many other confrontation oriented moves or omissions are made. Even a low intensity conflict may significantly reduce the desired effects of activities included in strategic management.

The above barrier is often related to the next one represented by the negation of achievements accomplished by previous authorities. Periodical elections constituting the fundament of democratic political systems may result in a certain group coming to power which does not accept directions of activities followed by its predecessors. It also happens at the level of communal self-governments. One of many practical consequences, which results from such situation, is starting all over again with defining strategic directions of development for the local system, accompanied by a concurrent discontinuance of some tasks aimed at obtaining goals approved by predecessors. If one disregards the issue of strategic changes validity, since they may be quite justified, one should accept that they always mean the violation of strategic management processes continuation. There are known cases of rejecting the already existing strategic plans, created by the previous political option, which resulted not just from lack of approval for their content, but from extended ambitions of the new authorities to create their own ones. Such situations often result from establishing their own publicity.

The last, ninth barrier refers to treating strategy as an instrument in an election campaign. The process of local development strategy conceptualization

often becomes the subject matter of interest for local community. In its course certain choices are made regarding projects constituting issues of great interest for many of its members. For this reason it is commented by both, the media independent from local self-government, and by means of using communication channels with citizens such as e.g. the Internet web site or a communal magazine. Additionally, the participation of numerous local self-government partners in planning process does intensify such relations. Some local authorities representatives are fully aware of that and having in mind the objective to win, possibly the largest, social support in the approaching elections initiate the communal development strategic plan construction procedure in the final phase of their term of office. At the same time all work is organized in the way to obtain the biggest possible coverage in the media and reflect, in this work results, as many expectations of the electorate as possible. In the majority of situations their final product, despite its formal name, it is not the strategy, but the set of tasks (wishes) impossible to perform (execute) in the assumed time span and having used the available means, sometimes even contradictory to the concept of local development. It is used as an instrument in an election campaign aimed at winning trust for current authorities as such, since they get involved in an active social dialogue, focused on cases which are most important for local inhabitants and because they offer a complex plan for meeting a wide spectrum of social needs which, for this reason, should be given a chance of another term of office. It is, however, not possible to use it as a full quality instrument for strategic management due to its methodological and substantial faults and, what is more, the authorities which perceive the role played by a strategy only from the elections perspective, after they are over, quite often do not manifest such intentions at all.

Final remarks

The significance of presented above barriers is crucial. They are of superior nature in relation to all the other ten groups. Such evaluation is justified by the fact that even elimination or extensive reduction of all the other barriers, accompanied by concurrent and lasting intensification of the discussed ones, will not result in proper application of local development strategic management by a given self-government. If local authorities are not motivated to take advantage of such method in executing their powers, or find themselves under the influence of contradictory motivation, then the whole range of other factors, facilitating the discussed type of management, will not bring about its application.

Such situation has its dire, negative consequences described in the introduction to the hereby article. Therefore it is important to undertake research focused on the presented barriers and their sources, and also the effects of their occurrence. Information obtained in this way will allow for searching such methods which could eliminate them effectively and this is extremely important for taking full advantage of the majority of opportunities brought about by the idea of local development, democracy, decentralization and territorial self-government.

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APPLICATION OF QUANTITATIVE AND QUALITATIVE METHODS IN RISK MANAGEMENT OF CREDIT PORTFOLIO IN THE CONDITIONS OF THE BANKING SYSTEM OF THE REPUBLIC OF TAJIKISTAN

Basgul Fajzullohonovna Isupova

Tajik State University of Commerce Dushanbe
Republic of Tajikistan

K e y w o r d s: credit risk, credit portfolio, overdue debt, risk management, analytical and statistical methods, legal entities.

A b s t r a c t

In this article, an analysis of the fundamental methods of risk assessment and risk management of credit portfolio is conducted. In particular, complex and qualitative methods of risk management of credit portfolio studied in details, namely analytical, statistical and coefficient methods. Based on the coefficient method the author proposes a number of standards for the assessment of potential losses in credit activity.

JAKOŚCIOWE ORAZ ILOŚCIOWE METODY W ZARZĄDZANIU RYZYKIEM KREDYTOWANIA W WARUNKACH SYSTEMU BANKOWEGO REPUBLIKI TADŻYKISTANU

Basgul Fajzullohonovna Isupova

Tadżycki Państwowy Uniwersytet Handlu w Duszanbe
Republika Tadżykistanu

S ł o w a k l u c z o w e: ryzyko kredytowe, portfolio kredytowe, należności przeterminowane, zarządzanie ryzykiem, metody analityczne i statystyczne, podmioty prawne.

A b s t r a k t

W artykule zaprezentowano główne metody szacowania i zarządzania ryzykiem kredytowym. Odniesiono się do metod ilościowych przydatnych w szacowaniu i zarządzaniu ryzykiem. Wykorzystując zależności korelacyjne, zaprezentowano podejście ograniczające straty w działalności kredytowej.

Introduction

Especially now days conditions of the banking sector principles of effective crediting and reliable methods of assessing credit risk acquire special importance.

Methods and tools to manage credit risks have passed a long process of development. Originally quantitative assessment of credit risk was limited by the determination of only the nominal value of the loan (BELYAKOV 2003). Subsequently, the ways to determine the cost of the credit product with considering the risk have been developed and the system of rating assessment of creditworthiness of the borrower became widespread (MATUTES, VIVES 2000). The current stage marked by the introduction of internal bank models of qualitative and quantitative risk assessment of loan portfolios (GONZALEZ 2005).

Delayed or not at all paid payments can lead to problems in cash flow and adversely affect the liquidity of the bank (ASSELT, ORWIN 2011). That is why bank should not only assess the risks related to untimely return or absence of return of issued credits, but also manage these risks (ELSINGER et al. 2004).

The process of credit risk management includes the following stages:

– quantitative assessment and monitoring of risk;

– selection and implementation of measures to change the amount of risk;

– control over the level of risk and the effectiveness of measures taken.

When performing last two stages it is necessary to:

1) constantly conduct comprehensive analysis of banking capabilities on assessment, administration, supervision, control and repayment of credits, safeguards and other credit instruments;

2) determine the adequacy of financial information received from the borrower and used in deciding whether to grant a credit;

3) periodically reassess the risks of each credit;

4) facilitate effective credit portfolio management, which can be achieved by bank with carrying out of not too restrictive credit policy;

5) assess the characteristics and quality of the credit portfolio;

6) timely detect the presence of the factors leading to a deterioration of the credit culture;

7) analyze the adequacy of established reserves for possible credit losses.

