PARP

2008

Report on the Condition of the Small and Medium-Sized Enterprise Sector

in Poland in 2006–2007

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ISBN 978-83-60009-88-8

Edition I

1000 copies

Printing preparation, print and binding:
Agencja Reklamowo-Wydawnicza A. Grzegorczyk
www.grzeg.com.pl

Contents

Dear Readers,

It is a pleasure to present to you another, eleventh edition of the *Report on the Condition of the Small and Medium-Sized Enterprise Sector in Poland*, prepared by Polish Agency for Enterprise Development.

The present edition of the Report was structured into three main themes. The first part – *Condition of the Small and Medium-Sized Enterprise Sector in Poland in 2005–2007*, similarly to the previous editions, presents the macroeconomic situation in Poland in 2007 as well as in-depth analyses concerning the condition of the SME sector at the national and regional level. This part of the Report is especially important as the data presented here are collected exclusively for the Report, therefore the thematic structure proposed, as well as the regional context and the scope of data prove the uniqueness of this position.

The two subsequent parts of the Report present the results of the research conducted by PAED in 2007–2008. Research constitutes a significant part of PAED's scope of activity. It results mainly from the statutory obligations laid upon the Agency, which include, *inter alia* researching the role of the SME sector in Polish economy as well as collecting and publicising the relevant information. Moreover, the results of PAED's research activity have a vital application function, as the information collected constitute the basis for designing new or adjusting the existing support instruments.

The second part of the Report, *The factors of development and competitiveness of enterprises*, presents the results of two research projects commissioned by PAED in 2008, the objective of which was an in-depth analysis of the factors conditioning the competitiveness of Polish enterprises and the development potential of the sector. Highly diversified internal and external factors affecting the market position of enterprises were the subjects of the research. This part of the Report is concluded in the chapter devoted to PAED's activity, mainly in the area of support co-financed from the EU funds, due to which there is a more and more visible change in the structure of enterprises' financing, which is indicated by the results of PAED's research.

The third part of the Report, *Research on the Innovations in Enterprises*, presents the results of three research projects, analysing the determinants enhancing the innovation processes in enterprises. The research on innovations play a very important role in PAED activities in recent years. Polish entrepreneurs, not fully aware of the role and significance of innovation processes in the global economy, definitely need the educational and financial support in this area. The results of research presented indicate not only innovation gaps, but also good practices, in the activity of enterprises, business environment and scientific circles, and the recommendations presented may be of help for various groups of stakeholders, including public institutions shaping and implementing the policy towards the SME sector.

In conclusion, we would like to express our gratitude for any suggestions or comments, which we always regard as valuable source of inspiration for our work on subsequent editions of the Report.

The authors

Part I
Condition of the Small and Medium-Sized Enterprise Sector in Poland in 2005–2007

Chapter 1

Macroeconomic situation in Poland in 2007[1]

1.1. Economic growth

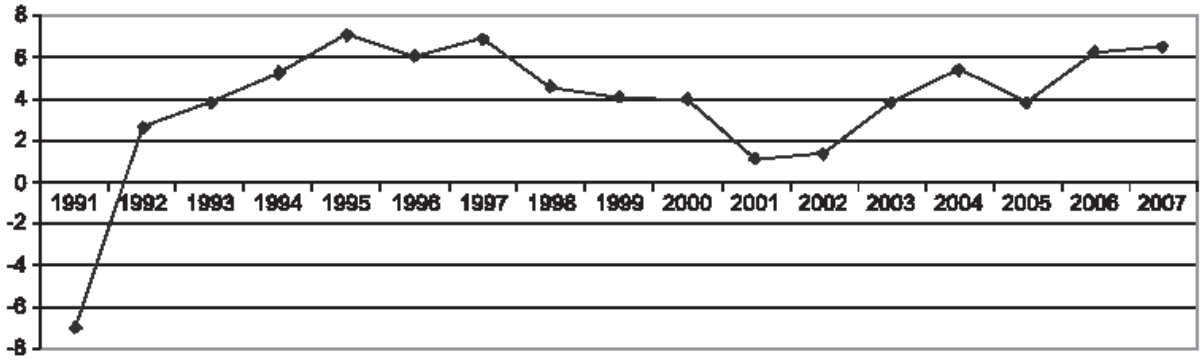
2007 was another year of strong economic growth and the growth rate exceeded the official forecasts and was the highest over the last 10 years. Gross Domestic Product reached the value of PLN 1 167 795 million. The acceleration was caused by a significant increase in both domestic (investment and consumption) and external demand. In 2007, as compared to the previous year, the domestic demand increased by 7.3%. It was due to an increase in the overall consumption by 4.2%, of which per capita consumption – by 5.2%, and due to an increase in gross fixed assets investments by as much as 20,4% - the highest growth over the last ten years. Investment rate increased to 22% versus 19.7% the previous year. Investment growth was possible due to improvement of the financial situation of enterprises, easier access to external financing (more liberal procedures of awarding bank loans, lower interest rates), and benefiting from the European Union structural funds.

Strengthening the GDP growth rate was noted mainly due to acceleration of the growth rate of Gross Value Added in construction, where the growth, as compared to the previous year, amounted to 15.6%, industry – 7.7%, and market services – 6.9%. Again, the trend of supporting economic growth was weakened by the net exports.

The rate of Gross Domestic Product (GDP) growth in 2007 was 6.6%, higher by 0.4 percentage point than the previous year. However, it is alarming that the growth was lower each quarter. In the first quarter of 2007 there was an increase by 7.3%, in the following two quarters – 6.5% each, and in the fourth quarter – 6.4%. This trend is opposite to the one observed last year, when GDP systematically increased in the consecutive quarters.

Economic upswing in 2007 was caused by a significant growth of domestic demand, in particular for investments and private consumption. The high growth of investments was due to several factors: good financial situation of enterprises, new resources from Structural Funds, influx of direct foreign investments and the general positive expectations concerning demand for goods and services on the domestic market. The growth of private consumption in turn resulted from the improvement of the situation on the labour market, moods of households and their income situation.

Chart 1.1. GDP growth rate in Poland in 1991–2007 (%)



Source: Authors' compilation of CSO data.

[1] In this Chapter CSO data published in the following publications were used: *Information on the Socio-Economic Situation of the Country: 2007, Registered Unemployment I-IV quarter 2007, Polish demographic situation. Report 2005-2006*. The Government Population Council, 2006, Inflow of Foreign Direct Investments to Poland in 2007. NPB 2008, World Development Indicators database, World Bank 2008, The World Factbook, Central Intelligence Agency https://www.cia.gov/library/publications/the-world-factbook/geos/pl.html. Statistical data presented in this material are not of final character and in the future may be subject to slight corrections.

In 2007 sold industrial production rose by 9.5%, which indicates deceleration as compared to the previous year, when the growth rate in this category amounted to 11.2%. The share of private sector in sold industrial production increased from 83.6% in 2006 to 84.9%. In enterprises employing more than 9 people sold industrial production was higher by 9.8% than in 2006 (in 2006 increase by 11.9%) and it increased in *Industrial processing* – by 10.9% (the year before the growth in this section was 13.5%), *Electricity, gas and water production and supply* – by 1.9%. In contrast, there was a decline in *Mining* – by 0.3% (in 2006 the decline was 1.3%).

The highest growth rate was noted in sold production of fixed assets – consumer goods – growth by 18% and investment – by 17%. A significant growth of sold production was noted among enterprises producing mainly supply goods (by ca.10%) and non-fixed consumer goods (by ca. 8%). The decrease in sold production was noted in enterprises producing mainly the goods connected with energy (by 0.1%).

The change in the level of sold production was mainly caused by the changes in processing industry, where the growth amounted to 13.4%. In 2007 the work performance In industry increased by 6%, with the growth of employment amounting to 3.5% (for the previous year it was 9.4% and 2.2% respectively).

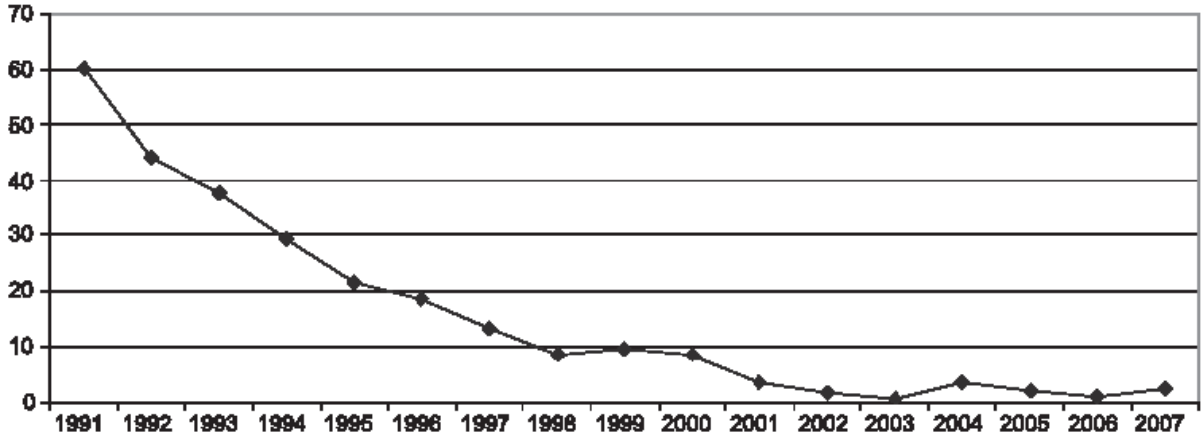
It should be stressed that in 2007 positive changes in the production structure were noted. Further recovery of pro-development activity ensued. The production of goods among the groups perceived as the drivers of technical development increased by 13.9%. It is more than the total sold production in industry, yet much less than the growth of pro-development production from the previous year (24.8%).

The value of gross fixed capital formation in 2007 versus the previous year increased by ca. 20.4%. The investment rate in national economy increased by 2.3 percentage points, reaching 22% in 2007.

1.2. Inflation

In 2007, for the first time in 3 years, the increase in the prices of consumer goods and services was higher than in 2006 and amounted to 2.5% (versus 1% the previous year). By the end of the third quarter the inflation was between 1.2–2.6%, in the fourth quarter it strongly increased, reaching 4% at the end of the year. Such value of inflation was higher by 0.6 pp than inflation projected in the Budget Act and higher than the target set by the Monetary Policy Council. The inflation was also higher than the average noted for the EU27. The growth rate of prices was most highly affected by the growth of food prices (caused by failure of the fruit crop in the country and increase in prices on global markets) as well as goods and services connected with apartment maintenance and the growth of fuel prices due to the growth of crude oil prices. The average monthly growth rate of consumer goods and services prices amounted to 0.3% and was higher than that from the previous year (0.1%).

Chart 1.2. Inflation in Poland in 1991–2007 (%)



Source: Authors' compilation of CSO data.

1.3. Condition of public finance

In 2007 State budget revenues totalled PLN 235.9 billion (103.1% of the figure assumed in the Budget Act), which represented a 19.4% as compared to 2006. Expenditures amounted to PLN 252.9 billion (97.7% of the amount projected) and increased by 13.6%. The State budget deficit was nearly PLN 17 billion and was lower by as much as 32.5% than the previous year.

The growth in State budget revenues resulted mainly from the increase in the tax revenues: indirect, including the excise, corporate and personal income tax (the increase by 14.9%, 16.6%, 27.1% and 25.2% respectively).

Transfers from the EU funds constituted 3.2% of the State budget revenues.

The most significant item on the side of budget expenditures comprised subsidies to local government units (14.5% of all expenditures), grants to the Social Insurance Fund (9.4%) and servicing of the public debt (10.9%). In 2007 the improvement in the composition of budget expenditures was noted – the share of "fixed" expenditures decreased. However, the improvement resulted mainly from the increase in the budget revenues due to economic upturn, and not due to public finance reform. Therefore, it may be assumed that deceleration of economic growth will automatically cause a return to the former composition of budget expenditures with the predominance of "fixed" expenditures.

1.4. Demographic situation of the country

As of the end of 2007 the population of Poland was 38.1 million. It means that again an actual decline of the population of our country was noted. The decline amounted to 10 thousand persons. A depopulation of Poland prevails since 1997. Since then the number of Poles decreased by 175 thousand. In 2007 the population growth rate was -0.03 versus -0.08 the previous year. The major cause of the decline were migrations abroad. Within 12 months of 2007 this was the reason for the decline by 21 thousand persons. However, there are positive indicators of changes – the number of persons leaving Poland for a permanent stay decreases, while the number of persons returning from emigration increases – in 2007 it amounted to 15 thousand. It is estimated that in 2007 as much as 1 950 thousand Poles were on a temporary emigration.

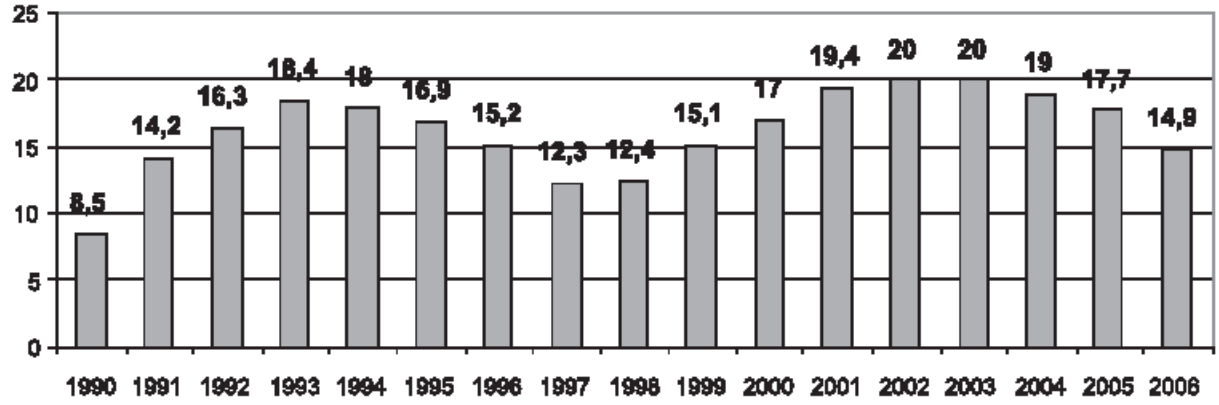
For many years Poland has been characterised by one of the lowest in the EU natural growth rate. The immediate cause of this condition is the low number of births. Since 1989, when the systemic transformation in Poland began, women fertility rate decreased significantly – from 2.03 in 1989 to 1.27 in 2006. Currently, it does not provide for the direct generation replacement, however some improvement was noted last year. In 2007 the number of births slightly increased – 388 thousand children were born, which is more by almost 14 thousand than the previous year. Therefore, natural growth was again positive – there were 11 thousand more births than deaths (in 2006 the difference was 5.7 thousand).

1.5. Labour market

Due to a high rate of economic growth, good financial results of enterprises – enabling maintaining the old and creating the new work places, better availability of job offers and gainful emigration, 2007 was another year when significant improvement in the labour market was noted. At the end of 2007 the number of persons employed in the national economy was 13.6 million and was up by 3% comparing to the previous year. Average employment in the corporate sector increased. At the end of December 2007 it amounted to 5.1 million (in enterprises employing more than 9 people), 4.7% more than in 2006. Employment rate increased in almost all sections of economy, the highest increase was noted in *Construction* (by 9.2%), *Tourism* (7.4%), *Trade and repairs* and *Real estate and business services* (6.7% each). Falling employment rates were registered only in *Mining* and *Electricity, gas and water production.*

At the end of 2007 there were 1.7 million registered unemployed, almost 562.8 thousand persons fewer than in 2006 and over 1 million fewer than two years before. The unemployment rate registered at the end of 2007 decreased to 11.4% of the total active labour force, which was less than in 2006 by 3.4 percentage point.

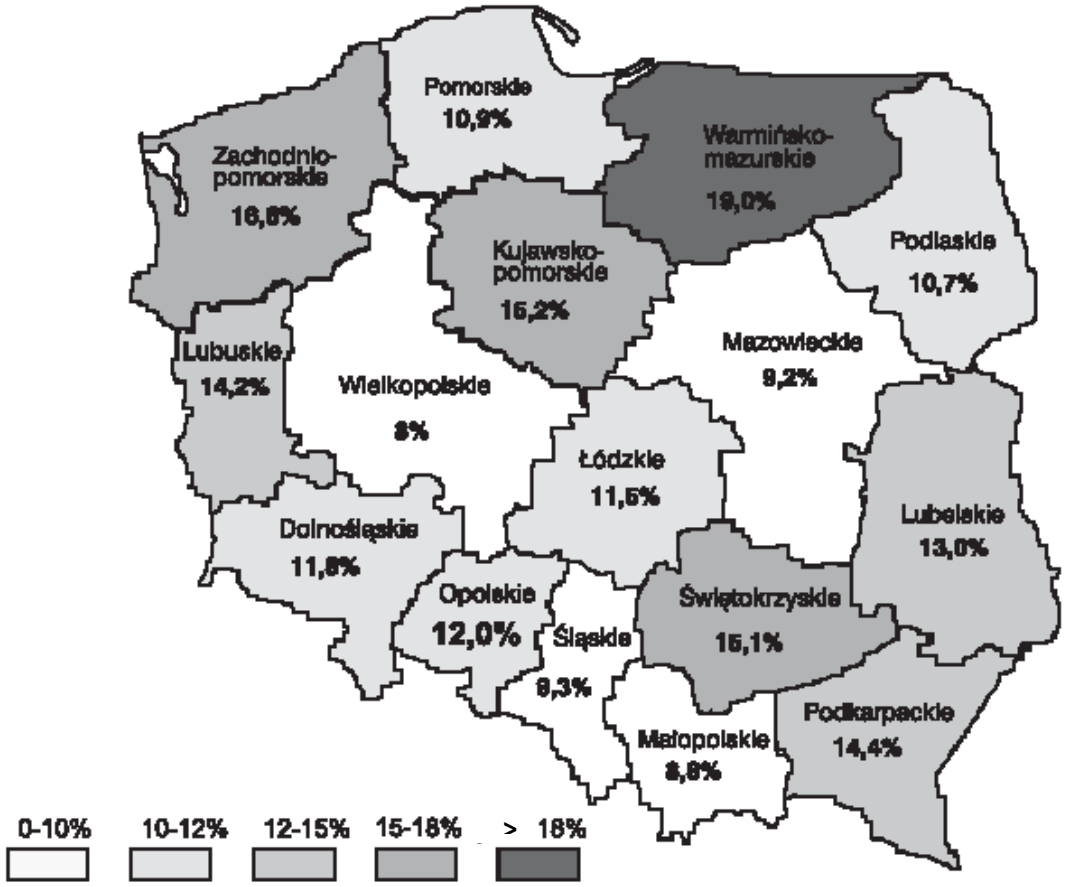
Chart 1.3. Unemployment rate in Poland in 1990-2007 (%)



Source: Authors' compilation of CSO data.

Unemployment rate decreased in all voivodeships. However, a considerable diversification of unemployment rates in individual voivodeships. The highest level was registered (as in the previous years) in the Warmińsko-Mazurskie (19.0%), Zachodniopomorskie (16.6%) and Kujawsko-Pomorskie (15.2%) voivodeships while the rate was the lowest in Mazowieckie, Małopolskie and Wielkopolskie voivodeships (9.2%, 8.8% and 8% respectively).

Map 1.1. Unemployment rate by voivodeship in December 2007



Source: Authors' compilation of CSO data.

The number of unemployed not eligible for unemployment benefits as of the end of the year was 1.4 million, i.e. 85.7% of all unemployed – fewer than the previous year by 0.8 percentage point. Losing the right to

these benefits results mainly from the fact that 2/3 of unemployed seeks jobs for a period longer than one year (in 2007 – 62.6%, fewer than in the previous year by 3.1 percentage point).

In 2007 the age structure of the unemployed changed. In the previous years young persons aged up to 24 faced the most difficult situation on the labour market. Currently, their situation has improved significantly. The share of young persons in the total number of unemployed was 19% and as compared with the previous year – decreased by 1.6 percentage point. On the other hand, the phenomenon of unemployment among the oldest persons, aged 50 and more, increased. In 2007 they constituted 21.7% of the unemployed, while in the previous year – 18.8%, which indicates the increasingly more difficult job situation of this age group.

In 2007 both the number of job offers and the number of persons participating in active measures of counteracting unemployment were higher. In 2007 Labour Offices received 1242.3 thousand job offers, an increase by more than 11.2% relative to a year before. Also the number of job offers not answered for more than one month increased – they constituted 44.8% of all job offers available.

1.6. Wages

2007 was the year of rapid growth of wages in economy, the highest for 5 years. The average monthly gross wage in the national economy was PLN 2 888, a growth of 9.2% relative to 2006. The corresponding figure for the enterprise sector was PLN 3 246 – 7.2% higher than in the previous year. Wages rose in almost all sections of national economy, but the highest growth was registered in construction.

In 2007 the average old-age and disability pension under the non-farm scheme of social insurance was PLN 1 298, and the pension paid to farmers was PLN 813. It implies a growth of 3% and 1.4% respectively. The purchasing power of old-age and disability pension in the employee scheme in 2007 as compared to the previous year has not changed, while in the farmers scheme it decreased by 1.6%. At the same time the number of persons collecting old-age and disability pensions increased by 38.4 thousand (in 2006 it declined by 18.1 persons). It is highly probable that without a change in legislation, which currently enables early retirement for wide groups of employees, such situation will prevail in the nearest future. This will negatively affect social insurance scheme and, indirectly, State budget.

1.7. Investment

2007 was another year of a growth of investment activity in Poland. The gross fixed assets outlays increased by as much as 20.4%, nearly by 5 percentage points more than in the previous year. This was the highest level of outlays growth since 1997. The investment rate amounted to 22%, relative to 19.7% in the previous year. The investments were enhanced mainly by the improvement of financial situation of enterprises and optimistic prognoses on the economic condition of Poland for the next years. The financial absorption of the EU structural funds was also of some significance.

Direct foreign investments amounted to EUR ca. 13.5 billion, which was by ca. 13% less than in the previous year. Nevertheless, this result should be perceived as very good, the highest among all the countries of Central and Eastern Europe.

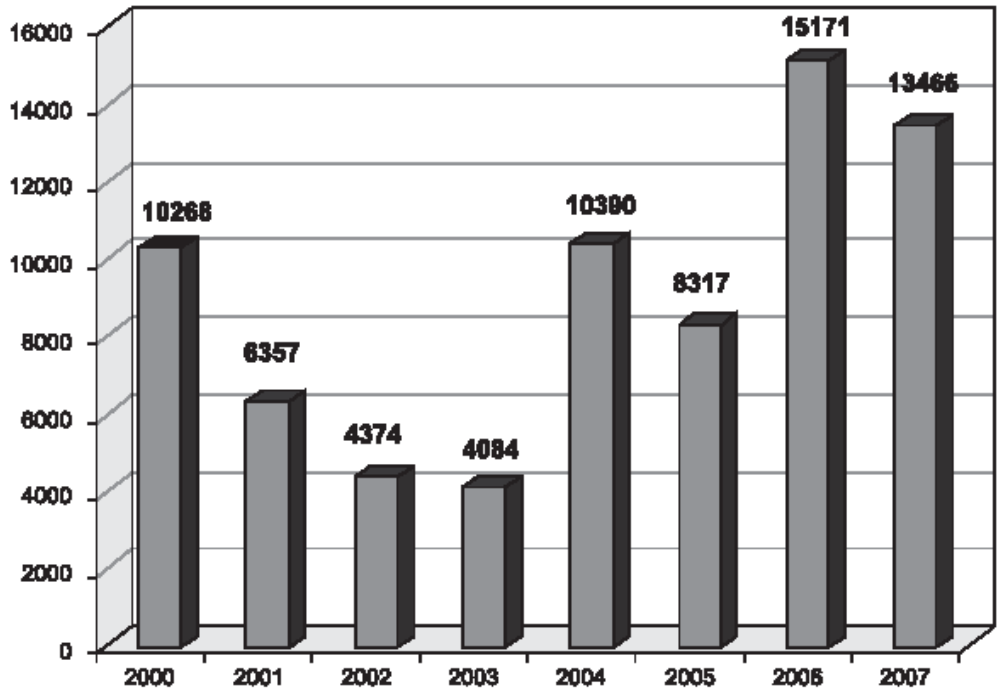
It is estimated that in 2007 85.3% of the direct foreign investment inflow was from the EU states, mainly from France, Germany, Austria, Italy and Sweden.

1.8. Foreign trade

In 2007 there was a further growth of domestic consumption and strengthening of the zloty. This was the reason why Polish entrepreneurs to a greater extent sought domestic markets. Nevertheless, foreign trade continued to grow, yet at the rate lower than in the previous years.

In 2007 export receipts (in constant prices) amounted to EUR 92.7 billion and as compared to the previous year increased by 14.5%, whereas expenditures on imports reached EUR 107.4 billion (an increase by 16.9%). The current balance of payments account after three quarters of 2006 registered a deficit of EUR 14.7 billion.

Chart 1.4. Inflow of direct foreign investments to Poland in 2000–2007 (EUR)



Source: Data from PAIiIZ i NBP

In terms of geographic structure of foreign trade, export to the countries of Central and Western Europe increased significantly, while import from this direction declined. The share of foreign trade with developed countries also decreased. The major trade partner was still Germany, however its share in the geographic structure of foreign trade declined significantly – by ca. 1.3 percentage point.

Another year of negative trends was registered in export: in the structure of foreign trade the share of both outward and inward processing declined. In 2007 outward/inward processing constituted 7.6% of export and 4.7% of total imports, in the previous year – 8.5% and 5.8% respectively. Additionally, in the import structure the share of articles for purposes of investment goods declined.

1.9. Financial market, money

At the end of 2007 the WIG index of the Warsaw Stock Exchange was, as WIRR and WIG20 indices, at the level slightly higher than in the previous year. The main market index, the WIG rose by 10.4%, while the parallel market index, the WIRR increased by 132.4%. The highest growth rates of indices were noted among the group of indices WIG-MEDIA (by 22%), while the greatest decline in WIG-SPOŻYW (by 13.4%). The indices rose in the first and the second quarter, after which the trend was reversed and the indices started declining due to deterioration of the situation on international financial market as a consequence of a crisis on the market of financial instruments connected with higher risk mortgage loans in the US.

In 2007 the total turnover of bonds for all registry systems amounted to PLN 3.5 billion and constituted 0.7% of the total turnover of shares. Of the total turnover, 99.2% was the turnover of State Treasury bonds. The trading volume on the bonds market was down by 36.9% in comparison with the previous year. In 2007 the profitability of treasury securities – from 70 basis points in the case of long-term bonds to 170 basis points for short-term instruments.

In 2007, due to an advantageous economic situation, the demand for financial services increased. Households invested more in investment funds, shares and life insurance policies. In the second half of 2007 this trend was reversed due to economic downturn on financial market, which, with the higher interest rates on deposits resulted in acceleration of natural persons' deposits in banks. In 2007, in the conditions of income situation improvement, households' loans, and in particular housing loans, increased dynamically. A significant increase in loans for enterprises, stimulated by an increase in enterprises' investments, was also noted.

In 2007 an increase in total money resources, deposits and other liabilities and receivables and at the same time a decrease in foreign net assets and net debt of general government were registered.

The total money resources in 2007 increased by 13.1% versus 16% in 2006. The increase was mainly due to growth of receivables (by 29.9%). Receivables from households increased by 38.0% (the year before – 33.4%), from enterprises – by 24.3% (versus 14.3%), from local government institutions – by 7.8% (versus 21.6%). However receivables from social insurance funds decreased by 100.0% (versus the decrease by 43.0% the year before).

Net debt of general government in 2007 decreased by 14.9% to the level of PLN 62 billion (in 2006- an increase by 13.0%).

In 2007 Monetary Policy Council raised the interest rates four times (each time by 0.25 percentage point) – in April, June, August and November. As a result NBP's base interest rates increased by 1 percentage point: NBP's reference rate from 4% to 5%, promissory note rediscount rate from 4.25% to 5.25%, lombard rate from 5.5% to 6.5% per annum.

2007 was another year of strengthening the zloty. The average annual exchange rate was PLN 3.7829 / EUR 1 and it decreased by 2.9% relative to the average exchange rate from 2006. The official average annual exchange rate of the US dollar decreased even more – by 10.8%, and amounted to PLN 2.7667 / USD 1. At the end of 2007, relative to the end of 2006, the zloty strengthened versus euro by 6.5% - to the level of PLN/EUR 3.58 and rapidly (by 16.5%) gained value over dollar to the level of PLN/USD 2.44, with a strong depreciation of the US dollar on global markets as a consequence of a crisis on the market of financial instruments connected with the mortgage loans market in the US.

Within the first half of the year (after the depreciation from the beginning of the year), the zloty exchange rate underwent gradual appreciation with the prevailing advantageous fundaments of Polish economy (high economic growth rate, safe situation of the State budget and balance of payments) as well as positive influence of the existing and expected increases in NBP's interest rates. A limited positive effect on the zloty was also that of the situation on the USD/EUR market, i.e. depreciation of the US currency to the level of USD/EUR 1.35.

In August there was a temporary depreciation of the zloty – when the crisis was revealed, the uncertainty on the global financial markets grew and the currencies of emerging markets were being sold out. In the following months better knowledge on the crisis led to stronger differentiation in the risk assessment of the country between the currencies of emerging markets and, despite the prevailing higher aversion to risk, zloty was gaining value. Polish currency was gaining value along the exchange rate of euro in the conditions of global, strong outflow of capital from the US (exchange rate USD/EUR growth to USD 1.46 as of the end of 2007) with the prevailing positive domestic factors registered in the first half of the year.

1.10. Situation of Poland against the European Union

In 2007 economic growth rate in the European Union Member States amounted to 3.0%. Globally it was estimated at ca. 3.3% versus 2.8% a year before. Poland, with its growth at the level of 5.8% was considered a country at a medium, but stable rate. Among the countries of Eastern and Central Europe, particularly high growth rates were noted in Slovakia and two Baltic states – Latvia and Lithuania.

Due to high and stable economic growth rate Poland, for the first time in years, ceased to be the EU state with the highest unemployment rate. Even in 2006 Poland had the highest unemployment rate among all the EU states, nearly two times higher than the EU average. Within a year unemployment rate declined significantly and currently it does not differ much from the EU -27 average.

Polish labour market has one of the lowest employment rates (the percentage of persons employed in the total population at working age) and population's professional activity in the EU. The low level of professional activity results in the need for maintaining an extensive social security system, which entails maintaining a high level of taxation. In Poland, both these rates – employment and professional activity rate – are on a very low level. In the third quarter of 2007 Poland was on the 21. place in the EU. Only 54.1% of Poles were professionally active, which is 4.5 percentage point fewer than the European Union average. However, it should be stated that the professional activity rates improved as compared with the previous year. Undoubtedly, this was affected by the improvement of the situation on the labour market, including the increase in the number of work places and decline of unemployment rate.

Table 1.1. Economic situation of Poland against the European Union states in 2007

	GDP growth	Unemployment rate	Inflation rate
Austria	3.4	4.3	3.5
Belgium	2.6	7.2	3.1
Bulgaria	d.d.	5.8	11.6
Cyprus	4.6	3.8	3.7
Czech Republic	6.1	4.8	5.5
Denmark	1.6	3.2	2.4
Estonia	6.5	5.2	9.7
Finland	4.1	6.7	1.9
France	2.2	7.9	2.8
Greece	d.d.	d.d.	3.9
Spain	3.8	8.2	4.3
Ireland	3.9	4.3	d.d.
Lithuania	11.6	4.0	8.2
Luxemburg	d.d.	4.9	4.3
Latvia	10.8	5.4	14.0
Malta	0.1	6.1	3.1
Netherlands	3.8	2.9	1.6
Germany	2.5	7.9	3.1
Poland	5.8	8.5	4.2
Portugal	1.8	8.2	2.7
Romania	d.d.	7.2	6.7
Slovakia	9.7	11.0	2.5
Slovenia	6.3	4.3	5.7
Sweden	2.6	6.0	2.5
Hungary	1.1	7.3	7.4
Great Britain	3.3	d.d.	2.1
Italy	1.9	d.d.	2.8
EU-27	3.0	6.9	3.2

Data from I-IX 2007, seasonally adjusted, harmonised, %, EUROSTAT prognosis
Source: CSO data

Comparing the level of Gross Domestic Product (GBP) per capita (calculated with the parity of purchasing power), Poland is still one of the poorest states of the European Union. In 2007 GDP per capita in Poland was USD 16 300. It is less than in Lithuania (USD 17 700), Latvia (USD 17 400) or Slovakia (USD 20 300). GDP lower than in Poland was register only in Bulgaria (USD 11 300) and Romania (USD 11 400), i.e. in the new EU Member States. To compare, the wealthiest EU states have GDP on the level of USD 80 500 – Luxembourg and USD 53 000 – Norway (data: *The World Factbook*, CIA).

Chapter 2
Condition of the SME sector in 2005–2007

The condition of the small and medium-sized enterprises in 2005-2006 was developed on the basis of CSO data, compiled exclusively for this Report. It applies mainly to the data on GDP and value added generated by the SMEs, financial situation of enterprises as well as the information on the sources of financing investments. Additionally, the chapter uses generally available CSO publications, including e.g.: Activity of non-financial enterprises with the relevant year given.

The collective name 'enterprises' means here such economic entities as: state enterprises, foreign-own enterprises and enterprises owned by social organisations and foundations, cooperatives, companies (joint-stock, limited liability companies, registered and limited partnerships, companies limited by shares, professional and civil law partnerships), as well as sole proprietorships engaged in an economic activity. Small enterprises are here understood as enterprises which employ[2] up to 49 persons (including those employing 0–9 persons – so-called micro-enterprises), while medium-sized as those which employ 50 to 249 persons.

2.1. Development trends in 1994–2006

Contribution of small and medium-sized enterprises to the generation of GDP and Gross Value Added

The volume of Gross Domestic Product (GDP) in 2005 was PLN 983 302 million and in 2006 PLN 1 061 031 million (see: Table 1 and 3 respectively in the Annex and Table 2.1 below). Calculated in constant prices, GDP volume increased in 2004–2005 by 3.6% and in 2005–2006 by 6.2%.

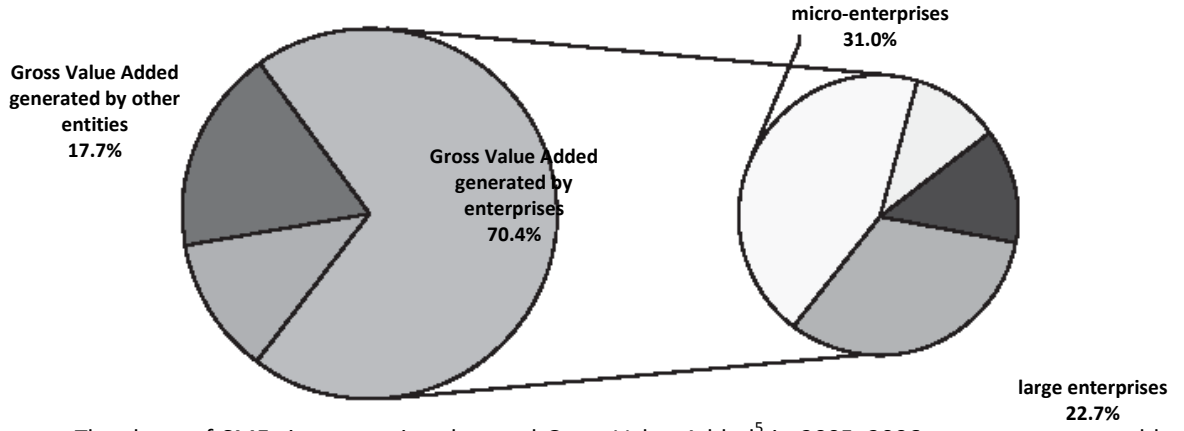
Table 2.1. GDP structure in 2005–2006

Specification	2005	2006
	PLN million	
GDP	983 302.0	1 061 031.0
of which: customs duties and indirect taxes net of subsidies	116 973.0	127 177.0
total Gross Value Added	866 329.0	933 854.0
including: Gross Value Added without section A and B	827 094.0	893 924.0
including: enterprises	686 833.0	746 549.2
of which: 0-9 employees	308 966.3	329 150.4
10-49 employees	71 927.3	77 515.4
50-249 employees	86 982.4	98 602.8
over 249 employees	218 957.0	241 280.6
	GDP = 100%	
GDP	100.0	100.0
of which: customs duties and indirect taxes net of subsidies	11.9	11.9
total Gross Value Added	88.1	88.1
including: Gross Value Added without section A and B	84.1	84.3
including: enterprises	69.7	70.4
of which: 0-9 employees	31.4	31.0
10-49 employees	7.3	7.4
50-249 employees	8.8	9.3
over 249 employees	22.2	22.7
SME share in the generation of GDP	47.5	47.7
SME share in the generation of Gross Value Added	54.0	54.1

[2] The size of an enterprise is determined by the number of people it employs pursuant to an employment relationship (established via a contract of employment, appointment or election). The number of employees of an enterprise does not include owners or co-owners (family members that work in the business). When owners and co-owners are also taken into account in addition to the employed persons, we obtain the number of people working (in work) at the enterprise.

The contribution of SMEs to the generation of Gross Domestic Product[3] in 2006 was 47.7%, of which the share of micro-enterprises – 31.0%, small enterprises (10–49 employees) – 7.4% and medium-sized – 9.3% (see Table 2 in the Annex and Table 2.1 above). These figures include the value added generated by persons who work and SMEs that operate in the so-called grey market. The corresponding ratio[4] of the GDP share produced by SMEs calculated for 2005 was 47.5% (the share of micro-enterprises was 31.4%, that of small enterprises – 7.3% and medium-sized – 8.8%). Therefore, SMEs share in generating GDP did not change significantly between 2005 and 2006. It should here be indicated that the share of medium-sized enterprises in generating GDP increased (by 0.5 percentage point), while that of micro-enterprises decreased. However it cannot be determined whether this is a beginning of a long-term trend or a short-term phenomenon.

Chart 2.1. GDP structure in 2006



The share of SMEs in generating the total Gross Value Added[5] in 2005–2006 was even more stable. In the subsequent years mentioned it amounted to 54.0% and 54.1% respectively. The share of individual categories of SME in generating Gross Value Added changed, however only slightly. Similarly to the case of GBP, the share of micro-enterprises declined in 2005–2006 by 0.5 percentage point (from 35.7% to 35.2%), while the share of medium-sized enterprises increased by 0.6 percentage point (from 10.0% to 10.6%). Also the share of large enterprises increased from 25.3% to 25.8%.

SME share in the generation of Gross Value Added

Taking Gross Value Added generated by enterprises apart from *Agriculture and forestry* and *Fishery and fishing*[6] as 100%, SME share in this value in 2005 amounted to 68.1%, while in the following year – 67.7% (see: Tables 2 and 4 in the Annex). It means a decline by 0.4 percentage points. The decline was caused by a decrease in the SME share in Gross Value Added, present in the three main sections of economy: *Industry* (from 37.0% to 36.4%), *Construction* (from 88.8% to 87.0%), and *Trade and repairs* (from 91.7% in 2005 to 90.4% the next year). An increase in the abovementioned share was noted in the three following sections: *Hotels and restaurants* (from 81.5% to 85.1%), *Transport, stock management and communications* (from 46.8% to 48.3%) and *Other services* (from 74.4% to 75.0% in 2006). However, the increase was not sufficient to compensate for the decline of SME share in generating GDP registered in industry, construction and trade, where large enterprises developed more dynamically than SMEs.

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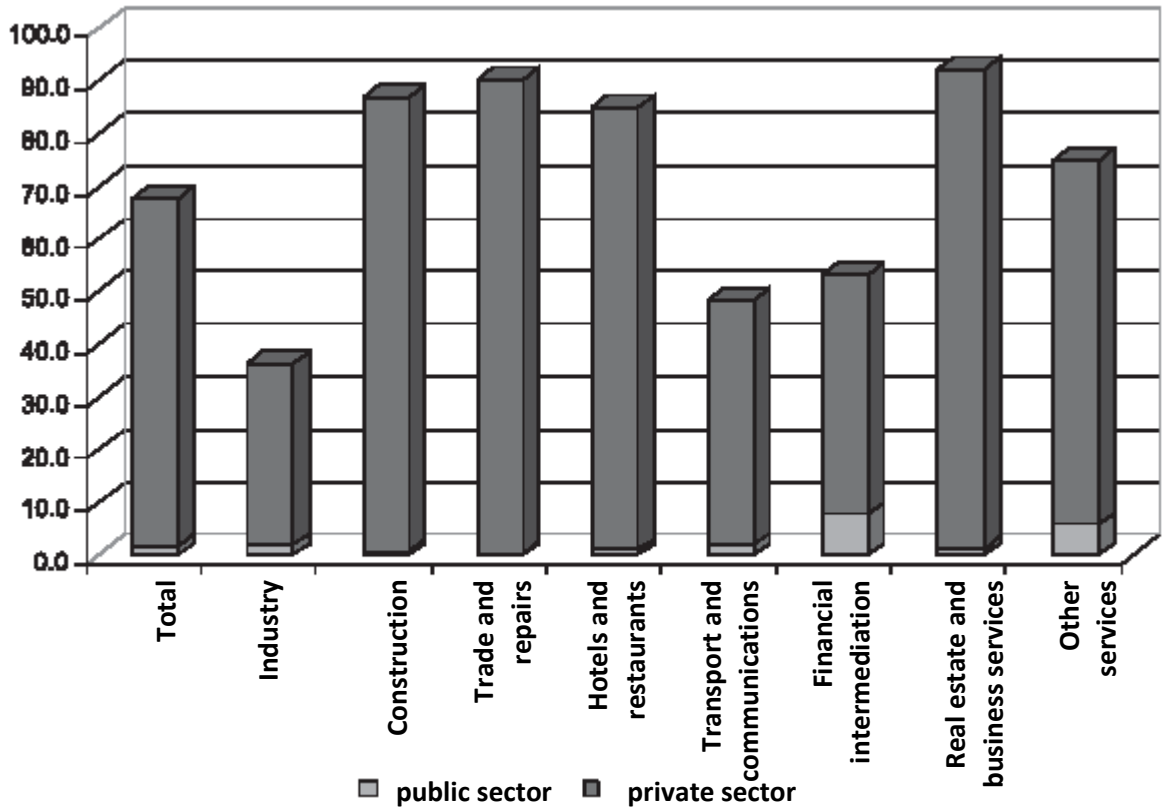
[3] In very general terms, GDP is the sum of Gross Value Added and indirect taxes (including VAT) plus customs duties that are paid into the State budget in a given year, net of subsidies. The amount of indirect taxes and customs duties, whose share in GDP in 2006 amounted to 11.9% (see: Table 2.1), cannot be broken down either by sections of the economy or by enterprise size classes (it is technically impossible to make such estimates). Therefore the share of SMEs in GDP is assumed to be the ratio of Gross Value Added generated by the SME to the total GDP. In 2006 micro-, small, medium-sized and large enterprises jointly produced 70.4% of GDP. With the 11.9% share of taxes and customs duties added, we arrive at 82.3% of GDP. The remaining 17.7% of GDP was generated by enterprises operating in the agriculture, forestry, fishery and fishing sections, individual farms (sections under the symbols A and B), and budget-funded agencies and units, their auxiliary units, special and special-purpose funds and non-profit, political and religious organisations.

[4] Current data on the GDP and added value structure in 2005 varies from that published in the previous Report on SMEs due to the corrections made by CSO to the data on GDP volume for that year.

[5] In 2005 the Total Gross Value Added amounted to PLN 866 329 million, while in 2006 it was PLN 933 854 million (see: Table 2.1 above).

[6] In 2006 Gross Value Added generated by enterprises other than those in sections A and B was at the level of PLN 746 549.2 million (see: Table 2.1 above).

Chart 2.2. SME share in the Gross Value Added generated by enterprises in particular sections of economy in 2006



Gross Value Added per person working in the private sector

From the beginning of the present decade up to the end of 2004, GDP growth in private enterprises was caused mainly by the growth of Gross Value Added per person working, with only slight increase or even a decrease in the number of working persons. On the other hand in 2005 a reverse phenomenon was registered: a slight increase in work performance measured with Gross Value Added per working person and at the same time increase in the number of working persons. Therefore, although in 2004 Gross Value Added in constant prices rose by 6.2% and the number of working persons, including grey market, increased only by 0.6%, in 2005 the growth of work performance amounted to 2.1% and the increase in the number of working persons was 2.5% (see: Table 2.2 below). In 2006 the situation was even more advantageous than a year before, as the growth of the number of working persons, including grey market, amounting to 2.5%, i.e. the same as in 2005,was accompanied by a faster growth of performance, amounting to 5.1%. Hence, even in the two following years the economy was developing differently than in 2000–2005, with the simultaneous growth of both: employment and performance. It is vital with regard to the still high unemployment rate prevailing in Poland.

Table 2.2. Gross Value Added growth rate per person in work at private enterprises in 2005–2006 (constant prices; previous year = 100%) by enterprise size class and the number of working persons including grey market

Year	Private sector total	of which enterprises with the number of employees		
		0–49 persons	50–249 persons	>249 persons
	Gross Value Added growth rate per person in work (constant prices; previous year = 100%)			
2005	102.1	103.9	92.3	102.1
2006	105.1	105.3	107.1	102.9
	Growth rate of the number of persons at work including grey market (constant prices; previous year = 100%)			
2005	102.5	100.8	103.0	107.4

2006	**102.5**	**100.0**	**104.4**	**108.6**

In 2006 the growth rate of Gross Value Added in private enterprises, calculated in constant prices, amounted to 7.7% and thus was higher than GDP growth rate in the whole economy (6.2%). Gross Value Added generated in small enterprises (up to 49 employees) increased by ca. 5.3%, in medium-sized by 11.8% and in large enterprises – by 11.7%. It should be underlined (see: Table 2.2 above) that medium-sized and large enterprises reached almost identical growth rate of Gross Value Added in a different manner – the former mainly due to an increase in work performance (by 7.1%), while the later mainly due to increasing employment (by 8.6%).

2.2. Registered and operating SMEs in 2005–2007

Entities registered and removed from the REGON register in 2005–2007

The number of entities registered with the REGON register[7] (excluding *Agriculture and forestry*, *Fishery and fishing* and *Public administration*) at the end of 2005 was 3 501 114, the following year – 3 517 898, and at the end of 2007 – 3 564 602 (see: Table 2.3 below).

Table 2.3. Economic entities registered with the REGON register as of year-ends of 2005–2007 (excluding *Agriculture and forestry*, *Fishery and fishing* and *Public administration*)

Year	Total	of which entities with the number of employees			
		0–9	10–49	50–249	>249
The number of entities as the end-year					
2005	3 501 114	3 333 607	138 321	25 017	4 169
2006	3 517 898	3 348 708	139 986	25 057	4 147
2007	3 564 602	3 392 583	142 729	25 110	4 180
Previous year = 100%					
2005	101.0	100.9	103.2	100.4	96.0
2006	100.5	100.5	101.2	100.2	99.5
2007	101.3	101.3	102.0	100.2	100.8

The number of entities registered with the REGON register changed only slightly in 2005–2007. The highest was the growth rate of the number of entities employing between 10–49 persons. In 2005–2007 the structure of registered entities according to size was practically unchanged. About 95.2% of all registered entities were units employing 0–9 persons, 4% - units employing 10–49 persons, ca. 0,7% - entities employing 50–249 persons and ca. 0.1% - units employing more than 249 persons.

As opposed to the total number of registered entities, the number of entities removed from the REGON register grew at high rate in 2004–2006. In 2004 it amounted to 191 257 (an increase by 37.5% relative to the previous year), the following year – 211 042 (increase by 10.3%), and in 2006 – 267 467 (increase by 26.7%). However, this should not lead to far-fetched conclusions concerning the condition of economy in the abovementioned period, because in individual years also entities which terminated their activity long time before, are being removed from the REGON register. In 2007 the number of entities removed from the register decreased by 10.6% as compared with the previous year and amounted to 239 155.

Entrepreneurship in Poland. New entities registered in 2005–2007

The number of newly registered entities[8] in 2004 amounted to 227 729, in 2005 it increased to 255 624 and in 2006 it increased even more – to 291 201 entities, while in 2007 it equalled 289 436, i.e. it stayed roughly at the level of the previous year (see: Table 5 in the Annex and Table 2.4 below).

[7] This Report provides the number of entities registered, newly registered and removed from the REGON register with the exception of the so-called local units. CSO presents information on this subject in annual publications entitled: *Structural changes of the groups of entities in national economy*.

[8] The number of registered units as of the end of a given year, decreased by the number of newly created units and increased by the number of units removed from the register that year does not have to be equal to the number as of the end of the previous year. It is because during that given year some entities could have changed the type of their main activity and move between the sections, which are not included in our Report and other sections. On the other hand some units might have been, on their own request, "brought to life", i.e. retrieved from the historical database of the REGON system (to which they were moved as liquidated) and moved to the database of "living" units.

Table 2.4. Newly registered economic entities in 2005-2007 (excluding *Agriculture and forestry*, *Fishery and fishing* and *Public administration*)

Year	Newly registered entities total	of which	
		companies	sole proprietorships engaged in economic activity
	The number of newly registered entities		
2005	255 624	23 465	214 391
2006	291 201	26 044	245 207
2007	289 436	29 559	246 122
	Previous year = 100%		
2005	112.2	101.5	117.2
2006	113.9	111.0	114.4
2007	99.4	113.5	100.4
	The number of newly registered entities total = 100%		
2005	100.0	9.2	83.9
2006	100.0	8.9	84.2
2007	100.0	10.2	85.0

The growth rate of the number of new entities registered in the subsequent years is often perceived as a kind of "barometer" characterising the condition of economy. High growth rate of the number of new entities registered in 2005–2006, following several years of decline, indicates the economic upturn in this period. It should here stressed that also in 2007, despite the slight decline of the total number of newly registered entities, the number of newly created companies strongly grew (by 13.5%) and the number of natural persons declaring economic activity stayed on the good level of 2006. The condition of economy is also indicated by those economy sections, in which there was the highest increase in the number of newly registered entities. Thus, in 2007 the number of newly registered companies highly increased *inter alia* in: *Mining and quarrying* (by over 65%), which may be connected with excavation of sand, gravel and aggregate for the construction of roads and other facilities, in *Construction* (by over 50%) and in *Transport, Real estate and business services* and *Education* (in each of the sections by ca. ¼). In the case of sole proprietorships, the number of newly registered entities increased the most in *Construction* (by over 25%), *Financial intermediation* and *Health care* (by ca. 17%), *Hotels and restaurants* (by over 16%) and in the section *Transport, stock management and communications* (by nearly 14%).

The number of operating enterprises

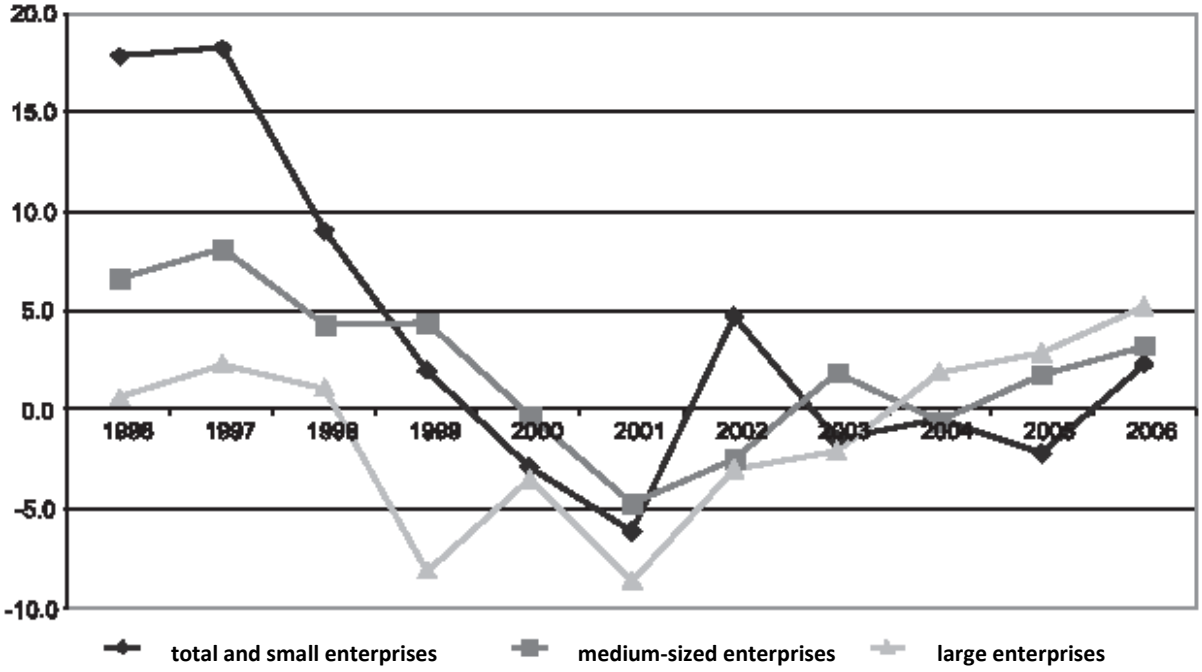
In 2006 the number of operating enterprises[9] increased following three years of decline. It amounted to 1 704 262 and was higher than the year before by 2.3%. The increase was registered in the number of micro-enterprises (by 2.3%), as well as medium-sized (by 3.2%) and large enterprises (by 5.2%). Only the number of small enterprises employing 10–49 persons in 2006 decreased by 0.7% as compared with the previous year (see: Table 6 in the Annex and Table 2.5 below).

Since 1996, the total number of operating enterprises and the number of small enterprises[10] continuously grew up to 1999 (see: Chart 2.3). In 1996–1997 the growth rate was very high – ca. 18%. In 1998 it decreased by half to 9% and the next year it declined to 2%. In 2000 the total number of operating enterprises and small enterprises decreased for the first time since the transformation. The rate of this decline was 2.9% and in 2001 it rose more than two times to the figure of 6.1%. In 2002 the number of operating enterprises increased following two years of decline. It rose by 4.7% due to the increase in the number of micro-enterprises, employing up to 9 persons. In 2003–2005 the number of operating enterprises and small enterprises was again declining, at the rate of 1.5% in 2003, 0.5% the following year and 2.2% in 2005. Only in 2006 this downward trend was stopped.

[9] Information on the number of operating enterprises, i.e. ones actually functioning in economy, was presented by CSO in annual publications entitled *Activity of non-financial enterprises.*

[10] Small enterprises in this part of the Report are units employing 0–50 persons in 1996–1998 and 0–49 persons up to 1999. Comparing the rate of changes in the number of operating enterprises before 1999 and later, it is not possible to consider the category of micro-enterprises, as CSO up to 1998 defined micro-enterprises as units employing 0–5 persons, and later 0–9 persons. The share of small enterprises in the total number of operating enterprises amounts to ca. 99% and therefore the rate of changes in the number of small enterprises and the total number of enterprises are equal in practice.

Chart 2.3. Growth rate of the number of operating enterprises in 1999–2006



In 1996 the number of operating medium-sized enterprises increased by 6.6%, the next year even by 8.1%, while in the following years – 1998–1999 it rose at a slightly lower rate amounting to over 4%. In 2000 the number of medium-sized enterprises was practically at the same level as the year before. In 2001 it decreased by 5.7%, as in 2002, though at slightly lower rate – by 2.5%. In 2003, following three years of decline, the number of medium-sized enterprises increased by 1.9%, in 2004 it decreased slightly by 0.6% and in 2005 it rose again – by 1,8%. The growth of the number of medium-sized enterprises by 3.2% registered in 2006 was the highest since 1999.

Table 2.5. Operating enterprises in 2005–2006 (excluding *Agriculture and forestry*, *Fishery and fishing* and *Public administration*)

Year	Total	of which entities with the number of employees			
		0–9	10–49	50–249	>249
The number of entities					
2005	1 666 679	1 605 276	44 326	14 245	2 832
2006	1 704 262	1 642 552	44 034	14 698	2 978
Previous year = 100%					
2005	97.8	97.7	100.3	101.8	102.9
2006	102.3	102.3	99.3	103.2	105.2
Total number of entities = 100%					
2005	100.0	96.32	2.66	0.85	0.17
2006	100.0	96.38	2.58	0.86	0.18

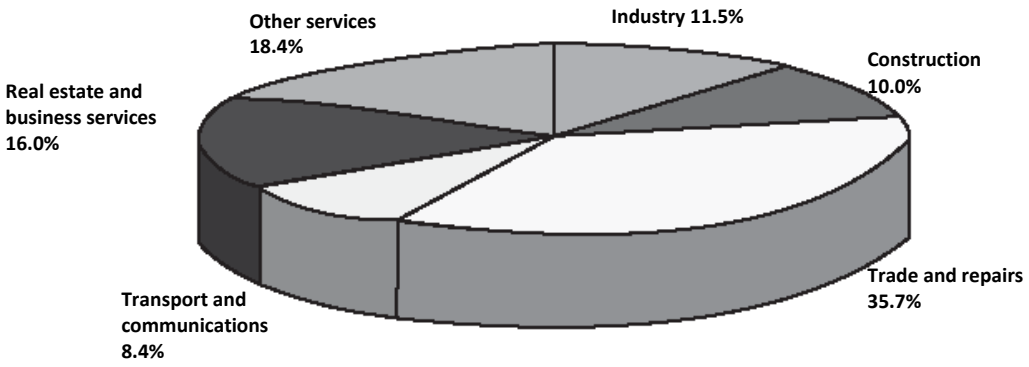
In 2006 the highest growth of the number of operating enterprises – by 7%, was noted in *Education* and the following sections: *Construction* (by 5.9%), *Transport, stock management and communications* (by 4.5%) and *Trade and repairs* (by 2.9%). Apart from the sections *Education* and *Hotels and restaurants*, particularly large number of medium-sized enterprises constituted an increase in construction, transport and financial intermediation, whereas a significant number of large enterprises increased most rapidly in financial intermediation, trade and constructions.

Despite the increase in the number of large commercial enterprises by 13.3%, the number of micro-enterprises, i.e. mainly small family stores, increased by 3%, whereas the number of commercial enterprises employing 10–49 persons, operating in small and medium-sized towns and are most vulnerable to the competition of large chain stores, decreased by 1.3%.

Unfortunately, economic upturn did not accelerate the development of small enterprises in the section of industry. The number of micro-enterprises in industry increased only by 1.3%, while the number of enterprises with 10–49 employees decreased by 2.3%. However, the number of medium-sized enterprises in industry rose by 2% and there was a growth of 5.3% in the number of large industrial enterprises.

If the total number of all operating SMEs in 2006 equals 100% (see: Chart 2.4), the highest number was operating in *Trade and repairs* (35.7%) and in *Real estate and business services* (16%), *Industry* (11.5%), *Construction* (10%) and *Transport, stock management and communications* (8.4%).

Chart 2.4. SMEs in the main sections of economy excluding agriculture in 2006 (%)



Analysing small (10–49 employees) and medium-sized (50–249 employees) enterprises separately, in the former group the in 2006 the highest share was that of industrial enterprises (33.8%) and enterprises in the section Trade and repairs (31.5%). Also among the medium-sized enterprises the dominating ones were industrial enterprises (49.3%), having much greater share than commercial enterprises (19.7%) relative to small enterprises.

2.3. Survivability of enterprises registered in 2001–2006

New enterprises created in 2001–2006

The statistic data on the rate of creating new and liquidation of the existing enterprises[11] are often perceived, next to GDP growth rate, as the main information on the condition of national economy. It is a valuable indicator, as it takes into consideration not only the rigid factors of economic growth, but also those which cannot be measured, i.e. investors moods and prognoses on the possibilities of managing an enterprise.

Last years' statistics confirms this interrelation. In the periods of economic downturn there were much fewer new enterprises than in the period of economic growth. Therefore, the number of newly established enterprises in Poland was increasing up to 1997, when GDP growth was oscillating around 7%. In the following years GDP growth rate decreased annually by as much as 4%. Also the number of newly established enterprises decreased slowly, but systematically, up to 2001. Then first GDP growth rate collapsed (from 4% to 1% per year), and the following year there was a steep decline in the number of newly established enterprises. In 2002 the number of new enterprises decreased by as much as 18.7%. This trend was reversed only in 2005, when there was a significant increase in the number of new enterprises. As compared with 2004, there were 26% more enterprises registered with the REGON system. 2006 was another year of economic upturn, with GDP growth of over 6%. The number of newly created enterprises was the highest since 2001.

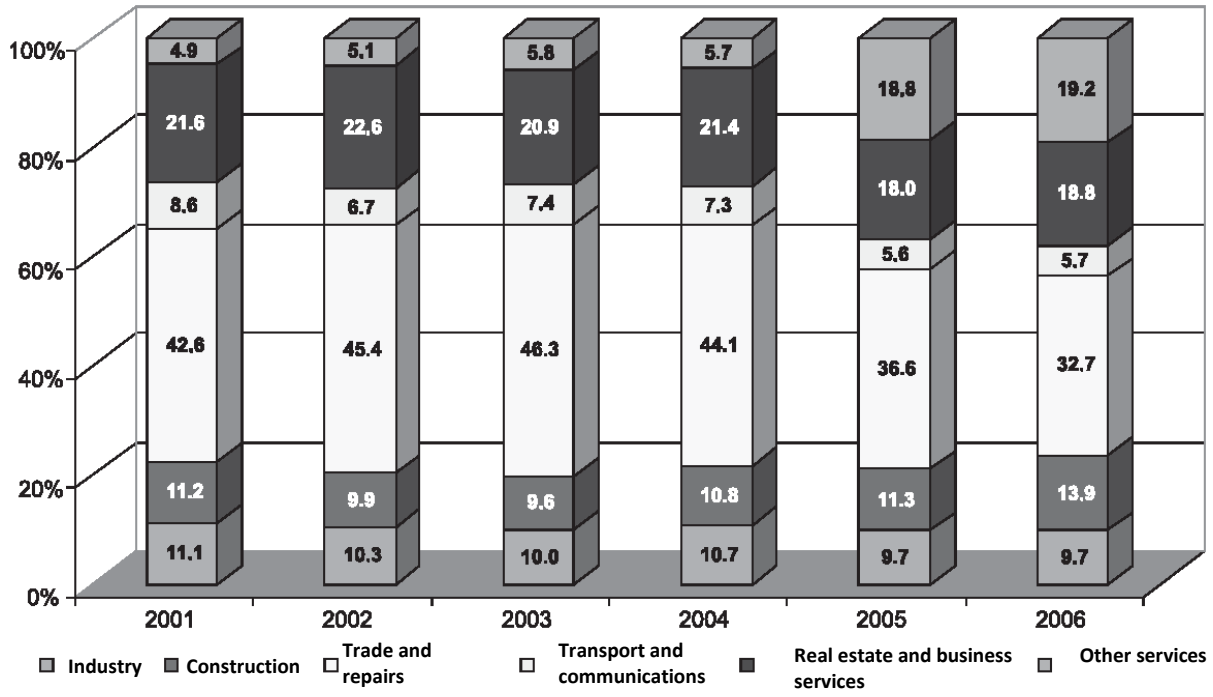
According to CSO, in 2006, as in the previous years, the dominating group of new enterprises were sole proprietorships (94.3% of all newly established enterprises in 2006). Enterprises with no hired employees were in majority.

Comparing the section structure of newly created enterprises in the subsequent years, one may notice some relations. The structure remains relatively stable, however a downward trend in creating commercial enterprises and an upward one with construction enterprises may be observed. It is understandable, hence Polish economy experiences higher rate of economic growth. Better financial situation of enterprises and natural persons increases the demand for real estates. The demand is additionally increased by the inflow of

[11] In the fragment below authors used information from periodical CSO study in publications *The conditions for establishing and operating and development perspectives for Polish enterprises established in2001*– the year which the Report concerns,

the EU structural funds, which are, partially, assigned for investments in construction. This affects the rising number of construction enterprises.

Chart 2.5 Section structure of new enterprises established in 2001–2006 (%)



Among newly established enterprises the dominant group each year were entities undertaking commercial activities (see: Chart 2.5). This was the case also in 2006 when commercial enterprises constituted 32.7% of the total number of new enterprises. Nevertheless, if compared to the previous year, the share of commercial enterprises in the section structure of new enterprises declined by almost 4 percentage points. The second greatest share was that of enterprises in real estate and business services (18.8%). The remaining sections had relatively stable shares. Each year in the group of newly created enterprises industrial enterprises constituted circa 10–11%, transport enterprises – 5–8%, and hotels and restaurants – 4–5%. The fluctuations of these new enterprises shares did not exceed 2 percentage points.

The new enterprises were not distributed evenly across the country. In 2006 as much as 26.5% of enterprises were established in just two voivodeships: Mazowieckie i Śląskie. At the other extreme were the "Eastern Wall" voivodeships. In any of these five voivodeships: Warmińsko-Mazurskie, Podlaskie, Lubelskie, Świętokrzyskie and Podkarpackie, only one in six (26.8%) newly created enterprises is established. However, this trend is being slowly reversed.

Characteristics of enterprises established in 2001–2006 that survived through 2007

Study findings indicate clearly that surviving the first year of operation represents the greatest challenge to enterprises. On average, about 35–40% of enterprises ceased to operate during this period (see: Table 2.6 below).

Table 2.6. Survivability ratio of enterprises created in 2001–2006

Year of establishment	Number of registered enterprises	First-year survivability ratio (%)	Survivability rate through 2007 (%)
2001	209 384	64.5	–
2002	176 492	61.5	24.6
2003	176 867	64.4	34.6
2004	155 853	61.6	42.1
2005	211 142	67.6	51.9
2006	241 352	66.5	66.5

CSO attempted to research the features characteristic of an enterprise which have a decisive impact on its survivability on the market. The research considered the following features connected with the enterprise:

legal form, section and whether it has employees, as well as features connected with the owner: sex, age, education and professional experience. Also the activities undertaken by the enterprise during the first year of its operation, i.e. the market it functioned on, its exports investments, etc. were taken into consideration.

In 2006 newly created enterprises functioned in similar conditions as the year ago. The first-year survivability ratio slightly decreased by 1.1 percentage point (see: Table 2.7 below). However, as opposed to the previous years, the situation was highly diversified depending on the economy section. In half of the sections first-year survivability ratio increased by an average of 2–5 percentage points. In the next five sections the ratio declined, yet the decline was much higher than the increase. The highest decline of survivability ratio was noted in *Other services*, by as much as 17.1 percentage points, *Education* (by 12.2%), and *Financial intermediation* (by 9.9%). The highest chances of surviving the first year among the enterprises established in 2006 had the enterprises of the Health care section. Also transport enterprises and enterprises in real estate and business services were above the average.

In the longer period of time, enterprises connected with tourism (hotels, restaurants) and commercial enterprises had the lowest chances of surviving. For these enterprises survivability ratio for the following years is mostly below the average of all sections. For instance, from the total number of enterprises functioning in the section connected with tourism established in 2002, only 16.7% survived through 2007, while the average for the enterprises in all sections was 24.6%. Similarly, among commercial enterprises the survivability ratio was only 22.4%.

Due to the fact that the research on the conditions for the functioning of enterprises has been conducted since 2001, this is the first time the survivability ration over five consecutive years can be compared. Thus, 28.1% of enterprises established in 2001 and 24.6% of enterprises established in 2002 has survived.

Table 2.7. First-year survivability ratio of enterprises established in 2001–2006 by activity profile

	2001	2002	2003	2004	2005	2006
Industry	65.4	66.2	70.5	68.9	72.3	64.0
Construction	61.9	58.5	67.2	58.7	64.4	65.1
Trade	64.4	62.2	62.1	58.8	67.5	68.8
Transport	74.6	66.2	67.4	65.3	66.8	69.3
Hotels and restaurants	57.2	57.0	60.1	54.3	61.7	66.1
Real estate and business services	63.0	59.0	65.5	65.9	65.3	69.3
Average:	64.5	61.5	64.4	61.6	67.6	66.5

In the longer period of time, enterprises registered as legal persons had greater chances of survival. These enterprises were usually already larger and stronger at the beginning. Their survivability ratio exceeded the corresponding measure for sole proprietorships by several percentage points. It is a continuous trend. Also the enterprises with employees at the commence of activity were in more advantageous situation. For those enterprises the survivability ratio is higher than in enterprises where the only working person is the owner by several percentage points. For enterprises established in 2006, first-year survivability ratio differed due to the legal form by as much as 14.3 percentage points. 20% of enterprises registered as legal persons failed, while among sole proprietorships the ratio was 34.3%. It is significant that in 2006 the first-year survivability ratio of the former increased and that of the later increased, relative to the previous year. Similar situation was the case with the number of employees. Therefore, the hypothesis that the enterprises which from the beginning are larger, stronger, have employees and economic bases (initial capital) have much greater chances of surviving than smaller enterprises, is confirmed.

Barriers to entrepreneurship development

As in the previous research, enterprise owners were asked to rate the difficulties their enterprises encountered in conducting their economic activity. One year after starting their operations, 52.5% of enterprises encountered no barriers. It is almost 3.5 percentage points more than in the previous research. Such firms appear to have the greatest chances of long-term survival. Among the remaining enterprises, 27.5% encountered demand-related difficulties, 14.6% - difficulties with both demand supply, and only 5.4% - supply-related barriers alone.

Among demand-related difficulties, enterprises after their first year of operations most frequently cited strong market competition (72%of answers). Similarly to the previous research, this barrier was experienced most severely by enterprises, regardless of the sector, enterprise location or owner's characteristics. Slightly more than 50% of answers concerned difficulties connected with lowering prices by competitors (thus another barrier relating to the strong market competition). Supply-related barriers were cited much less frequently and

if so, they were usually connected with insufficient internal resources. Interestingly, the perception of supply-related barriers has slightly changed over time. In the previous years an important obstacle (the second most frequently cited) was the difficult access to bank credits. Presently, difficulties with gaining bank credit are on the third position. Nevertheless, it does not mean that obtaining external financing became much easier. Theoretically, banks have lowered the criteria for granting credits and for the increasing number of enterprises, even the small and newly established ones, the credits are becoming available. However, the research indicates that the number of enterprises which were granted bank credits, has not changed significantly. Nevertheless, the barrier connected with gaining credit is currently perceived as less important, hence finding qualified employees is becoming an increasing problem for enterprises. 66% of construction enterprises, 42% of industrial and 38% of service enterprises complained about the lack of employees while indicating supply-related barriers. Within one year the importance of this barrier increased by as much as 15 percentage points and it is indicated by one out of three enterprises experiencing supply problems. It may be expected that in the following years, with the decrease in unemployment rate, this barrier will be indicated by an increasing number of enterprises.

However, what is characteristic, the research did not prove any relation between the type of difficulties or the lack of these and the survivability ratio.

Although the access to bank credits has improved, entrepreneurs establishing their own enterprise, in most of the cases still finance it from own resources. Nevertheless, the percentage of such enterprises each year systematically decreases: in 2006 it amounted to 84.5%, while in the previous year – 86.5% and in 2004 – 88.9%. Despite better accessibility, bank credits finance an insignificant number of undertakings. In 2006 it was used only by 4.1% of enterprises, exactly the same percentage as in 2005. The share of "other forms of financing" increases, which was indicated by 7% of entrepreneurs versus 3.6% the year before. To some extent "other forms of financing" of newly established enterprises comprise of using aid support from the European Union. In 2004–2006 assistance programmes financing establishing enterprises by persons staying outside the labour market were available. In the following years, due to an increase in the volume of funds for this purpose, their significance may be even greater.

Financial support for newly established enterprises is vital for their future. Investments increase their survivability ratio by ca. 10 percentage points. Such trend has been observed since CSO undertook such research. In 2006, in the group of newly established enterprises, 34.6% of enterprises made investments – it is 2.3 percentage points more than a year ago.

Insufficient investments definitely result from insufficient funds. Investments are mainly financed from internal resources regardless of the enterprise's age. External financing was rarely used by both – newly created and well-established enterprises. It should be stressed that such trend is continuous. There was no indication that older enterprises, having greater experience, would use bank credits more frequently.

In 2006 the investments were in majority financed from internal resources (71.5% of enterprises), bank credits (21.8%) and other sources (6.7%). What is peculiar, as compared with the previous year, the percentage of enterprises financing investments from internal sources increased. This may indicate the improvement of population's economic situation (the majority of new enterprises are sole proprietorships). On the other hand, financing investments from bank credits and other sources decreased. This is a disadvantageous situation, as it means that an economic downturn will stop investments in enterprises and the possibilities of seeking external financing are still insignificant. It significantly limits the possibility of implementing new technologies, which is a capital intensive process, and own funds, as it is indicated by 80% of all entrepreneurs, are insufficient.

It may therefore be stated that despite numerous instances of attracting attention to the limitations of external financing of enterprises, this situation has not changed, neither by an economic upturn nor strong competition on the bank market.

It should be noticed that as the possibility of financing initial investments from support measures by newly established enterprises increases, the remaining aid/support from the EU funds is not targeted at investments in this group of enterprises.

Analysing the group of enterprises which invested from the initial stage of their operation, it may be stated in majority of the cases these were the enterprises with legal personality and those which from the beginning had employees.

Table 2.8. Percentage of operating units making investments, by year of establishment

Year of establishment	Operating units, investing one year after establishment	First-year survivability ratio	
		Enterprises investing	Enterprises not investing
2001	24.7	75.8	55.9
2002	27.8	83.2	68.1

2003	27.1	84.2	75.9
2004	28.8	85.4	76.4
2005	32.1	84.4	73.0
2006	34.6	x	x

Newly established enterprises in most of the cases operate on the local market (in each research conducted over 50% of entrepreneurs, in 2006 – 54.3%). The exporters constitute a minor group of new entrepreneurs. The data indicate that the number of exporters among newly established enterprises is slightly, but systematically increasing (in 2002 2.9%, in 2004 5.3% and in 2006 6.8%), which should be perceived as a trend beneficial for Polish economy. The research also indicates that the market on which an enterprise operates directly depends on the section. The greatest number of exporters operates in transport (19.8%), industry (12.9%) and real estate and business services (9.7%). The external marked is only incidentally entered by enterprises engaged in education, health care, small services and, what is interesting – financial intermediations, where the percentage of enterprises operating on international market does not exceed 3%.

Apart from the information on the activity of enterprises, the characteristics of their owners were researched in order to find the features determining the success of an enterprise. The following characteristics were taken into consideration: sex, age, education and professional experience.

In 2006 women established 39.4% of enterprises, which is 3.8 percentage point less than in the previous year. It should be stressed that this figure is one of the highest in Europe. Polish women are highly entrepreneurial. The rate has been remaining on the stable level of ca. 40% for years. A trend in which more women decides to establish an enterprise in the more difficult labour market situation and when the unemployment rate grows was observed. This may indicate women's less advantageous situation on the labour market. When they are not able to find employment, they more frequently provide themselves with a workplace, establishing an enterprise on their own.

An enterprise established by man had greater chances of surviving than an enterprise owned by a woman. The difference was not substantial, yet survivability ratio of enterprises run by men in usually higher than that of enterprises run by women by 2–4 percentage points. In 2006 women most frequently established and managed service enterprises, operating in health care and hotels and restaurants. Men dominated among the owners of construction and transport enterprises.

In 2006 the age structure of persons establishing new enterprises slightly changed. In 2005 new enterprises were most frequently created by persons aged up to 29. In the following year the share of this age group declined by 5 percentage points. The subsequent age group, i.e. persons aged 30–39, increased from 29% to 33.7% and these persons were most frequent among new entrepreneurs. Persons aged 40–44, 45–49 and 50–59 established 9–11% of enterprises per age group.

These results should be compared with the information on professional activity in the population of Poland. In 2004–2005 the highest unemployment rate was registered among the youngest persons. For instance, in 2004 unemployment rate among persons aged 20–24 amounted to as much as 41.5%, in the next year it slightly decreased to the level of 38.5% yet it was still incredibly high. Lack of jobs for this age group n connection with their relatively high level of education (as compared with other age groups) and quite good economic situation in Poland made the youngest persons bear a risk of starting their own economic activity. Otherwise, they would be out of the labour market. In 2006 the situation on labour marked improved. Unemployment rate among the youngest persons decreased to 27.9%. It was still high, the highest among all the other age groups, jet the downward trend maintained. An increasing number of young persons, instead of establishing their own enterprises, could find employment in already existing enterprises or seek employment abroad. Establishing an enterprise became a matter of choice, not of necessity. In the following years, as the situation on the labour market continues to improve, this phenomenon, as a positive trend, should increase. In particular the youngest persons planning establishing their own enterprise, should have some professional experience. Lack of experience substantially decreases their chances for success on the market, whish is indicated by the results of the research. Among the enterprises established in 2005, first-year survivability rate was the lowest in this very group of entrepreneurs. What is interesting, in the other age groups there is no relation between the survivability ratio and the age of the owner.

Taking into consideration the educational attainment of entrepreneurs, the highest number of enterprises were established by persons with secondary education (40.5%), followed by persons with tertiary and post-secondary education (35.4%). The lowest number was that of entrepreneurs with primary education (below 5%). The owners' structure of newly established enterprises according to owner's level of education practically has not changed since 2005. In the previous years there was no relation between owner's education level and enterprise's first-year survivability rate. Such relation is visible among enterprises established in 2005.

The lowest survivability ratio was registered among enterprises established by persons with primary education (66.3%) and the highest among those owned by persons with tertiary and post-secondary education (78.3%). This trend should be observed in the next years to determine, whether owner's subsequent years of education will result in enterprise's better development perspective.

2.4. Number of working persons, average employment rate and wages in the SME sector

Persons working for SMEs in 2005–2006

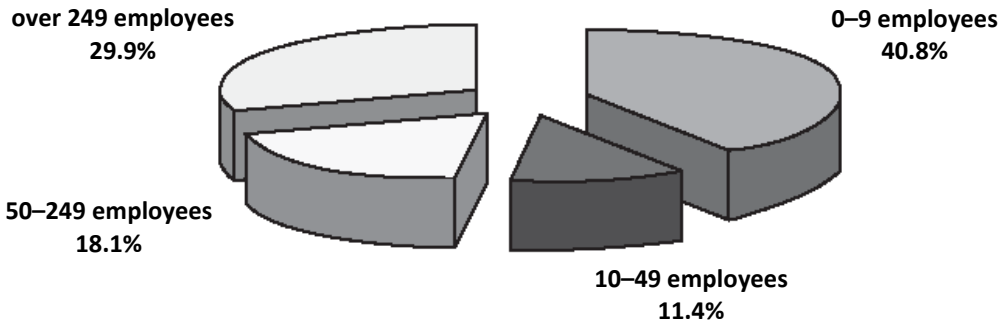
As of the end of 2004 the total number of persons working in enterprises[12] amounted to 8 106.8 thousand persons and was practically equal to the figure from the end of the previous year. In 2005 the figure increased by 1.6% to the level of 8 234.1 thousand. In 2006 the growth rate of the number of working persons was twice as high as the year before and the number of working persons as of the end of 2006 reached 8 500.7 thousand (see: Table 7 in the Annex and Table 2.9 below).

In 2006, similarly to the previous year, the highest growth rate of the number of working persons was registered among large enterprises (growth of 6%), medium-sized enterprises (3.2%), micro-enterprises (2%) and the lowest among small enterprises employing 10–49 persons (0.5%). Referring to the data on the increase in the number of operating enterprises analysed above, this leads to the conclusion that the acceleration of economic growth rate noted in 2004 was affected mainly by the activity of large enterprises and, to some extent, of medium-sized enterprises. Between the end of 2003 and the end of 2006, the share of persons working in SMEs in the total number of persons working in enterprises decreased from 71.7% to 70.1%, of which the share of persons working in enterprises employing 0–49 persons decreased from 53.5% to 52%.

Table 2.9. Persons working in enterprises as of year-ends of 2005–2006 (excluding *Agriculture and forestry*, *Fishery and fishing* and *Public administration*)

Year	Total	of which entities with the number of employees			
		0–9	10–49	50–249	>249
The number of working persons as of the year-end (thousand)					
2005	8 234.1	3 380.9	968.4	1 493.4	2 391.4
2006	8 500.7	3 450.2	972.8	1 541.7	2 536.0
Previous year = 100%					
2005	101.6	100.6	100.5	102.2	103.0
2006	103.2	102.0	100.5	103.2	106.0
Total number of working persons = 100%					
2005	100.0	41.1	11.8	18.1	29.0
2006	100.0	40.6	11.4	18.1	29.9

Chart 2.6. The structure of persons working in enterprises as of the end of 2006 (%)



The only section where in 2006 the proportions of the growth in the number of working persons in particular groups of enterprises were completely different than the nationwide trend described above was *Transport, stock management and communications*. In this section the number of working persons increased in 2006 by 4.9%, of which in micro-enterprises by 9.5%, in small enterprises (10—49 employees) by 3.8%,

[12] Information on the number of persons working in enterprises as of the year-ends of consecutive years was presented by CSO in annual publications entitled *Activity of non-financial enterprises.*

medium-sized by 3.5% and in large enterprises by 2.3%. In all the other sections, excluding *Education* and *Health care*, where large enterprises are few, the highest growth rate of the number of persons in work was noted among large enterprises and only in section *Hotels and restaurants* – in medium-sized ones. The highest growth rate of the number of working persons was noted among large enterprises in *Construction* (growth of 18.8%) and then in the following sections: *Financial intermediation* (15.6%), *Trade and repairs* (14.3%), *Industrial processing* (7.6%).