Efficient credit portfolio management can be achieved if:

– during setting a limit on the total amount of issued credits first of all will be considered such factors as the demand for credit, fluctuations of deposits and credit risks;

– stimulate the diversification of the credit portfolio and contribute to finding a balance between the maximum income and minimum risk by

construction of an appropriate mathematical model, in which along with credit risks are taken into account such factors of market risk as interest rates and exchange rates;

– allow some deviation from the established standards in case if there are constraints in percentage ratio of credits, issued to the commercial sector, the real estate sector, individuals and other credit categories (COLLETAZ et al. 2013);

– when choosing types of credit instruments not only rely on the experience of employees of the credit department, but also on the structure of the bank deposits and expected credit demand. In this case should be controlled or not issued at all certain types of credits, issuing of which previously led to the unexpected losses;

– use the differentiation of interest rates on various types of credits, basing this on changes in the values of costs and competitive factors. Interest rates should be sufficient not only to cover the costs of the bank on attracting resources and possible losses, but also provide an acceptable profit margin;

– identify and recognize the weakening of credit, especially in cases where there is a likelihood that the bank will not be able to get certain amounts in accordance with the conditions of the contract. Such weakening can be taken into account through reduction of the book value of the credit to the value of its implementation (based on the results of assessment) by the partial write-off or by introducing of relevant costs in the profit and loss report (creation of reserves);

– In the case of receiving incomplete and inaccurate financial information from the borrower a credit should be issued on condition that as the source of payments will be used liquid collateral. Here is necessary to have directives on financial reporting which have the auditor's conclusion and which does not have such. There should be established procedures for the analysis of credits by external auditors in order to provide periodic adjustment of the data.

The aim of the article – research approach

The aim of this article is to set up the approach in reducing the level of risk activity of commercial banks. The complex formulas calculating the bank credit portfolio were elaborated and discussed.. Author refers to quantitative and qualitative methods that should be considered in risk management at commercial banks of the Republic Tajikistan.

The basic functions of commercial bank in the respect of risk

As the credit function of the bank focused on the execution of following three main tasks:

– loans should be issued on a reasonable basis and with the confidence that they will be repaid;

– funds should be invested profitably in the interests of shareholders and investors;

– must satisfy the reasonable credit demand of borrowers (legal entities and individuals);

to test whether credit decisions are successful it is required periodically to analyze them, by selection of about 70% of the total amount and 30% of total bank credits. Analysis should also be subjected to at least 75% (in total) and 50% (by number) of foreign currency credits and all loans with a maturity of over one year. In addition, a detailed analysis of the quality of credit portfolio should cover:

– all credits to borrowers, amount of which is more than 55% of the total capital of the bank;

– all credits to shareholders and entities related to the bank;

– all credits, interest rates or repayment conditions which have been renegotiated or changed since the granting of the credit;

– all credits where payment of interest and (or) the principal amount is overdue by more than 30 days (PAR> 30), including those credits on which interest was capitalized or prolonged;

– all credits, classified to categories as nonstandard, doubtful or problematic.

By such analysis it is necessary to assess the probability that the credit will be repaid and the fact that the classification of credit has been set by the bank in accordance with the rules of this method (ZHARIKOV et al. 2009).

The quality of the total credit portfolio and consequently the quality of credit decisions is determined by the size of the bank's portfolio of non-performing credits. Credits are considered non-performing when principal amount or interests on them overdue and not paid within 90 days or more. Assessment of the overall level of reserves in terms of non-performing credits shows how well the bank can handle credit risks (FINUCANE, HOLUP 2006).

When analyzing the portfolio of non-performing credits it is necessary to:

– classify credits (including principal amount and interests) by delay in payment of more than 30, 90, 180 and 360 days; by type of client and the nature of its economic activity in order to identify common trends and their impact on each borrower;

– find out the reasons of credit portfolio quality deterioration, the analysis of which will help to develop the necessary measures to change this situation;

– especially analyze all important information on non-performing credits in order to determine whether the situation is reversible, what can be done to increase the likelihood of credit repayment and were there any action to recover the funds (KOSTYUCHENKO 1990);

– check whether the level of reserves is sufficient for repayment of non-performing credits;

– determine by using of analytical method how the assets quality deterioration effect in the profit and loss of the bank.

There are many problems (other than those above) leading to a deterioration in the quality of the credit portfolio, the main ones are:

1) private interests (issuing of credit in excess of established limits to the management board members or major shareholders of the bank);

2) non-compliance with the principles of credit policies (issuing of overly risky credits or issuing credits on unsatisfactory conditions with full consciousness that credit principles are violated. In this case reasons may be the desire to get more profit, competitive pressures in the key markets of the bank or personal conflicts of interests.);

3) incompleteness of credit information (the borrower must be requested to provide all necessary financial reports, including that ones, which are not of an official nature. Credit file (folder) should contain information about the purpose of the borrowing, information for assessing risks, reports on the status and supervision of credit – monitoring, expert reports and minutes of meetings from discussions on credit) (HAO WANG et al. 20013);

4) loss of mindfulness (usually expressed as a lack of control over the old and familiar borrowers, confidence in the verbal information, ignoring the signs of anxiety in regard to the borrower, economy, region, industry sector, etc.);

5) lack of supervision (ineffective supervision invariably leads to the fact that the bank has incomplete information about the actions of the borrower over the duration of the credit. As a result, the initially secure credits can create problems or cause damages. In this case, to such an outcome could affect the principle "Loss of the sense of responsibility of the borrower");

6) incorrect identification of risks at an early stage of their warnings by risk manager.

The most important issue for the bank is to assess and regulate the riskiness of credit portfolio as one of the main directions of effective management of credit activities of the bank. The main purpose of credit portfolio management is ensuring maximum profitability at a certain level of risk.

The typical risk assessment according Tajikistan regulation

Risk assessment methodology of bank credit portfolio includes:

– qualitative analysis of aggregate credit risk of the bank, which consists of identifying risk factors (revealing of its sources) and requires deep knowledge, experience and intuition in this field. Speaking on the quality assessment of the bank credit portfolio also should be taken into account the availability of connected crediting and credit risk concentration;

– quantitative risk assessment of the bank credit portfolio, which involves determining the level (degree) of risk. Credit risk degree is a quantitative expression by which the bank assess the creditworthiness of borrowers and credit operations in general.

Qualitative and quantitative risk assessments of the credit portfolio are held at the same time, where analytical, statistical and coefficient methods are used to assess the risk of bank credit portfolio.

The analytical method is an assessment of possible losses (risk level) of the bank and carried out in accordance with the Instruction No. 177 of National Bank of the Republic of Tajikistan (hereinafter NBRT) "On procedure of forming and use of the reserve for potential losses and the fund to cover possible losses on loans".

Methods of risk assessment of the bank credit portfolio in accordance with the Instruction No. 177 NB of RT provides an assessment of the risk level for each credit operation, taking into account the financial status of the borrower, his/her maintenance of credit debts and the quality level his/her maintenance. Then the loan should be classified into one of five categories of quality:

– I (the highest) quality category (standard loans);
– II quality category (non-standard loans);
– III quality category (doubtful loans);
– IV quality category (insecure loans);
– V (the lowest) quality category (uncollectible loans).

Statistical assessment method of the risk amount of bank credit portfolio allows assessing the risk level of credit portfolio on the basis of previous cases of occurrence of credit risks and the general state of the portfolio in the past. Statistical values show the importance of each characteristic for determining the level of risk.

The assessment of credit risk using the method of statistical analysis implies that the total risk exposure of the credit portfolio is reflected in its quality. Such an assertion provides a basis to interpret the variation of credit risks in relation to the agreements, constituting the bank credit portfolio, as a general indicator of the riskiness of credit activities.