In the section: *Trade and repairs*, despite rapid increase in employment rate among large enterprises, the number of persons working for micro-enterprises and small enterprises (10–49 employees) was practically at the same level as at the end of 2005. On the other hand, in Industrial processing, having the second highest growth rate in the number of working persons, large enterprises were followed by micro-enterprises. Nevertheless, the most probable reason for such state was the reduction of the number of persons working in some small enterprises employing 10–49 persons, and their transfer to micro-enterprises, as jointly in both these groups the employment rate as of the end of 2006 was same as year before.

If the number of persons working in SME as of the end of 2006 equals 100%, then the most – 31.9% of the total number worked in Trade and repairs section, followed by Industry (27.1%), Real estate and business services (12.5%), Construction (10.1%) and Transport, stock management and communications (6.3%).

Chart 2.7. The share of persons working in SME by economy sections in 2006 (%)

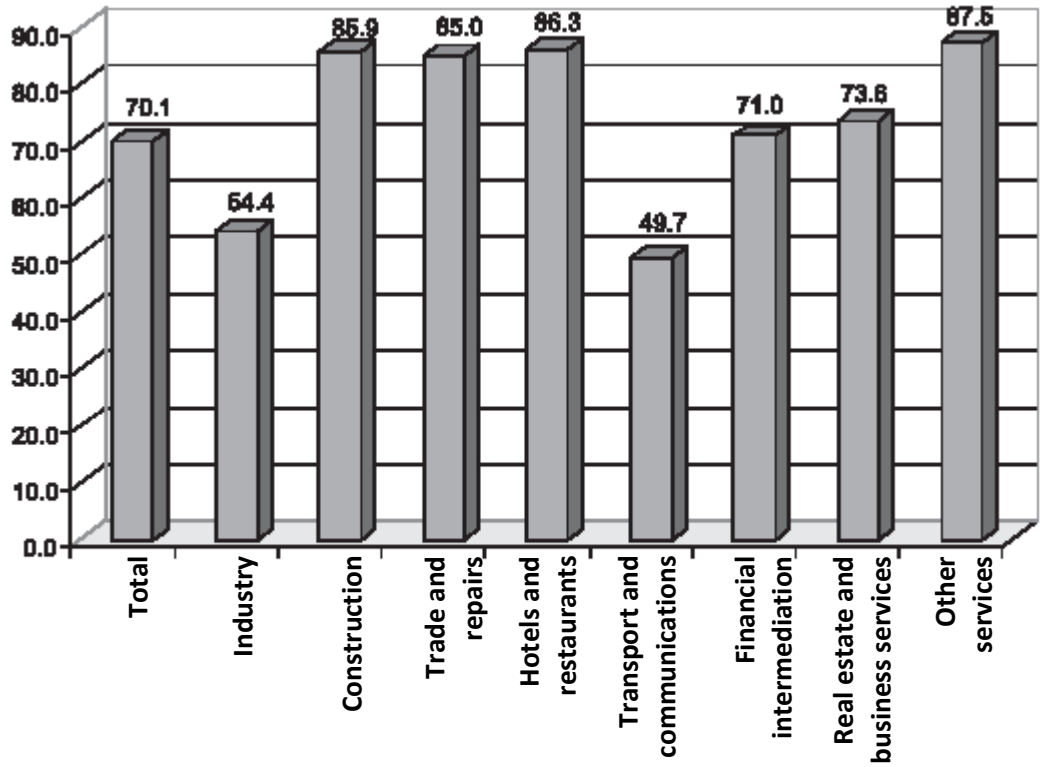
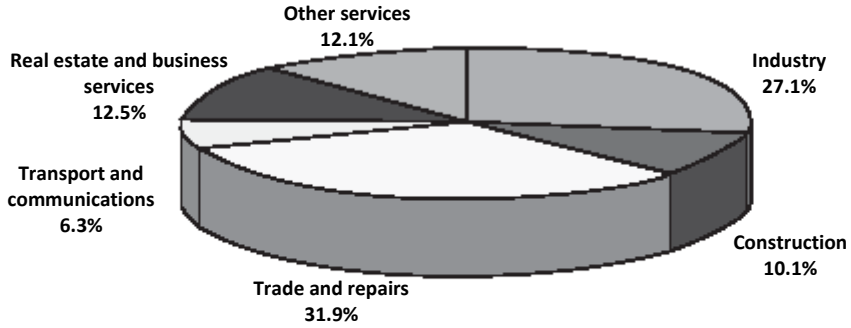


Chart 2.8. The share of persons working in SME as of the end of 2006 (%)



Average number of employees and wages in the SME sector

The average number of employees[13], after a slight decline of 0.6% in 2004, in 2005 increased by 2.6% to the level of 5 778.6 thousand persons and in 2006 by 3.1% to 5 959.9 thousand (see: Table 8 in the Annex). Therefore, the growth rate of the total number of employees in 2006 was similar to that of the number of working persons as of the end of the year (3.2%), which was described above. The abovementioned similarity refers also to the growth rate in the number of working persons and employees in individual size classes of enterprises. In the group of micro-enterprises the growth rate of both numbers in 2006 amounted to 2%, in other groups the growth rate of employment was slightly lower than that of the number of working persons (small enterprises respectively 0.1% and 0.5%, medium-sized – 3.1% and 3.2%, large – 5% and 6%). Substantial similarities of the two growth rates were present also in the majority of economy sections.

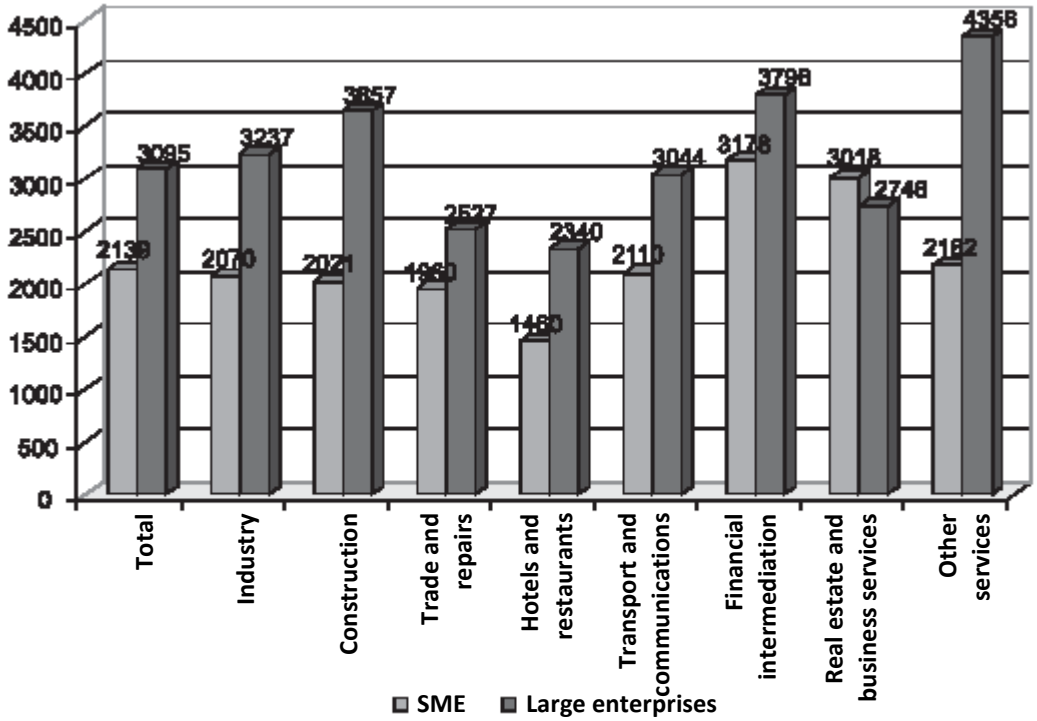
In 2004 the average monthly gross wage of permanent employees in enterprises soared (by 9.3%) reaching PLN 2 333. In 2005 the rate of this growth was mach lower – only 2.7% and the wage increased to the level of PLN 2 397. In 2006 the growth rate of an average monthly gross wage accelerated again and amounted to 5.2%. The average wage in all enterprises regardless their size in 2006 amounted to PLN 2 521, of which in micro-enterprises PLN 1 511, in small – PLN 2 283, medium-sized – PLN 2 579 and in large enterprises PLN 3 095 (see: Table 9 in the Annex and Table 2.10. below).

Table 2.10. Average monthly gross wage in 2005–2006 (excluding *Agriculture and forestry*, *Fishery and fishing* and *Public administration*)

Year	Total	of which entities with the number of employees			
		0–9	10–49	50–249	>249
Monthly gross wages (PLN)					
2005	2 397	1 486	2 180	2 441	2 938
2006	2 521	1 511	2 283	2 579	3 095
Previous year = 100%					
2005	102.7	102.3	102.6	102.9	103.1
2006	105.2	101.7	104.7	105.7	105.3
National average = 100%					
2005	100.0	62.0	90.9	101.8	122.6
2006	100.0	59.9	90.6	102.3	122.8

[13] Information on the average number of employees and their monthly gross wages was presented by CSO in annual publications entitled *Activity of non-financial enterprises.* The number of employees is lower than the number of working persons, because the category of employees does not include inter alia owners of enterprises and their family members who help them conducting their activity.

Chart 2.9. Average monthly gross wage in SMEs and large enterprises by economy sections in 2006 (PLN)



In 2006 wages rose in all groups of enterprises regardless their size. However, the growth rate was diversified – lower in smaller enterprises, where previously it was below the average level calculated for all size classes and higher in medium-sized and large enterprises, where previously it was higher than the abovementioned average wage. Therefore, the disparity of wages in individual groups of enterprises by their size increases.

If the average monthly gross wage calculated for all enterprises regardless their size in 2006 equals 100%, employees of micro-enterprises received 60% of this amount, employees of small enterprises (10–49 employees) – ca. 90%. Wages in medium-sized enterprises were roughly at the level of national average and those in large enterprise exceeded national average by over 20%.

The diversification of employees' wages in individual size classes by economy sections is not very significant. Traditionally, the lowest wages are paid in *Hotels and restaurants section* (in 2006 it constituted only 77.2% of the average wage paid to all employees in micro-enterprises nationwide). In the case of employees from small enterprises in this section the wages amounted to 69.9% of the relevant national average and in the case of medium-sized and large enterprises the figures were 82.8% ad 75.6% respectively. However, these, often times seasonal, employees of hotels and restaurants frequently receive, apart from regular wages, also "tips" from guests they serve; moreover, sometimes they are entitled to full board. Higher than the relevant national average wages were those of employees in medium-sized and large enterprises in those sections where specialist qualifications were required. Thus, e.g. persons working in small (10-49 employees) and medium-sized enterprises from *Financial intermediation* section earned over twice as much as the average in all national small and medium-sized enterprises. Similarly, employees of micro-enterprises and small and medium-sized enterprises in the section: Real estate and business services, science, including inter alia numerous IT enterprises, had wages higher by 40–50% than persons working in relevant SME groups in the country.

Persons working in grey market in 2005–2006

The average number of persons working in grey market in 2004 amounted to 405 thousand persons and in 2005 it increased by almost 5% to the level of 425 thousand persons[14] (see: Table 2.11. below). In 2006 this figure was rising at lower rate and amounted to 439 thousand persons (growth of 3.3%).

[14] These figures were estimated on the basis of CSO data published in *Statistical Yearbooks*. These figures should not be interpreted in such way that for instance in 2006 there were 439 natural persons working in grey market. Persons working

Table 2.11. Persons working in grey market in 2005–2006 (excluding *Agriculture and forestry*, *Fishery and fishing* and *Public administration*)

Economy sections	Persons working in grey market, thousands		Previous year = 100%		Persons working in grey market as the percentage of persons working in small private enterprises	
	2005	2006	2005	2006	2005	2006
Total	425	439	104.9	103.3	8.7	9.0
of which:						
Industrial processing	84	85	129.2	101.2	8.7	9.1
Construction	79	83	105.3	105.1	14.8	15.3
Trade and repairs	221	228	97.1	103.2	12.2	12.7
Hotels and restaurants	10	10	111.1	100.0	5.6	5.5
Transport and communications	17	18	100.0	105.9	5.7	5.8
Real estate and business services	8	9	100.0	112.5	1.4	1.6

Workers employed illegally in 2006 constituted as much as 15.3% of the average total number of persons working in small construction enterprises. It means that one out of seven persons working in small construction enterprises was employed illegally. The analogous share in the case of *Trade and repairs* was 12.7% and in *Industrial processing* – 9.1%. In the remaining sections, where there was grey market, the share of persons working illegally in the total number of persons working in small enterprises did not exceed 6% and in all the sections in question equalled 9%, i.e. it was the highest since 1999 when the present definition of small enterprises was introduced.

2.5. Revenues and financial situation of SMEs

Total revenues of enterprises of different sizes

In 2005 the total revenues of enterprises[15] (excluding Agriculture and forestry, Fishery ad fishing and Public administration) amounted to PLN 2 257 202 million and were higher than the year before by 3.2% (see: Table 10 in the Annex and Table 2.12. below). In 2005 revenues growth rate was relatively moderate as compared with the one noted in 2004, when total revenues of all enterprises increased by as much as 12.6%. In 2006 revenues growth rate was even higher than two years before – it reached 13% and the revenues amounted to PLN 2 551 193 million. Such high rate was possible mainly due to a rapid increase in sales in the three main sections of economy: *Construction* (by 21.6%), *Transport, stock management and communications* (by 14.1%) and *Industrial processing* (by 13.3%), as well as in two other sections, in which the number of economic entities and employees is relatively low, namely: *Financial intermediation* (by 53.4%) and *Education* (by 21.5%).

Table 2.12. Total revenues of enterprises in 2005–2006 (excluding *Agriculture and forestry*, *Fishery and fishing* and *Public administration*)

Year	Total	of which entities with the number of employees			
		0–9	10–49	50–249	>249
Revenues (PLN million)					
2005	2 257 202	551 679	322 171	501310	882 042
2006	2 551 193	656 064	339 812	561 214	1 015 103
Previous year = 100%					
2005	103.2	102.1	99.5	102.9	105.6
2006	113.0	115.1	105.5	111.9	115.1
Total income = 100%					
2005	100.0	24.4	14.3	22.2	39.1

illegally are usually employed for short term of seasonally and therefore the number of natural persons working in grey market may by several times higher than the average number of workers presented here (e.g. employing 1 million natural persons on average during one quarter of a year amounts to the average number of working persons of 250 thousand).

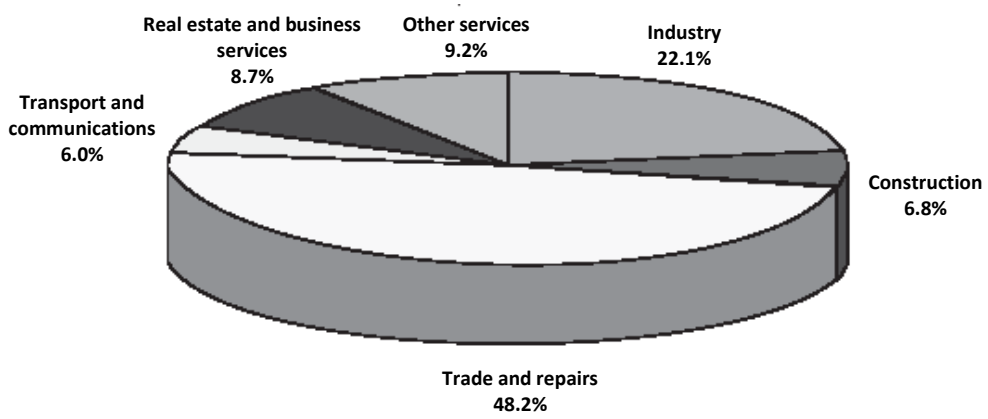
[15] Information on the volume of revenues was presented by CSO in annual publications entitled *Activity of non-financial enterprises.*

2006	100.0	24.9	13.3	22.0	39.8

In 2006 the revenues rose at the highest rate in micro-enterprises and large enterprises – in both the groups by 15.1%. In small enterprises, employing 10–49 persons, the increase in revenues was the slowest and amounted to 5.5%, whereas in medium-sized enterprises – 11.9%. Practically in all size groups of enterprises, enterprises in the following sections increased their revenues at the highest rate: *Construction*, *Transport, stock management and communications*, *Industrial processing* and *Financial intermediation*. The exception of this rule was the case of small enterprises (10–49 employees) – revenues decreased in enterprises from F*inancial intermediation*, while exceptionally good results were achieved in sections: *Other services* and *Hotels and restaurants*. On the other hand, medium-sized enterprises, apart from the abovementioned sections, registered significant increase in revenues in sections: *Hotels and restaurants* and *Real estate and business services, science*.

Due to the differences in the rate of revenues growth in 2005–2006 SME share in total revenues decreased, this time from 60.9% to 60.2%, which was affected mainly by relatively worse results of small enterprises with 10–49 persons, the share of which in the total revenues decreased by 1 percentage point from 14.3% to 13.3%.

Chart 2.10. SME revenues structure in 2006 (%)



Income of enterprises employing up to 9 persons

Income (revenues from total activity net total costs) of enterprises employing up to 9 persons calculated per entity increased in2004–2005 from PLN 34.4 thousand to PLN 39.3 thousand, i.e. by 15.6%. In 2004 this growth rate was even higher as it amounted to 29.3%. In 2006 income per entity increased to PLN 42.5 thousand, which means that the rate was lower than in the two previous years and amounted to 8.1% (see: Table 11 in the Annex).

This visible deceleration of growth rate in 2006 was affected the most by the situation in two sections: *Trade and repairs* and *Industrial processing*. Total income of micro-enterprises categorised in sections: *Trade and repairs* and *Industrial processing* in 2006 jointly amounted to as much as 44.3% of total income of all micro-enterprises. Therefore, when the income per enterprise among commercial micro-enterprises in 2006 increased only by 2.4% and, moreover, income per micro-enterprise in *Industrial processing* decreased by 1.7% relative to the previous year, it had to affect the results of the whole sector of micro-enterprises. Therefore, even the high 20% growth of income per micro-enterprise in sections: *Construction*, *Health care* and *Other services,* could not significantly improve the results of the whole sector, as the joint share of income from enterprises in these three sections in the total income of all micro-enterprises in 2006 amounted to only 20.1%.

Another section, apart from *Industrial processing*, where in 2006 a decrease in income per enterprise was noted, was the section of *Hotels and restaurants*. The abovementioned income here declined by 4.7% even though the number of micro-enterprises in this section decreased by 1.7%. Previous years experience indicates that such situation is not frequent, as usually the decline in income per enterprise in a given section was accompanied by an increase in the number of micro-enterprises functioning in such section and the other way around. Such “typical” relation occurred in 2005–2006 in *Health care*, where in 2005 the number of units decreased and the income per micro-enterprise increased, while in 2006 income increased with the simultaneous decline of the number of enterprises.

Financial situation of enterprises keeping accounting books and employing over 9 persons

As of the end of 2006, the number of enterprises keeping accounting books and employing over 9 persons amounted to 43 799 units, whose incomes from all types of activity equalled PLN 1 847 227 million. Although these enterprises constituted only a minor part – 2.6% of the total number of operating enterprises, their revenues covered as much as 72.4% of the total volume of enterprises revenues, excluding *Agriculture and forestry*, *Fishery and fishing* and *Public administration*. Therefore, financial situation of the abovementioned group of enterprises is particularly strictly monitored and is subject to a number of economic analyses describing it from different perspectives.

Gross turnover profitability[16] in enterprises keeping accounting books and employing over 9 persons decreased between 2004 and 2005 from 5.9% to 4.8% and in 2006 it increased to 5.4% (see: Table 12 in the Annex and Table 2.13. below). It should here be added, that gross turnover profitability of all groups of enterprises according to their size in 2004 was the highest since 1998, i.e. the year in which statistical research on finances of enterprises with the present structure began[17] (see: Chart 2.11.). Similarly, the highest net turnover profitability occurred in 2004. It then amounted to 4.8%, in 2005 it declined to 3.9% and in 2006 it again increased to 4.4%.

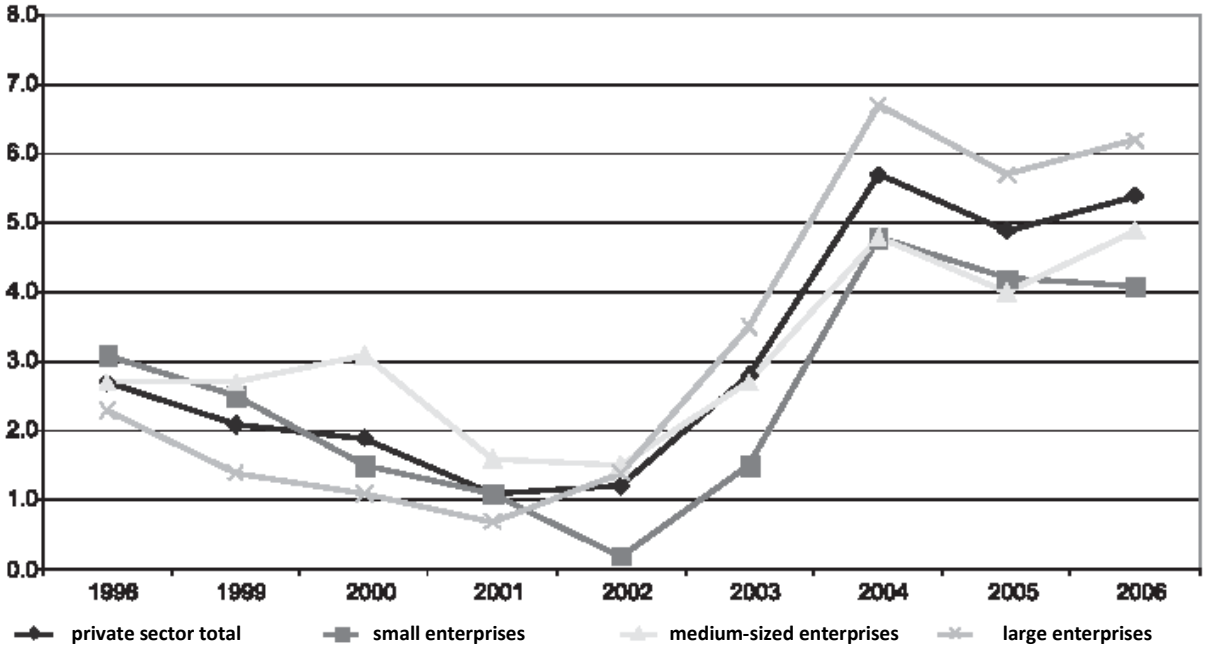
Table 2.13. Gross and net turnover profitability of enterprises employing over 9 persons and keeping accounting books in 2005–2006

Specification	Total		of which entities with the number of employees					
			10–49		50–249		>249	
	2005	2006	2005	2006	2005	2006	2005	2006
	Gross turnover profitability (%)							
Total	4.8	5.4	4.6	4.1	3.9	5.0	5.5	5.9
Public sector	4.8	5.0	16.6	2.8	3.1	6.4	4.7	4.8
Private sector	4.9	5.4	4.2	4.1	4.0	4.9	5.7	6.2
	Net turnover profitability (%)							
Total	3.9	4.4	3.8	3.6	3.1	4.1	4.3	4.7
Public sector	3.4	3.7	14.9	1.9	2.0	4.7	3.2	3.5
Private sector	4.0	4.5	3.5	3.7	3.2	4.1	4.6	5.1

[16] Gross and net turnover profitability is the ratio measured as the percentage of gross and net financial results respectively to revenues from the entire activity. In enterprises required to maintain accounting records, the difference between revenues and expenses from all activities is called net income from economic activities. That difference, once it is adjusted for the balance of extraordinary expenses and profits, is called gross financial result. After deducting taxes payable on gross earnings we obtain the net financial result.

[17] It is impossible to directly compare gross and net turnover profitability of all enterprises before 1998 with that of the following years, as CSO in 1997 gave the value of relevant rates jointly for all enterprises keeping accounting books regardless their size, including also the enterprises employing fewer than 10 persons (previously data on the condition of enterprises keeping accounting books were presented jointly for over 80 thousand, and currently for 40-50 thousand enterprises).

Chart 2.11. Net turnover profitability in private enterprises by size in 1998–2006 (%)



In 2004–2006 gross profitability of small private enterprises (10–49 employees) and medium-sized private enterprises (50–249 employees) was lower than the profitability of large private enterprises (over 249 employees). The same applies to net profitability. However, in individual sections of economy, the situation of private enterprises in 2006 was much more diversified. Large private enterprises had the highest gross turnover profitability in 4 (*Mining and quarrying*, *Hotels and restaurants*, T*ransport, stock management and communications* and *Other services*) out of 12 sections analysed, while in *Industrial processing* large enterprises and small enterprises together were the leaders as far as gross profitability is concerned. Small enterprises had the highest gross profitability in three sections (*Construction*, *Trade and repairs* and *Health care*), while in the remaining four sections the highest profitability was that of medium-sized enterprises.

In 2004–2005 the ratio of first-degree financial liquidity[18] of enterprises employing over 9 persons and keeping accounting books increased from 28.6% to 32.3%, while in 2006 – to 35%. The value of the second-degree liquidity indicator increased in 2004–2005 from 89.2% to 99.3% and in 2006 it amounted to 106.9% (see: Table 13 in the Annex and Table 2.14 below). Such high values of both indicators has not been registered since 1999.

[18] The economic and statistical analysis differentiates between first-, second-, and third-degree financial liquidity ratios. All these are fractions (expressed as percentage values after being multiplied by 100) having the same denominator equal to the value of short-term liabilities as of the end of the period under study. The numerators of the first-, second- and third-degree liquidity indicators differ with respect to the degree of liquidity of assets which enterprises can use to pay off their liabilities. The numerator in the first-degree liquidity ratio comprises the most liquid assets such as cash on enterprises' bank accounts and securities which may be sold immediately. The numerator of the second-degree liquidity measure includes additionally enterprises' receivables and claims, whereas that of the third-degree liquidity ratio – inventories of goods, materials, goods in process and finished products, which constitute, together with the abovementioned items, the value of enterprise's working capital.

Table 2.14. First- and second-degree financial liquidity in enterprises employing over 9 persons and keeping accounting books in 2005–2006

Specification	Total		of which enterprises with the number of employees					
			10–49		50–249		>249	
	2005	2006	2005	2006	2005	2006	2005	2006
	First-degree financial liquidity (%)							
Total	32.3	35.0	31.0	35.5	28.3	33.1	35.1	35.9
Public sector	51.4	56.1	58.3	75.4	49.0	65.4	51.5	53.4
Private sector	28.7	31.4	29.6	33.9	26.3	30.6	29.8	30.9
	Second-degree financial liquidity (%)							
Total	99.3	100.7	98.3	106.9	97.6	102.1	100.6	98.0
Public sector	119.3	110.3	96.1	114.4	117.5	104.6	121.2	104.6
Private sector	95.5	99.0	98.4	106.6	95.7	99.1	94.1	96.2

In 2004–2006, and in particular in 2006, both the first- and the second-degree liquidity rates were relatively similar in individual size groups of private enterprises. In 2006 the difference between the level of first-degree liquidity of small enterprises (33.9%) and that of medium-sized (30.6%; in large enterprises – 30.9%) amounted to only 3.3 percentage points, whereas the difference between small enterprises with the highest second-degree financial liquidity among the private sector (106.6%) and large enterprises with the lowest value of the indicator (96.2%) amounted to 10.4 percentage points. In both cases the difference did not exceed 10% of the absolute value of the indicator for small enterprises, having the highest first- and second-degree financial liquidity.

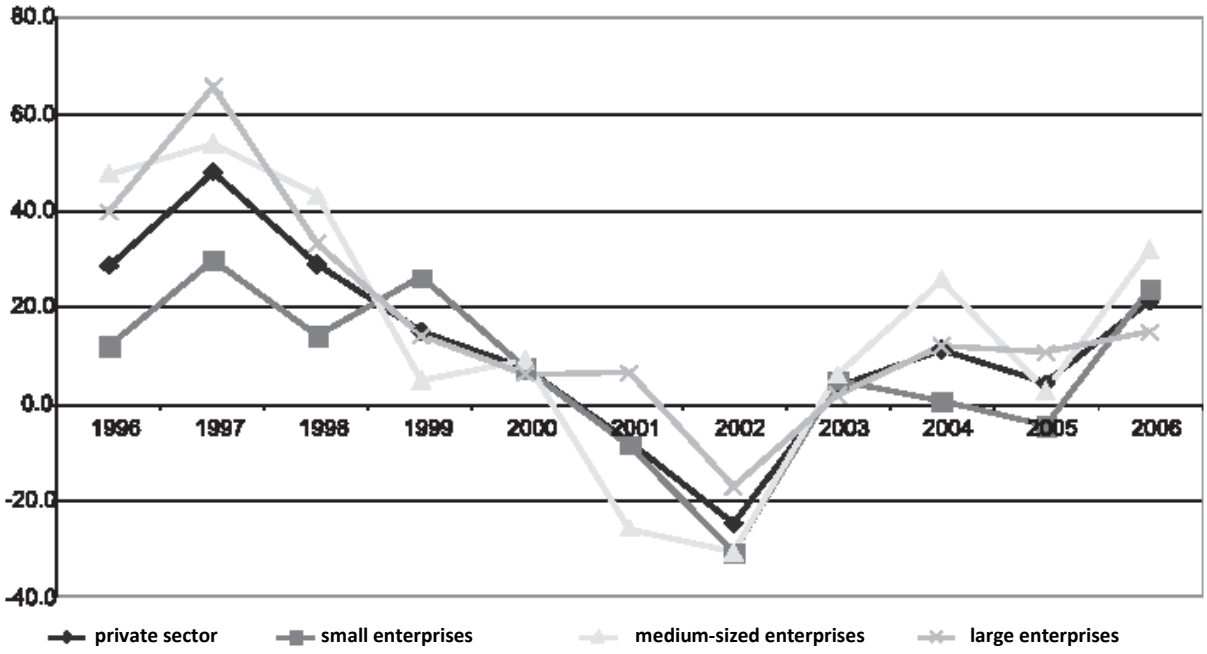
2.6. Investments and fixed assets in SMEs

Growth rate of investment expenditure of enterprises in different size classes in constant prises

The research on the volume of enterprises investment expenditures on new fixed assets which has been conducted for many years indicates, that the highest growth rate of these expenditures, calculated in constant prices[19], was registered in 1997. In 1997 investment expenditures by small private enterprises, employing, according to the definition used, up to 50 persons, increased by nearly 30% relative to the previous year; the expenditures of medium-sized enterprises (51–250 employees) by nearly 54% and those of large enterprises (over 250 employees) by almost 2/3 (see: Chart 2.12.). From 1998, the growth rate of investment expenditures by all groups of enterprises, was systematically decreasing up to 2002, and while in 2000 in all groups of enterprises the expenditures increased as compared with the previous year, in 2001 the increase was registered only among large enterprises, while in small and medium-sized enterprises there was an absolute decline in expenditures relative to 2000. With regard to the volume of investment expenditures, 2002 was disastrous, as expenditures of small and medium-sized private enterprises (up to 49 and 50–249 employees respectively) decreased relative to the previous year by as much as ca. 30% and those of private large enterprises (over 249 employees) by 17%. In 2003–2004 investment expenditures in all groups of enterprises began to increase again. Unfortunately, the rate of this growth was lower than a year ago and the expenditures of small companies even decreased as compared with 2004. It was only in 2006 when the growth rate of private enterprises' investment expenditures calculated in constant prices significantly increased, amounting to 21.3%, of which in the group of small enterprises – 23.9%, medium-sized – 31.9% and large enterprises – 14.9%.

[19] The author of this part of the Report estimated the growth rate of investment expenditure by enterprises in constant prices o the basis of price indices published by CSO for four groups of expenditures specified (outlays in buildings and structures, machinery, installations and tools, means of transport and other expenditures).

Chart 2.12. Growth rate of investment expenditures for fixed assets in private enterprises of different sizes in 1996–2006 (constant prices; previous year = 100%)



In 2006, expenditures of small and medium-sized private enterprises on new fixed assets expressed in constant prices were, with regard to the absolute value, still below the highest level of 2000, whereas investment expenditures in large enterprises were the highest since the beginning of transformation.

Investment expenditures in SMEs in 2005–2006

In 2006 the total investment expenditures of enterprises[20] amounted to PLN 113 895.1 million, of which expenditure on new fixed assets PLN 101 678.4 million. Total expenditures increased in 2006 by 14.6% as compared with the previous year (current prices), whereas expenditure on new fixed assets by 20.1%, thus, not as in the previous years, the growth rate of expenditure on new fixed assets was higher than the total expenditures growth rate (see: Table 14 in the Annex and Table 2.15. below). It was caused mainly by large enterprises in the section Transport, stock management and communications. Their total investment expenditures in 2006 decreased by nearly 25%, while expenditure on new fixed assets increased by almost 10%. This means that large enterprises in the abovementioned section practically stopped buying used fixed assets, including used means of transport abroad.

[20] Information on the volume of investment expenditures of enterprises was presented by CSO in annual publications entitled *Activity of non-financial enterprises.* Information on the volume of investment expenditure on new fixed assets presented there slightly differs from the data, on the basis of which the growth rate of investment expenditures in constant prices was estimated in the previous paragraph.

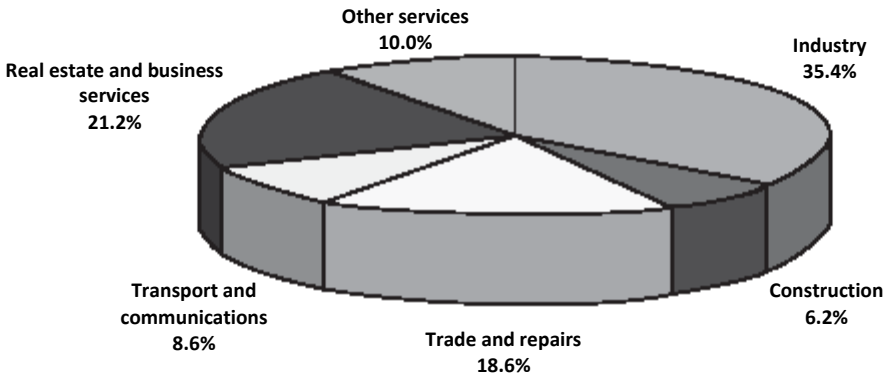
Table 2.15. Investment expenditures of enterprises in 2005–2006 (excluding *Agriculture and forestry, fishery and fishing and Public administration*)

Year	Total	of which enterprises with the number of employees			
		0–9	10–49	50–249	>249
Total investment expenditures (PLN million)					
2005	99 418.2	11 790.1	10 450.9	21 384.3	55 792.9
2006	113 895.1	14 125.5	12 720.1	27 647.7	59 247.6
Previous year = 100%					
2005	110.4	103.9	90.2	98.5	122.9
2006	114.6	119.8	121.7	129.3	106.2
Investment expenditure on new fixed assets (PLN million)					
2005	84 674.7	10 849.0	7 932.4	18 397.2	47 496.1
2006	101 678.4	12 916.4	9 628.2	24 072.9	55 060.9
Previous year = 100%					
2005	106.1	120.9	89.3	101.8	112.4
2006	120.1	119.1	121.4	130.9	115.9

In 2006 the growth rate of investment expenditures in all the SME size groups was higher than in large enterprises, which previously took place in 2003. As opposed to large enterprises, the growth rate of total investment expenditures in SMEs was similar to that of expenditures on new fixed assets, which means that in the SME sector the purchases of new and used fixed assets increased proportionally.

In the vast majority of economy sections the growth rate of SME investment expenditures in 2006 was significantly higher than a year ago. The exceptions concern only micro-enterprises. In 2005 the total growth rate of investment expenditures in the case of industrial micro-enterprises amounted to 25.7%, while in 2006 – only to 3.5%. It applied mainly to micro-enterprises in *Mining and quarrying* and *Electricity, gas and water production and supply*, as in Industrial processing the growth rate of investment expenditures in micro-enterprises decreased insignificantly (from 17.1% in 2005 to 16.3% the following year). Similar situation occurred in the next two sections: *Trade and repairs* and *Hotels and restaurants*. In the former, investment expenditures of enterprises in 2005 increased by 30.6% and in 2006 decreased by 16.8% relative to the previous year. In *Hotels and restaurants* section micro-enterprises increased their total expenditures by 44.9% in 2005 and in the following year only by 6.8%. It means that the owners of enterprises in the abovementioned sections in 2005 most probably assed the conditions and development capacities of their enterprises too optimistically, and therefore in 2006 had to introduce some corrections to their investment plans.

Chart 2.13. Structure of SME investment expenditures on jointly new and used fixed assets in 2006 (%)



In 2006 investment expenditure per working person were in all groups of enterprises higher than the year before, which is understandable, as the growth rate of investment expenditures was in all groups higher than the growth rate of the number of working persons.

In 2006 investment expenditures jointly on new and used fixed assets per working person amounted to PLN 13.4 thousand, of which in micro-enterprises – PLN 4.1 thousand, in small – PLN 13.1 thousand, in medium-sized – PLN 17.9 thousand and in large enterprises PLN 13.4 thousand (see: Table 16 in the Annex). Expenditures on new fixed assets per working person were slightly lower (total: PLN 12 thousand, of which micro-enterprises – PLN 3.7 thousand, small enterprises – PLN 9.9 thousand, medium-sized PLN 15.6 thousand and large enterprises PLN 21.7 thousand).

The highest investment expenditures per working person were registered, as a rule, in *Industry* as well as *Transport, stock management and communications*. It is connected with relatively high cost of equipping work places in these sections. There are exceptions from the above rule, caused most frequently by a rapid, single increase in investment expenditures in some of the sections and size groups of enterprises. In 2006 such relatively high expenditures per working person were registered *inter alia* in small (10–49 employees) and medium-sized enterprises in *Financial intermediation* and Real *estate and business services, science*.

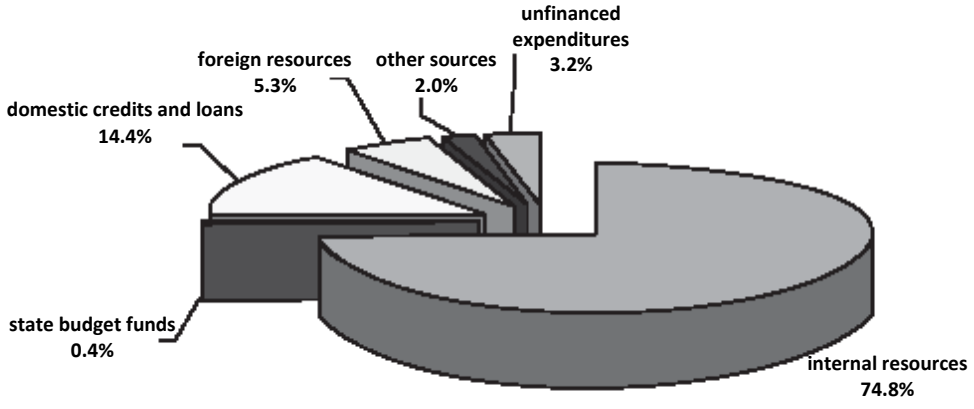
Sources of financing for enterprise investments

In 2006 73% of investment expenditures in enterprises employing over 9 persons were financed from internal resources and 12.7% from domestic credits and loans (see: Table 2.16 below). In the private sector the relevant shares were higher and amounted to 74.8% and 14.4% respectively. In the private sector the total share of investment expenditures financed from internal resources in 2005 was higher (79%) than in 2004 (77.5%). In 2006 the abovementioned share decreased to 74.8%, i.e. to the level lower than that of 2004. The share of expenditures financed from domestic credits and loans increased and in 2006 was higher than in 2004 and 2005 (by 11.5% and 10.5% respectively).

Table 2.16. Structure of investment expenditures by sources of financing in enterprises employing over 9 persons in 2005–2006 (excluding *Agriculture and forestry*, *Fishery and fishing* and *Public administration*)

Specification	Total		of which enterprises with the number of employees					
			10–49		50–249		>249	
	2005	2006	2005	2006	2005	2006	2005	2006
	Enterprises total (total investment expenditures = 100%)							
Internal resources	78.6	73.0	71.9	60.5	74.1	64.6	78.5	79.0
Domestic credits and loans	9.2	12.7	20.9	22.7	14.9	21.5	5.2	7.2
Foreign resources	4.7	5.0	2.0	10.1	3.8	6.4	5.5	3.5
Unfinanced expenditures	5.1	4.3	1.4	2.9	1.9	2.4	6.8	5.4
	Public sector (total investment expenditures of the sector= 100%)							
Internal resources	70.4	67.4	49.8	52.7	70.7	62.6	71.3	69.0
Domestic credits and loans	5.5	7.4	31.2	28.8	9.4	15.3	3.6	4.9
Foreign resources	3.9	4.3	0.5	0.9	3.3	4.3	4.2	4.4
Unfinanced expenditures	9.3	8.4	0.6	1.4	2.3	2.2	10.9	9.9
	Private sector (total investment expenditures of the sector= 100%)							
Internal resources	79.0	74.8	74.3	61.2	74.7	64.9	82.1	83.6
Domestic credits and loans	10.5	14.4	19.8	22.1	15.9	22.4	6.0	8.2
Foreign resources	5.0	5.3	2.1	11.0	3.9	6.7	6.2	3.1
Unfinanced expenditures	3.6	3.1	1.5	3.1	1.9	2.5	4.8	3.4

Chart 2.14. Structure of investment expenditures of private enterprises employing over 9 persons by source of financing in 2006 (%)



The decrease in the share of expenditures financed from internal resources was significantly higher in SME than in the private sector jointly. In the case of small companies employing 10–49 persons it decreased by as much as 13.1 percentage points (from 74.3% to 61.2%). The decline was compensated mainly by a 8.9% increase in the share of direct foreign investments (*inter alia* support from the EU) and a relatively low increase (by 2.3 pp) in the share of domestic credits and loans (banks are still reluctant to finance investments of small enterprises). The main beneficiaries of the EU support were small enterprises from *Industrial processing* and *Hotels and restaurants* sections. In medium-sized enterprises, the decline by 9.8 percentage points in the share

of expenditures financed from internal resources (from 74.7% to 64.9%) was compensated mainly by the increase in the share of expenditures financed from domestic credits and loans (by 8.5%, from 15.9% to 22.4%).

The situation was completely different in the case of large enterprises. In 2005–2006 the share of internal resources in financing investment expenditures increased from 81.6% to 83.6%. It is caused inter alia by the fact that among private large enterprises foreign entities have a significant role and if the resources for the development of daughter companies in Poland are needed, they are supplied by foreign mother company.

Gross value of SME fixed assets and the level of their consumption

As of the end of 2006, the gross value of fixed assets of all enterprises (excluding *Agriculture and forestry*, *Fishery and fishing* and *Public administration*) amounted to PLN 1 103 817.4 million and was 4.2% higher than as of the end of 2005 (see: Table 17 in the Annex). Between the year-ends of 2005 and 2006 the gross value of fixed assets in micro-enterprises increased by 7%, in small by 3.2%, in medium-sized by 5.3% and in large enterprises by 3.5%.

Table 2.17.The level of consumption of fixed assets in enterprises as of year-ends of 2005–2006 (excluding *Agriculture and forestry*, *Fishery and fishing* and *Public administration*)

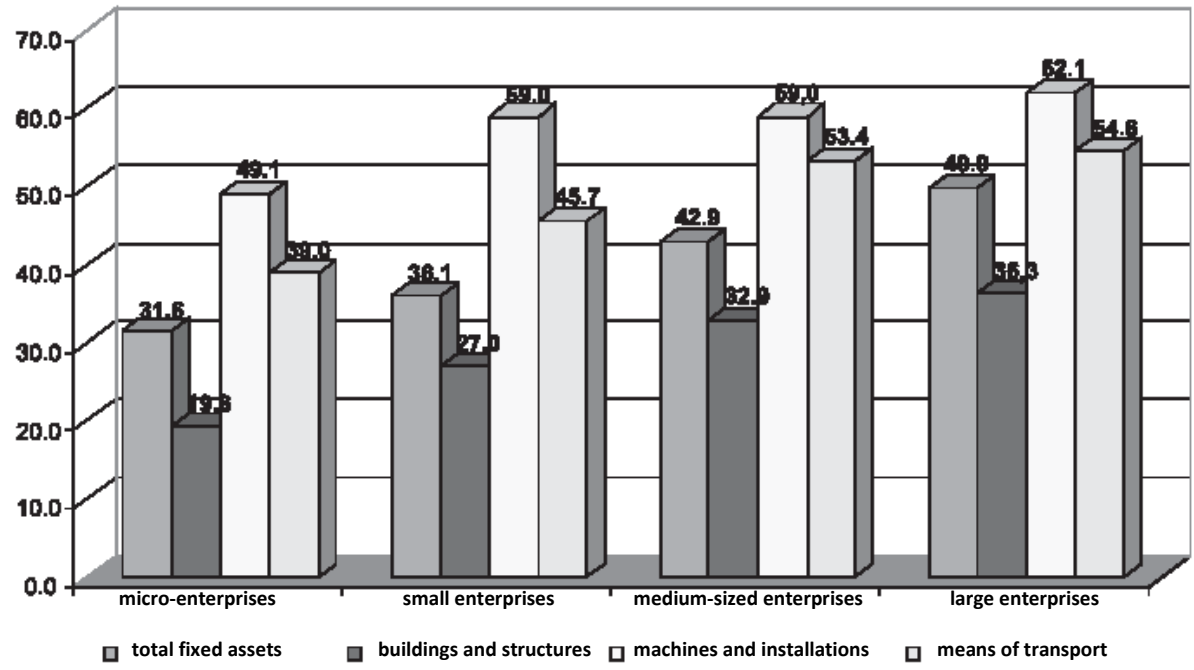
Specification	Year	Total	of which entities with the number of employees			
			0–9	10–49	50–249	>249
Total	2005	44.2	25.6	35.4	42.3	49.7
	2006	45.0	31.6	36.1	42.9	49.9
of which						
Buildings and structures	2005	31.3	12.5	24.5	32.0	36.2
	2006	32.3	19.3	27.0	32.9	36.3
Machinery, installations and tools,	2005	60.5	44.4	60.3	59.0	62.2
	2006	60.7	49.1	59.0	59.0	62.1
Means of transport	2005	47.7	33.2	56.0	56.0	55.0
	2006	49.3	39.0	45.7	53.4	54.6

As of the end of 2006, the level of consumption of fixed assets[21] in all enterprises, regardless their size, amounted to 45%, of which in micro-enterprises 31.6%, in small enterprises – 36.1%, in medium-sized 42.9% and in large enterprises 49.9% (see: Table 18 in the Annex, Table 2.17. above and Chart 2.15. below).As compared to the end of 2005, the level of fixed assets consumption slightly increased in all size groups of enterprises apart from micro-enterprises, where it increased by as much as 6 percentage points (from 25.6% to 31.6%). One of the reasons is that micro-enterprises use fixed assets of relatively low value as compared to other groups of enterprises, whish is soon amortised, in accordance with regulations in force.

The figures presented above indicate that the level of consumption of fixed assets increased with the size of enterprises. It could prove that smaller enterprises on average had more modern equipment than larger ones. However, the data should be analysed with caution, as the consumption of fixed assets in the aspect of accountancy, like the one analysed above, is not always equal to fixed assets being modern in technical terms. It applies mainly to small enterprises (10–49 employees), which, within total investment expenditures, purchase a significant number of used fixed assets. In 2006 small enterprises used as much as over 24% of total investment expenditures on buying used fixed assets, while micro-enterprises only ca. 8.5%, medium-sized almost 13% and large enterprises slightly over 7% (calculations based on the data from Table 2.15. above). These used fixed assets are treated by enterprises' accountants equally to new ones, i.e. they entered to register at purchase prices and then gradually amortised according to relevant amortisation rates. Therefore, in terms of accounting, the consumption level of an installation which is technically obsolete may be slight soon after its purchase. Thus, it may be stated that machinery, installations and means of transport from registers of small enterprises may be, despite the values of consumption level indicators presented above, more obsolete in technical terms than those of medium-sized and large enterprises.

[21] The level of consumption of fixed capital as of the end of individual period is the ratio of the value of fixed capital amortisation (gross value minus net value) to the gross value of fixed capital multiplied by 100.

Chart 2.15. The level of fixed assets consumption as of the end of 2006 in enterprises of different sizes (%)



2.7. Small and medium-sized enterprises on voivodeship level[22]

Enterprises newly registered and operating by voivodeship

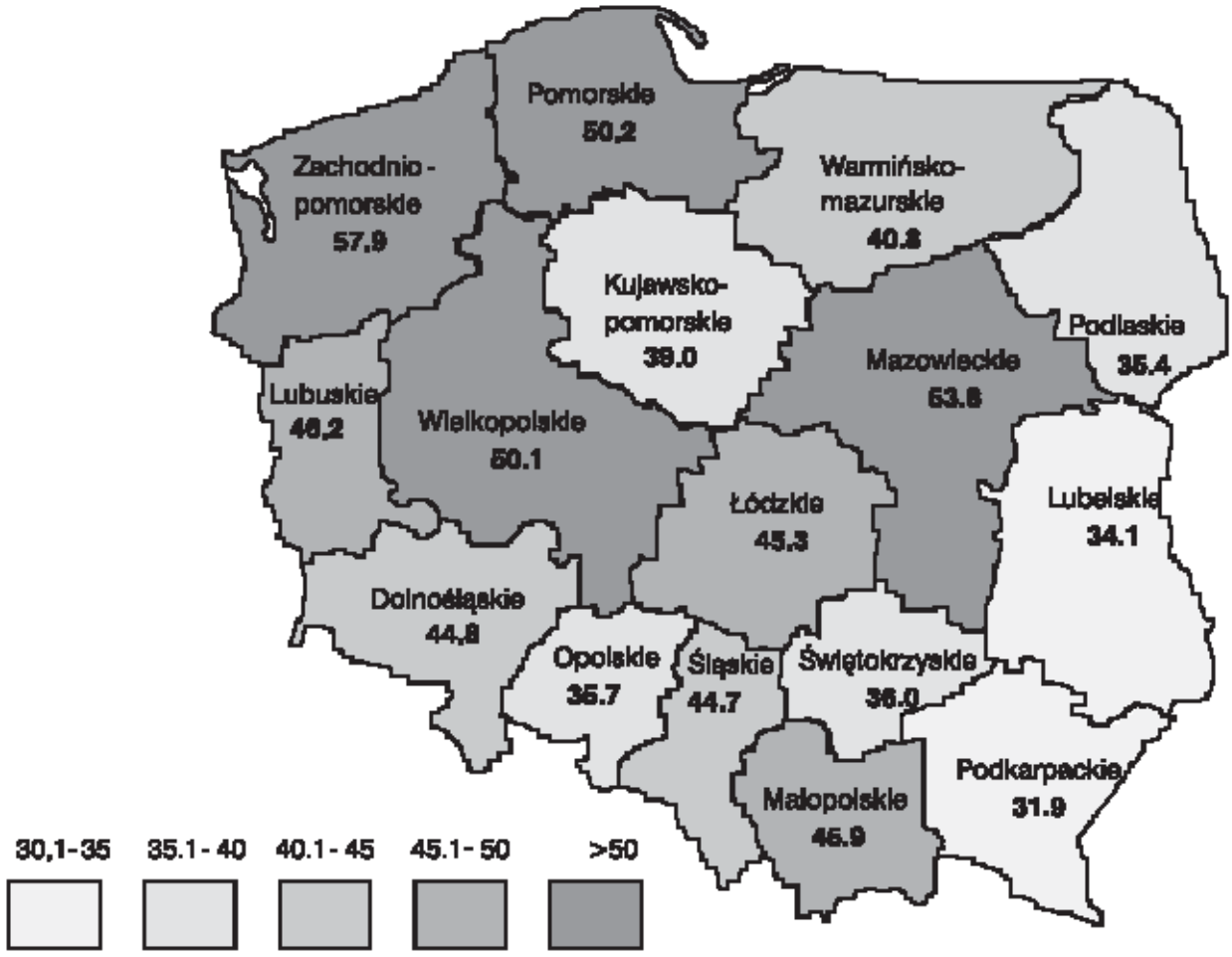
The number of newly registered entities calculated per 1 000 inhabitants of a voivodeship has for many years been highly diversified; moreover – the geography of this diversification has practically not changed over time. In 2006 the total number of newly registered companies and sole proprietorships amounted to 7.3 per 1 000 inhabitants of Poland, as compared to 6.4% in 2005 (see: Table 19 in the Annex). In six voivodeships the number of newly registered companies per 1 000 inhabitants exceeded national average. The first place regarding the abovementioned indicator was, traditionally, that of Zachodniopomorskie Voivodeship, with 10 newly registered enterprises per 1 000 inhabitants, followed by Pomorskie (9.1), Mazowieckie (8.6), Lubuskie (8.4), Wielkopolskie (8.0) and Dolnośląskie (7.9). The voivodeships where inhabitants' entrepreneurship has for years been less intensive than in other parts of the country are: Podlaskie (6.1 companies and sole proprietorships per 1 000 inhabitants), Świętokrzyskie (5.7), Lubelskie (5.4), Opolskie (5.2) and, on the last place in this regard, Podkarpackie, with the rate discussed on the level of 4.9 (see: Map 2.1.). However, it should be added that in 2006 the number of companies registered per 1 000 inhabitants increased also in these five voivodeships with the lowest rates by 0.5–0.6, while in Świętokrzyskie Voivodeship even by 1.2.

[22] Information on SME on the voivodeship level will be presented including enterprises categorised to section A and B, i.e.: Forestry, Fishery and fishing, However, it does not have significant influence on the comparability of data presented in this part of the Report and the previous parts, due to a relatively small number of such enterprises (in 2006 the total number: 1 654, of which 10 medium-sized and 3 large) and their relatively limited area of activity. In the total number of operating enterprises and of working persons, given for all voivodeships, enterprises from sections A and B constituted the share of only 0.6%, and in the total income – only 0.3%. Data on SME on the voivodeship level are taken from periodical publications of CSO, in the case of newly registered entities – from the report entitled *Structural Changes of National Economy Groups of Entities*, and the remaining data from *The activity of non-financial enterprises*.

Map 2.1. Newly registered companies and sole proprietorships in 2006 per 1 000 voivodeship inhabitants

In 2006 the number of operating SMEs per 1 000 inhabitants of a voivodeship (see: Map 2.2.) was the highest in those voivodeships, where for many years the number of newly registered enterprises per 1 000 inhabitants was high. With the national average of 44.9 operating SMEs per 1 000 inhabitants, the highest value of this rate was that of the following voivodeships: Zachodniopomorskie (57.9), Mazowieckie (53.8), Pomorskie (50.2), Wielkopolskie (50.1 operating SMEs per 1 000 inhabitants). At the end of this ranking there were Świętokrzyskie (36 SMEs per 1 000 inhabitants), Opolskie (35.7), Podlaskie (35.4), Lubelskie (34.1) and Podkarpackie Voivodeship (31.9). In 2006 as much as 16.2% of all national SMEs operated in Mazowieckie Voivodeship, 12.2% in Śląskie, 9.9% in Wielkopolskie and 8.8% in Małopolskie, while the lowest number of enterprises was operating in Lubuskie and Warmińsko-Mazurskie voivodeships (2.7% of all SMEs in each), Podlaskie (2.5%) and Opolskie (2.2%).

Map 2.2. The number of operating SMEs in 2006 per 1 000 voivodeship inhabitants



Persons working in SMEs by voivodeship

The share of persons working in SMEs in the total number of persons in work is highly diversified in individual regions of Poland. Thus, e.g. as of the end of 2006, with the average national level of 70%, it fluctuated from 52.6% in Mazowieckie Voivodeship to 84.1% in Zachodniopomorskie (see: Table 21 in the Annex). The abovementioned share mainly depends on the economic specificity of a given region. However, the rate of persons working in SMEs in a given voivodeship is also somehow affected by the type of employment data aggregation[23].

In 2006 the number of persons working in SMEs in the country increased by 2.1%, i.e. at lower rate than the number of persons working in large enterprises (growth of 6%). The number of persons working in SMEs grew at the highest rate in the following voivodeships: Lubuskie (7.5%), Dolnośląskie (7%), Pomorskie (4.6%), Zachodniopomorskie (3.8%) and Świętokrzyskie (3.6%). The high growth rate of the number of persons working in SMEs in the abovementioned voivodeships occurred mainly in micro-enterprises (in Pomorskie Voivodeship also in medium-sized enterprises). The growth rate of the number of persons working in micro-

[23] The data is collected with the use of the so-called enterprise method, thus persons working in individual enterprises are assigned to the voivodeship in which the management board registered office of the enterprise is located, regardless the fact that its activity may be conducted in numerous units and branches all over the country (e.g. commercial company Jeronimo Martins with the registered office of management board in Poznań, has a network of sales units named *Biedronka*). Many large companies with nationwide scope of activity have chosen Warsaw for the registered office of enterprise's management board and this is one of the reasons why Mazowieckie Voivodeship has the lowest share of persons working in SMEs among all the regions of the country. The same remarks as those in the case of the SME share in the total number of working persons in voivodeships are valid for the SME share in revenues and total investment expenditures in individual voivodeships (see: Tables 22 and 25 in the Annex).

enterprises in Lubuskie Voivodeship amounted to as much as 14.1% and in Dolnośląskie – to 9.4%. The voivodeships with the lowest growth rate of the number of persons working in SMEs were: Mazowieckie (1.8%), Lubuskie (0.7%) and Opolskie (0.4%), while in Śląskie and Łódzkie voivodeships the number of persons working in SMEs even declined (by 1.1% and 3.1% respectively) relative to 2005. The decline in Łódzkie Voivodeship was affected by micro-enterprises, where the number of working persons decreased by as much as 7.2%, whereas in Śląskie Voivodeship the number of working persons decrease in both micro- and small enterprises employing 10–49 persons.

Of all voivodeships the highest share of persons working in SMEs in the total number of persons working in SMEs in the country was registered in Mazowieckie Voivodeship and it amounted to 16.2%. The lowest share of 2.3% was that of two voivodeships: Opolskie and Podlaskie. In 2006 the shares of individual voivodeships in the total number of persons working in SMEs were very similar to their shares in the total number of small and medium-sized enterprises.

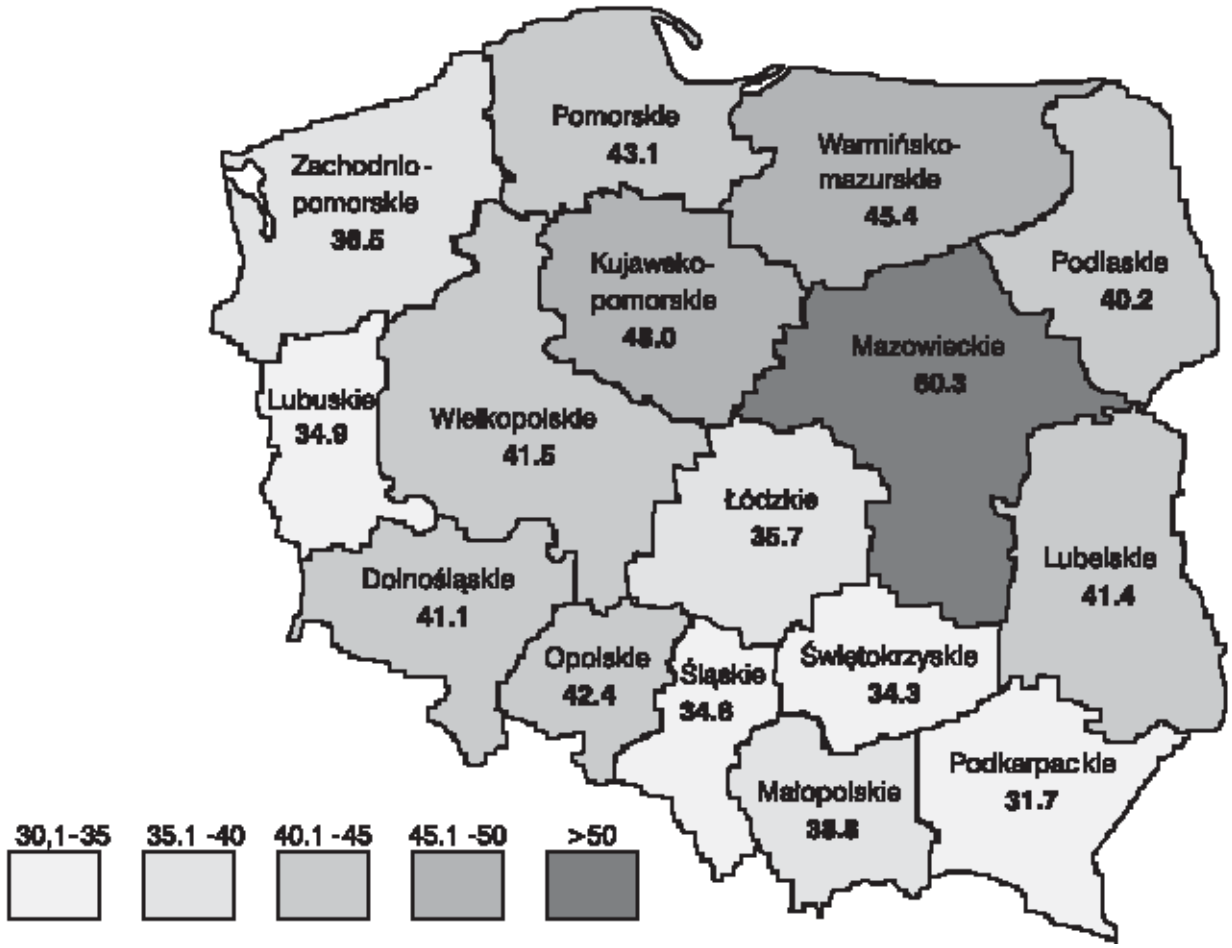
Revenues and financial situation of SMEs in voivodeships

In 2006 the situation of SMEs in individual voivodeships with regard to growth rate of revenues was highly diversified. In the case of micro-enterprises, where the growth rate of revenues in whole Poland amounted to 15.1%, growth rate of revenues fluctuated from the growth of 39.7% in Mazowieckie Voivodeships to decline by 5.7% in Podlaskie Voivodeship. High growth rate of revenues in micro-enterprises was registered also in the following voivodeships: Małopolskie (by 29.2%), Lubuskie (20.4%) and Pomorskie (18.9%). In the case of these three voivodeships, the high growth rate of revenues was correlated with a relatively high growth rate of the number of persons working in SMEs. The relation between growth rates of the number of working persons and that of revenues was registered also in several voivodeships where in 2006 the revenues of micro-enterprises decreased as compared with 2005. Apart from the abovementioned Podlaskie Voivodeship, the revenues of micro-enterprises declined also in the following voivodeships: Łódzkie (by 5%), Opolskie (by 4.2%) and Zachodniopomorskie (by 1.1%). As it was indicated in the previous paragraph, in 2006 the number of persons working in micro-enterprises in Łódzkie and Opolskie voivodeships declined.

In the case of small enterprises, i.e. employing 10–49 persons, a slight decrease in revenues in 2006 occurred only in Podlaskie Voivodeship (by 1.1%), whereas in several other voivodeships rapid growth was registered, e.g. in Wielkopolskie by 14.1%, in Lubelskie by 14%, Lubuskie by 13.2% and in Łódzkie and Świętokrzyskie by 10.1%. Nevertheless, the nationwide growth rate of revenues was relatively low (5.5%) as compared to other size classes of enterprises. This was caused by the low growth rate of revenues in Mazowieckie Voivodeship (by 2.8%) and stabilisation of revenues in Śląskie Voivodeship at the level of the previous year, with regard to the fact that the share of Mazowieckie in the total volume of small enterprises revenues in 2006 amounted to 24.5% and that of Śląskie – 12.5%.

As regards medium-sized enterprises, in 2006 none of the voivodeships noted a decline in revenues. However, the growth rate was highly diversified in individual voivodeships. The highest growth rate of revenues of medium-sized companies was registered in Lubelskie Voivodeship, where the revenues of abovementioned entities doubled. This could have been caused by new units' entrance to the group of medium-sized enterprises or by former large enterprises which, due to reduction of employment below 250 persons, became classified as medium-sized. A relatively high growth rate of revenues was registered among medium-sized enterprises also in the following voivodeships: Dolnośląskie (24%), Pomorskie (23.4%), Opolskie (16.9%), Małopolskie (16.8%), Zachodniopomorskie (16.3%) and Kujawsko-Pomorskie (15.9%), whereas the lowest growth rate of revenues was noted for the second consecutive year among medium-sized enterprises from Wielkopolskie and Mazowieckie voivodeships (the last year when significant growth of revenues was registered was 2004).

Map 2.3. Income of enterprises employing up to 9 persons calculated per enterprise in 2006 by voivodeship (PLN thousand)



As regards the income (revenues net costs) per enterprise employing up to 9 persons, the situation of individual region was in 2006 still highly diversified, yet the differences between the volumes of income in particular voivodeships were smaller than the year before. It resulted mainly from a rapid growth of income per micro-enterprise in three voivodeships: Podkarpackie, Zachodniopomorskie and Lubelskie (by 35.5%, 26.7% and 35.6% respectively), where in 2005 the income was the lowest (see: Table 23 in the Annex and Map 2.3.). In 2005 income per micro-enterprise was the lowest in Podkarpackie Voivodeship – it amounted to 59.4% of the national average. In 2006 the voivodeship still had the lowest income, yet it amounted to 74.4% of the relevant national average. The opposite situation was that of Mazowieckie Voivodeship, where an average micro-enterprise in 2005 generated income equal to 135% of national average, while in 2006 – 141.5%. Therefore, in Podkarpackie income per enterprise employing up to 9 persons in 2005 were ca. 2.3 times lower than in Mazowieckie, and in 2006 – ca. 1.9 times. High income of micro-enterprises in Mazowieckie Voivodeship are probably connected with the local market high demand for goods and services (wages in Warsaw are on average the highest in Poland), as well as with the specific activity of these enterprises. There are numerous enterprises in Warsaw operating in industry, construction, and real estate and business services; science, the income of which calculated per enterprise is much higher than the income of enterprises from other economy sections (see: Table 11 in the Annex).

The analysis of the value of share of costs in revenues rates[24] calculated for the groups of enterprises employing over 9 persons (see: Table 24 in the Annex) confirms the conclusions developed on the basis of previous research, i.e. that the financial situation of these entities is relatively only slightly relevant to their location in a given voivodeship. It can be stated that the larger the enterprise, the higher independence from local markets and their financial situation is more affected by factors of national of international nature. Therefore, while in the case of micro-enterprises there is a hierarchy of voivodeships referring to the volume of income per enterprise, prevailing over years without significant changes, then in the case of medium-sized and large enterprises the hierarchy of voivodeships referring to financial results of enterprises changes over time at much higher rate. However, in the periods of economic upturn, medium-sized and large enterprises from a given voivodeship may have good financial results for several consecutive years, yet, as it seems, it is rather slightly connected with the location of these enterprises.

An additional argument supporting this conclusion is the diversified situation of individual size groups of enterprises from a given voivodeship as compared with enterprises from other voivodeships. Thus e.g. micro-enterprises from Mazowieckie Voivodeship in 2006 generated the highest income per enterprise as compared with similar units from other regions, as it was mentioned above. At the same time small enterprises (10–49 employees) had the highest (97%), i.e. the worst rate of share of costs in revenues of all voivodeships, while in the case of medium-sized and large enterprises the value of the abovementioned rate was roughly equal to the average value calculated for all enterprises, medium-sized and large respectively, in Poland (it differed from these national average values only by 0.1 percentage point).

SME investment expenditures by voivodeship

If the volume of investment expenditures of all SMEs operating in Poland equals 100%, in 2006 as much as 25.5% of this value was the share of SMEs operating in Mazowieckie Voivodeship. In the case of individual SME groups in the voivodeship the shares were similar (micro-enterprises – share of 25,6% of the total volume of expenditures of micro-enterprises, small – 24.3%, and medium-sized – 26.1%). Śląskie Voivodeship, having the second highest value of the abovementioned rate, had only 9% share in the total volume of SME investment expenditures, while Lubuskie and Opolskie voivodeships, being on the last locations – the share of 1.9% (see: Table 2.18. below).

Table 2.18. The structure of SME investment expenditures by voivodeships in 2005–2006 (%)

Voivodeships	SME total		of which enterprises with the number of employees					
			0–9		10–49		50–249	
	2005	2006	2005	2006	2005	2006	2005	2006
Poland	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Dolnośląskie	8.6	8.8	6.4	8.6	8.1	9.3	9.9	8.8
Kujawsko-Pomorskie	4.2	4.1	2.5	2.0	4.2	4.1	5.2	5.1
Lubelskie	3.0	2.7	2.5	2.6	3.4	3.0	3.1	2.5
Lubuskie	2.3	1.9	1.6	1.5	2.7	2.5	2.5	1.8
Łódzkie	6.8	6.9	8.9	5.8	5.7	5.4	6.1	8.2
Małopolskie	8.4	8.3	14.1	12.6	7.0	7.2	6.0	6.6
Mazowieckie	23.9	25.5	23.4	25.6	22.5	24.3	25.1	26.1
Opolskie	1.9	1.9	1.7	1.7	2.2	1.8	1.9	2.1
Podkarpackie	3.8	3.6	4.1	4.3	3.6	3.3	3.7	3.4
Podlaskie	2.1	2.3	1.8	2.4	2.9	2.7	1.9	2.0
Pomorskie	6.1	6.7	4.7	8.8	7.0	6.7	6.3	5.6
Śląskie	10.0	9.0	8.9	7.4	12.6	10.0	9.4	9.4
Świętokrzyskie	2.4	2.0	2.5	1.6	2.6	2.5	2.3	2.0

[24] The share of costs in revenues is the percentage ratio of costs of operating to revenues from total activity of enterprises. After subtracting the value of this ratio from 100% the result is roughly equal to the value of gross turnover profitability rate.

Warmińsko-Mazurskie	2.6	2.9	2.4	3.3	2.5	3.1	2.7	2.6
Wielkopolskie	9.8	8.5	10.2	6.6	9.3	10.2	9.8	8.7
Zachodniopomorskie	4.1	4.9	4.3	5.2	3.7	3.9	4.1	5.1

Voivodeships' share in total SME investment expenditures was affected by numerous factors; among the basic ones are: the number of inhabitants and industrialisation level. However, Mazowieckie Voivodeship's dominating share in total SME expenditures, which in 2006 increased by 1.6 percentage point from 23.9% to 25.5%, was caused mainly by the absolute value of expenditures incurred by individual enterprises. In 2006 Mazowieckie Voivodeship was ahead of other voivodeships as regards the volume of expenditures per enterprise and per working person in all size groups of SMEs (see: Table 26 in the Annex). Therefore, there is a justified concern that the disparity in terms of modern solution between Mazowieckie and other regions will not decrease, but on the contrary – increase.

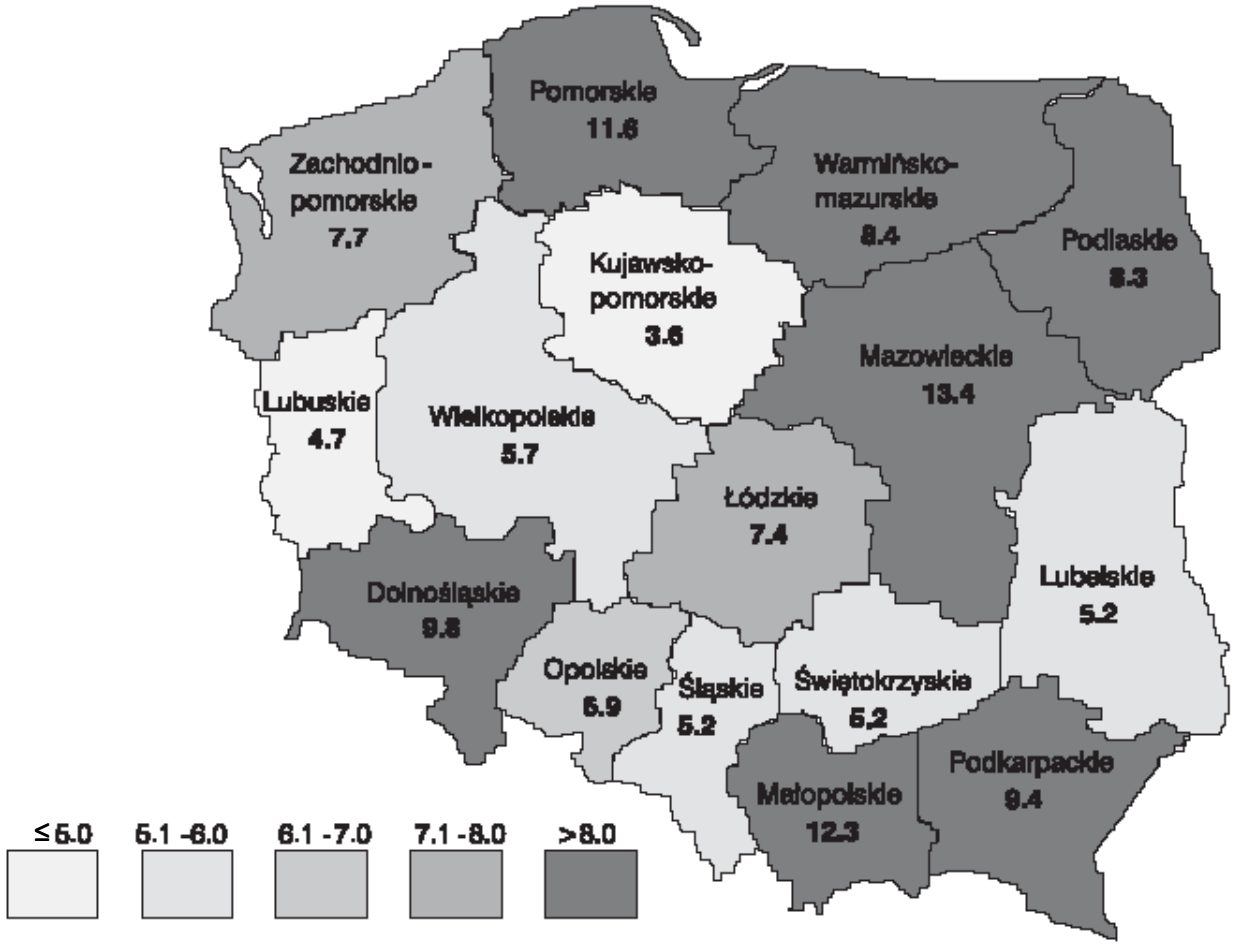
The level of MSP investment activity in individual voivodeships depends manly on the volume of income generated by enterprises, as the major share of investment expenditures of enterprises is financed from internal resources. In 2005 micro-enterprises in Poland assigned 18.5% of its income for investments, in 2006 the figure was higher – 20.2% (see: Table 2.19. below).

Table 2.19. Income and investment expenditures per enterprise employing up to 9 persons by voivodeships in 2005–2006

Voivodeships	Income per enterprise (PLN thousand)		Investment expenditures per enterprise (PLN thousand)		Expenditures to income ratio (%)	
	2005	2006	2005	2006	2005	2006
Poland	39.4	42.6	7.3	8.6	18.5	20.2
Dolnośląskie	41.6	41.1	6.7	9.8	16.1	23.8
Kujawsko-Pomorskie	35.4	48.0	3.8	3.6	10.7	7.5
Lubelskie	29.7	41.4	4.2	5.2	14.1	12.6
Lubuskie	32.2	34.9	4.6	4.7	14.3	13.5
Łódzkie	33.2	35.7	9.2	7.4	27.7	20.7
Małopolskie	50.2	38.8	12.4	12.3	24.7	31.7
Mazowieckie	53.2	60.3	10.3	13.4	19.4	22.2
Opolskie	38.2	42.4	5.7	6.9	14.9	16.3
Podkarpackie	23.4	31.7	7.7	9.4	32.9	29.7
Podlaskie	34.3	40.2	5.4	8.3	15.7	20.6
Pomorskie	39.2	43.1	5.4	11.6	19.8	26.9
Śląskie	39.5	34.6	5.1	5.2	12.9	15.0
Świętokrzyskie	34.7	34.3	7.5	5.2	21.6	15.2
Warmińsko-Mazurskie	37.3	45.4	5.2	8.4	21.2	18.5
Wielkopolskie	34.0	41.5	7.5	5.7	22.1	13.7
Zachodniopomorskie	28.8	36.5	5.4	7.7	18.8	21.1

Despite the nationwide increase in the ratio: investment expenditures/income of microenterprises in 2006 in as much as eight voivodeships the value of the ratio decreased. The decrease was registered even in some voivodeships where in 2006 income per enterprise increased significantly, as e.g. in Kujawsko-Pomorskie (decrease in the investment expenditures/income ratio from 10.7% in 2005 to 7.5% in 2006), Lubelskie (from 14.1% to 12.6%), Podkarpackie (from 32.9% to 29.7%), Warmińsko-Mazurskie (from 21.2% to 18.5%), or Wielkopolskie (from 22.1% to 13.7%). From the five voivodeships enumerated, only in Wielkopolskie micro-enterprise sector is sufficiently developed. Thus, e.g. in the following voivodeships: Lubelskie, Podkarpackie and Warmińsko-Mazurskie, entrepreneurs should use the opportunity, i.e. increase in income, and assign higher than in past years share of income for the purposes of development. Income growth was in the major part assigned for consumption, which will probably influence the future situation of micro-enterprises in these regions.

Map 2.4. Investment expenditures of enterprises employing up to 9 persons calculated per enterprise in 2006 by voivodeships (PLN thousand)



Similar analysis conducted for small enterprises (10–49 employees) indicates that the share of investment expenditures in income on the national scale increased in this group from 57.7% in 2005 to 70.7% in 2006, although income per small enterprise decreased from PLN 412.9 thousand to PLN 410.9 thousand. In seven voivodeships (Lubelskie, Lubuskie, Łódzkie, Opolskie, Podlaskie and Świętokrzyskie) the abovementioned ratio: investment expenditures/income decreased, despite the increase in income per enterprise. The unique situation occurred in Mazowieckie Voivodeship, where in 2005–2006 income per enterprise decreased from PLN 691.8 thousand to PLN 404.1 thousand, yet investment expenditures per enterprise increased from PLN 384.9 thousand to PLN 511.4 thousand. Therefore the investment expenditures/income ratio in 2006 was higher than 100% (it amounted to 126.6%), which means that small enterprises from Mazowieckie Voivodeship effectively used external sources of financing investment expenditures, e.g. domestic credits and bank loans or support from the EU).

2.8. Enterprises with foreign capital share in Poland in 2005–2006

This part of the Report presents the condition of enterprises with the share of foreign capital submitting annual financial report to CSO[25]. The research covered all the enterprises, also those with minority share of foreign capital and domestic private entities or natural persons or State Treasury are the majority

[25] Data on enterprises with foreign capital are taken from CSO publication entitled: *Economic activity of companies with foreign capital share* in the year the publication concerns.

shareholders. Data on the entities with foreign capital share do not include information on banks, financial and insurance institutions. Mainly the information on the results of enterprises employing 10 or more persons will be considered here, as in the group of enterprises employing up to 9 persons entities with foreign capital share are relatively very infrequent (in 2006 almost 10.7 thousand entities with foreign capital share against over 1 652 thousand units with the sole domestic capital, i.e. ca. 60% of micro-enterprises), and their results do not influence the values of indices concerning the whole group of micro-enterprises in Poland.

Enterprises with foreign capital share

In 2006 there were 18 015 enterprises with foreign capital share and complete accountancy in Poland (including *Agriculture and forestry* and *Fishery and fishing*, but excluding *Public administration*), of which 10 652 (59.1%) employed up to 9 persons, 4 009 (22.3%) with 10–49 employees, 2 346 (13%) were medium-sized enterprises and 1 008 (5.6%) – large enterprises employing over 249 persons. As compared with the previous year, the total number of enterprises with foreign increased by 7%, which means that there were 1 178 new entities (in 2005 fewer – 1 021). The size structure of entities has practically not changed – fluctuations in each of the groups did not exceed 1 percentage point.

Table 2.20. Growth rate of the number of entities with foreign capital share in 1996–2006 (%)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
total	10.5	9.5	2.2	5.9	6.3	1.6	0.1	6.1	2.9	6.5	7.0
up to 9 employees	11.0	8.3	1.7	3.4	8.2	5.4	0.4	5.0	2.8	6.5	8.0
10–49 employees	10.1	7.9	-2.8	5.9	2.8	-6.5	-1.4	9.9	2.6	7	4.0
50–249 employees	7.3	15.8	10.0	15.5	5.9	1.7	-0.3	5.3	1.4	4.9	5.9
over 249 employees	14.2	20.7	19.3	10.9	3.8	-1.4	5.2	4.9	9.2	7.3	12.0

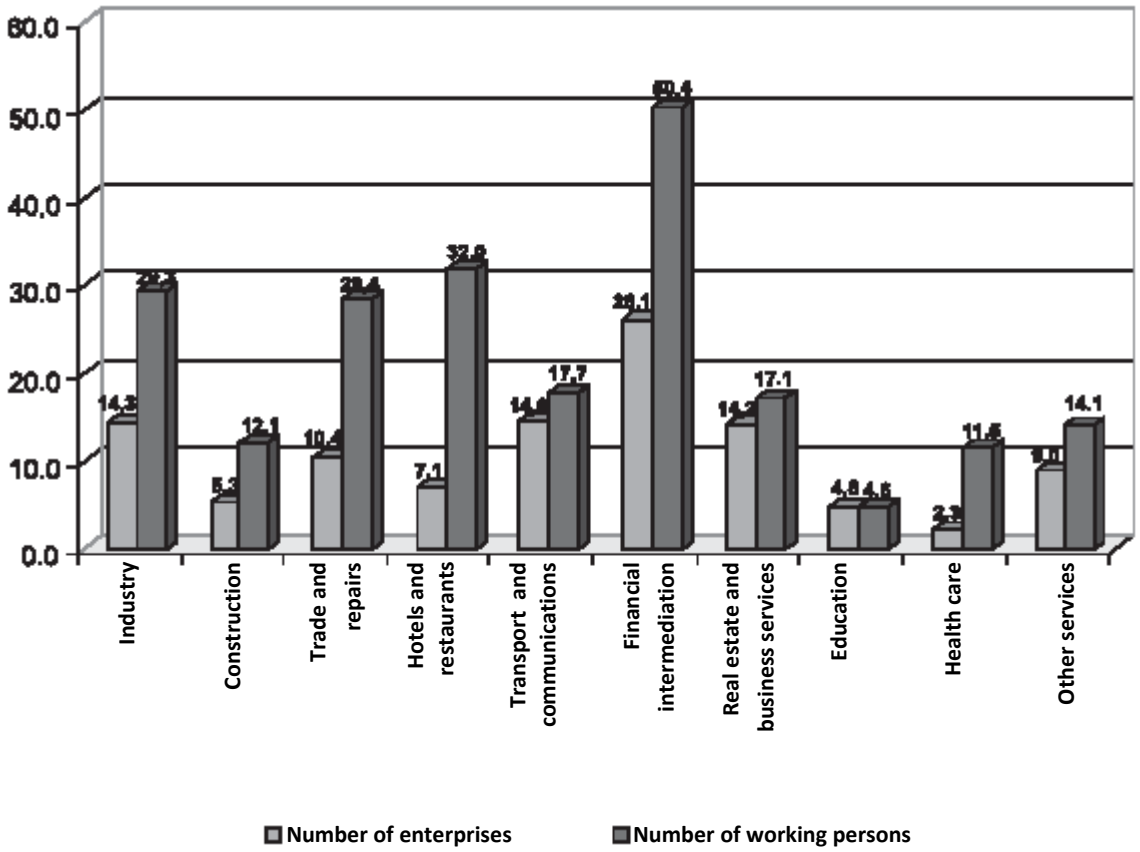
The following part discuses exclusively foreign entities employing more than 9 persons.

In 2006 there were 7 363 entities with a share of foreign capital employing over 9 persons operating in Poland, of which 4 009 small entities (10–49 employees), 2 346 medium-sized and 1 008 large (see: Table 27 in the Annex). Over 46% of them operated in *Industry* (3 397), almost one out of four was a commercial enterprise (1 785), over 12% in *Real estate and business services;* science (904), *Transport, stock management and communications* (430) and *Construction* (310). As compared to the previous year, the number of enterprises in all sections and size groups increased, with the exception of *Agriculture, forestry and fishery* and of the number of small enterprises in *Trade and repairs* and *Other services*.

In 2006 entities with foreign capital share constituted 11.9% of all operating enterprises employing more than 9 persons and their share increased relative to the previous year by 0.6 percentage point, as the total number of operating enterprises employing more than 9 persons increased in 2006 by 5% and the number of entities with foreign capital share increased by 5.5%. The role of these enterprises increases with size. Among small enterprises there were only 9.1% of entities with foreign capital, in the group of medium-sized – 16% and among large enterprises as much as 33.8%. As compared with 2005 the shares of entities with foreign capital increased in all size groups of enterprises.

As compared with 2005, the share of entities with foreign capital in the total number of enterprises operating in individual sections changed only slightly. It was still the highest in *Financial intermediation* (the share in the total number f operating enterprises – 26.1%). Higher than average share was, similarly to 2005, that of entities in *Industry* (14.3%), *Transport, stock management and communication* (14.6%) and *Real estate and business services, science* (14.2%).

Chart 2.16. The share of entities with foreign capital employing over 9 persons in the total number of operating enterprises and the number of working persons as of the end of 2006 (%)



As of the end of 2006 in enterprises with foreign capital share (including *Agriculture and forestry* and *Fishery and fishing*, but excluding *Public administration*) employing over 9 persons there were 1 285.1 thousand working persons, of which 91.2 thousand worked in small companies (with 10–49 employees), 269.1 thousand in medium-sized and 924 thousand in large enterprises (see: Table 28 in the Annex). As compared with the previous year employment in these entities increased by 10.9%.

Out of the total number of 1 285.1 thousand of working persons, as much as 57% worked in *Industry*, 20.1% in *Trade and repairs*, 6.9% in *Transport, stock management and communications* and 7.1% in *Real estate and business services, science*. As compared with the previous years, employment increased in all the sections, except for *Agriculture, forestry and fishery* , at the fastest rate in the section *Real estate and business services, science* (by 26.6%). Taking into account the shares in the total number of working person, the major role was that of entities with foreign capital in *Financial intermediation* (50.4% share – increase by 3.3 percentage points as compared with the end of 2005), *Hotels and restaurants* (32.0% – decrease by 0.3 pp), *Trade and repairs* (28.4% – increase by 0.8 pp) and in *Industry* (29.3% – increase by 1.3 pp).In the case of large enterprises, the shares of foreign entities in the total number of working persons were much higher. Thus, in the group of large industrial enterprises, persons employed in foreign enterprises constituted 39.3% of the total number of working persons (in Industrial processing even 49.9%), in trade – 56.3%, in the section *Hotels and restaurants* – 69.6% and in *Financial intermediation* – 55.7%.

Gross turnover profitability of entities with foreign capital share

In 2006 gross turnover profitability of enterprises employing over 9 persons and keeping accounting books amounted to 5.4%, of which in domestic enterprises – 5.2% and in entities with foreign capital – 5.6%. As compared with 2005, the total profitability and that of foreign entities increased by 0.6 percentage point, while

that of domestic enterprises by 0.5 pp. Therefore, in 2006 foreign enterprises were still ahead of domestic ones in terms of profitability.

In 2006 profitability in all of the sections was positive and in almost all sections higher than that from the previous year, both in the case of domestic and foreign enterprises. The exceptions were *Financial intermediation* and *Real estate and business services*. In these two sections profitability decreased in both domestic and foreign companies. On the other hand in the section *Transport, stock management ad communication* profitability of foreign entities slightly decreased (inter alia mobile telephony operators), yet it was still very high (10.8%).

Enterprises with domestic capital had higher profitability in the following sections: Mining and quarrying, Construction, Real estate and business services, Education and Health care. In other sections enterprises with foreign capital had higher profitability.

Investments of entities with foreign capital share

In 2006 investment expenditures of entities with foreign capital share employing over 9 persons, assigned for new fixed assets, amounted to PLN 39.6 billion. The expenditures increased relative to 2005 by 20.3%, thus only slightly more than investment expenditures of enterprises with domestic capital (increase by 19.7%). In the total amount of expenditures of foreign entities the highest share was that of enterprises in *Industrial processing*, i.e. PLN 21.1 billion (53.2% of the total volume of expenditures of foreign entities), and the following sections: *Trade and repairs* (PLN 6.2 billion –15.6%) and *Real estate and business services* (PLN 2.4 billion, 6%). High investment expenditures were incurred also in *Transport, stock management and communication*, yet due to statistical confidentiality CSO did not publish investment value. In 2006 ca. ¾ of the total amount of investment expenditures of enterprises with foreign capital employing over 9 persons was located the three sections of economy enumerated above. As compared with the previous year, investment expenditures increased in all sections, the most in Construction – by as much as 278%,

Expenditures of entities with foreign capital constituted 44.5% of all expenditures incurred by enterprises employing more than 9 persons (in 2005 – 44.3%). In *Industrial processing* and *Trade and repairs* these shares were even higher and amounted to 57.2% and 54.6% respectively.

Foreign trade of enterprises with foreign capital

The value of export from Poland in 2005 amounted to PLN 288.8 billion and in 2006 increased by 19% to the amount of PLN 343.8 billion (current prices). In the case of import, there was an increase from PLN 328.2 billion to PLN 394 billion, i.e. by 20% (current prices). With regard to entities with foreign capital, in 2005-2006 their export value increased from PLN 177.8 billion to PLN 214.5 billion, i.e. by 20.6% and the import value from PLN 191.2 billion to PLN 218.1 billion, i.e. by 14.1%. The value of export of entities with foreign capital increased at a slightly higher rate than that of domestic enterprises, while the import value – at lower rate. The share of foreign entities in the total export value in 2005–2006 increased from 61.6% to 62.4%, while the share in import value decreased from 58.3% to 55.4%.

In 2005–2006 import structure of entities with foreign capital changed positively. The share of import value of raw materials and materials for manufacturing purposes increased from 49.5% to 51.1%, while the share of import value of commodities for resale decreased from 44.8% to 42.5%.

2.9. Summary

The data characterising the condition of SME in 2005-2006 indicate that the economic entities in question in 2006 achieved significantly better results than a year ago. The number of operating SMEs increased, against the decline from 2005. The number of persons working in micro-enterprises increased, while in 2005 it was practically at the level of 2004. Also the growth rate of the number persons working in medium-

sized companies increased. The expansion of supermarkets has not lead to significant decrease in the number of persons working in micro- and small enterprises employing 10–49 persons. The average monthly gross wage in SME sector was increasing, and in small and medium-sized enterprises the growth rate was twice as high as in 2005. Revenues of micro-enterprises increased at the same rate as those of large enterprises and, generally, the growth rate of SME revenues was higher by precisely 10 percentage points than in 2005 (101.7% and 111.7%). Income (revenues net costs) per micro-enterprise was increasing and income per micro-enterprise in regions of Poland which are particularly weak in this regard increased at the rate much higher than in voivodeships where in the previous years income per enterprise was the highest. Gross and net turnover profitability in medium-sized enterprises increased, while the profitability of small enterprises (10–49 employees) was at the 2005 level. The volume of SME investment expenditures increased by a high figure (in micro- and small enterprises by ca. 20%, and in medium-sized even by 30%), while in 2005 the volume of investment expenditures in small and medium-sized enterprises declined relative to the previous year and the expenditures of micro-enterprises increased only by 4%.

Nevertheless the whole picture is not entirely optimistic. Generally, it may be stated that micro-enterprises and small companies developed somewhat dominated by large and, partially, medium-sized enterprises. They did not commence the high growth rate in Polish economy in 2004, but rather to some extent used the opportunity to develop, created by larger enterprises and other external factors. To support this conclusion some facts may be cited. The growth rate of the number of operating large and medium-sized enterprises in 2005–2006 was higher than that of small and micro-companies. The same applies to the growth rate of the number of working persons; in consequence the joint share of persons working in small and micro-enterprises systematically declines (between the year-ends of 2005–2006 it decreased from 52.9% to 52%). The average gross monthly wages increased at a higher rate in large and medium-sized enterprises, which resulted in increasing disparity in wages to the disadvantage of smaller enterprises. The joint share of small and micro-enterprises in the total volume of revenues decreased in 2005-2006 from 38.7% to 38.2%. Since 2003, gross and net turnover profitability index has been higher in large private enterprises than in small and medium-sized ones. Despite the increase in investment expenditures incurred in 2006 by small enterprises (0-49 employees) amounting to 20%, the expenditures calculated in constant prices were still lower by ca. 20% than the highest expenditures of 2000. On the other hand, in the case of large enterprises the record level of investment expenditures from 2001 was exceeded in 2005 and then again in 2006. And at last, the relatively high growth rate of investment expenditures in micro- and small enterprises, registered in some sections of economy in the previous years, did not result in significant improvement of their situation, while the high growth rate of investment expenditures in large enterprises resulted in their spectacular results discussed above.

The reasons for this relatively low economic performance of small and micro-enterprises are well known and were frequently described by numerous economists. They include strict requirements, in which enterprises operate, from the length of the period needed for registering new enterprise and, generally, the relations between entrepreneurs and state and local administration, regulations of Labour Code and labour costs, to the number of bodies controlling enterprises and regulations on the terms and scope of such controls. Large and medium-sized enterprises are more capable of operating in the reality of these regulations, using e.g. services of reputable legal and tax advisors. Small entrepreneurs, not able to afford such services, not always have the necessary knowledge and experience to face such situations. There is a threat that, without governmental measures aimed at improving the conditions for, most of all, smaller enterprises and the quality of the so-called business environment, the relatively good results achieved by small and micro-enterprises in 2006 will not be possible to achieve in the situation of economic downturn. Then the difficulties encountered by entrepreneurs may become more severe and will cause a decline in the number of operating enterprises. It should here be emphasised that up till now the number of operating enterprises, of which small enterprises (0–49 employees) constitute 99%, has not yet reached the record level of 1999 (to exceed it, there would have to be 95–100 thousand newly established enterprises additionally to the number of the end of 2006). In the time

of economic downturn also the number of persons working in small enterprises may again start declining, which will additionally complicate the difficult situation on the labour market.

Chapter 3

The condition of the SME sector on the regional level

This chapter presents the characteristics of the condition of the small and medium-sized enterprise sector in individual voivodeships in Poland in 2006. The data presented include enterprises from public and private sector and were analysed according to the following aspects: structure of entities, performance of operating enterprises and SME capital expenditure.

3.1. Dolnośląskie Voivodeship

Structure of entities

In 2006 in Dolnośląskie Voivodeship 309.2 thousand economic entities were registered, i.e. 8.3% of those present in the REGON system in Poland, out of which only 433 employed more than 250 persons. The voivodeship had the above average share in domestic entities in enterprises not having any employees – 16.5%. The voivodeship had relatively the smallest share in the group of small entities i.e. employing 10-49 persons – 6.7% . In 2006 in Dolnośląskie Voivodeship 27,1 thousand new enterprises were established i.e. 8.6% of all newly-started enterprises in Poland, but 26.2 thousand were liquidated, that is 9.1% of all liquidated entities in the country. The region had a particularly significant share in liquidated entities and newly-established entities in the group of enterprises not having employees – 19.9% and 19% respectively.

Nearly 2% of the enterprises registered in the region are entities with the major share of foreign capital. The highest number of such entities is in the group of medium-sized enterprises – 11.5% of all and large – nearly 20% of all registered in the voivodeship. Nearly 6% of the enterprises registered in the region is in the public sector. The highest number of public sector entities is in the group of enterprises employing 50-249 persons – 39.2% and the largest enterprises – 40.6%, whereas the lowest is in the group of micro-enterprises – 4.8%.

Table 3.1.1. Entities registered in the REGON system in Dolnośląskie Voivodeship in 2006 according to the number of working persons

	total	0	0-9	10-49	50-249	>249
Dolnośląskie	309217	47283	296125	10506	2153	433
Region share in Poland (%)	8.3	16.5	8.3	6.7	7.1	8.0
Foreign capital share in the region (%)	1.8	4.0	1.6	5.8	11.5	19.6
Public sector share in the region (%)	5.8	25.7	4.8	26.4	39.2	40.6
Private sector share in the region (%)	94.2	74.3	95.2	73.6	60.8	59.4
Newly-started	27079	3756	26709	336	30	4
Newly-started share in Poland (%)	8.6	19.9	8.6	7.6	6.7	4.3
Liquidated	26191	893	25884	276	20	11
Liquidated share in Poland (%)	9.1	19.0	9.1	7.4	4.4	6.2

Source: Calculations based on the CSO data

The major sections in Dolnośląskie Voivodeship according to the share of a section in SME in the region compared to the share of a section in SME in the country are *Mining* and *Real estate and business services*. The share of small and medium-sized enterprises of the abovementioned SME sections in the region in 2006 was higher than the national average by respectively 33% and 18%.

The SMEs of the private sector are dominated by enterprises in *Trade and repairs* section – nearly 33.4% and the *Real Estate and business services* section – nearly 18%. *Construction* and *Industrial processing* enterprises also had circa 10% share in the structure of private SMEs. The structure of SME public sector is dominated by enterprises in the *Real estate and business services* section, which constitute nearly 70% and in the *Education* section – over 18%. SMEs owned by foreign capital are mainly entities operating in the sections of *Trade and repairs* – over 39%, *Industrial processing* – 22% and *Real estate and business services* – 15%.

Newly-started enterprises in 2006 in Dolny Śląsk region are mainly enterprises in the sections of *Trade and repairs* – 28.5%, *Real estate and business services* – 22,5% and *Industrial processing* – over 7%. Small and medium-sized entities liquidated in Dolnośląskie Voivodeship are mainly enterprises in *Trade and repairs* – nearly 40% as well as *Real estate and business services* – 14.3%, construction enterprises – nearly 12% and *Industrial processing* – over 9%. The sections of *Industrial processing*, *Trade and repairs*, *Hotels and restaurants* and *Transport* had higher share in SMEs liquidated than newly-started in 2006 and in these sections

there was the largest negative balance between newly-started and liquidated entities. On the other hand, in 2006 the largest preponderance of newly-started entities over liquidated ones was in the *Real estate and business services* and *Other services* sections.

Table 3.1.2. Section structure of SMEs registered in the REGON system in Dolnośląskie Voivodeship in 2006

Dolnośląskie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.09	0.09	0.70	0.06	0.02	1.33	11
Industrial processing	0.78	9.38	22.08	7.35	8.85	0.87	-327
Electricity, gas and water production and supply	0.50	0.06	0.18	0.05	0.05	0.82	0
Construction	0.33	10.37	7.50	13.31	11.94	1.00	479
Trade and repairs	0.13	33.42	39.24	28.48	39.89	0.97	-2731
Hotels and restaurants	0.65	3.26	3.55	3.35	3.93	0.97	-120
Transport, stock management and communications	0.35	7.25	4.31	5.06	6.75	0.98	-397
Financial intermediation	0.28	3.97	3.86	4.25	4.44	1.03	-10
Real estate and business services	67.54	18.31	15.23	22.45	14.28	1.18	2340
Public administration	4.92	0.25	0.02	0.35	0.03	0.56	89
Education	17.89	1.69	1.21	2.42	2.09	1.03	108
Health care and social assistance	3.84	4.54	0.83	3.43	2.72	0.98	215
Other services	2.72	7.40	1.28	9.42	5.01	1.01	1240

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

Entrepreneurship indices in Dolnośląskie Voivodeship are among the highest in Poland. The region ranks 4th place with respect to the number of registered entities per 1 000 inhabitants. The region ranks 3rd place with respect to the number of entities with foreign capital participation while it is 5th with respect to the number of newly-started enterprises. In 2006 in Dolnośląskie Voivodeship a relatively large number of entities were liquidated as compared to the number of inhabitants – circa 91 per 10 thousand inhabitants, which corresponded with the 14th place in the voivodeship rankings.

Table 3.1.3. SMEs registered in the REGON system in relation to the number of inhabitants

Dolnośląskie	Number of enterprises per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	1071.3	4
Foreign capital SME	19.2	3
Newly-started SME	93.9	5
Liquidated SME	90.8	14

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in the voivodeship there were over 129 thousand non-financial enterprises actually conducting their activities, which corresponded to 7.5% of operating entities in the country.[26] A total of 242 large enterprises were

[26] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as

operating in Dolnośląskie Voivodeship, which constituted 8.1% of operating large enterprises in Poland. Small entities constituted 2.6% of all operating enterprises in the voivodeship and their share in the country amounted to 7.7%. The share of micro- and medium-sized enterprises in the total number of enterprises in the county in these size categories was 7.5% each.

Entrepreneurial activity in the voivodeship, measured by the number of operating enterprises per inhabitant, was equal to the national average and amounted to 45 entities per 1 000 inhabitants. The largest number of persons in this voivodeship was employed in micro-enterprises (40% of all working persons) and in large enterprises (nearly 1/3 of all persons in work).

The number of working persons per 1 000 inhabitants was higher than the national average only in case of large enterprises, among micro- and small enterprises it was equal to the national average while in case of medium-sized enterprises this index was slightly below the national average.

The average enterprise size in the region, with respect to the number of persons in work, corresponded with the national average for micro-enterprises (it amounted to 2.1 working persons per entity) and large enterprises (860 working persons per entity). Small enterprises in the region on average employed 22 persons, i.e. slightly fewer than an average small enterprise in the country; while medium-sized enterprises in Dolnośląskie Voivodeship on average employed 104 persons which was equal to the national average for that size class.

Revenues of an average enterprise in the voivodeship amounted to PLN 1.3 million. In all size categories revenues of an average enterprise in the region were lower in comparison with the average for all enterprises in the country. A particularly significant difference was observed in case of micro-enterprises, in which revenues from sales per entity were 25% below the national average and amounted to PLN 0.3 million. In case of small enterprises their revenues were lower by 20% and totalled PLN 6.2 million while revenues of an average enterprise with 50-249 employees were 13% below the national average and amounted to PLN 33.5 million in 2006.

Work performance in enterprises in Dolnośląskie Voivodeship, measured by revenues per working person, rose with the size of an enterprise and was the lowest in micro-entities – PLN 0.16 million, and the highest in large entities – PLN 0.34 million. However, in all size categories work performance was below the national average, and the difference ranged from 12% in the group of medium-sized enterprises to nearly 20% among small enterprises.

The lower work performance by enterprises in the region as compared to the rest of the country was not reflected in the wages, which were comparable to the average wages in case of small and large entities and were slightly lower – by 4% in case of micro- and medium-sized entities. The lowest average monthly gross wage – PLN 1.46 thousand – was in micro-enterprises employing up to 9 persons, while the highest was in medium-sized enterprises – PLN 2.5 thousand and large enterprises – PLN 3 thousand.

Table 3.1.4. Operating enterprises in 2006

Dolnośląskie	total	micro	small	medium	large
Number of operating entities	129370	124624	3399	1105	242
Share in Poland (%)	7.5	7.5	7.7	7.5	8.1
Enterprises per 1 000 inhabitants	44.9	43.2	1.2	0.4	0.1
Structure of working persons (%)	Number:61510	39.9	11.2	17.4	31.5
Working persons per 1 000 inhabitants	229.5	91.5	25.8	40.0	72.2
Working persons per entity	5.1	2.1	21.9	104.3	860.0
Revenues per 1 entity; PLN million	1.3	0.3	6.2	33.5	289.0
Share of costs in revenues (%)	91.3	87.7	93.1	95.9	90.3
Revenues per working person; PLN million	0.26	0.16	0.28	0.32	0.34
Structure of income (%)	100.0	24.6	12.4	21.8	41.3
Average monthly gross wage (PLN)	2493	1458	1816	2513	3061

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons

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sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking, insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

In 2006 in Dolnośląskie Voivodeship SME sector share in the revenues of enterprises amounted to 58.7%, while in the number of persons working to 68.5%, with the greatest importance of micro-enterprises and the least of small enterprises. Indicator of the cost level of micro-, small and large enterprises in the region was below the average for enterprises in these size categories in Poland and amounted respectively to 88%, 93% and 90%; while medium-sized enterprises were characterised by the highest level of costs, which totalled 96% and was higher than the average for Poland in this size category.

Table 3.1.5. Enterprises in Dolnośląskie Voivodeship; average for Poland = 100

Dolnośląskie	micro	small	medium	large
Enterprises per 1 000 inhabitants	99.6	101.7	103.7	d.d.
Working persons per 1 000 inhabitants	100.4	100.6	98.9	107.4
Working persons per entity	100.7	99.0	99.5	100.0
Revenues per 1 entity; PLN million	75.0	80.0	87.7	84.4
Share of costs in revenues (%)	98.5	98.4	101.3	95.9
Revenues per working person; PLN million	86.0	80.9	88.2	84.4
Average monthly gross wage; PLN	96.6	99.2	97.4	98.6

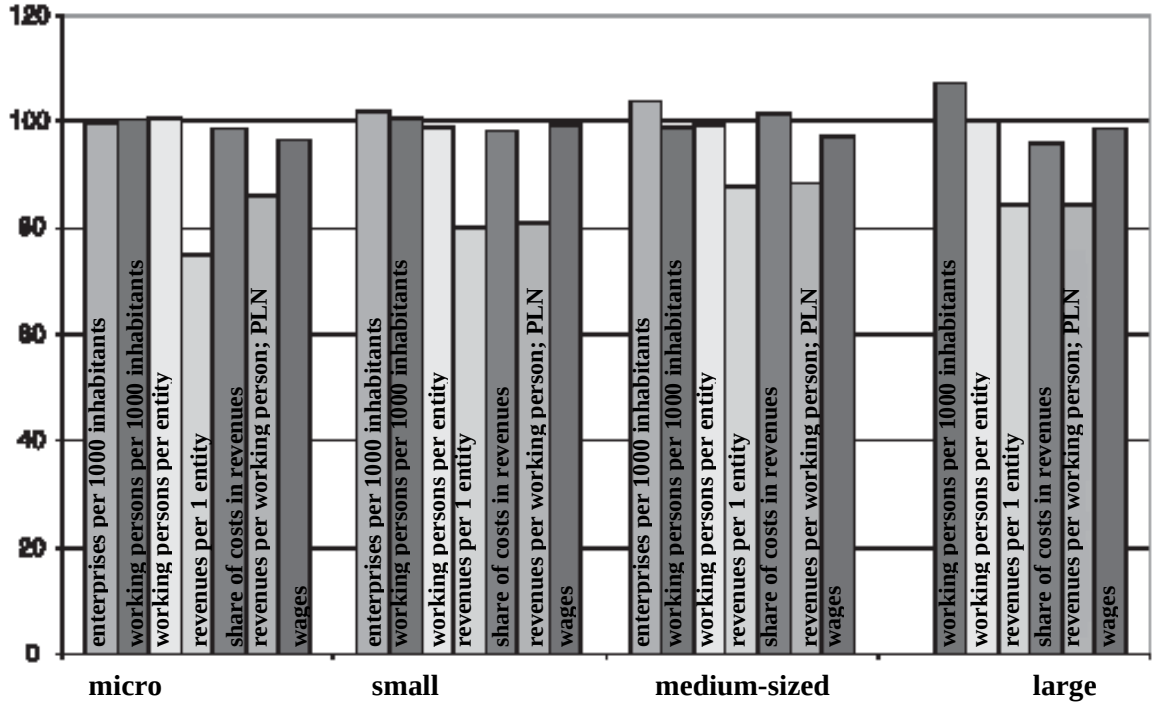
Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In 2006, among SMEs required to keep accounting books only micro-enterprises had higher than the national average revenues per entity. It was particularly the case with micro-entities in the *Construction* section in which the revenues were 16.4% higher and amounted to PLN 4.17 million. Micro-enterprises in the *Financial intermediation* and *Real estate and business services* sections had relatively the lowest revenues.

Among small enterprises revenues per entity were 22% below the national average. In this group of enterprises in the region revenues per entity were higher than the national average only in case of enterprises in the *Financial intermediation*, *Hotels and restaurants* and *Construction* sections; while lower revenues per small enterprise were particularly noticeable in the sections of *Electricity, gas and water production and supply* in which the revenues were 80% lower than the national average.

In the group of medium-sized enterprises required to keep accounting books revenues per entity were 13% below the national average, with the exception of enterprises in the sections of *Other services*, *Construction* and *Mining and quarrying*, which stood out as compared to the rest of the country with the average revenues higher than the national average by respectively 34%, 17% and 7%. In the remaining sections the average revenues were below the national average which was particularly observable in two sections: *Electricity, gas and water production and supply* and *Real estate and business services*. Revenues per entity of medium-sized enterprises in these sectors were less than 44-46% of the national average.

Chart 3.1.1. Enterprises in Dolnośląskie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Table 3.1.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Voivodeship total excluding A and B	3 329	8 342	33 141	103.5	78.2	86.6
Mining and quarrying	x	4 985	26 139	x	95.2	107.9
Industrial processing	2 619	5 743	23 849	103.1	79.5	90.0
Electricity, gas and water production and supply	710	4 792	22 768	100.0	21.2	43.8
Construction	4 171	6 850	30 081	264.1	100.2	117.4
Trade and repairs	5 341	12 686	75 929	108.4	80.5	91.2
Hotels and restaurants	x	3 150	10 476	x	104.8	90.6
Transport, stock management and communications	4 199	6 425	24 088	117.6	63.2	79.5
Financial intermediation	391	54 165	x	25.4	164.5	x
Real estate and business services	662	5 334	12 505	28.7	82.4	45.8
Education	x	1 698	x	x	79.9	x
Health care and social assistance	x	1 863	7 546	x	92.6	92.4
Other services	x	3 764	22 765	x	80.0	134.0

Source: Calculations based on the CSO data

Investment expenditures

Total investment expenditures of enterprises in the region were PLN 10.8 billion, of which micro-entities accounted for 10.2%, small entities for 16.2% and medium-sized enterprises for 19% of expenditures. The share of enterprises in expenditures in the national economy was the highest in the group of entities employing 10-49 persons – 79.4% and the lowest in the group of micro-enterprises – 41.2%. The share of public sector enterprises in expenditures by Dolnośląskie enterprises was the highest in the group of medium-sized enterprises – 10.2%, and the lowest in micro-enterprises – 0.9%.

Table 3.1.7. SME investment expenditures

Dolnośląskie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditures; PLN thousand	10791751	1095824	1746478	2054203
Share in expenditures of enterprises in the region (%)	100.0	10.2	16.2	19.0
Share of enterprises in investment expenditures in the region (%)	74.8	41.6	79.4	74.1
Public sector share in investment expenditures of enterprises (%)	15.4	0.9	5.2	10.2
Public sector share in expenditures of enterprises in the region; Poland = 100	72	63	59	77
Investments per non-financial enterprise; PLN thousand	81.2	9.8	350.5	2 235.3
Investments per enterprise; Poland = 100	121.7	114.7	120.7	117.2
Investments per working person in non-financial enterprises; PLN thousand	15.9	4.6	16.0	21.4
Investments per working person; Poland = 100	118.8	113.8	121.9	117.9

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In all groups of enterprises public sector in Dolnośląskie Voivodeship had smaller share in investments than it had on average in the country, while investments per enterprise as well as per working person were higher in the region than the national average in case of all groups of SME entities. Investment expenditures per working person and per enterprise were the highest in medium-sized entities and amounted respectively to PLN 21.4 thousand and PLN 2.23 million. Investments per working person in micro-enterprises added up to PLN 4.6 thousand and per enterprise to PLN 9.8 thousand.

The majority of investment expenditures in Dolnośląskie SMEs came from the sections of *Industrial processing* – 50.7% and *Trade and repairs* as well as *Real estate and business services*, *Construction* and *Financial intermediation* – circa 8% each. The fewest investments were made by SMEs from *Education*, *Health care and social assistance* and *Hotels and restaurants* sections.

The SME sector had the largest share in the investments in *Construction*, *Hotels and restaurants* and *Real estate and business services* – over 75% while the fewest investments (less than 20%) came from SMEs in the sections of *Mining*, *Electricity, gas and water production and supply* and *Transport*.

Table 3.1.8. Section structure of SME investments

Dolnośląskie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SMEs
C	12.52	1.97	3.47	21.67	187.84
D	52.29	50.74	1.64	1.07	50.05
E	17.51	2.46	0.53	70.57	125.59
F	86.45	8.21	1.53	2.07	34.10
G	34.68	11.44	0.68	0.66	62.62
H	76.31	1.73	0.77	1.28	81.37
I	15.52	2.91	0.37	11.05	132.42
J	63.32	8.02	1.72	0.02	3.20
K	77.56	7.99	0.39	15.62	182.97
M	65.51	0.31	0.44	14.13	88.96
N	45.36	1.62	0.86	33.77	88.84
O	84.85	2.61	0.73	46.03	85.57

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

Mining, *Industrial processing*, *Construction* and *Financial intermediation* should be considered the investment profiles of Dolnośląskie SMEs. The share of these sections in investment expenditures of Dolnośląskie SMEs was higher than the share these sections had in expenditure in the country.

The public sector generated the majority of SME investments in the *Electricity, gas and water production and supply* section – over 70% and in the *Other municipal, community and individual services* section – more than 46%. The public sector had the miniscule fraction in SME investments in *Financial intermediation* and *Trade*. The contribution of public sector to SME investments was above the national average in the sections of *Mining*, *Real estate and business services*, *Transport* and *Electricity, gas and water production and supply*.

Small and medium-sized enterprises in the region, except for small enterprises from private sector, financed the investments largely from own resources – 53% of expenditures by small enterprises in the public sector, 59.6% by medium-sized in the private sector and 62.6% by medium-sized in the public sector. Small enterprises from the private sector financed only 27.8% of the investments from own resources while the major source of financing in this group was foreign resources which covered almost half of the investments by small enterprises.

Medium-sized enterprises from the private sector financed 20.3% of their investments from foreign resources, out of which 11% came from foreign credits. In the public sector domestic credits and loans were the second important source of financing expenditures – 28.8% in the group of small enterprises and 15.3% in medium-sized group. In case of the private sector this source ranged from 11.4% in small enterprises to 14.7% in medium-sized group. In case of the public sector state budget funds were also an important source of financing (circa 12%) while they had no significant role in the private sector investments.

Table 3.1.9. Sources of SME investment financing (%)

	public sector		private sector	
Dolnośląskie	small	medium	small	medium
Internal resources	52.7	62.6	27.8	59.6
State budget funds	12.0	12.9	0.1	0.4
Domestic credits and loans	28.8	15.3	11.4	14.7
Total foreign resources:	0.9	4.3	47.1	20.3
Of which foreign credits	0.0	0.0	14.1	11.0
Other sources	4.0	2.7	0.8	1.6
Non-financed expenditure	1.4	2.2	12.7	3.2

Source: Calculations based on the CSO data

3.2. Kujawsko-Pomorskie Voivodeship

Structure of entities

In 2006 in Kujawsko-Pomorskie Voivodeship 192.3 thousand economic entities were registered i.e. 5.1% of all present in the REGON system in Poland, out of which only 253 were enterprises employing more than 250 persons. The voivodeship had the above average share in medium-sized entities – 5.3%. It had relatively the smallest share in the group of enterprises not having any employees – 2.5%. In 2006 in Kujawsko-Pomorskie Voivodeship 17.4 thousand new enterprises were established i.e. 5.5% of all newly-started enterprises in Poland, while fewer were liquidated – 16.8 thousand i.e. 5.8% of all liquidated entities in the country. The region had a particularly significant share in liquidated entities in the group of micro-entities – 5.8%, whereas in newly-started in the group of small enterprises – 6.9%.

Nearly 1% of the enterprises registered in the region are enterprises with the major share of foreign capital. The highest number of such entities is in the group of medium-sized enterprises – 6.5% of all registered enterprises and large – nearly 13% of all registered. Nearly 4% of the entities registered in the region is in the public sector. The highest number of public sector entities is in the group of enterprises employing 50-249 persons – 37.5% and the largest enterprises – 49.6%, whereas the lowest is in the group of micro-enterprises – 2.2%.

Table 3.2.1. Entities registered in the REGON system in 2006 according to the number of working persons

Kujawsko-Pomorskie	total	0	0-9	10-49	50-249	>249
	192298	7153	182840	7604	1601	253
Region share in Poland(%)	5.1	2.5	5.2	4.9	5.3	4.7
Foreign capital share in the region (%)	0.8	3.4	0.6	2.7	6.5	13.0
Public sector share in the region (%)	3.6	11.2	2.2	28.5	37.4	49.8
Private sector share in the region (%)	96.4	88.8	97.8	71.5	62.6	50.2
Newly-started	17430	673	17096	306	22	6
Newly-started share in Poland (%)	5.5	3.6	5.5	6.9	4.9	6.5
Liquidated	16764	250	16559	175	23	7
Liquidated share in Poland (%)	5.8	5.3	5.8	4.7	5.1	3.9

Source: Calculations based on the CSO data

Kujawsko-Pomorskie Voivodeship specializes, according to the share of SME entities in a given section in the region compared to the share of SME entities in a given section in the country, in *Electricity, gas and water production and supply* and *Health care and social assistance*. In 2006 the share of SME entities in these sections as compared to all SME entities in the region was by over 15% higher than on average in Poland. The SMEs of the private sector are dominated by enterprises in the *Trade and repairs* section – more than 36% and the *Real Estate and business services* section – nearly 14%. Construction enterprises and the *Industrial processing* section also had circa 10% share in the structure of private SMEs. The structure of SME public sector is dominated by enterprises in the *Real estate and business services* section – 36.4% as well as in the *Education* section – circa 35%. SMEs owned by foreign capital are mainly entities operating in the section of *Trade and repairs* – more than 35.2%, *Industrial processing* – 31.3% and *Real estate and business services* – 10.6%.

Newly-started enterprises in Kujawsko-Pomorskie Voivodeship are mainly enterprises in the following sections: *Trade and repairs* – more than 33% and *Real estate and business services* – 16% as well as construction enterprises – 13% and enterprises in the sections of *Industrial processing* – 8% and *Other municipal services* – nearly 10%. Small and medium-sized entities liquidated in Kujawsko-Pomorskie Voivodeship are mainly commercial enterprises – 40.6%, then enterprises in *Real estate and business services* – 14.4%, *Construction* – 11% and *Industrial processing* – 10%. *Industrial processing*, *Trade and repairs*, *Hotels and restaurants*, *Transport* and *Financial intermediation* had higher share in SMEs liquidated than newly-started and in these sections there was the largest negative balance between newly-started and liquidated entities. Whereas, in 2006 in the *Other services* and *Construction* sections there was the largest preponderance of newly-started entities over liquidated ones.

Table 3.2.2. Section structure of SMEs registered in the REGON system in Kujawsko-Pomorskie Voivodeship in 2006

Kujawsko-Pomorskie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.01	0.07	0.14	0.09	0.02	0.97	13
Industrial processing	1.61	10.53	31.28	8.12	9.93	0.98	-249
Electricity, gas and water production and supply	1.13	0.09	0.42	0.19	0.07	1.27	21
Construction	0.92	10.18	6.79	12.93	10.89	0.98	429
Trade and repairs	0.46	36.44	35.20	33.25	40.60	1.06	-1011
Hotels and restaurants	1.12	2.81	2.45	2.98	3.35	0.83	-42
Transport, stock management and communications	0.40	7.42	3.99	4.83	6.43	1.00	-237
Financial intermediation	0.64	4.04	5.95	3.96	4.37	1.05	-43
Real estate and business services	36.43	13.71	10.57	16.18	14.39	0.88	407
Public administration	10.34	0.38	0.00	0.69	0.01	0.87	120
Education	35.27	1.47	0.63	1.99	1.52	0.89	93
Health care and social assistance	7.07	5.35	0.98	5.03	2.77	1.15	412
Other services	4.57	7.52	1.61	9.75	5.59	1.03	762

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

The competitiveness indices in Kujawsko-Pomorskie Voivodeship are at the national average level. In 2006 the region ranked 9th place in Poland, with 93 entities registered per 1 000 inhabitants. The region ranked 8th place with respect to the number of newly-started entities. In comparison to the rest of the country, the region fared poorly with respect to the number of entities with foreign capital participation – with 7 entities registered per 10 thousand inhabitants it ranked 11th place in Poland. In 2006 in the region a relatively large number of entities were liquidated – circa 8 enterprises per 1 000 inhabitants which corresponded with the 12th place in the voivodeship rankings.

Table 3.2.3. SMEs registered in the REGON system in relation to the number of inhabitants

Kujawsko-Pomorskie	Number of enterprises per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	929.4	9
Foreign capital SME	6.9	11
Newly-started SME	84.3	8
Liquidated SME	81.1	12

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Kujawsko-Pomorskie voivodeship there were nearly 81 thousand non-financial enterprises actually conducting their activities which corresponded with 4.7% of operating entities in the country[27]. A total of 151 large enterprises were operating in this voivodeship i.e. 5.1% of operating large enterprises in Poland. Medium-

[27] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking, insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

sized entities constituted 1% of all operating enterprises in the voivodeship and their share in the country amounted to 5.5%, whereas the share of small and micro- enterprises in the total number of enterprises in the county was respectively 4.8% and 4.7%.

Entrepreneurial activity in the voivodeship, measured by the number of operating enterprises per inhabitant, was lower than the national average and amounted to 39 entities per 1 000 inhabitants.

The number of working persons per 1 000 inhabitants in Kujawsko-Pomorskie Voivodeship was significantly higher than the national average in case of medium-sized enterprises. In the remaining size categories this index was considerably below the national average.

The average enterprise size in the region, with respect to the number of working persons, was above the national average in case of small and medium-sized entities. Small enterprises in the region on average employed 23 persons (5% more than the national average), while medium-sized enterprises in Kujawsko-Pomorskie Voivodeship on average employed 108 persons (3% more than the national average). Micro-enterprises in the region on average employed 2 persons i.e. slightly fewer than an average micro-enterprise in Poland. In comparison to the rest of Poland, a particularly significant difference was observed in case of large enterprises, which on average employed 554 persons – such employment figures were 40% below the national average for this size category.

Among different size categories, only revenues of an average micro-enterprise in the region were equal to the national average and amounted to PLN 0.4 million. In case of the remaining size categories, the revenues were lower than the national average. A particularly significant difference was observed in case of large enterprises, in which revenues from sales per entity were below the national average by 46% and amounted to only PLN 184.4 million per entity.

In case of medium-sized enterprises their revenues were lower by 1/5 and totalled PLN 30 million, while revenues of an average small enterprise were 14% below the national average and in 2006 amounted to PLN 6.6 million.

Work performance in enterprises in Kujawsko-Pomorskie Voivodeship, measured by revenues per working person, rose with the size of an enterprise and was the lowest in micro-entities – PLN 0.18 million, and the highest in large entities – PLN 0.33 million. However, that pattern was not noted in the groups of small and medium-sized enterprises. Revenues per employee in medium-sized enterprises in the region were even slightly lower than revenues per employee in small enterprises. In this respect, medium-sized enterprises were also far below the national average – revenues per employee were almost 1/4 lower. In the remaining size categories work performance was also below the national average.

The lower work performance of enterprises in the region as compared to the rest of the country was reflected in lower wages. In case of micro-enterprises the average gross wage in Kujawsko-Pomorskie Voivodeship amounted to 90% of the average gross wage for Poland, and in case of large enterprises – 83.5%. Wages rose with the number of employees. The lowest average monthly gross wage – PLN 1.35 thousand – was registered in micro-enterprises employing up to 9 persons while the highest was in medium-sized enterprises – PLN 2.17 thousand and large enterprises – PLN 2.59 thousand.

Table 3.2.4. Operating enterprises in 2006

Kujawsko-Pomorskie	total	micro	small	medium	large
Number of operating entities	80715	77632	2125	807	151
Share in Poland (%)	4.7	4.7	4.8	5.5	5.1
Enterprises per 1 000 inhabitants	39.1	37.6	1.0	0.4	0.1
Structure of working persons (%)	Number: 376635	41.5	13.1	23.2	22.2
Working persons per 1 000 inhabitants	182.3	75.7	23.9	42.2	40.5
Working persons per entity	4.7	2.0	23.2	108.1	554.0
Revenues per 1 entity; PLN million	1.2	0.4	6.6	30.0	184.4
Share of costs in revenues (%)	92.0	86.5	94.0	94.4	94.4
Revenues per working person; PLN million	0.25	0.18	0.29	0.28	0.33
Structure of revenues (%)	100.0	29.4	15.0	25.9	29.7
Average monthly gross wage (PLN)	2091	1359	1622	2173	2594

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10–49 working persons

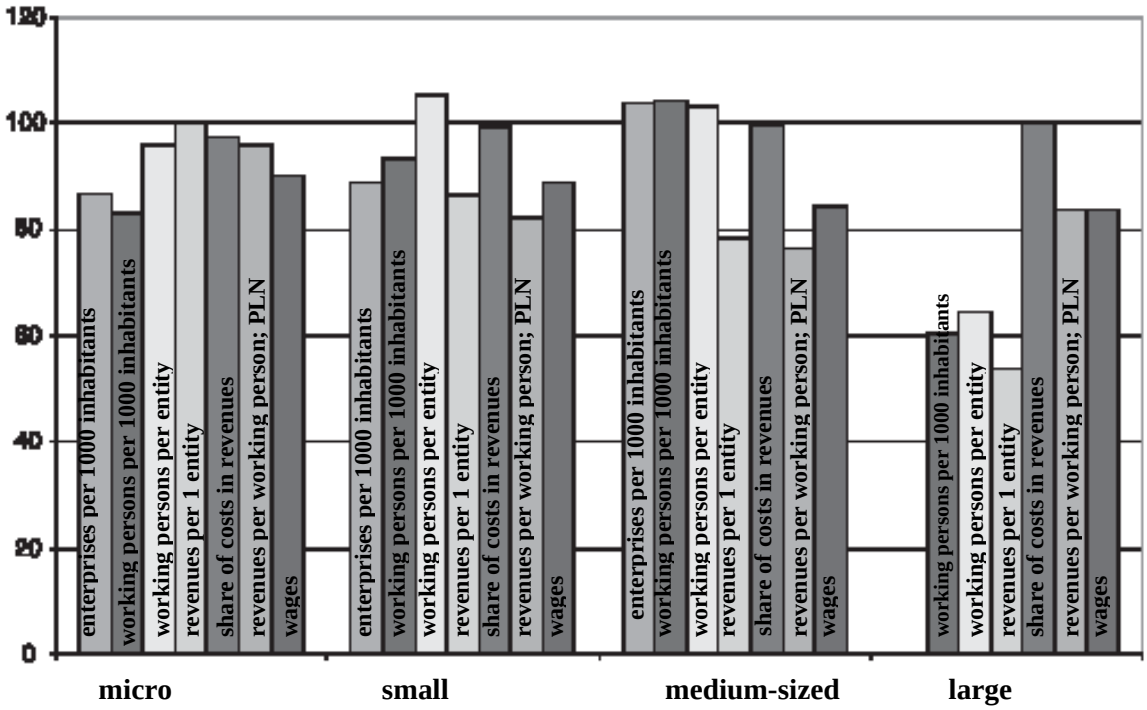
In 2006 in Kujawsko-Pomorskie Voivodeship SME sector share in the revenues of enterprises amounted to 70.3%, while in the number of working persons to 77.8%, with the greatest importance of micro-enterprises and the least of small enterprises. Indicator of the cost level of small, medium-sized and large enterprises in the region was equal to the average for enterprises in these size categories in Poland and in all these categories amounted to 94%. In case of micro-enterprises the indicator amounted to 86.5% and was below the national average.

Table 3.2.5. Enterprises in Kujawsko-Pomorskie Voivodeship; average for Poland = 100

Kujawsko-Pomorskie	micro	small	medium	large
Enterprises per 1 000 inhabitants	86.7	88.6	103.7	d.d.
Working persons per 1 000 inhabitants	83.1	93.2	104.3	60.3
Working persons per entity	95.9	105.1	103.1	64.4
Revenues per 1 entity; PLN million	100.0	86.2	78.5	53.9
Share of costs in revenues	97.2	99.3	99.7	100.2
Revenues per working person; PLN million	96.1	82.1	76.4	83.6
Average monthly gross wage (PLN)	90.1	88.6	84.3	83.5

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Chart 3.2.1. Operating enterprises in Kujawsko-Pomorskie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In 2006, among SMEs required to keep accounting books, only micro-enterprises had higher than the national average revenues per entity (by 2.3%). It was particularly the case with micro-entities in the *Industrial processing* sector in which the revenues were 40% higher than the national average and amounted to PLN 3.55 million. Micro-enterprises in the *Real estate and business services* sector had relatively the lowest revenues – over 70% below the nation average, which amounted to PLN 0.66 million per entity.

Table 3.2.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Kujawsko-Pomorskie	Revenues per entity; PLN thousand	Revenues per entity; Poland = 100

	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	3 289	9 072	30 053	102.3	85.0	78.5
Mining and quarrying	x	x	x	x	x	x
Industrial processing	3 557	5 872	26 141	140.0	81.3	98.6
Electricity, gas and water production and supply	x	3 752	19 400	x	16.6	37.4
Construction	x	5 029	21 276	x	73.6	83.1
Trade and repairs	5 809	15 584	61 651	117.9	98.9	74.1
Hotels and restaurants	x	x	7 242	x	x	62.6
Transport, stock management and communications	x	5 965	24 560	x	58.7	81.1
Financial intermediation	x	2 587	14 429	x	7.9	19.2
Real estate and business services	662	4 716	20 109	28.7	72.8	73.7
Education	x	x	x	x	x	x
Health care and social assistance	x	1 919	8 664	x	95.5	106.0
Other services	x	4 894	13 659	x	104.0	80.4

Source: Calculations based on the CSO data

Among small enterprises revenues per entity were 15% below the national average. In this group of enterprises in the region revenues per entity were higher than the national average only in case of enterprises in the *Other services* section, in which revenues were 4% higher than the national average. In other sections revenues per small enterprise in the region were lower in comparison with the rest of the country. In case of *Financial intermediation*, revenues per entity amounted to PLN 2.59 million which constituted only 8% of revenues of an average small enterprise in this section in Poland.

In the group of medium-sized enterprises required to keep accounting books revenues per entity were below the national average by 21.5%. The average revenues per entity of enterprises employing 50–249 persons were below the national average in all cases, except for enterprises in the section of *Health care and social assistance* – their average revenues were 6% higher. As was the case with small enterprises, lower revenues were particularly noticeable in *Financial intermediation* – revenues per entity of medium-sized enterprises were in this section more than 80% below the national average.

Investment expenditures

Total investment expenditures of enterprises in the region were PLN 3.92 billion, of which micro-entities accounted for 6.1% of expenditures, small entities for 10.7% and medium-sized enterprises for 29.5%. The share of enterprises in expenditures in the national economy was the highest in the group of entities employing 50–249 persons – 70.1% and the lowest in the group of entities employing up to 9 persons – 21.3%. The share of public sector enterprises in expenditures by Kujawsko-Pomorskie enterprises was the highest in the group of medium-sized enterprises – 13.1%, and the lowest in micro-enterprises – 1.3%.

The public sector had the above average share in investment expenditures by small enterprises in Kujawsko-Pomorskie Voivodeship than it had in the rest of the country. In the remaining groups of enterprises the public sector had lower share in investments than on average in the country. Investments per enterprise as well as per working person were lower than the national average in case of the whole SME sector in the region. Investment expenditures per working person and per enterprise were the highest in medium-sized entities and amounted respectively to PLN 16.4 thousand and PLN 1.77 million. Investments per working person in micro-enterprises added up to PLN 1.8 thousand and per enterprise to PLN 3.6 thousand.

Table 3.2.7. SME investment expenditures

Kujawsko-Pomorskie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditures; PLN thousand	3916434	240675	420864	1154394
Share in expenditures of enterprises in the region (%)	100.0	6.1	10.7	29.5
Share of enterprises in investment expenditures in the region (%)	65.8	21.3	57.9	70.1
Public sector share in investment expenditures of enterprises (%)	24.6	1.3	10.4	13.1
Public sector share in expenditures of enterprises in the region; Poland = 100	116	89	119	99
Investments per non-financial enterprise; PLN thousand	46.1	3.6	250.2	1773.2
Investments per enterprise; Poland = 100	69.2	41.6	86.1	93.0
Investments per working person in non-financial enterprises; PLN thousand	9.9	1.8	10.8	16.4
Investments per working person; Poland = 100	74.0	43.4	82.0	90.2

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Mining, *Industrial processing*, *Construction*, *Trade and repairs*, *Education*, *Health care and social assistance*, *Other municipal, community and individual services* should be considered the investment profiles of Kujawsko-Pomorskie SMEs. The share of these sections in investment expenditures of Kujawsko-Pomorskie SMEs was higher than the share these sections had in SME expenditures in the country.

The public sector generated the majority of SME investments in the *Electricity, gas and water production and supply* sector – more than 80% as well as in the *Other municipal, community and individual services* sector and *Health care and social assistance* – circa 60%. The public sector had the miniscule fraction in SME investments in the sections of *Mining*, *Industrial processing* and *Trade*. The investments of public sector SMEs were above the national average, particularly in the sections of *Financial intermediation*, *Construction* as well as *Health care*.

Table 3.2.8. Section structure of SME investments

Kujawsko-Pomorskie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	57.62	0.73	1.30	0.00	0.00
D	43.10	45.23	1.46	0.66	30.80
E	14.73	3.30	0.72	80.26	142.83
F	97.81	8.08	1.50	12.76	210.55
G	57.67	18.07	1.07	0.66	63.03
H	95.89	0.84	0.37	1.75	111.66
I	30.24	3.09	0.39	5.79	69.37
J	33.36	1.38	0.30	4.71	777.26
K	68.77	9.23	0.45	7.55	88.47
M	100.00	0.95	1.35	18.82	118.49
N	31.63	3.51	1.87	59.64	156.90
O	83.10	5.58	1.57	64.11	119.17

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

Small and medium-sized enterprises in the region, in all sections, financed the investments largely from own resources – from 51.5% of expenditures by small enterprises in the public sector to 69% by small enterprises in the private sector. Domestic credits and loans were the second important source of financing SMEs – they covered circa 16% of expenditures by medium-sized enterprises in the public sector, more than 22% by private sector SMEs and the most – over 36% – of expenditures in the group of small enterprises in the public sector. State budget funds constituted 8-10% of budget for investments in the public sector, while they had no significant role in the private sector investments. Foreign resources were used mainly by medium-sized enterprises. In the public and private sector they covered respectively nearly 8% and 3.6% of investments by that group of enterprises. Small enterprises financed 1-2% of their investments from foreign resources, with a minor role of foreign credits.

Other than the abovementioned sources financed more than 5% of investment expenditures by small enterprises in the private sector and 3.6% by private medium-sized enterprises. In the public sector this source covered 3% of expenditures.

Table 3.2.9. Sources of SME investment financing

	public sector		private sector	
Kujawsko-Pomorskie	small	medium	small	medium
Internal resources	51.5	63.1	68.8	66.7
Budget resources	8.0	10.3	0.2	0.4
Domestic credits and loans	36.2	15.6	22.4	24.5
Total foreign resources:	1.1	7.9	1.9	3.6
Including foreign credits	0.0	0.0	0.5	0.9
Other sources	2.8	3.1	5.2	3.6
Non-financed expenditure	0.5	0.0	1.4	1.2

Source: Calculations based on the CSO data

3.3 Lubelskie Voivodeship

Structure of entities

In 2006 155.3 thousand economic entities were registered in Lubelskie Voivodeship, i.e. 4.2% of all figuring in the REGON system in Poland, out of which only 191 were entities employing more than 249 persons. The voivodeship had the higher share in the group of entities not having any employees -4.7%. It had relatively the smallest share in the group of large enterprises – 3.5%. In 2006 in Lubelskie Voivodeship 13.5 thousand new entities were established i.e. 4.3% of all newly-started in Poland, while 11.2 thousand were liquidated i.e. 3.9% of all liquidated entities in the country. The region had the greatest share in newly-started enterprises in the group of micro-entities – 4.3%, whereas in liquidated in the group of enterprises not having any employees – 4.4%.

Slightly more than 0.5% of enterprises registered in the region are entities with the major share of foreign capital. The highest number of such entities is in the group of medium-sized enterprises – 4.6% of all and 6.8% of all registered.

More than 4% of entities registered in the region is in the public sector. The highest number of public sector enterprises is in the group of enterprises employing 50–249 persons – 48% and largest enterprises – 55%, whereas the lowest is in the group of micro-enterprises – 2.2%.

Table 3.3.1. Entities registered in the REGON system in Lubelskie Voivodeship in 2006 according to the number of working persons

	total	0	0-9	10-49	50-249	>249
Lubelskie	15537	13394	147390	6476	1250	191
Region share in Poland(%)	4.2	4.7	4.2	4.1	4.1	3.5
Foreign capital share in the region (%)	0.6	1.5	0.5	1.9	4.6	6.8
Public sector share in the region (%)	4.2	9.2	2.2	39.8	47.5	54.5
Private sector share in the region (%)	95.8	90.8	97.8	60.2	52.5	45.5
Newly-started	13479	727	13299	161	17	2
Newly-started share in Poland (%)	4.3	3.9	4.3	3.7	3.8	2.2
Liquidated	11150	205	11023	107	11	9
Liquidated share in Poland (%)	3.9	4.4	3.9	2.9	2.4	5.1

Source: Calculations based on the CSO data

The major sections in Lubelskie Voivodeship in SME sector are *Mining*, *Electricity, gas and water production and supply* as well as *Health care and social assistance*. The share of SME entities in these sections as compared to all small and medium-sized enterprises in the region in 2005 was higher by over 14% than the national average. Moreover, the region specialises in public administration – the share of this section entities in the group of entities employing up to 249 persons is in the region over twice as high as the average in Poland, which results from the underdevelopment of enterprises in other sections.

The SMEs of the private sector are dominated by enterprises in *Trade and repairs* section – more than 39% and *Real Estate and business services* section – over 12%. Construction enterprises and the *Industrial processing* section also had circa 10% share in the structure of private SMEs. The structure of SME public sector is dominated by enterprises in *Education* – circa 49%, *Real estate and business services* – nearly 17% and *Public administration* – over 13%. SMEs owned by foreign capital are mainly entities in the following sections *Trade and repairs* – circa 50%, *Industrial processing* – 17% and *Financial Intermediation* – 8.7%.

Table 3.3.2. Section structure of SMEs registered in the REGON system in Lubelskie Voivodeship in 2006

Lubelskie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.00	0.09	0.00	0.07	0.03	1.30	6
Industrial processing	1.08	8.97	17.20	7.38	8.21	0.83	79
Electricity, gas and water production and supply	1.48	0.08	0.41	0.09	0.21	1.14	-11
Construction	0.75	9.69	5.25	11.74	10.27	0.93	438
Trade and repairs	0.49	38.45	49.85	37.03	45.40	1.12	-68
Hotels and restaurants	1.07	2.90	3.30	3.67	3.96	0.86	53
Transport, stock management and communications	0.77	7.58	4.12	5.51	6.00	1.02	75
Financial intermediation	0.50	4.04	8.65	4.30	4.12	1.05	120
Real estate and business services	16.94	12.11	7.31	13.41	11.95	0.78	476
Public administration	13.03	1.12	0.00	0.19	0.02	2.54	24
Education	48.92	1.65	0.62	2.99	2.55	1.01	119
Health care and social assistance	7.80	5.38	1.54	4.12	2.62	1.16	263
Other services	7.17	7.94	1.65	9.51	4.68	1.08	761

Source: Calculations based on the CSO data, * - LQ the share of a sector in SME in the region as compared to the share of a sector in SME in the country

In 2006 the newly-started enterprises in Lubelskie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – 37% and *Real estate and business services* – 13.4% as well as construction enterprises – 23% and enterprises in the sections of *Other municipal services* – 9.5% and *Industrial processing* – 7.4%. Small and medium-sized entities liquidated in Lubelskie Voivodeship are mainly commercial enterprises – 45.4%, enterprises in the sections of *Real estate and business services* – 12%, *Construction* – 10.3% and *Industrial processing* – 8.2%. *Industrial processing*, *Trade and repairs*, *Hotels and restaurants*, *Transport* and *Electricity, gas and water production and supply* had higher share in SMEs liquidated than newly-started. However, the negative balance between newly-started and liquidated entities in Lubelskie Voivodeship was observable only in the sections of *Trade and repairs* and *Electricity, gas and water production and supply*. In 2006 the largest preponderance of newly-started entities over liquidated ones occurred in the *Real estate and business services* and *Construction* sections.

The entrepreneurship indices in Lubelskie Voivodeship are low in comparison to the rest of the country. In 2006 the region ranked 15th place in Poland, with 71 entities registered per 1 000 inhabitants, while it was 14th with respect to the number of newly-started entities. The region ranked 13th place with respect to the number of entities with foreign capital participation – there are 4.5 entities registered per 10 thousand inhabitants. In 2006 a relatively small number of entities were liquidated in the region, i.e. circa 5 enterprises per 1 000 inhabitants which corresponded with the 4th place in the voivodeship rankings.

Table 3.3.3. SMEs registered in the REGON system in relation to the number of inhabitants

Lubelskie	Number of enterprises per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	713.9	15
Foreign capital SME	4.5	13
Newly-started SME	62.0	14
Liquidated SME	51.3	4

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Lubelskie Voivodeship there were 74.2 thousand non-financial enterprises actually conducting their activities which corresponded with 4.3% of operating entities in the country[28]. A total of 87 large enterprises were operating in Lubelskie Voivodeship, which constituted 2.9% of operating large enterprises in Poland. There were 560 medium-sized enterprises employing 50-290 persons, which constituted 0.75% of all operating enterprises in the voivodeship and their share in the country amounted to 3.8%. The share of small and micro-enterprises in the total number of enterprises in the county was 4.4% and 4.3% respectively.

Entrepreneurial activity in the voivodeship, measured by the number of operating enterprises per inhabitant, amounted to 34 entities per 1 000 inhabitants and was below the national average in all size categories by circa 25%.

The number of working persons per 1 000 inhabitants was considerably below the national average in all size categories. In case of micro- and small enterprises this number was lower and in the group of medium-sized enterprises by ¼ and it was 3% less as compared to the rest of the country.

In case of small and medium-sized entities the average enterprise size in the region was similar to the national average. A small enterprise in the region on average employed 22 persons and a medium-sized one - 105 persons. Micro-enterprises in Lubelskie Voivodeship on average employed 2.1 persons, i.e. slightly fewer than an average micro-enterprise in the country.

In comparison to the rest of Poland, a particularly significant difference was observed in case of large enterprises in the region which on average employed 687 persons – such employment figures were 30% below the national average for this size category.

Among different size categories, only revenues of an average medium-sized enterprise in the voivodeship were nearly 30% higher than the national average and amounted to PLN 49.4 million. In case of an average micro-enterprise its revenues corresponded with the national average and amounted to PLN 0.4 million.

A particularly significant difference was observed in case of small and the largest enterprises, in which revenues from sales per entity were lower than the national average by 23% and 44% respectively.

In 2006, work performance in SME enterprises in Lubelskie Voivodeship, measured by revenues per working person, rose with the size of an enterprise and was the lowest in micro-entities – PLN 0.17 million and the highest in medium-sized enterprises – PLN 0.47 million.

The lower work performance in large enterprises (PLN 0.28 million) as compared to medium-sized enterprises is characteristic of this voivodeship. It results mainly from the fact that revenues of medium-sized enterprises in Lubelskie Voivodeship are circa 30% higher than revenues of an average enterprise in that size category in the country, while large enterprises have revenues per working person lower by 30% in comparison with an average large enterprise in Poland.

The discrepancies between the levels of work performance in medium-sized and large enterprises did not find a reflection in average gross wages. Wages rose with the number of employees. In case of medium-sized enterprises the average monthly gross wage was PLN 2.1 thousand and in enterprises employing more than 250 persons – PLN 2.7 thousand. Overall, wages in the SME sector were 20% below the national average and in case of large enterprises they were 13% lower.

[28] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking, insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Table 3.3.4. Operating enterprises in 2006

Lubelskie	total	micro	small	medium	large
Number of operating entities	74163	71577	1939	560	87
Share in Poland (%)	4.3	4.3	4.4	3.8	2.9
Enterprises per 1 000 inhabitants	34.1	32.9	0.9	0.3	0.0
Structure of working persons (%)	Number: 309766	48.0	13.7	18.9	19.3
Working persons per 1 000 inhabitants	142.6	68.5	19.6	27.0	27.5
Working persons per entity	4.2	2.1	22.0	104.7	687.3
Revenues per 1 entity; PLN million	1.1	0.4	5.9	49.4	190.5
Share of costs in revenues (%)	91.5	88.5	95.3	90.5	95.4
Revenues per working person; PLN million	0.26	0.17	0.27	0.47	0.28
Structure of revenues (%)	100.0	31.6	14.1	33.9	20.3
Average monthly gross wage (PLN)	1994	1237	1489	2101	2706

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10–49 working persons

In 2006 in Lubelskie Voivodeship the share of SME sector in the revenues of enterprises amounted to 79.7% while in the number of working persons to 80.7%, with the greatest importance of micro-enterprises and the least of small enterprises. Indicator of the cost level of micro-, small and large enterprises in the region was close to the average for enterprises in these size categories in Poland and amounted respectively to 88.5%, 95.3% and 95.4%; while in case of medium-sized enterprises the indicator amounted to 90.5% and was below the national average.

Table 3.3.5. Enterprises in Lubelskie Voivodeship; average for Poland = 100

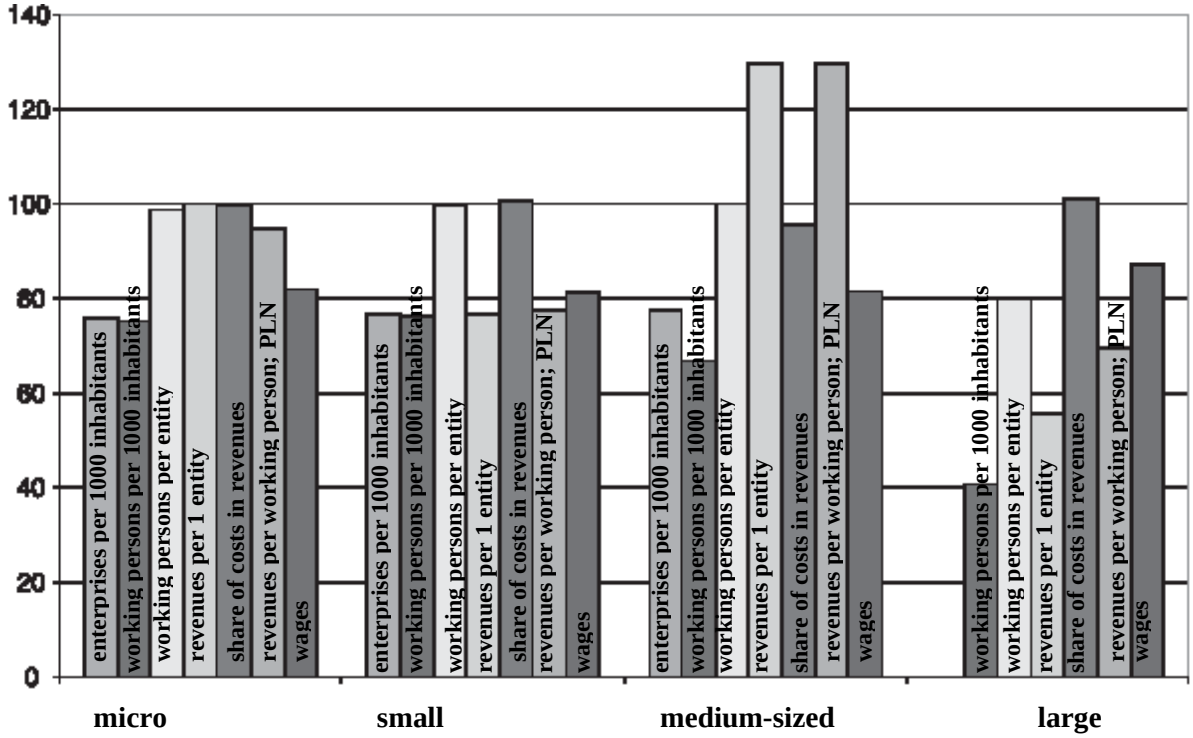
Lubelskie	micro	small	medium	large
Enterprises per 1 000 inhabitants	75.9	76.9	77.8	d.d
Working persons per 1 000 inhabitants	75.2	76.5	66.7	40.9
Working persons per entity	98.9	99.4	99.9	79.9
Revenues per 1 entity; PLN million	100.0	76.9	129.3	55.7
Share of costs in revenues	99.4	100.7	95.6	101.3
Revenues per working person; PLN million	94.6	77.4	129.6	69.6
Average monthly gross wage (PLN)	82.0	81.3	81.5	87.1

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In 2006, among SMEs required to keep accounting books only micro-enterprises had higher than the national average revenues per entity. It was particularly the case with micro-entities in *Industrial processing* section in which the revenues were 16% higher and amounted to PLN 2.96 million. Micro-enterprises in *Real estate and business services* section had relatively the lowest revenues – over 5% below the nation average, which amounted to PLN 1.05 million per entity.

Among small enterprises revenues per entity were 21% below the national average. In this group of enterprises in the region revenues per entity were higher than the national average only in case of enterprises in the section of *Hotels and restaurants*, in which revenues were 3% higher than the national average. In the remaining sections revenues per small enterprise in the region were lower as compared to the national average. In case of the *Electricity, gas and water production and supply* revenues per entity amounted to PLN 3.69 million which constituted only 16% of revenues of an average small enterprise in this section in the country.

Chart 3.3.1. Operating enterprises in Lubelskie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In the group of medium-sized enterprises required to keep accounting books revenues per entity were 34% below the national average (also with regard to sections). As was the case with small enterprises, lower revenues were particularly noticeable in *Financial intermediation* – revenues per entity of medium-sized enterprises were in this section over 70% below the national average.

Table 3.3.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Lubelskie	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	3 607	8 401	25 361	112.1	78.7	66.2
Mining and quarrying	x	x	x	x	x	x
Industrial processing	2 958	6 746	20 478	116.5	93.4	77.3
Electricity, gas and water production and supply	x	3 692	15 074	x	16.3	29.0
Construction	x	5 949	21 116	x	87.1	82.4
Trade and repairs	5 060	11 525	49 246	102.7	73.1	59.2
Hotels and restaurants	x	3 096	x	x		x
Transport, stock management and communications	3 494	6 201	21 333	97.8	61.0	70.4
Financial intermediation	x	x	x	x	x	x
Real estate and business services	1 049	3 442	15 072	45.4	53.2	55.3
Education	x	x	6 093	x	x	41.2
Health care and social assistance	656	1 969	x	71.7	98.0	x
Other services	x	x	8 760	x	x	51.6

Source: Calculations based on the CSO data

Investment expenditures

Total investment expenditures by enterprises in the region were PLN 2.5 billion, of which micro-entities accounted for circa 14% of expenditures, small entities for 11% and medium-sized enterprises for 25%. The share of enterprises in expenditures in the national economy was the highest in the group of entities employing 50-249 persons – 63% and the lowest in the group of entities employing up to 9 persons – 29%. The share of public sector enterprises in expenditures by Lubelskie enterprises was the highest in the group of medium-sized enterprises – 17%, and the lowest in micro-enterprises – 2.5%.

The public sector had the above average share in investment expenditures by micro- and medium-sized enterprises in Lubelskie Voivodeship than it had in the rest of the country. In the group of small enterprises the public sector had lower share in investments than on average in the country. Investments per enterprise as well as per working person were lower than the national average in case of the whole SME sector in the region. Investment expenditures per working person and per enterprise were the highest in medium-sized entities and amounted to PLN 12 thousand and PLN 1.26 million respectively, while investments per working person in micro-enterprises added up to PLN 2.5 thousand and per enterprise to PLN 5.2 thousand.

Table 3.3.7. SME investment expenditures

Lubelskie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	2518952	357442	273143	622214
Share in expenditures of enterprises in the region (%)	100.0	14.2	10.8	24.7
Share of enterprises in investment expenditures in the region (%)	53.8	28.8	38.3	63.4
Public sector share in investment expenditures of enterprises (%)	36.0	2.5	5.4	16.8
Public sector share in expenditures of enterprises in the region; Poland = 100	169	165	61	127
Investments per non-financial enterprise; PLN thousand	33.6	5.2	199.8	1261.3
Investments per enterprise; Poland = 100	50.4	60.6	68.8	66.2
Investments per working person in non-financial enterprises; PLN thousand	8.0	2.5	9.1	12.0
Investments per working person; Poland = 100	60.2	61.2	69.2	66.2

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Table 3.3.8. Section structure of SME investments

Lubelskie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	2.33	0.38	0.66	4.25	36.83
D	54.48	34.23	1.10	1.16	53.93
E	18.18	3.65	0.79	55.43	98.64
F	79.54	7.43	1.38	0.57	9.43
G	68.81	21.98	1.30	0.86	82.41
H	93.84	1.65	0.73	1.99	126.88
I	40.62	8.32	1.06	10.09	120.83
J	31.43	1.50	0.32	0.07	11.41
K	85.60	11.54	0.56	9.04	105.87
M	42.42	0.76	1.07	30.16	189.89
N	27.35	3.28	1.75	28.55	75.11
O	81.41	5.29	1.49	84.38	156.85

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

Industrial processing, *Construction*, *Trade and repairs*, *Transport*, *Education*, *Health care and social assistance*, *Other municipal, community and individual services* should be considered the investment profiles in Lubelskie SMEs - the share of these sections in investment expenditures by Lubelskie SMEs was higher than the share these sections had in SME expenditure in the rest of the country.

The public sector generated the majority of SME investments in the sections of *Other municipal, community and individual services* – more than 80% as well as *Electricity, gas and water production and supply* – more than 55%. The public sector had the miniscule fraction in SME investments in *Financial Intermediation*, *Construction* and *Trade*. The investments of public sector SMEs were above the national average in the following sections of *Hotels*, *Transport*, *Real Estate and business services*, *Education* and *Other services*.

Small and medium-sized enterprises in the region, in all sections, financed their investments mostly from own resources, although to a much greater extent in the private sector, where own resources covered circa 70% of investment spending. In the public sector own resources ranged from circa 40% in the group of small enterprises to 50% among medium-sized.

Domestic credits and loans were the second important source of financing SMEs – they covered circa 12% of expenditures by medium-sized enterprises in the public sector. The remaining enterprises in both sectors financed circa 1/4 of their investments from credits. State budget funds constituted circa 20% of budget for investments in the public sector, while they had no significant role in private sector investments. Foreign resources were used mainly by medium-sized enterprises in the public sector – they covered more than 8% of investments by this group of enterprises. Private sector SMEs financed circa 2% of expenditures from foreign resources, although none of the enterprises made use of foreign credits. Other than the abovementioned sources played a significant role in financing investments by small enterprises in the public sector (14% of expenditures covered) while in case of the remaining enterprises in both sectors expenditures from other sources did not exceed 4%.

Table 3.3.9. Sources of SME investment financing

	public sector		private sector	
Lubelskie	small	medium	small	medium
Internal resources	39.3	49.8	71.2	68.3
Budget resources	20.9	19.7	0.8	0.2
Domestic credits and loans	25.7	12.2	22.6	25.5
Total foreign resources:	0.0	8.4	1.5	2.3
Including foreign credits	0.0	0.0	0.0	0.0
Other sources	14.1	3.8	3.6	2.4
Non-financed expenditure	0.0	6.2	0.3	1.2

Source: Calculations based on the CSO data

3.4 Lubuskie Voivodeship

Structure of entities

In 2006 in Lubuskie Voivodeship 106.6 thousand economic entities were registered i.e. 2.9% of all in the REGON system in Poland, out of which only 130 were enterprises employing more than 249 persons. The voivodeship had the above average share in the group of entities not having any employees – 3.9% while it had relatively the lowest share in the group of large enterprises – 2.4%. In 2006 in Lubuskie Voivodeship 9.5 thousand new entities were established i.e. 3% of newly-started enterprises in Poland, whereas 5.9 thousand enterprises were liquidated i.e. 2.1% of all liquidated in the country. The region had the greatest share in newly-started and liquidated entities in the group of medium-sized enterprises – respectively 3.6% and 3.3%.

More than 2% of enterprises registered in the region are entities with the major share of foreign capital. The highest number of such entities is in the group of medium-sized enterprises – 10.8% of all medium-sized enterprises as well as in the group of large enterprises – 19.2% of all registered in the region. Nearly 6% of entities registered in the region is in the public sector. The highest number of public sector entities is in the group of enterprises employing 50-249 persons – 40% and largest enterprises – 48%, while the lowest is in the group of micro-entities – 4.6%.

Table 3.4.1. Entities registered in the REGON system in Lubuskie Voivodeship in 2006 according to the number of working persons

	total	0	0-9	10-49	50-249	>249
Lubuskie	106651	11289	101508	4177	836	130
Region share in Poland(%)	2.9	3.9	2.9	2.7	2.8	2.4
Foreign capital share in the region (%)	2.1	2.5	1.8	7.7	10.8	19.2
Public sector share in the region (%)	5.8	32.4	4.6	28.4	39.8	47.7
Private sector share in the region (%)	94.2	67.6	95.4	71.6	60.2	52.3
Newly-started	9542	628	9394	132	16	0
Newly-started share in Poland (%)	3.0	3.3	3.0	3.0	3.6	0.0
Liquidated	5915	109	5777	117	15	6
Liquidated share in Poland (%)	2.1	2.3	2.0	3.1	3.3	3.4

Source: Calculations based on the CSO data

Electricity, gas and water production and supply and *Mining* are the sections which had the greater share in structure of entities in SME sector in Lubuskie Voivodeship than on average in the country. The share of SME entities in these sections as compared to all SME entities in the region was in 2006 respectively 27% and 12% higher than the national average. The SMEs of the private sector are dominated by enterprises in the sections of *Trade and repairs* – circa 37% and *Real Estate and business services* – 16%. Construction enterprises and the *Industrial processing* section also had circa 10% share in the structure of private SMEs.

The structure of SME public sector is dominated by enterprises in the sections of *Real estate and business services* – 60% *Education* – circa 21.4%. SMEs with the major share of foreign capital are mainly entities in the sections of *Trade and repairs* – 36%, *Industrial processing* – 27% and *Real estate and business services* – 10.5%.

Table 3.4.2. Section structure of SMEs registered in the REGON system in Lubuskie Voivodeship in 2006

Lubuskie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.03	0.08	0.87	0.08	0.08	1.12	7
Industrial processing	0.90	9.09	26.89	7.65	9.09	0.84	193
Electricity, gas and water production and supply	0.75	0.09	0.50	0.14	0.15	1.27	4
Construction	0.59	9.76	7.84	13.62	9.26	0.94	753
Trade and repairs	0.36	36.69	35.82	33.62	41.50	1.06	756
Hotels and restaurants	0.52	3.67	4.33	3.92	4.65	1.09	99
Transport, stock management and communications	0.42	7.29	6.75	5.12	5.45	0.98	167
Financial intermediation	0.33	3.87	3.78	3.85	4.08	1.00	126
Real estate and business services	59.88	15.96	10.53	18.28	15.64	1.03	820
Public administration	6.74	0.26	0.00	0.37	0.08	0.59	30
Education	21.37	1.18	0.32	1.62	1.83	0.72	47
Health care and social assistance	3.93	4.57	0.73	2.74	2.54	0.98	111
Other services	4.19	7.50	1.64	8.99	5.67	1.02	523

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

Newly-started enterprises in Lubuskie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – nearly 33.6% and *Real estate and business services* – 18.3% as well as construction enterprises – 13.6% and enterprises in the sections of *Other municipal services* – 9% and *Industrial processing* – circa 7.6%. Small and medium-sized entities liquidated in Lubuskie Voivodeship are mainly trade enterprises – 41.5%, enterprises in the sections of *Real estate and business services* – 15.6%, as well as construction enterprises and enterprises in the *Industrial processing* section – circa 9% each. The sections of *Industrial processing*, *Trade and repairs*, *Hotels and restaurants*, Transport, *Financial intermediation* and *Education* had higher share in SMEs liquidated than newly-started. However, in all sections there was a positive balance between newly-started and liquidated entities. The largest preponderance of newly-started entities over liquidated ones was observable in the sections of *Real estate and business services*, *Construction* and *Trade*.

Table 3.4.3. SMEs registered in the REGON system in relation to the number of inhabitants

Lubuskie	Number of enterprises per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	1056.2	5
Foreign capital SME	21.8	2
Newly-started SME	94.6	4
Liquidated SME	58.6	5

Source: Calculations based on the CSO data

Competitiveness in Lubuskie Voivodeship is quite high as compared with the rest of the country and has improved since 2005. In 2006 the region ranked 5th place in Poland, with 106 entities in SME sector registered per 1 000 inhabitants, and it had a high, 4th place with respect to the number of newly-started entities. Lubuskie Voivodeship also stands out in terms of entities with foreign capital participation as compared to the number of inhabitants – it came in second in Poland, with 22 such entities registered per 10 thousand inhabitants. In 2006 a relatively low number of enterprises were liquidated in the region i.e. circa 59 enterprises per 10 thousand inhabitants which corresponded with the 5th place in the voivodeship rankings.