The essence of the statistical method is as follows:

– statistical analysis of credit risks in relation to agreements, constituting the bank credit portfolio;

– characteristics of dispersion level of credit risks in the loan portfolio;

– establishing the magnitude and the frequency of credit risk.

The main tools of the statistical method for calculation and assessment of risks of bank credit portfolio are known from the general theory: dispersion, variation, standard deviation, the coefficient of variation and asymmetry (GOLDBERG 1990).

The probability of realization of the bank credit risk is characterized by a probability distribution. The basic statistical indicator for identification of such probability (risk level) is the standard deviation or coefficient of variation. Calculation of weighted average credit portfolio risk, its variance and standard deviation allows tracing the level of diversification of the bank credit portfolio (ROSE PETER 1995).

The use of such statistical values like positive and negative semi-variance, positive and negative average semi-quadratic deviation, as well as calculation of the asymmetry relatively to credit risks in relation to agreements constituting the credit portfolio gives the opportunity for the bank to determine the frequency of losses, depending on the number of cases with occurrence of relevant losses and the total number of risky cases in statistical data. The total losses from credit operations can be assessed as the total amount of the obligations of the borrower (or a group of borrowers) before the bank, multiplied by the probability of losses during the credit operations. Under the probability of losses from credit operations is understood the average (for the previous three-year period of bank performance) share of non-repaid credits and non-fulfillment of other liabilities by clients (or group of clients), which have similar characteristics, level of creditworthiness, the same level credit rating.

Statistical method for risk assessment of the bank credit portfolio is based on the analysis of statistical data related to the financial status of borrowers over a certain period of time. Such a study is the basis for the comparison of the actual frequency of the bank losses occurrence (which significantly affect the quality of credit portfolio) with predicted estimates.

The third method of risk assessment of the credit portfolio is the coefficient method. The essence of the method is to calculate the relative indicators to assess credit risks included in the bank credit portfolio, also to assess the calculated values which are compared with the normative assessment criteria, and on this basis the level of risk of the overall bank credit portfolio is determined qualitatively and quantitatively.

The complexity of applying the coefficient method for assessing the overall risk of bank credit portfolio occurs when comparing the calculated parameters

to standard values, since the values of some calculated indicators may correspond to the relevant normative criteria, and others – not. In this case should be selected a general indicator for determining the risk level.

A comprehensive risk assessment of bank credit portfolio envisages simultaneous conducting of quantitative and qualitative assessments of the credit risk.

Formulas of risk assessment

The optimal method of quantitative risk assessment of the bank credit portfolio is a methodology for assessing the risk degree of bank credit portfolio. This is a mathematical procedure for structuring and provision of hierarchical set of indicators that determine the actual level of risk and provide the ability to choose effective methods of its regulation. The process of building an integrated system of risk assessment of bank credit portfolio starts with the formation of the hierarchical structure of these integral indicators.

Possible (expected) amount of losses on the credit portfolio – is the most important characteristic of credit risk, because it is the center of the probability distribution. The importance of this indicator lies in the fact that it shows most plausible value of the risk level, and is defined as follows:

$$S_p = \sum_{i=1}^{n} S_i \times p_i(c)$$

the formula for calculating of the expected absolute value of the losses on the credit portfolio in general, where:

S_i – amount of issued credits to the group i of counterparties (by industry sector),

$i = 1, n$;

$p_i(c)$ – credit risk relative to group i of counterparties.

This indicator is a generalized quantitative characteristic, which does not allow making a decision about the application of the basic methods of credit portfolio risk management (diversification or concentration). However, to make a decision it is necessary to determine the degree of variability of the credit portfolio risk. For this purpose two closely related categories: dispersion and standard deviation are applied, for calculations of which it is necessary to determine the average weighted risk of bank credit portfolio by the following formula:

$$\partial = \frac{\sum_{i=1}^{n} s_i \times p_i(c)}{\sum_{i=1}^{n} s_i} = \frac{s_p}{\sum_{i=1}^{n} s_i}.$$

The above indicator is the base value for the calculation of the credit risk variation in relation to agreements of group i of counterparties, which constitute the bank credit portfolio.

The dispersion of credit risk in relation to agreements of group i of counterparties, which constitute of the bank credit portfolio can be defined as follows:

$$V(p) = \sum (P_i(c) - \partial)^2 \times \frac{S_i}{S},$$

where:
$S = \sum_{n} S_i$ – i.e. the sum of the overall bank loan portfolio in the equivalent.

The above indicator represents the variation of the characteristic throughout researched set under the influence of all the factors contributing to this variation.

The results of the analysis are more visible if the indicator showing the spread of a random variable expressed in same measure units as the random variable itself. For these purposes is used the standard deviation of credit risk in relation to agreements of group i of counterparties, which constitute the bank credit portfolio:

$$\sigma(p) = \sqrt{V(p)},$$

The calculation of this indicator allows determining closeness of relationship between productive and grouping factor characteristics. It has the following limits: $0 < \sigma(p) < 1$, otherwise, calculation of deviation would be incorrect – mathematical error. If $\sigma(p)$ tends to 0, grouping characteristic less and less effect on the productive characteristic, if $\sigma(p) \to 1$ – the changes of productive characteristic more and more varies depending on a grouping characteristic.

Dispersion and standard deviation characterize the level of credit risk dispersion in relation to credit agreements and the average weighted risk of the credit portfolio. These indicators show the diversification of the credit portfolio in relation to the risk. The larger are the values of dispersion and standard deviation, the more diversified is the bank credit portfolio in relation to risk. Dispersion and standard deviation show the level of dispersion of credit risk in relation to credit agreements both in a better way (their values are less than

< average weighted credit portfolio risk) and worse (their values are more > than the average weighted credit portfolio risk). Therefore, these indicators do not give an opportunity to clearly assess the degree of riskiness of the credit portfolio. For this purpose, it is more expedient to use such indicator of risk as semi-variance.

Depending on the result of the deviation of credit risk in relation to the agreements of the credit portfolio from average weighted credit risk, semi-variance of risk on credit agreements may be positive or negative.

Positive semi-variance of credit risk in relation to agreements on the group i of counterparties, which constitute the credit portfolio can be defined as:

$$\text{PSV} = \sum_{i=1}^{n} t_i^2 \times \frac{S_i}{S},$$

where:

n – volume of credit portfolio (number of agreements from all customer groups of bank);

t_i – positive deviation of credit risk in relation to agreements (constituting the bank credit portfolio on the group i of counterparties) from the average weighted credit risk, i.e.:

$$t_i = \begin{cases} 0, p_i(c) \geq \partial \\ p_i(c) - \partial, p_i(c) < \partial \end{cases}$$

Negative semi-variance of credit risk in relation to agreements on the group i of counterparties, which constitute the credit portfolio is defined as:

$$\text{NSV} = \sum_{i=1}^{n} l_i^2 \times \frac{S_i}{S},$$

where:

n – volume of credit portfolio (number of agreements from all customer groups of bank);

l_i – negative deviation of credit risk in relation to agreements (constituting the bank credit portfolio on the group i of counterparties) from the average weighted credit risk, consequently:

$$l_i = \begin{cases} 0, p_i(c) \leq \partial \\ p_i(c) - \partial, p_i(c) > \partial \end{cases}$$

Also, positive and negative semi-quadratic deviation of credit risk in relation to agreements (constituting the bank credit portfolio on the group *i* of counterparties) should be determined. For this purpose the following formulas can be used:

$$psv = \sqrt{\text{PSV}},\ nsv = \sqrt{\text{NSV}}$$

where:

psv – positive average semi-quadratic deviation of credit risk in relation to agreements (constituting the bank credit portfolio on the group *i* of counterparties);

nsv – negative average semi-quadratic deviation of credit risk in relation to agreements (constituting the bank credit portfolio on the group *i* of counterparties).