Performance of operating enterprises

In 2006 in Lubuskie Voivodeship there were 46.6 thousand operating non-financial enterprises which corresponded with 2.7% of total operating entities in the country[29]. Only 73 large enterprises were operating in this region, which constituted 2.4% of operating large enterprises in Poland. The voivodeship had the largest share in the total number of operating small enterprises in the country – 3.1%. The share of micro- and medium-sized enterprises in the total number of enterprises in the county in these size categories was 2.7% and 2.6% respectively.

Entrepreneurial activity in Lubuskie Voivodeship, measured by the number of operating enterprises per inhabitant, was above the national average and amounted to 46 entities per 1 000 inhabitants. In case of small enterprises in the region this index was 20% higher than the average for Poland.

The number of working persons per 1 000 inhabitants was above the national average only in case of SME sector enterprises. In this case also in small enterprises the number of working persons per 1 000 inhabitants was nearly 1/5 higher than the average for Poland.

The average enterprise size in the region was similar to the national average in case of SME sector, while it differed significantly in case of the largest enterprises – on average they employed 496.5 persons which constituted 58% of the average for Poland.

Revenues of an average enterprise in the voivodeship amounted to PLN 0.9 million and were below the national average. A particularly significant difference was observed in case of medium-sized enterprises, in which revenues from sales per entity were 36% lower than the national average and amounted to PLN 24.4 million. In case of micro-enterprises their revenues were lower by 25% and totalled PLN 0.3 million while revenues of an average small enterprise were 16% below the national average and amounted to PLN 6.4 million in 2006. An even greater disparity occurred in case of the largest enterprises in the voivodeship – revenues by an average large enterprise in the region were 58% below the average for Poland.

Work performance in enterprises in Lubuskie Voivodeship, measured by revenues per working person, was the lowest in micro-entities – PLN 0.15 million, and the highest in large entities – PLN 0.29 million. This pattern was disrupted by medium-sized enterprises, in which revenues per working person were 37% below the average for Poland and lower than in small enterprises by PLN 0.06 million.

The below average work performance was observable in all size classes in the analysed region. The lower level of revenues per working person was reflected in the average gross wage in Lubuskie Voivodeship, which was below the national average in all size categories (in medium-sized and large enterprises by nearly 20%). Wages rose with the number of employees. The lowest average monthly gross wage – PLN 1.38 thousand – was registered in the smallest enterprises employing up to 9 persons while the highest occurred in large enterprises – PLN 2.47 thousand.

Table 3.4.4. Operating enterprises in 2006

[29] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking, insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Lubuskie	total	micro	small	medium	large
Number of operating entities	46645	44797	1390	385	73
Share in Poland (%)	2.7	2.7	3.1	2.6	2.4
Enterprises per 1 000 inhabitants	46.3	44.4	1.4	0.4	0.1
Structure of working persons (%)	Number: 201929	46.5	15.2	20.3	18.0
Working persons per 1 000 inhabitants	200.2	93.1	30.4	40.7	35.9
Working persons per entity	4.3	2.1	22.1	106.7	496.5
Revenues per 1 entity; PLN million	0.9	0.3	6.4	24.4	144.6
Share of costs in revenues (%)	92.6	88.9	94.4	95.7	93.3
Revenues per working person; PLN million	0.21	0.15	0.29	0.23	0.29
Structure of revenues (%)	100.0	32.9	20.8	21.8	24.6
Average monthly gross wage (PLN)	1964	1379	1612	2093	2470

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw;
in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons.

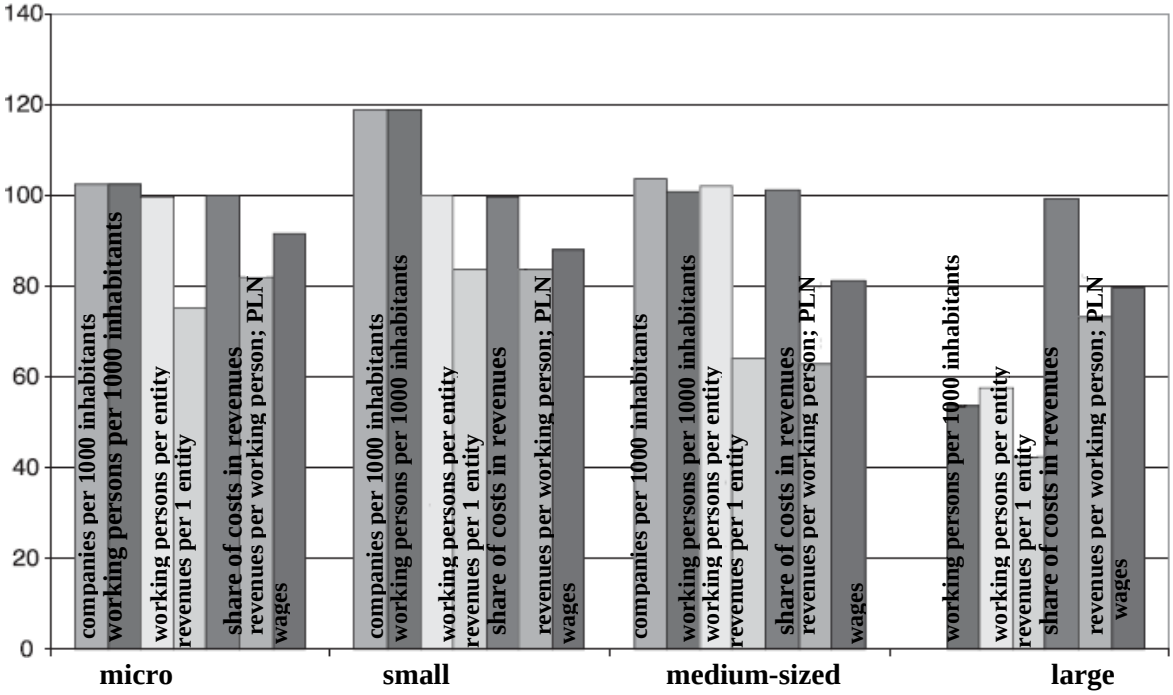
In 2006 SME sector share in the revenues of enterprises amounted to 75.4%, while in the number of working persons to 82%, with the greatest importance of micro-enterprises which employed nearly half of the total number of working persons in the region and their revenues amounted to 1/3 of the total revenues of enterprises. Indicator of the cost level of all size classes in the region was similar to the average for enterprises in these size classes in Poland.

Table 3.4.5. Enterprises in Lubuskie Voivodeship; average for Poland = 100

Lubuskie	micro	small	medium	large
Enterprises per 1 000 inhabitants	102.4	118.8	103.7	d.d
Working persons per 1 000 inhabitants	102.2	118.8	100.6	53.4
Working persons per entity	99.7	100.0	101.8	57.8
Revenues per 1 entity; PLN million	75.0	83.5	63.9	42.2
Share of costs in revenues	99.9	99.7	101.1	99.0
Revenues per working person; PLN million	82.1	83.6	62.7	73.2
Average monthly gross wage (PLN)	91.4	88.0	81.2	79.5

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Chart 3.4.1. Operating enterprises in Lubuskie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In case of all size classes of enterprises required to keep accounting books revenues per entity were below the average for Poland. The lowest revenues were observed in the group of medium-sized enterprises (65% of the national average), particularly in the sections of *Real estate and business services* and *Trade and repairs*, in which revenues were below the national average by 61% and 47% respectively. In this enterprise group none of the sections had revenues higher than the average for Poland. The situation was similar in case of micro-enterprises – in this group revenues per entity were 25.5% below the national average and no sections had revenues higher than the average for all regions. In case of the *Transport, stock management and communications* section as well as the *Real estate and business services* section revenues per entity were nearly 60% below the average for Poland.

Table 3.4.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Lubuskie	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	2 396	9 618	24 817	74.5	90.1	64.8
Mining and quarrying	x	x	x	x	x	x
Industrial processing	1 998	6 081	23 493	78.7	84.2	88.6
Electricity, gas and water production and supply	x	3 142	27 880	x	13.9	53.7
Construction	x	6 723	18 860	x	98.4	73.6
Trade and repairs	x	11 968	43 938	x	75.9	52.8
Hotels and restaurants	x	x	8 949	x	x	77.4
Transport, stock management and communications	1 493	18 047	24 206	41.8	177.6	79.9
Financial intermediation	x	144 252	x	x	438.1	x
Real estate and business services	987	4 767	10 669	42.7	73.6	39.1
Education	x	x	x	x	x	x
Health care and social assistance	x	x	x	x	x	x
Other services	x	x	9 309	x	x	54.8

Source: Calculations based on the CSO data

In the group of small enterprises required to keep accounting books revenues per entity were 10% lower than the national average. In the majority of sections the average revenues in enterprises employing 10-49 persons were below the average for Poland, with the significant exception of the *Financial intermediation* section, in which revenues per entity amounted to PLN 4.77 million and were 338% higher than the national average. In contrast to micro- and medium-sized enterprises, in case of the *Transport, stock management and communications* section revenues per entity in the group of small enterprises were 77% above the average for Poland.

Investment expenditure

Total investment expenditures by enterprises in the region were PLN 1.96 billion, of which micro-entities accounted for circa 11% of expenditures, small entities for 13% and medium-sized enterprises for 23%. The share of enterprises in expenditure in the national economy was the highest in the group of entities employing 50–249 persons and small enterprises – respectively 56% and 53%, while the lowest in the group of entities employing up to 9 persons – 32.5%. The share of public sector enterprises in expenditures by Lubuskie enterprises was the highest in the group of small enterprises – 21%, and the lowest in micro-enterprises – 4%.

The public sector had the above average share in investment expenditures by Lubuskie SMEs than it had in the rest of the country. Investments per enterprise as well as per employee were lower than the national average in case of all groups of enterprises in the region. Investment expenditures per employee and per enterprise were the highest in medium-sized entities and amounted respectively to PLN 12 thousand and PLN 1.3 million, while investments per employee in micro-enterprises added up to PLN 2.2 thousand and per enterprise to PLN 4.7 thousand.

Table 3.4.7. SME investment expenditure

Lubuskie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	1958566	210029	254761	445027
Share in expenditures of enterprises in the region (%)	100.0	10.7	13.0	22.7
Share of enterprises in investment expenditure in the region (%)	57.1	32.5	53.0	56.4
Public sector share in investment expenditures of enterprises (%)	15.7	9.7	17.5	16.4
Public sector share in expenditures of enterprises in the region; Poland = 100	74	649	199	125
Investments per non-financial enterprise; PLN thousand	37.4	4.7	232.6	1285.0
Investments per enterprise; Poland = 100	56.1	54.7	80.1	67.4
Investments per employee in non-financial enterprises; PLN thousand	8.6	2.2	10.5	12.0
Investments per employee; Poland = 100	64.6	54.8	80.1	66.2

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Industrial processing, *Construction*, *Trade and repairs*, *Transport*, *Electricity, gas and water production and supply*, *Health care and social assistance*, *Other municipal, community and individual services* should be considered the investment profiles in Lubuskie SMEs - the share of these sections in investment expenditures by Lubuskie SMEs was higher than the share these sections had in total SME expenditure in the rest of the country.

The public sector generated the majority of SME investments in the sections of *Other municipal, community and individual services* – more than 81% as well as *Electricity, gas and water production and supply* – more than 72%. The public sector had the miniscule fraction in SME investments in the sections of *Mining* and *Industrial processing*. The investments of public sector SMEs were above the national average in all sections except for *Mining*, *Industrial processing*, *Hotels* and *Transport*.

Table 3.4.8. Section structure of SME investments

Lubuskie	SME share in expenditure by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments when Poland = 100 SME
C	12.99	0.37	0.66	0.09	0.77
D	35.96	40.82	1.32	0.45	21.07
E	37.16	4.96	1.08	72.47	128.96
F	96.31	5.00	0.93	36.17	596.69
G	67.97	17.28	1.03	18.07	1742.69
H	91.36	2.17	0.96	1.14	72.86
I	38.36	9.72	1.23	1.15	13.76
J	32.30	0.84	0.18	3.35	553.21
K	80.13	11.12	0.54	9.52	111.48
M	62.98	0.59	0.83	60.42	380.47
N	49.03	2.50	1.33	44.19	116.26
O	98.51	4.63	1.30	81.03	150.62

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

Small and medium-sized enterprises in the region, in all sectors, financed the investments mostly from own resources. To a greater extent it concerned small enterprises in the public and private sector where own resources covered respectively 76% and 68% of investments, while medium-sized enterprises used own resources in 45% of investments in the public sector and in 54% in the private one.

Domestic credits and loans were the second important source of financing all SMEs, except for small public sector enterprises – they covered 22-28% of expenditures by medium-sized enterprises in both sectors and by small private sector enterprises (small enterprises in the public sector used credits to finance only 7% of expenditures). State budget funds constituted circa 14% of budget for investments in the public sector and 2.5% in medium-sized private enterprises while they had no significant role in the group of small enterprises in the private sector. Foreign resources were used mainly by medium-sized enterprises in both sectors – they covered 11-13% of investments. Foreign resources financed circa 3.7% of expenditures by small private sector entities, while they were almost insignificant in expenditures by small public entities. However, only medium-sized enterprises in the public sector made use of foreign credits. Other than the abovementioned sources financed respectively 1% and 4% of investments by small and medium-sized enterprises in the private sector as well as circa 2% of investments in public sector SMEs.

Table 3.4.9. Sources of SME investment financing (%)

	public sector		private sector	
Lubuskie	small	medium	small	medium
Internal resources	75.9	45.2	68.0	53.7
State budget funds	14.7	13.7	0.1	2.5
Domestic credits and loans	7.0	22.1	24.9	28.0
Total foreign resources:	0.6	13.0	3.7	11.2
Including foreign credits	0.0	0.2	0.0	0.0
Other sources	1.7	2.2	1.0	4.0
Non-financed expenditure	0.0	3.9	2.4	0.6

Source: Calculations based on the CSO data

3.5 Łódzkie Voivodeship

Structure of entities

In 2006 in Łódzkie Voivodeship 259.3 thousand economic entities were registered i.e. 6.9% of all in the REGON system in Poland, out of which only 306 were enterprises employing more than 249 persons. The voivodeship had the above average share in the group of small entities – 7.4% and medium-sized entities – 7.3%. The voivodeship had relatively the smallest share in the group of enterprises not having any employees – 5.5%. In 2006 in Łódzkie Voivodeship 21.7 thousand new enterprises were established i.e. 6.9% of all newly-started enterprises in Poland. 27.7 thousand enterprises were liquidated i.e. 9.6% of all liquidated. The region had the greatest share in newly-started enterprises in Poland in the group of small entities – 8.4% while in liquidated in the group of micro-enterprises – 9.7%.

Entities with the major share of foreign capital constituted 1% of enterprises registered in the region. The highest number of such entities is in the group of medium-sized enterprises – 8.6% of all and large enterprises – 16.7% of all registered. More than 3% of entities registered in the region is in the public sector. The highest number of public sector enterprises is in the group of enterprises employing 50-249 persons – 37.5% and the largest enterprises – 40.2%, while the lowest is in the group of micro-entities – 1.9%.

Table 3.5.1. Entities registered in the REGON system in 2006 according to the number of working persons

	total	0	0-9	10-49	50-249	>249
Łódzkie	259354	15787	245276	1154	2218	306
Region share in Poland(%)	6.9	5.5	6.9	7.4	7.3	5.6
Foreign capital share in the region (%)	1.0	2.4	0.8	3.2	8.6	16.7
Public sector share in the region (%)	3.1	17.1	1.9	22.5	37.5	40.2
Private sector share in the region (%)	96.9	82.9	98.1	77.5	62.5	59.8
Newly-started	21725	1296	21319	371	30	5
Newly-started share in Poland (%)	6.9	6.9	6.8	8.4	6.7	5.4
Liquidated	27743	419	27378	314	38	13
Liquidated share in Poland (%)	9.6	8.9	9.7	8.4	8.4	7.3

Source: Calculations based on the CSO data

Mining, Industrial processing and *Public Administration* are the sections which had higher share in the structure of entities in Łódzkie Voivodeship SME sector than on average in the country. The share of SME entities in these sections as compared to all SME entities in the region was in 2006 respectively 19%, 35% and 23% higher than the national average.

The SMEs of the private sector are dominated by enterprises in the sections of *Trade and repairs* – 37.8% and *Industrial processing* – 14.6% as well as *Real estate and business services* – 12.3%. Construction enterprises also had circa 8.5% share in the structure of private SMEs. The structure of SME public sector is dominated by enterprises in the sections of *Real estate and business services* and *Education* – circa 35% each. SMEs with the major share of foreign capital are mainly entities in the sections of *Trade and repairs* – more than 46%, *Industrial processing* – 25% and *Real estate and business services* – 11%.

Newly-started enterprises in Łódzkie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – nearly 38%, *Real estate and business services* – 14.5%, *Industrial processing* – 10.5% and *Other municipal services* – 9.5%. Small and medium-sized entities liquidated in Łódzkie Voivodeship are mainly trade enterprises – 45%, enterprises in the sections of *Industrial processing* – 13% and *Real estate and business services* – 11% as well as construction enterprises – circa 9% each. The sections of *Industrial processing*, *Trade and repairs*, *Hotels and restaurants* and *Transport* had higher share in SMEs liquidated than newly-started and in these sections there was the largest negative balance between newly-started and liquidated entities. Whereas, in 2006, in the *Other services* and *Health care and social assistance* sections there was the largest preponderance of newly-started entities over liquidated ones.

Table 3.5.2. Section structure of SMEs registered in the REGON system in Łódzkie Voivodeship in 2006

Łódzkie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.03	0.08	0.16	0.07	0.08	1.19	-6
Industrial processing	1.34	14.57	25.13	10.52	12.92	1.35	-1299
Electricity, gas and water production and supply	1.18	0.04	0.08	0.06	0.05	0.58	-1
Construction	0.58	8.54	4.24	8.90	8.72	0.82	-485
Trade and repairs	1.65	37.78	45.90	38.44	44.66	1.10	-4034
Hotels and restaurants	0.89	2.84	2.86	3.35	4.19	0.84	-434
Transport, stock management and communications	0.49	6.58	3.55	4.53	6.32	0.89	-768
Financial intermediation	0.50	3.73	4.73	3.93	3.20	0.97	-35
Real estate and business services	34.03	12.30	11.06	14.51	11.06	0.79	85
Public administration	10.07	0.54	0.00	0.42	0.02	1.23	86
Education	35.17	1.70	0.53	2.43	1.68	1.03	60
Health care and social assistance	7.33	4.17	0.65	3.34	1.88	0.90	204
Other services	6.75	7.12	1.10	9.50	5.18	0.97	627

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

The entrepreneurship indices in Łódzkie Voivodeship are on the average national level. In 2006 the region ranked 7th place in Poland, with 101 entities in SME sector registered per 1 000 inhabitants. It also came 7th with respect to the number of newly-started entities. Łódzkie Voivodeship has an average number of entities with foreign capital participation per inhabitant – 9.6 such entities are registered per 10 thousand inhabitants which corresponds with the 10th place in Poland. In 2006 the highest number of enterprises were liquidated in the region i.e. 108 enterprises per 10 thousand inhabitants which corresponded with the 16th place in the voivodeships rankings.

Table 3.5.3. SMEs registered in the REGON system in relation to the number of inhabitants

Łódzkie	Number of companies per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	1009.5	7
Foreign capital SME	9.6	10
Newly-started SME	84.6	7
Liquidated SME	108.1	16

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Łódzkie Voivodeship there were 116.5 thousand operating non-financial enterprises which corresponded with 6.8% of total operating enterprises in the country[30]. Only 164 large enterprises were

[30] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking,

operating in this region, which constituted 5.5% of operating large enterprises in Poland. The voivodeship had the largest share in the total number of operating small and medium-sized enterprises in the country – 7.7% and 7.2% respectively. The share of micro-enterprises in the total number of enterprises in the county was 6.8%.

The number of operating enterprises per inhabitant in Łódzkie Voivodeship amounted to 45 entities per 1 000 inhabitants. In case of small and medium-sized enterprises in the region this index was higher than the average for Poland by 14.6% and 3.7% respectively, while it was comparable with the national average in case of micro-enterprises.

The number of working persons per 1 000 inhabitants was above the national average in case of small and medium-sized enterprises – by 14% and 5% respectively. The index corresponded with the national average in case of micro-enterprises and was 37% below it in case of enterprises employing more than 249 persons.

The average enterprise size in the region was similar to the national average in case of SME sector, while it differed significantly in case of the largest enterprises – large enterprises in the region on average employed 662 persons which constituted 77% of the average for Poland.

Revenues of an average enterprise in the voivodeship amounted to PLN 1 million and were below the national average. Revenues by an average micro- and small enterprise were 25% lower than the average for Poland and in 2006 amounted respectively to PLN 0.3 million and PLN 5.8 million. Average revenues per entity of medium-sized and large enterprises were respectively 30% and 38% below the national average and amounted to PLN 26.6 million and PLN 211.9 million.

Work performance in enterprises in Łódzkie Voivodeship, measured by revenues per working person, rose with the size of an enterprise and was the lowest in micro-entities –PLN 0.15 million, and the highest in large entities – PLN 0.32 million. However, in all size classes work performance was below the national average, which was particularly observable in case of medium-sized enterprises – with work performance 30% lower than the average for Poland. Consequently, wages in the region were below the national average, particularly in the group of medium-sized entities. Micro-entities had the lowest gross wages – PLN 1.38 thousand while medium-sized and large entities the highest – PLN 2.1 thousand and PLN 2.9 thousand respectively.

Table 3.5.4. Operating enterprises in 2006

Łódzkie	total	micro	small	medium	large
Number of operating entities	116521	111892	3411	1054	164
Share in Poland (%)	6.8	6.8	7.7	7.2	5.5
Companies per 1 000 inhabitants	45.4	43.6	1.3	0.4	0.1
Structure of working persons (%)	Number:525909	44.3	14.3	20.8	20.6
Working persons per 1 000 inhabitants	204.9	90.9	29.2	42.5	42.3
Working persons per entity	4.5	2.1	22.0	103.6	661.8
Revenues per 1 entity; PLN million	1.0	0.3	5.8	26.6	211.9
Share of costs in revenues (%)	92.9	88.5	94.1	94.7	95.2
Revenues per working person; PLN million	0.22	0.15	0.26	0.26	0.32
Structure of revenues (%)	100.0	29.6	16.9	23.9	29.7
Average monthly gross wage (PLN)	2118.0	1376.0	1623.0	2079.0	2877.0

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons

In 2006 SME sector share in the revenues of enterprises amounted to 70.3%, while in the number of working persons to 79.4%, with the greatest importance of micro-enterprises which employed 44.3% of the total number of working persons in the region and their revenues amounted to nearly 30% of the total revenues of enterprises.

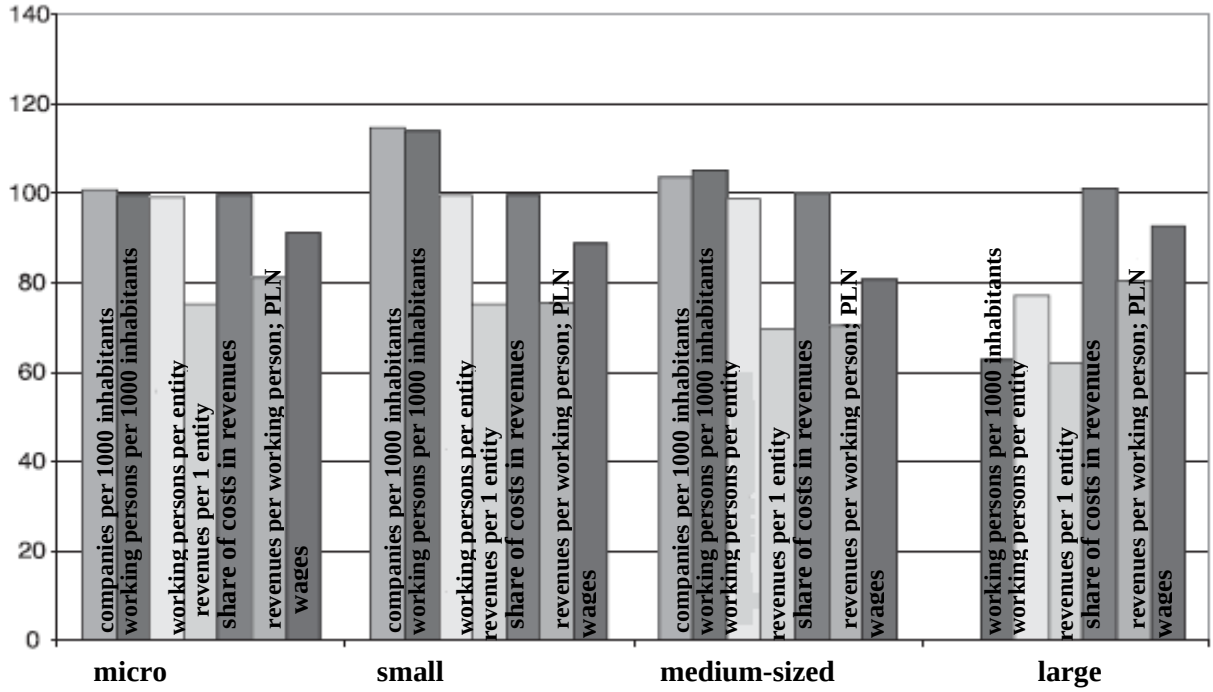
insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Table 3.5.5. Enterprises in Łódzkie Voivodeship; average for Poland = 100

Łódzkie	micro	small	medium	large
Companies per 1 000 inhabitants	100.6	114.6	103.7	d.d.
Working persons per 1 000 inhabitants	99.7	114.1	105.1	62.9
Working persons per entity	99.2	99.6	98.8	77.0
Revenues per 1 entity; PLN million	75.0	75.3	69.6	61.9
Share of costs in revenues (%)	99.4	99.4	100.0	101.1
Revenues per working person; PLN million	81.1	75.6	70.5	80.4
Average monthly gross wage (PLN)	91.2	88.6	80.6	92.7

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Chart 3.5.1. Operating enterprises in Łódzkie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In 2006 in Łódzkie Voivodeship revenues per entity in SMEs required to keep accounting books were below the national average in all size classes. In the group of micro-enterprises it was mainly due to the results by enterprises in the *Transport, stock management and communications* section which were more than 80% below the national average for the section. Revenues by micro-enterprises in the *Manufacturing* sector did not differ significantly from the national average – they were 1.1% below the average for Poland and amounted to PLN 2.5 million. In the group of small enterprises required to keep accounting books, enterprises in the *Health care and social assistance* section had the above average revenues per entity. Enterprises in the sections of *Electricity, gas and water production and supply* and *Financial intermediation* had the lowest revenues per small enterprise – more than 80% below the national average.

In the group of medium-sized enterprises, enterprises in the sections of *Real estate and business services* as well as *Mining and quarrying* stood out as compared to the rest of the country – their average revenues were respectively over 86% and 12% above the national average. In the *Hotels and restaurants* section revenues per entity amounted to PLN 11.7 million and were 1% higher than the average for Poland. In all remaining sections revenues per medium-sized entity were below the national average, particularly in *Electricity, gas and water production and supply* (70% lower).

Table 3.5.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Łódzkie	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	2 876	8 842	27 316	89.4	82.9	71.3
Mining and quarrying	x	5 287	27 110	x	101.0	111.9
Industrial processing	2 513	6 974	31 702	98.9	96.5	81.9
Electricity, gas and water production and supply	x	3 547	15 831	x	15.7	30.5
Construction	1 017	5 971	21 541	64.4	87.4	84.1
Trade and repairs	4 689	12 740	43 206	95.2	80.8	51.9
Hotels and restaurants	x	2 114	11 679	x	70.4	101.0
Transport, stock management and communications	660	6 435	24 707	18.5	63.3	81.6
Financial intermediation	x	7 062	x	x	21.4	x
Real estate and business services	1 002	5 333	50 830	43.4	82.4	186.3
Education	x	2 140	9 520	x	100.7	64.4
Health care and social assistance	x	3 089	x	x	153.6	x
Other services	x	4 902	x	x	104.2	x

Source: Calculations based on the CSO data

Investment expenditure

Total investment expenditures by enterprises in the region were PLN 6.9 billion, of which micro-entities accounted for circa 11.1% of expenditures, small entities for 7.4% and medium-sized enterprises for 31.5%. The share of enterprises in expenditure in the national economy was the highest in the group of entities employing 50-249 persons – 75%, while the lowest in the group of entities employing up to 9 persons – 42%. The share of public sector enterprises in expenditures by Łódzkie enterprises was the highest in the group of small enterprises – 9.1%, and the lowest in micro-enterprises – 1.8%.

Table 3.5.7. SME investment expenditure

Łódzkie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	6947138	773626	512313	2187998
Share in expenditures of enterprises in the region (%)	100.0	11.1	7.4	31.5
Share of enterprises in investment expenditure in the region (%)	71.1	41.5	58.5	74.7
Public sector share in investment expenditures of companies (%)	24.5	1.8	9.1	8.9
Public sector share in expenditures of companies in the region; Poland = 100	115	119	104	68
Investments per non-financial enterprise; PLN thousand	53.8	7.4	202.2	2184.0
Investments per enterprise; Poland = 100	80.7	86.0	69.6	114.6
Investments per employee in non-financial enterprises; PLN thousand	11.9	3.5	9.2	21.1
Investments per employee; Poland = 100	89.2	86.8	69.9	116.0

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In the groups of micro- and small enterprises the public sector in Łódzkie Voivodeship had the above average share in investments than it had on average in Poland. In case of medium-sized enterprises the public sector had the lower share in investments than on average in the country. Investments per enterprise as well as per

employee were higher in the region than the national average in case of medium-sized entities and lower in the groups of micro- and small enterprises. Investment expenditures per employee and enterprise were the highest in medium-sized entities and amounted respectively to PLN 21.1 thousand and PLN 2.2 million. Investments per employee in micro-enterprises added up to PLN 3.5 thousand and per enterprise to PLN 7.4 thousand.

Industrial processing, *Real estate and business services* and *Education* should be considered the investment profiles in Łódzkie SMEs - the share of these sections in investment expenditures by Łódzkie SMEs was higher than the share these sections had in SME expenditure in the rest of the country.

The public sector generated the majority of SME investments in the sections of *Other municipal, community and individual services* – nearly 67% as well as *Electricity, gas and water production and supply* – 59%. The public sector had the miniscule fraction in SME investments in the sections of *Mining, Financial intermediation*, *Trade* and *Industrial processing*. The investments of public sector SMEs were above the national average in the sections of *Hotels*, *Transport*, *Electricity, gas and water production and supply* as well as *Other services*.

Table 3.5.8. Section structure of SME investments

Łódzkie	SME share in expenditure by section enterprises in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	3.78	0.32	0.57	0.00	0.00
D	50.86	36.84	1.19	0.85	39.74
E	15.90	4.24	0.92	58.93	104.87
F	75.18	3.96	0.74	5.84	96.30
G	71.61	15.16	0.90	0.27	25.40
H	59.90	2.10	0.93	2.52	160.38
I	29.81	6.62	0.84	15.75	188.61
J	25.82	0.78	0.17	0.22	36.68
K	89.25	25.91	1.25	5.71	66.92
M	35.18	0.73	1.03	7.13	44.88
N	34.52	1.34	0.71	22.84	60.10
O	88.81	2.00	0.56	66.97	124.49

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

Small and medium-sized enterprises in the region, in all sectors, financed the investments mostly from own resources. To the greatest extent it concerned medium-sized enterprises – in that group own resources covered 83% of expenditures, while they had the least share in the expenditures by medium-sized private enterprises – 45% of investment budget.

Domestic credits and loans were the second important source of financing all SMEs, except for medium-sized public enterprises – they covered respectively 24% and 41% of expenditures by small and medium-sized enterprises in the private sector as well as 34% of expenditures by small public enterprises, with 5% in the group of medium-sized public entities. State budget funds constituted 6–8% of budget for investments in the public sector while they had no significant role in the private sector. Foreign resources were used exclusively by private enterprises and they amounted respectively to 2.4% and 4.8% of budget for investments in the groups of small and medium-sized enterprises. Foreign credits financed circa 1% of investment expenditures in the private sector and did not occur in the public one. Other than the abovementioned sources financed 0.6% – 1.9% of SME investment expenditures.

Table 3.5.9. Sources of SME investment financing (%)

	public sector		private sector	
Łódzkie	small	medium	small	medium
Internal resources	58.8	83.1	68.6	44.9
State budget funds	6.1	8.3	0.1	0.1
Domestic credits and loans	33.7	5.0	24.2	41.3
Total foreign resources:	0.0	0.0	2.4	4.8
Including foreign credits	0.0	0.0	1.4	0.8
Other sources	1.4	1.9	1.2	0.6
Non-financed expenditure	0.0	1.7	3.5	8.4

Source: Calculations based on the CSO data

3.6 Małopolskie Voivodeship

Structure of entities

In 2006 in Małopolskie Voivodeship 296.6 thousand economic entities were registered, i.e. 7.9% of all in the REGON system in Poland, out of which only 424 were enterprises employing more than 249 persons. The voivodeship had the above average share in the group of small entities – 8.8% while the region had relatively the smallest share in the group of enterprises not having any employees – 5.8%. In 2006 in Małopolskie Voivodeship 25.8 thousand new entities were established i.e. 8.1% of all newly-started enterprises in Poland, whereas 25.2 thousand enterprises were liquidated i.e. 8.7% of all liquidated in the country. The region had the greatest share in newly-started entities in Poland in the group of large entities – 11%, whereas in liquidated in the group of micro-enterprises – circa 10.5%.

More than 1% of enterprises registered in the region are entities with the major share of foreign capital. The highest number of such enterprises is in the group of medium-sized enterprises – 5.6% of all, and in the group of large enterprises – 10.1% of all large enterprises registered. 3.1% of entities registered in the region is in the public sector. The highest number of public sector entities is in the group of enterprises employing 50-249 persons – 35% and largest enterprises – 43%, while the lowest is in the group of micro-entities – 1.7%.

Table 3.6.1. Entities registered in the REGON system in 2006 according to the number of working persons

	total	0	0-9	10-49	50-249	>249
Małopolskie	296632	16575	280067	13715	2426	424
Region share in Poland(%)	7.9	5.8	7.9	8.8	8.0	7.8
Foreign capital share in the region (%)	1.1	1.2	0.9	3.5	5.6	10.1
Public sector share in the region (%)	3.1	11.1	1.7	26.5	34.6	43.2
Private sector share in the region (%)	96.9	88.9	98.3	73.5	65.4	56.8
Newly-started	25792	1104	25422	329	31	10
Newly-started share in Poland (%)	8.1	5.8	8.2	7.5	6.9	10.9
Liquidated	25168	269	24830	306	24	8
Liquidated share in Poland (%)	8.7	5.7	8.8	8.2	5.3	4.5

Source: Calculations based on the CSO data

Hotels and restaurants, *Electricity, gas and water production and supply*, *Industrial processing*, *Construction* and *Transport* are the sections which had higher share in the structure of entities in Małopolskie Voivodeship SME sector than on average in the country. The share of SME entities in these sections, as compared to all SME entities in the region, was in 2006 20%-9% higher than the national average.

The SMEs of the private sector are dominated by enterprises in the sections of *Trade and repairs* – more than 32% and *Real estate and business services* – more than 14% as well as *Construction* and *Industrial processing* – circa 11.5% each. The structure of SME public sector is dominated by enterprises in the sections of *Education* – 50% and *Real estate and business services* – more than 22%. SMEs with the major share of foreign capital are mainly entities in the sections of *Trade and repairs* – more than 36%, as well as *Industrial processing* and *Real estate and business services* – circa 18% each.

Newly-started enterprises in Małopolskie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – circa 28%, *Real estate and business services* – 18.5% as well as construction enterprises – 15.7% and enterprises in the *Industrial processing* section – 8.5%. Small and medium-sized entities liquidated in Małopolskie Voivodeship are mainly commercial enterprises – 37%, enterprises in the sections of *Real estate and business services* – 14%, *Construction* – 13.3% as well as *Industrial processing* – 11%. The sections of *Industrial processing*, *Trade and repairs* and *Transport* had a higher share in SMEs liquidated than newly-started and in these sections there was the highest negative balance between newly-started and liquidated entities. While, in 2006 in the sections of *Real estate and business services*, *Other services* and *Construction* there was the largest preponderance of newly-started entities over liquidated ones.

Table 3.6.2. Section structure of SMEs registered in the REGON system in Małopolskie Voivodeship in 2006

Małopolskie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.09	0.06	0.32	0.04	0.05	0.86	-2
Industrial processing	1.27	11.81	17.75	8.50	10.76	1.10	-515
Electricity, gas and water production and supply	0.99	0.08	0.25	0.06	0.02	1.14	10
Construction	0.92	11.33	8.88	15.67	13.25	1.09	707
Trade and repairs	0.42	32.11	36.29	28.06	37.40	0.93	-2175
Hotels and restaurants	1.48	4.05	4.23	4.49	4.24	1.20	89
Transport, stock management and communications	0.67	8.06	3.92	6.34	7.24	1.09	-186
Financial intermediation	0.41	3.45	4.90	3.94	3.70	0.90	86
Real estate and business services	22.05	14.90	18.89	18.49	14.24	0.96	1184
Public administration	8.69	0.47	0.22	0.06	0.02	1.07	11
Education	49.96	1.64	1.64	2.59	2.09	1.00	141
Health care and social assistance	6.92	4.64	1.04	3.58	2.20	1.00	371
Other services	6.15	7.40	1.67	8.17	4.74	1.01	914

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

The entrepreneurship indices in Małopolskie Voivodeship are quite low as compared to the rest of the country. In 2006 the region ranked 10th place in Poland, with 91 entities in SME sector registered per 1 000 inhabitants. It also came 10th with respect to the number of newly-started entities. Małopolskie Voivodeship had an average number of entities with foreign capital participation as compared to the number of inhabitants – 10 such entities are registered per 10 thousand inhabitants which corresponds with the 9th place in Poland. In 2006 the relatively high number of enterprises were liquidated in the region i.e. circa 77 enterprises per 10 thousand inhabitants, which corresponded with the 9th place in the voivodeship rankings.

Table 3.6.3. SMEs registered in the REGON system in relation to the number of inhabitants

Małopolskie	Number of companies per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	905.5	10
Foreign capital SME	9.7	9
Newly-started SME	78.8	10
Liquidated SME	76.9	9

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Małopolskie Voivodeship there were 150.2 thousand operating non-financial enterprises which corresponded with 8.8% of total operating enterprises in the country[31]. 222 large enterprises were operating in this region, which constituted 7.4% of operating large enterprises in Poland. The voivodeship had the highest share in the total number of operating micro- enterprises in the country – 8.8%. The share of small and medium-sized enterprises in the total number of enterprises in these size classes was 8.5% and 8.2% respectively.

The number of operating enterprises in Małopolskie Voivodeship amounted to 46 entities per 1 000 inhabitants. This index was relatively higher than the average for Poland in case of micro- and medium-sized enterprises (by 2.2% and 3.7% respectively), while it was 1% lower in the group of small enterprises.

The number of working persons per 1 000 inhabitants was above the national average only in case of micro-enterprises. In the remaining size-categories, the number of working persons per 1 000 inhabitants was below the average for Poland, particularly in the group of the largest enterprises – by as much as 23%.

The average enterprise size in the region was similar to the national average in case of SME sector, while it differed significantly in case of the largest enterprises – large enterprises in the region on average employed 764.2 persons which constituted 89% of the average for Poland. The average size of small and medium-sized enterprise in the region was respectively 1.1% and 1.8% below the national average and amounted to respectively 21.8 and 103 working persons per entity. Micro-enterprises in the region on average employed 2.1 persons – slightly above the average for Poland, while revenues of an average micro-enterprise in the region were equal to the national average and totalled PLN 0.4 million in 2005.

Revenues per entity of small and medium-sized enterprises were 1.7% and 18.3% below the average for Poland and amounted to PLN 7.6 million and PLN 31.2 million respectively. Work performance in enterprises in the voivodeship was the lowest in micro-entities – PLN 0.20 million and medium-sized entities – PLN 0.30 million, while it was the highest in large and small entities – PLN 0.46 million and PLN 0.35 million respectively. However, in small and medium-sized enterprises work performance was below the national average. Wages in the region were below the national average in case of all size categories, with the lowest gross wages in the group of micro-entities – PLN 1.40 thousand and the highest in case of medium-sized and large enterprises – PLN 2.38 thousand and PLN 2.85 thousand respectively.

Table 3.6.4. Operating enterprises in 2006

Małopolskie	total	micro	small	medium	large
Number of operating entities	150244	145053	3757	1212	222
Share in Poland (%)	8.8	8.8	8.5	8.2	7.4
Companies per 1 000 inhabitants	45.9	44.3	1.1	0.4	0.1
Structure of working persons (%)	Number:683207	44.9	12.0	18.3	24.8
Working persons per 1 000 inhabitants	208.9	93.8	25.1	38.2	51.9
Working persons per entity	4.5	2.1	21.8	103.0	764.2
Revenues per 1 entity; PLN million	1.4	0.4	7.6	31.2	350.3
Share of costs in revenues (%)	93.7	91.0	94.5	94.5	95.2
Revenues per working person; PLN million	0.30	0.20	0.35	0.30	0.46
Structure of revenues (%)	100.0	30.3	13.8	18.3	37.7
Average monthly gross wage (PLN)	2278.0	1401.0	1701.0	2381.0	2846.0

[31] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking, insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons

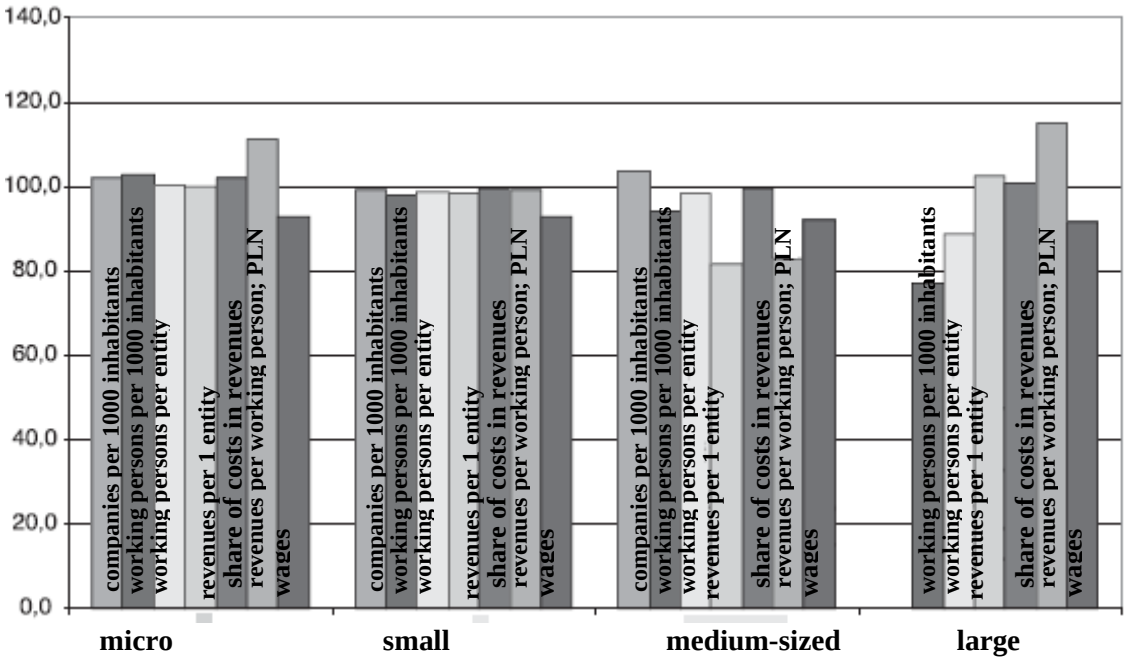
In 2006 SME sector share in the revenues of enterprises amounted to 62.3%, while in the number of working persons to 75.2%, with the greatest importance of micro-enterprises which employed 45% of the total number of working persons in the region and their revenues amounted to nearly 30% of the total revenues of enterprises. Large enterprises played the most important role in the structure of revenues while small entities were the least significant. Indicator of the cost level of small and medium-sized enterprises was equal to the average for enterprises in these size categories in Poland and totalled 94.5% in both cases. Micro- and small enterprises were characterised by the above average level of costs, which amounted to 91% and 95.2% respectively.

Table 3.6.5. Enterprises in Małopolskie Voivodeship; average for Poland = 100

Małopolskie	micro	small	medium	large
Companies per 1 000 inhabitants	102.2	99.0	103.7	d.d.
Working persons per 1 000 inhabitants	102.9	97.9	94.4	77.2
Working persons per entity	100.6	98.9	98.2	88.9
Revenues per 1 entity; PLN million	100.0	98.3	81.7	102.3
Share of costs in revenues (%)	102.2	99.8	99.8	101.1
Revenues per working person; PLN million	111.3	99.4	83.1	115.1
Average monthly gross wage (PLN)	92.8	98.9	92.3	91.7

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Chart 3.6.1. Operating enterprises in Małopolskie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In 2006 in Małopolskie Voivodeship revenues per entity in micro-enterprises required to keep accounting books were 9% below the national average. Enterprises in the *Transport, stock management and communications* section had particularly low revenues – PLN 2.13 million i.e. 59.5% of the national average. In the group of small enterprises required to keep accounting books, enterprises in the sections of *Industrial processing* and *Trade and repairs* had the above average revenues per entity, while enterprises in the sections of *Electricity, gas and water production and supply* as well as *Transport* had the lowest revenues per small enterprise – more than 5 times lower than the national average. Overall, revenues per entity in this size category were 2% above the national average.

Table 3.6.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Małopolskie	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	2 940	10 922	31 001	91.4	102.4	81.0
Mining and quarrying	x	x	24 470	x	x	101.0
Industrial processing	2 222	7 863	28 309	87.5	108.9	106.8
Electricity, gas and water production and supply	x	5 388	19 753	x	23.8	38.0
Construction	1 415	5 810	20 634	89.6	85.0	80.6
Trade and repairs	4 997	17 472	55 320	101.4	110.9	66.5
Hotels and restaurants	x	2 589	12 382	x	86.2	107.1
Transport, stock management and communications	2 126	7 512	27 662	59.5	73.9	91.3
Financial intermediation	x	x	x	x	x	x
Real estate and business services	2 129	5 407	14 836	92.2	83.5	54.4
Education	415	x	x	x	x	x
Health care and social assistance	x	1 815	5 725	x	90.3	70.1
Other services	x	x	20 182	x	x	118.8

Source: Calculations based on the CSO data

In the group of medium-sized enterprises, enterprises in the sections of *Other services*, *Hotels and restaurants* as well as *Industrial processing* stood out as compared to the rest of the country – their average revenues were higher than the national average by 19% and 7% respectively. In the remaining sections revenues per medium-sized entity were below the national average, particularly in the *Electricity, gas and water production and supply* section (62% lower).

Investment expenditure

Total investment expenditures by enterprises in the region were PLN 8.5 billion, of which micro-entities accounted for circa 17% of expenditures, small entities for 8% and medium-sized enterprises for 19%. The share of enterprises in expenditure in the national economy was the highest in the group of entities employing 50-249 persons – 63%, while the lowest in the group of entities employing up to 9 persons – 45%. The share of public sector enterprises in expenditures by Małopolskie enterprises was the highest in the group of medium-sized enterprises – 17%, and the lowest in micro-enterprises – 0.5%. The public sector had the above average share in investment expenditures by Małopolskie medium-sized enterprises. In case of the remaining groups of enterprises the public sector had lower share in investments than on average in the country.

Investments per enterprise as well as per employee were higher in the region than the national average in case of micro-entities and lower in the groups of small and medium-sized enterprises. Investment expenditures per employee and enterprise were the highest in medium-sized entities and amounted respectively to PLN 14.7 thousand and PLN 1.52 million. Investments per employee in micro-enterprises added up to PLN 5.8 thousand and per enterprise to PLN 12.3 thousand.

Table 3.6.7. SME investment expenditure

Małopolskie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	85112091	1473785	686761	1574141
Share in expenditures of enterprises in the region (%)	100.0	17.3	8.1	18.5
Share of enterprises in investment expenditure in the region (%)	66.3	45.2	51.6	62.9
Public sector share in investment expenditures of companies (%)	19.5	0.5	5.6	17.2
Public sector share in expenditures of companies in the region; Poland = 100	91	33	64	130
Investments per non-financial enterprise; PLN thousand	57.3	12.3	244.5	1519.2
Investments per enterprise; Poland = 100	85.9	143.4	84.2	79.7
Investments per employee in non-financial enterprises; PLN thousand	12.6	5.8	11.2	14.7
Investments per employee; Poland = 100	94.2	142.6	85.1	81.1

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Mining, *Trade and repairs*, *Hotels and restaurants*, *Transport*, *Education* as well as *Health care and social assistance* should be considered the investment profiles in Małopolskie SMEs - the share of these sections in investment expenditures by Małopolskie SMEs was higher than the share these sections had in SME expenditure in the rest of the country.

The public sector generated the majority of SME investments in the sections of *Electricity, gas and water production and supply* – 76%, *Other municipal, community and individual services* and *Education* – circa 60%. The public sector had the miniscule fraction in SME investments in the sections of *Financial intermediation* and *Trade*. The investments of public sector SMEs were above the national average in the sections of *Industrial processing*, *Electricity, gas and water production and supply*, *Education* and *Other services*.

Table 3.6.8. Section structure of SME investments

Małopolskie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	13.85	0.70	1.23	7.80	67.64
D	33.54	25.53	0.82	2.96	138.20
E	10.43	1.90	0.41	75.80	134.90
F	81.55	5.31	0.99	3.10	51.08
G	48.35	22.38	1.33	0.41	39.53
H	78.22	3.36	1.49	1.37	87.30
I	59.94	17.97	2.28	6.31	75.56
J	32.61	1.17	0.25	0.03	4.53
K	59.25	13.96	0.68	4.42	51.79
M	37.00	0.42	0.59	60.26	379.46
N	34.66	2.27	1.21	36.94	97.17
O	75.94	5.02	1.41	60.58	112.62

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock

management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

Small and medium-sized enterprises in the region, in all sectors, financed the investments mostly from own resources. To the greatest extent it concerned medium-sized public enterprises and all private SMEs – in these groups own resources covered circa 70% of expenditures, while they had the least share – 50.6% – in the expenditures by small public enterprises.

Table 3.6.9. Sources of SME investment financing (%)

	public sector		private sector	
Małopolskie	small	medium	small	medium
Internal resources	50.6	71.2	68.4	68.9
State budget funds	10.5	11.3	0.4	0.1
Domestic credits and loans	32.8	12.2	23.0	16.9
Total foreign resources:	0.0	0.6	6.0	3.0
Including foreign credits	0.0	0.0	2.4	2.0
Other sources	4.2	3.7	1.4	6.0
Non-financed expenditure	1.9	1.0	0.8	5.0

Source: Calculations based on the CSO data

Domestic credits and loans were the second important source of financing all SMEs, except for medium-sized public enterprises – they covered respectively 23% and 33% of expenditures by small enterprises in the private and public sector as well as 17% of expenditures by medium-sized private enterprises and 12% in the group of medium-sized public entities. State budget funds constituted circa 11% of budget for investments in the public sector while they had no significant role in the private sector. Foreign resources were used mainly by private enterprises and they amounted respectively to 3% and 6% of budget for investments in the groups of small and medium-sized enterprises. Foreign credits financed circa 2% of investment expenditures in the private sector and did not occur in the public one. Sources other than the abovementioned financed respectively 1.4% and 6% of investment expenditures by small and medium-sized enterprises in the private sector.

3.7 Mazowieckie Voivodeship

Structure of entities

In 2006 in Mazowieckie Voivodeship 626 thousand economic entities were registered i.e. 16.7% of all in the REGON system in Poland, out of which 1 221 were enterprises employing more than 249 persons. The voivodeship had the above average share in the group of micro-entities – 16.8% and large entities – 22.5%. The region had relatively the smallest share in the group of enterprises not having any employees – 10.8%. In 2006 in Mazowieckie Voivodeship 49.1 thousand new enterprises were established i.e. 15.5% of all newly-started in Poland, whereas 41.8 thousand were liquidated, i.e. 14.5% of all enterprises liquidated in the country. The region had the greatest share in newly-started entities in Poland in the group of large entities – circa 20%, while in liquidated in the group of medium-sized enterprises – 21%.

Nearly 4% of enterprises registered in the region are enterprises with the major share of foreign capital. The highest number of such enterprises is in the group of medium-sized enterprises – 13.9% of all medium-sized entities and in the group of large enterprises – 17.5% of all large enterprises registered. 2.4% of entities registered in the region is in the public sector. The highest number of public sector entities is in the group of enterprises employing 50-249 persons – 36% and largest enterprises – 44%, while the lowest is in the group of micro-enterprises – 1.3%.

Table 3.7.1. Entities registered in the REGON system in 2006 according to the number of working persons

	total	0	0-9	10-49	50-249	>249
Mazowieckie	625997	30790	594898	24821	5057	1221
Region share in Poland(%)	16.7	10.8	16.8	15.9	16.7	22.5
Foreign capital share in the region (%)	3.6	8.2	3.2	9.3	13.9	17.5
Public sector share in the region (%)	2.4	9.4	1.3	19.7	35.9	44.4
Private sector share in the region (%)	97.6	90.6	98.7	80.3	64.1	55.6
Newly-started	49140	1000	48389	650	83	18
Newly-started share in Poland (%)	15.5	5.3	15.5	14.7	18.5	19.6
Liquidated	41820	421	41102	573	107	38
Liquidated share in Poland (%)	14.5	8.9	14.5	15.3	23.7	21.3

Source: Calculations based on the CSO data

Transport, *Education* and *Real estate and business services* are the sections which had higher share in the structure of entities in Mazowieckie Voivodeship SME sector than on average in the country. The share of SME entities in these sections as compared to all SME entities in the region was in 2005 more than 10% higher than the national average.

The SMEs of the private sector are dominated by enterprises in the sections of *Trade and repairs* – more than 33% and *Real estate and business services* – 18.7% as well as *Industrial processing* – 11%. Construction enterprises also had circa 10% share in the structure of private SMEs in 2006. The structure of SME public sector is dominated by enterprises in the sections of *Education* – circa 41% and *Real estate and business services* – 28.5%. SMEs with the major share of foreign capital are mainly entities in the sections of *Trade and repairs* – 44%, as well as *Real estate and business services* – 26.5% and *Industrial processing* – 11%.

Table 3.7.2. Section structure of SMEs registered in the REGON system in Mazowieckie Voivodeship in 2006

Mazowieckie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.03	0.07	0.15	0.08	0.05	0.97	18
Industrial processing	1.81	10.55	11.28	7.17	9.53	0.98	-463
Electricity, gas and water production and supply	0.94	0.05	0.31	0.13	0.06	0.75	36
Construction	1.05	9.90	4.78	9.81	10.42	0.95	466
Trade and repairs	1.07	33.33	43.70	29.42	38.32	0.97	-1556
Hotels and restaurants	0.73	2.35	2.03	2.94	3.02	0.70	183
Transport, stock management and communications	0.65	8.25	4.20	6.41	7.50	1.11	13
Financial intermediation	0.70	3.70	3.20	4.45	4.37	0.96	360
Real estate and business services	28.55	18.67	26.46	25.20	16.71	1.20	5400
Public administration	10.51	0.35	0.59	0.09	0.06	0.78	20
Education	40.75	1.85	0.69	2.81	2.18	1.13	470
Health care and social assistance	7.03	3.85	0.59	3.22	2.36	0.83	597
Other services	6.16	7.09	1.95	8.26	5.35	0.97	1823

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

Newly-started enterprises in Mazowieckie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – nearly 30%, *Real estate and business services* – 25% as well as construction enterprises – 10% and enterprises in the *Other services* section – 8.3%. Small and medium-sized entities liquidated in Mazowieckie Voivodeship are mainly trade enterprises – 38%, enterprises in the sections of *Real estate and business services* – 17%, *Construction* – 10.4% as well as *Industrial processing* – 9.5%. The sections of *Industrial processing*, *Construction*, *Trade and repairs* and *Transport* had higher share in SMEs liquidated than newly-started. However,

the negative balance between newly-started and liquidated entities was observable only in the sections of *Trade and repairs* and *Industrial processing*, while in the sections of *Real estate and business services* and *Other services* there was the largest preponderance of newly-started entities over liquidated ones.

The entrepreneurship indices in Mazowieckie Voivodeship are among the highest in Poland. In 2006 the region ranked 2nd place in Poland, with 121 entities in SME sector registered per 1 000 inhabitants. Mazowieckie Voivodeship has the highest number of entities with foreign capital participation as compared to the number of inhabitants – 43 such entities are registered per 10 thousand inhabitants. The region ranked 3rd place with respect to the number of newly-started entities in 2006. In 2006 relatively high number of enterprises were liquidated in the region i.e. circa 81 enterprises per 10 thousand inhabitants which corresponded with the 11th place in the voivodeship rankings.

Table 3.7.3. SMEs registered in the REGON system in relation to the number of inhabitants

Mazowieckie	Number of companies per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	1208.1	2
Foreign capital SME	42.6	1
Newly-started SME	95.0	3
Liquidated SME	80.8	11

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Mazowieckie Voivodeship there were 278.7 thousand operating non-financial enterprises which corresponded with 16.3% of total operating enterprises in the country[32]. 668 large enterprises were operating in this region, which constituted 22.4% of operating large enterprises in Poland. The share of micro- and medium-sized enterprises in the total number of enterprises in these size classes amounted to 16% and in case of small entities to 13%. The number of operating enterprises in the region was 54 entities per 1 000 inhabitants. The voivodeship had the above average index of operating enterprises per 1 000 inhabitants in all size categories, particularly in medium-sized and micro- enterprises – the index was higher than the national average by 30% and 20% respectively.

The number of working persons per 1 000 inhabitants was above the national average in all size classes. The index of working persons per 1 000 inhabitants was higher than the average for Poland – by as much as 153% in the group of the largest enterprises; more than 20% in micro- and medium-sized enterprises and 4% in small enterprises.

The average enterprise size in the region, measured by the number of working persons per entity, was also above the national average in case of all size categories. It was particularly observable in the group of the largest enterprises – on average they employed 1319 persons, which constituted 153% of the average for Poland. The average size of micro-, small and medium-sized enterprise in the region was 2-3% above the national average and amounted respectively to 2.2, 22.5 and 107.6 working persons per entity. Revenues of an average micro-enterprise were 50% higher than the average for Poland and totalled PLN 0.6 million in 2006. Revenues per entity of small and medium-sized enterprises were nearly 80% above the national average and amounted to PLN 13.5 million and PLN 68.7 million respectively.

[32] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking, insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Work performance in Mazowieckie Voivodeship measured by revenues per working person was the lowest in micro-entities – PLN 0.28 million and large – PLN 0.45 million, while it was the highest in medium-sized and small entities – PLN 0.64 million and PLN 0.60 million respectively. However, in all size categories work performance was significantly above the national average, particularly in medium-sized and small entities.

Wages in the region were higher than the average for Poland in case of all size categories, particularly in the group of medium-sized enterprises – by 50%; with the lowest gross wages in micro-entities – PLN 1.98 thousand and the highest in case of medium-sized and large enterprises – PLN 3.89 thousand and PLN 3.41 thousand respectively.

Table 3.7.4. Operating enterprises in 2006

Mazowieckie	total	micro	small	medium	large
Number of operating entities	278756	269601	6124	2363	668
Share in Poland (%)	16.3	16.3	13.8	16.1	22.4
Companies per 1 000 inhabitants	53.9	52.1	1.2	0.5	0.1
Structure of working persons (%)	Number: 1859794	31.5	7.4	13.7	47.4
Working persons per 1 000 inhabitants	359.6	113.4	26.7	49.2	170.4
Working persons per entity	6.7	2.2	22.5	107.6	1319.1
Revenues per 1 entity; PLN million	2.9	0.6	13.5	68.7	59.0
Share of costs in revenues (%)	93.7	90.0	97.0	94.8	94.1
Revenues per working person; PLN million	0.43	0.28	0.60	0.64	0.45
Structure of revenues (%)	100.0	20.3	10.3	20.2	49.2
Average monthly gross wage (PLN)	3271.0	1985.0	2522.0	3887.0	3414.0

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons

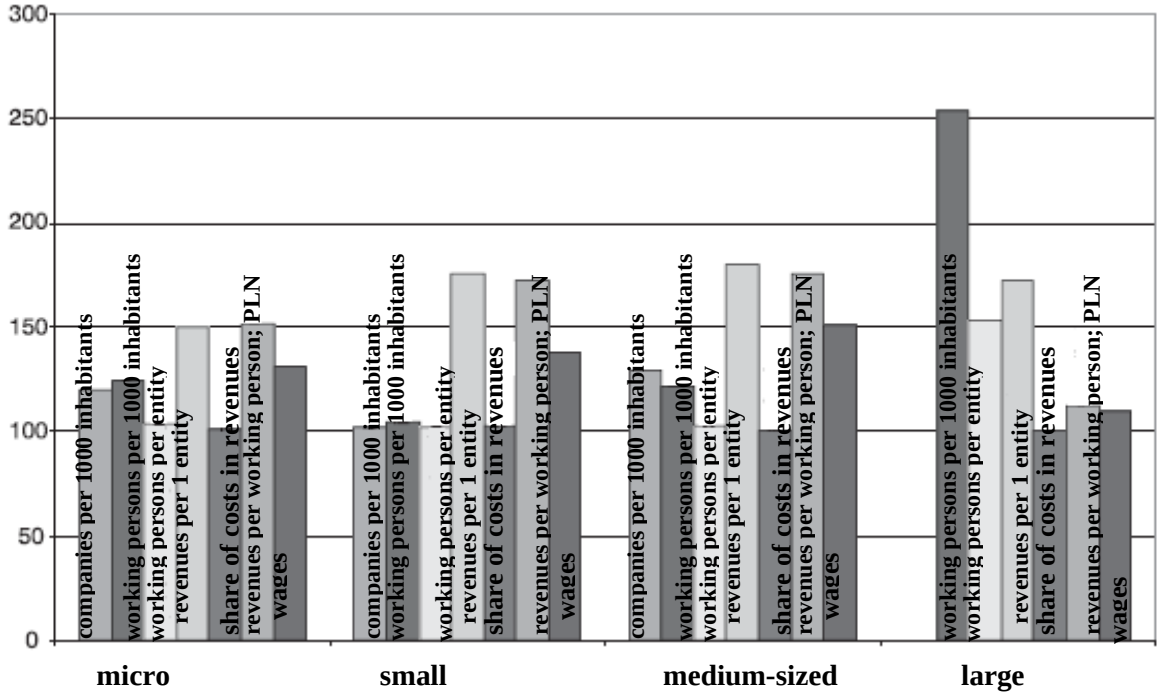
In 2006 SME sector share in the revenues of enterprises amounted to 50.8%, while in the number of working persons to 52.6%, with the greatest importance of micro- and medium-sized enterprises. Large enterprises played the most important role in the structure of revenues while small entities were the least significant. Indicator of the cost level of medium-sized and large enterprises was equal to the average for these size categories in Poland and totalled 94.8% and 94.1% respectively. Micro- and small enterprises were characterised by the above average level of costs, which amounted to 90% and 97% respectively.

Table 3.7.5. Enterprises in Mazowieckie Voivodeship; average for Poland = 100

Mazowieckie	micro	small	medium	large
Companies per 1 000 inhabitants	120.2	102.1	129.6	d.d.
Working persons per 1 000 inhabitants	124.4	104.2	121.6	253.5
Working persons per entity	103.5	102.1	102.6	153.4
Revenues per 1 entity; PLN million	150.0	176.0	179.8	172.5
Share of costs in revenues (%)	101.1	102.5	100.1	99.9
Revenues per working person; PLN million	151.3	172.4	175.5	112.4
Average monthly gross wage (PLN)	131.5	137.7	150.7	110.0

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Chart 3.7.1. Operating enterprises in Mazowieckie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In 2006 in Mazowieckie Voivodeship revenues of SMEs required to keep accounting books were higher than the average for Poland, which was due to the above average results by enterprises in almost all sections. In the group of micro-enterprises their revenues per entity were nearly 14% above the national average and amounted to PLN 3.66 million – all sections, except for *Construction*, *Other services* and *Transport, stock management and communications* had the above average results. Enterprises in the sections of *Financial intermediation* as well as *Health care and social assistance* had the highest revenues per entity, as compared to the rest of the country. In the group of small enterprises required to keep accounting books, enterprises in all sections, except for *Financial intermediation* and *Mining and quarrying* had the above average revenues per entity, with the highest revenues per small enterprise in the *Other services* section – which amounted to PLN 10.1 million, more than twice as high as the national average. In 2006 in the group of medium-sized enterprises required to keep accounting books, enterprises in the *Health care and social assistance* sector stood out as compared to the rest of the country – their revenues per entity were 131% higher than the average for Poland. In this size category only the sections of *Financial intermediation* and *Education* had below average revenues per entity.

Table 3.7.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Mazowieckie	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	3 664	16 210	74 414	113.9	151.9	194.4
Mining and quarrying	x	4 730	x	x	90.4	x
Industrial processing	3 190	9 298	36 360	125.6	128.7	137.2
Electricity, gas and water production and supply	x	x	x	x	x	x
Construction	1 322	9 640	45 027	83.7	141.1	175.8
Trade and repairs	6 127	24 653	148 078	124.3	156.4	177.9
Hotels and restaurants	x	x	19 253	x	x	166.6
Transport, stock management and communications	3 273	15 930	57 054	91.7	156.8	188.4
Financial intermediation	3 399	12 456	68 790	220.6	37.8	91.3
Real estate and business services	3 021	11 152	45 137	130.8	172.2	165.5

Education	1 732	2 759	13 680	x	129.9	92.6
Health care and social assistance	1 746	2 450	18 878	191.0	121.9	231.1
Other services	1 165	10 138	27 925	79.6	215.4	164.3

Source: Calculations based on the CSO data

Investment expenditure

Total investment expenditures by enterprises in the region were PLN 24.9 billion, of which micro-entities accounted for circa 14% of expenditures, small entities for 10% and medium-sized enterprises for 25%. The share of enterprises in expenditure in the national economy was the highest in the group of entities employing 50-249 persons – 84%, while the lowest in the group of entities employing up to 9 persons – 47%. The share of public sector enterprises in expenditures by Mazowieckie enterprises was the highest in the group of medium-sized enterprises – 9.5%, and the lowest in micro-enterprises – 1.9%. In Mazowieckie Voivodeship the public sector had the lower share in investment expenditures by small and medium-sized enterprises than it had on average in the country, while the share was higher in case of micro-entities.

In case of micro-, small and medium-sized entities investments per enterprise as well as per employee were over 50%-70% higher in the region than the national average. Investment expenditures per employee and enterprise were the highest in medium-sized entities and amounted respectively to PLN 28.8 thousand and PLN 3.1 million, whereas investments per employee in micro-enterprises added up to PLN 6.2 thousand and per enterprise to PLN 13.4 thousand.

Table 3.7.7. SME investment expenditure

Mazowieckie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	24949049	3406093	2552686	6190251
Share in expenditures of enterprises in the region (%)	100.0	13.7	10.2	24.8
Share of enterprises in investment expenditure in the region (%)	75.9	47.3	71.8	84.0
Public sector share in investment expenditures of companies (%)	16.7	1.9	5.4	9.5
Public sector share in expenditures of companies in the region; Poland = 100	78	128	62	72
Investments per non-financial enterprise; PLN thousand	123.8	13.4	511.4	3104.5
Investments per enterprise; Poland = 100	185.7	156.8	176.1	162.8
Investments per employee in non-financial enterprises; PLN thousand	18.6	6.2	22.7	28.8
Investments per employee; Poland = 100	138.9	151.5	172.5	158.7

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Electricity, gas and water production and supply, *Transport*, *Financial intermediation* as well as *Real estate and business services* should be considered the investment profiles in Mazowieckie SMEs – the share of these sections in investment expenditures by Mazowieckie SMEs was higher than the share these sections had in SME expenditure in the rest of the country.

The public sector generated the majority of SME investments in the sections of *Electricity, gas and water production and supply* as well as *Other municipal, community and individual services* and *Education* – more than 30%. The public sector had the miniscule fraction in SME investments in the sections of *Financial intermediation* and *Industrial processing*. The investments of public sector SMEs were above the national average in the sections of *Construction*, *Trade*, *Transport* and *Financial intermediation*.

Table 3.7.8. Section structure of SME investments

Mazowieckie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	45.13	0.16	0.27	3.10	26.84
D	37.40	14.32	0.46	0.95	44.15
E	44.79	6.89	1.50	31.92	56.80
F	59.64	3.33	0.62	12.01	198.19
G	55.69	15.91	0.94	1.08	103.14
H	81.68	1.43	0.64	1.19	76.03
I	16.62	8.10	1.03	9.37	112.26
J	69.61	10.71	2.30	0.61	101.00
K	82.24	35.46	1.72	4.53	53.08
M	64.23	0.51	0.72	11.42	71.92
N	26.79	1.02	0.54	29.37	77.27
O	59.65	2.16	0.61	37.56	69.83

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

Small and medium-sized enterprises in the region, in all sectors, financed the investments mostly from own resources. To the greatest extent it concerned medium-sized private enterprises – 70.5% as well as small private and medium-sized public enterprises – circa 60%, while own resources had the least share in the expenditures by small public enterprises – 50.1%.

Domestic credits and loans were the second important source of financing all SMEs, except for small public enterprises – they covered 5.8% of expenditures by small public enterprises and 20-70% in the remaining groups of enterprises. In the groups of small and medium-sized public enterprises State budget funds constituted respectively circa 25% and 13% of budget for investments, while they had no significant role in the private sector. Foreign resources were used mainly by private enterprises and they amounted respectively to 3% and 7% of budget for investments in the groups of medium-sized and small enterprises. Foreign credits financed circa 2% of investment expenditures by medium-sized private enterprises and 4.4% by small enterprises in the private sector and did not occur in the public one. Other than the abovementioned sources financed circa 3-4% of investment expenditures by all SMEs, except for small public enterprises – in that group other sources amounted to as much as 18.2%. Leasing may be one of such sources.

Table 3.7.9. Sources of SME investment financing (%)

	public sector		private sector	
Mazowieckie	small	medium	small	medium
Internal resources	50.1	58.8	62.1	70.5
State budget funds	24.6	12.9	0.1	0.8
Domestic credits and loans	5.8	22.0	26.9	20.5
Total foreign resources:	1.2	1.9	6.8	3.0
Including foreign credits	0.0	0.0	4.4	1.7
Other sources	18.2	2.7	3.8	3.8
Non-financed expenditure	0.0	1.7	0.3	1.4

Source: Calculations based on the CSO data

3.8 Opolskie Voivodeship

Structure of entities

In 2006 in Opolskie Voivodeship 93.1 thousand economic entities were registered i.e. 2.5% of all in the REGON system in Poland, out of which only 101 were enterprises employing more than 249 persons. The voivodeship had the above average share in the group of entities not having any employees – 4.0% while it had relatively the lowest share in the group of large enterprises – 1.9%. In 2006 in Opolskie Voivodeship 6.1 thousand new enterprises were established i.e. 1.9% of all newly-started in Poland, while fewer – 3.9 thousand – were liquidated i.e. 1.4% of all enterprises liquidated in the country. The region had the greatest share in newly-started and liquidated entities in the group of enterprises not having any employees – respectively 2.7% and 3.3%.

Table 3.8.1. Entities registered in the REGON system in Opolskie Voivodeship in 2005 according to the number of working persons

	total	0	0-9	10-49	50-249	>249
Opolskie	93079	11569	88855	3397	726	101
Region share in Poland(%)	2.5	4.0	2.5	2.2	2.4	1.9
Foreign capital share in the region (%)	1.3	3.0	1.1	3.9	8.8	15.8
Public sector share in the region (%)	5.9	30.1	4.6	29.7	49.0	43.6
Private sector share in the region (%)	94.1	69.9	95.4	70.3	51.0	56.4
Newly-started	6140	506	6067	67	6	0
Newly-started share in Poland (%)	1.9	2.7	1.9	1.5	1.3	0.0
Liquidated	3918	157	3831	73	9	5
Liquidated share in Poland (%)	1.4	3.3	1.4	2.0	2.0	2.8

Source: Calculations based on the CSO data

More than 1% of enterprises registered in the region are entities with the major share of foreign capital. The highest number of such enterprises is in the group of medium-sized enterprises – 8.8% of all medium-sized entities and in the group of large enterprises – 15.8% of all large enterprises registered. Nearly 6% of entities registered in the region is in the public sector. The highest number of public sector enterprises is in the group of enterprises employing 50-249 persons – 49% and largest enterprises – 44%, while the lowest is in the group of micro-enterprises – 4.6%.

Public administration, *Financial Intermediation*, *Construction* and *Real estate and business services* are the sections which had higher share in structure of entities in Opolskie Voivodeship SME sector than on average in the country. The share of SME entities in these sections as compared to all SME entities in the region in 2006 was higher than the national average by 9% and more.

The SMEs of the private sector are dominated by enterprises in the sections of *Trade and repairs* – 33% and *Real estate and business services* – 17%. Construction enterprises and SMEs in the *Industrial processing* section had respectively 12% and 10% share in the structure of private SMEs. The structure of SME public sector is dominated by enterprises in the sections of *Real estate and business services* – 52% and *Education* – circa 32%. SMEs with the major share of foreign capital are mainly entities in the sections of *Trade and repairs* – 32%, as well as *Industrial processing* – 24% and *Real estate and business services* – 10%.

Newly-started enterprises in Opolskie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – nearly 32%, *Real estate and business services* – 17.5% as well as construction enterprises – 13% and enterprises in the *Industrial processing* section – 9.6% and the *Other municipal services* section – circa 8%. Small and medium-sized entities liquidated in Opolskie Voivodeship are mainly trade enterprises – 38%, enterprises in the sections of *Real estate and business services* – 15.5% as well as *Construction* and *Industrial processing*. The sections of *Industrial processing*, *Trade and repairs*, *Hotels and restaurants*, *Transport*, *Financial intermediation* and *Education* had higher share in SMEs liquidated than newly-started. However, in all sections more entities were established than liquidated. In the sections of *Real estate and business services*, *Construction* and *Other services* there was the largest preponderance of newly-started entities over liquidated ones.

Table 3.8.2. Section structure of SMEs registered in the REGON system in Opolskie Voivodeship in 2006

Opolskie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.02	0.03	0.26	0.00	0.00	0.40	0
Industrial processing	0.82	10.06	24.43	9.10	10.66	0.93	142
Electricity, gas and water production and supply	0.86	0.05	0.09	0.02	0.03	0.70	0
Construction	0.35	12.03	10.47	15.15	11.22	1.15	491
Trade and repairs	0.20	32.88	28.43	28.62	38.10	0.95	266
Hotels and restaurants	0.57	3.35	2.64	3.32	3.86	0.99	53
Transport, stock management and communications	0.44	6.30	5.87	4.38	4.63	0.85	88
Financial intermediation	0.49	4.54	6.04	3.79	4.37	1.18	62
Real estate and business services	51.22	16.81	18.64	19.43	15.54	1.09	585
Public administration	6.52	0.64	0.00	0.15	0.03	1.43	8
Education	31.37	1.39	0.85	2.49	3.55	0.85	14
Health care and social assistance	3.98	4.42	0.60	3.01	2.91	0.95	71
Other services	3.15	7.50	1.70	10.54	5.09	1.02	448

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

The entrepreneurship indices in Opolskie Voivodeship are quite low as compared to the rest of the country. In 2006 the region ranked 11th place in Poland, with 89 entities in SME sector registered per 1 000 inhabitants. Opolskie Voivodeship had an average number of entities with foreign capital participation as compared to the number of inhabitants – 11 such entities are registered per 10 thousand inhabitants which corresponds with the 7th place in Poland. Opolskie Voivodeship stands out with respect to the low number of entities liquidated. In 2006 circa 38 enterprises per 10 thousand inhabitants were liquidated in the region which corresponded with the 1st place in the voivodeship rankings. However, at the same time few enterprises were established i.e. 59 newly-started enterprises per 10 thousand inhabitants, thus the region ranked 15th in Poland.

Table 3.8.3. SMEs registered in the REGON system in relation to the number of inhabitants

Opolskie	Number of companies per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	892.4	11
Foreign capital SME	11.3	7
Newly-started SME	58.9	15
Liquidated SME	37.6	1

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Opolskie Voivodeship there were 37.2 thousand non-financial enterprises actually conducting their activities, which corresponded with 2.2% of total operating enterprises in the country[33]. 53 large enterprises were

[33] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking,

operating in this region, which constituted 1.8% of operating large enterprises in Poland. There were 359 medium-sized enterprises i.e. employing 50–249 persons and their share in the country amounted to 2.4%. The share of small and micro- enterprises in the total number of enterprises in Poland was 2.6% and 2.2% respectively.

Entrepreneurial activity in the voivodeship, measured by the number of operating enterprises per inhabitant, amounted to nearly 36 entities per 1 000 inhabitants and was below the national average in all size classes. The particularly low entrepreneurial activity was observed in micro- and medium-sized enterprises – over 20% below the average of Poland, while in case of small enterprises it was only 5% lower.

The number of working persons per 1 000 inhabitants was below the national average in all size categories. In case of micro-, small and medium-sized enterprises it was lower by 1/5, 9% and 12% respectively.

The average enterprise size in the region was below the national average in case of small and medium-sized enterprises – on average they employed 21.2 persons and 102.7 persons respectively. A micro-enterprise in the region on average employed 2.1 persons i.e. slightly fewer than an average micro-enterprise in the country. Large enterprises in the region differed significantly from the rest of Poland – on average they employed 652 persons i.e. 25% below the national average in this size category.

In all size categories revenues of an average enterprise in the voivodeship were lower than the average for Poland and amounted to PLN 1.1 million. In case of an average micro-enterprise its revenues were 25% lower as compared to the rest of the country and totalled PLN 0.3 million. A particularly significant difference was observed in the groups of medium-sized and the largest enterprises, in which revenues from sales per entity were circa 30% below the national average.

Work performance in Opolskie Voivodeship was the lowest in micro-entities – PLN 0.15 million and the highest in large entities – PLN 0.38 million. However, in all size categories work performance was below the national average. The difference ranged from 28% in the group of medium-sized enterprises to 5% in the largest enterprises. Consequently, wages in the region were lower than the average for Poland, particularly in large entities. However, the lowest gross wages occurred in the group of micro-entities – PLN 1.46 thousand, and the highest in large entities – PLN 2.84 thousand.

Table 3.8.4. Operating enterprises in 2006

Opolskie	total	micro	small	medium	large
Number of operating entities	37215	35654	1149	359	53
Share in Poland (%)	2.2	2.2	2.6	2.4	1.8
Companies per 1 000 inhabitants	35.7	34.2	1.1	0.3	0.1
Structure of working persons (%)	Number:171858	44.3	14.2	21.5	20.1
Working persons per 1 000 inhabitants	164.9	73.0	23.4	35.4	33.2
Working persons per entity	4.6	2.1	21.2	102.7	651.7
Revenues per 1 entity; PLN million	1.1	0.3	6.2	26.7	247.8
Share of costs in revenues (%)	91.2	86.5	93.8	94.0	91.6
Revenues per working person; PLN million	0.24	0.15	0.29	0.26	0.38
Structure of revenues (%)	100.0	27.2	17.4	23.4	32.0
Average monthly gross wage (PLN)	2236	1462	1705	2405	2843

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons

In 2006 the total share of micro-, small and medium-sized enterprises in the revenues of enterprises amounted to 68%, while in the number of working persons to nearly 80%. Indicator of the cost level of small and medium-sized enterprises was similar to the average for enterprises in these size categories in Poland and amounted to 93.8% and 94% respectively, while micro- and large enterprises were characterised by an even lower level of costs.

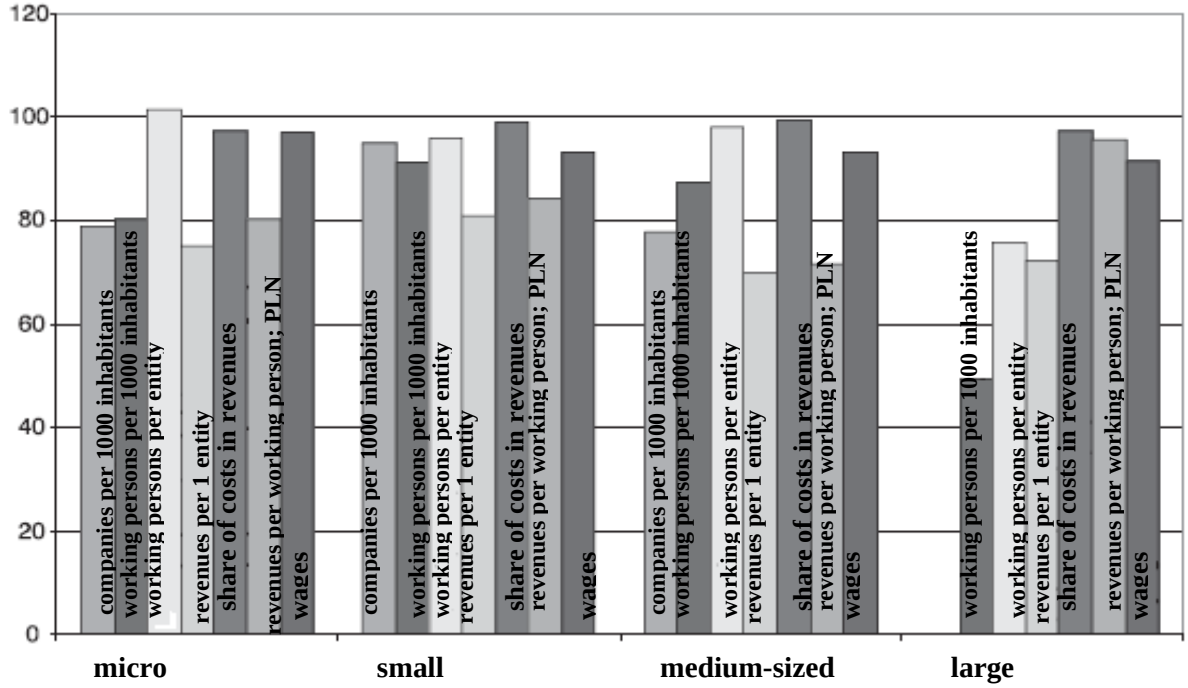
insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Table 3.8.5. Enterprises in Opolskie Voivodeship; average for Poland = 100

Opolskie	micro	small	medium	large
Companies per 1 000 inhabitants	78.9	95.1	77.8	d.d.
Working persons per 1 000 inhabitants	80.1	91.2	87.5	49.4
Working persons per entity	101.5	96.0	97.9	75.8
Revenues per 1 entity; PLN million	75.0	80.9	69.9	72.4
Share of costs in revenues (%)	97.2	99.1	99.3	97.2
Revenues per working person; PLN million	80.2	84.3	71.5	95.5
Average monthly gross wage (PLN)	96.9	93.1	93.3	91.6

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Chart 3.8.1. Operating enterprises in Opolskie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Average revenues per entity of Opolskie SMEs required to keep accounting books were below the national average in all size classes. In case of micro-enterprises they amounted to PLN 2.8 million, i.e. 12.7% less than on average in the country, while in small enterprises revenues totalled PLN 8.97 million i.e. 7.9% below the national average, and in medium-sized – PLN 26.54 million i.e. more than 30% below the average for Poland. In the groups of small and medium-sized enterprises, those in the *Electricity, gas and water production and supply* section had particularly low revenues per entity as compared to the rest of the country – 4 times below the national average. In the group of medium-sized enterprises, only two sections – *Mining and quarrying* and *Other services* – had the above average revenues per entity (by several percentage points).

Table 3.8.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Opolskie	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	2 809	8 975	26 536	87.3	84.1	69.3
Mining and quarrying	x	x	28 500	x	x	117.7
Industrial processing	x	x	28 390	x	x	107.1
Electricity, gas and water production and supply	x	6 073	11 742	x	26.8	22.6
Construction	x	5 600	19 328	x	82.0	75.5

Trade and repairs	3 835	12 909	43 467	77.8	81.9	52.2
Hotels and restaurants	x	1 556	x	x	51.8	x
Transport, stock management and communications	x	6 746	23 060	x	66.4	76.1
Financial intermediation	x	x	x	x	x	x
Real estate and business services	855	3 950	13 711	37.0	61.0	50.3
Education	x	x	x	x	x	x
Health care and social assistance	x	1 927	x	x	95.8	x
Other services	x	x	23 078	x	x	135.8

Source: Calculations based on the CSO data

Investment expenditure

In 2006, total investment expenditures by enterprises in the region were PLN 1.73 billion, of which micro-entities accounted for circa 13% of expenditures, small entities for 10% and medium-sized enterprises for 31%. The share of enterprises in expenditure in the national economy was the highest in the group of entities employing 50-249 persons – 62.7%, while the lowest in the group of entities employing up to 9 persons – 39%. The share of public sector enterprises in expenditures by Opolskie enterprises was the highest in the group of medium-sized enterprises – 33%, and the lowest in micro-enterprises – 0.2%.

Table 3.8.7. SME investment expenditure

Opolskie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	1725331	226267	170973	540020
Share in expenditures of enterprises in the region (%)	100.0	13.1	9.9	31.3
Share of enterprises in investment expenditure in the region (%)	62.9	38.9	52.4	62.7
Public sector share in investment expenditures of companies (%)	30.1	0.2	12.7	32.9
Public sector share in expenditures of companies in the region; Poland = 100	141	13	145	250
Investments per non-financial enterprise; PLN thousand	39.5	6.9	198.9	1610.3
Investments per enterprise; Poland = 100	59.3	80.9	68.5	84.5
Investments per employee in non-financial enterprises; PLN thousand	8.6	3.3	9.4	15.7
Investments per employee; Poland = 100	64.0	79.7	71.4	86.3

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In the groups of small and medium-sized enterprises the public sector in Opolskie Voivodeship had the above average share in expenditures than it had on average in Poland, while it was much lower in case of micro-enterprises. In all groups of enterprises investments per enterprise as well as per employee were lower than the national average. Investment expenditures per employee and per enterprise were the highest in medium-sized entities and amounted respectively to PLN 15.7 thousand and PLN 1.6 million. Investments per employee in micro-enterprises added up to PLN 3.3 thousand and per enterprise to PLN 6.9 thousand.

Mining, *Industrial processing*, *Transport*, *Education, Health care and social assistance* as well as *Other municipal, community and individual services* should be considered the investment profiles in Opolskie SMEs – the share of these sections in investment expenditures by Opolskie SMEs was higher than the share these sections had in SME expenditure in the rest of the country.

The public sector generated the majority of SME investments in the sections of *Electricity, gas and water production and supply* – more than 91% as well as *Other municipal, community and individual services* and *Education* – nearly 72%. The public sector had the miniscule fraction in SME investments in the sections of *Hotels*, *Trade* and *Mining*. The investments of public sector SMEs were above the national average in the sections of

Industrial processing, *Electricity, gas and water production and supply*, *Construction*, *Financial intermediation*, *Health care and social assistance* as well as *Other services*.

Table 3.8.8. Section structure of SME investments

Opolskie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	94.98	1.58	2.79	0.70	6.10
D	47.15	44.98	1.45	19.94	929.48
E	22.48	4.03	0.88	91.46	162.76
F	86.58	4.90	0.91	7.33	120.93
G	65.63	11.26	0.67	0.08	7.69
H	93.44	2.21	0.98	0.02	1.54
I	70.32	11.37	1.44	5.35	64.07
J	40.52	1.17	0.25	1.64	270.48
K	55.81	4.73	0.23	4.29	50.21
M	93.68	2.73	3.88	4.19	26.40
N	63.69	3.93	2.09	57.14	150.33
O	97.27	7.12	2.00	71.83	133.53

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

Small and medium-sized enterprises in the region, in all sectors, financed the investments mostly from own resources – circa 66% in the groups of small enterprises in the public and private sector, while circa 74% in medium-sized enterprises in both sectors.

Domestic credits and loans were the second important source of financing all SMEs, except for small public enterprises – they covered 7.8% of expenditures by small public enterprises and 14-23% in the remaining groups of enterprises. In the groups of small and medium-sized public enterprises State budget funds constituted respectively circa 19% and 9.4% of budget for investments, while they had no significant role in the private sector. Foreign resources were used mainly by small private enterprises and they amounted to 12% of their budget for investments while in the remaining groups they ranged from 0.7% to 1.2%. Foreign credits financed circa 10% of investment expenditures by small private enterprises and 0.3% by medium-sized enterprises in the private sector and did not occur in the public one. Circa 2% of investment expenditures by all SMEs, except for small public enterprises was financed by other than the abovementioned sources. In the group of medium-sized public enterprises they constituted only 0.6%.

Table 3.8.9. Sources of SME investment financing (%)

	public sector		private sector	
Opolskie	small	medium	small	medium
Internal resources	66.5	74.7	66.3	73.9
State budget funds	18.9	9.4	0.1	0.0
Domestic credits and loans	7.8	14.2	19.7	22.6
Total foreign resources:	1.2	0.7	11.7	0.7
Including foreign credits	0.0	0.0	10.1	0.3
Other sources	2.1	0.6	2.1	1.6
Non-financed expenditure	3.5	0.4	0.1	1.1

Source: Calculations based on the CSO data

3.9 Podkarpackie Voivodeship

Structure of entities

In 2006 in Podkarpackie Voivodeship 142.6 thousand economic entities i.e. 3.8% were registered in the REGON system in Poland, out of which only 237 were enterprises employing more than 249 persons. The voivodeship had the above average share in the group of small entities – 4.1% and medium-sized – 4.4%. The region had relatively the lowest share (as in the total number of entities) in the group of micro-enterprises – 3.8%. In 2006 in Podkarpackie Voivodeship 11.8 thousand new enterprises were established i.e. 3.7% of all newly-started in Poland, while fewer – 9.7 thousand – were liquidated which constituted 3.4% of all enterprises liquidated in the country. The region had the greatest share in newly-started and liquidated entities in the group of enterprises not having any employees and large enterprises – respectively 5.3% and 5.4% as well as 5.2% and 5.1%.

Table 3.9.1. Entities registered in the REGON system in Podkarpackie Voivodeship in 2006 according to the number of working persons

	total	0	0-9	10-49	50-249	>249
Podkarpackie	142621	11473	134802	6393	1189	237
Region share in Poland(%)	3.8	4.0	3.8	4.1	3.9	4.4
Foreign capital share in the region (%)	0.6	1.4	0.5	1.7	4.8	10.1
Public sector share in the region (%)	4.5	9.1	2.4	41.1	44.0	46.4
Private sector share in the region (%)	95.5	90.9	97.6	58.9	56.0	53.6
Newly-started	11801	996	11663	118	15	5
Newly-started share in Poland (%)	3.7	5.3	3.7	2.7	3.3	5.4
Liquidated	9681	245	9548	112	12	9
Liquidated share in Poland (%)	3.4	5.2	3.4	3.0	2.7	5.1

Source: Calculations based on the CSO data

Only 0.6% of enterprises registered in the region are entities with the major share of foreign capital. The highest number of such enterprises is in the group of medium-sized enterprises – 4.8% of all medium-sized entities and in the group of large enterprises – 10.1% of all large enterprises registered. 4.5% of entities registered in the region is in the public sector. The highest number of public sector enterprises is in the group of enterprises employing 50-249 persons – 44% and largest enterprises – 46.4%, while the lowest is in the group of micro-enterprises – 2.4%.

Other services, *Trade and repairs* and *Health care and social assistance* are the sections which had higher share in the structure of Podkarpackie Voivodeship entities in SME sector than on average in the country. The share of SME entities in these sections, as compared to all SME entities in the region, was in 2006 respectively 16%, 4% and 3% higher than the national average. The share of SMEs in the *Public administration* section is in the region twice as high as the average in Poland, which results from the low number of enterprises in other sections.

The SMEs of the private sector are dominated by enterprises in the sections of *Trade and repairs* – more than 36%, *Real estate and business services* – 13.4% as well as *Industrial processing* and *Construction* – over 10% each. The structure of SME public sector is dominated by enterprises in the sections of *Education*– circa 53.5% as well as *Real estate and business services* – 15.5%. SMEs with the major share of foreign capital are mainly entities in the sections of *Trade and repairs* – 49%, *Industrial processing* – 23% and *Real estate and business services* – 7%.

Table 3.9.2. Section structure of SMEs registered in the REGON system in Podkarpackie Voivodeship in 2006

Podkarpackie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.03	0.06	0.00	0.07	0.05	0.89	3
Industrial processing	1.17	10.75	23.16	8.44	9.66	1.00	62
Electricity, gas and water production and supply	1.69	0.05	0.37	0.06	0.07	0.78	0
Construction	0.39	10.45	5.51	13.29	11.35	1.00	470
Trade and repairs	0.27	35.94	46.81	30.14	39.77	1.04	-292
Hotels and restaurants	1.53	3.01	1.72	3.38	4.39	0.89	-26
Transport, stock management and communications	0.82	7.13	4.04	5.03	6.06	0.96	7
Financial intermediation	0.25	3.58	8.95	3.96	4.34	0.93	47
Real estate and business services	15.48	13.42	6.99	17.51	15.35	0.87	580
Public administration	11.48	0.89	0.00	1.42	0.06	2.00	161
Education	53.54	1.45	0.49	2.11	1.63	0.88	91
Health care and social assistance	6.28	4.79	0.98	3.44	2.26	1.03	187
Other services	7.07	8.48	0.98	11.16	4.97	1.16	835

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

Newly-started enterprises in Podkarpackie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – over 30%, *Real estate and business services* – 17.5% as well as construction enterprises – 13.3% and enterprises in the *Other municipal services* section – 11% and I*ndustrial processing* – 8.4%. Small and medium-sized entities liquidated in Podkarpackie Voivodeship are mainly commercial enterprises – 39%, enterprises in the sections of *Real estate and business services* – 15.4% as well as *Construction* and *Industrial processing*. The sections of *Industrial processing*, *Trade and repairs*, *Hotels and restaurants*, *Transport* and *Financial intermediation* had higher share in SMEs liquidated than newly-started. However, only in the *Trade and repairs* section more entities were liquidated than established. In the sections of *Other services*, *Real estate and business services* and *Construction* there was the largest preponderance of newly-started entities over liquidated ones.

The entrepreneurship indices in Podkarpackie Voivodeship are the lowest in Poland. In 2006 68 entities in SME sector were registered per 1 000 inhabitants. The region ranked 15th place in the country with respect to the number of entities with foreign capital participation as compared to the number of inhabitants – less than 4 entities per 10 thousand inhabitants are registered there. Podkarpackie Voivodeship stands out in terms of the low number of entities liquidated. In 2006 circa 46 enterprises per 10 thousand inhabitants were liquidated in the region which corresponded with the 2nd place in the voivodeship rankings. However, at the same time few enterprises were established, i.e. 56 newly-started enterprises per 10 thousand inhabitants, thus the region ranked 16th in Poland.

Table 3.9.3. SMEs registered in the REGON system in relation to the number of inhabitants

Podkarpackie	Number of companies per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	678.8	16
Foreign capital SME	3.9	15
Newly-started SME	56.2	16
Liquidated SME	46.1	2

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Podkarpackie Voivodeship there were nearly 67 thousand operating non-financial enterprises which corresponded with 3.9% of total operating enterprises in the country[34]. The voivodeship had the largest share in the total number of operating large enterprises in the country – 5.1%. 153 large enterprises were operating in this region. The share of micro-, small and medium-sized enterprises in the total number of enterprises in Poland in these size classes amounted to 3.9%, 4.7% and 4.9% respectively.

Entrepreneurial activity in Podkarpackie Voivodeship, measured by the number of operating enterprises per inhabitant, amounted to nearly 32 entities per 1 000 inhabitants and was below the national average. In the groups of micro- and small enterprises this index was respectively 30% and 15% lower; whereas the number of operating enterprises per inhabitant was 1/5 below the national average in case of enterprises with 50-249 working persons.

In all size categories the number of working persons per 1 000 inhabitants did not exceed 85% of the average for Poland.

The average enterprise size in the region was similar to the national average in case of small and medium-sized enterprises. It was slightly below the average in micro-enterprises (by 3%), while it differed significantly in case of large enterprises in the region, which on average employed 643 persons i.e. only 74.8% of the national average.

Revenues of an average enterprise in the region were lower than the average for Poland and amounted to PLN 1.1 million. In case of micro-enterprises their revenues amounted to PLN 0.4 million and were equal to revenues of an average micro-enterprise. Revenues in an average small and medium-sized enterprise in the region were 30% lower than the average for Poland and in 2006 amounted to PLN 5.5 million and PLN 27 million respectively. Even higher discrepancy was observed in case of large enterprises in the voivodeship – revenues of an average large enterprise in the region were 55% below the national average.

Work performance in the voivodeship (measured by revenues per working person) was the lowest in micro-enterprises – PLN 0.18 million and the highest in small and medium-sized enterprises – PLN 0.25 million, although work performance in micro-entities was most similar to the average for Poland, while it was circa 30% lower in case of small and medium-sized enterprises. Work performance in large enterprises differed even more significantly from the national average and was over 40% lower.

The low level of revenues per working person were reflected in the average monthly gross wage which was below the national average in all size classes (in small, medium-sized and large by circa 20%, while it was circa 10% lower in the group of large enterprises). Wages rose with the number of employees. The lowest average monthly gross wage – PLN 1.37 thousand – was in the group of the smallest enterprises employing up to 9 persons, while the highest in large enterprises – PLN 2.5 thousand.

In 2006 the SME sector share in the revenues of enterprises amounted to 69%, while in the number of working persons to 71.5%, with the greatest importance of micro-enterprises which employed 38% of the total number of working persons in the region and their revenues constituted nearly 1/3 of the total revenues of enterprises. Indicator of the cost level of small and medium-sized enterprises was above the average for enterprises in these size categories in Poland and amounted to 91.2% and 96.2% respectively, while it was lower in the groups of micro- and large enterprises.

Table 3.9.4. Operating enterprises in 2006

[34] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking, insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Podkarpackie	total	micro	small	medium	large
Number of operating entities	66968	64111	2060	644	153
Share in Poland (%)	3.9	3.9	4.7	4.4	5.1
Companies per 1 000 inhabitants	31.9	30.6	1.0	0.3	0.1
Structure of working persons (%)	Number: 345843	38.1	13.2	20.3	28.5
Working persons per 1 000 inhabitants	164.9	62.8	21.8	33.4	46.9
Working persons per entity	5.2	2.1	22.2	108.8	643.1
Revenues per 1 entity; PLN million	1.1	0.4	5.5	27.0	152.3
Share of costs in revenues (%)	93.3	91.2	93.7	96.2	93.1
Revenues per working person; PLN million	0.22	0.18	0.25	0.25	0.24
Structure of revenues (%)	100.0	30.9	15.0	23.1	31.0
Average monthly gross wage (PLN)	2022	1368	1528	2005	2498

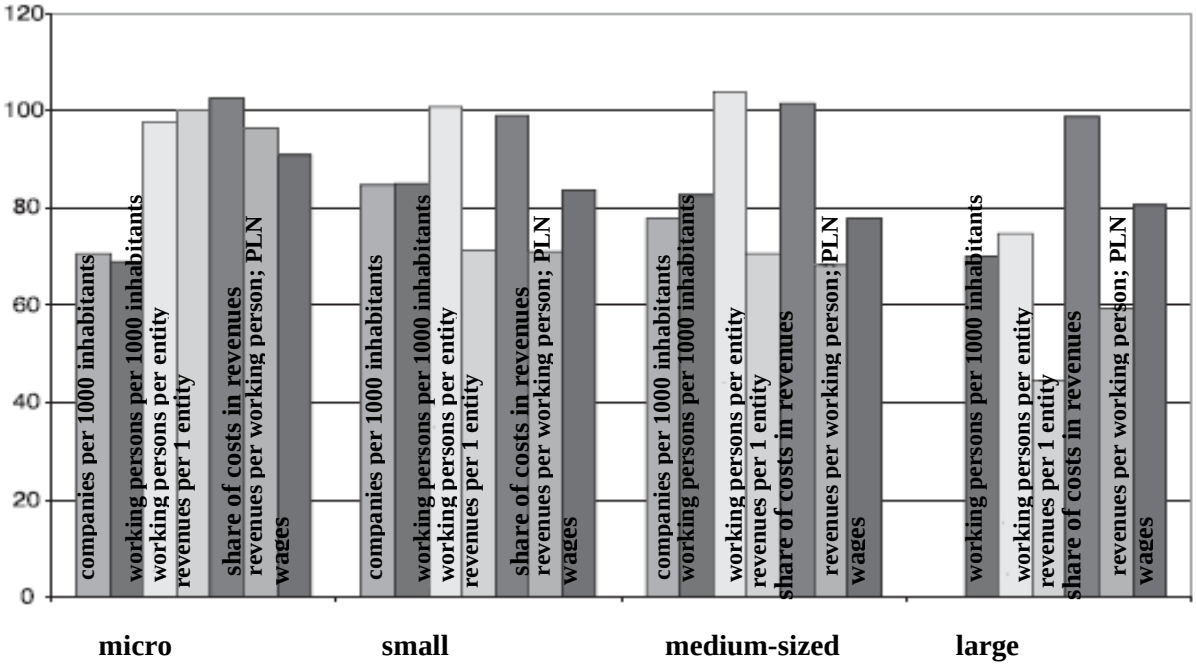
Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons

Table 3.9.5. Enterprises in Podkarpackie Voivodeship; average for Poland = 100

Podkarpackie	micro	small	medium	large
Companies per 1 000 inhabitants	70.6	84.7	77.8	d.d.
Working persons per 1 000 inhabitants	68.9	85.1	82.6	69.8
Working persons per entity	97.7	100.6	103.7	74.8
Revenues per 1 entity; PLN million	100.0	71.4	70.7	44.5
Share of costs in revenues (%)	102.5	99.0	101.6	98.8
Revenues per working person; PLN million	96.2	71.0	68.2	59.4
Average monthly gross wage (PLN)	90.7	83.5	77.7	80.5

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Chart 3.9.1. Enterprises in Podkarpackie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In 2006 revenues per entity in SMEs required to keep accounting books were lower than the national average. In the group of micro-enterprises revenues per entity were 25% below the average for Poland. The difference was particularly observable in case of micro-entities in the *Transport, stock management and communications* section – their revenues were 65% lower than the national average and amounted to PLN 1.25 million. Micro-enterprises in the *Construction* section had relatively the highest revenues which were similar to the national average and amounted to PLN 1.61 million per entity.

In the group of small enterprises revenues per entity were 25% lower than the average for Poland, with the exception of the enterprises in the *Education* section – their revenues were 82% above the national average. In the remaining sections revenues per small entity were lower as compared to the rest of the country.

In the group of medium-sized enterprises required to keep accounting books, revenues per entity were 30% below the national average. Enterprises employing 50-249 persons had lower average revenues per entity in all sections, which was particularly noticeable in the *Electricity, gas and water production and supply* section. Revenues per medium-sized entity was in this section 60% below the average for Poland.

Table 3.9.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Podkarpackie	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	2 431	8 061	26 913	75.6	75.6	70.3
Mining and quarrying	x	2 289	x	x	43.7	x
Industrial processing	1 718	5 341	21 157	67.6	73.9	79.8
Electricity, gas and water production and supply	x	17 453	21 110	x	77.1	40.6
Construction	1 609	4 546	22 862	101.9	66.5	89.3
Trade and repairs	3 422	11 269	43 618	69.4	71.5	52.4
Hotels and restaurants	x	2 897	x	x	96.4	x
Transport, stock management and communications	1 249	6 187	24822	35.0	60.9	82.0
Financial intermediation	x	x	x	x	x	x
Real estate and business services	x	x	18 913	x	x	69.3
Education	x	3 880	x	x	182.7	x
Health care and social assistance	x	1 606	6 409	x	79.9	78.4
Other services	910	2 826	11 247	62.2	60.1	66.2

Source: Calculations based on the CSO data

Investment expenditures

Total investment expenditures of enterprises in the region were PLN 3.52 billion, of which micro-entities accounted for 16%, small entities for 9% and medium-sized enterprises for 25% of expenditures. The share of enterprises in expenditures in the national economy was the highest in the group of entities employing 50-249 persons – 55% and the lowest in the group of enterprises employing up to 9 persons – 37%. The share of public sector enterprises in expenditures by Podkarpackie enterprises was the highest in the group of medium-sized enterprises – 24.6%, and the lowest in micro-enterprises – 0.4%. The public sector had the above average share in investment expenditures by medium-sized enterprises in Podkarpackie Voivodeship. In the groups of small and micro- enterprises the public sector had the less significant share in investments than on average in the country.

Investments per enterprise as well as per working person in the region were above the national average in case of micro-entities and lower in medium-sized and small enterprises. Investments expenditures per working person and per enterprise were the highest in medium-sized entities and amounted respectively to PLN 13.6 thousand and PLN 1.5 million. Investments per working person in micro-enterprises added up to PLN 4.6 thousand and per enterprise to PLN 9.4 thousand.

Table 3.9.7. SME investment expenditure

Podkarpackie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	3521498	571059	313726	866969
Share in expenditures of enterprises in the region (%)	100.0	16.2	8.9	24.6
Share of enterprises in investment expenditure in the region (%)	61.0	37.2	43.6	54.6
Public sector share in investment expenditures of companies (%)	24.9	0.4	8.5	24.6
Public sector share in expenditures of companies in the region; Poland = 100	117	30	97	187
Investments per non-financial enterprise; PLN thousand	49.5	9.4	204.3	1479.6
Investments per enterprise; Poland = 100	74.2	110.1	70.4	77.6
Investments per employee in non-financial enterprises; PLN thousand	9.6	4.6	9.2	13.6
Investments per employee; Poland = 100	71.7	112.7	70.0	74.8

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Industrial processing, *Electricity, gas and water production and supply*, *Construction*, *Trade*, *Hotels*, *Transport* and *Other services* should be considered the investment profiles of Podkarpackie SMEs. The share of these sections in investment expenditures of Podkarpackie SMEs was higher than the share these sections had in SME expenditures in the country.

Table 3.9.8. Section structure of SME investments

Podkarpackie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	7.31	0.40	0.71	0.23	1.98
D	37.17	32.43	1.05	8.12	378.42
E	31.97	5.94	1.29	93.55	166.47
F	91.15	7.15	1.33	1.37	22.61
G	77.20	19.96	1.18	1.04	99.14
H	92.32	2.54	1.13	0.76	48.47
I	50.58	9.28	1.18	1.32	15.81
J	29.75	0.91	0.20	10.30	1699.88
K	83.67	14.32	0.69	5.91	69.24
M	70.98	0.64	0.91	4.58	95.32
N	16.39	1.38	0.74	30.49	80.21
O	92.80	5.03	1.41	73.58	136.77

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

The public sector generated the majority of SME investments in the *Electricity, gas and water production and supply* section – over 93% as well as in the sections of *Other municipal, community and individual services* and *Education* – nearly 74%. The public sector had the miniscule fraction in SME investments in *Hotels* and *Mining*. The investments of public sector SMEs were above the national average in the sections of *Industrial processing*, *Electricity, gas and water production and supply*, *Construction*, *Financial intermediation* and *Other services*.

Small and medium-sized enterprises in the region, in all sections, financed the investments largely from own resources – circa 75% of expenditures by enterprises in the private sector and circa 50% in the public sector.

Domestic credits and loans were the second important source of financing all SMEs, except for small public sector enterprises – they covered from 9.9% of expenditures by small public sector enterprises to 17-26% of expenditures in the remaining groups of enterprises. State budget funds constituted respectively circa 40% and 14% of budget for investments by small and medium-sized enterprises in the public sector, while they had no significant role in the private sector investments. Foreign resources were used mainly by medium-sized enterprises in both sectors – they constituted circa 8% of their budget for investments, and in case of small private enterprises they amounted to 2.6%. Foreign resources did not occur in small enterprises in the public sector. Foreign credits financed circa 1% of investment expenditures by private SMEs and did not occur in the public sector. Foreign credits financed circa 2% of investment expenditures in the private sector and did not occur in the public one. Other than the abovementioned sources financed circa 1%-2% of SME investment expenditures.

Table 3.9.9. Sources of SME investment financing (%)

	public sector		private sector	
Podkarpackie	small	medium	small	medium
Internal resources	47.6	49.4	75.9	72.8
State budget funds	39.9	13.8	0.4	0.2
Domestic credits and loans	9.9	25.6	18.9	17.0
Total foreign resources:	0.0	8.4	2.6	7.8
Including foreign credits	0.0	0.0	0.8	1.5
Other sources	2.6	1.1	1.6	1.3
Non-financed expenditure	0.0	1.7	0.7	0.9

Source: Calculations based on the CSO data

3.10 Podlaskie Voivodeship

Structure of entities

In 2006 in Podlaskie Voivodeship 90.4 thousand economic entities were registered, i.e. 2.4% of all in the REGON system in Poland, out of which only 123 were enterprises employing more than 249 persons. The voivodeship had the above average share in the group of enterprises not having any employees – 2.6%, while it had relatively the lowest share in the group of small enterprises – 2.2%. In 2006 in Podlaskie Voivodeship 8.2 thousand new enterprises were established i.e. 2.6% of all newly-started in Poland, whereas fewer – 7.7 thousand were liquidated, i.e. 2.7% of all liquidated in the country. The region had the greatest share in newly-started enterprises in Poland in the group of micro-enterprises – 2.6% while in liquidated in the group of enterprises not having any employees – 3.9% and large enterprises – 5.1%.

Only 0.5% of enterprises registered in the region are entities with the major share of foreign capital. The highest number of such entities is in the group of medium-sized enterprises – 4.3% of all medium-sized enterprises registered. Nearly 4% of entities registered in the region is in the public sector. The highest number of public sector enterprises is in the group of enterprises employing 50-249 persons – 59.6% and the largest enterprises – 52.8%, while the lowest is in the group of micro-entities – 1.9%.

Table 3.10.1. Entities registered in the REGON system in Podlaskie Voivodeship in 2006 according to the number of working persons

	total	0	0-9	10-49	50-249	>249
Podlaskie	90366	7403	86041	3476	726	123
Region share in Poland(%)	2.4	2.6	2.4	2.2	2.4	2.3
Foreign capital share in the region (%)	0.5	1.2	0.4	1.4	4.3	2.4
Public sector share in the region (%)	3.8	9.4	1.9	39.3	49.6	52.8
Private sector share in the region (%)	96.2	90.6	98.1	60.7	50.4	47.2
Newly-started	8220	446	8141	66	10	3
Newly-started share in Poland (%)	2.6	2.4	2.6	1.5	2.2	3.3
Liquidated	7719	185	7643	61	6	9
Liquidated share in Poland (%)	2.7	3.9	2.7	1.6	1.3	5.1

Source: Calculations based on the CSO data

Health care and social assistance, *Mining*, *Other services*, *Transport, stock management and communications* and *Financial Intermediation* are the sections which had the greater share in structure of entities in SME sector in Podlaskie Voivodeship than on average in the country. The share of SME entities in these sections as compared to all SME entities in the region was in 2006 more than 9% higher than the national average. The region had also a large share of SMEs in the sections of *Public administration* and *National defence*.

Table 3.10.2. Section structure of SMEs registered in the REGON system in Podlaskie Voivodeship in 2006

Podlaskie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining		0 08	0.00	0.11	0.04	1.16	6
Industrial processing	0.80	9.63	22.13	7.17	8.59	0.89	-73
Electricity, gas and water production and supply	1.31	0.05	0.43	0.11	0.13	0.72	-1
Construction	0.45	10.66	5.21	12.75	11.35	1.02	173
Trade and repairs	1.66	34.02	46.64	32.57	38.91	0.99	-324
Hotels and restaurants	1.48	2.53	2.60	3.26	3.04	0.75	34
Transport, stock management and communications	0.98	8.08	3.47	5.01	6.59	1.09	-96
Financial intermediation	0.77	4.42	8.89	3.49	3.97	1.15	-19
Real estate and business services	21.20	13.22	7.81	19.72	16.20	0.85	371
Public administration	15.23	0.72	0.00	0.22	0.03	1.62	16
Education	41.24	1.62	0.65	3.12	2.11	0.99	93
Health care and social assistance	7.07	6.47	0.65	3.44	3.40	1.39	21
Other services	7.81	8.48	1.30	9.02	5.65	1.16	305

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

The SMEs of the private sector are dominated by enterprises in the sections of *Trade and repairs* – 34%, *Real estate and business services* – 13.2%, *Construction* – 10.7%, *Industrial processing* – 9.6% and *Other services* – 8.5%. The structure of SME public sector is dominated by enterprises in the sections of *Education*– circa 41% as well as *Real estate and business services* – 21.2%. SMEs with the major share of foreign capital are mainly entities in the sections of *Trade and repairs* – 46.6%, *Industrial processing* – 22.1% as well as *Financial Intermediation* – 8.9% and *Real estate and business services* – 7.8%.

Newly-started enterprises in Podlaskie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – over 32.6%, *Real estate and business services* – 19.7% as well as construction enterprises – 12.8% and enterprises in the *Other municipal services* section – 9% and the I*ndustrial processing* section – 7.2%. Small and medium-sized entities liquidated in Podlaskie Voivodeship are mainly trade enterprises – 38.9%, enterprises in the sections of *Real estate and business services* – 16.2% as well as *Construction* and *Industrial processing*. The sections of *Industrial processing*, *Electricity, gas and water production and* supply, *Trade and repairs*, *Transport* and *Financial intermediation* had higher share in SMEs liquidated than newly-started and in these sections liquidated entities dominated over newly-started ones. In the sections of *Real estate and business services* and *Other services* there was the largest preponderance of newly-started entities over liquidated ones.

The entrepreneurship indices in Podlaskie Voivodeship are one of the lowest in Poland. In 2006 the region ranked 14th place in Poland, with 75 entities in SME sector registered per 1 000 inhabitants. It ranked 16th place in the country with respect to the number of entities with foreign capital participation as compared to the number of inhabitants – 3.9 entities per 10 thousand inhabitants are registered there. Podlaskie Voivodeship has the average number of liquidated enterprises. In 2006 circa 65 enterprises per 10 thousand inhabitants were liquidated in the region which corresponded with the 6th place in the voivodeship rankings. At the same time few enterprises were established i.e. 66 newly-started enterprises per 10 thousand inhabitants, thus the region ranked 12th place in Poland.

Table 3.10.3. SMEs registered in the REGON system in relation to the number of inhabitants

Podlaskie	Number of companies per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	754.5	14
Foreign capital SME	3.9	16
Newly-started SME	68.7	12
Liquidated SME	64.5	6

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Podlaskie Voivodeship there were 42.3 thousand non-financial enterprises actually conducting their activities which corresponded with 2.5% of total operating enterprises in the country[35]. There were only 57 large enterprises in this region, which constituted 1.9% of operating enterprises in Poland, employing more than 249 persons. There were 346 medium-sized enterprises employing 50-249 persons and their share in the country amounted to 2.4%. The share of small and micro- enterprises in the total number of enterprises in Poland was 2.5%.

Entrepreneurial activity in the voivodeship, measured by the number of operating enterprises per inhabitant, amounted to 35 entities per 1 000 inhabitants and was more than 20% below the national average in all size classes.

In all size categories the number of working persons per 1 000 inhabitants did not exceed 80% of the average for Poland. This index was 26% below the national average in case of micro- and medium-sized enterprises and 1/5 lower in case of small enterprises. It was 60% below the average for Poland in the group of large enterprises in Podlaskie Voivodeship.

The average enterprise size in the voivodeship was comparable with the average for Poland in case of small entities. A small enterprise in the region on average employed 22 persons. A micro- and medium-sized enterprise in Podlaskie Voivodeship on average employed 2 and 103 persons respectively, i.e. fewer than an average micro- and medium-sized enterprise in Poland. A significant difference was observed in case of enterprises employing more than 249 persons – on average they had 554 employees i.e. 35% below the national average in this size category.

In Podlaskie Voivodeship only revenues of an average micro-enterprise were equal to the national average and amounted to PLN 400 thousand. In the remaining size classes revenues from sales per entity were more than 20% below the national average in the groups of medium-sized and large entities and 7% lower in case of small enterprises.

Work performance in the voivodeship was the lowest in micro-entities – PLN 180 thousand and the highest in large entities – PLN 470 thousand. Work performance in SME sector was 20% below the national average in the group of medium-sized enterprise while it was respectively 8% and 1.5% lower in case of small and micro-enterprises. In large enterprises revenues per working person were 18% above the average for Poland.

Wages in the region were lower than the national average, particularly in medium-sized entities. The lowest gross wages occurred in the group of micro-entities – PLN 1.37 thousand, and the highest in medium-sized and large entities – PLN 2.18 thousand and PLN 2.72 thousand respectively. It may be concluded that the above average work performance in case of large enterprises was not reflected in the wages which were lower than the average for Poland.

[35] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking, insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Table 3.10.4. Operating enterprises in 2006

Podlaskie	total	micro	small	medium	large
Number of operating entities	42345	40835	1107	346	57
Share in Poland (%)	2.5	2.5	2.5	2.4	1.9
Companies per 1 000 inhabitants	35.4	34.1	0.9	0.3	0.0
Structure of working persons (%)	Number: 171760	46.5	14.4	20.8	18.4
Working persons per 1 000 inhabitants	143.6	66.7	20.6	29.8	26.4
Working persons per entity	4.1	2.0	22.3	103.2	554.2
Revenues per 1 entity; PLN million	1.1	0.4	7.1	30.0	260.4
Share of costs in revenues (%)	93.8	88.6	93.6	95.4	97.7
Revenues per working person; PLN million	0.28	0.18	0.32	0.29	0.47
Structure of revenues (%)	100.0	30.3	16.6	21.9	31.2
Average monthly gross wage (PLN)	2079	1372	1607	2181	2723

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons

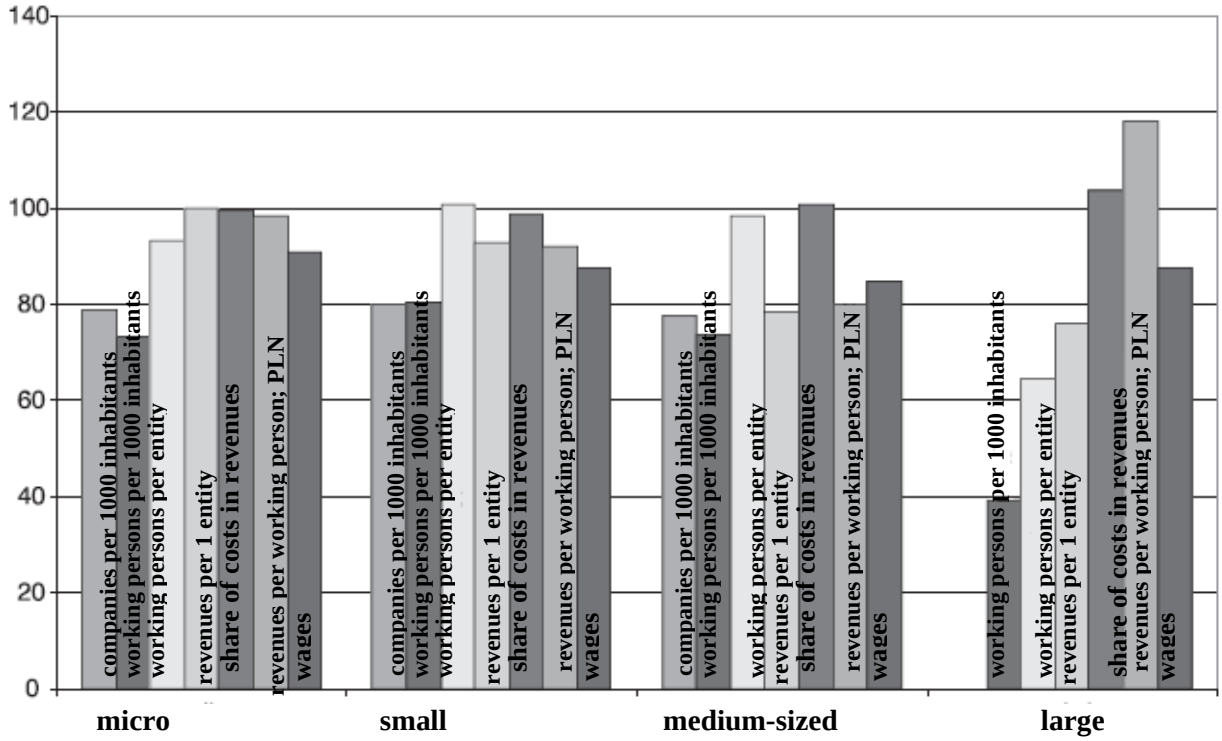
In 2006 SME sector share in the revenues of enterprises amounted to 68.8%, while in the number of persons working to 81.6%, with the greatest importance of micro-enterprises. Indicator of the cost level of medium-sized enterprises was equal to the average for enterprises in these size categories in Poland and amounted to 95.4%, while large enterprises were characterised by the highest level of costs – 97.7%.

Table 3.10.5. Enterprises in Podlaskie Voivodeship; average for Poland = 100

Podlaskie	micro	small	medium	large
Companies per 1 000 inhabitants	78.6	79.8	77.8	d.d.
Working persons per 1 000 inhabitants	73.2	80.5	73.7	39.9
Working persons per entity	93.0	100.9	98.4	64.5
Revenues per 1 entity; PLN million	100.0	92.9	78.5	76.1
Share of costs in revenues (%)	99.6	98.9	100.7	103.7
Revenues per working person; PLN million	98.5	92.2	80.0	118.0
Average monthly gross wage (PLN)	90.9	87.8	84.6	87.7

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Chart 3.10.1. Enterprises in Lubuskie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Average revenues per entity of Podlaskie SMEs required to keep accounting books were below the national average in all size classes. In case of micro-enterprises they amounted to PLN 2.6 million i.e. 20% less than on average in the country, while in small enterprises revenues totalled PLN 9.8 million i.e. 8% below the national average, and in medium-sized – PLN 30.2 million i.e. more than 20% below the average for Poland. In the groups of small and medium-sized enterprises, enterprises in the *Real estate and business services* section had particularly low revenues per entity as compared to the rest of the country – respectively 57% and 36% below the average in micro- and small enterprises. In these size categories only the *Construction* section had the above average revenues per entity – they were 20% higher than the average for Poland in case of medium-sized enterprises and 11% higher in small enterprises.

Table 3.10.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Podlaskie	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	2 431	8 061	26 913	75.6	75.6	70.3
Mining and quarrying	x	2 289	x	x	43.7	x
Industrial processing	1 718	5 341	21 157	67.6	73.9	79.8
Electricity, gas and water production and supply	x	17 453	21 110	x	77.1	40.6
Construction	1 609	4 546	22 862	101.9	66.5	89.3
Trade and repairs	3 422	11 269	43 618	69.4	71.5	52.4
Hotels and restaurants	x	2 897	x	x	96.4	x
Transport, stock management and communications	1 249	6 187	24 822	35.0	60.9	82.0
Financial intermediation	x	x	x	x	x	x
Real estate and business services	x	x	18 913	x	x	69.3
Education	x	3 880	x	x	182.7	x
Health care and social assistance	x	1 606	6 409	x	79.9	78.4
Other services	910	2 826	11 247	62.2	60.1	66.2

Source: Calculations based on the CSO data

Investment expenditures

Total investment expenditures of enterprises in the region were PLN 2.14 billion, of which micro-entities accounted for 14%, small entities for 12% and medium-sized enterprises for 21% of expenditures. The share of enterprises in expenditures in the national economy was the highest in the group of entities employing 50-249 persons – 62% and the lowest in the group of entities employing up to 9 persons – 38%. The share of public sector enterprises in expenditures by Podlaskie enterprises was the highest in the groups of small and medium-sized enterprises – circa 12% each, and the lowest in micro-enterprises – 6.5%. The public sector had the lower share in investment expenditures by micro- and small enterprises in Podlaskie Voivodeship than it had in the rest of the country.

Table 3.10.7. SME investment expenditure

Podlaskie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	3521498	571059	313726	866969
Share in expenditures of enterprises in the region (%)	100.0	16.2	8.9	24.6
Share of enterprises in investment expenditure in the region (%)	61.0	37.2	43.6	54.6
Public sector share in investment expenditures of companies (%)	24.9	0.4	8.5	24.6
Public sector share in expenditures of companies in the region; Poland = 100	117	30	97	187
Investments per non-financial enterprise; PLN thousand	49.5	9.4	204.3	1479.6
Investments per enterprise; Poland = 100	74.2	110.1	70.4	77.6
Investments per employee in non-financial enterprises; PLN thousand	9.6	4.6	9.2	13.6
Investments per employee; Poland = 100	71.7	112.7	70.0	74.8

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Investments per working person in the region were above the national average in case of micro- and small entities and lower in medium-sized entities. Investments per enterprise in the region were higher than the national average only in case of small entities. Investments expenditures per enterprise and per working person were the highest in medium-sized entities and amounted respectively to PLN 1.61 million and PLN 15.6 thousand. Investments were relatively the lowest in micro-enterprises and added up to PLN 4.3 thousand per working person and to PLN 8.3 thousand per enterprise.

Mining, *Electricity, gas and water production and supply*, *Construction*, *Trade*, *Transport*, *Education* as well as *Health care and social assistance* should be considered the investment profiles of Podlaskie SMEs. The share of these sections in investment expenditures of Podlaskie SMEs was higher than the share these sections had in SME expenditures in the country.

Table 3.10.8. Section structure of SME investments

Podlaskie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	7.31	0.40	0.71	0.23	1.98
D	37.17	32.43	1.05	8.12	378.42
E	31.97	5.94	1.29	93.55	166.47
F	91.15	7.15	1.33	1.37	22.61
G	77.20	19.96	1.18	1.04	99.14
H	92.32	2.54	1.13	0.76	48.47
I	50.58	9.28	1.18	1.32	15.81
J	29.75	0.91	0.20	10.30	1699.88
K	83.67	14.32	0.69	5.91	69.24
M	70.98	0.64	0.91	4.58	95.32
N	16.39	1.38	0.74	30.49	80.21
O	92.80	5.03	1.41	73.58	136.77

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

The public sector generated the majority of SME investments in the *Other municipal, community and individual services* section – nearly 71% as well as in the sections of *Electricity, gas and water production and supply* and *Health care and social assistance* – circa 40%. The public sector had the miniscule fraction in SME investments in *Financial intermediation* and did not occur in the *Mining* section. The investments of public sector SMEs in Podlaskie Voivodeship were above the national average in the sections of *Real estate and business services*, *Health care and social assistance* and *Other services*.

Small and medium-sized enterprises in the region, in all sections, financed the investments largely from own resources – circa 70% of expenditures by enterprises in the private sector and circa 60% in the public sector.

Domestic credits and loans were the second important source of financing all SMEs, except for small public sector enterprises – they covered 12.5% of expenditures by small public sector enterprises, 11% by medium-sized public sector enterprises and 23-26% of expenditures by SMEs in the private sector. State budget funds constituted respectively circa 13% and 5% of budget for investments by small and medium-sized enterprises in the public sector, 2.4% by medium-sized private enterprises while they had no significant role in investments by small entities in the private sector. Foreign resources were used mainly by medium-sized public enterprises – they constituted circa 20% of their budget for investments, and in the remaining groups of enterprises they ranged from 0.1% in case of small public enterprises to 1.6% in small enterprises in the public sector. Foreign credits financed circa 0.1% of investment expenditures by small private enterprises and did not occur in the group of medium-sized private enterprises and in the public sector. Other than the abovementioned sources financed circa 1%-3% of SME investment expenditures, except for small enterprises in the public sector – in case of this group of enterprises other sources financed 8.4% of investment expenditures.

Table 3.10.9. Sources of SME investment financing (%)

	public sector		private sector	
Podlaskie	small	medium	small	medium
Internal resources	47.6	49.4	75.9	72.8
State budget funds	39.9	13.8	0.4	0.2
Domestic credits and loans	9.9	25.6	18.9	17.0
Total foreign resources:	0.0	8.4	2.6	7.8
Including foreign credits	0.0	0.0	0.8	1.5
Other sources	2.6	1.1	1.6	1.3
Non-financed expenditure	0.0	1.7	0.7	0.9

Source: Calculations based on the CSO data

3.11 Pomorskie Voivodeship

Structure of entities

In 2006 in Pomorskie Voivodeship 236.5 thousand economic entities were registered i.e. 6.3% of all in the REGON system in Poland, out of which only 289 were enterprises employing more than 249 persons. The region had relatively the lowest share in the group of enterprises not having any employees – 5.7% and large enterprises – 5.3%. In 2006 in Pomorskie Voivodeship 22.5 thousand new enterprises were established i.e. 7% of all newly-started in Poland, while fewer – 19.6 thousand - were liquidated which constituted 6.8% of all enterprises liquidated in the country. The region had the greatest share in newly-started and liquidated entities in Poland in the group of micro-enterprises – circa 7%.

1.4% of enterprises registered in the region are entities with the major share of foreign capital. The highest number of such enterprises is in the group of medium-sized enterprises – 8.6% of all medium-sized enterprises registered and in the group of large enterprises – 14.2% of all large entities registered. 4.4% of entities registered in the region is in the public sector. The highest number of public sector enterprises is in the group of enterprises employing 50-249 persons – 35.6% and largest enterprises – 48.4%, while the lowest is in the group of micro-enterprises – 3.3%.

Table 3.11.1. Entities registered in the REGON system in 2006 according to the number of working persons

	total	0	0-9	10-49	50-249	>249
Pomorskie	236492	16406	224579	9770	1854	289
Region share in Poland(%)	6.3	5.7	6.3	6.2	6.1	5.3
Foreign capital share in the region (%)	1.4	0.9	1.2	5.1	8.6	14.2
Public sector share in the region (%)	4.4	26.1	3.3	22.4	35.6	48.4
Private sector share in the region (%)	95.6	73.9	96.7	77.6	64.4	51.6
Newly-started	22249	942	21963	262	20	4
Newly-started share in Poland (%)	7.0	5.0	7.0	5.9	4.5	4.3
Liquidated	19632	132	19360	241	23	8
Liquidated share in Poland (%)	6.8	2.8	6.8	6.4	5.1	4.5

Source: Calculations based on the CSO data

Hotels and restaurants, Electricity, gas and water production and supply, *Industrial processing* and *Financial intermediation* as well as *Real estate and business services* and *Construction* are the sections which had the greater share in structure of entities in SME sector in Pomorskie Voivodeship than on average in the country. The share of SME entities in these sections as compared to all SME entities in the region in 2006 was over 8% higher than the national average, and in case of the *Hotels* section 50% higher, which reflects the tourism-oriented character of Pomorskie Voivodeship. The share of entities in the *Electricity, gas and water production and supply* section was almost twice as high as the average in Poland.

The SMEs of the private sector are dominated by enterprises in the sections of *Trade and repairs* – 29.3% and *Real estate and business services* – over 16.9% as well as *Industrial processing* – 12.6%. Construction enterprises also had circa 11% share in the structure of private SMEs. The structure of SME public sector is dominated by enterprises in the sections of *Real estate and business services* – circa 59% and *Education* – 23.4%. SMEs with the major share of foreign capital are mainly entities in the sections of *Trade and repairs* – 37.6%, *Industrial processing* – 23.4% and *Real estate and business services* – 13.7%.

Newly-started enterprises in Pomorskie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – nearly 26%, *Real estate and business services* – 18.5%, *Industrial processing*– 13.8% as well as construction enterprises – 15.5%. Small and medium-sized entities liquidated in Pomorskie Voivodeship are mainly commercial enterprises – 31%, enterprises in the sections of *Hotels and restaurants* – 14.7%, *Real estate and business services* – 13.3% as well as *Construction* – 11.1% and *Industrial processing* – 12.2%. The sections of *Trade and repairs*, *Hotels and restaurants*, *Transport* and *Financial intermediation* had higher share in SMEs liquidated than newly-started. In the sections of *Real estate and business services* and *Construction* there was the largest preponderance of newly-started entities over liquidated ones.

Table 3.11.2. Section structure of SMEs registered in the REGON system in Pomorskie Voivodeship in 2006

Pomorskie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.01	0.07	0.18	0.07	0.07	1.00	2
Industrial processing	0.83	12.57	23.37	13.75	12.15	1.17	674
Electricity, gas and water production and supply	0.69	0.13	1.31	0.11	0.06	1.95	13
Construction	0.63	11.22	6.21	15.50	11.11	1.08	1266
Trade and repairs	0.29	29.34	37.63	25.93	31.12	0.85	-338
Hotels and restaurants	0.68	5.08	3.57	5.38	14.71	1.50	-1690
Transport, stock management and communications	0.54	7.20	6.21	4.43	4.92	0.97	20
Financial intermediation	0.42	4.21	4.04	3.60	3.94	1.09	27
Real estate and business services	58.77	16.87	13.67	18.51	13.31	1.09	1506
Public administration	6.19	0.31	0.00	0.07	0.03	0.70	9
Education	23.35	1.63	0.74	2.29	1.86	0.99	145
Health care and social assistance	3.91	4.37	0.86	3.15	2.46	0.94	219
Other services	3.72	7.00	1.87	7.20	4.25	0.96	766

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

The entrepreneurship indices in Pomorskie Voivodeship are among the highest in Poland. In 2006 the region ranked 3rd place in Poland, with 107 entities in SME sector registered per 1 000 inhabitants. It ranked 5th place in the country with respect to the number of entities with foreign capital participation as compared to the number of inhabitants – 15 entities per 10 thousand inhabitants are registered there. Pomorskie Voivodeship has a high number of liquidated entities. In 2006 89 enterprises per 10 thousand inhabitants were liquidated in the region, which corresponded with the 13th place in the voivodeship rankings. However, at the same time numerous enterprises were established i.e. 101 newly-started enterprises per 10 thousand inhabitants, which corresponded with the 2nd place in Poland.

Table 3.11.3. SMEs registered in the REGON system in relation to the number of inhabitants

Pomorskie	Number of companies per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	1071.9	3
Foreign capital SME	15.3	5
Newly-started SME	100.9	2
Liquidated SME	89.1	13

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Pomorskie Voivodeship there were 110.7 thousand non-financial enterprises actually conducting their activities, which corresponded with 6.5% of total operating enterprises in the country[36]. There were 160

[36] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking,

large enterprises in this voivodeship, which constituted 5.4% of operating enterprises in Poland. Among SMEs, the voivodeship had the largest share in the group of micro-enterprises i.e. employing up to 9 persons – 6.5%.

Entrepreneurial activity, measured by the number of operating enterprises per inhabitant, was similar to the national average and amounted to 50 entities per 1 000 inhabitants. The number of working persons per 1 000 inhabitants was above the national average in case of the SME sector, the index was over 10% higher in case of micro- and small enterprises while circa 5% higher in the group of medium-sized enterprises.

The average enterprise size in the region corresponded with the average for Poland in case of micro- and small enterprises and amounted respectively to 2.1 and 22 working persons per entity. A medium-sized and large enterprise in the region employed fewer persons than an average medium-sized and large enterprise in the country.

Revenues of an average enterprise in Pomorskie Voivodeship amounted to PLN 1.4 million and were equal to the national average. Revenues from sales per entity were below the average for Poland only in case of medium-sized enterprises – by 7%, and they amounted to PLN 35.6 million. In the group of micro-enterprises their revenues were 3.2% higher than the national average and totalled PLN 7.9 million while revenues of an average enterprise employing more than 250 persons were 8% above the average for Poland and amounted to PLN 369.2 million in 2006.

Work performance in enterprises in Pomorskie Voivodeship, measured by revenues per working person, rose with the size of an enterprise and was the lowest in micro-entities – PLN 0.17 million while the highest in large entities – PLN 0.56 million. Work performance in small and large enterprises was above the national average by 3% and 41% respectively, while in case of micro- and medium-sized enterprises it was respectively 8% and 9% below the average for Poland.

Wages in the region were lower than the national average only in case of micro-enterprises; in the remaining groups they were above the average. The lowest gross wages occurred in the group of micro-entities – PLN 1.45 thousand, while the highest in medium-sized and large entities – PLN 2.67 thousand and PLN 3.18 thousand respectively.

Table 3.11.4. Operating enterprises in 2006

Pomorskie	total	micro	small	medium	large
Number of operating entities	110711	106819	2814	918	160
Share in Poland (%)	6.5	6.5	6.4	6.2	5.4
Companies per 1 000 inhabitants	50.2	48.5	1.3	0.4	0.1
Structure of working persons (%)	Number:485556	46.2	12.8	19.4	21.6
Working persons per 1 000 inhabitants	220.3	101.9	28.3	42.6	47.5
Working persons per entity	4.4	2.1	22.1	102.4	654.4
Revenues per 1 entity; PLN million	1.4	0.4	7.9	35.6	369.2
Share of costs in revenues (%)	93.3	87.8	93.8	93.7	96.4
Revenues per working person; PLN million	0.31	0.17	0.36	0.35	0.56
Structure of revenues (%)	100.0	24.8	14.7	21.5	38.9
Average monthly gross wage (PLN)	2479	1455	1860	2667	3182

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons

In 2006 SME sector share in the revenues of enterprises amounted to 61.6%, and in the number of persons working to 78.4%, with the greatest importance of micro-enterprises in the structure of working persons and large enterprises in the structure of revenues, with the least importance of entities employing 10-49 persons. Indicator of the cost level of medium-sized enterprises was similar to the average for enterprises in these size categories in Poland and amounted to 93%, with micro-enterprises characterised by the lowest level of costs – 87.8%.

Table 3.11.5. Enterprises in Pomorskie Voivodeship; average for Poland = 100

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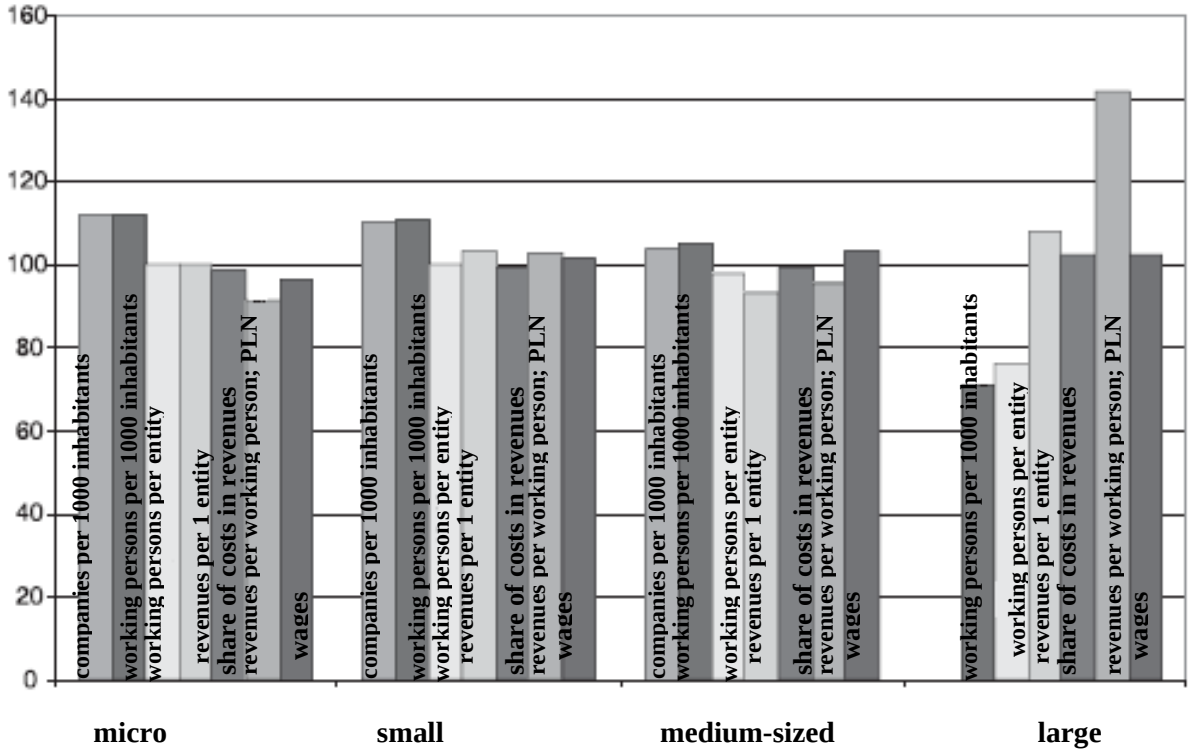
insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Pomorskie	micro	small	medium	large
Companies per 1 000 inhabitants	111.9	110.1	103.7	d.d.
Working persons per 1 000 inhabitants	111.8	110.4	105.3	70.7
Working persons per entity	100.0	100.3	97.6	76.1
Revenues per 1 entity; PLN million	100.0	103.2	93.2	107.9
Share of costs in revenues (%)	98.7	99.1	98.9	102.3
Revenues per working person; PLN million	91.6	102.9	95.5	141.7
Average monthly gross wage (PLN)	96.4	101.6	103.4	102.5

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Chart 3.11.1. Operating enterprises in Pomorskie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In 2006 in Pomorskie Voivodeship revenues per entity of micro-enterprises required to keep accounting books were more than 13% above the national average, largely due to good results of enterprises in the *Transport, stock management and communications* section – which were over twice as high as the average for the section. Revenues of Pomorskie micro-enterprises in the sections of *Industrial processing* and *Trade and repairs* were also above the national average. In the group of small enterprises required to keep accounting books, enterprises in the sections of *Transport, stock management and communications*, *Construction* and *Industrial processing* had the above average revenues per entity. Enterprises in the *Financial intermediation* section had the lowest revenues per small enterprise – nearly three times below the average for Poland.

In the group of medium-sized enterprises, enterprises in the sections of *Trade and repairs* as well as *Hotels and restaurants* stood out as compared to the rest of the country – their average revenues were respectively 10% and 5% above the national average. In the remaining sections revenues per medium-sized entity were below the average for Poland, particularly in the *Financial intermediation* section.

Table 3.11.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Pomorskie	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	3 656	10 499	34 862	113.7	98.4	91.1
Mining and quarrying	x	3 845	x	x	73.5	x

Industrial processing	3 187	7 730	24 101	125.5	107.0	90.9
Electricity, gas and water production and supply	x	x	x	x	x	x
Construction	1 448	7 216	23 615	91.7	105.6	92.2
Trade and repairs	5 396	15 000	91 543	109.5	95.2	110.0
Hotels and restaurants	x	2 967	12 146	x	98.7	105.1
Transport, stock management and communications	7 365	13 002	27 291	206.3	128.0	90.1
Financial intermediation	x	11 967	38 411	x	36.3	51.0
Real estate and business services	1 953	5 749	20 927	84.5	88.8	76.7
Education	x	x	x	x	x	x
Health care and social assistance	x	1 988	5 781	x	98.9	70.8
Other services	x	3 961	16 095	x	84.2	94.7

Source: Calculations based on the CSO data

Investment expenditures

Total investment expenditures of enterprises in the region were PLN 6.04 billion, of which micro-entities accounted for circa 19%, small entities for 10% and medium-sized enterprises for 22% of expenditures. The share of enterprises in expenditures in the national economy was the highest in the group of entities employing 50-249 persons – 72% and the lowest in the group of entities employing up to 9 persons – 50.6%. The share of public sector enterprises in expenditures by Pomorskie enterprises was the highest in the group of small enterprises – 14.8%, and the lowest in micro-enterprises – 1.2%. The public sector had the above average share in investment expenditures by small enterprises in Pomorskie Voivodeship. In the remaining groups of enterprises the public sector had less significant share in investments than on average in the country.

Investments per enterprise as well as per working person in the region were above the national average in case of micro- and small entities and lower in medium-sized enterprises. Investments expenditures per working person and per enterprise were the highest in medium-sized entities and amounted respectively to PLN 16.8 thousand and PLN 17.2 million. Investments per working person in micro-enterprises added up to PLN 5.5 thousand and per enterprise to PLN 11.6 thousand.

Table 3.11.7. SME investment expenditure

Pomorskie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	6036077	1139588	603701	1295123
Share in expenditures of enterprises in the region (%)	100.0	18.9	10.0	21.5
Share of enterprises in investment expenditure in the region (%)	69.2	50.6	58.4	71.6
Public sector share in investment expenditures of companies (%)	21.7	1.2	14.8	13.0
Public sector share in expenditures of companies in the region; Poland = 100	102	83	169	99
Investments per non-financial enterprise; PLN thousand	59.2	11.6	306.0	1721.1
Investments per enterprise; Poland = 100	88.8	135.5	105.4	90.3
Investments per employee in non-financial enterprises; PLN thousand	13.5	5.5	13.8	16.8
Investments per employee; Poland = 100	101.0	135.5	105.0	92.5

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Transport, *Financial intermediation, Real estate and business services* as well as *Education* should be considered the investment profiles of Pomorskie SMEs. The share of these sections in investment expenditures of Pomorskie SMEs was higher than the share these sections had in SME expenditures in the country.

Table 3.11.8. Section structure of SME investments

Pomorskie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	6.84	0.13	0.24	0.00	0.00
D	36.57	18.94	0.61	0.81	37.97
E	17.97	3.04	0.66	58.53	104.16
F	48.46	4.76	0.89	2.47	40.82
G	46.70	11.86	0.70	0.42	39.63
H	89.51	2.16	0.96	0.52	32.84
I	36.39	11.82	1.50	6.52	78.12
J	65.37	6.22	1.34	0.11	18.70
K	89.34	34.91	1.69	9.47	110.87
M	99.98	0.82	1.17	8.45	53.19
N	45.93	1.70	0.91	34.67	91.22
O	75.77	3.57	1.00	58.77	109.26

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

The public sector generated the majority of SME investments in the sections of *Other municipal, community and individual services* as well as *Electricity, gas and water production and supply* – more than 58%. The public sector had the miniscule fraction in SME investments in the sections of *Financial intermediation*, *Trade* as well as *Industrial processing* and did not occur in the *Mining* section. The investments of public sector SMEs in Pomorskie Voivodeship were above the national average in the sections of *Real estate and business services*, *Other services* as well as *Electricity, gas and water production and supply*.

Small and medium-sized enterprises in the region, in all sections, financed the investments largely from own resources – circa 80% of expenditures by small enterprises in the private sector, circa 67% in medium-sized enterprises in both sectors and 56% in the group of small public enterprises.

Table 3.11.9. Sources of SME investment financing (%)

	public sector		private sector	
Pomorskie	small	medium	small	medium
Internal resources	55.6	67.2	80.3	66.3
State budget funds	11.0	10.5	0.3	0.9
Domestic credits and loans	31.3	15.9	16.0	21.2
Total foreign resources:	0.5	3.1	0.9	8.7
Including foreign credits	0.0	0.0	0.0	6.2
Other sources	1.6	2.1	2.2	2.5
Non-financed expenditure	0.0	1.1	0.3	0.5

Source: Calculations based on the CSO data

Domestic credits and loans were the second important source of financing SMEs – they covered 16% of expenditures by small private and medium-sized public enterprises, 21% by medium-sized private enterprises and 31% of expenditures by small entities in the private sector. State budget funds constituted circa 11% of budget for investments by public sector SMEs while they had no significant role in SME investments in the private sector. Foreign resources were used mainly by medium-sized private and medium-sized public enterprises – they constituted respectively circa 9% and 3% of their budget for investments, while in the

remaining groups of enterprises the share of foreign resources was below 1%. Foreign credits financed circa 6.2% of investment expenditures by medium-sized private enterprises and did not occur in the remaining groups. Other than the abovementioned sources financed circa 2% of SME investment expenditures.

3.12 Śląskie Voivodeship

Structure of entities

In 2006 in Śląskie Voivodeship 449.3 thousand economic entities were registered i.e. 12% of al in the REGON system in Poland, out of which only 727 were enterprises employing more than 249 persons. The region had relatively the smallest share in the group of enterprises not having any employees – 11.2%. In 2006 in Śląskie Voivodeship 34.8 thousand new entities were established i.e. 11% of all newly-started in Poland, while 34.6 thousand were liquidated which corresponded with 12% of all enterprises liquidated in the country. The region had the largest share in newly-started and liquidated entities in Poland in the group of small and medium-sized enterprises – respectively 12.1% and 12.9% as well as 16% and 15.3%.

More than 1% of enterprises registered in the region are entities with the major share of foreign capital. The highest number of such entities is in the group of medium-sized enterprises – 6.6% of all medium-sized enterprises and in the group of large enterprises – 12.2% of all large enterprises registered in the region. 4.5% of enterprises registered in the region is in the public sector. The highest number of public sector entities is in the group of enterprises employing 50-249 persons – 34.4% and largest enterprises – 48.8%, whereas the lowest is in the group of micro-enterprises – 3.2%.

Table 3.12.1. Entities registered in the REGON system in 2006 according to the number of working persons

Śląskie	total	0	0-9	10-49	50-249	>249
	449287	31925	423035	21741	3784	727
Region share in Poland(%)	12.0	11.2	11.9	13.9	12.5	13.4
Foreign capital share in the region (%)	1.1	1.6	0.9	3.8	6.6	12.2
Public sector share in the region (%)	4.5	31.4	3.2	23.1	34.4	48.8
Private sector share in the region (%)	95.5	68.6	96.8	76.9	65.6	51.2
Newly-started	34825	1926	34226	532	58	9
Newly-started share in Poland (%)	11.0	10.2	11.0	12.1	12.9	9.8
Liquidated	34645	500	33954	597	69	25
Liquidated share in Poland (%)	12.0	10.6	12.0	16.0	15.3	14.0

Source: Calculations based on the CSO data

Hotels and restaurants, Financial intermediation as well as *Trade and repairs* are the sections which had higher share in structure of entities in Śląskie Voivodeship SME sector than on average in the country. The share of SME entities in these sections as compared to all SME entities in the region in 2006 was 8%-12% higher than the national average.

The SMEs of the private sector are dominated by enterprises in the sections of *Trade and repairs* – 37.4% and *Real estate and business services* – over 13.6% as well as *Industrial processing* and *Construction* – circa 10.2% each. The structure of SME public sector is dominated by enterprises in the sections of *Real estate and business services* – circa 52.6% and *Education* – nearly 27%. SMEs with the major share of foreign capital are mainly entities in the sections of *Trade and repairs* – 40.2%, *Industrial processing* – 22% and *Real estate and business services* – 12.7%.

Table 3.12.2. Section structure of SMEs registered in the REGON system in 2006

Śląskie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.12	0.05	0.22	0.05	0.03	0.75	6
Industrial processing	1.02	10.20	22.14	8.59	8.92	0.95	-96
Electricity, gas and water production and supply	0.62	0.04	0.22	0.03	0.03	0.62	2
Construction	0.44	10.15	6.92	9.94	10.27	0.97	-96
Trade and repairs	0.43	37.38	40.18	35.55	42.88	1.08	-2467
Hotels and restaurants	0.52	3.77	2.42	4.61	4.55	1.12	30
Transport, stock management and communications	0.52	7.40	5.54	5.68	6.10	1.00	-135
Financial intermediation	0.24	4.19	5.40	4.64	4.88	1.09	-73
Real estate and business services	52.58	13.65	12.66	16.77	12.92	0.88	1365
Public administration	4.74	0.22	0.06	0.13	0.03	0.49	37
Education	26.98	1.63	0.71	2.25	1.98	1.00	96
Health care and social assistance	4.53	4.25	1.19	3.01	2.37	0.91	229
Other services	7.26	7.07	2.34	8.75	5.04	0.96	1301

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

Newly-started enterprises in Śląskie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – nearly 35.6%, *Real estate and business services* – 16.7%, as well as construction enterprises – nearly 10% and enterprises in the sections of *Industrial processing* and *Other municipal services* – circa 8.5% each. Small and medium-sized entities liquidated in Śląskie Voivodeship are mainly trade enterprises – 43%, enterprises in the sections of *Real estate and business services* – 12.9%, *Construction* – 10.3% and *Industrial processing* – 9%. The sections of *Industrial processing*, *Construction*, *Trade and repairs*, *Transport* and *Financial intermediation* had higher share in SMEs liquidated than newly-started. The *Trade* section had a particularly significant share in SMEs liquidated as compared to newly-started, while in the sections of *Real estate and business services* and *Other services* there was the largest preponderance of newly-started enterprises over liquidated ones.

The entrepreneurship indices in Śląskie Voivodeship are on average national level. In 2006 the region ranked 8th place in Poland, with 96 entities in SME sector registered per 1 000 inhabitants. It also came 8th with respect to the number of entities with foreign capital participation as compared to the number of inhabitants – nearly 11 entities per 10 thousand inhabitants are registered there. Śląskie Voivodeship has the average number of liquidated enterprises. In 2006 circa 74 enterprises per 10 thousand inhabitants were liquidated in the region which corresponded with the 8th place in the voivodeship rankings. At the same time, however, the relatively small number of enterprises were established i.e. circa 75 newly-started enterprises per 10 thousand inhabitants, thus the region ranked 11th place in Poland.

Table 3.12.3. SMEs registered in the REGON system in relation to the number of inhabitants

Śląskie	Number of companies per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	960.7	8
Foreign capital SME	10.6	8
Newly-started SME	74.6	11
Liquidated SME	74.1	8

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Śląskie Voivodeship there were 209.1 thousand non-financial enterprises actually conducting their activities which corresponded with 12.2% of total operating enterprises in the country[37]. 418 large enterprises were operating in this region, which constituted 14% of operating large enterprises in Poland. Among SMEs, the voivodeship had the largest share in small entities i.e. employing 10-49 persons – 13.8% and medium-sized entities – 12.8%.

There were nearly 45 operating enterprises in the region per 1 000 inhabitants. The number of operating enterprises as compared to the number of inhabitants was particularly high in case of small enterprises. The number of working persons per 1 000 inhabitants was above the national average in all size categories.

The average enterprise size in the region was similar to the average for Poland in case of medium-sized entities and amounted to 104.6 working persons per entity. Small enterprises in the region on average employed 21.7 persons i.e. 2% below the national average, while micro-enterprises had 2.2 employees – 4% above the average for Poland. A large enterprise in the region on average employed 892 persons i.e. 3.7% more than an average large enterprise in the country.

Revenues of an average enterprise in Śląskie Voivodeship amounted to PLN 1.5 million and were lower than the national average. A particularly significant difference was observed in case of micro-enterprises, in which revenues from sales per entity were 25% below the national average and amounted to PLN 0.3 million. In case of small enterprises their revenues were lower by 10% and totalled PLN 6.9 million while revenues of an average enterprise employing 50-249 persons were 3% below the average for Poland and in 2006 amounted to PLN 37.1 million.

Work performance in enterprises in Śląskie Voivodeship, measured by revenues per working person, rose with the size of an enterprise and was the lowest in micro-entities – PLN 0.15 million while the highest in large entities – PLN 0.36 million. However, in all size classes work performance was below the national average. Wages in SME sector in the region were lower than the average for Poland by 2%-4%, depending on the size category. The average monthly gross wage was higher than the national average only in the group of large enterprises – by 12%. The lowest monthly gross wages – PLN 1.46 thousand – were in the group of the smallest enterprises, employing up to 9 persons, whereas the highest occurred in the groups of medium-sized and large enterprises – PLN 2.47 thousand and PLN 3.48 thousand respectively.

Table 3.12.4. Operating enterprises in 2006

Śląskie	total	micro	small	medium	large
Number of operating entities	209137	200708	6124	1887	418
Share in Poland (%)	12.2	12.1	13.8	12.8	14.0
Companies per 1 000 inhabitants	44.8	43.0	1.3	0.4	0.1
Structure of working persons (%)	Number: 1140685	38.4	11.6	17.3	32.7
Working persons per 1 000 inhabitants	244.3	93.8	28.4	42.3	79.8
Working persons per entity	5.5	2.2	21.7	104.6	891.7
Revenues per 1 entity; PLN million	1.5	0.3	6.9	37.1	320.7
Share of costs in revenues (%)	93.0	89.5	93.4	95.1	93.7
Revenues per working person; PLN million	0.27	0.15	0.32	0.35	0.36
Structure of revenues (%)	100.0	21.1	13.6	22.4	42.9
Average monthly gross wage (PLN)	2704	1458	1803	2472	3484

[37] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking, insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons

In 2006 the SME sector share in the revenues of enterprises amounted to 57.1%, while in the number of persons working to 67.3%, with the greatest importance of micro-enterprises in the structure of working persons and large enterprises in the structure of revenues, and with the least importance of entities employing 10-49 persons. Indicator of the cost level of micro- and medium-sized enterprises was similar to the average for enterprises in these size categories in Poland and amounted to 89.5% and 95.1% respectively.

Table 3.12.5. Enterprises in Śląskie Voivodeship; average for Poland = 100

Śląskie	micro	small	medium	large
Companies per 1 000 inhabitants	99.2	113.1	103.7	d.d.
Working persons per 1 000 inhabitants	102.9	110.9	104.6	118.7
Working persons per entity	103.8	98.1	99.8	103.7
Revenues per 1 entity; PLN million	75.0	90.1	97.1	93.7
Share of costs in revenues (%)	100.6	98.6	100.4	99.5
Revenues per working person; PLN million	82.2	91.9	97.5	90.3
Average monthly gross wage (PLN)	96.6	98.5	95.9	112.2

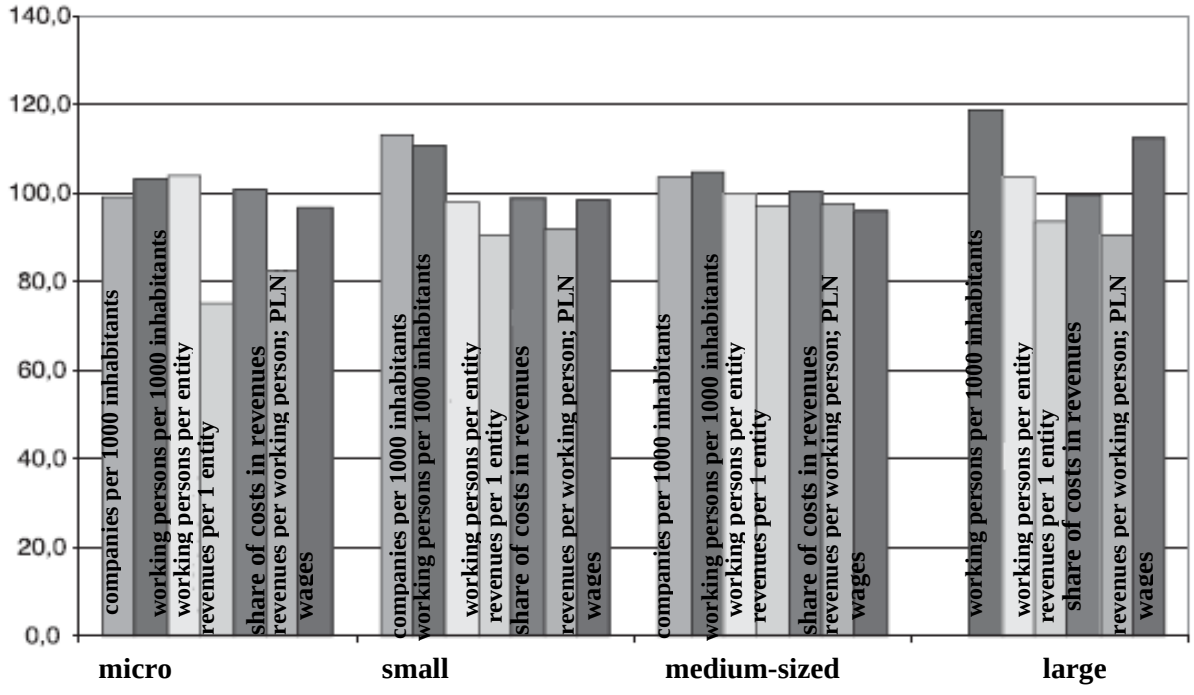
Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Micro-enterprises required to keep accounting books were the only enterprises in the SME sector with the above average revenues per entity – by 7.5%. Enterprises in the *Real estate and business services* section had the highest revenues per micro-enterprise – 44% above the average for Poland.

In 2006 in small enterprises required to keep accounting books revenues per entity were 4% below the national average. Only small enterprises in the *Education* section had the above average revenues. In the remaining sections revenues per entity were lower than the average for Poland, particularly in the *Real estate and business services* section – over 30% lower.

In the group of medium-sized enterprises, enterprises in the sections of *Industrial processing* as well as *Trade and repairs* stood out as compared to the rest of the country – their average revenues were respectively 16% and 12% above the national average. In the remaining sections revenues per medium-sized entity were below the average for Poland, particularly in the sections of *Electricity, gas and water production and supply* as well as *Real estate and business services*.

Chart 3.12.1. Operating enterprises in Śląskie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Table 3.12.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Śląskie	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	3 458	10 235	37 493	107.5	95.9	97.9
Mining and quarrying	x	x	20 011	x	x	82.6
Industrial processing	2 047	6 906	30 762	80.6	95.6	116.0
Electricity, gas and water production and supply	x	x	34 457	x	x	66.3
Construction	1 309	5 963	20 707	82.9	87.3	80.8
Trade and repairs	4 852	14 670	93 239	98.4	93.1	112.0
Hotels and restaurants	x	2 243	10 159	x	74.6	87.9
Transport, stock management and communications	x	8 290	x	x	81.6	x
Financial intermediation	x	28 877	x	x	87.7	x
Real estate and business services	3 322	4 346	18 070	143.8	67.1	66.2
Education	x	2 762	x	x	130.1	x
Health care and social assistance	479	1 621	7 638	52.4	80.6	93.5
Other services	x	3 473	14 645	x	73.8	86.2

Source: Calculations based on the CSO data

Investment expenditures

Total investment expenditures of enterprises in the region were PLN 14.33 billion, of which micro-entities accounted for circa 7%, small entities for circa 8% and medium-sized enterprises for 17.5% of expenditures. The share of enterprises in expenditures in the national economy was the highest in the group of entities employing 50-249 persons – 75.5% and the lowest in the group of entities employing up to 9 persons – 30.7%. The share of public sector enterprises in expenditures by Śląskie enterprises was the highest in the group of medium-sized enterprises – 16.5%, and the lowest in micro-enterprises – 0.4%. The public sector had the above average share in investment expenditures by medium-sized and small enterprises in Śląskie Voivodeship. In the group of micro-enterprises the public sector had less significant share in investments than on average in the country.