The higher is the positive semi-variance (positive average semi-quadratic deviation) of credit risk in relation to agreements on credit portfolio and the lower is their negative semi-variance (negative average semi-quadratic deviation), the lower is the level of credit portfolio risk.

The use in the analysis of only two indicators (average and standard deviation) can lead to incorrect conclusions. The standard deviation inadequately characterizes the risk of shifted distributions, because it is ignored that the majority of variability accounted for a "good" (right), or "bad" (left) side of the expected profitability. Therefore, when analyzing asymmetric distributions take an additional indicator – the coefficient of asymmetry of credit risk in relation to agreements (constituting the bank credit portfolio on the group *i* of counterparties). It is a normalized value of the third central moment and determined by the formula:

$$a = \sum_{i=1}^{n} \frac{S_i}{S} \times (p_i(c) - \partial)^3 / \sqrt{V^3(p)} \text{ – the asymmetry coefficient}$$

The lower is the coefficient of asymmetry (a), the lower is the risk of the credit portfolio, as unfavorable deviations of credit risk in relation to credit portfolio agreements from the average weighted credit portfolio risk with a relatively large weight placed on the right are the closest to the average weighted credit portfolio risk (deviates less from it to an unfavorable direction). In turn, the respective (favorable) values of the credit risk in relation to credit portfolio agreements are far removed from the average weighted portfolio risk.

The value of risk of the bank credit portfolio can be determined by the relative values (as a percentage of portfolio), which express the degree of uncertainty in the implementation of management decisions, show the structure of the credit portfolio, acting as a qualitative characteristic of bank credit risk.

In relative values, the risk of bank credit portfolio can be defined as follows:

$$K_P = \frac{K_1 + K_2}{2} = \frac{K_1 + K_{21} + K_{22} + K_{23} + K_{24}}{2},$$

where:

K_1 – volatility of the credit portfolio risk;
K_2 – the proportion of loan debts, which are non-standard, in aggregate amount of issued credits;
K_{21} – the proportion of non-standard loans in the total credit portfolio;
K_{22} – the proportion of doubtful loans in the total credit portfolio;
K_{23} – the proportion of problematic loans in the credit portfolio;
K_{24} – the proportion of insecure loans in credit portfolio.

The indicator characterizing the variability of the tendency of risk level at a given time interval is the volatility of the risk of the credit portfolio, defined as follows:

$$K_1 = \frac{\partial \times nsv}{psv}.$$

Volatility of aggregate credit risk is a indicator based on the standard deviation of credit risk in relation to agreements (constituting the bank credit portfolio on the group i of counterparties).

The use of this indicator in comparing the degree of risk of bank credit portfolio in different periods of assessment makes it possible to determine the risk diversification (concentration) of the bank credit portfolio. It can show clearly in what direction and to what extent the quality of the credit portfolio changes.

Indicator characterizing quality of the bank's credit portfolio management is K_2, which is the proportion of loan debts that are non-standard in the total amount of issued credits. This coefficient is calculated by summing the K_{21}, K_{22}, K_{23}, K_{24}, the calculation of which is required for the identification of factors of changes in proportion of loan debts that are non-standard.

One of the first indicators characterizing quality of the bank credit portfolio is the proportion of non-standard loans (PAR < 30) in the total volume of credit portfolio:

$$K_{21} = \frac{\text{non – standars loans}}{\text{the total volume of bank credit porfolio}} \times 100.$$

Reducing of this coefficient gives a signal for the bank that it is necessary to increase the monitoring efficiency of counterparties' financial status, which own the largest loans.

The next step in the calculation of the proportion of overdue debts in the total bank credit portfolio is to determine the proportion of doubtful loans in the total volume of bank credit portfolio:

$$K_{22} = \frac{\text{doubtful loans}}{\text{the total volume of bank credit porfolio}} \times 100.$$

For the bank it is important to monitor the clients experiencing some specific difficulties and control the volume of credit transactions with them. For this purpose it is necessary to determine the proportion of problematic loans in the credit portfolio.

$$K_{23} = \frac{\text{problematic loans}}{\text{the total volume of bank credit porfolio}} \times 100.$$

The value of this indicator should not exceed 5% of the net bank credit risk.

The most significant impact on the quality of the credit portfolio has the proportion of uncollectible loans as the risk from such operations is equal to the sum of total debt (100% of the risk).

$$K_{24} = \frac{\text{uncollactible loans}}{\text{the total volume of bank credit porfolio}} \times 100.$$

The value must strive to zero, and the high value of this indicator may adversely affect the liquidity of the bank.

According to the results of a comprehensive analysis of the aggregate bank credit risk can be determined its degree as follows (according to the recommendations of the Basel Committee).

Table 1

Qualitative risk assessment	Quantitative risk assessment
Acceptable risk level	0–20%
High risk level	more than 21%

Under the credit portfolio with an acceptable level of credit risk should be considered a credit portfolio that provides profitability to the bank even upon the occurrence of all possible risks. The credit portfolio of high risk is characterized by a level of risk for credit operations, the implementation of which in full threatens the overall functioning of the bank, i.e. in the case of the implementation of all the risks the own resources of bank are not enough to cover them, which could lead to the bankruptcy of the bank. However, taking into account the specifics of regional economic development, the banking business, political situation, this indicator can be revised on a time interval.

A comprehensive risk level assessment of the bank credit portfolio should be held not less than 1 time per quarter.

The following groups of credit indicators are used for ongoing monitoring of the credit portfolio and overall policy of the bank in general:

– profitability indicators of credit investments;
– quality indicators of credit portfolio management;
– indicators of the adequacy of reserves for covering potential losses;
– integrated indicators of aggregate credit risk of the bank.