Investments per enterprise as well as per working person in the region were below the national average. Investments expenditures per working person and per enterprise were the highest in medium-sized entities and amounted respectively to PLN 13.4 thousand and PLN 1.4 million. Investments per working person in micro-enterprises added up to PLN 2.4 thousand and per enterprise to PLN 5.2 thousand.

Table 3.12.7. SME investment expenditure

Śląskie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	14325784	986506	1114760	2512011
Share in expenditures of enterprises in the region (%)	100.0	6.9	7.8	17.5
Share of enterprises in investment expenditure in the region (%)	73.6	30.7	63.3	75.5
Public sector share in investment expenditures of companies (%)	30.5	0.4	9.3	16.5
Public sector share in expenditures of companies in the region; Poland = 100	143	30	106	125
Investments per non-financial enterprise; PLN thousand	66.6	5.2	212.1	1399.3
Investments per enterprise; Poland = 100	99.9	60.8	73.0	73.4
Investments per employee in non-financial enterprises; PLN thousand	12.2	2.4	9.8	13.4
Investments per employee; Poland = 100	91.4	58.5	74.4	73.6

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Industrial processing, *Construction, Trade*, *Health care and social assistance* as well as *Other services* should be considered the investment profiles of Śląskie SMEs. The share of these sections in investment expenditures of Śląskie SMEs was higher than the share these sections had in SME expenditures in the country.

The public sector generated the majority of SME investments in the sections of *Electricity, gas and water production and supply* – nearly 70% as well as *Other municipal, community and individual services* – nearly 52%. The public sector had the miniscule fraction in SME investments in the sections of *Financial intermediation* and *Trade*. The investments of public sector SMEs in Śląskie Voivodeship were above the national average in all sections, except for *Construction*, *Trade* and *Other services*.

Table 3.12.8. Section structure of SME investments

Śląskie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	1.26	0.46	0.82	31.39	272.09
D	27.81	38.24	1.23	2.32	108.13
E	13.70	4.08	0.89	69.19	123.12
F	82.11	6.78	1.26	2.54	41.90
G	67.32	20.79	1.23	0.61	57.99
H	80.18	1.83	0.81	2.89	184.05
I	24.18	5.61	0.71	12.53	150.15
J	45.04	2.47	0.53	0.72	118.24
K	55.58	11.34	0.55	23.44	274.49
M	99.36	0.64	0.91	22.86	143.92
N	34.75	3.08	1.64	39.68	104.40
O	72.75	4.60	1.30	51.46	95.66

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

Small and medium-sized enterprises in the region, in all sections, financed the investments largely from own resources – 79% of expenditures by small enterprises in the private sector, circa 67% by medium-sized private enterprises, 68.4% by small public entities and only 42% of expenditures by medium-sized enterprises in the public sector.

Domestic credits and loans were the second important source of financing all SMEs, except for medium-sized enterprises in the public sector – they covered 15.3% of expenditures by small private enterprises, circa 21% by small public and medium-sized private enterprises and only 6% of expenditures in the group of medium-sized public enterprises. State budget funds constituted 33.5% of budget for investments by medium-sized enterprises in the public sector and 3.2% in the group of small private enterprises while they had no significant role in SME investments in the private sector. Foreign resources were used mainly by medium-sized private and medium-sized public enterprises – they constituted respectively circa 7.4% and 2.1% of their budget for investments, while in the remaining groups of enterprises the share of foreign resources was slightly above 1%. Foreign credits financed 5.3% of investment expenditures by medium-sized private enterprises, 0.7% in the group of small private enterprises and did not occur in the public sector. Other than the abovementioned sources financed circa 2%-3% of SME investment expenditures, except for medium-sized enterprises in the public sector – in case of this group of enterprises other sources financed 11.6% of investment expenditures.

Table 3.12.9. Sources of SME investment financing (%)

	public sector		private sector	
Śląskie	small	medium	small	medium
Internal resources	68.4	41.7	79.0	66.5
State budget funds	3.2	33.5	0.4	0.5
Domestic credits and loans	21.5	5.8	15.3	20.7
Total foreign resources:	1.4	2.1	1.3	7.4
Including foreign credits	0.0	0.0	0.7	5.3
Other sources	2.3	11.6	3.0	2.5
Non-financed expenditure	3.3	5.4	0.9	2.4

Source: Calculations based on the CSO data

3.13 Świętokrzyskie Voivodeship

Structure of entities

In 2006 in Świętokrzyskie Voivodeship 110 thousand economic entities were registered i.e. 2.9% of all in the REGON system in Poland, out of which only 148 were enterprises employing more than 249 persons. The region had relatively the smallest share in the group of large enterprises and enterprises not having any employees – 2.7% and large enterprises – 5.3%. In 2006 in Świętokrzyskie Voivodeship 8.2 thousand new entities were established i.e. 2.6% of all newly-started in Poland, while fewer – 5.9 thousand - were liquidated which corresponded with 2.1% of all enterprises liquidated in the country. The region had the greatest share in newly-started enterprises in Poland in the group of medium-sized and large entities – respectively 3.8% and 4.3%, while in liquidated in the group of small – 2.3% and large entities – 2.8%.

0.5% of enterprises registered in the region are entities with the major share of foreign capital. The highest number of such enterprises is in the group of medium-sized enterprises – 3.8% of all medium-sized enterprises and in the group of large enterprises – 15.5% of all large enterprises registered in the region. Nearly 4% of entities registered in the region is in the public sector. The highest number of public sector enterprises is in the group of enterprises employing 50-249 persons – 45.4% and largest enterprises – 50%, while the lowest is in the group of micro-enterprises – 2.1%.

Table 3.13.1. Entities registered in the REGON system in 2006 according to the number of working persons

Source: Calculations based on the CSO data

Świętokrzyskie	total	0	0-9	10-49	50-249	>249
	109941	7805	104411	4517	865	148
Region share in Poland(%)	2.9	2.7	2.9	2.9	2.9	2.7
Foreign capital share in the region (%)	0.5	1.0	0.4	2.1	3.8	15.5
Public sector share in the region (%)	3.8	13.5	2.1	33.9	45.4	50.0
Private sector share in the region (%)	96.2	86.5	97.9	66.1	54.6	50.0
Newly-started	8205	388	8067	117	17	4
Newly-started share in Poland (%)	2.6	2.1	2.6	2.7	3.8	4.3
Liquidated	5910	52	5812	85	8	5
Liquidated share in Poland (%)	2.1	1.1	2.1	2.3	1.8	2.8

Mining, Trade and repairs and *Construction* are the sections which had higher share in structure of entities in SME sector in Świętokrzyskie Voivodeship than on average in the country. The share of SME entities in these sections as compared to all SME entities in the region in 2006 was 7%-12% higher than the national average. The region also has the above average share of SMEs in the *Public Administration* section.

The SMEs of the private sector are dominated by enterprises in the sections of *Trade and repairs* – 40.5% as well as *Real estate and business services* and *Construction* – circa 11% each. The structure of SME public sector is dominated by enterprises in the sections of *Education* – more than 41% and *Real estate and business services* – circa 29%. SMEs with the major share of foreign capital are mainly entities in the sections of *Trade and repairs* – 41%, *Industrial processing* – 23% and *Construction* – 12%.

Table 3.13.2. Section structure of SMEs registered in the REGON system in 2006

Świętokrzyskie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.05	0.08	0.00	0.09	0.07	1.22	3
Industrial processing	1.41	9.85	22.28	8.95	8.86	0.91	211
Electricity, gas and water production and supply	1.75	0.06	0.74	0.09	0.07	0.82	3
Construction	0.61	11.15	10.50	12.79	10.82	1.07	410
Trade and repairs	0.61	40.49	41.62	37.87	46.96	1.17	333
Hotels and restaurants	0.63	2.91	1.47	3.56	3.61	0.86	79
Transport, stock management and communications	0.63	7.16	3.87	4.72	6.74	0.97	-11
Financial intermediation	0.39	3.60	8.84	3.85	3.56	0.93	106
Real estate and business services	26.05	11.47	7.55	12.86	11.09	0.74	400
Public administration	10.85	0.81	0.00	0.11	0.03	1.84	7
Education	41.15	1.50	1.84	2.68	2.00	0.92	102
Health care and social assistance	9.36	4.31	0.37	3.46	2.12	0.93	159
Other services	6.52	6.60	0.92	8.96	3.96	0.90	501

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

Newly-started enterprises in Świętokrzyskie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – nearly 42%, *Real estate and business services* and *Construction* – circa 11.5% each as well as enterprises in the I*ndustrial processing* section – nearly 10%. Small and medium-sized entities liquidated in Świętokrzyskie Voivodeship are mainly trade enterprises – 47%, enterprises in the sections of *Real estate and business services* and *Construction* – circa 11% each as well as in the *Industrial processing* section – 9%. The sections of *Trade and repairs*, *Hotels and restaurants* and *Transport* had higher share in SMEs liquidated than newly-started. However, only in the *Transport* section liquidated entities dominated over newly-started ones. In the sections of *Construction* and *Real estate and business services* there was the largest preponderance of newly-started entities over liquidated ones.

The entrepreneurship indices in Świętokrzyskie Voivodeship are quite low as compared to the rest of the country. In 2006 the region ranked 12th place in Poland, with nearly 86 entities in SME sector registered per 1 000 inhabitants. It ranked 14th place in the country with respect to the number of entities with foreign capital participation as compared to the number of inhabitants – 4.2 entities per 10 thousand inhabitants are registered there. Świętokrzyskie Voivodeship has a low number of liquidated enterprises. In 2006 circa 46 enterprises per 10 thousand inhabitants were liquidated in the region which corresponded with the 3rd place in the voivodeship rankings. However, at the same time the relatively small number of enterprises were established i.e. 64 newly-started enterprises per 10 thousand inhabitants, thus the region ranked 13th place in Poland.

Table 3.13.3. SMEs registered in the REGON system in relation to the number of inhabitants

Świętokrzyskie	Number of companies per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	857.9	12
Foreign capital SME	4.2	14
Newly-started SME	64.1	13
Liquidated SME	46.1	3

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Świętokrzyskie Voivodeship there were nearly 46.1 thousand operating non-financial enterprises which corresponded with 2.7% of total operating enterprises in the country[38]. There were only 79 operating enterprises employing 249 and more persons. The voivodeship had the same share in micro-entities i.e. employing up to 9 persons and small entities – 2.7% each.

Entrepreneurial activity, measured by the number of operating enterprises per inhabitant, was below the national average in Świętokrzyskie Voivodeship and amounted to nearly 36 entities per 1 000 inhabitants. This index was 20% lower than the average in case of micro- and small enterprises in the region, and 22% lower in the group of enterprises with 50-249 working persons.

The number of working persons per 1 000 inhabitants did not exceed 80% of the average for Poland in all size categories.

The average enterprise size in the region was 6% below the average for Poland in case of micro-enterprises and amounted to 2 working persons per entity. In case of small and large enterprises the average enterprise size was respectively 2% and 36% lower than the national average. Medium-sized enterprises in the region on average employed 107.5 persons i.e. 2.5% more than the national average.

Revenues of an average enterprise in the region amounted to PLN 1.1 million and were lower than the national average. In case of micro-enterprises their revenues totalled PLN 0.3 million and were 25% lower than revenues of an average enterprise in the country in this size category. In 2006 revenues of an average small and large enterprise in the region were respectively 30% and 40% below the average for Poland and amounted to PLN 5.4 million and PLN 38.7 million respectively. The revenues were higher than the national average only in case of medium-sized enterprises – by 1.3%.

Work performance in the voivodeship was the lowest in micro-entities – PLN 0.15 million and the highest in large entities – PLN 0.38 million, although work performance in medium-sized entities was the closest to the national average for this size class, while it was lower in case of small and micro- enterprises (by 30% and 20% respectively).

[38] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking, insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Table 3.13.4. Operating enterprises in 2006

Świętokrzyskie	total	micro	small	medium	large
Number of operating entities	46117	44454	1211	373	79
Share in Poland (%)	2.7	2.7	2.7	2.5	2.7
Companies per 1 000 inhabitants	36.0	34.7	0.9	0.3	0.1
Structure of working persons (%)	Number:198126	44.5	13.3	20.2	22.0
Working persons per 1 000 inhabitants	154.8	68.9	20.5	31.3	34.0
Working persons per entity	4.3	2.0	21.7	107.5	550.8
Revenues per 1 entity; PLN million	1.1	0.3	5.4	38.7	207.4
Share of costs in revenues (%)	91.9	88.2	94.8	95.2	90.8
Revenues per working person; PLN million	0.25	0.15	0.25	0.36	0.38
Structure of revenues (%)	100.0	25.6	13.0	28.7	32.6
Average monthly gross wage (PLN)	2154	1227	1497	2323	2872

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons

The lower level of revenues per working person was reflected in the average gross wage in Świętokrzyskie Voivodeship, which was below the national average in all size categories (circa 20% lower in the groups of micro- and small enterprises, while 10% lower in case of medium-sized and large enterprises). Wages rose with the number of employees. The lowest average monthly gross wage – PLN 1.23 thousand – was registered in the smallest enterprises employing up to 9 persons while the highest occurred in large enterprises – PLN 2.87 thousand.

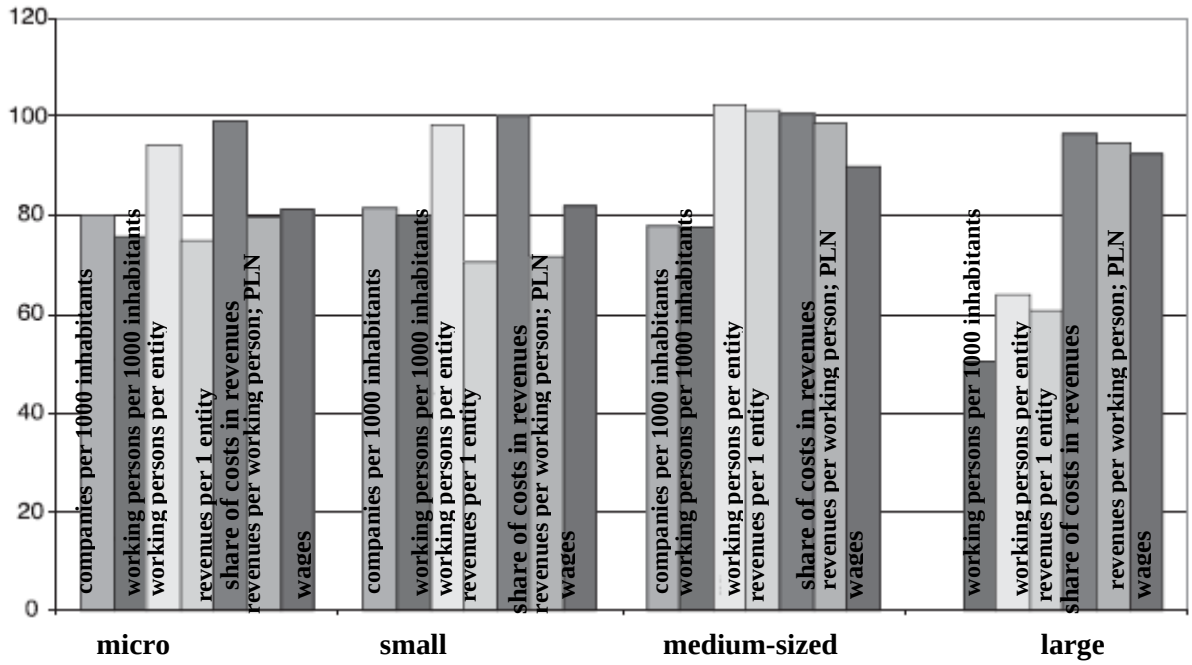
In 2006 SME sector share in the revenues of enterprises amounted to 67.4%, while in the number of persons working to 78%, with the greatest importance of micro-enterprises in the structure of working persons and large enterprises in the structure of revenues, with the least importance of entities employing 10-49 persons. Indicator of the cost level of micro-, small and medium-sized enterprises was similar to the average for enterprises in these size categories in Poland and amounted to 88.2%, 94.8% and 95.2% respectively.

Table 3.13.5. Enterprises in Świętokrzyskie Voivodeship; average for Poland = 100

Świętokrzyskie	micro	small	medium	large
Companies per 1 000 inhabitants	80.0	81.6	77.8	d.d.
Working persons per 1 000 inhabitants	75.6	80.2	77.4	50.6
Working persons per entity	94.4	98.3	102.5	64.1
Revenues per 1 entity; PLN million	75.0	70.4	101.3	60.6
Share of costs in revenues (%)	99.1	100.1	100.5	96.4
Revenues per working person; PLN million	79.7	71.6	98.9	94.5
Average monthly gross wage (PLN)	81.3	81.8	90.1	92.5

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Chart 3.13.1. Operating enterprises in Świętokrzyskie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In 2006 in Świętokrzyskie Voivodeship revenues per entity of micro-enterprises required to keep accounting books were 16% below the national average.

In the group of small enterprises required to keep accounting books enterprises in the *Industrial processing* section had the above average revenues per entity. The lowest revenues per small enterprise occurred in the *Electricity, gas and water production and supply* section – they were nearly 80% lower than the average for Poland.

In the group of medium-sized enterprises, enterprises in the sections of *Trade and repairs* as well as *Industrial processing* stood out as compared to the rest of the country – their average revenues were respectively 21% and 4.5% above the national average. In the remaining sections revenues per medium-sized entity were below the average for Poland, particularly in the *Electricity, gas and water production and supply* section.

Table 3.13.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Świętokrzyskie	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	2 704	7 838	38 601	84.1	73.5	100.8
Mining and quarrying	x	x	22 931	x	x	94.7
Industrial processing	1 018	7 426	27 702	40.1	102.8	104.5
Electricity, gas and water production and supply	x	5 244	18 204	x	23.2	35.1
Construction	x	5 269	23 381	x	77.1	91.3
Trade and repairs	3 760	9 484	101 031	76.3	60.2	121.4
Hotels and restaurants	x	x	x	x	x	x
Transport, stock management and communications	x	9 925	20 623	x	97.7	68.1
Financial intermediation	x	x	x	x	x	x
Real estate and business services	x	x	21 324	x	x	78.2
Education	x	x	x	x	x	x
Health care and social assistance	x	x	3 714	x	x	45.5
Other services	x	x	10 8640	x	x	63.9

Source: Calculations based on the CSO data

Investment expenditure

Total investment expenditures of enterprises in the region were PLN 1.9 billion, of which micro-and small entities accounted for circa 12% each and medium-sized enterprises for 31% of expenditures. The share of enterprises in expenditures in the national economy was the highest in the group of entities employing 50-249 persons – 60% and the lowest in the group of entities employing up to 9 persons – 34%. The share of public sector enterprises in expenditures by Świętokrzyskie enterprises was the highest in the group of medium-sized enterprises – 13%, and the lowest in micro-enterprises – 4%. The public sector had lower share in investment expenditures by small and medium-sized enterprises in Świętokrzyskie Voivodeship than it had in the rest of the country, while its share was above the average in case of Świętokrzyskie micro-enterprises.

Investments per enterprise as well as per working person in the region were below the national average. Investment expenditures per working person and per enterprise were the highest in medium-sized entities and amounted respectively to PLN 13.9 thousand and PLN 1.5 million. Investments per working person in micro-enterprises added up to PLN 2.6 thousand and per enterprise to PLN 5.2 thousand.

Mining, Industrial processing, *Construction, Trade*, *Education* as well as *Health care and social assistance* should be considered the investment profiles of Świętokrzyskie SMEs. The share of these sections in investment expenditures of Świętokrzyskie SMEs was higher than the share these sections had in SME expenditures in the country.

Table 3.13.7. SME investment expenditure

Świętokrzyskie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	1873291.0	220189.0	231883.0	574241.0
Share in expenditures of enterprises in the region (%)	100.0	11.8	12.4	30.7
Share of enterprises in investment expenditure in the region (%)	62.5	33.7	48.9	60.2
Public sector share in investment expenditures of companies (%)	16	4	7	13
Public sector share in expenditures of companies in the region; Poland = 100	74.7	289.2	77.3	97.9
Investments per non-financial enterprise; PLN thousand	40.8	5.2	262.1	1497.0
Investments per enterprise; Poland = 100	61.2	61.0	90.2	78.5
Investments per employee in non-financial enterprises; PLN thousand	9.5	2.6	12.1	13.9
Investments per employee; Poland = 100	71.1	64.6	91.7	76.6

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

The public sector generated the majority of SME investments in the sections of *Electricity, gas and water production and supply* – nearly 96% as well as *Health care and social assistance* – nearly 52%. The public sector had the particularly miniscule fraction in SME investments in the *Trade* section. The investments of public sector SMEs in Świętokrzyskie Voivodeship were above the national average in the sections of *Industrial processing*, *Electricity, gas and water production and supply*, *Real estate, renting and business activities* as well as *Health care and social assistance*.

Table 3.13.8. Section structure of SME investments

Świętokrzyskie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	49.82	0.94	1.67	11.07	96.00
D	47.27	42.03	1.36	2.45	114.17
E	25.08	4.52	0.98	95.95	170.75
F	95.02	6.61	1.23	5.23	86.29
G	63.60	15.38	0.91	0.60	57.62
H	95.42	3.63	1.61	0.03	2.23
I	65.74	7.75	0.98	0.46	5.55
J	24.84	0.57	0.12	0.33	53.73
K	91.18	11.02	0.53	12.02	140.78
M	100.00	2.64	3.75	2.94	18.52
N	28.77	1.91	1.02	51.70	136.01
O	90.50	3.00	0.84	44.45	82.63

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

Small and medium-sized enterprises in the region, in all sections, financed the investments largely from own resources – 80% of expenditures by small enterprises in the private sector, 75% by medium-sized private enterprises, and respectively 50% and 55% of expenditures by small and medium-sized enterprises in the public sector.

Domestic credits and loans were the second important source of financing all SMEs, except for medium-sized enterprises in the public sector – they covered circa 15% of expenditures by small private and medium-sized public enterprises, circa 20% by medium-sized private enterprises and circa 32% of expenditures by small enterprises in the public sector.

State budget funds constituted 22% of budget for investments by medium-sized enterprises in the public sector and 13.4% in the group of small private enterprises while they had no significant role in SME investments in the private sector. Foreign resources were used mainly by medium-sized public enterprises – they constituted 4.2% of their budget for investments, while in the remaining groups of enterprises the share of foreign resources was circa 1%. Foreign credits financed 0.7% of investment expenditures by medium-sized private enterprises and did not occur in the group of small private enterprises and in the public sector. Other than the abovementioned sources financed circa 1%-2% of SME investment expenditures, except for small enterprises in the public sector – in case of this group of enterprises other sources financed 4.3% of investment expenditures.

Table 3.13.9. Sources of SME investment financing (%)

	public sector		private sector	
Świętokrzyskie	small	medium	small	medium
Internal resources	49.5	54.9	80.0	74.7
State budget funds	13.4	22.0	0.6	0.5
Domestic credits and loans	31.7	15.9	14.5	20.4
Total foreign resources:	1.2	4.2	1.1	1.2
Including foreign credits	0.0	0.0	0.0	0.7
Other sources	4.3	1.1	1.3	2.1
Non-financed expenditure	0.0	1.9	2.6	1.1

Source: Calculations based on the CSO data

3.14 Warmińsko-Mazurskie Voivodeship

Structure of entities

In 2006 in Warmińsko-Mazurskie Voivodeship 113.3 thousand economic entities were registered, i.e. 3% of all in the REGON system in Poland, out of which only 167 were enterprises employing more than 249 persons. The region had relatively the smallest share in the group of micro-enterprises – 3% and the greatest in the group of enterprises not having any employees – 4.8%. In 2006 in Warmińsko-Mazurskie Voivodeship 11.6 thousand new entities were established i.e. 3.7% of all newly-started in Poland, while fewer – 9.8 thousand – were liquidated which corresponded with 3.4% of all enterprises liquidated in the country. The region had the largest share in newly-started enterprises in Poland in the group of large entities – 9.8%, while in liquidated in the group of medium-sized enterprises – 4.2%.

Slightly more than 0.5% of enterprises registered in the region are entities with the major share of foreign capital. The highest number of such entities is in the group of medium-sized enterprises – 4.8% of all medium-sized enterprises and in the group of large enterprises – 12% of all large enterprises registered in the region. More than 6% of entities registered in the region is in the public sector. The highest number of public sector entities is in the group of enterprises employing 50-249 persons – 42.8% and largest enterprises – 52.7%, whereas the lowest is in the group of microenterprises – 0.5%.

Mining, *Electricity, gas and water production and supply*, *Health care and social assistance* and *Other services* are the sections which had higher share in the structure of entities in SME sector in Warmińsko-Mazurskie Voivodeship than on average in the country. The share of SME entities in these sections as compared to all SME entities in the region in 2006 was 17% higher than the national average. Warmińsko-Mazurskie Voivodeship also has the above average share of SMEs in the *Public Administration* section.

The SMEs of the private sector are dominated by enterprises in the sections of *Trade and repairs* – 32.7% and *Real estate and business services* – 15.3% as well as *Construction* and *Industrial processing* – circa 10% each. The structure of SME public sector is dominated by enterprises in the sections of *Real estate and business services* – circa 49.5% and *Education* – 27%. SMEs with the major share of foreign capital are mainly entities in the sections of *Trade and repairs* – 33%, *Industrial processing* – 26.5% as well as *Real estate and business services*, *Financial intermediation*, *Hotels and restaurants* and *Construction* – circa 7%.

Table 3.14.1. Entities registered in the REGON system in 2006 according to the number of working persons

Warmińsko-Mazurskie	total	0	0-9	10-49	50-249	>249
	113225	13651	106585	5379	1094	167
Region share in Poland(%)	3.0	4.8	3.0	3.4	3.6	3.1
Foreign capital share in the region (%)	0.6	1.0	0.5	2.1	4.8	12.0
Public sector share in the region (%)	6.1	25.5	4.4	32.0	42.8	52.7
Private sector share in the region (%)	93.9	74.5	95.6	68.0	57.2	47.3
Newly-started	11586	974	11352	206	19	9
Newly-started share in Poland (%)	3.7	5.2	3.6	4.7	4.2	9.8
Liquidated	9774	123	9595	154	19	6
Liquidated share in Poland (%)	3.4	2.6	3.4	4.1	4.2	3.4

Source: Calculations based on the CSO data

Table 3.14.2. Section structure of SMEs registered in the REGON system in 2006

Warmińsko-Mazurskie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining		0.08	0.86	0.09	0.07	1.23	3
Industrial processing	0.68	9.60	26.54	8.97	9.20	0.89	140
Electricity, gas and water production and supply	1.31	0.12	0.43	0.05	0.12	1.79	-6
Construction	0.34	10.11	7.17	14.62	11.38	0.97	580
Trade and repairs	0.42	32.71	33.14	31.51	40.90	0.95	-347
Hotels and restaurants	0.80	3.50	7.03	4.08	5.22	1.04	-38
Transport, stock management and communications	0.70	7.24	5.88	5.32	5.78	0.98	51
Financial intermediation	0.45	4.11	7.46	3.25	4.52	1.07	-66
Real estate and business services	49.51	15.29	7.75	16.77	12.18	0.99	752
Public administration	8.57	0.56	0.00	0.03	0.03	1.25	1
Education	26.98	1.73	1.87	2.58	2.46	1.06	59
Health care and social assistance	5.36	6.36	0.57	3.77	3.31	1.37	114
Other services	4.88	8.58	1.29	8.95	4.81	1.17	566

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

Newly-started enterprises in Warmińsko-Mazurskie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – nearly 32%, *Real estate and business services* – 17%, as well as construction enterprises – 14.6% and enterprises in the sections of *Industrial processing* and *Other services* – circa 9% each. Small and medium-sized entities liquidated in Warmińsko-Mazurskie Voivodeship are mainly commercial enterprises – 41%, enterprises in the sections of *Real estate and business services* – 12%, *Construction* – circa 11.4% and *Industrial processing* – 9.2%. The sections of *Industrial processing*, *Electricity, gas and water production and supply*, *Trade and repairs*, *Hotels and restaurants*, *Transport* and *Financial intermediation* had higher share in SMEs liquidated than newly-started. The *Trade* section had a particularly significant share in SMEs liquidated as compared to newly-started, while in the sections of *Real estate and business services*, *Construction* and *Other services* there was the largest preponderance of newly-started enterprises over liquidated ones.

The entrepreneurship indices in Warmińsko-Mazurskie Voivodeship are quite low as compared to the rest of the country. In 2006 the region ranked 13th place in Poland, with 79 entities in SME sector registered per 1 000 inhabitants. It ranked 12th place in the country with respect to the number of entities with foreign capital participation as compared to the number of inhabitants – 4.9 entities per 10 thousand inhabitants are registered there. Warmińsko-Mazurskie Voivodeship has the average number of liquidated enterprises. In 2006 circa 69 enterprises per 10 thousand inhabitants were liquidated in the region which corresponded with the 7th place in the voivodeship rankings. However, at the same time 81 enterprises per 10 thousand inhabitants were established, thus the region ranked 9th place in Poland.

Table 3.14.3. SMEs registered in the REGON system in relation to the number of inhabitants

Warmińsko-Mazurskie	Number of companies per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	792.3	13
Foreign capital SME	4.9	12
Newly-started SME	81.1	9
Liquidated SME	68.5	7

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Warmińsko-Mazurskie Voivodeship there were 58.3 thousand non-financial enterprises actually conducting their activities which corresponded with 3.4% of total operating enterprises in the country[39]. 75 large enterprises were operating in the region which constituted 2.5% of operating enterprises employing more than 249 persons. There were 535 medium-sized enterprises employing 50-249 persons which constituted 0.9% of total operating enterprises in the voivodeship and their share in Poland amounted to 3.6%. Small enterprises had the same share – 3.6% - in the total number of enterprises in the country. In case of micro-enterprises their share amounted to 3.4%.

Entrepreneurial activity in the region, measured by the number of operating enterprises per inhabitant, amounted to nearly 41 entities per 1 000 inhabitants and in the groups of micro- and small enterprises was below the average for Poland by 10% and 5% respectively. Work performance was above the national average only in case of medium-sized enterprises – by 3.7%.

The average enterprise size in Warmińsko-Mazurskie Voivodeship was below the average for Poland. A small enterprise in the region was closest to the national average and on average it employed circa 22 persons. A micro- and medium-sized enterprise in the voivodeship on average employed 2 persons and nearly 99 persons respectively i.e. fewer than an average micro- and medium-sized enterprise in the country. In comparison to the average for Poland, a particularly significant difference was observed in case of large enterprises, which on average employed 611 persons – such employment figures were 30% below the national average for this size category.

Among different size classes only revenues of an average micro-enterprise in the voivodeship were equal to the national average and amounted to PLN 0.4 million. In case of the remaining size categories, revenues from sales per entity were lower than the average for Poland – in the groups of small and medium-sized enterprises by 32% and 40% respectively and by as much as 57% in case of large enterprises.

Work performance in the voivodeship was the lowest in micro-enterprises – PLN 0.18 million and the highest in large enterprises – PLN 0.24 million. In all size classes work performance was below the national average – by 5% in case of micro-enterprises and by more than 30% in the groups of small and medium-sized enterprises.

Consequently, wages in the region were below the average for Poland, particularly in case of medium-sized and large entities. However, the lowest gross wages were observed in the group of micro-entities – PLN 1.39 thousand while the highest in medium-sized and large entities – PLN 1.95 thousand and PLN 2.3 thousand respectively.

[39] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking, insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Table 3.14.4. Operating enterprises in 2006

Warmińsko-Mazurskie	total	micro	small	medium	large
Number of operating entities	58327	56143	1574	535	75
Share in Poland (%)	3.4	3.4	3.6	3.6	2.5
Companies per 1 000 inhabitants	40.9	39.3	1.1	0.4	0.1
Structure of working persons (%)	Number: 245468	45.7	14.1	21.6	18.7
Working persons per 1 000 inhabitants	172.0	78.6	24.2	37.1	32.1
Working persons per entity	4.2	2.0	21.9	98.9	611.0
Revenues per 1 entity; PLN million	0.9	0.4	5.2	22.8	148.3
Share of costs in revenues (%)	92.3	87.0	93.1	94.9	97.9
Revenues per working person; PLN million	0.21	0.18	0.24	0.23	0.24
Structure of revenues (%)	100.0	38.4	16.1	23.8	21.7
Average monthly gross wage (PLN)	1864	1389	1533	1948	2299

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons

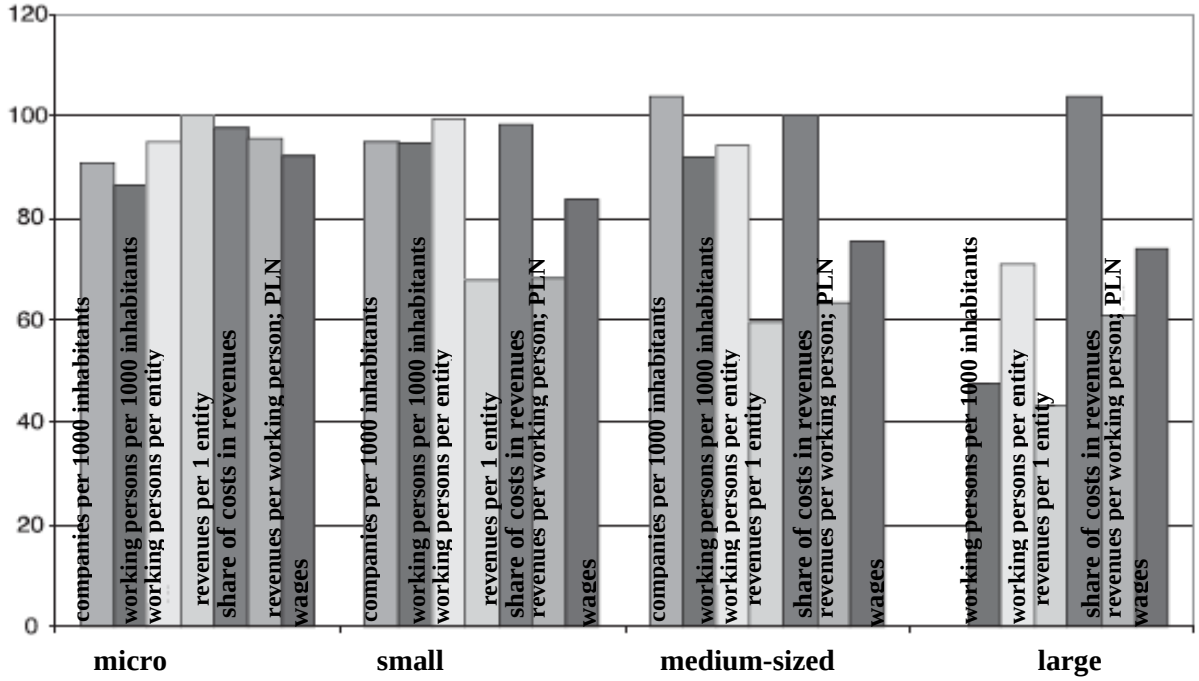
In 2006 in Warmińsko-Mazurskie Voivodeship SME sector share in the revenues of enterprises amounted to 78.3%, while in the number of persons working to 81.3%, with the greatest importance of micro-enterprises both in the structure of working persons and the structure of revenues. Indicator of the cost level of medium-sized enterprises was similar to the average for enterprises in these size categories in Poland and amounted to 94.9%, while it was below the average for Poland in case of micro- and small enterprises. The highest level of costs was observed in the group of large enterprises – 97.9%.

Table 3.14.5. Enterprises in Warmińsko-Mazurskie Voivodeship; average for Poland = 100

Warmińsko-Mazurskie	micro	small	medium	large
Companies per 1 000 inhabitants	90.6	95.1	103.7	d.d.
Working persons per 1 000 inhabitants	86.2	94.5	91.7	47.8
Working persons per entity	95.1	99.3	94.3	71.1
Revenues per 1 entity; PLN million	100.0	67.9	59.7	43.3
Share of costs in revenues (%)	97.8	98.4	100.2	103.9
Revenues per working person; PLN million	95.6	68.3	63.3	61.0
Average monthly gross wage (PLN)	92.0	83.7	75.5	74.0

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Chart 3.14.1. Enterprises in Warmińsko-Mazurskie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In 2006 in Warmińsko-Mazurskie Voivodeship revenues per entity of micro-enterprises required to keep accounting books were 9% below the national average in case of all sections.

In the group of small enterprises required to keep accounting books, revenues in all sections were lower than the average for Poland, with the exception of the *Health care and social assistance* section in which revenues per entity amounted to PLN 3.51 million and were 53% above the national average.

In the group of medium-sized enterprises, revenues of enterprises in all sections were 38% lower than the average for Poland, particularly in the sections of *Electricity, gas and water production and supply* as well as *Transport, stock management and communications*.

Table 3.14.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Warmińsko-Mazurskie	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	2 609	7 589	23 812	81.1	71.1	62.2
Mining and quarrying	x	x	x	x	x	x
Industrial processing	1 618	6 654	24 398	63.7	92.1	92.0
Electricity, gas and water production and supply	x	2 729	11 720	x	12.1	22.6
Construction	1 260	5 352	19 340	79.7	78.3	75.5
Trade and repairs	4 186	10 439	39 352	84.9	66.2	47.3
Hotels and restaurants	x	2 591	7 237	x	86.2	62.6
Transport, stock management and communications	x	6 214	12 673	x	61.1	41.8
Financial intermediation	x	x	x	x	x	x
Real estate and business services	x	3 987	14 957	x	61.6	54.8
Education	x	x	x	x	x	x
Health care and social assistance	x	3 511	8 392	x	174.6	102.7
Other services	x	2 711	8 610	x	57.6	50.7

Source: Calculations based on the CSO data

Investment expenditures

Total investment expenditures of enterprises in the region were PLN 3 billion, of which micro-entities accounted for 14.7%, small entities for 10.5% and medium-sized enterprises for 21.4% of expenditures. The share of enterprises in expenditures in the national economy was the highest in the group of entities employing 50-249 persons – 65% and the lowest in the group of entities employing up to 9 persons – 49%. The share of public sector enterprises in expenditures by Warmińsko-Mazurskie enterprises was the highest in the group of small enterprises – 27%, and the lowest in micro-enterprises – 1%. The public sector had the above average share in investment expenditures by small enterprises in Warmińsko-Mazurskie Voivodeship than it had in the rest of the country. In the groups of micro- and medium-sized enterprises the public sector had the less significant share in investments than on average in the country.

Investments per enterprise in Warmińsko-Mazurskie Voivodeship were below the national average in all size classes, while investments per working person were lower in the groups of small and medium-sized enterprises.Investment expenditures per working person and per enterprise were the highest in medium-sized entities and amounted respectively to PLN 13.7 thousand and PLN 1.4 million. Investments per working person in micro-enterprises added up to PLN 4.2 thousand and per enterprise to PLN 8.4 thousand.

Electricity, gas and water production and supply, *Construction*, *Trade*, *Hotels and restaurants*, *Real estate and business services*, *Education* as well as *Other services* should be considered the investment profiles of Warmińsko-Mazurskie SMEs. The share of these sections in investment expenditures of Warmińsko-Mazurskie SMEs was higher than the share these sections had in SME expenditures in the country.

Table 3.14.7. SME investment expenditure

Warmińsko-Mazurskie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	3003723.0	442813.0	316490.0	642957.0
Share in expenditures of enterprises in the region (%)	100.0	14.7	10.5	21.4
Share of enterprises in investment expenditure in the region (%)	67.1	44.9	61.3	65.0
Public sector share in investment expenditures of companies (%)	15	1	27	12
Public sector share in expenditures of companies in the region; Poland = 100	68.7	89.0	310.7	92.7
Investments per non-financial enterprise; PLN thousand	47.3	8.4	250.3	1358.9
Investments per enterprise; Poland = 100	71.0	98.1	86.2	71.3
Investments per employee in non-financial enterprises; PLN thousand	11.2	4.2	11.4	13.7
Investments per employee; Poland = 100	84.2	103.2	86.8	75.6

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

The public sector generated the majority of SME investments in the sections of *Electricity, gas and water production and supply* – nearly 84.4% as well as *Health care and social assistance* – circa 72%. The public sector had the particularly miniscule fraction in SME investments in the sections of *Trade* and *Hotels* and did not occur in the *Mining* section. The investments of public sector SMEs in Warmińsko-Mazurskie Voivodeship were above the national average in the sections of *Electricity, gas and water production and supply*, *Financial intermediation*, *Real estate and business services*, *Education* as well as *Health care and social assistance*.

Table 3.14.8. Section structure of SME investments

Warmińsko-Mazurskie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	69.76	0.53	0.94	0.00	0.00
D	24.83	27.53	0.89	1.76	81.93
E	37.92	6.84	1.49	84.44	150.27
F	94.86	6.53	1.21	5.97	98.56
G	77.17	17.13	1.02	0.47	44.69
H	93.34	7.18	3.19	0.47	29.98
I	45.16	4.68	0.59	6.81	81.55
J	32.91	0.94	0.20	1.68	277.40
K	94.48	22.11	1.07	8.88	104.1
M	95.33	1.30	1.85	23.65	148.94
N	28.60	1.49	0.79	72.14	189.79
O	81.97	3.73	1.05	45.69	84.93

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

Small and medium-sized enterprises in the region, in all sections, financed the investments largely from own resources – circa 65% of expenditures by SMEs in the private sector and small public enterprises, while circa 46% by medium-sized entities in the public sector. Domestic credits and loans were the second important source of financing private SMEs – they covered circa 28% of expenditures by small and medium-sized enterprises in the private sector, while respectively 7.3% and 1.7% by small and medium-sized enterprises in the public sector.

State budget funds constituted 34% of budget for investments by medium-sized enterprises in the public sector and 12.4% in the group of small public enterprises while they had no significant role in SME investments in the private sector. Foreign resources were used mainly by small and medium-sized public enterprises – they constituted respectively 6.3% and 7.5% of their budget for investments, while in medium-sized and small enterprises in the private sector the share of foreign resources was 5.8% and 1.1% respectively. Foreign credits financed 0.2% of investment expenditures by small private enterprises and did not occur in the group of medium-sized private enterprises and in the public sector. Other than the abovementioned sources financed circa 2% of investment expenditures in the private sector, and in case of small and medium-sized public enterprises they financed respectively 4.5% and 10% of investment expenditures.

Table 3.14.9. Sources of SME investment financing (%)

	public sector		private sector	
Warmińsko-Mazurskie	small	medium	small	medium
Internal resources	65.2	45.6	66.8	63.4
State budget funds	12.4	34.1	1.5	0.9
Domestic credits and loans	7.3	1.7	27.8	27.6
Total foreign resources:	6.3	7.5	1.1	5.8
Including foreign credits	0.0	0.0	0.2	0.0
Other sources	4.5	10.1	2.6	1.7
Non-financed expenditure	4.2	1.0	0.3	0.7

Source: Calculations based on the CSO data

3.15 Wielkopolskie Voivodeship

Structure of entities

In 2006 in Wielkopolskie Voivodeship 349.9 thousand economic entities were registered i.e. 9.4% of all in the REGON system in Poland, out of which only 482 were enterprises employing more than 249 persons. The region had relatively the smallest share in the group of enterprises not having any employees – 8% and large enterprises – 8.9%, and the greatest in the group of small and medium-sized enterprises. In 2006 in Wielkopolskie Voivodeship 30.9 thousand new entities were established i.e. 9.8% of all newly-started in Poland, while fewer – 26.1 thousand - were liquidated which constituted 9% of all enterprises liquidated in the country. The region had the greatest share in newly-started enterprises in Poland in the group of medium-sized entities – 12.9%, while in liquidated in the group of small enterprises. 1.4% of enterprises registered in the region are entities with the major share of foreign capital. The highest number of such enterprises is in the group of medium-sized enterprises – 9.4% of all medium-sized enterprises in the region and in the group of large enterprises – 18% of all large entities registered. More than 3% of enterprises registered in the region is in the public sector. The highest number of public sector enterprises is in the group of enterprises employing 50-249 persons – 29% and largest enterprises – 37%, whereas the lowest is in the group of microenterprises – 1.2%.

Table 3.15.1. Entities registered in the REGON system in 2006 according to the number of working persons

Wielkopolskie	total	0	0-9	10-49	50-249	>249
	349877	22987	330105	16220	3070	482
Region share in Poland(%)	9.4	8.0	9.3	10.4	10.2	8.9
Foreign capital share in the region (%)	1.4	2.9	1.2	5.2	9.4	18.0
Public sector share in the region (%)	3.2	14.8	1.9	22.7	28.9	37.1
Private sector share in the region (%)	96.8	85.2	98.1	77.3	71.1	62.9
Newly-started	30924	2204	30296	559	58	11
Newly-started share in Poland (%)	9.8	11.7	9.7	12.7	12.9	12.0
Liquidated	26091	458	25642	394	43	12
Liquidated share in Poland (%)	9.1	9.7	9.1	10.5	9.5	6.7

Source: Calculations based on the CSO data

Mining, *Industrial processing*, *Health care and social assistance* as well as *Construction* are the sections which had the larger share in structure of entities in SME sector in Wielkopolskie Voivodeship than on average in the country. The share of SME entities in these sections as compared to all SME entities in the region was in 2006 more than 7% higher than the national average. Wielkopolskie Voivodeship also has the above average share of SMEs in the *Public Administration* section.

The SMEs of the private sector are dominated by enterprises in the sections of *Trade and repairs* – 33.7% and *Real estate and business services* – 15.6% as well as *Construction* and *Industrial processing* – circa 12% each. The structure of SME public sector is dominated by enterprises in the sections of *Real estate and business services* – circa 30% and *Education* – 40%. SMEs with the major share of foreign capital are mainly entities in the sections of *Trade and repairs* – 39%, *Industrial processing* – 24.5% as well as *Real estate and business services* – circa 14.5%.

Table 3.15.2. Section structure of SMEs registered in the REGON system in 2006

Wielkopolskie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.04	0.08	0.18	0.05	0.05	1.11	3
Industrial processing	2.33	11.78	24.45	8.86	10.72	1.09	-58
Electricity, gas and water production and supply	1.34	0.06	0.36	0.04	0.07	0.81	-7
Construction	0.85	11.56	5.59	14.11	11.79	1.11	1287
Trade and repairs	0.67	33.69	39.05	31.70	39.26	0.98	-439
Hotels and restaurants	1.18	2.63	2.30	2.76	3.49	0.78	-56
Transport, stock management and communications	0.67	6.68	5.27	4.75	5.95	0.90	-84
Financial intermediation	0.57	3.51	4.95	3.76	3.63	0.91	215
Real estate and business services	29.59	15.61	14.50	18.43	16.41	1.01	1418
Public administration	9.47	0.54	0.04	0.28	0.03	1.21	79
Education	40.16	1.62	0.59	2.35	1.73	0.99	275
Health care and social assistance	5.62	4.97	0.95	2.92	2.22	1.07	326
Other services	7.52	7.28	1.78	9.98	4.62	0.99	1880

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

Newly-started enterprises in Wielkopolskie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – 31.7%, *Real estate and business services* – 18.4%, as well as construction enterprises – 14.1% and enterprises in the sections of *Other services* – circa 10% and I*ndustrial processing* – circa 9% Small and medium-sized entities liquidated in Wielkopolskie Voivodeship are mainly trade enterprises – 39.3%, enterprises in the sections of *Real estate and business services* – 16.4%, *Construction* – circa 12% and *Industrial processing* – 11%.

The sections of *Industrial processing*, *Hotels and restaurants*, *Trade and repairs*, *Transport* and *Electricity, gas and water production and supply* had a larger share in SMEs liquidated than newly-started. The *Trade* section had a particularly significant share in SMEs liquidated as compared to newly-started, while in the sections of *Other services*, *Real estate and business services* and *Construction* there was the largest preponderance of newly-started enterprises over liquidated ones.

The entrepreneurship indices in Wielkopolskie Voivodeship are on average in the country. In 2006 the region ranked 6th in Poland, with 103 entities in SME sector registered per 1 000 inhabitants. It also came 6th with respect to the number of entities with foreign capital participation as compared to the number of inhabitants – 14.7 entities per 10 thousand inhabitants are registered there. Wielkopolskie Voivodeship has the average number of liquidated enterprises. In 2006 circa 77 enterprises per 10 thousand inhabitants were liquidated in the region which corresponded with the 10th place in the voivodeship rankings. At the same time, however, 92 enterprises per 10 thousand inhabitants were established, thus the region ranked 6th in Poland.

Table 3.15.3. SMEs registered in the REGON system in relation to the number of inhabitants

Wielkopolskie	Number of companies per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	1034.2	6
Foreign capital SME	14.7	6
Newly-started SME	91.5	6
Liquidated SME	77.2	10

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Wielkopolskie Voivodeship there were 169.5 thousand operating non-financial enterprises which corresponded with 9.9% of total operating enterprises in the country[40]. 306 large enterprises were operating in the region which constituted 10.3% of large enterprises in Poland. The voivodeship had the largest share in the total number of operating medium-sized enterprises in the country – it amounted to 10.8%. The share of micro- and small enterprises in the total number of enterprises in Poland was 9.9% and 9.6% respectively.

The number of operating enterprises as compared to the number of inhabitants in Wielkopolskie Voivodeship amounted to 50 entities per 1 000 inhabitants – the index was above the national average for all size classes, particularly for medium-sized enterprises.

The number of working persons per 1 000 inhabitants was higher than the average for Poland in all size categories.

The average enterprise size in the region was slightly below the national average in case of micro- and medium-sized enterprises and amounted respectively to 2.1 and 103.9 working persons per entity. Small enterprises in the region on average employed 22.5 persons i.e. 1.8% more than the average for Poland, while large enterprises had 748 employees – 13% below the national average.

Revenues of an average micro- and medium-sized enterprise were lower than the average for Poland and in 2006 amounted to PLN 0.3 million and PLN 33.4 million respectively. Revenues per entity of small enterprises were 6.7% higher than the average for Poland and totalled PLN 8.2 million.

Work performance in enterprises in Wielkopolskie Voivodeship, measured by revenues per working person, rose with the size of an enterprise and was the lowest in micro-entities – PLN 0.15 million while the highest in large entities – PLN 0.44 million. Work performance in micro- and medium-sized enterprises was below the national average, which was particularly noticeable in case of micro-enterprises – work performance in this size class was 16% lower than the average for Poland. Work performance in the groups of small and large enterprises was above the national average by 5% and 10% respectively. Wages in the SME sector in the region were lower than the average for Poland by circa 10% and in large enterprises by 15%. The lowest gross wages occurred in the group of micro-entities – PLN 1.4 thousand, while the highest in medium-sized and large enterprises – PLN 2.3 thousand and PLN 2.7 thousand respectively.

Table 3.15.4. Operating enterprises in 2006

Wielkopolskie	total	micro	small	medium	large
Number of operating entities	169516	163390	4226	1594	306
Share in Poland (%)	9.9	9.9	9.6	10.8	10.3
Companies per 1 000 inhabitants	50.2	48.4	1.3	0.5	0.1
Structure of working persons (%)	Number: 831559	41.1	11.4	19.9	27.5
Working persons per 1 000 inhabitants	246.1	101.3	28.1	49.0	67.7
Working persons per entity	4.9	2.1	22.5	103.9	748.0
Revenues per 1 entity; PLN million	1.4	0.3	8.2	33.4	328.3
Share of costs in revenues (%)	93.0	87.2	94.0	95.1	94.6
Revenues per working person; PLN million	0.29	0.15	0.37	0.32	0.44
Structure of revenues (%)	100.0	22.0	14.4	22.1	41.6
Average monthly gross wage (PLN)	2223	1401	1702	2325	2662

[40] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9 working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking, insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons

Indicator of the cost level of small, medium-sized and large enterprises was similar to the average for enterprises in these size categories in Poland and ranged from 94% in small entities to 95.1% in medium-sized.

Table 3.15.5. Enterprises in Wielkopolskie Voivodeship; average for Poland = 100

Wielkopolskie	micro	small	medium	large
Companies per 1 000 inhabitants	111.6	107.8	129.6	d.d.
Working persons per 1 000 inhabitants	111.2	109.8	121.1	100.7
Working persons per entity	99.6	101.8	99.0	87.0
Revenues per 1 entity; PLN million	75.0	106.7	87.4	95.9
Share of costs in revenues (%)	98.0	99.3	100.4	100.4
Revenues per working person; PLN million	84.5	104.8	88.4	110.2
Average monthly gross wage (PLN)	92.8	93.0	90.2	85.7

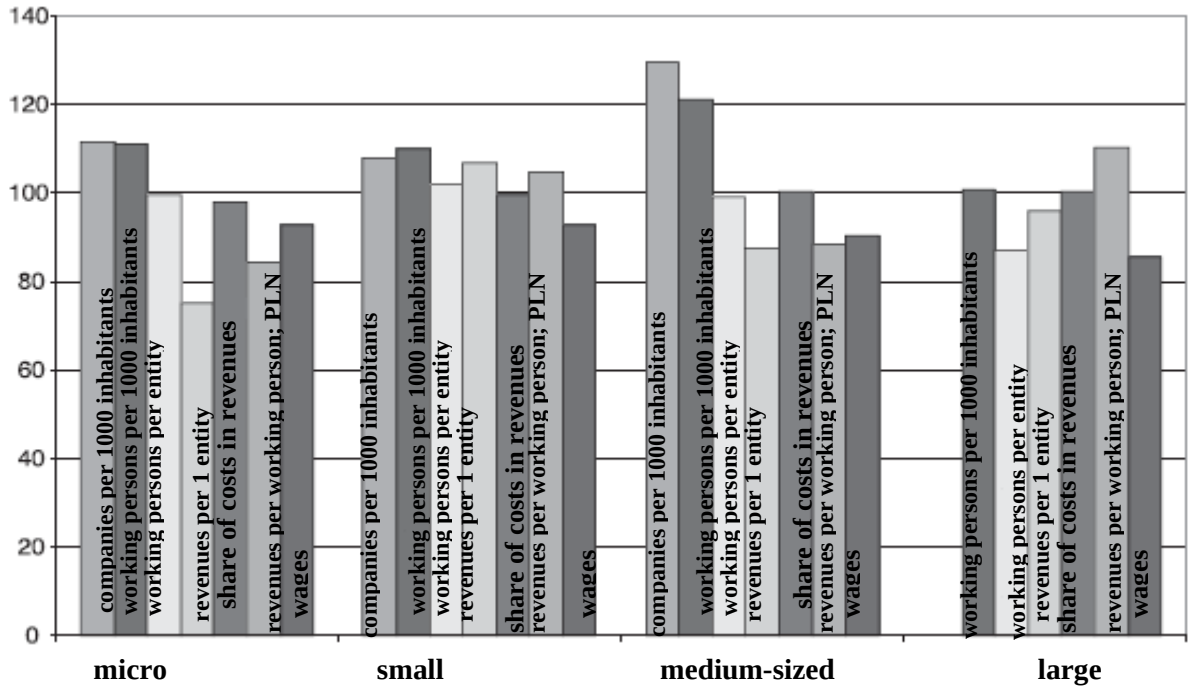
Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In 2006 in Wielkopolskie Voivodeship revenues per entity of SMEs required to keep accounting books were above the national average only in case of small enterprises. In this group of enterprises revenues per entity were 7% higher than the average for Poland and amounted to PLN 11.4 million which was due to the above average results by enterprises in the sections such as: *Construction*, *Real estate and business services*, *Industrial processing*, *Trade and repairs* as well as *Health care and social assistance*.

In the group of micro-enterprises required to keep accounting books, enterprises in the *Construction* section had the above average revenues per entity.

In 2006, in the group of medium-sized enterprises required to keep accounting books, enterprises in the *Health care and social assistance* section stood out as compared to the rest of the country – their revenues per entity were 110.5% higher than the average. Medium-sized enterprises in the sections of *Financial intermediation* and *Construction* also had the above average revenues.

Chart 3.15.1. Enterprises in Wielkopolskie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Table 3.15.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Wielkopolskie	Revenues per entity; PLN thousand			Revenues per entity; Poland = 100		
	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	3 034	11 410	33 988	94.3	107.0	88.8
Mining and quarrying	x	x	x	x	x	x
Industrial processing	2 255	7 759	25 797	88.8	107.4	97.3
Electricity, gas and water production and supply	x	10 589	19 819	x	46.8	38.2
Construction	1 703	8 832	26 297	107.8	129.3	102.7
Trade and repairs	4 481	16 785	72 796	90.9	106.5	87.5
Hotels and restaurants	x	x	7 728	x	x	66.8
Transport, stock management and communications	x	x	23 973	x	x	79.2
Financial intermediation	x	17 551	80 809	x	53.3	107.3
Real estate and business services	2 152	7 420	17 284	93.1	114.6	63.4
Education	x	1 700	x	x	80.1	x
Health care and social assistance	x	2 127	17 197	x	105.8	210.5
Other services	x	3 663	10 804	x	77.8	63.6

Source: Calculations based on the CSO data

Investment expenditures

Total investment expenditures of enterprises in the region were PLN 9.3 billion, of which micro-entities accounted for 9.2%, small entities for circa 10% and medium-sized enterprises for 23% of expenditures. The share of enterprises in expenditures in the national economy was the highest in the group of entities employing 50-249 persons – 73% and the lowest in the group of entities employing up to 9 persons – 31%. The share of public sector enterprises in expenditures by Wielkopolskie enterprises was the highest in the group of medium-sized enterprises – 13%, and the lowest in micro-enterprises.

Table 3.15.7. SME investment expenditure

Wielkopolskie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	9282225.0	855590.0	961228.0	2146442.0
Share in expenditures of enterprises in the region (%)	100.0	3.2	10.4	23.1
Share of enterprises in investment expenditure in the region (%)	68.2	30.9	60.5	72.9
Public sector share in investment expenditures of companies (%)	18	0	9	13
Public sector share in expenditures of companies in the region; Poland = 100	82.7	24.6	105.1	99.9
Investments per non-financial enterprise; PLN thousand	61.0	5.7	310.4	1524.9
Investments per enterprise; Poland = 100	91.5	66.5	106.9	80.0
Investments per employee in non-financial enterprises; PLN thousand	12.4	2.7	13.8	14.7
Investments per employee; Poland = 100	93.0	66.8	104.9	80.8

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

The public sector had the above average share in investment expenditures by small enterprises in Wielkopolskie Voivodeship than it had in the rest of the country. The share of the public sector in investments by micro-enterprises was significantly below the national average while it was nearly equal to the average in case of medium-sized entities. Investments per enterprise as well as per working person in the region were above the

national average in case of small enterprises. Investment expenditures per working person and per enterprise were the highest in medium-sized entities and amounted respectively to PLN 14.7 thousand and PLN 1.52 million. Investments per working person in micro-enterprises added up to PLN 2.7 thousand and per enterprise to PLN 5.7 thousand.

Industrial processing, *Construction* and *Trade* should be considered the investment profiles of Wielkopolskie SMEs. The share of these sections in investment expenditures of Wielkopolskie SMEs was higher than the share these sections had in SME expenditures in the country.

The public sector generated the majority of SME investments in the sections of *Electricity, gas and water production and supply* – 85.5% as well as *Other services* – circa 66%. The public sector had the particularly miniscule fraction in SME investments in the *Trade* section and did not occur in the *Mining* section. The investments of public sector SMEs in Wielkopolskie Voivodeship were above the national average in the sections of *Electricity, gas and water production and supply*, *Construction*, *Transport*, *Financial intermediation*, *Real estate, renting and business activities*, *Health care and social assistance* as well as *Other services*.

Table 3.15.8. Section structure of SME investments

Wielkopolskie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	9.47	0.31	0.54	0.00	0.00
D	37.41	40.61	1.31	1.68	78.39
E	25.43	4.15	0.90	85.49	152.14
F	74.74	5.58	1.04	8.58	141.49
G	56.39	20.00	1.19	0.91	87.21
H	79.50	2.11	0.94	1.21	77.07
I	21.55	5.40	0.69	9.92	118.81
J	26.54	0.95	0.20	1.41	233.05
K	75.02	15.95	0.77	9.20	107.79
M	100.00	0.64	0.90	11.46	72.16
N	34.87	1.60	0.85	40.63	106.88
O	50.13	2.71	0.76	65.72	122.18

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

Small and medium-sized enterprises in the region, in all sections, financed the investments largely from own resources – circa 65% of expenditures by SMEs in the public sector, respectively 60% and 71% by small and medium-sized enterprises in the private sector. Domestic credits and loans were the second important source of financing private SMEs – they covered circa 18% of expenditures by medium-sized enterprises in both sectors, as well as respectively 25% and 36% by small public and private enterprises.

State budget funds constituted 7-8% of budget for investments by small and medium-sized enterprises in the public sector while they had no significant role in SME investments in the private sector. Foreign resources were used mainly by medium-sized private enterprises – they constituted 5% of their budget for investments, while in case of medium-sized public and small private enterprises the share of foreign resources was circa 2% each. Foreign credits financed 0.1% of investment expenditures by medium-sized private enterprises and did not occur in the group of small private enterprises and in the public sector. Other than the abovementioned sources financed circa 4% of SME investment expenditures, except for small enterprises in the private sector – in case of this group of enterprises other sources on average financed 1.9% of investment expenditures

Table 3.15.9. Sources of SME investment financing (%)

	public sector		private sector	
Wielkopolskie	small	medium	small	medium
Internal resources	63.7	65.3	59.1	71.0
State budget funds	6.9	8.6	0.4	0.7
Domestic credits and loans	24.5	18.7	36.3	17.4
Total foreign resources:	0.0	2.1	1.8	5.0
Including foreign credits	0.0	0.0	0.0	0.1
Other sources	3.8	3.5	1.9	4.0
Non-financed expenditure	1.1	1.7	0.5	1.9

Source: Calculations based on the CSO data

3.16 Zachodniopomorskie Voivodeship

Structure of entities

In 2006 in Zachodniopomorskie Voivodeship 210.4 thousand economic entities i.e. 5.6% were registered in the REGON system in Poland, out of which only 205 were enterprises employing more than 249 persons. The region had relatively the smallest share in the group of large enterprises – 3.8%, and the greatest in the group of micro-enterprises and enterprises not having any employees. In 2006 in Zachodniopomorskie Voivodeship 18.5 thousand new enterprises were established i.e. 5.9% of all newly-started in Poland, while fewer – 15.5 thousand – were liquidated which corresponded with 5.4% of all enterprises liquidated in the country. The region had the greatest share in newly-started enterprises in Poland in the group of enterprises not having any employees – 7%, situation was similar in case of liquidated enterprises.

Table 3.16.1. Entities registered in the REGON system in 2006

Zachodniopomorskie	total	0	0-9	10-49	50-249	>249
	210397	20394	202160	6662	1370	205
Region share in Poland(%)	5.6	7.1	5.7	4.3	4.5	3.8
Foreign capital share in the region (%)	1.5	3.8	1.3	6.5	11.2	13.7
Public sector share in the region (%)	4.2	24.7	3.1	26.8	45.6	60.0
Private sector share in the region (%)	95.8	75.3	96.9	73.2	54.4	40.0
Newly-started	18544	1314	18329	197	16	2
Newly-started share in Poland (%)	5.9	7.0	5.9	4.5	3.6	2.2
Liquidated	15521	294	15333	157	24	7
Liquidated share in Poland (%)	5.4	6.2	5.4	4.2	5.3	3.9

Source: Calculations based on the CSO data

1.5% of enterprises registered in the region are entities with the major share of foreign capital. The highest number of such enterprises is in the group of medium-sized enterprises – 11.2% of all medium-sized enterprises in the region as well as in the group of large enterprises – 13.7% of all large entities registered in the voivodeship. More than 4% of enterprises registered in the region is in the public sector. The highest number of public sector enterprises is in the group of enterprises employing 50-249 persons – 46% and largest enterprises – 60%, while the lowest is in the group of microenterprises – 3.1%.

Hotels and restaurants, Electricity, gas and water production and supply, *Health care and social assistance*, *Real estate and business services* and *Construction* are the sections which had the larger share in structure of entities in SME sector in Zachodniopomorskie Voivodeship than on average in the country. The share of SME entities in these sections as compared to all SME entities in the region was in 2006 99%-6% higher than the national average.

The SMEs of the private sector are dominated by enterprises in the sections of *Trade and repairs* – 31.5% and *Real estate and business services* – 16.8% as well as *Construction* – 11% and *Industrial processing* – 9%. The structure of SME public sector is dominated by enterprises in the sections of *Real estate and business services* – circa 59% and *Education* – 21.6%. SMEs with the major share of foreign capital are mainly entities in the sections of *Trade and repairs* – 28%, *Industrial processing* – 27% as well as *Real estate and business services* – circa 13%.

Table 3.16.2. Section structure of SMEs registered in the REGON system in 2006

Zachodniopomorskie	Public sector (%)	Private sector (%)	Foreign capital (%)	Newly-started (%)	Liquidated (%)	LQ*	New - liquidated
Mining	0.01	0.05	0.45	0.02	0.02	0.71	1
Industrial processing	1.00	9.14	26.87	9.91	9.63	0.85	344
Electricity, gas and water production and supply	0.78	0.14	1.40	0.16	0.13	1.99	10
Construction	0.41	11.00	10.27	17.09	12.78	1.06	1186
Trade and repairs	0.39	31.46	28.05	26.11	34.43	0.91	-500
Hotels and restaurants	1.32	6.39	5.52	6.25	6.76	1.89	110
Transport, stock management and communications	0.58	7.11	7.75	4.45	5.65	0.96	-51
Financial intermediation	0.41	3.63	3.41	3.22	3.47	0.94	58
Real estate and business services	58.95	16.80	13.18	19.08	17.36	1.08	844
Public administration	7.35	0.21	0.00	0.11	0.02	0.47	17
Education	21.63	1.57	0.57	2.05	2.04	0.96	65
Health care and social assistance	4.09	5.73	0.54	3.63	2.68	1.23	269
Other services	3.06	6.77	1.98	7.91	4.99	0.92	692

Source: Calculations based on the CSO data, * - LQ the share of a section in SME in the region as compared to the share of a section in SME in the country

Newly-started enterprises in Zachodniopomorskie Voivodeship are mainly enterprises in the sections of *Trade and repairs* – 26%, *Real estate and business services* – 19%, as well as construction enterprises – 17% and enterprises in the I*ndustrial processing* section– 10% Small and medium-sized entities liquidated in Zachodniopomorskie Voivodeship are mainly trade enterprises – 34.4%, enterprises in the sections of *Real estate and business services* – 17.4%, *Construction* – circa 13% and *Industrial processing* – 9.6%. The sections of *Trade and repairs*, *Hotels and restaurants*, *Transport* and *Financial intermediation* had a larger share in SMEs liquidated than newly-started. However, the negative balance between newly-started and liquidated entities was observable only in the sections of *Trade and repairs* and *Transport*. The largest preponderance of newly-started entities over liquidated ones occurred in the *Real estate and business services*, *Construction* and *Other services* sections.

The entrepreneurship indices in Zachodniopomorskie Voivodeship are the highest in Poland, with 124 entities in SME sector registered per 1 000 inhabitants in 2006. The region ranked 4th with respect to the number of entities with foreign capital participation as compared to the number of inhabitants – 19 entities per 10 thousand inhabitants are registered there. Zachodniopomorskie Voivodeship has the relatively high number of liquidated entities. In 2006 92 enterprises per 10 thousand inhabitants were liquidated in the region, which corresponded with the 15th place in the voivodeship rankings. However, at the same time the highest number of new enterprises were established i.e. 110 newly-started enterprises per 10 thousand inhabitants.

Table 3.16.3. SMEs registered in the REGON system in relation to the number of inhabitants

Zachodniopomorskie	Number of companies per 10 thousand inhabitants	Place in the voivodeships ratings
SME total	1241.7	1
Foreign capital SME	18.5	4
Newly-started SME	109.5	1
Liquidated SME	91.6	15

Source: Calculations based on the CSO data

Performance of operating enterprises

In 2006 in Zachodniopomorskie Voivodeship there were 98.2 thousand operating non-financial enterprises which corresponded with 5.7% of total operating enterprises in the country[41]. Only 73 large enterprises were

[41] CSO (2008) Activity of non-financial enterprises in 2006, Warsaw; Elaboration based on the results of complete research of enterprises employing 10 and more persons as presented in the reports: the annual enterprise survey for 2006 (SP) and statistical financial report as of the day 31 XII 2006 (F-02) as well as the representative survey of micro-enterprises (up to 9

operating in the region which constituted 2.4% of operating large enterprises in Poland. The voivodeship had the largest share in the total number of operating micro-enterprises – it amounted to 5.8%. The share of small and medium-sized enterprises in the total number of enterprises in Poland was 4.1% and 3.8% respectively.

The number of operating enterprises as compared to the number of inhabitants in Zachodniopomorskie Voivodeship amounted to 58 entities per 1 000 inhabitants. In case of micro-enterprises this index was 30% above the average for Poland, while it was lower than the average in the remaining size classes, particularly in medium-sized entities – by as much as 22%.

The number of working persons per 1 000 inhabitants was higher than the average for Poland only in case of micro-enterprises – by 25%. In case of large enterprises the same index was more than 50% below the average for enterprises in this size class in the country.

The average enterprise size in the region was below the average for Poland in all size categories, particularly in case of micro- and large enterprises. Small and micro- enterprises in the region on average employed 21.5 and 2 persons respectively - such employment figures were respectively 2.7% and 4% lower than the national average. Medium-sized enterprises had 104.6 employees which corresponded with the average for Poland.

Work performance in enterprises in Zachodniopomorskie Voivodeship, measured by revenues per working person, ranged from PLN 0.15 million in case of micro-enterprises to PLN 0.33 million in small entities. Revenues per working person in medium-sized and large enterprises were lower than the revenues in small enterprises.

Wages in the SME sector in the region were below the average for Poland by circa 6-8% and in large enterprises by 16%. However, the lowest gross wages occurred in the group of micro-entities – PLN 1.4 thousand, while the highest in large enterprises – PLN 2.6 thousand.

Table 3.16.4. Operating enterprises in 2006

Zachodniopomorskie	total	micro	small	medium	large
Number of operating entities	98166	95709	1818	566	73
Share in Poland (%)	5.7	5.8	4.1	3.8	2.4
Companies per 1 000 inhabitants	58.0	56.5	1.1	0.3	0.0
Structure of working persons (%)	Number: 346527	55.7	11.3	17.1	16.0
Working persons per 1 000 inhabitants	204.7	113.9	23.1	35.0	32.7
Working persons per entity	3.5	2.0	21.5	104.6	759.4
Revenues per 1 entity; PLN million	0.8	0.3	7.2	26.3	223.2
Share of costs in revenues (%)	93.1	88.3	93.7	95.4	99.4
Revenues per working person; PLN million	0.21	0.15	0.33	0.25	0.29
Structure of revenues (%)	100.0	40.2	17.6	20.1	22.0
Average monthly gross wage (PLN)	2111	1397	1688	2417	2603

Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw; in case of salaries the data for small entities apply to the ones with 0-49 working persons, in other cases to entities with 10-49 working persons

In 2006 SME sector share in the revenues of enterprises amounted to 78%, while in the number of persons working to 84%, with the greatest importance of micro-enterprises which employed 56% of the total number of working persons in the region and their revenues amounted to 40% of the total revenues of enterprises. Indicator of the cost level of medium-sized and large enterprises was slightly above the average for enterprises in these size categories in Poland, it was similar to the average in micro-enterprises and in case of large entities it was above the average and amounted to 99.4%.

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working persons) conducted with the use of "Report on economic activity of enterprises for 2006" form (SP-3). The data about operating enterprises cover all entities in the following sections according to Polish Classification of Activities: industry (sections C,D and E), construction (section F) trade (section G), hotels and restaurants (section H), transport, stock management and communications (section I), real estate, renting and business activities (section K), education (section M), health care (section N), other municipal, community and individual services (section O, divisions 90,92,93) as well as sections A and B i.e. forestry, agriculture and fishery. This elaboration includes also selected entities conducting their activities in the scope of financial intermediation, excluding entities conducting their activities in the scope of banking, insurance, brokerage, credit and savings unions, investment funds societies and investment funds, general pension societies, open pension funds, national investment funds.

Table 3.16.5. Enterprises in Zachodniopomorskie Voivodeship; average for Poland = 100

Zachodniopomorskie	micro	small	medium	large
Companies per 1 000 inhabitants	130.3	92.6	77.8	d.d.
Working persons per 1 000 inhabitants	125.0	90.0	86.5	48.6
Working persons per entity	95.9	97.3	99.7	88.3
Revenues per 1 entity; PLN million	75.0	93.1	68.8	65.2
Share of costs in revenues (%)	99.2	99.0	100.7	105.5
Revenues per working person; PLN million	84.2	95.8	69.0	73.8
Average monthly gross wage (PLN)	92.6	92.2	93.7	83.8

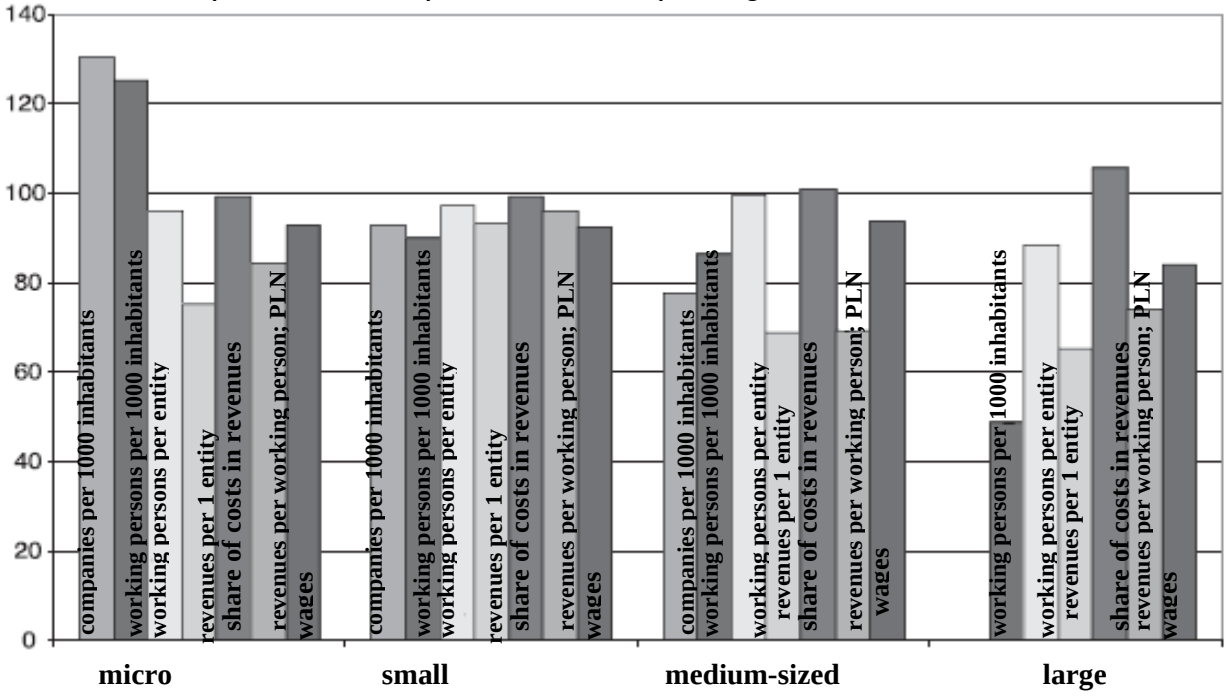
Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

In 2006 revenues per entity of SMEs required to keep accounting books were below the national average in all size categories. Revenues of micro-entities in the *Health care and social assistance* section stood out as compared to the rest of the country – they were 73% above the national average and amounted to PLN 1.58 million. Construction micro-enterprises had relatively the lowest revenues – 5 times lower than the average for Poland which totalled PLN 0.3 million per entity.

In the group of small enterprises revenues per entity were 9% below the national average, except for enterprises in the sections of *Construction* – revenues 4% higher than the average for Poland, as well as *Transport, stock management and communications* – revenues 1% higher. In the remaining sections revenues per small enterprise in the region were below the national average. In case of the *Electricity, gas and water production and supply* section revenues per entity amounted to PLN 3.48 million which constituted only 15% of revenues per an average small enterprise in this section in Poland.

In the group of medium-sized enterprises required to keep accounting books, revenues per entity were 31% below the national average. In all sections, except for *Transport, stock management and communications* average revenues per entity were lower than the average for Poland. As was the case with small enterprises, lower revenues were particularly noticeable in the *Electricity, gas and water production and supply* section – revenues per entity of medium-sized enterprises were in this section more than 70% below the national average.

Chart 3.16.1. Enterprises in Zachodniopomorskie Voivodship, average for Poland = 100



Source: Calculations based on *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Table 3.16.6. SMEs required to keep accounting books – revenues per entity; PLN thousand

Zachodniopomorskie	Revenues per entity; PLN thousand	Revenues per entity; Poland = 100

	0-9	10-49	50-249	0-9	10-49	50-249
Total excluding A and B	2 397	9 726	26 197	74.5	91.2	68.4
Mining and quarrying	x	4 898	24 148	x	93.6	99.7
Industrial processing	2 234	6 537	21 343	88.0	90.5	80.5
Electricity, gas and water production and supply	x	3 478	14 278	x	15.4	27.5
Construction	303	7 111	19 637	19.2	104.1	76.7
Trade and repairs	4 132	14 907	60 407	83.8	94.6	72.6
Hotels and restaurants	1 359	2 278	9 774	x	75.8	84.5
Transport, stock management and communications	x	10 308	34 081	x	101.4	112.5
Financial intermediation	x	x	x	x	x	x
Real estate and business services	1 315	4 856	19 618	56.9	75.0	71.9
Education	x	1 428	x	x	67.2	x
Health care and social assistance	1 585	x	x	173.4	x	x
Other services	x	x	11 567	x	x	68.1

Source: Calculations based on the CSO data

Investment expenditures

Total investment expenditures of enterprises in the region were PLN 4.46 billion, of which micro-entities accounted for 16%, small entities for 9% and medium-sized enterprises for 29% of expenditures. The share of enterprises in expenditures in the national economy was the highest in the group of entities employing 50-249 persons – 70% and the lowest in the group of entities employing up to 9 persons – 51%. The share of public sector enterprises in expenditures by Zachodniopomorskie enterprises was the highest in the group of small enterprises – 17%, and the lowest in micro-enterprises – 1%.

The public sector had the above average share in investment expenditures by small and medium-sized enterprises in Zachodniopomorskie Voivodeship than it had in the rest of the country, while in case of micro-enterprises the public sector had the less significant share in investments than on average in the country. Investments per enterprise as well as per working person in the region were above the national average in case of medium-sized entities and lower in the groups of micro- and small enterprises. Investment expenditures per working person and per enterprise were the highest in medium-sized entities and amounted respectively to PLN 24.2 thousand and PLN 2.5 million. Investments per working person in micro-enterprises added up to PLN 3.8 thousand and per enterprise to PLN 7.7 thousand.

Table 3.16.7. SME investment expenditure

Zachodniopomorskie	total	0-9 working persons	10-49 working persons	50-249 working persons
Expenditure; PLN thousand	4462532.0	699898.0	391265.0	1302371.0
Share in expenditures of enterprises in the region (%)	100.0	15.7	8.8	29.2
Share of enterprises in investment expenditure in the region (%)	71.4	51.3	61.4	70
Public sector share in investment expenditures of companies (%)	28	1	17	14
Public sector share in expenditures of companies in the region; Poland = 100	133.3	50.2	195.1	104.2
Investments per non-financial enterprise; PLN thousand	42.9	7.7	273.8	2532.5
Investments per enterprise; Poland = 100	64.3	90.2	94.3	132.8
Investments per employee in non-financial enterprises; PLN thousand	12.1	3.8	12.8	24.2
Investments per employee; Poland = 100	90.9	94.1	96.9	133.2

Source: Calculations based on the CSO data and *Activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Industrial processing, *Hotels and restaurants*, *Transport*, *Education*, *Health care and social assistance* as well as *Other municipal, community and individual services* should be considered the investment profiles of Zachodniopomorskie SMEs. The share of these sections in investment expenditures of Zachodniopomorskie SMEs was higher than the share these sections had in SME expenditures in the country.