Table 2

Coefficient	Description	Calculation	Formula	Standards
1	2	3	4	5
Profitability coefficients of credit investments				
The coefficient of net profitability of credit investments – K1	Allows assessing the profitability of the credit portfolio.	Interest income – Interest expense/ /Amount of the credit portfolio.	$Ii - Ie/CP$ total · 100%	> 0.75 (monthly)
The coefficient of net profitability of Capital K2	Shows the proportion of interests of Bank margin in its capital (invested funds in the banking business)	Interest income – Interest expense/ /Bank Capital	$Ii - Ie/C$ total · 100%	> 3 (monthly) > 36 (annual)
The coefficient of net profitability of assets K3	Shows net profitability of all assets of Bank	Interest income – Interest expense/ /Asset	$Ii - Ie/A$ · 100%	> 0.5 (monthly)

cont. table 2

1	2	3	4	5
The coefficient of net profitability of credit investments K3.1		Interest income – Interest expense/ /Credit investments bringing income – "working assets"	$Ii - Ie/S(+) \cdot 100\%$	> 0.925 (monthly)
The coefficient of overall profitability of "working assets" K4	Characterizes the real profitableness of credit investments	Interest income (received)/ Credit investments bringing income – "working assets	$Ii/C(+) \cdot 100\%$	> 2.2 (monthly)
The coefficients of the quality of management of bank credit portfolio				
The coefficient of useless credits in the Bank's assets K5	Characterizes the quality of the bank credit portfolio management in relation to volumes, non-performing credit investments, credits with prolonged and overdue payment dates	Credit investments, not bringing income /Bank's assets	$C(-)/A \cdot 100\%$	< 0.5
The coefficient of proportion of overdue debts in the Bank's assets K5.1.		Overdue credits/ /Assets	$C_{overdue}/A \cdot 100\%$	< 1.5
The coefficient of useless credits in credit portfolio K6	Details the assessment of the quality of credit portfolio management	Credit investments, not bringing income /Total credit investments (the volume of credit portfolio)	$C(-)/C_{total} \cdot 100\%$	< 1.5
The coefficient of the proportion of overdue debts in credit investments K6.1	Characterizes the quality of the loan portfolio	Overdue debt/credit investments	$C_{overdue}/C_{total}$	< 5%
Coefficient of total credit portfolio K7	Demonstrates the degree of aggressiveness of the bank's credit policy, insufficiency or overloading of its credit portfolio. It is considered that if the level of this indicator exceeds 65%, the bank's credit portfolio is overloaded and there is a requirement for reorientation of credit resources in the other	Total credit investments/Assets	$C_{total}/A \cdot 100\%$	50-75

cont. table 2

1	2	3	4	5
	direction, such as investment in Central Bank, the National Bank of Tajikistan.			
Coefficient of utilization of deposit funds K7.1.		Credit investments / Deposits	Ci/D	< 1
The coefficient of the flowing credit portfolio K8	Characterizes the proportion of short-term credit investments in the total credit portfolio.	Short-term credit investments/Credit investments	C s.-t./C_{total} · 100%	< 90
The coefficient of the current credit portfolio K8.1.	Characterizes the dynamics of growth of credit investments over the period	Credit investments for the current period/Credit investments for the previous period		Average value by system
The coefficients of reservation of credit portfolio				
Coefficient of the overall sufficiency of actual established reserves for possible credit losses (hereinafter RPCL) K9	Shows the actual degree of protection of the bank credit portfolio from the overall risk.	Actual established reserves for possible credit losses (RPCL)/Credit investments	RPCL actual/ Ci · 100%	> 10
Coefficient of the sufficiency of reserve K10	Characterizes the completeness (deviation) of established special reserve for covering potential losses on credits.	Actual established reserves for possible credit losses/ Estimated reserve for possible credit losses (according to this method)	RPCL actual. /RPCL estimated · 100%	> 100
Coefficient of the write-off of the credit from RPCL K10.1.	Characterizes the proportion of credits actually lost for the Bank (hopeless to repayment).	The amount of write-off from RPCL / Credit investments		< 1.5
Integrated indicators of aggregate bank credit risk				
Coefficient of "aggressiveness" of the Bank credit policy K11	This indicator shows the direction of the credit policy of the bank.	Credit investments /Raised funds of the Bank.	Ci/Rf · 100%	53-78
The coefficient of the overall risk of credit portfolio K12	Allows more clearly determine the quality of the credit portfolio in relation to credit risk.	(Credit investments – forecasted bank losses (FBL))/ Credit investments	Ci – FBL) /Ci · 100%	> 90

cont. table 2

1	2	3	4	5
Normative coefficients: Amount of the credit risk for one or more (group of interrelated) borrowers K13.1		The aggregate amount of requirements of the Bank to the borrower (AARBB) or a group of interrelated borrowers in equivalent/Capital	AARBB/Cap. · 100%	< 25
Amount of the aggregate (major) credit risks K13.2		The aggregate amount of major credit risks (AAMCR)/Capital	AAMCR/Cap. · 100%	< 500

Source: own elaboration.

– If K11 > 70%, we can assume that the bank carries out "aggressive" credit policy (in the aggressive policy the upper limit is – 78%, when exceeding this limit it means that the bank carries out unreasonably dangerous credit activity). If Ka < 60%, this means that the bank carries out "cautious" credit policy (in cautious credit policy the lower limit is set at 53%, if the value of indicator is less than 53%, then it is likely that the bank can have a threat of shortfall in profits and can have losses);

– when calculating K12 the indicator FBL (forecasted bank losses) for the reporting date is determined as the aggregate amount of reserves for possible loan losses, loans and similar debts, formed in accordance with the instruction No. 177 NBRT. It is considered that the higher is the value of the forecasted bank losses, the higher is the risk in its credit activities and in the existing credit portfolio;

– when calculating K13.2, a large credit for a commercial bank is considered a credit, a loan or a letter of credit in the amount exceeding 5% of the bank's capital (in accordance with standards, established by National Bank of Republic of Tajikistan).

Fourth, the final group of indicators (of aggregate risk of crediit portfolio) is complex, integrated indicators of aggregate bank credit risk. These are the main indicators for assessing the quality of bank credit portfolio, for the characterization of the profitability of credit investments, for determination of the quality of the credit portfolio management and for analyzing the sufficiency of reserves for covering possible losses on credits. These indicators are called integrated because in their calculation are not used aggregates of financial coefficients from different groups.

The level of profitability of the bank credit investments with taking into account the coefficient of losses is reflected by the coefficient *Cp* (Credit profitability).

Cp is calculated as ratio of the difference between net interest income and credit losses to total credit investments

$$Cp = (Ii\text{-}Ie\text{-CL}) / Ci_{\text{total}} \cdot 100\%$$

The coefficient of the quality of credit portfolio management (CQCPM) shows the risk degree of credit investments with regards to their distribution into risk groups, which is carried out on the basis of data on the duration of overdue loans and on the quality of the security for the credit.

This coefficient is defined as the ratio of the volumes of different groups of credits (weighted in order to define the risk degree on non-repayment of credit), to the total amount of credit investments, and is calculated using the formula:

$$\text{CQCPM} = \sum_{n=1}^{n} (Xn \cdot Kn) / C_{\text{total}} \cdot 100\%$$

where:
n – is the number of credit investment risk groups.

The coefficient CQCPM allows numerically assessing the quality of credit portfolio management. However, at all advantages of this method of calculation it is not deprived of significant deficiency.