Table 3.16.8. Section structure of SME investments

Zachodniopomorskie	SME share in expenditures by section in the region	structure of SME investments in the region	section share in SME expenditure in the region as compared to section share in SME expenditure in the country	public sector share in SME investments	public sector share in investments; Poland = 100 SME
C	14.54	0.35	0.62	0.00	0.00
D	51.30	35.65	1.15	0.43	20.15
E	15.18	4.32	0.94	42.72	76.02
F	85.98	4.37	0.81	4.47	73.74
G	59.99	13.19	0.78	0.59	56.64
H	89.64	5.37	2.38	3.71	236.04
I	44.90	8.03	1.02	10.03	120.15
J	38.49	1.27	0.27	1.45	239.22
K	90.93	16.59	0.80	27.15	318.00
M	100.00	0.73	1.04	17.05	107.35
N	52.72	2.87	1.53	27.60	72.61
O	97.75	7.25	2.04	24.35	45.26

Source: Calculations based on the CSO data; C – Mining; D – Industrial processing; E – Electricity, gas and water production and supply; F – Construction; G – Trade and repairs; H – Hotels and restaurants; I – Transport, stock management and communications; J – Financial intermediation; K – Real estate, renting and business activities; M – Education; N – Health care and social assistance; O – Other municipal, community and individual services

The public sector generated the majority of SME investments in the sections of *Electricity, gas and water production and supply* – 43%.The public sector had the particularly miniscule fraction in SME investments in the sections of *Industrial processing* and *Trade* and did not occur in the *Mining* section. The investments of public sector SMEs in Zachodniopomorskie Voivodeship were above the national average in the sections of *Trade and repairs*, *Hotels and restaurants*, *Transport, stock management and communications*, *Financial intermediation*, *Real estate, renting and business activities* as well as *Education*.

Small and medium-sized enterprises in the region, except for small enterprises in the public sector, financed the investments largely from own resources – circa 63% of expenditures by medium-sized public and small private enterprises, 49% in the group of medium-sized private entities as compared to 30% of expenditures by small enterprises in the public sector. Domestic credits and loans were the second important source of financing private SMEs, except for small public enterprises in which they played the most important role – they covered circa 60% of expenditures by small enterprises in the public sector and ranged from 19% to 28% in the remaining groups of enterprises.

State budget funds constituted circa 5% of budget for investments by small and medium-sized enterprises in the public sector while they had no significant role in SME investments in the private sector. Foreign resources were used mainly by medium-sized private enterprises – constituted 20% of their budget for investments, while in case of medium-sized public and small private enterprises the share of foreign resources was 2.5% and 0.3% respectively. Foreign credits financed 14.3% of investment expenditures by medium-sized private enterprises and did not occur in the group of small private enterprises and in the public sector. Other than the abovementioned sources financed circa 6% of investment expenditures by medium-sized enterprises in the public sector, 3.3% by small private entities and circa 1% of expenditures in the remaining groups of enterprises.

Table 3.16.9. Sources of SME investment financing (%)

	public sector		private sector	
Zachodniopomorskie	small	medium	small	medium
Internal resources	30.4	62.4	63.3	48.9
State budget funds	5.6	5.1	0.5	0.5
Domestic credits and loans	60.4	19.3	23.4	28.1
Total foreign resources:	0.0	2.5	0.3	20.0
Including foreign credits	0.0	0.0	0.0	14.3
Other sources	0.8	6.0	3.3	1.3
Non-financed expenditure	2.8	4.6	9.3	1.2

Source: Calculations based on the CSO data

3.17. Regional profiles – synthesis

This chapter presents the characteristics of the SME sector development in voivodeships of Poland in 2006 in the scope of structure of entities, performance and investment expenditures of operating enterprises as well as from the perspective of sector's role on the labour market. The summary of these analyses is a synthetic index expressing the level of development and performance of small and medium-sized enterprises in the regions in 2006.

Structure of entities

In 2006 the SME sector employed the highest number of persons as compared to the number of inhabitants in Mazowieckie Voivodeship – 189 persons working in SMEs per 1 000 inhabitants and Wielkopolskie – 178 persons per 1 000 inhabitants of the region. Higher than the national average was the number of persons working in SME in Pomorskie, Zachodniopomorskie, Śląskie, Lubuskie and Łódzkie regions. In these voivodeships 173–163 persons per 1 000 inhabitants were working in SMEs, with the national average equal to 157 persons.

157 persons per 1 000 inhabitants, which is a figure comparable with national average, was working in SMEs in Dolnośląskie and Małopolskie voivodeships. 141 persons per 1 000 inhabitants were working in Kujawsko Pomorskie SME, 140 in Warmińsko-Mazurskie and 132 in Opolskie. The lowest number of persons working in SMEs per 1 000 inhabitants was registered in the regions of Eastern Poland, i.e. Świętokrzyskie, Podkarpackie, Podlaskie and Lubelskie – from 121 to 115 persons working in SMEs per 1 000 inhabitants.

Table 3.17.1. Entrepreneurship in the regions and persons working in SMEs in 2006

	SMEs per 1 000 inhabitants	Persons working in SMEs per 1 000 inhabitants	Share in the number of enterprises (%)	Share in the number of working persons (%)
POLAND	44.9	157.2	100	100
Dolnośląskie	44.8	157.3	7.54	7.56
Kujawsko-Pomorskie	39.0	141.8	4.71	4.89
Lubelskie	34.1	115.0	4.33	4.17
Lubuskie	46.2	164.3	2.72	2.76
Łódzkie	45.3	162.6	6.80	6.96
Małopolskie	45.9	157.0	8.76	8.57
Mazowieckie	53.8	189.2	16.24	16.33
Opolskie	35.7	131.8	2.17	2.29
Podkarpackie	31.9	118.0	3.90	4.13
Podlaskie	35.4	117.2	2.47	2.34
Pomorskie	50.2	172.8	6.46	6.35
Śląskie	44.7	164.5	12.19	12.81
Świętokrzyskie	36.0	120.8	2.69	2.58
Warmińsko-Mazurskie	40.8	139.9	3.40	3.33
Wielkopolskie	50.1	178.4	9.88	10.06
Zachodniopomorskie	57.9	172.0	5.73	4.86

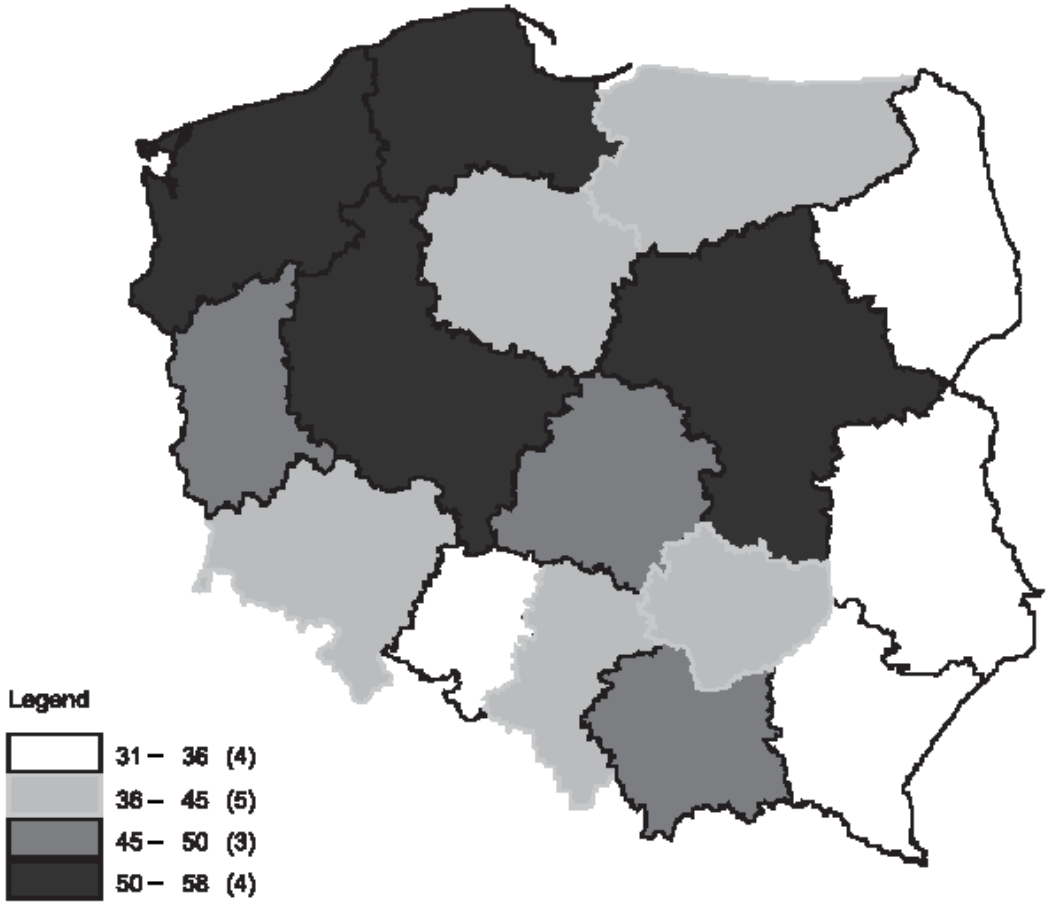
Source: Calculations based on *The activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

As far as the quantity of operating enterprises compared with thee population is concerned, the SME sector in 2006 was the most developed in Zachodniopomorskie Voivodeship, where in 2006 there were 58 operating SMEs per 1 000 inhabitants and in Mazowieckie – 54 SMEs per 1 000 inhabitants. Active SME entities were also numerous in Pomorskie and Wielkopolskie voivodeships – 50 entities per 1 000 inhabitants and Lubuskie and Małopolskie – ca. 46 enterprises per 1 000 inhabitants each. Łódzkie, Dolnośląskie and Śląskie were at the level of national average with 45 SME per 1 000 inhabitants. Warmińsko-Mazurskie and Kujawsko-Pomorskie had respectively: 41 and 39 operating enterprises per 1 000 inhabitants. Circa 36 SMEs per 1 000 inhabitants operated in Opolskie, Podlaskie and Świętokrzyskie, 34 in Lubelskie and the fewest – 32 in Podkarpackie.

Regions' share in the number of operating enterprises and in the number of persons working in SMEs is comparable and highest in the following voivodeships: Mazowieckie – over 16%, Śląskie – ca. 12.5%, Wielkopolskie – ca. 10% as well as in Małopolskie – ca. 9% and Dolnośląskie and Łódzkie – 7.5% and 7% respectively. The lowest share in the number of entities and working persons of Polish SME sector is that of Podlaskie, Świętokrzyskie, Lubuskie and Opolskie voivodeships – below 3% each.

In 2006 the highest number of newly-established entities were registered in urban gminas in Śląskie Voivodeship – nearly 80% and Mazowieckie, Pomorskie and Łódzkie – ca. 70% each. Nearly 65% of new entities were established in urban gminas in Podlaskie and Dolnośląskie, while 60%, as much as the national average, in Lubelskie. More than a half of new enterprises were established in rural areas also in Warmińsko-Mazurskie and Zachodniopomorskie voivodeships. In other voivodeships, i.e. Małopolskie, Lubuskie, Podkarpackie, Wielkopolskie and Opolskie higher number of new entities were established in urban-rural gminas and rural areas. The most, i.e. over 50% of new entities were established in urban-rural gminas in Opolskie. With regard to the significance of rural areas as the location for new enterprises in 2006 the leading voivodship was Podkarpackie – almost 35% of new entities in this region were registered in rural areas, Lubelskie – 30%, as well as Świętokrzyskie and Małopolskie – ca. 25% each. The lowest number of new entities were established in rural gminas in Zachodniopomorskie and Dolnośląskie – ca. 12% in each. Urban-rural gminas as locations for new entities, apart from Opolskie, were significant also in Lubuskie, Wielkopolskie and Zachodniopomorskie – over 30% of new entities were registered there. The fewest new enterprises were registered in urban-rural gminas in Śląskie Voivodeship – ca. 7% and Lubelskie and Pomorskie – ca 10% each.

Map 3.17.1. Operating SMEs per 1 000 inhabitants

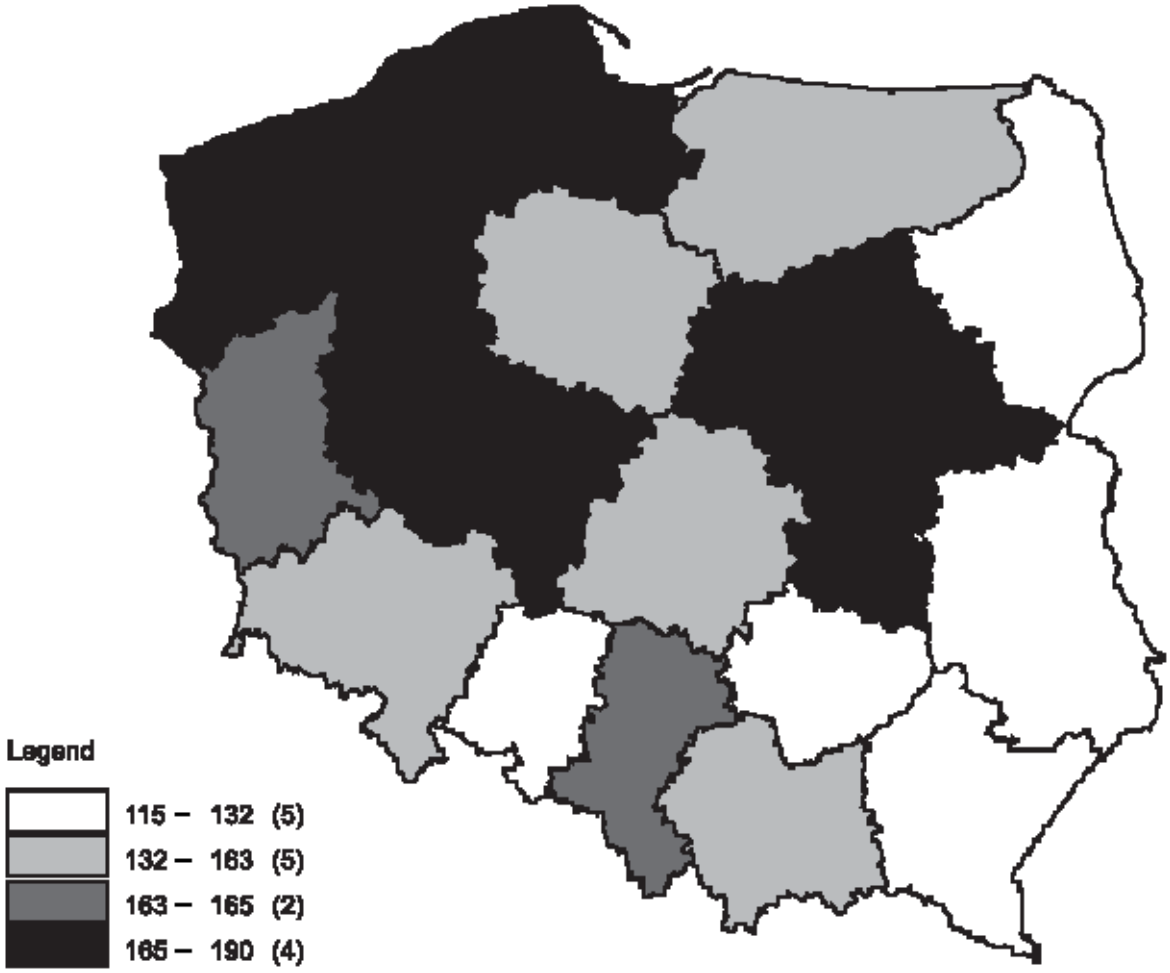


Source: Authors' calculations based on CSO data

The highest number of new enterprises as compared with the number of inhabitants in 2006 was registered in the regions with traditionally high level of entrepreneurship and tourism, i.e. Zachodniopomorskie and Pomorskie – over 100 new enterprises per 10 thousand inhabitants were established there. Over 90 new SME entities relative to the number of inhabitants were established in 2006 in Mazowieckie, Lubuskie, Dolnośląskie and Wielkopolskie voivodeships. More than the national average – 83 entities per 10 thousand inhabitants – were established in Łódzkie and Kujawsko-Pomorskie and over 80 entities also in Warmińsko-Mazurskie. Over 74 new entities per 10 thousand inhabitants were registered in Małopolskie and Śląskie and 69 in Podlaskie. Unfortunately, in the regions with low general number of entities also in 2006 the number of new entities was the lowest, and these were Świętokrzyskie, Lubelskie, Opolskie and Podkarpackie, where 64–56 new entities per 10 thousand inhabitants were registered.

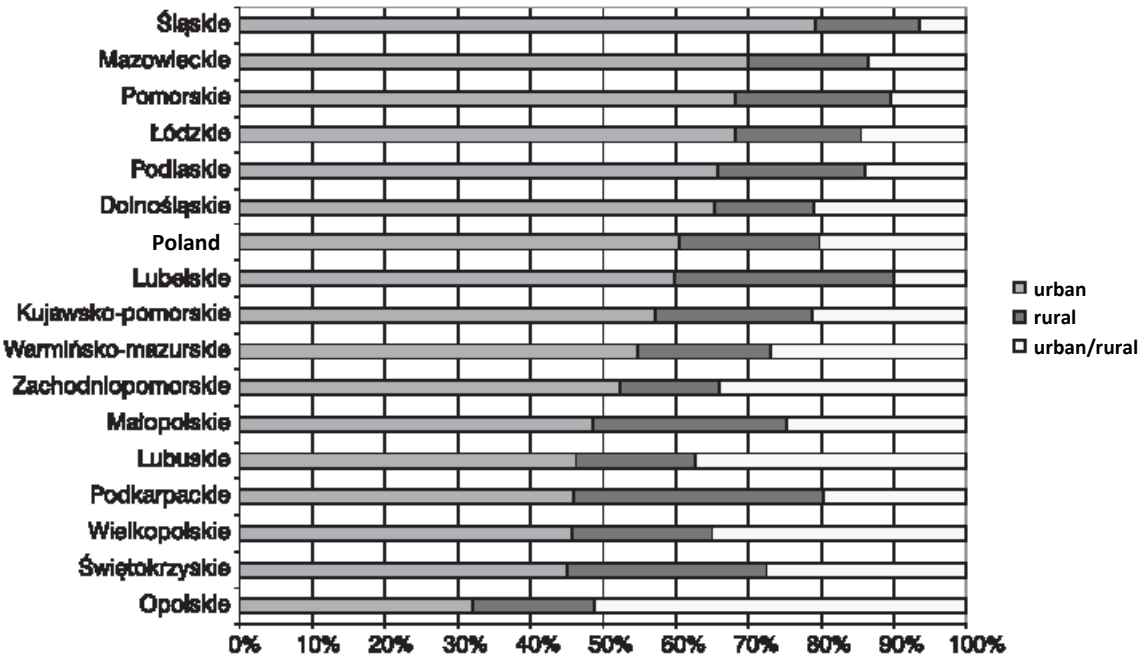
In 2006 the balance of newly registered and liquidated entities was the highest in Mazowieckie Voivodeship – 7.3 thousand more entities were established than liquidated. Newly created entities significantly outnumbered the liquidated also in Wielkopolskie, Lubuskie and Zachodniopomorskie – the balance of new and liquidated entities amounted there to 4.8 thousand, 3.6 thousand and 3 thousand entities respectively. A still significant preponderance of newly established over liquidated entities – more than 1.8 thousand companies – was characteristic of Pomorskie, Lubelskie, Świętokrzyskie, Opolskie, Podkarpackie and Warmińsko-Mazurskie voivodeships. The only region where much more enterprises were liquidated than established was Łódzkie.

Map 3.17.2. Persons working in SMEs per 1 000 inhabitants



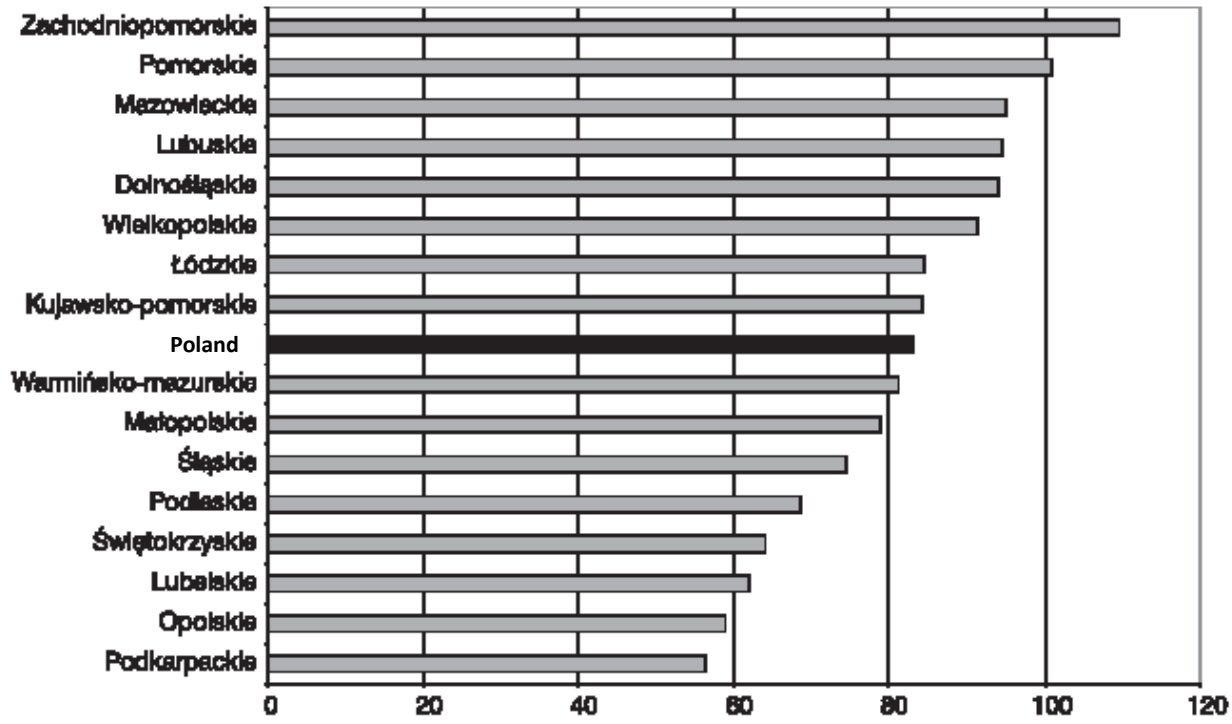
Source: Authors' calculations based on CSO data

Chart 3.17.1. Territorial structure of newly established entities in 2006



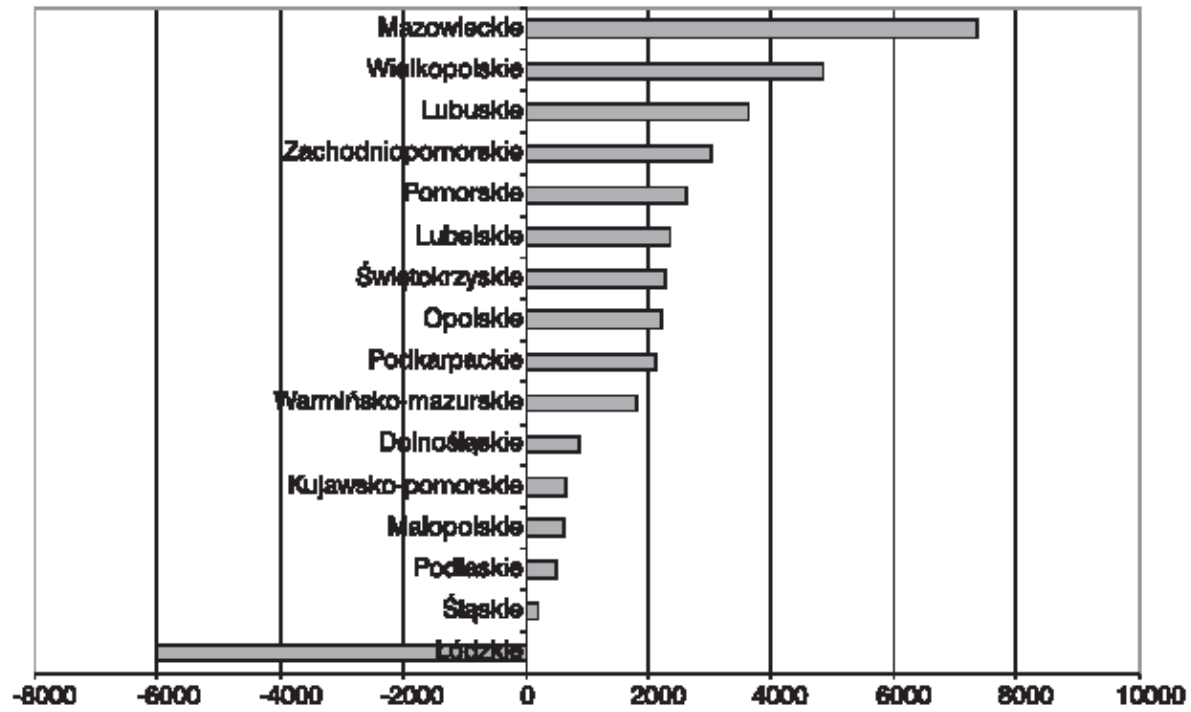
Source: Authors' calculations based on CSO data

Chart 3.17.2. Newly established SMEs per 10 thousand inhabitants



Source: Authors' calculations based on CSO data

Chart 3.17.3. Newly established SMEs net the number of liquidated enterprises in the region in 2006 according to REGON register



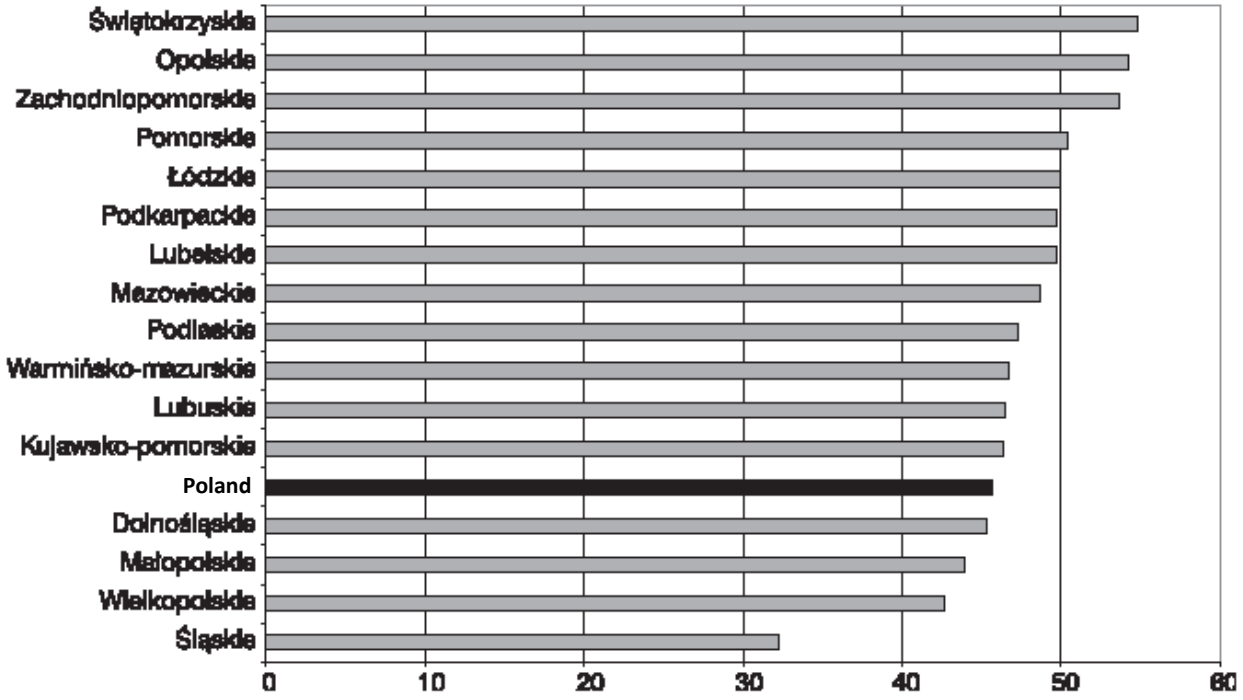
Source: Authors' calculations based on CSO data

Performance and investments

In 2006 the highest SME share in investment expenditures of regional enterprises was that in Świętokrzyskie, Opolskie and Zachodniopomorskie voivodeships, where it amounted to ca. 54%. About half of

investment expenditures of enterprises was that of the SME sector in Pomorskie, Łódzkie, Podkarpackie and Lubelskie. In Mazowieckie and Podlaskie the SME sector generated respectively: 49% and 47% of investments, while in Warmińsko-Mazurskie, Lubuskie and Kujawsko-Pomorskie – ca. 46.5%, with the national average of 45.6%. SMEs in Dolnośląskie voivodeships generated comparable share. The lowest share was that of the SME sector in Małopolskie and Wielkopolskie voivodeships – ca. 43% and Śląskie – 32%.

Chart 3.17.4. SME share in investment expenditures of enterprises in 2006 (%)



Source: Authors' calculations based on CSO data

Table 3.17.2. SME revenues, costs and investments in the regions

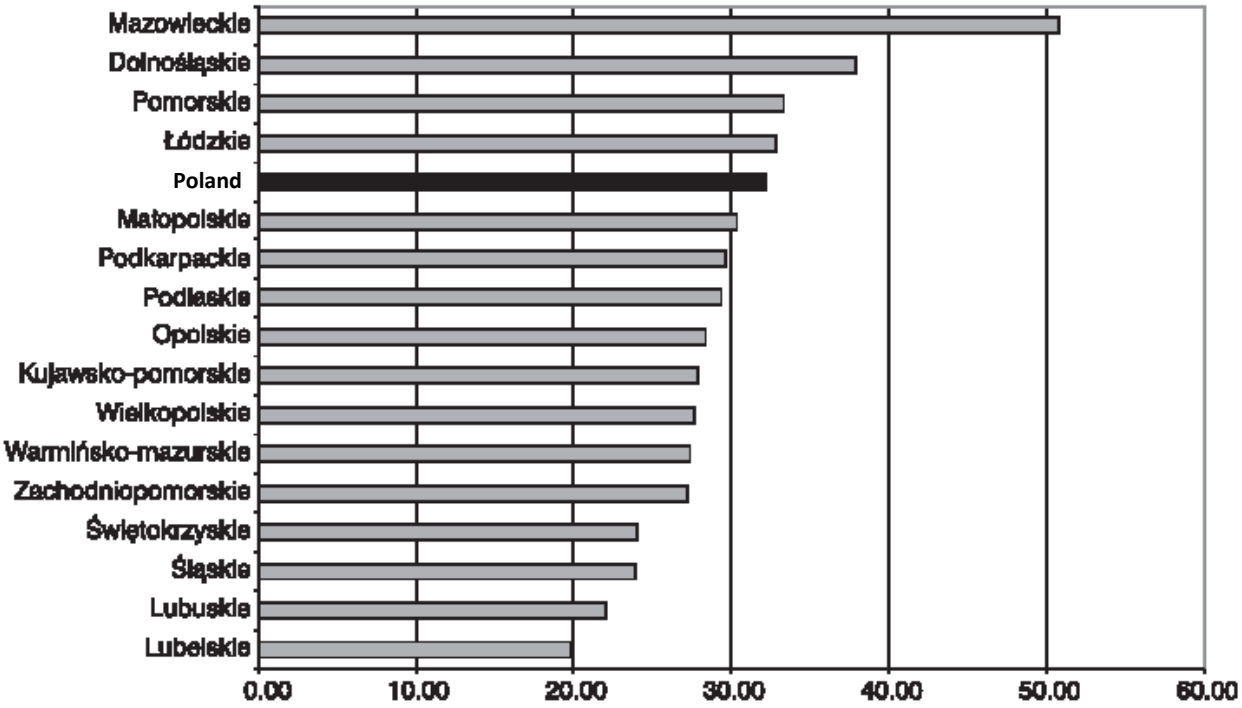
	Revenues per enterprises PLN million	Revenues per working person PLN million	Share of costs in revenues %	Investment expenditures per enterprise PLN thousand	Investment expenditures per working person PLN thousand
POLAND	0.90	0.257	92.3	32.17	9.19
Dolnośląskie	0.77	0.220	91.9	37.85	10.78
Kujawsko-Pomorskie	0.82	0.225	91.0	27.80	7.64
Lubelskie	0.88	0.260	90.6	19.78	5.86
Lubuskie	0.70	0.196	92.4	22.08	6.21
Łódzkie	0.71	0.198	91.9	32.81	9.15
Małopolskie	0.86	0.251	92.8	30.29	8.85
Mazowieckie	1.47	0.417	93.3	50.68	14.40
Opolskie	0.75	0.203	91.0	28.37	7.68
Podkarpackie	0.78	0.210	93.4	29.62	8.00
Podlaskie	0.77	0.233	92.0	29.34	8.85
Pomorskie	0.84	0.243	91.3	33.31	9.67
Śląskie	0.86	0.232	92.6	23.88	6.49
Świętokrzyskie	0.74	0.219	92.4	24.07	7.17
Warmińsko-Mazurskie	0.69	0.201	90.7	27.35	7.98
Wielkopolskie	0.83	0.234	91.9	27.63	7.76
Zachodniopomorskie	0.59	0.198	91.3	27.23	9.18

Source: Calculations based on *The activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Investment expenditures calculated per SME in 2006 were the highest in Mazowieckie Voivodeship and amounted to ca. PLN 51 thousand. The figure was higher than the national average also in Dolnośląskie, Pomorskie and Łódzkie – respectively: PLN 38 thousand and PLN 33 thousand per SME each. The lowest

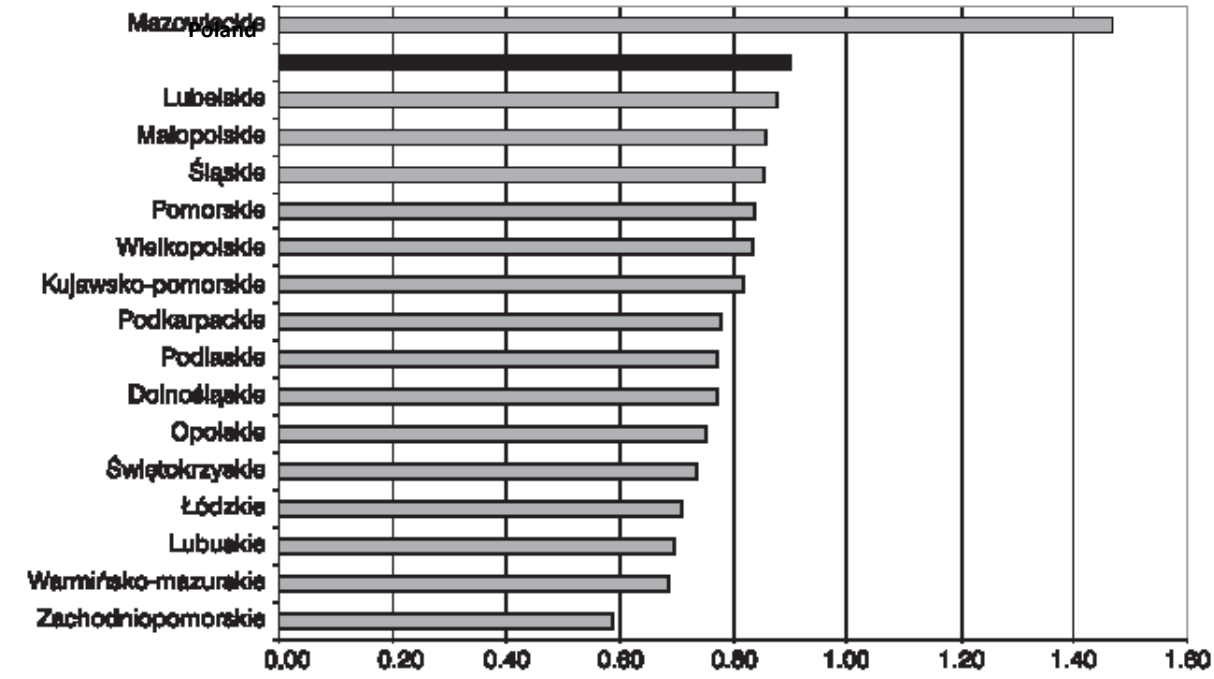
investment expenditures per entity in 2006 were characteristic of Lubelskie SMEs – ca. PLN 19 thousand per SME and Lubuskie, and Śląskie, which invested PLN 22 thousand and 24 thousand per enterprise respectively.

Chart 3.17.5. Investment expenditures per SME in 2006 in the regions; PLN thousand



Source: Calculations based on *The activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

Chart 3.17.6. Revenues from sale per SME in the regions in 2006, PLN million

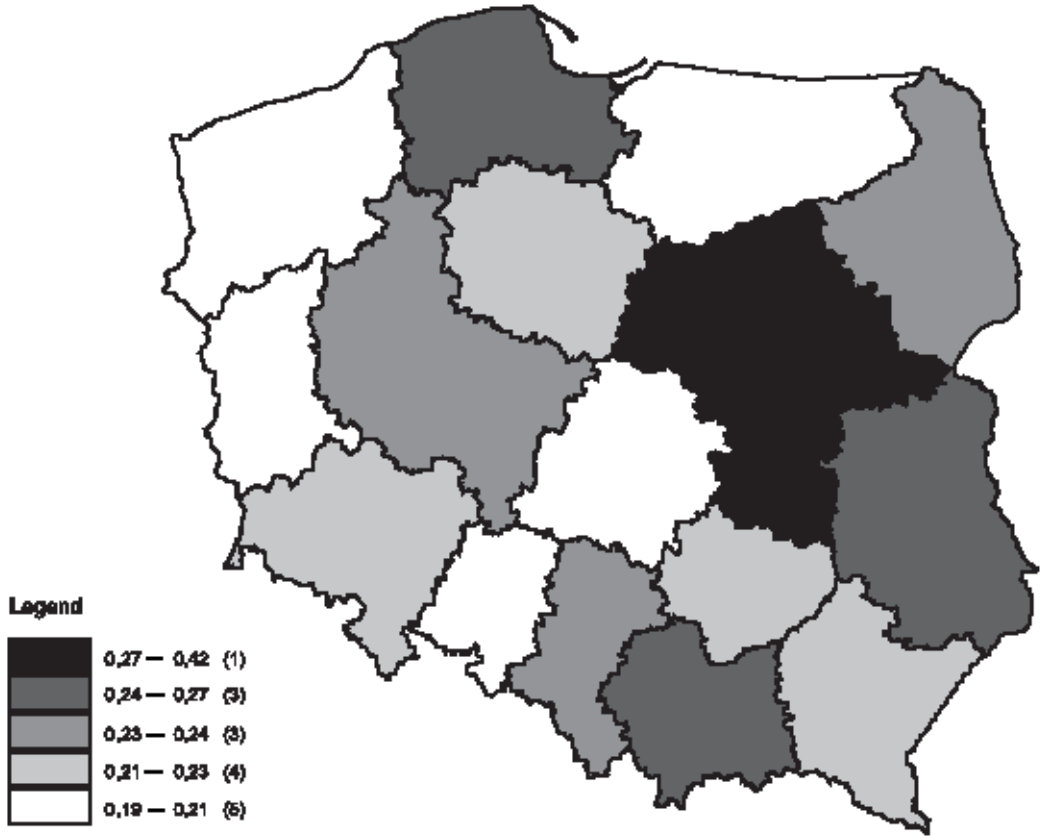


Source: Calculations based on *The activity of non-financial enterprises in 2006*, CSO (2008) Warsaw

The highest average revenues from sales in 2006 were registered in Mazowieckie SMEs – PLN 1..47 million per entity. As the result in all the other regions SMEs' revenues were below the average. However, it partially results from the fact that in Mazowieckie voivodeship some enterprises locate their central offices

while having local units in other regions. Relatively high revenues per small and medium-sized enterprise were registered in Lubelskie – PLN 0.88 million, as well as in Małopolskie and Śląskie – PLN 0.86 million per entity. The lowest average revenues from sales were in 2005 generated by SMEs in Zachodniopomorskie – PLN 0.59 million, as well as Warmińsko-Mazurskie, Lubuskie and Łódzkie – from PLN 0.69 million to PLN 0.71 million.

Map 3.17.3. Revenues per person working in SME in 2006 (PLN million)

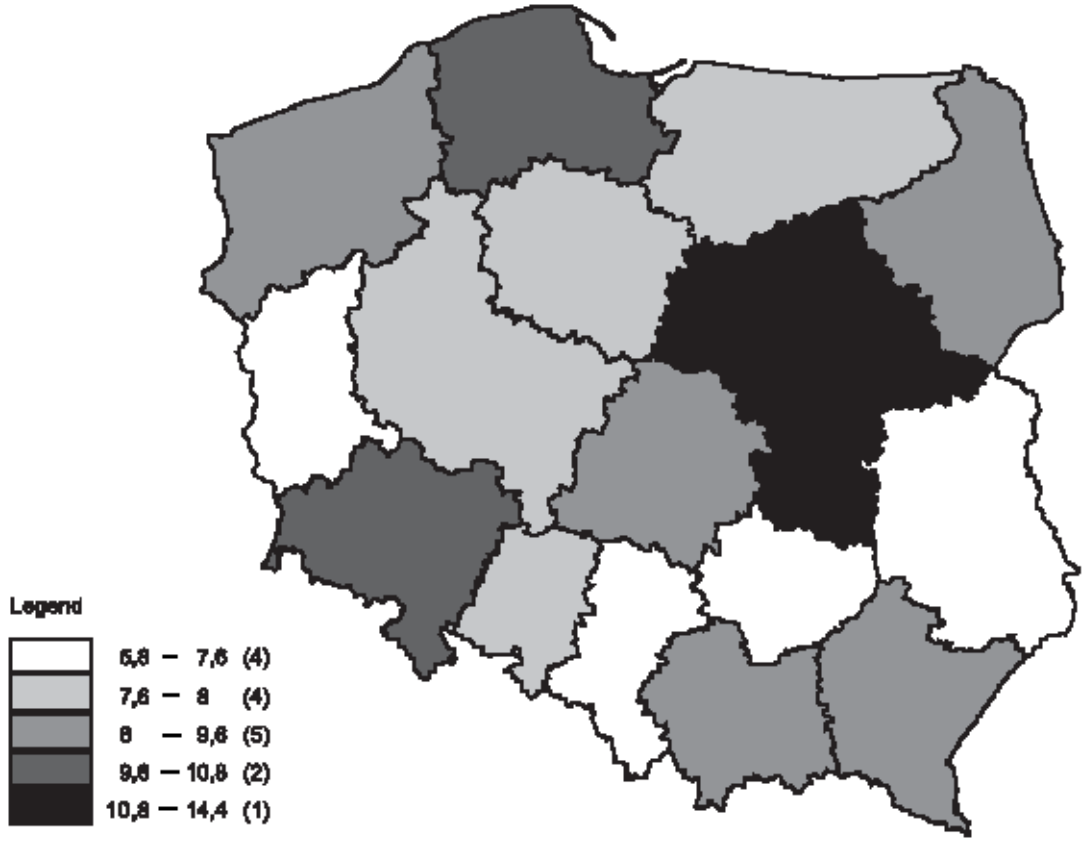


Source: Authors' calculations based on CSO data

If compared with the number of working persons, the highest revenues from sales were characteristic of Mazowieckie SMEs – PLN 0.42 million and Lubelskie – PLN 0.26 million, while the lowest – Lubuskie, Łódzkie, Warmińsko-Mazurskie, Zachodniopomorskie and Opolskie – ca. PLN 0.2 million. Investment expenditures in relation to the number of working persons were the highest in Mazowieckie, Dolnośląskie and Pomorskie voivodeships – from PLN 14.4 thousand to PLN 9.7 thousand. The lowest investment expenditures per working person were those of SMEs in the following voivodeships: Świętokrzyskie, Śląskie, Lubuskie and Lubelskie – respectively from PLN 7.2 thousand to PLN 5.9 thousand.

The lowest costs, i.e. the ones constituting 91% of revenues form sales, in 2006 were characteristic of SMEs in the following voivodeships: Lubelskie, Warmińsko-Mazurskie, Opolskie and Kujawsko-Pomorskie. The highest cost index was characteristic of operating small and medium-sized enterprises in Podkarpackie and Mazowieckie – over 93%. Cost index higher than the national average of 92.3% was registered also among the SMEs in Świętokrzyskie, Lubuskie, Śląskie and Małopolskie voivodeships.

Map 3.17.4. Investment expenditures per person working in SME in 2006, PLN thousand



Source: Authors' calculations based on CSO data

Synthetic index

The synthetic index was developed on the basis of the region's place in 26 voivodeships rankings presenting changes of variables concerning the level of entrepreneurship development, as well as performance and investment activity of micro-, small and medium-sized enterprises in a given voivodeship in 2006. The following variables were included:

- Operating enterprises per 1 000 inhabitants: micro, small and medium-sized;
- Working persons per operating micro-, small and medium-sized entity;
- Persons working in operating micro-, small and medium-sized entities per 1 000 inhabitants;
- Revenues per operating micro-, small and medium-sized entity;
- Revenues per person working in micro-, small and medium-sized entity;
- Cost index in micro-, small and medium-sized entities;
- Average gross wages in small and medium-sized entities;
- Investment expenditures per micro-, small and medium-sized entity;
- Investment expenditures per person working in micro-, small and medium-sized entity.

The synthetic index was developed according to the formula:

Synthetic index = (p*n-x)*100/max

n – number of variables
x – number of points for variables being the sum of region's places in individual sub-rankings
p – number of places in a ranking
max = (p*n-x) – the maximum number of points which can be obtained in the case of having the first place in all the sub-rankings

The result corresponds with the region's level of realising the maximum result, i.e. having the first place in all sub-rankings[42]. On the basis of the score obtained, a final ranking of regions according to the level of development and performance of the SME sector in 2006 was created.

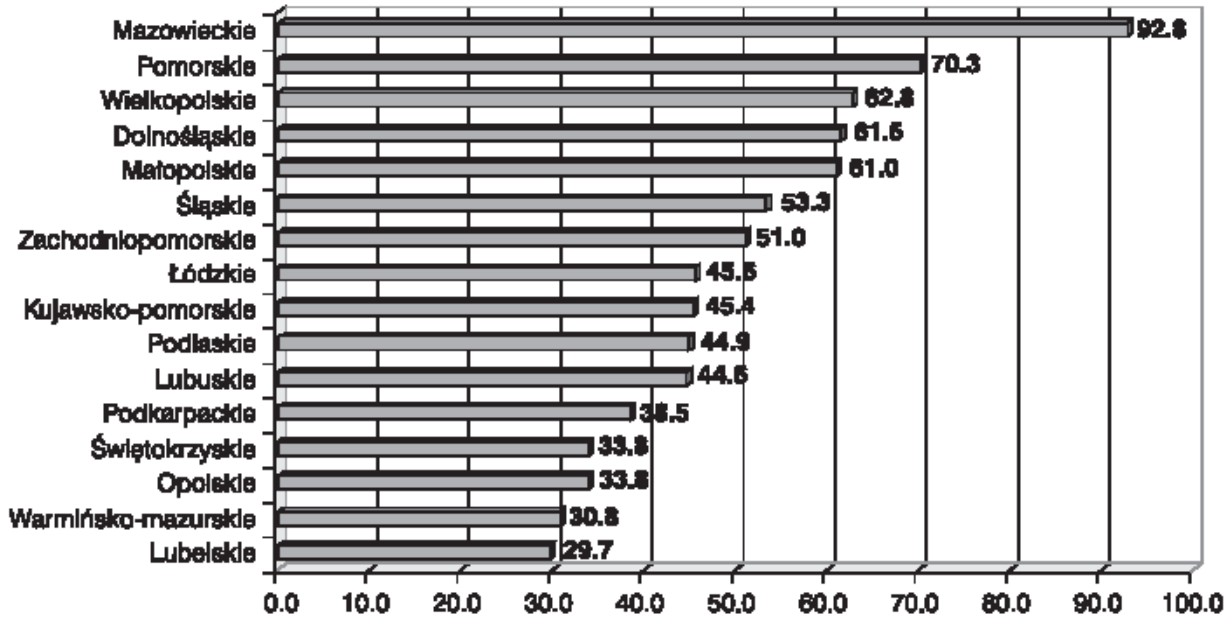
The best chances of having the first place in all 26 sub-rankings were realised by Mazowiecki region – almost 92%. Its SME sector in size classes in 2006 was characterised by high performance, both in terms of revenues and investment activity, as well as cost level. Entrepreneurship in the region is highly developed. The second place was that of Pomorskie Voivodeship, which realised 71% of chances of being the leader in all rankings. In 2006 also the SME sector of Wielkopolskie, Dolnośląskie and Małopolskie voivodeships had high performance – the value of the synthetic index was between 62.8% and 61%.

Over 50% of chances for the highest scores in 26 rankings were realised also by the SME sector in Śląskie and Zachodniopomorskie.

Fairly low level of SME development and performance in 2006 was characteristic of Łódzkie, Kujawsko-Pomorskie, Podlaskie and Łódzkie, which realised ca. 45% of chances for the highest scores in the sub-rankings.

In 2006, the least developed and characterised by the lowest performance was the SMP sector in agricultural, poorly urbanised regions, i.e. in Podkarpackie – the value of the synthetic index: 38.5%, Świętokrzyskie – 33.8%, Opolskie – 33,8%, Warmińsko-Mazurskie30.8% and Lubelskie – 29.7% voivodeships.

Chart 3.17.7. The level of development and performance of the SME sector in the regions in 2006 – synthetic index (%)



Source: Authors' calculations based on CSO data

[42] E. Wojnicka (2007) *Klimat koniunktury dla rozwoju przedsiębiorstw w gminach Podkarpacia i Lubelszczyzny* in: E. Wojnicka, ed.
(2007) *Koniunktura konsumencka na poziomie lokalnym w podkarpackim i lubelskim. Raport III*, Institute of Economics at the University of Information Technology and Management in Rzeszów; www.e-barometr.pl

Part II

The factors of enterprises' development and competitiveness

Chapter 4
Competitiveness factors of the SME sector

The subject of the research conducted for Polish Agency for Enterprise Development in the middle of 2008[43] was the issue of factors determining the SME sector competitiveness. The following three elements were subject to the study: enterprise resources (enterprise competitive potential was studied in view of such enterprise components as inter alia: technology, management, innovation, qualifications and knowledge of management board and workers), competing instruments used by enterprises to build a competitive position as well as the mechanisms and sources of enterprise competitive advantage (together with the ex post and ex ante evaluation of SME sector enterprise competitiveness in view of the future development potential).

Market competitiveness of an enterprise is affected by numerous mechanisms and internal factors inherent in the enterprise, as well as the external ones, existing in the environment. It can be understood as *inter alia*:

- ability to develop
- ability to generate benefits
- ability to generate profits
- ability to gain competitive advantage

It was assumed during the research that creating the competitiveness potential by enterprises is a continuous process reacting to the changes in the market environment. Due to limited resources, enterprises should concentrate their means on the vital issues resulting from enterprise development strategy. The task of those instruments is to interest a potential customer with the enterprise offer so it is regarded as more attractive than the competitors' offer. The evaluation of competitiveness of the examined entities, based on the degree of adjusting the used competitiveness instruments to their potential may allow for better implementation of market competitiveness strategy.

The achievement of the targeted competitiveness position is conditioned by holding competitive advantage. The competitive advantage may be thus understood as enterprise's better position in the section, achieving better results, the ability to perform better than the competitors. The enterprise and its competitors' pursuit to achieve the competitive advantage is one of the forces which will contribute to the development of competitiveness and will also motivate enterprises to even more intensive activities in competitive processes.

It was also assumed during the research that the competitiveness improvement occurs when the enterprise develops (increases the sales revenues, profits), allocates resources for investment, implements new solutions, observes and knows the current market well, attempts to enter new markets, optimistically evaluates its development perspectives. It is obvious that neither of these elements guarantees a strong competitive position or the improvement of competitiveness, yet their occurrence is the necessary condition for a positive assessment of competitiveness of an enterprise or the whole sector. It is acknowledged that the ex post competitiveness influences ex ante competitiveness and the key factor is the development of each of the enterprises. The development achieved in the last period strongly influences the competitive position of the enterprise (ex post competitiveness). The development targeted, treated as one of the main objectives of enterprise's activity, is an important element of ex ante competitiveness. Enterprise development is on the one hand dependent on its current situation, position on the market and previous expenditures, and on the other it is dependent on the perceived chances on the market as well as expectations concerning the future shape of the market.

[43] Study entitled "The analysis of SME sector competitiveness factors" was carried out for Polish Agency for Enterprise Development by PENTOR Research International and The Gdańsk Institute for Market Economics. The study was carried out on a representative random-quota sample of SME sector enterprises in Poland –sample size N=1000.

During the study the following factors were also taken into account: market information, research and development activity, marketing or corporation culture. These factors are important in the process of development of enterprise competitiveness, nevertheless, usually they were not taken into consideration in the research on Polish SMEs' competitiveness. It could have been connected with the difficulties in measuring certain features or factors, or estimating their importance in the SME sector as lesser in regard to enterprises in general. Those factors have been taken into consideration in the research discussed in order to analyse their actual role in shaping competitiveness of small and medium sized enterprises.

4.1. The increase in Polish SMEs' competitiveness

The data obtained in the research suggest that Polish small and medium-sized enterprises systematically increase their competitiveness. It is indicated by the analysis of factors by which enterprises compete, among which the quality of products/services has an increasing importance while the significance of price competition decreases. The growth rate of sales revenues registered in Polish small and medium-sized enterprises – over a half of them noted an increase in revenues in recent years – also indicates the improvement in competitiveness. It should be highlighted that the results of the study show that the volume of SME sector entities revenues is connected with the size of an enterprise, what can be proved by the fact that the annual revenues of every fourth micro-enterprise do not exceed PLN 100 000. Subsequently, among small enterprises the major percentage (12%) declared revenues of PLN 1-4.99 million, while among medium-sized enterprises the majority (15%) had revenues of PLN 5-19.99 million. Revenues higher than PLN 20 million could be generated only by medium-sized enterprises. It is evident that micro-enterprises are often characterised by worse financial situation. It is partially reflected in the financial self assessment. Medium-sized enterprises expressed their satisfaction from their current financial situation most frequently – as much as 14% of them evaluated their financial situation as very well (to compare, only 3% of micro-enterprises expressed similar assessment). It should be noted that there is a relatively small number of entrepreneurs perceiving the problems connected with financing the current activity. The existence of such problems is declared only by one out of ten enterprises.

Despite a systematic improvement of SMEs' competitiveness, they continue to invest in their development only to a limited extent. In 2007 almost a half of enterprises incurred no investment expenditures. Micro-enterprises have the worst results in this respect, then fall small enterprises (27%) and finally medium-sized enterprises (18%). The reasons for limited scale of micro-enterprises investment activity are *inter alia*:

- limited capital they can allocate for development, one out of four micro-enterprises generates revenues lower than PLN 100 thousand
- noticeable lack of the need to invest in new technologies- as much as 16% of micro-entities considers new technologies completely unimportant in the scope of their enterprise's activity of, and 27% considers it as being of little importance.

The fact that micro-enterprises perceive no need to invest may be surprising, especially since one out of ten micro-enterprises estimates that its technological advancement level is lower than other Polish enterprises' average, and more than a half (56%) evaluates its advancement as being close to that average. However, it should be noted that every fifth micro enterprise was not able to asses its own technological advancement in relation to competition. This situation may result from entrepreneurs' limited knowledge concerning the technologies currently applied on the market.

The scope and character of investments taken up by SMEs depend on: enterprise size, the market they operate on, the scale of competition, their revenues and section. Small and medium-sized enterprises most frequently invested in purchasing embodied technology in form of machines and technical equipment (9%), software (18%) and means of transport (15%). A significantly lower percentage of enterprises was involved into purchase (or construction) of buildings, premises, civil engineering facilities (3%) and the purchase of land (2%). Very few enterprises (1%) were interested in investing in own research and development works or the purchase of external R&D works. Thus it is visible that Polish SMEs still to a limited extent invest in new

technologies and implement innovative solutions on the section scale. It is caused by the unquestionably lower risk of investments in machines and equipment, as compared with investments in purchasing technology or in research and development works. Smaller enterprises (having limited financial reserves) frequently cannot afford to undertake such risk. Another reason for limited technology investments is the fact that return on such investment is gained often after a longer period of time, while the majority of SMEs - especially smaller units- concentrates on the current activity and fails to develop long-term plans of activities. The lack of capital results in the situation that innovations implemented in enterprises are mostly incremental innovations and organisational changes. Merely one out of six enterprises decides to implement considerable changes into their products.

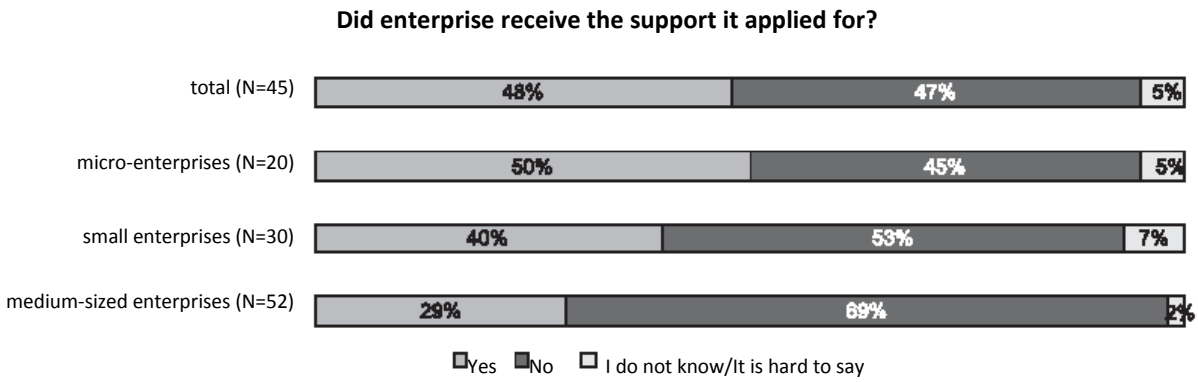
The scope and character of investments taken up by particular enterprises are positively correlated with enterprise size, the risk of its activities, the scale of competition and enterprise's sales revenues. The larger the enterprise, the wider the market it operates on, the stronger its competition and the higher its sales revenues – the more frequently it undertakes investment activities. It is reflected in the share of sales revenues allocated for investment activities. Micro and small enterprises, having a limited scope of activities, most often allocate less than 5% of their revenues for investment activities. In contrast, larger enterprises more frequently decide to allocate over 6% of their revenues for this purpose (one out of ten enterprises allocates over 30% of revenues for investments).

A certain regularity in the structure of sources of financing among SMEs can be noticed, i.e. the fact that larger enterprises relatively more frequently use external sources of financing.

The research indicates that ¾ of enterprises finances investment activities from the their own resources (77%). Smaller enterprises less frequently use external sources of financing (such as: bank credits or public funds), in turn they more frequently gain resources from their acquaintances or family. Larger enterprises relatively more frequently than smaller enterprises finance their activities from credits, public funds or by using venture capital fund (such as *Venture Capital*, *Business Angels).* It is connected with the fact that medium-sized enterprises more frequently make an effort to gain public support and receive it more often. The results of the study indicate that only one out of four enterprises declares taking up efforts to obtain public support, whereas the level of engagement of particular enterprises rises proportionately to their size. One out of two enterprises (47%) received the support it applied for. Relatively most frequently (71%) efforts to obtain support were successful in case of enterprises from the voivodeships with the highest level of investment attractiveness.

Moreover, the study indicates that enterprise size is to a large extent connected with the character of activities the enterprise applied for to gain public support. About 90% of micro-enterprises applied for grants for investments, 40% for trainings, 10% for the purchase of licenses and know-how, and 5% for research and development works. Medium-sized enterprises relatively more frequently focused on "soft instruments", such as consultancy (17%) and trainings (35%), and also on innovation activities, namely R&D works (5%) and development of technology (2%). It is surprising that none of the medium-sized enterprises participating in the survey applied for funds in order to purchase licenses and know-how. This aim was more frequently mentioned by small and micro-enterprises. About half of enterprises received the public support they applied for. It should be noticed that the most successful in this respect were larger enterprises, among which c.a. 69% received the support (to compare, among small enterprises – 53% and among micro-enterprises – only 45%).

Chart 4.1. The success in support applications.



Source: PENTOR, The Gdańsk Institute for Market Economics *The Analysis of SME Sector Competitiveness Factors*

Medium-sized enterprises also more frequently declared that they plan to apply for public support. The reason for not using the external sources of financing is the lack of perceived need. The difficulties in obtaining the EU funds as well as the assumption that the costs of a credit would be too high for the enterprise, were also mentioned among the barriers in this respect. Moreover, a significant problem is that of a limited knowledge of entrepreneurs, e.g. not knowing the rules and regulations in force and difficulties in obtaining such information, e.g. from consultancy. It should be highlighted that micro-enterprises pointed to the problems of limited knowledge or a lack of available information support relatively more frequently.

Entrepreneurs surveyed by PENTOR declared that the value of investment expenditures in 2008 did not change significantly in comparison with the previous year – the highest percentage of enterprises declared the change ranging from 1 to 10%. Among the factors, which most radically influenced the limitation of SME investment activities during the last two years, entrepreneurs mentioned the lack of access to the capital for investments (33%), high risk of legal changes and a resultant functioning instability (27%) and the lack of demand on the market (24%). The barriers identified were reflected among the factors indicated by entrepreneurs, which could encourage enterprises to undertake investment activities –enterprises could be stimulated by lower costs (higher profitability), lower risk of investing and greater demand for produced goods/provided services.

One of the problems revealed in the study results, is a highly restricted market domestic SMEs operate on. As much as 63% of enterprises stated that they operate on the local market, and merely few percent sell their products on foreign markets. Another problem is the quality of management, organisational structures, competence of the management staff and the lack/poor quality of collecting and analysing the market data.

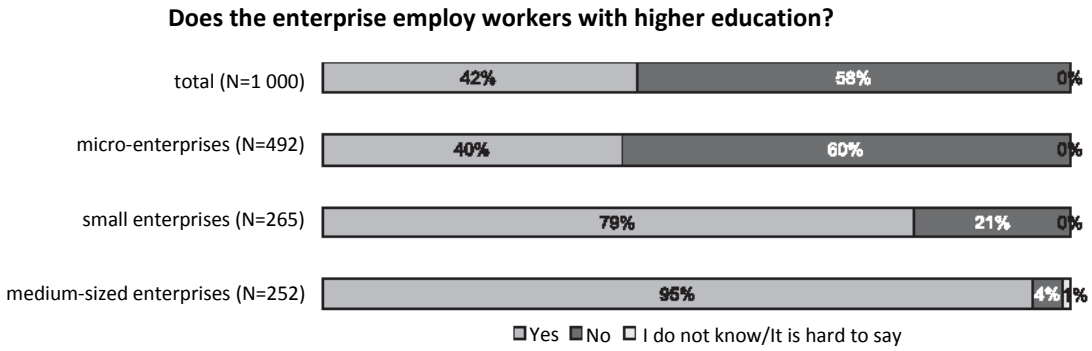
4.2. Human resources and management system in enterprise competitiveness

As far as the role of the personnel's quality in the process of enterprise development stimulation is concerned, the attention should be drawn to two factors: employing personnel with higher education as well as management staff experience of working in a foreign corporation. In both abovementioned areas, higher more active were the enterprises which:

- generated higher sales revenues,
- more frequently cooperated with R&D units,
- are competitive on international scale,
- more frequently undertake innovative activities.

More than half of SMEs do not employ workers with higher education. It is applicable particularly to micro-enterprises, which are visibly distanced form other entities in this respect.

Chart 4.2. Employees with higher education versus enterprise size



Source: PENTOR, The Gdańsk Institute for Market Economics *The Analysis of SME Sector Competitiveness Factors*

Moreover, over a half of micro-enterprises (52%) declares that the personnel together with the management staff participate in professional trainings less frequently than once a year or do not participate in them at all – to compare, among medium-sized enterprises the figure was 15%. Relatively frequently the entrepreneurs from the SME sector have difficulties with finding workers with adequate qualifications. The research indicates that this problem concerns 36% of enterprises. Medium-sized enterprises encounter this barrier most frequently (52%), whereas least frequently – micro-enterprises which employ relatively more unqualified personnel.

Difficulties connected with finding workers with adequate qualifications relatively most frequently affect innovative enterprises (52%), those engaged in innovative activities (51%), operating on multi-regional markets (63%) and European/global (63%) market, intending to enter new market and established before 1989 (55%). The problems with finding adequately qualified personnel are mentioned by 44% of enterprises employing workers with a higher education.

The enterprises from voivodeships with the highest level of investment attractiveness have relatively the least difficulties with finding properly qualified personnel (32% of answers).

A negative relation between the level of difficulty in finding personnel with higher education and the size of the locality where the enterprise is registered is also noticeable. The smaller the locality, the greater the management's problems with employing properly qualified workers.

The process of organisation management, i.e. among others, the structure of management staff significantly affects enterprise development. It particularly concerns micro-enterprises, in 81% managed by one person (the owner), while for small enterprises the percentage is 49%, and for medium-sized ones – 21%. In the case when one person is responsible for the whole decision making process connected with organising all areas of enterprise activity, the development may become a secondary issue due to the necessity to focus on the current activity. The problem affects especially the enterprises in which the owner alone constitutes the management staff. Naturally, this situation affects mainly micro-enterprises (in which it is difficult to assign an additional person to management), but it also concerns larger enterprises, which recently expanded from small enterprises, yet so far failed to develop properly the enterprise management structure. These enterprises often operate only on a local/regional market and on a daily basis they contact with a limited number of co-operators (suppliers/customers – often being at a similar stage of development). This thesis is reflected in the research conducted – enterprises managed by one person were characterised by *inter alia*:

- limited market – as much as 68% of enterprises operating on a local/regional market were managed by one person;
- lower innovation awareness – the share of entrepreneurs who were not able to clearly state if they conduct innovation activities at all was relatively high, the scope of cooperation with the scientific

environment was limited, relatively more frequently the enterprises lacked a separate R&D unit and did not plan the enterprise expansion onto new markets (geographic or customer segment);

- lower level of employees' education;
- lower involvement in obtaining public support.

A considerable improvement in the scope of innovation activity may already be observed when an employed manager is responsible for the organisation of enterprise, however, the enterprises most active in the scope of innovation are those managed by several persons responsible for particular areas.

4.3. Knowledge management in the SMEs surveyed

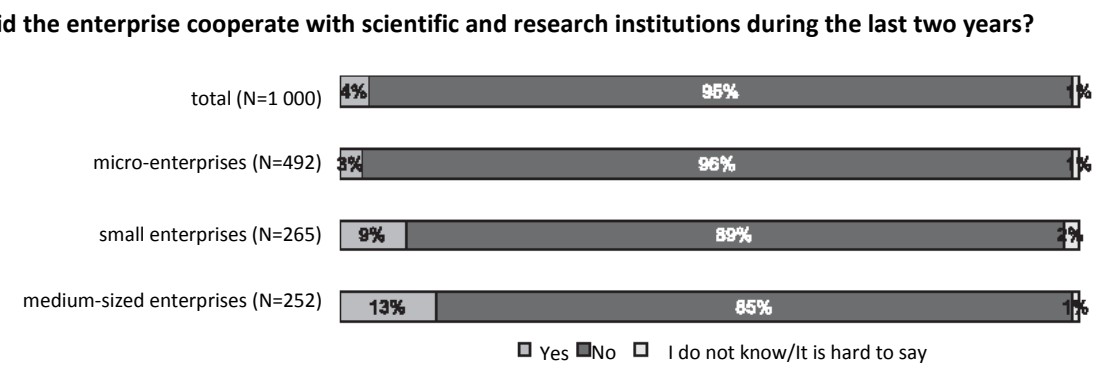
The results of the research also indicate that a considerable number of small and medium-sized enterprises has a limited knowledge concerning the competitive environment and their own competitive potential in comparison with other enterprises. It is caused by the fact that firstly: enterprises (especially those operating on a local/regional market) contact only with a limited number of business partners (most often with a similar potential) and secondly – the majority of enterprises do not conduct (or commissions) any studies or analyses of the market on which they operate. The majority of enterprises collects no information concerning customer needs or external environment, thus having a limited knowledge of the market. Few enterprises undertake any marketing activities, which influences the process of building their competitiveness advantage over their competitors. As a consequence they rarely operate on foreign markets, since they are unable to compete with enterprises functioning on international market. This leads to a paradoxical situation when smaller enterprises operating on local markets estimate their competitiveness better than enterprises operating on international markets.

Generally, it should be stated that SMEs are on different stadia of development, involvement into investments and innovation. It should be also stressed that a part of entrepreneurs is not interested in the development of their enterprise. They are mostly concerned with its survival - functioning in the current form. More than 60% of enterprises participating in the research pointed out that their goal for the next two years is maintaining their current position on the market. Such attitude is more frequent among smaller enterprises which often operate on local markets and compete by means of price.

The results of the research indicate that Polish SMEs are diversified in terms of using ICT. Micro-enterprises are behind other entities in this respect. For instance, 90-99% of small and large enterprises use computers and the Internet in their activity, whereas among micro-enterprises the figure ranges from 70% to 79%. It should be noted that the level of advancement of ICT tools used, such as own webpage or a local computer network increases with enterprise size. A similar trend can be noticed in the scope of the Internet or specialist software use. The common use of office applications (e.g. Microsoft Office) is the only feature showing a small diversification in relation to the size of an enterprise. However, in case of using specialist accounting software, production management systems and other programs supporting enterprise management, micro-enterprises are characterised by a considerable backwardness in comparison with larger enterprises.

The results of the research indicates that over ¾ of SMEs conducts no activities in order to develop/implement new or significantly enhanced products/services. Only 5% of enterprises has a separate unit permanently occupied with the development of new services or particular workers are assigned to this task. About 4% of enterprises cooperated with research units during the last two years, while 95% of enterprises which did not cooperate declared no changes concerning future in this respect.

Diagram 4.3. SMEs cooperation with scientific and research institutions



Source: PENTOR, The Gdańsk Institute for Market Economics *The Analysis of SME Sector Competitiveness Factors*

The enterprises relatively more frequently involved in R&D works (internal and external) are in the first place enterprises which:

- aim at the expansion on new markets (segments, customers),
- compete with rivals operating abroad,
- employ workers with higher education,
- generate relatively high revenues,
- employ workers with foreign corporation experience,
- cooperate with other enterprises form their section.

The insignificant role of R&D units in SMEs' activity is also reflected by a relatively small share of research expenditures in the total amount of financial resources allocated for investment activity. What is more, scientific environment is considered not very important information source by the majority of SMEs.

Polish small and medium-sized enterprises focus on collecting information from their closest environment including: customers, suppliers and competitors. Open sources such as: magazines, trade fairs or specialised exhibitions are fairly important in this respect. Universities and R&D units are not regarded as valuable information source –over half of SMEs characterised them as entirely unimportant, while 19-22% considers them as having little importance. Appreciating the informative role of scientific units increases with the size of an enterprise.

The nature of cooperation with enterprises from the section with respect to new products and services development is diversified in terms of enterprise size. Every tenth enterprise was undertaking cooperation with other enterprises from the sector with respect to new products and services development. What should be mentioned is that the scope of such cooperation was diversified in terms of enterprise size. The analysis of the research results reveals that larger enterprises were more frequently undertaking cooperation in order to exchange experience/information (46%), which was significantly less popular among micro-enterprises (37%). Micro-enterprises predominantly expected from such cooperation the possibility of participating in trainings (22%) or conducting joint marketing research. The phenomenon of a limited scale of micro-enterprises cooperation is indicated also the fact that micro-enterprises are less frequently members of entrepreneurs associations.

The results of the study indicate that voivodeships with the highest level of investment attractiveness impose on enterprises the necessity to meet the requirements of a high competitive pressure.

4.4. Location factors versus SMEs' competitiveness

The enterprises from the region with the highest level of investment attractiveness[44] more frequently declared that there is more than ten major competitors operating on their market, whereas their competitive environment is characterised by a relatively higher rate of changes than it is in other regions. Those enterprises more frequently declare that their chief competitors come from the same region – it indicates that they are subjected to higher competitive pressure, and the section leaders are more frequently localised in the region. It is interesting that a relatively high competitive pressure affecting these enterprises' activities causes the entities to:

- be more interested in collecting information concerning the competitors' activities (different situation took place in case of enterprises from region D, which were more frequently involved in collecting information on customers' needs or suppliers' offer);
- more frequently describe the competition as a source of innovation significant for their activity;
- more frequently use instruments for protection against the competition (patents, design patterns and trademarks);
- more frequently point to the competition as the key factor that may decelerate enterprise development.

Enterprises localised in voivodeships with the highest level of investment attractiveness not only have better access to investment capital, but also more frequently decide to introduce innovations of a breakthrough nature. Those enterprises more frequently finance their activity from external sources of financing, more frequently use the support of banks and leasing enterprises. It should be mentioned that only these enterprises used venture capital funds (such as venture capital, business angels) and guarantee funds. It can de deduced that enterprises located in regions with the lowest level of investment attractiveness encounter difficulties in gaining access to external sources of financing – among the factors restricting their innovation activity they frequently declared 'lack of access to capital for investments'.

Regarding the investment activity of enterprises, it should be noted that enterprises from the region with the highest level of investment attractiveness differ from other enterprises in the scope of the character of introduced changes. They more frequently focus on implementing radical changes, such as introducing a new product/service on the market, whereas, they in fact less frequently aim at introducing improvements into the existing products/services (modernisation). It should be noted that enterprises more frequently develop the introduced changes independently.

Some interesting conclusions may be also drawn from the analysis of data collected during the research on SMEs localised in larger cities. They have an easier access to qualified workers, moreover, it is easier for them to enter into cooperation with the scientific environment. Enterprises localised in larger cities more frequently:

- use the commission of R&D works;
- decide to purchase rights in the form of a patents, licences, know-how;
- have certificates;
- have formulated strategies for development;
- employ workers with higher education;
- employ persons with experience in foreign corporation.

[44] A voivodeship classification into regions having different levels of investment attractiveness was used in the interpretation of the results. Every voivodeship belongs to one of four classes of voivodeships developed on the basis of investment risk levels, with class A – voivodeships with the highest level of investment attractiveness (Mazowieckie and Śląskie), class B – voivodeships with medium level of investment attractiveness (Wielkopolskie, Dolnośląskie, Zachodniopomorskie), class C – voivodeships with low level of investment attractiveness (Małopolskie, Lubuskie, Łódzkie, Pomorskie, Kujawsko-Pomorskie, Opolskie), class D – voivodeships with the lowest level of investment attractiveness (Podkarpackie, Warmińsko-Mazurskie, Świętokrzyskie, Podlaskie, Lubelskie)

The relations identified may prove that enterprises localised in lager cities have an easier access to qualified workers, moreover, it is certainly easier for those entities to enter into cooperation with a scientific environment.

4.5. SMEs' in contacts with customer

Regarding the character of relations with customer, the size of an enterprise, its market and section plays a vital role. Generally, ca. 44% of enterprises declares maintaining long-term contacts, while a similar share of enterprises declares keeping short-term relations. Long-term relations are more frequently maintained by the following enterprises:

- small and (predominantly) medium-sized,
- those which operate on international and European markets,
- service enterprises, such as R&D, IT technology, wholesale and retail trade.

It is should be underlined that micro-enterprises much more frequently than larger ones declare that the share of their major customer in their revenues does not exceed 1%. A similar trend can be also noticed in the share of their three major customers in their revenues. It shows that micro-enterprises are often not interested in long-term contacts with customer, as they base on the constant search for new customers. They are relatively less frequently concerned with customer satisfaction and meeting the demands of customers who at least once used their products or services.

A somewhat larger percentage cooperates with suppliers on a long-term basis (25%), however, similarly to the customer area – the enterprises which involve into a permanent cooperation are most frequently larger, more dynamic and innovative ones. Regarding the share of supplies provided by the major supplier, it should be noticed that micro- and small enterprises relatively more frequently than the medium-sized ascribe vital role in their activity to the major supplier, granting him over 50% of share in the enterprise supply, as well as they do not grant the major supplier the share exceeding 1% of the total supply. Nonetheless, the majority of medium-sized enterprises declares the share of the major supplier ranging from 21% to 50% of the supply. In addition, larger enterprises more frequently sign agreements with suppliers for more than one contract.

4.6. SMEs' competitiveness instruments

The research covered also the competitiveness instruments of the SME sector entities. The results of the study allow stating that high quality of goods was the dominating instrument. This factor has been described as important or very important by almost all enterprises surveyed. The quality was very important especially for enterprises selling products on a national (multi-regional) and European market and for the enterprises indenting to enter a new market either geographic or customer segment. Innovative enterprises or enterprises form service sector mentioned this factor more frequently .

Table 4.1. Competitiveness instruments

Enterprise market competitiveness instruments (from the most to the least important)	Average
The quality of the service provided	3.8
Strong reputation	3.6
The concern about individual customer needs	3.6
Providing the service quickly and on time	3.6
Permanent relations with customers	3.6
Having specialist knowledge or skills	3.4
Providing full range of services	3.4
Providing services at the lowest price	3.1
Complying with the standards and regulations	3.1
Introducing new services	3.o
Intensive marketing and promotion	2.9
Large number of distribution channels	2.8
Using advanced technologies	2.6
The organisational structure of the enterprise (e.g. number of branches)	2.4

Source: PENTOR, The Gdańsk Institute for Market Economics *The Analysis of SME Sector Competitiveness Factors*

A very important factor for the success of surveyed enterprises, placed after the quality, is their strong reputation. This competitiveness instrument was more frequently mentioned by enterprises introducing innovations and cooperating with other partners on the market (with research and development institutions as well as other enterprises). Much significance is also ascribed to the factor connected with the concern about individual customer needs. As an important competitiveness factor surveyed enterprises recognised also having a specialist knowledge or abilities. At the same time, over half of enterprises sends their workers to professional trainings less frequently than once a year or does not send them at all, while 1/5 – once a year at most. Enterprises attach relatively high significance to workers' competence, thus they begin to notice the importance of having personnel which allows for providing distinctive service on the market through a service system. SMEs, and in particular, micro-enterprises frequently operate on niche markets and on a small scale, therefore individual approach to every consumer as well as permanent relations with their consumers is fundamental for their activity. Innovative enterprises and those which cooperate with other partners are also noticeable in this respect.

The number of enterprises which deem providing products and services at the lowest price as a basis of their success is decreasing. Many enterprises still regards this factor as very important, however, it is presently not dominant, but only a supporting competitiveness instrument. The use of price as a competitiveness instrument very frequently entails losing some customers when the competitors offer a similar price. The possibility of offering a lower price to a large extent depends on the enterprise financial capacity, an advantage, which is fairly easily imitated.

The abovementioned factors indicate that the use of quality competitiveness instruments, such as quality, brand, or the range of products, acquires increasingly higher importance. However, a certain inconsistency can be noticed, as only 10% of enterprises has enterprise or product quality certificate. These are mainly ISO type certificates or specialist certificates for a given section. It is symptomatic that, according to publications on the subject[45], diverse and modern products are perceived as competitiveness instruments, while in case of the enterprises surveyed, the factors connected with introducing new products or using modern technologies were assessed as relatively unimportant (respectively $^1/_3$ and ½ of enterprises regards them as having little importance or having no importance).

[45] Stankiewicz M.J., *Konkurencyjność przedsiębiorstw. Budowanie konkurencyjności przedsiębiorstwa w warunkach globalizacji*, TNOiK "Dom Organizatora", Toruń 2002

The innovations introduced in enterprises had rather organisational character, concerning mainly the improvements of workers skills (1/5 enterprises declared it). Meanwhile only 15% of enterprises decided to introduce significant changes in their products. Every eighth enterprise decided to introduce changes in production technology and methods of cooperation with customers. Difficulties with localising the sources of innovations in the enterprise indicate the problem of little significance devoted to innovation. Over a quarter of enterprises is unable to determine the source of changes in their products and services. Currently, only every fifth enterprise conducts the activity aimed at developing new or considerably improved products. Only 5% of enterprises has a separate unit or personnel permanently responsible for developing new products or services.

The investments into new technologies in enterprise's scope of activity were estimated as unimportant or having little importance by half of the surveyed enterprises. Small significance of a competitive instrument concerning the use of advanced technologies is connected *inter alia* with enterprises' weak inclination to invest. Approximately half of enterprises made no investments the last year. The expenditures of enterprises which did invest were allocated on fixed assets, such as machines and equipment or means of transport, as well as software. Among the surveyed enterprises only several (ca. 1%) invested in their own research and development works or purchase of external works of this kind.