In order to address the deficiencies it is recommended to use other integrated indicator – the coefficient of total risk of bank credit (CTRBK), which takes into account the degree of sufficiency of reserve.

$$\text{CTRBK} = (C_{\text{total}} - \text{CL}) / C_{\text{total}} \cdot \text{L1},$$

where:
L1 – the coefficient of sufficiency in establishing the reserve.

The coefficient L1 is calculated as follows:

$$\text{L1} = (C_{\text{total}} - \text{CL}) / (C_{\text{total}} - \text{FL}).$$

If the difference between the indicators CL and FL (forecasted losses) is insignificant or absent, the value of the indicator L1 tends to one, i.e. the impact of this indicator on the value of the credit risk is close to zero. With the

indicator L1 it is real to show the impact of the factor of sufficiency in establishing the reserve for credits to coefficient of credit risk CTRBK. Substituting the indicator L1 in the formula for calculating of CTRBK, we get the following equation:

$$\text{CTRBK} = ((C_{\text{total}} - \text{CL}) * (C_{\text{total}} - \text{CL})) / C_{\text{total}} \cdot (C_{\text{total}} - \text{FL}).$$

The closer is the value of CTRBK to one, the better is the quality of the credit portfolio in relation to repayment and sufficiency of reserve. If CTRBK = 1, there is no risk and forecasted losses are equal to zero. The closer is the indicator CTRBK to the zero point, the higher is the value of the aggregate credit risk.

Conclusion

According to the previously described method of calculation of the coefficient of aggregate credit risk (which considers the factor of sufficiency of reserve), the risk assessment of bank credit should take into account not only the possible actions of the borrower, which lead to the formation of the problem on loan debt, but also the application or lack of protective measures by the bank. These measures are characterized first of all by the amounts of required estimated reserve and actual established reserve for possible losses on credits.

We consider it necessary to carry out general monitoring of credit risk in the overall credit portfolio of the bank for the timely assessment of the "problemness" of credit portfolio, and also to carry out on a regular basis the analysis of the overall credit activities of the bank by regions.

In our opinion, this model is a comprehensive assessment of the level of possible losses on crediting, which allows the bank not only to limit the extent in amounts of issuing credits, but also to take into account the real solvency of client. This, in turn, will allow a commercial bank optimally structure its portfolio of assets in the aspect of credit operations.

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PROPERTY INSURANCE AND LIABILITY INSURANCE OF PHARMACISTS AND PHARMACIES IN THE OLSZTYN MARKET

Joanna Bak

Department of Social Policy and Insurance
University of Warmia and Mazury in Olsztyn

K e y w o r d s: pharmacy insurance, third-party liability of a pharmacist, choice of insurance.

A b s t r a c t

This article brings up a very important and current issue concerning the insurance of pharmacists and pharmacies. The aim of the research undertaken was to present the range and factors determining the choice of insurance products for pharmacies and pharmacists operating in Olsztyn. The study is focused on products ensuring protection for the properties owned and used in pharmacies, as well as third-person liability insurance related to the business activity and to the professional practice of a pharmacist. It identifies the most popular insurances in the examined population and specifies the factors determining their choice.

UBEZPIECZENIA MAJĄTKOWE ORAZ OC FARMACEUTÓW I APTEK NA RYNKU OLSZTYŃSKIM

Joanna Bak

Katedra Polityki Społecznej i Ubezpieczeń
Uniwersytet Warmińsko-Mazurski w Olsztynie

S ł o w a k l u c z o w e: ubezpieczenie apteki, odpowiedzialność cywilna farmaceuty, wybór ubezpieczenia.

A b s t r a k t

W artykule podjęto bardzo istotną i aktualną tematykę ubezpieczenia farmaceutów i aptek. Celem podjętych badań było przedstawienie zakresu i czynników wyboru ubezpieczeń aptek i farmaceutów działających na terenie Olsztyna. Uwagę skupiono na produktach zapewniających ochronę zarówno posiadanego i wykorzystywanego mienia, jak i odpowiedzialności cywilnej z zakresu prowadzonej działalności oraz wykonywania zawodu farmaceuty. Zidentyfikowano najbardziej popularne ubezpieczenia w badanej populacji oraz określono czynniki, które przesądzają o ich wyborze.

Introduction

In a growing, competitive economy, each company is endangered with a risk related to running a business activity. Since the dawn of time, man has been trying to minimise this risk. Insurance has become a perfect method for reducing risk and, more precisely, for transferring the risk onto another entity and replacing its undetermined amount with a small, known loss (in the form of a premium paid in advance) (KRÓLIKOWSKI 2006). The literature of the subject increasingly more often contains a message addressed to businessmen, which is a particularly good piece of advice, encouraging taking protective measures against the effects of negative unfortunate events. This protection means investing a part of one;s funds into an insurance policy (ZIÓŁKOWSKA 2002).

The article brings up the issue concerning the insurance of pharmacies and pharmacists who work in them, as this activity is burdened with more complex risk. Apart from the risk of running business activity, to which all companies are exposed, this involves the risk of making a mistake while attending the customers and mistakes concerning reimbursed medicines. In order to meet the demands of this sphere of activity, many insurance companies have constructed a special product addressed to pharmacy owners (entities running pharmacies) and pharmacists employed in them (including pharmacy technicians), regardless of the form of running the business activity. These are usually complex products, covering both the insurance of property against theft, as well as third-party liability insurance related to owning and running the pharmacy, and to practicing the profession of a pharmacist.

The aim of this study was to present the range and factors determining the choice of insurances for pharmacies and pharmacists operating in Olsztyn.

The research included all pharmacies operating in Olsztyn. According to the data provided by the Provincial Pharmaceutical Inspectorate, 69 public-access pharmacies operate in Olsztyn (Wojewódzki Inspektorat Farmaceutyczny).

A survey questionnaire was used to accomplish the research objective. The questions included in the questionnaire concerned, among others: the current status of the insurance protection and its extent, the duration of this protection, the choice of the insurance company, the amount of the premium and the sum insured.

Insurances of pharmacists and pharmacies

Insurance addressed to pharmacy owners and to pharmacists are constructed in various ways. A basic offer is made of standard products ensuring the protection of property. This protection can be extended by signing clauses

exclusively and directly related to pharmacies and pharmacists. Clauses recommended by professionals include, for instance: utilization of damaged medicines, covering financial losses related to the loss of prescriptions for reimbursable medicines, third-party liability insurance related to dispensing an inappropriate medicine or a medicine past its expiration date (Farmacja praktyczna). The significance of the above-mentioned subject matter is proved by the fact of posting it at the website available only for medical and pharmaceutical community, www.farmacjapraktyczna.pl. The third-party liability insurance of a pharmacist is required by the National Health Fund while signing contracts. Thus, for instance, a pharmacist selling incontinent briefs or orthopaedic means must have professional third-liability policy, since the National Health Fund considers that such a person is a healthcare provider. The required policy should be concluded for the amount of €12,000 per event and €65,000 for all events (Farmacja i ja, JAWORSKI 2010).

However, the advantages of having this type of insurance protection seem to be greater. The trust in a pharmacist working in a pharmacy plays a significant role in its activity, since this person directly affects our health and, sometimes, even our life. Third-party liability insurances for pharmacists and pharmacies have been also produced for "image purposes" – this product creates higher liability of the insured towards the persons to whom services are provided. This is about a particular type of the feeling of safety – if damage is caused which the insured is obliged to repair, the insurer will pay due compensation to the third party. On the other hand, from the point of view of a pharmacist or the pharmacy owner, insuring companies often pay attention to the importance of minimising own risk related to running a medical or professional practice (JAWORSKI 2010).

Currently in our market, insurance coverage addressed to pharmacists and pharmacies can be found in the offers of many insurance companies. The largest insurance companies (gathering around 1 billion or more of written premium a year) use incentives of various types, thus promoting their product. The possibility to choose the extent of the insurance protection and its adjustment to individual needs of the customer has become a standard solution. Offers providing for an instalment plan of payments have become common, thus allowing better adjustment of the premium payment to individual expectations of the customer. Equally often, it is possible to reduce the premium for non-claim insurance history and for concluding a group insurance agreement for persons employed as pharmacists in a given pharmacy. Since many pharmacy owners do not have specialist knowledge in the field of insurance and are reluctant to complete the related formalities, an efficient and reliable service (offered by the insurance companies), both at the stage of concluding the agreement, as well as when the damage occurs becomes an important element.

Research results

The research was carried out on a sample made up of all pharmacies (69 entities) from Olsztyn. The questionnaire was completed and returned by 42 entities. This is a satisfactory result, accounting for 60.9% of the examined population. In the great majority, the owners of pharmacies were women (30 persons). The examined group included 12 men. The owners of Olsztyn pharmacies are persons with an average age of 46–60 years. This age group numbers 19 persons. Another group is made up of 14 persons above 60 years of age. Eight persons are aged 36–45 and only one person is in the age group of 25–35 years.

At present, 24 independent pharmacies and 18 network entities operate in Olsztyn. 31% of the examined entities are free-standing pharmacies and 69% of them are located in a complex of buildings.

As a result of the studies performed, it was found that not all pharmacies have concluded insurance agreements. 81% of the examined entities have insurance protection for running a business activity. The figure below presents the types of insurance of the owners of Olsztyn pharmacies (Fig. 1).

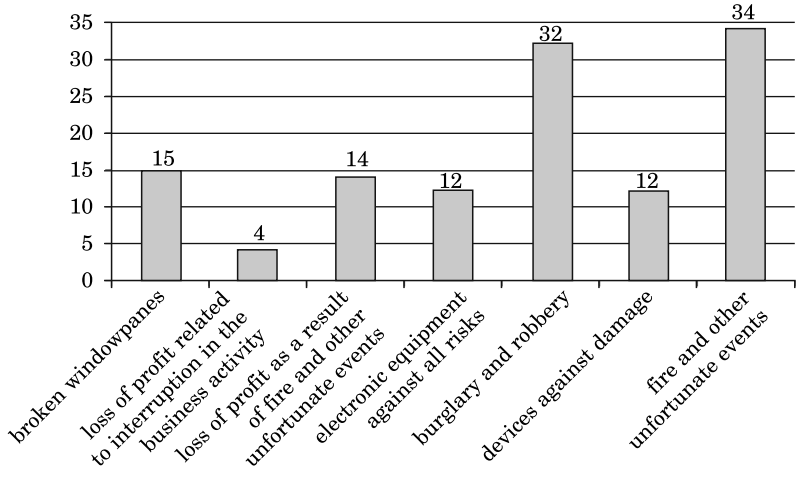

Fig. 1. Risks insured by the owners of Olsztyn pharmacies
Source: Own study on the basis of research.

As results from the data presented in Figure 1, the most popular insurance related to running a business activity is insurance against fire and other unfortunate events. 34 pharmacy owners (i.e. all who bought protection for running a business activity) declared having such protection for both the fixed property and the movable property. "Fire" insurance is often treated as a basic

insurance. This basis is often extended by buying protection against burglary, which was confirmed in this study. As many as 32 pharmacies have such protection. The remaining types of risks included in the research are characterised by a similar level of popularity. Thus, 15 pharmacies have insurance for windowpanes against breaking, 14 pharmacies have been insured against a loss of profit as a result of fire and other unfortunate events (this insurance is often treated as an extension to the insurance of fixed and movable property against fire and other unfortunate events) and insurance of electronic equipment against all risks and devices against damage have been declared in 12 cases. The smallest group of the respondents (4 pharmacies) claimed having insurance against the loss of profit related to interruption in their business activity.

During the research, particular attention was given to the popularity of insurance against risks strictly related to the activity of pharmacy. The obtained data are presented in Figure 2.

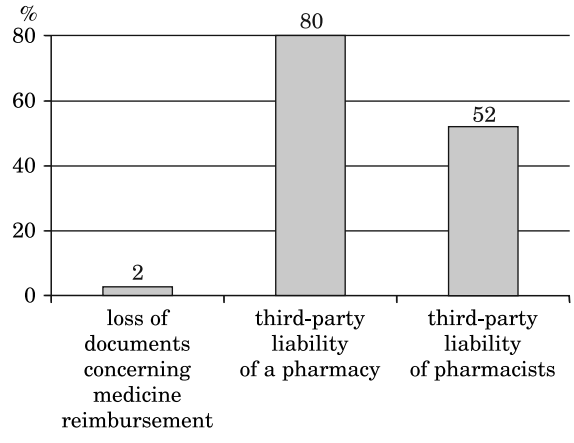

Fig. 2. Insurance of Olsztyn pharmacies directly related to the specific character of their activity
Source: Own study on the basis of research.

On the basis of the data presented in Figure 2, it can be claimed that the insurance which, apparently, should be often concluded, enjoys the lowest popularity. Only 2% of the surveyed claimed protection against the loss of documents concerning reimbursement of medicines. This is a very low result in view of the fact that differences in the price between reimbursed and full-price medicines are very high, and the pharmacist who sells the medicine for the reimbursable price and loses the required documents suffers a loss resulting from the price difference of the medicine.

The situation in case of third-party liability insurance of pharmacists is definitely better. Such protection has been bought by many more owners – 80% in the analysed case. 52% respondents also declared having third-party liability insurance for a pharmacist. In each case in which a third-party liability insurance agreement was concluded, it concerned (pursuant to respondents' answers) liability in tort – the damage arising as a result of a tortious act related to owning a property. This could be, for instance, a situation in which an improperly-placed advertising stand falls on the customer. On the other hand, the purchased third-party liability insurance of a pharmacist is, first of all, a contractual liability – concerning a failure to perform or improper performance of an obligation. Its scope include: dispensing a wrong medicine, dispensing a medicine past its expiry date, improper making of a medicine on-site, in the pharmacy.

An important part of the research was to identify the factors directly influencing the conclusion of an insurance agreement (Figure 3).

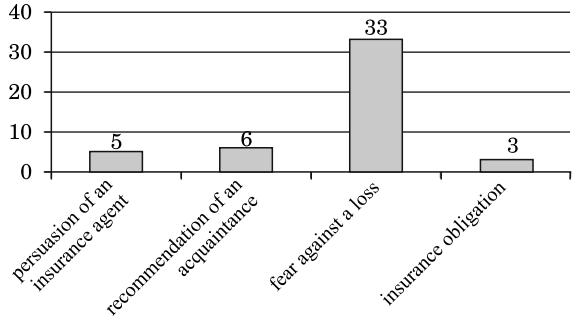

Fig. 3. Reasons for concluding the insurance agreement
Source: Own study on the basis of research.

This part of the study allowed multiple selection answers. As results from Figure 3, the most often indicated reason for concluding the insurance agreement was the fear against the occurrence of a loss. Such an answer was provided by 33 respondents. Other mentioned factors proved less important. In the examined group, six persons admitted that their acquaintance convinced them to buy the insurance policy, while only three persons declared that insurance was a part of their obligations related to the activity pursued.

The specification of reasons for choosing an insurance company proved equally interesting. The results of the study are presented in Figure 4. Here, as in the previous point, multiple selection answers were allowed.

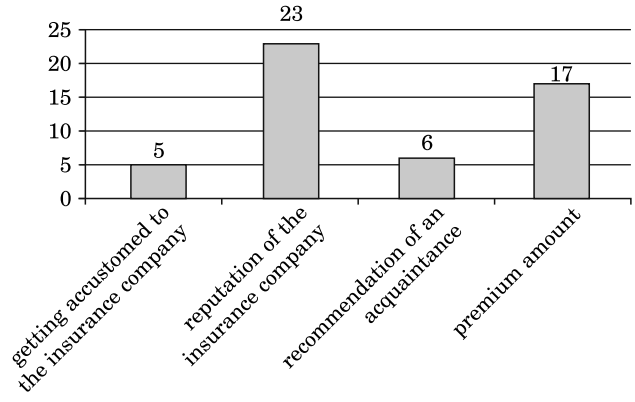

Fig. 4. Determinants for selecting the insurance company
Source*:* Own study on the basis of research.

Despite declarations of having read the general terms and conditions of insurance and making an informed choice of insurance products offered by a specific insurance company, none of the examined persons emphasized this fact while responding to the question concerning the factors for selecting a specific insurance company as a provider of insurance protection. As results from the above data, the reputation and market position of the insurance company is the most important for respondents. The research revealed that the declared reputation translates into the choice of services provided by PZU S.A. This regularity was observed in a definite majority of cases. The second-most popular insurance company in Olsztyn was Generali. Price is still very important while purchasing the policy. It is difficult to clearly specify the importance of coverage directly related to the real needs of the policy holder in cases of purchasing cheap insurance – here, no responses allowing definite conclusions to be drawn were obtained. Most frequently, no answer was provided to this question. This relationship still remains an open subject.

An attachment to one insurance company can be observed in the examined population. 79% respondents claim that they have never changed their selected insurance company, while 21% admit a one-time change. The reasons for a declared change were, respectively:

– a new, most advantageous offer;

– lack of satisfactory, professional consultancy in the previous insurance company;

– a high insurance premium.

The owners of Olsztyn pharmacies were also asked about personal accident insurance related to the activity of the pharmacy. It should be mentioned here that such insurance is offered by insurance companies and is often included in

packages addressed to pharmacies. In the examined population, only 20% respondents declared having this type of protection.

Conclusions

The research undertaken made it possible to characterise the popularity of specific types of insurance in the pharmacy market of Olsztyn. The survey found that not all pharmacies were insured. The most popular among the respondents are undoubtedly insurance policies related to running a business activity and, in this group, protection against fire and other unfortunate events was declared by 81% respondents. Insurance against burglary was declared by only two entities less, while fifteen pharmacies have insurance for windowpanes against breaking which, in the context of the examined population, is quite high.

A surprisingly low result was obtained while verifying the popularity of insurance typical for running a pharmacy. Only 2% of the respondents were insured against the risk of losing documents concerning reimbursement of medicines, while about 52% had signed third-party liability insurance agreements for pharmacists. This is not a very satisfactory result in view of the fact that the coverage of this insurance provides a significant protective umbrella for practicing the profession of a pharmacist, as mentioned in the text.

The fact of concluding an insurance agreement is, first of all, influenced by the fear against the occurrence of a loss. On the other hand, the choice of the insurance company is more often determined by its popularity in the market and the price (premium amount) for which it is willing to protect the customer with its insurance coverage rather than by specific, precise needs and the analysis of the conditions specified, for instance, in the general terms and conditions of insurance for the product offered.

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GUIDELINES FOR TEXT PREPARATION FOR THE "OLSZTYN ECONOMIC JOURNAL"

The "Olsztyn Economic Journal" (ISSN 1897–2721) is a scientific magazine published in English at the Faculty of Economic Sciences of the University of Warmia and Mazury in Olsztyn. During the years 2007–2012 the magazine was published semi-annually and as of 2013 it was transformed into a quarterly. It publishes scientific papers of methodical, review and empirical nature in economic sciences. The Olsztyn Economic Journal is published by the University of Warmia and Mazury in Olsztyn Publishing House. The printed format is the primary form of the magazine. Additionally, all numbers of the magazine are available also in the electronic format on the website: http://www.uwm.edu.pl/wne/oej.php; http://wydawnictwo.uwm.edu.pl (subpage Czytelnia)

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– Polish authors deliver paper text in Polish and English (the English language version should present the name and surname of the translator). Correction of the English text should take place after receiving the positive review and/or responding to the reviewer's comments.

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– All papers are subject to the initial evaluation by the editor in chief, subject editors, statistical editor and evaluation of contents by reviewers.

– Authors should consider comments by reviewers and comment on them.

After receiving the review, the author shall send to the editor:

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3) response to the review,
4) author's statement.

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4) There are no:

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Each paper should consist of the identified following parts:

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3) interpretation of the results obtained, discussed in the individual parts of the paper,
4) conclusion,
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The units of measurement should be given according to the international SI system. Tables and figures (photographs and graphs) should be numbered with Arabic numbers and provided with the title and source. Mathematic formulas should be written in the WORD editor. Letters of the Greek alphabet, symbols, special signs should be clearly explained in the margin with indication which of them are to be set in ordinary, italics or bold set.

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If the reference in the text concerns a collective paper, instead of the author;s name the **full title of the paper** (Elektronika. 1993) or the abbreviated title (Dbajmy o właściwe suszarnictwo... 1992) should be given.

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Collective papers: Dbajmy o właściwe suszarnictwo ziarna. Red. K. Lewin 1982. T. 1. PWN, Warszawa.

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Tomczyk Z. 1996. *Wynalazczość i racjonalizacja źródłem postępu technicznego*. Gosp. Narod., 6: 21–25.

Unpublished papers: Malicki K. 1990. *Ubój świń. Instytut Żywienia Zwierząt ART*, Olsztyn (typewritten text).

Kowalski H. 1992. *Wychów cieląt. Katedra Hodowli Bydła ART*, Olsztyn (doctoral dissertation).

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Tables, figures and other appendices should be recorded in separate files. On the CD the number of the figure in the paper should be included in its title.

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