The competitiveness instruments related to the service e.g. ensuring an easy access to the product on the market or ensuring a convenient time and place for the product purchase, have also a small significance. The competitiveness instruments related to communication and information, including marketing, sales promotion and maintaining consumer contact programs, are also used to a limited extent. Less than half of enterprises undertakes any marketing activities, and enterprises which do, allocate for them less than 1% of their revenues. A thesis may be proposed that the majority of enterprises lacks adequate marketing skills, abilities in the scope of product designing, as well as building a positive image of the enterprise on the market.

4.7. Conclusions

Basing on the results of the research on applied competitiveness instruments, it can be stated that the surveyed enterprises inconsistently implement their competitiveness strategies. Additionally, as far as the role of quality is concerned, there are doubts whether the enterprises surveyed have the objective resources sufficient to ensure a higher quality of products than their competitors provide. Similarly, in relation to other competitiveness instruments, it can be noticed that their use is unsatisfactory. The surveyed entities fail to use such competitiveness instruments as: marketing and promotion or differentiation of products in comparison with the competitors' products (innovation).

The lack of using certain instruments is primarily caused by limited financial resources at enterprises' disposal. Moreover the lack of adequate competitiveness potential i.e. technological as well as research and development background results in the fact that enterprises very frequently base their competitiveness on short-term advantages. Therefore, competitiveness advantages generated by enterprises are prone to be imitated and the competitors surpass them easily. This is accompanied also by the factors connected with the lack of market knowledge and passivity of enterprises preoccupied with their current activity. In face of constantly changing environment enterprises should strive to use different, unique combinations of competitiveness instruments, which will support each other and ensure the achievement of synergic effect as well as their integrated operation. Basing the enterprise competitive advantage on a single competitiveness instrument, regardless whether it is of a quality or price type, does not guarantee market success in a longer perspective.

A surprising conclusion drawn from the research is the fact that micro-enterprises show the highest level of flexibility in adapting to consumer needs, which can be proved by the fact that the share of entities declaring exclusively production/providing products/services adjusted to consumer requirements is twice as high as the percentage noted among the medium-sized enterprises. It should be underlined that enterprises operating on domestic and, in particular, European markets relatively more frequently produce/provide standard services, and the enterprises operating on local/regional and multi-regional markets are the most

flexible in this respect. The flexibility of the offer is also connected with the age of an enterprise and the experience of the management staff – relatively young entities more frequently stress the importance of the ability to fulfil the individual customer needs.

Another conclusion resulting from the study is a limited extent of SMEs' activity formalisation. While analysing the results of the research, it should be stated that the level of formalisation of the SME sector entities' activity is highly limited. Every fourth enterprise bases its activity on informal principles of operation, and the formal system of quality management, e.g. ISO is implemented only in a small percentage of enterprises (3%). About 85% of enterprises, and among them a large percentage of micro-enterprises, declares that their products/services have no certificates. Among the certificates which Polish SMEs possess ISO 9000, ISO 18000 (safety and work hygiene), ISO 14000 (environmental) were most frequently mentioned. The share of enterprises which have a written enterprise activity strategy is also relatively small. On the one hand, formalisation may create an obstacle in stimulation of employees' creative behaviour. On the other hand, it may stimulate other aspects of developmental activity of the entity, e.g. formalised procedure of undertaking cooperation with scientific environment or other enterprises from the sector shall stimulate the processes of technology transfer between the both environments.

The conclusion concerning the lack of involvement of the SME sector entities into the process of systematic collection of information about its environment is also interesting. Over half of enterprises (52%) declares that it fails to systematically collect information about its environment.

The areas which are given the most interest by the enterprises in this respect relate to the closest environment of the enterprise – its market partners. A lot of attention is devoted to the issue of customer needs, whereas the future needs of customers interest mostly the enterprises which are:

- small and medium-sized,
- involved in investment activities,
- planning expansion on new markets,
- having a separate R&D unit,
- undertaking cooperation (with scientific units as well as other enterprises form the section).

The process of collecting information on the level of customer satisfaction with products/services provided by an enterprise is most frequently based on direct contact with a consumer and surveying his opinion. This way of collecting information was particularly common among micro- and small enterprises whereas, medium-sized enterprises more frequently involved into conducting marketing research.

With respect to the areas about which data are collected continuously, the entrepreneurs mentioned the area of supply market, as well as competitors activities and competitiveness instruments used by them. Although the majority of enterprises is able to approximately indicate the number of its major competitors, ca. 37% is unable to state how many new competitors entered the market during the last two years, and every tenth enterprise is not able to describe the strategies of enterprises operating on its market.

Chapter 5
Development potential of small and medium-sized enterprises in Poland

Development potential of Polish SME, viewed from the perspective of investment activity and its sources of financing, is high. It is indicated by continuous growth of capital expenditures in the previous years and entrepreneurs' trust for the external sources financing which reduces involvement of own resources. There are, however, certain aspects, which hinder Polish SME from using their full capacities thus they need to be improved – particularly in regard to micro- and small entrepreneurs' declarations concerning reducing investment expenditures in 2009-2011. In that context the factors such as inadequate use of strategic planning tools or considering the public procurement market unattainable should be noted. Support for the entrepreneurs in those fields can be defined as the priority for public institutions responsible for development and implementation of SME sector policy.

In the middle of 2008 Polish Agency for Enterprise Development commissioned a research on 802 small and medium-sized Polish enterprises (SME)[46]. The subject of the research was to review development potential of Polish small and medium-sized enterprises sector in the aspect of their investment activity. Development potential is a set of factors which enable an enterprise to maintain its position on the market and facilitate dynamic and multidirectional progress. It depends on enterprise's supplies and its ability to form optimal combinations of the supplies. Development potential thus refers to numerous aspects of conducting economic activity. The research provided basis for an analysis of the development potential of SME in Poland including the following elements:

- Size and structure of implemented investments
- Source of financing of the investment
- Use of instruments of strategic planning
- Polish SME potential in the context of public procurement
- External and internal factors – significant from the point of view of developing enterprises' potential

Table 5.1. Voivodeships division in regard to GDP – developed for the purpose of the research.

Voivodeships with GDP per capita lower than 40% of the EU-27 average (2004) – voivodeships of low level of development	
Voivodeship	GDP value as the % of EU-27 average
Lubelskie	35.2%
Podkarpackie	35.4%
Podlaskie	37.9%
Świętokrzyskie	39.3%
Warmińsko-Mazurskie	39.4%
Voivodeships with GDP per capita higher than 40% and lower than 50% of the EU-27 average (2004) – voivodeships of medium level of development	
Voivodeship	GDP value as the % of EU-27 average
Małopolskie	43.4%
Opolskie	43.6%
Lubuskie	45.4%
Kujawsko-Pomorskie	45.4%
Łódzkie	46.7%
Zachodniopomorskie	47.2%
Pomorskie	49.6%
Voivodeships with GDP per capita higher than 50% of the EU-27 average (2004) – voivodeships of high level of development	

[46] Research was conducted from April to June 2008 by PSDB LLC and GFK Polonia LLC

Voivodeship	GDP value as the % of EU-27 average
Dolnośląskie	51.7%
Wielkopolskie	54.5%
Śląskie	57.9%
Mazowieckie	76.8%

Source: Author's compilation based on EUROSTAT prognoses

For the need of research and further analysis voivodeships have been divided into three categories, which reflect their development potential: voivodeships with low level of development (average GDP per capita in 2004 was lower than 40% of the EU-27 average), voivodeships with medium level of development (average GDP per capita in 2004 constituted more than 40% but less than 50% of the EU-27 average), voivodeships with high level of development (average GDP per capita in 2004 was higher than 50% of the EU-27 average). In accordance with such method of division 31% of the examined enterprises operated in the area of voivodeships from the first category, 43% - from the second category and 24% - from the third category.

5.1. Investments activities of enterprises

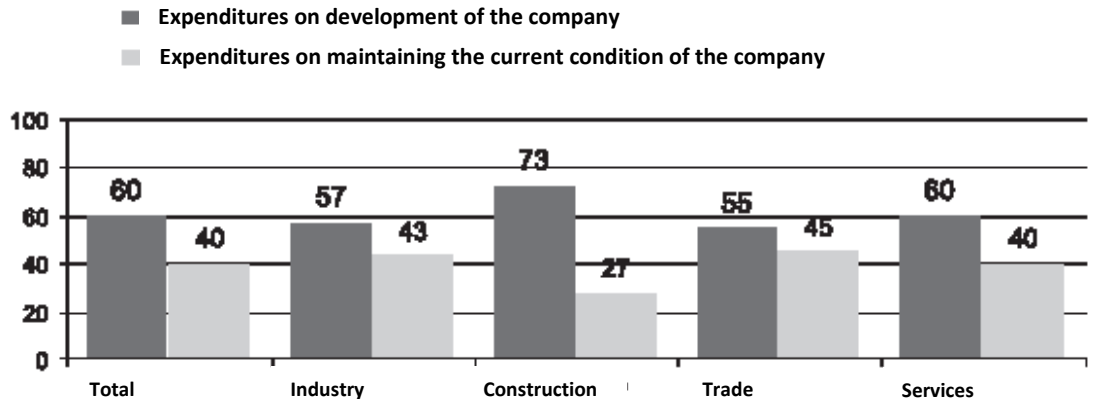
Structure and size of investments implemented in 2007

The majority of small and medium-sized enterprises invest in their companies. In 2007 as much as 86% of surveyed companies incurred expenses related to real estates, means of transport, machines and equipment or intangible and legal assets. Larger companies are more prone to invest. In the group of micro-enterprises, 14% of companies, in the group of small companies – 6% and in the group of medium sized companies – 1%. did not invest. The level of socio-economic development of the region in which the enterprise operates also influences the inclination to invest: 18% of companies located in regions with low level of development did not invest, while in voivodeships with the medium level of development 15% and in voivodeship with high level of development - 11% of companies did not invest.

In 2007 the investment expenditures of companies surveyed, on average, amounted to PLN 120.6 thousand (per company). The amount spent on investments depended on the size of the company examined. Companies from the group of micro-enterprises on average spent on investment PLN 100.8 thousand, small companies – PLN 371.4 thousand while medium-sized companies – PLN 1.8 million. The companies from the industrial section incurred the highest costs of investment expenditures (on average PLN 212.3 thousand), while enterprises from trade section spent the least (PLN 90.8% thousand).

More than half of all investments realized in 2007 by companies (60%) were aimed at development (the expenses were aimed at sale increase, introduction of new products or services or technology solutions). The remaining 40% of investments were of reconstruction character – their purpose was to maintain company's position on the previous level.

Chart 5.1. Investment aims by sections in 2007(%)



Source: PSDB, GFK *Final Report, Development Potential of Polish SME*

In 2007 entrepreneurs most often realized expenditures on purchase and refurbishment of machines and equipment (70%). Less often entrepreneurs invested in purchase or refurbishment of means of transport

(40%) and purchase of intangible or legal assets (38%). The lowest was the percentage of companies which decided to purchase or refurbish real estates (21%).

In 2007 investment capacity of companies continues to depend mostly on their size. It can be also noted that, the types of investments differ depending on what sector of economy the enterprise represents. Service companies statistically more frequently invested in intangible and legal assets, trade companies – in means of transport, while industrial companies – in purchase or refurbishment of machines and equipment.

In 2007 companies from voivodeships with the high level of development more frequently than the companies in voivodeships with low level of development invested in means of transport. Slightly more often they assigned expenditures for the purchase of intangible and legal assets. The companies operating in particular sector for more than 5 year, more frequently invest in the purchase or refurbishment of real estates, machines and equipment, whereas the intangible and legal assets are more often purchased by the companies which operate in the sector for at least 20 years. Companies from this category undertake an investment activity more frequently than younger companies.

Structure and size of investments realised and planned for 2008

According to declarations of the companies surveyed, in 2008 investments will be higher than in the previous year. Companies are planning to spend PLN 157 thousand (versus PLN 120 thousand in 2007) for diverse investments. Differences in the level of declared expenditures depend on the size of the company. By the end of 2008 micro-companies will on average assign PLN 134.9 thousand for the investments, small companies – PLN 415.4 thousand, and medium-sized companies – PLN 1.9 million. Trade companies will spend on average PLN 147.76 thousand, construction companies – PLN 142.1 thousand while service – PLN 128.4 thousand.

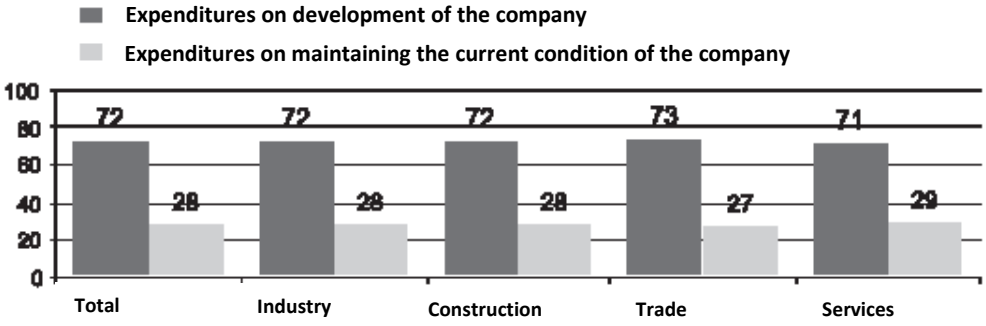
In 2008, companies operating in the voivodeships of the average level of development will invest the most – on average PLN 173.8 thousand. Entrepreneurs operating in the voivodeships of high level of development are planning to assign to this purpose on average PLN 157.5 thousand, whereas the companies operating in the voivodeships of low level of development will spent the least, on average – PLN 113 thousand.

In 2008, the percentage of enterprises implementing the pro-development investments will amount to 72% (versus 60% in 2007). The aim of investments in 2008 will be to maintain companies on the existing level.

Taking into consideration the division into sections, it may be stated that it has no significant influence on the aim of the investments conducted. In 2008 the pro-development investments are considerably more frequent in the voivodeships of high level of development. They are considerably less frequent in the voivodeships of medium level of development. It is important that the pro-development investments are more frequently declared by the entrepreneurs, who have a strategy for the company development (91%). However, the companies with no such strategy less frequently declare the pro-development investments (67%).

In 2008 the entrepreneurs will most frequently assign investment expenditures for the purchase or refurbishment of machines and equipment (49%). Fairly frequent will be the investments in the purchase or refurbishment of means of transport (40%) or the purchase of intangible and legal assets (25%). Less frequently companies will decide to purchase or refurbish real estates (17%). In 2008 the companies from voivodeships of the low level of development will less frequently invest in real estates than the companies from voivodeships of the medium level of development. The companies from voivodeships of the medium level of development will less frequently than other companies invest in means of transport.

Chart 5.2. Investment aims by sections in 2008 (%)



Source: PSDB, GFK *Final Report, Development Potential of Polish SME*

Entrepreneurs' declarations indicate that in 2008 nearly half of them is planning to assign more than in the previous year for investments. One out of ten entrepreneurs will maintain their expenditures on the previous level, while in 40% of companies a reduction of expenditures is expected. From statistical point of view, there are no significant differences in plans of investments. It can be noticed that the companies established prior to 1989 with a strong position on the market more frequently plan to cut spending on investments, whereas the companies established between 1999 ands 2004 are planning to increase the expenditures.

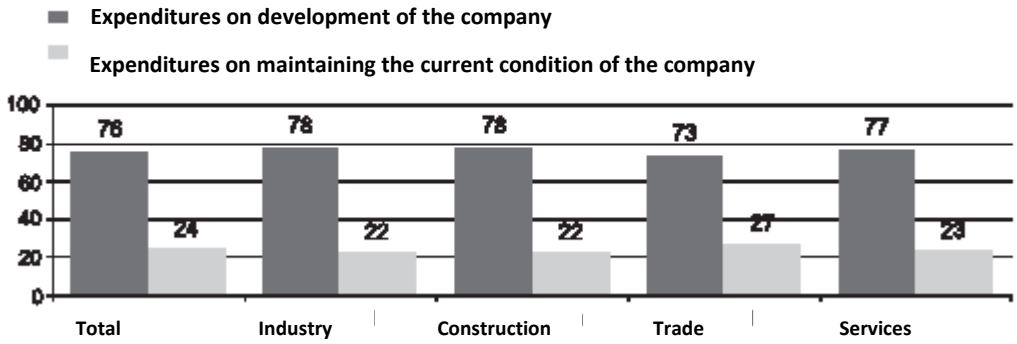
The main premise of increasing investment expenditures for 2008 is the improvement of company's financial condition. Other frequently defined premises are the new sources of financing, reduction of prices of the purchased goods and services. The reason for reducing investment expenditures is most frequently the lack of needs. Investment expenditures, from statistical point of view, do not differ significantly with regard to size of the company, sector of economy the company represents, region or time of being active on the market.

Structure and size of investments planned for 2009-2011

Representatives of surveyed companies are moderately optimistic while declaring their investment plans for 2009-2011. For this period investments are planned by 64% of small and medium-sized companies. Medium-sized enterprises plan to implement investments more frequently than all other companies surveyed (76%).Similar tendency occurs in the group of small companies (71%). The level of investments planned by micro-enterprises is the same as in the case of all other companies surveyed. Enterprises operating in the construction and the service sector more frequently plan to implement investments in 2009-2011 than the total of companies surveyed (respectively 73% and 69%). The situation is similar in the case of companies operating in the industrial sector (68%). However, the trade companies must be distinguished since considerably more often they claim that in 2009–2011 they will not implement any investments (46%).

In 2009-2011 companies are planning to spend on investment an average of PLN 402.1 thousand. Comparing the declarations to 2008 it can be stated that in 2009-2011 on the yearly average Polish SME will be spending less. It is a reversed tendency compared to the one observed in 2007 and 2008. It can be also noted that the expenditures differ depending on the size of the company. In 2009-2011 micro-companies will assign on average PLN 336.4 thousand, small companies – PLN 649.2% and medium-sized companies – PLN 8.2 million. In the group of medium-sized companies the yearly average of investment expenditures will be higher than in 2008, thus their attitude towards investments is optimistic. In 2009-2011 the companies operating in voivodeships of high development level are planning to invest PLN 542.7 thousand. The entrepreneurs operating in voivodeships of medium and low levels of development are planning to invest on average PLN 249.2 thousand and PLN 217.1 thousand respectively. That is less than the total of companies surveyed. In 2009-2011 over ¾ of the investments planned for 2009-2011 will be of pro-development character (76%). The aim of 24% of the investments will be to maintain the company on the existing level.

Chart 5.3. Investment aims in particular sectors in 2009-2011 (%)



Source: PSDB, GFK *Final Report, Development Potential of Polish SME*

In 2009-2011 entrepreneurs will most frequently assign expenditures for purchase or refurbishment of machines and equipment (48%). Fairly often they plan to invest in purchase or refurbishment of means of transport (35%) and purchase of intangible or legal assets (22%). Less frequently companies decided to purchase or refurbish real estates (20%).

The number of plans regarding implementation of pro-development investments depends on the level of region's wealth. In 2009-2011 pro-development investments are most frequently planned in voivodeships of medium and high level of development (78% and 77% respectively). Investments of such type are less frequently planned in voivodeships of low level of development (71%).

Investments in intangible and legal assets, which in most cases (2/3) are regarded as pro-development ventures, should be underlined.

Entrepreneurs' declarations indicate that 46% of companies which plan to invest in intangible and legal assets, will spend more for that aim in 2008 than in 2007. 32% of entrepreneurs will spend less and 21% will maintain their spending on the same level. The main reason for increasing expenditures on intangible and legal assets are is the intention to enhance the market offer (14%), surviving on the market (13%), new possibilities of financing (12%) or reducing the prices of intangible and legal assets (10%). Due to improvement of their financial situation companies from the construction section much more frequently increased expenditures on the abovementioned aims. Service companies will spend more on intangible and legal assets due to expanding their offers.

Favourable tendency for investment activity in SME sector, noted in 2002–2004 and 2004–2206 will continue. Average value of investment expenditures in 2008 will be higher than in 2007. The results of the research on prognoses concerning the value of investments in 2009–2011 indicate that in that period yearly average expenditures on investments of micro- and small companies will be lower than in 2008. This will not apply to medium-sizes enterprises since their expenditures in all analysed periods will be increasing. It refers particularly to years 2009–2011 when yearly average of expenditures will amount to more than PLN 2.7 million. Compared to the previous periods this will be a significant increase.

Table 5.2. Average level of investment expenditures with regard to the size of an enterprises , elaborated on the basis of survey research (PLN thousand)

Size of the enterprise / Years	2007	2008*	2009–2011*
Micro	100.8	134.9	336.4
Small	371.4	415.4	649.2
Medium-sized	1 800	1 900	8 200

Source: PSDB, GFK *Final Report, Development Potential of Polish SME*. In 2007 for micro-companies n=239, for small companies n=198, for medium-sized companies n=117. In 2008 respectively n=229, n=166, n=104. In 2009–2011 respectively: n=149, n=119, n=73.* Prognosis concerning the value of average expenditures (in 2009–2011).

While referring to the structure of the planned investments and the investments that are implemented, it should be noted that in the upcoming years there will be a tendency of increasing investment expenditures for the purpose of development (expenditures on increasing sales, introducing new products or services or technological solutions) while reducing reconstruction expenditures (investments aimed at maintaining company's previous level).

Table 5.3. Aims of investment on the basis of survey research (the %of investment expenditures – total)

The aim of investment / Years	2007	2008*	2009–2011*
Development investment	60	72	76
Replacement investment	40	28	24

Source: PSDB, GFK *Final Report, Development Potential of Polish SME*. Number of investments in 2007 n=1570, number of investments in 2008 n=1114, in 2009-2011, n= 1055. * Prognosis.

The research conducted indicates, that most frequently investments will be connected with the purchase and refurbishment of machines and equipment, however it must be noted that in 2008 and 2009–2011 undertaking such type of investments by entrepreneurs will be significantly less frequent than in 2007 (decline from 70% in 2007 to 45% in 2009–2011). Purchase and refurbishment of means of transport is indicated as second most frequent investment – implemented or planned. Less frequently entrepreneurs decide to invest in intangible and legal assets (just as in the case of purchasing and refurbishing machines and equipment a decline of such type of investments can be noted while comparing 2008 and 2009-2011 to 2007).The least frequent are investments in purchase and refurbishment of real estates.

Table 5.4. The most and the least frequent investments on the basis of a survey research (%)

The aim of investment/Years	2007	2008*	2009-2011*
Purchase or refurbishment of machines and equipment	70	49	45
Purchase or refurbishment of means of transport	40	28	33
Purchase of intangible and legal assets	38	25	22
Purchase or refurbishment of real estates	21	17	20

Taking into account geographical diversity, it must be noted that in 2007 the percentage of companies which did not undertake any kind of investments amounted to 18% in the case of companies located in the regions of low level of development, 15% – medium level of development and 11% – high level of development. However, while analysing investment activity of the enterprises with regard to their location, it can be noted that enterprises operating in voivodeships of high level of development in the following periods analysed will increase an average value of investments. The tendency does not apply to voivodeships of low level of development (where in the upcoming years a decline of investments is expected) and also in voivodeships of medium level of development, where after the expected increase of investment expenditures in 2008, relative to 2007, in 2009-2011 a decrease of yearly average investment expenditures is expected – to the level even lower than in 2007.

The research conducted indicates that comparing to 2007, in 2008 an increase of investment expenditures in all sectors is expected, however in 2009–2011 the increase will be maintained only in the service sector. Entrepreneurs from the trade sector declare that in 2009–2011 they will maintain yearly average investment expenditures on the same level as in 2008, while in the construction and industrial sectors a decline of investment expenditures is declared.

Particularly unfavourable phenomena connected with a decline of investment activity are characteristic for enterprises operating in voivodeships of low level of development –respondents from that enterprises declare that they will reduce yearly average investment expenditures in 2008 (compared to 2007) and in 2009–2011 (there will be a decline comparing both to 2008 and 2007). Taking into account the structure of investments in the analysed periods in voivodeships of low level of development, a particularly steep decline of expenditures for the purchase of intangible and legal assets may be noted in case of micro-companies (yearly average of expenditures planned for 2009–2011 is ca. three times lower than in 2007 or 2008).

5.2. Source of financing investments

Most of small and medium-sized enterprises (94%) declare that the investments implemented in 2007 were financed from their own resources. Second important source of financing were credits and domestic loans, declared by 29% of the entrepreneurs surveyed. The tendency is compliant with the results of statistical research concerning finance source of investment expenditures in the previous years. In 2007 public resources were used by 3% of the entrepreneurs surveyed, while foreign loans only by 1% of entrepreneurs from SME sector.

Micro-enterprises actions concerning sources of investment financing were similar to the actions of all the other types of companies. In 2007 they financed investment expenditures from their own resources – 94%, credits and domestic loans – 28%, public resources – 2% and foreign loans – 1%. Small companies more frequently used credits and domestic loans (44%) and also public resources (7%), yet less frequently their own resources (92%). Medium-sized companies most frequently financed investments from their own resources (98%) and public resources (12%); also, more frequently than the rest of companies, they used credits and domestic loans (39%). Just as small companies, medium-sized companies did not use foreign loans. The companies established in 1999–2004 most frequently used their own resources (97%) yet least frequently credits and domestic loans (22%). The companies established until 1989 and after 2005 most frequently used credits and domestic loans (33%). In the cases of other types of companies the level of using all sources of financing was similar to that companies generally.

The majority of small and medium-sized enterprises declare that the investments realized in 2008 were financed and they will continue to be financed from own resources (84%). Second important sources of financing are credits and foreign loans, declared by 35% of the entrepreneurs surveyed. In 2008 public resources are used by 10% the entrepreneurs surveyed, while foreign loans only by 2% of them. Compared to 2007 the percentage of companies using public resources is higher (it increased by 7 pp). However the percentage of companies which implement investments from their own resources decreased (by 10 pp).

The majority of SME entrepreneurs declare that investments planned for 2009–2011 will be financed from their own resources (78%). Second important source of financing will be credits and domestic loans, declared by 42% of the entrepreneurs surveyed. Public resourced are declared to be used by 19% of the entrepreneurs surveyed, while foreign loans only by 2%. 5% of respondents do not know what finance source they will use to cover expenditures. In comparison with the previous years the percentage of companies which plan to use public resources is higher. However, the percentage of companies, which plan to cover investment expenditures form their own resources decreases (decrease by 6 pp).

While referring to investments in intangible and legal assets, as in the case of analysing investment activity, it should be noted that a major group of small and medium-sized enterprises implementing in 2007 such types of investments (97%) declare that they were financed from companies' own resources. Second major source of financing investments were domestic credits; it declared by 6% of the entrepreneurs surveyed. Public resources and foreign credits in 2007 were used by 1% of the entrepreneurs surveyed. In 2008, compared to 2007, the use of companies' own resources (91%) and foreign credits (0%) decreased while the use of public resources (6%) and domestic credits increased (12%). In 2009–2011 there will be again a decrease in share of companies' own resources (89%). Second important source of financing investments will be domestic credits, which is declared by 13% of the entrepreneurs surveyed. Public resources will be used by 12% of the entrepreneurs surveyed, while foreign credits by 0%. In comparison to 2008, using companies' own resources will decrease, while the level of budget grants and domestic credits will increase.

In the following periods analysed a decrease in using companies' own resources by SME entrepreneurs can be noted, although they still remain primary source of financing investments. The tendency may also be noticed with regard to investments in intangible and legal assets.

Table 5.5. The frequency of using particular sources of financing, on the basis of the survey research in 2007, 2008, 2009–2011 (% of answers)

Finance source/Years	2007	2008	2009–2011
Own resources	94	84	78
Credits and domestic loans	29	35	42
Public resources	3	10	19

Source: PSDB, GFK *Final Report, Development Potential of Polish SME*. In 2007, from company's own resources n =668, credit and domestic loans n=241, from public resources n=43. In 2008 respectively: n=513, n=241, n=96. In 2009–11 respectively: n=430, n=242, n=129. * Prognosis.

Taking into account the size of enterprises, the tendency is characteristic for micro- and small enterprises. Although in the case of medium-sized enterprises in 2008 as compared with 2007, using own resources decreased, it is again planned in 2009–2011 (however slightly lower than in 2007).

The analysis of finance source in the form of own resources with regard to regional diversity indicated no differences – enterprises operating in voivodeships of low, medium and high level of development plan to reduce financing form their own resources. The tendency can be assessed as positive, in particular in the context of the results which indicate that in the analysed periods – both with respect to the whole SME sector and the size of companies – there was an increase in financing from credits and domestic loans. It must be noted that the increase was observed inn all regions regardless of their level of development.

Also in the case of financing investments from public resources there is a tendency for more frequent use of such finance source by SME in the subsequent analysed periods. With regard to the size of companies, the most significant increase of financing from public resources is characteristic for micro-enterprises (2% in 2007, 9% in 2008, 19% is planned in 2009–2011), which may be connected with high expectations of the enterprises regarding the present year's (2007–2013) period of spending structural funds. Analysis of micro-companies' expectations in the matter must refer particularly to the sectors which manifest the highest expectations. The analysis, developed during examining the data, indicated that micro-enterprises from industrial sectors will most frequently use this source of financing. In terms of geographic location of micro-enterprises, the most significant increase is declared by entities form voivodeships of low level of development.

During all the analysed periods (2007–2011), an increase of financing investments from credits and domestic loans by micro- and small companies was noted, whereas financing form own resources declined.

5.3. The use of planning tools

The majority of the enterprises surveyed declare having a development strategy (i.e. a plan of subsequent stages of company's development, written down or not). 12% of the companies surveyed has the strategy in a form of a written document. It is worth mentioning that this figure is higher than in 2005–2006, when, according to PAED's research, it amounted to 8%.

It must be emphasised that 47% of respondents declare having a strategy that has not been written down. 40% of the total number of surveyed entrepreneurs admits that their company has no development strategy. Taking into account the size of a company, it must be noted that larger companies more frequently have a development strategy in a written form. Depending on the region in which company operates it can be noted that enterprises operating in the regions of higher level of development more often have such type of document. The companies located in voivodeships of low level of development are in considerably less favourable position, since only 5% of them declares having a development strategy in a written form.

Most frequently companies from the service sector have a development strategy in a written form. In case of nearly all of the service sector companies (92%) their development strategy (written or not) concerns sales of the current products. The majority of companies (86%) develops plans concerning new products and new services on the previous market. 70% of companies plans to enter new markets, these are companies which plan to sell new services and goods. The development strategy, in the case of those enterprises which have a written form of it, covers a period of several years. The size of a company does not influence, in statistical terms, any significant aspects connected with the type or time range of development strategy.

5.4. Participation in the public procurement market

2/3 of the companies surveyed did not participate in any tender procedure in 2007. It must noted that micro-companies (71%) as well as enterprises established after 2005 (82%) least frequently participated in tenders.

Moreover, 22% of companies declare that in 2007 they participated in less than 10 tenders (most frequently such declarations were made by companies from the construction sector – 38%). Participation in more than 10 tenders was declared by 7% of the enterprises surveyed. Out of 30% of companies, which in 2007 participated in any tender, 81% declared wining one of them, where 69% won from 1 to 10 tenders and 12% more than 10. Most frequently winning more than 10 tenders was declared by service companies of the wealthiest areas. Trade companies from voivodeships of low level of development do not succeed in winning tenders (57% in comparison to 20% total).

81% of the companies, which did not enter any tender in 2007, do not plan to participate in these also in 2008. Usually these are entities conducting commercial activity (88%). The size of the company and the region in which company operates in statistical terms have no significant influence on the participation in tenders in 2008. 39% of surveyed entrepreneurs indicated small size of a company as the factor hindering participation in a tender. Complicated administrative and bureaucratic procedures are considered a hindrance by 27% of the entrepreneurs surveyed. They are followed by an unclear criteria of choosing the best offer (18%) as well as high costs of preparing an offer (13%). Nearly half of the entrepreneurs surveyed (47%) claims that ISO management system facilitates entering tenders. However, nearly one out of three entrepreneurs surveyed claims the opposite.

While analysing the barriers indicated by entrepreneurs, hindering the access to the public procurement market, one should bear in mind that such barriers may result from the law, which cannot grant preferences to any of participants of a tender. Thus while suggesting actions aimed at increasing SME's participation in the public procurement market it must be born in mind that, it is not possible to introduce such changes as, for instance, preferential assessment of micro-enterprises' offer during public procurement proceedings.

Other significant limitations indicated by the SME entrepreneurs are complicated procedures and bureaucracy connected with granting the public procurement. The factor, according to the research conducted, is particularly often indicated by enterprises from industrial sector, operating in the regions of high level of development, as well as micro-enterprises from the constructions sector.

5.5. Factors determining development of enterprises

The factor that, according to the entrepreneurs surveyed, crucially determines the development of enterprises, is highly qualified personnel (64%). It is followed by the possibility of using modern technologies (37%), low taxes (35%) and easy access to the external sources of financing (22%).Relatively infrequently such aspects as possibility of goods/services export or access to the public procurement were mentioned (14%).

From the statistical point of view the size of a company has no significant influence on what factors entrepreneurs indicate as determining for their development. However, there are differences depending in what sector companies operate. Entrepreneurs from the construction sector indicated highly qualified personnel (74%) and use of a modern technology (50%) as factors facilitating development. Entrepreneurs connected with industry claim that development of company is equally dependent on highly qualified personnel as on low taxes.

Taking into account regional diversity, it must be stated that enterprises operating in the voivodeships of high level of development (70%) considerably more often indicate highly qualified personnel as a factor facilitating development than the rest of enterprises (the percentage is higher in Śląskie and Mazowieckie voivodeships). It is worth to emphasize that enterprises from voivodeships of high level of development which operate in the construction sector consider the access to highly qualified personnel crucially important for their development (90% of companies from that regions operating in the sector indicated that factor).

In enterprises operating in voivodeships of low level of development (in particular trade companies), the human factor is rarely defined as a potential source of development (in Świętokrzyskie and Warmińsko-Mazurskie voivodeships the factor was indicated least frequently).

Employing or possibility of employing highly qualified personnel constitutes one of the three most important factors influencing SME investment decisions, next to the understanding of the market and customers needs and the necessity of adjusting to certain standards of quality/safety. As a factor influencing investment decisions it was considerably more often indicated by entrepreneurs from dynamically developing companies, little less often by companies limiting their activity. Considerably less often it was indicated by companies experiencing stagnation.

As it has been already mentioned, highly qualified personnel, as a factor facilitating the development of a company, is relatively more important for the entrepreneurs from the construction sector than for industrial enterprises. Moreover, it is important for those companies which operate according to a certain development strategy (not necessarily written down in a form of a document).

The abovementioned account, and in particular the fact that human potential is a factor determining companies' development (particularly increasing the income level), displays a certain bipolarity concerning perceiving employee's qualifications as a source of companies' development by entrepreneurs operating in voivodeships of high and low level of development. If the situation continues in the following years it may lead to augmenting the differences in regions' socio-economic development.

Barriers to companies' development

According to the entrepreneurs surveyed, the factors which most negatively influence development of company are: the tax law (47%) and high non-remuneration costs of work. It is worth mentioning that these factors were considered obstacles for development of companies also in the *SME sector competitiveness* research *s* conducted in 2007 by PKPP Lewiatan.

Other factors hindering development were: strong competition (30%), lack of highly qualified personnel (27%) and payment gridlocks (24%). Less frequently entrepreneurs indicated the following factors: system of labour law (17%), high remuneration (14%) and insufficient demand for services/goods offered by companies surveyed (11%) as well as difficulties in receiving credits (10%) and business checks.

From the statistical point of view the size of a company has no significant influence on what factors entrepreneurs indicate as hindrance to their development. However, there are differences depending in what sector company operates. Entrepreneurs from industrial companies more frequently than the rest of companies indicated payment gridlocks as hindrance for development. Entrepreneurs from the construction sector (operating in voivodeships of high level of development and also micro-enterprises) considerably more often indicated lack of highly qualified personnel, while entrepreneurs from the trade sector (in particular in voivodeships of average level of development), more frequently indicated strong competition.

Summing up the results of the research conducted, it must be stated that with regard to the capacity of Polish SME sector to cover investment expenditures in 2007–2008, a continuous positive tendency of increasing investment expenditures can be observed. However, it must be noted that micro- and small enterprises declare that, as compared with 2008, in 2009–2011 they will reduce yearly average investment

expenditures. Thus, it is necessary to undertake measures aimed at moderating or preventing the phenomenon. The situation does not apply to the medium-sized enterprises, which declare that in 2008 they will increase the level of yearly average expenditures from 2008.

While referring to the sources of financing Polish SME's investments in the analysed periods, it must be noted that the positive tendency of increasing entrepreneurs interest in credits and domestic loans, observed in the previous years, has been strengthen and – according to entrepreneurs' declarations, it will be maintained also in 2008 and 2009–2011. However, taking into account the fact that cost of credit are depended on decisions of the Central Bank and the availability of such finance sources may be reduced in the future – it is worth to consider encouraging use of the finance source by admitting loans from regional administration, which is aware of the needs of local markets.

Nearly 12% of the entrepreneurs surveyed have a written development strategy. Detailed analysis of the results indicates significant differences in using the tool, in particularly – its low use in micro-companies, which suggests undertaking measures aimed at increasing the percentage of those companies using the tool.

2/3 of the companies surveyed did not participate in any tender in 2007. Micro companies (71%) as well as enterprises established after 2005 (82%) least frequently participated in tenders, which may indicate low ability of such enterprises to enter the public procurement market. Considering the fact that 81% of companies which did not enter any tender in 2007 do not participate in tenders also in 2008 it is advisable to undertake measures*, inter alia,* educational measures and also introduce solutions facilitating cooperation between companies and consortiums and leading to increasing SME share in that market (in particular micro-enterprises). It is extremely important, in particular in the aspect of annual increase in the value of procurements offered on the public procurement market. The volume of the procurements increased in 2000–2006 from PLN 23 billion to PLN 79.6 billion.

According to the conducted research of SME entrepreneurs' opinions, the factor mostly influencing companies' development is highly qualified personnel and the possibility of using new technologies. The factors hindering companies' development are tax law and non-remuneration working costs. It should be noted that the importance of human resources for enterprise development is most often indicated by companies from voivodeships of high level of development, while least frequently by those from voivodeships of low level of development.

Development potential of Polish SMEs, viewed from the perspective of investment activity and its sources of financing, is high. It is indicated by continuous growth of capital expenditures in the previous years and the increase of using external finance sources which reduces involvement of company's own resources. As it has been stated, there are aspects which hinder Polish SMEs from using their full capacities, thus they need to be improved – in cooperation with the public institutions.

Chapter 6

Support for the SME sector development from public resources on the example of Polish Agency for Enterprise Development

Polish Agency for Enterprise Development is a government agency subordinate to Minister of Economy by virtue of Act 9 November 2000 on establishing Polish Agency for Enterprise Development. The Act defines, inter alia, the scope of activity of the Agency and its role in implementation of financial programmes from funds, Agency's measures and tools which it may use for implementation of the measures.

The aim of Agency is to undertake measures for socio-economic development in Poland, which determined its objectives for the upcoming years. The most significant objectives are: supporting Polish entrepreneurship by implementing support programmes providing innovative solutions and technologies, development of human capital, export or regional development. The Agency implements its measures by implementing financial programmes from structural fund, multiannual programmes of European Commission and state budget. These are programmes connected with the development of entrepreneurship and adaptability of Polish enterprises to the changing conditions on the market, in particular measures aimed at development of innovativeness in enterprise's.

The tools most frequently used by PAED are granting non-returnable financial support, financing service costs and also – to a lesser extent – granting loans. The Agency participates in promoting innovativeness in the country and abroad by organising numerous seminars and conferences, promotional actions and publications.

6.1. PAED actions in 2007

Agency's work in 2007 was determined mainly by actions connected with structural funds. Agency was in the matter both an implementing institution for particular measures and beneficiary implementing so-called own-projects.

Main programmes implemented by PAED in 2007 were Sectoral Operational Programme Improvement of the Competitiveness of Enterprises (SOP-ICE), Sectoral Operational Programme Human Resources Development (SOP HRD), The Competitiveness and Innovation Framework Programme (CIP*)* and The European Union Programme supporting Euro Info Centre – Multiannual Programme for Enterprise and Entrepreneurship. PAED implemented also measures assigned to it by government institution , such as running EXPO 2008 Office and implementation of programme "Direction of improving innovativeness of the economy in 2007-2013", government programme of extending the system of loan and guarantee funds for small and medium-sized enterprises in 2002-2006 "Capital for entrepreneurship". The Agency conducted conclusions of financial programmes financed from the pre-access funds PHARE. The Agency commenced works connected with preparation of implementation of measures addressed to financial entrepreneurs within Operational Programmes 2007-2013. The programmes are: Operational Programme Innovative Economy (OP IE), Operational Programme Human Capital (OP HC) and Operational Programme Development of Eastern Poland (OP EPD). Both OP IE and OP HC are currently implemented nationwide, while OP EPD which main objective is improving growth rate of socio-economic development of Eastern Poland is implemented in the following voivodeships Lubelskie, Podkarpackie, Podlaskie, Świętokrzyskie and Warmińsko-Mazurskie.

Characteristics of financial programmes 2004 2006

<u>Implementation of Sectoral Operational Programme - Improvement of the Competitiveness *of* Enterprises (SOP-ICE).</u>

Sectoral Operational Programme - Improvement of the Competitiveness of Enterprises (SOP-ICE) is meant mainly for entrepreneurs and its aim is to improve competitiveness of enterprises operating in Poland in the conditions of the European Single Market. The programme is finances from structural funds within the framework of so-called "old –perspective" that is budget for 2004-200. PAED is responsible for the implementation of 4 measures within the SOP-ICE -1.1, 1.2., 2.1, 2.3 and sub-measure 2.2.1 of total worth of EUR 859.9 million.

Development of business environment institutions

The aim of 1.1 measure is to improve accessibility of high quality services of business environment institutions for SMEs. Within the framework of the programme PAED implements 2 projects concerning measures for establishing and development of organisational networks of The National Small and Medium-sized Enterprises Service Network (KSU) and the network of Consulting Points (PK). The role of Agency is connected with registering in KSU institutions interested in cooperation, supervising certification of units, improving competence of personnel and promoting the network. Within the *Establishing network of Consulting Points within KSU* by the end of 2007 there 188 PK operating, in which16 Regional PK, 172 Local PK. Consulting Points performed ca. 93.1 thousand services for ca. 63.2 thousand customers.

Moreover, within the framework of the measure project of other regional and local institutions which are willing to participate in the institutional system of SME support are implemented. Projects implemented within the measure 1.1.2 *Supporting business environment institutions and networks of business environment institutions* are connected with improving substantial potential of institutions operating for entrepreneurship development. Projects submitted by institutions of business support and networks of such institutions with the aim of improving services quality for the entrepreneurs were also co-financed. From the beginning of the measure realisation 92 are being implemented – their total worth amounts to PLN 75.3 million.

The Agency supports development of entrepreneurship also by providing capital for business environment institutions operating on the regional and local level. The aim of measure 1.2 *Improvement of accessibility to external financing of enterprises' investments* , is to improve access to the external source of financing investments by providing capital for micro-loan funds, guarantee and seed capital funds. Agency provided capital for 53 loan funds of total worth amounting to PLN 436 million, due to which funds were able to grant 9.4 thousand loans, credit guarantee funds over 8.2 thousand of guarantees according to data from the end of 2007. Moreover the Agency launched sub-measure 1.2.3 *Support for establishing seed capital funds* within the framework of which 6 contracts for co-financing worth PLN 65.9 million were signed.

Direct support for enterprises

Measures financed from structural funds are aimed also directly to enterprises. The Agency implements three such measures, connected with financing cost of consultancy and investment purchases for enterprises.

Within the 2.1 measure *Improvement of competitiveness of SMEs through advice* the support is provided for SME which aim is to improve their level of competitiveness by providing specialist consultancy of experts accredited by PAED (by the end of 2007 there were ca. 1370 of them). Applicants could receive consultancy in regard to conducting enterprises in the EU, quality, innovations and new technologies, introduction of product on the new market, establishing cooperation networks connecting entrepreneurs, obtaining external financing for activity development etc. Within the 2.1 measure Agency conclude over 2.5 thousand contracts for co-financing with beneficiaries – contracts of total worth amounting to PLN 79 million.

Sub-measure 2.2.1 SOP-ICE *Support for enterprises launching new investments* is connected with supporting new investments of SME by establishing or reconstructing the enterprise both in the area of production and services, and also by introducing substantial changes in production process or the product itself by changing the type of production. By the end of 2007the Agency concluded 250 contracts with enterprises worth jointly ca.PLN 810 million.

On the other hand within the measure 2.3 *Improvement of competitiveness of SMEs through investments* co-financed was provided for investments of micro-, small and medium-sizes enterprises with the aim of improving their competitiveness by modernising their products and technology. Projects include, *inter alia*, modernising measures aimed at significant change in the product or production process, implementing investment joint ventures, purchase of R&D research results or/and industrial property right by enterprises, use of ICT in management processes, adjustment of technology and products to the EU requirements, in particular harmonised standards and law concerning occupational health and safety etc. 21.5 thousand projects were submitted for support, nearly 3 thousand were accepted and resulted in signing of contracts worth in total PLN 1.4 billion.

Sectoral Operational Programme Human Resources Development (SOP HRD)

The main objective of the Sectoral Operational Programme Human Resources Development is to develop an open and knowledge based society . The objective of 2.3 measure *Development of personnel of modern economy* implemented by the Agency is to improve competitiveness and adaptation capacity of enterprises by improving skills and qualifications of management and employees, establishing new forms of

works, supporting knowledge transfer and cooperation between universities and enterprises, as well as improving qualifications and skill of healthcare employees.

Within measure 2.4 PAED implements 3 schemes worth jointly EURO 253.3 million. PAED supports projects implemented by contractors selected by the contest (training institutions, universities and their founding bodies, scientific units, organisations associating employers and entrepreneurs, trade unions) and also develops and implements its own projects. Projects developed by PAED when receive authorisation of appropriate institutions are implemented by virtue of agreement with a contractor selected in a tender. PAED concluded agreements with 20 contractors worth nearly PLN 220 million, including: *Nationwide programme of trainings on environment protection, Trainings of SME personnel in the area of implementation of occupational health and safety standards, Telepraca – nationwide programme of promotion and training for entrepreneurs, Investment in personnel, Training programme promoting clustering, Training programme for development of tourist products, Improving competitiveness of enterprises of wood industry section, Improving competitiveness of enterprises form electronic section, Improving innovativeness of SME sector, Training programme for personnel for the development of tourist products II, Preparation for export I, Support of the development of Polish export, Work rotation, Enterprise in 21st century, Training programme supporting e-business, Investment in personnel II, Project preparing model training programmes on-line (PAED Academy), Training programme for development of tourist products III, Occupational health and safety in construction section, Training programme for development of small enterprises in Eastern Poland and Possibilities of increasing innovativeness of Polish SME- research project.*

Within the scheme *Increasing skills and qualifications of healthcare personnel* only one beneficiary was entitled to submit applications – that was Maria Skłodowska-Curie Institute of Oncology. The aim of the project is to conduct nationwide training concerning cervical cancer screening. The project should reach over 1 700 people. In 2007 1 245 people participated in the trainings.

From the moment SOP HRD commenced until December 2007 within contest scheme 398.9 thousand people participated in trainings. Within PAED own projects trainings were completed by ca. 76.6 thousand enterprises employees, ca. 1200 persons employed in local government units and ca. 1000 representatives of organisations associating employers and entrepreneurs, and also 1322 representatives of training institutions.

Within the SOP HRD support for beneficiaries and workers of implementing institutions was financed by free of charge trainings, consultancy, providing information and promoting the rules for using the European Social Fund. Implementation of the measure is the performed by European Social Fund National Training Centre operating in the structure of PAED and selected in the contest European Social Fund Regional Training Centres.

6.2. Implementation of Operational Programmes within new financial perspective 2007-2013

In 2007 PAED actively participated in developing documents connected with launching new measures for the development of enterprises and financing from structural funds. Within PAED's own projects works included preparation of application forms, scopes of measures for contractors of services realises within the projects, defining guidelines of contest for beneficiaries realises within the projects. In case of contest projects implementation documentation was developed.

Operational Programme Innovative Economy (OP IE)

The Programme is aimed for institution of business environment and entrepreneurs. The institutions may receive support for, *inter alia*, improving quality of services provided for entrepreneurs and establishing networks of private investors. Entrepreneurs may receive support in a form of co-financing investment projects connected with research and development, modern technologies, investments of great importance for the economy or implementation and use of IT and communication technologies. Support within the Programme is aimed also for protection of industrial property and reinforcing the cooperation between science and economy. The Agency was made responsible for the implementation of 13 measures within OP IE with the total budget of EUR 3.9 billion.

Measure 1.4 Support for target projects

The objective of the measure is to improve entrepreneurs innovativeness by using the results of R&D works conducted for them. An entrepreneur receiving support may conduct the works or commission it to a scientific unit, other entrepreneurs or science-industrial consortium. The measure is an integral part of measure 4.1.

Measure 3.1 Initiating innovative activity

The measure objective is to increase the number of enterprises using innovative solutions. Implementation of the measure includes selection of institution which find and sort innovative ideas for business and provide support in establishing an enterprise (so-called pre-incubation) and than selection of institutions offering capital for a venture.

Measure 3.3 Introducing system facilitating investments in SMEs

Implementation of the measure consists of two schemes: co-financing consultancy for entrepreneurs who search for external financing source and providing support for networks of private investors, improving awareness of enterprises concerning benefits of using services of such networks and their offer, establishing platforms enabling encounters of investors and entrepreneurs searching for financing.

Measure 4.1 Support for implementation of R&D

Measure is based on continuation of support for research project implemented within the 1.4 measure – co-financing projects concerning practical implementation of research results, including investments and consultancy necessary for implementation of research results.

Measure 4.2 Stimulating R&D works and support for industrial design

Improvement of enterprises competitiveness by supporting projects aimed at practical implementation of organisational and technological solutions – it is the main objective of measure 4.2. Projects concerning entrepreneurs research-development works can be co-financed within the measure.

Measure 4.4 New investments of high innovative potential

The measure consists of co-financing projects of production and service enterprises concerning new investments and consultancy service or trainings necessary for its implementation. The investments may include purchase of technological and organisational solutions which were used in Poland in the given section for no longer than 36 months. Co-financing includes projects aimed at introducing new products and services.

Measure 5.1 Support for development of cooperative relations on a supra-regional scale,

Projects aimed at establishing and developing supra-regional cooperative relations between entrepreneurs, enabling transfer and exchange of knowledge and experience among cooperating entities. The projects will contribute to the growth in cooperation among enterprises as well as between entrepreneurs and scientific units and business environment institutions.

Measure 5.2 Support for the institutions of business environment rendering services related to innovative activities of entrepreneurs and their networks on a supra-regional scale

The aim of providing support of the organisations is to provide entrepreneurs with an easier access to the complex services of adequately high level, available within the whole country, essential from the perspective of innovative activity. It is aimed at business support institutions and networks of such institutions providing comprehensive services of pro-innovative character including, *inter alia*, technology transfer, utilising industrial property rights, undertaking cooperative activity and promotion and utilising industrial and consumer design as well as industrial property rights protection).

Measure 5.3 Support for innovation centres

The aim of the measure is to develop favourable conditions for innovative economic activity of enterprises and reinforce cooperation between science and business. The ventures co-financed will be those concerning technology parks located in the areas of the highest development potential.

Measure 5.4 Management of intellectual property rights

Co-financing from structural funds will include projects aimed at dissemination of knowledge of benefits resulting from the legal protection of intellectual property and possibilities of direct support for SME sector in regard of obtaining industrial property rights and their realisation.

Measure 6.1 Passport to export

Implementation of the measure will improve the volume of Polish export and sales the Single European Market by increasing the number of enterprises conducting export and sales on the Single European Market. The support will be assigned for entrepreneurs to cover cost of consultancy for preparation of Export

Development Plan as well as costs of their participation on trade fairs, exhibition events and foreign economic missions.

Measure 8.1 Support for economic activity in the area of electronic economy

The main idea of the measure is to stimulate development of e-service market by providing support for micro-and small entrepreneurs. Co-financing will be granted in the form of non-returnable support, it may be granted only for implementation of projects connected with launching electronic services.

Measure 8.2 Support for implementation of electronic business B2B

The aim of the measure is to stimulate establishing new electronic businesses . All the technical (IT) ventures as well as organisational ventures leading to establishment of electronic business processes including three or more enterprises will be the subject of the support.

The offer of the measure can be used first of all by entrepreneurs, business environment institutions – including incubators, scientific-technological parks, technology transfer and innovation centres, research-development units, organisations associating entrepreneurs, networks of business environment institutions and investors networks.

Operational Programme Human Capital (OP HC)

The objective of the Programme was to increase the level of employment and social cohesion as well as popularisation of the idea of improving qualification of employees. PAED implemented measures of Priority Axis II of the Programme, which aim was to increase competitiveness of enterprises by increasing investments expenditures in human capital (mainly by trainings) and improvement of access to high quality services supporting development of entrepreneurship.

Measure 2.1 Development of personnel with high qualifications suitable in the modern economy

The aim of the measure is improving and adjusting entrepreneurs and employees to the demands of modern knowledge-based economy. The measure is aimed at entrepreneurs and managers inclined to improving their and their employees qualifications. Significant part of the budget is assigned fro co-financing trainings and consultancy for enterprises. Moreover measure includes implementation of all the projects connected with introducing new forms and methods of work organisation, management and strategic planning, predicting demand for certain qualifications and occupations, increasing the level of awareness regarding innovativeness of Polish entrepreneurs and promoting cooperation between science and business.

Measure 2.2 Development of personnel with high adaptation abilities.

T he aim of the measure 2.2 is increasing accessibility and quality of services provided for entrepreneurs and persons establishing new economic activity by business environment institutions and training institutions. The measure is implemented by inter alia, increasing qualifications of trainers and lecturers, enhancing offer of institutions supporting entrepreneurs with the aim of popularisation of the offers and services available, development of effective system of improving enterprises personnel performance. The measure (of EUR 672 million budget) is addressed to entrepreneurs and their employees, socio-economic partners , scientific units, research-development units, technological parks, technology transfer centres, innovations incubators, training institutions, institutions supporting, persons intending to establish new economic activity, government and local government administration an and mass-media.

Operational Programme Development of Eastern Poland (OP EPD)

The reason for the development of this programme was to increase growth rate of socio-economic development of the five most disadvantaged regions: Lubelskie, Podkarpackie, Podlaskie, Świętokrzyskie and Warmińsko-Mazurskie.

Projects implemented by PAED within OP EPD concern, *inter alia,* improving road infrastructure, development of universities, congress infrastructure, technological parks, wide-band network of Internet access, preparation of areas for investments and development of ecological public transport. Co-financed projects contribute to the increase of tourist and investment attractiveness of those five voivodeships, and also to the increase of citizens innovativeness and entrepreneurship. The sources available for implementation amount to EUR 2.67 billion, they are targeted to the following beneficiaries: universities, local government units, state budget units, entrepreneurs, research-development institutes, non-governmental organisations, development agencies. The most significant part of resources will be assigned for construction or modernisation of roads (ca. EUR 663 million), development of educational infrastructure (over EUR 337 million), than for infrastructural investments in voivodeships growth units in the area of development of municipal transport development, congress and trade fairs infrastructure (ca. EUR 255 million). The part

assigned for entrepreneurs for infrastructure facilitating conducting innovative activity (EUR 407 million) and for expenditures on IT infrastructure (ca. EUR 255 million).

6.3. Dissemination of knowledge, promotion of innovativeness and entrepreneurship

One of Agency's priorities is promoting entrepreneurial and innovative attitudes. It is done by financing business undertakings, which were mentioned before, but also by realising promotional and informational projects, organising seminars, contests and through publishing. Polish Agency for Enterprise Development has an Internet portal devoted to innovations and organises an annual contest Polish Product of the Future. Representatives of the SME sector can participate in periodical meetings of Innovative Entrepreneurs Club. The educational portal PAED Academy popularises access to business knowledge in the form of e-learning among micro-, small and medium-sized enterprises.

The Agency also has a unit of Enterprises Europe Network, the basic objective of which is to improve the performance of small and medium-sized enterprises on the Single Market. The Network, established within the Competitiveness and Innovation Framework Programme 2007–2013 – CIP, connects the experience of two networks operating for the SME sector: *Euro Info Centre* and *Innovation Relay Centre*. The task of the Network is to provide SMEs with the following services:

- information and counselling activities in the scope of the EU common regulations, conducting economic activity abroad, participating in the European Union support programmes, seeking the external sources of financing for enterprises,
- organising trainings, workshops and seminars,
- aid/support in finding commercial partners,
- aid/support in technology transfer, including technological audits, exchange of technological offers, help in finding technological partners and contacting entrepreneurs with scientific units.

6.4. PAED's activities for The National SME Service Network

National Small and Medium-sized Enterprises Service Network (KSU) is a network of groups of entities providing services, organisations specialised in providing services supporting enterprises and persons conducting economic activity. In 2008 KSU received recommendation from the European Commission as a good practice in the area of public administration's answer to the SME needs, aimed at inspiring the implementation of "Small Business Act" – a new plan of the European Commission developed for small and medium-sized enterprises, which should limit the administrative barriers and other difficulties encountered by small and medium-sized enterprises in the European Union.

KSU was established in October 1996, currently it operates by virtue of the Regulation of the Minister of Economy and Labour of 27 January 2005 on National Small and Medium-sized Enterprises Service Network and its organisation is supported by the Polish Agency for Enterprise and Development.

In 2006–2008 PAED conducted a number of research projects on the functioning of institutions supporting entrepreneurship, associated in the National SME service Network. The conclusions, although they apply mainly to organisations registered in KSU, in majority may be of significance to the whole system of supporting entrepreneurship in Poland.

The institutions supporting small and medium-sized enterprises are valuable partners for public administration in the process of implementing public support programmes. Conducting activity through implementation of projects, due to the experience and flexibility they posses, the are up-to-date with the strategic objectives of public interventions in terms of subjective scope and type of activities realised and services provided[47]. KSU centres in majority implement projects financed or co-financed from external resources and thus function according to the so-called "project logics"[48]. Adjusting to this mode of work took the organisations little time. As it is indicated by the research on the experience of KSU centres in implementing projects, 2005, when new possibilities connected with the accession to the EU and the access to public support began, was characterised by an unprecedentedly increased project activity of the organisations

47 Business environment institutions supported within SOP ICE, 2004–2006 – determining programme's influence on service offer and quality level of services provided – research conducted in February–June 2007 by the consortium WYG International & PSDB LLC commissioned by the Ministry for Regional Development.

48 *Research on the experience of the National SME Service Network in implementing projects,* conducted in October-December 2007 by the consortium Pracownia Badań i Doradztwa „Re-Source" and Fundacja Uniwersytetu im. Adama Mickiewicza in Poznań – Poznański Park Naukowo-Technologiczny, commissioned by Polish Agency for Enterprise Development

surveyed. The activity, expressed in the number of projects KSU centres began in 2005, increased in comparison with 2004 almost twice (the beginning of 37% of all projects by the surveyed KSU centres from 2002–2007 took place in 2005).

Polish entrepreneurs see the need of there being an integrated support system associating organisations helping entrepreneurs. As the research indicate, 87% of entrepreneurs appreciates such idea[49]. The functioning of business environment institutions within the framework of KSU at the same time entails a number of problems. Identifying the problems enabled Polish Agency for Enterprise Development and the representatives of ministries and business environment elaborating in 2007–2008 *the strategy for The National SME Service Network development*.

According to the research in 2007[50], a characteristic feature of institutions supporting business was a low potential for providing pro-innovative services. It is caused by *inter alia*: lack of qualified personnel, poor cooperation with scientific environment, difficulties in maintaining high quality of services and the shortcomings of its standardisation. The abovementioned problems indicate the necessity of providing mechanisms which would guarantee the improvement of knowledge and skills in KSU organisations providing counselling services of pro-innovative nature and the need to extend the network by means of granting it new competences and mechanisms of using them. Such activities were planned *inter alia* in the strategy for KSU development for 2008–2012.

This document also stipulates measures supporting financial engineering institutions, such as credit funds and credit guarantee funds. They are aimed at increasing the professionalisation of the abovementioned entities, by *inter alia* implementing complex programmes of counselling and training for both types of funds and implementing monitoring system for credit and guarantee activity, showing the capital use efficiency. The abovementioned solutions were recommended to implementation on the basis of the results of the research conducted in the first half of 2008 on the group of credit funds and credit guarantee funds operating in Poland[51].

The system of implementing Operational Programme Human Capital, Operational Programme Innovative Economy and Regional Operational Programmes, as well as the problems in the scope of functioning of an institutional entrepreneurship support system identified during the research, indicate the necessity of modifying the internal structures of the system. Therefore, the strategy for KSU development includes elaborating the conception of internal connections, covering national, regional and specialist structures, based on individual categories of services, which will ensure the development and smooth operation of the system in voivodeships and cooperation with local and regional authorities, representatives of economic associations, etc.

The strategy for KSU development introduces the new role of the system and "opens" it to new services. KSU mission is "developing entrepreneurship by means of providing services of the highest quality in the vital areas requiring the support from the State".

Currently, basing on the identified areas which require intervention in the Operational Programmes for 2007–2013, KSU supports the following services:

=> **information** – *inter alia* on the subject of:

- administrative and legal aspects of commencing, conducting, suspending and liquidation of economic activity,
- available sources of public support and other sources of financing economic activity,
- possibilities, scope and rules of providing other services available in the system (e.g. support of export development, possibilities of participating in trainings, help from innovative projects promoter, possibilities of gaining resources for financing activity within credit or guarantee funds),

=> **counselling of pro-innovative character**, including:

- conducting technological audit and
- the services for technology transfer, which will include:
- preparing an offer or request for technology,

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49 *Research on image the of the National SME Service Network*, conducted in May-June 2008 by Pracownia Badań i Doradztwa „Re-Source" commissioned by Polish Agency for Enterprise Development.

50 *Research on the ability of providing counselling services of pro-innovative character of business support organisations within the National SME Service Network*, conducted in May-June 2007 by consortium WYG International – PSDB –CBOS commissioned by PAED.

51 *Credit funds and credit guarantee funds versus the National Small and Medium-sized Enterprises Service*, research conducted by Policy & Action Group Uniconsult LLC in February-April 2008 commissioned by Polish Agency for Enterprise Development

- survey of technology suppliers or recipients profiles,
- establishing contact with technology supplier or recipient,
- counselling in implementation of technology or during negotiations and concluding contracts between technology supplier and recipient ,
- monitoring the implementation of technology or the realisations of a contract as well as other aspects of post-implementation support,

=> **financial in the scope of granting credits** – services enabling external financing for entities conducting economic activity,

=> **financial in the scope of granting guarantees** – services enabling additional guarantees for credits or loans of entities conducting economic activity.

Directing public resources into areas in which State's intervention is needed, is to be supported by periodical research on the demand for services supporting entrepreneurs, their supply, the way customers perceive services provided and monitoring system's performance. The provisions of the strategy for KSU development will be implemented within PAED's own project into sub-measure 2.2.1 of Operational Programme Human Capital, aimed at improving the quality of services provided by institutions supporting the development of entrepreneurship and innovativeness.

The National Service Network, after 12 years of functioning, is about to reform, which will affect the scale and quality of its operation. Implementing the strategy for KSU development is to enable creating an effective, recognisable entrepreneurship support system in Poland and providing services to over 350 thousand customers until 2015. The fact that it was developed according to the rules of *good governance*, i.e. *inter alia* transparency and openness, efficiency and participation as well as the fact that it will be updated on annual basis, give the perspective for more effective institutional support for entrepreneurship and innovativeness in Poland and for adequate spending of public resources, in the scope adjusted to the needs of entrepreneurs, persons conducting economic activity as it takes into account the priorities of Polish economy.

Chapter 7

The role of human capital in enterprises' innovativeness on the example of the service sector

The Gdańsk Institute for Market Economics and PENTOR Research International commissioned by the Polish Agency for Enterprise Development conducted in the first half of 2008 research on innovativeness of the service sector[52]. One of the main objectives of the research was to determine the importance of human capital in the innovativeness of enterprises in the sector and to examine competitiveness of service enterprises. Competence of management and quality of human capital are – next to such factors as the enterprise size, market on which it operates, the education level of employees, branch, intensiveness of competition – main determinants of an innovative activity of service enterprises. The quality of services provided is of key importance in service activity. Flexibility of actions as well as specialised knowledge or skills are also of great significance. Research indicates that, employees are one of the most significant sources of innovativeness for service enterprises.

7.1. Research background

From the end of the 19th century the role of innovativeness in the service sector gradually becomes more important. It is connected with a growing share of the sector in the structure of the developed countries' economies and growing use of knowledge, technology (including R&D) and human capital of high quality in service sector. Unlike industrial innovativeness, which includes mainly introducing new products to the market or changes in production, services' innovativeness reaches deeper to the internal structure of enterprise. It includes changes in the way services are delivered, in training of personnel and implementing new model of business.

Analysis of the results of an international research indicates that in comparison with other European countries service sector in Poland is characterised by considerably low level of innovativeness. SSII indicator (*Service Sector Innovation Index*) for Poland in 2007 amounted to 0.33 which was one of the lowest figures among the EU Member States. Analysis of the component indicators of the index shows that, in comparison with other European countries, favourable factors of Polish service sector are: highly qualified personnel, demand for innovative solutions as well as active contacts between Polish entrepreneurs and their partners on the market.

Polish service product is characterised by considerable flexibility. Only one out of four enterprises offers exclusively standardised services, all the other enterprises offer services adjusted to their customers' needs.

Services can be characterised as unique and non-standard – that is why it is not easy to define the moment they can be considered innovative. It appears that the uniqueness of provided services is a phenomenon typical of service enterprises – usually it does not provide enterprise with a competitive advantage. Innovative activity of service enterprises rarely includes introducing radical changes. Merely a minor percentage (2-3%) invests in forms of innovative activity, which involve more risk (for instance R&D).

Over ¾ of service enterprises surveyed (77%) defines quality of service as a factor of great importance with regard to conducting an enterprise. Comparable percentage of the enterprises (70%) considered fast and punctual realisation of a service highly important, 65% considers specialised knowledge a key factor, while 63% values paying attention to individual customer's needs. The great importance assigned to the enumerated factors suggests that the key characteristic of services activity is flexibility of actions and highly qualified personnel, which – synergistically – contribute to an increase of the quality of services provided. Perceiving high quality as a key factor of competitiveness is reflected in the objectives established prior to introduction of changes – the aim most frequently indicated by entrepreneurs was an increase of service's quality. Other

[52]The research, commissioned by Polish Agency for Enterprise Development, was conducted by PENTOR Research International and Gdańsk Institute for Market Economics in May 2008, on the representative sample of SME sector enterprises in the number N=1 035. Additionally, 20 in-depth interviews with representatives of service enterprises were conducted (qualitative research). The research covered enterprises from the following sections of Polish Classification of Activities (PKD): Land, water, air transport and transport via pipelines (NACE 60–62), Supporting and auxiliary transport activities, activities of travel agencies (NACE 63), Post and telecommunications (NACE 64), Financial intermediation (Section J), Computer and related activities (NACE 72), Research and development (NACE 73), Architectural and engineering activities and related technical consultancy (NACE 74.2), technical testing and analysis (NACE 74.3).

frequently indicated aims were increasing the effectiveness of processes, greater flexibility as well as expanding services' assortment. Among the assessed factors of enterprises' competitiveness relatively less significant were: the price of services provided, the number of distribution channels or introduction of new services. In the scope of differentiating the importance of particular factors enterprise size was also taken into consideration.

On the other hand, nearly half of enterprises declares that they will accept a competitive strategy based on providing service for the lowest price possible. One out of four enterprises aims at standing out from the competition. Strategy based on specialisation (offering services to a particular group of customers or operating on a particular geographic market) is declared by ca. 15%.

Main motivations for introducing changes are: development of new solutions inside of enterprise, introducing solutions suggested by customers or introducing solutions by supplier. Nearly 1/3 of enterprises declare that introducing changes was an outcome of solutions developed inside of enterprise. Introducing changes suggested by customers was indicated by 17% of enterprises, while introducing changes by suppliers by 10% - in particular in case of micro-enterprises. Highly important, in regard to motivations for introducing changes, is the will to develop (9%), which plays an important role mainly for "younger" enterprises established after 2005. SMEs more frequently engage in forms of innovative activity which involve less risk, such as purchase of machines and equipment, software. Merely few enterprises invest in purchase of technology (licenses, R&D). The structure of the surveyed investment expenditures incurred this year was dominated by machines and equipment (36%) as well as software (34%). Significantly less frequently did the enterprises invest in trainings (24%) or specialised advisory services (9%). Merely a minor percentage of enterprises (2-3%) invested in forms of innovative activity which involved more risk, that being research and development works conducted in the enterprise, patents for inventions, know-how licenses, completed research and development works.

More than half of service enterprises cooperated with their recipients (51%). Frequently cooperation with suppliers (29%), competition and other enterprises (18%) was undertaken. Fewer entities (5-6%) engaged in cooperation with consulting enterprises or universities. Establishing cooperation is a matter of interest for enterprises conducting their own research and development activity as well as financial agencies. Cooperation with the research background was particularly significant for R&D enterprises and financial agency services.

The changes introduced in an enterprise were mainly an outcome of new solutions developed within the enterprise (33%). Lower percentage of enterprises indicated introducing changes suggested by customers (17%). However, entrepreneurs indicated consumers as the superior source of information, it must noted that remarks made by consumers may become the source of innovation provided there are met with the attention of employees. Due to that personnel becomes the main source of innovation and remarks reported by consumers are primarily the source of inspiration for project of changes developed by the employees. Solutions suggested by suppliers and copying competition's solutions were also considered significant in regard to sources of innovation.

An important factor influencing competitiveness is creating communication networks and project task groups. The most innovative and competitive enterprises encourage their employees' creativeness. In the majority of enterprises (78%) the knowledge concerning developing new solutions is transferred directly – in particular in case of micro-enterprises. In larger, more innovative enterprises functioning of communication networks among employees and establishing separate task group for the development of new project is more common. It is worth mentioning that enterprises of higher level of innovativeness declare that their employees are encouraged to be creative – to create new solutions instead of basing on the already existing.

In the previous three years, one out of five enterprises (22%) entered new markets in geographic terms, similarly in the terms of customer segment (23%). It is worth mentioning that expansion of those enterprises was determined by engagement of entities in innovative activity. Enterprises, which in the previous three years introduced new services on the market/sector scale relatively more often expanded their previous scale of activity. Significant difference in this scope may be noticed from the point of view of sectors, more specifically – dynamics of their development.

Competitive environment of enterprises is characterised by high dynamics of changes. As much as ¼ of enterprises declared that during previous three years more than 10 new competitive enterprises entered the market. More frequently than in case of regions attractive for investments, those enterprises which operate on the nationwide or international market and also 'grey market', are considered competitors. It must be noted that enterprises located in the voivodeships of the highest level of investment attractiveness were able to define effectiveness of particular tools of protection against competition. Those enterprises considered, *inter alia*, agreement against competition with key employees, marketing actions and trademarks, relatively more significant.

7.2. Competitiveness, markets and customers of service sector

Competitiveness in the modern economy becomes to a larger extend depended on the capacity of introducing new solutions, increasing quality of services and goods provided, as well as the ability to meet specific needs of recipients. Product and technology life cycle in many sectors underwent radical reduction, in consequence of which enterprises, in order to maintain their position on the market, must immediately introduce improvements of their products or replace them with new products with better functionality, productivity, etc. In this scope customers' satisfaction and gathering customers' opinions is crucial in order to adjust services to the customers' needs

One out of three enterprises of SME sector operating in service sector provides mainly services adjusted to the needs of particular customers, one out of four – only standardised services. What is characteristic is that structure of type of services provided does not depend on the size of SME and it is similar in case of micro-, small and medium-sized enterprises. The only significant difference occurs in the case of enterprises providing mainly standardised services, among medium-sized enterprises there is 39% of them, while among micro-enterprises – 28%.

Only one out of four SMEs operating in the service sector measures the level of their customers' satisfaction. Larger enterprises are more prone to conduct such research, it is declared by 31% of medium-sized enterprises and only by 22% of micro-enterprises.

At the same time there is a strong correlation between innovativeness of an enterprise and enterprise's readiness to measure the level of customers' satisfaction. 43% of enterprises, which during last three years introduced innovative activities on the market/in the sector, measure the level of customers' satisfaction (34% enterprises did not introduced such services). Nearly half of SMEs currently conducting actions aimed at development of services, take into consideration the level of their customer's satisfaction, while 80% of enterprises not conducting innovative actions do not measure the level. SMEs, which use services of institutions supporting development of innovativeness and entrepreneurship, are more prone to measure the level of their customers' satisfaction. Measuring the level of customers' satisfaction is declared by 47% of such enterprises (while in case of enterprises which do not use the support of the abovementioned institutions it is declared only by 22%). The most significant percentage of enterprises measuring the level of customers' satisfaction occurs in the following sectors: financial intermediaries (35%), IT and architecture and engineering/technical research and analysis (30% each), while the lowest in the following sections: transport, stock management and communications (18%). The role of measuring the level of customers' satisfaction is particularly appreciated by those enterprises which operate on the market for a long time.

Measuring the level of customers' satisfaction is undertaken mainly by SMEs of medium size, operating on the market for a long time and introducing innovative solutions. The percentage of enterprises measuring their customers' satisfaction increases with the level of income from sales (20% of enterprises with revenues under PLN 499 thousand and 55% of enterprises with revenues of PLN 5–99, 99 million).

Half of SMEs which declare measuring the level of their customers' satisfaction for that purpose simply use their customers' opinions. Lower number of enterprises is able to afford market research (28%), however the percentage of enterprises choosing that form of surveying customers' opinions increases with the size of enterprise (44% of medium-sized enterprises). Third source of information (10%) is the number of customers which serves as an estimate according to a customary rule saying that "if there are more customers it means they are satisfied." Customer's opinions are equally important for all enterprises, regardless their size, innovativeness, sector their represent, etc. More advanced methods (marketing research) are relatively more often used by SMEs which conduct an innovative activity (42%), in which there are special units established with the aim of developing innovativeness (47%), those which use services of institutions supporting innovativeness and entrepreneurship (51%). According to the entrepreneurs surveyed enterprise's success, first of all, depends on the quality of services provided (average assessment – 3.8 in the scale of 4 points), providing services quickly and on time (3.7), established reputation (3,7), paying attention to customer's individual needs (3,7) and specialised knowledge or skills (3,6).

Table 7.1. Elements affecting success of enterprise (table of averages)

Elements affecting success of enterprise	Total (N=1035)	Micro-enterprise (N=499)	Small enterprise (N=274)	Medium-sized enterprise (N=262)
Quality of service provided	3.8	3.8	3.7	3.8
Providing services quickly and on time	3.7	3.7	3.7	3.7
Established reputation	3.7	3.7	3.6	3.7

Paying attention to customer's individual needs	3.6	3.6	3.6	3.7
Specialised knowledge or skills	3.6	3.6	3.5	3.6
Stable relations with recipients	3.5	3.5	3.5	3.6
Providing full assortment of services	3.4	3.4	3.4	3.5
Meeting standards and requirements	3.4	3.4	3.4	3.5
Introducing new services	3.2	3.2	3.1	3.3
Providing lower price services	3.1	3.1	3.1	3.1
Dynamic development of marketing and promotion	3.1	3.0	3.1	3.4
Use of state-of-art technology	3.1	3.0	3.1	3.2
Significant number of distribution channels	2.9	2.9	3.0	3.2
Organisational structure of enterprise (e.g. number of branches)	2.6	2.6	2.8	3.0

Source: PENTOR, IBnGR *Research on innovativeness of enterprises of service sector*

Although the assessment of particular factors influencing the success of an enterprise indicates insignificant differences among enterprises of different size, level of innovativeness, location (voivodeship), etc., it may be noticed that there is a general trend according to which the more innovative SME is, the greater is its awareness of particular elements of its success. The awareness is manifested by giving more points to each of factors facilitating success which were the subject of the research. It can be noticed particularly when the assessment given by employees from enterprise which establish units for development of innovations and those which do not establish such units are compared, and also when comparing the enterprises for which investments in new technologies are important with those which do not find such investments particularly important.

The factors surveyed are relatively more significant for enterprises from the following sections: post and telecom, financial agencies and the least significant for enterprises from the following sections: architecture and engineering/technical research and analysis as well as transport, stock management and communication. Particular elements were assessed more positively by workers from enterprises which provide services adjusted to the customer's needs and aimed at customers from the EU and the whole world. Taking into account the factors facilitating success, which were the most important for the respondents, quality of the services provided, was very significant for 77% of them and significant for 21%. The importance of quality is emphasised by employees of those SMEs which conduct innovative activity (average assessment 3.8), those which have separate units for development of innovations (3.8) and consider investment in new technologies as significant/very significant (3.8). The quality of services provided is also significant for those SMEs which offer services adjusted to customer's needs (3.8), servicing customers from the EU/the whole world (3.9) and having more than twenty years of experience of operating in the given section (3.8).

Providing services quickly and on time is considered a very significant factor influencing enterprises' success by 70% of the entrepreneurs surveyed. Perceiving this factor as significant is common among all types of enterprises and its assessment differs inconsiderably. *Established reputation* is particularly important for medium-sized enterprises (average assessment -3.7) and those interested in increasing the level of their innovativeness. The factor is emphasised, first of all, by those enterprises which already gained established reputation, which means those operating on the market for the longest time (3.8), with the most experienced personnel (3.8) and those aiming at reaching customers from the whole country (3.7) or even from the whole EU/world (3.8).

63% of the entrepreneurs surveyed defined *paying attention to the customer's individual needs* as very important. Naturally those SMEs which provide services adjusted to the needs, take care of customer's needs (3.8 against 3.5 among the enterprises providing standardised services). It seems that taking care of customer's needs increases on the more competitive markets: it is the highest in the group of SMEs with customers from the whole EU/world (3.7).

Specialised knowledge or skills are very significant factors influencing success for 2/3 of SME. They are relatively more significant for enterprises conducting innovative activity (3.7), those considering investments in new technologies as important/very important (3.7), those employing workers with higher education (3.6), those operating on the market for a long time and providing services adjusted to the customer's needs.

Half of SMEs operating in services sector has more than 10 competitors on the same market. The number of competitors declines with the size of enterprises, 51% of micro-enterprises has 10 competitors while in case of medium-sized enterprises it is 42%. Similarly, 17% of medium-sized SMEs and 10% of micro-enterprises have 3-4 competitors. Enterprises from IT sector (52% of SMEs have 10 or more competitors) and

transportation, stock management and communication (50%) have the highest number of competitors. Enterprises from the post and telecommunication sector have the lowest number of competitors (12% of respondents claim that their enterprise has no competition on the market). During last three years, in most of the cases, more than 10 competitors entered the markets in which the SMEs surveyed operate (21% of answers). 15% of SMEs gained 1–2 competitors, 14% - 3–4 and 12% – 5–10. In 9% of cases, according to the respondents, situation on the market did not change. Nearly one out of three entrepreneurs surveyed was not able to define how the situation on the market changed for his enterprise in the given period. Increase in the number of competitors appears to differ insignificantly with regard to sectors. The most insignificant changes were noted by enterprises operating for the longest time, with a strong position on the market (15% of SMEs established prior to 1989 have not encountered even one new competitor). Increase in the number of competitors is strictly connected with entering new markets. One out of four enterprises (27%) entering new markets in geographic terms encountered more than 10 competitors, similar (25%) situation occurred in case of enterprises entering new markets in terms of type of customers.

The SMEs surveyed most frequently (81%) indicated enterprises with domestic capital, located in the region, as a source of information about the competition. The second (49%) were enterprises with domestic capital, located in the country, third (33%) – international enterprises with foreign capital (located in Poland). Grey market is a source of competition for 17% of SMEs from the sector surveyed, while foreign enterprises – only for 3% of SMEs. Percentage of competitors with foreign capital increases with the size of entity surveyed and it amounts to 43% in case of medium-sized SMEs (enterprises located in Poland) and 6% (enterprises located abroad).

Relatively, enterprises with foreign capital, located in Poland, are the most significant competition for SME financial agencies (47%). What should also be noted is a significant share of grey market in IT sector (21%) and transport, stock management and communication sector (19%).

Table 7.2. Source of SME's competition by section

What is the source of competition for your enterprise?	Section					
	Transport, stock management	Post and telecom.	Financial agencies	IT	R&D	Architecture, engineering, technical analysis
Total	N=468	N=42	N=194	N=101	N=18	N=22
Enterprises with domestic capital located in the region	78%	64%	72%	74%	50%	76%
Enterprises with domestic capital located in country	59%	55%	55%	61%	72%	52%
International enterprises with foreign capital (located in Poland)	38%	40%	47%	33%	22%	32%
Grey market	19%	12%	9%	21%	6%	10%
Import (enterprises located abroad)	4%	0%	4%	2%	0%	2%

Source: PENTOR, IBnGR *Research on innovativeness of enterprises of service sector*

Enterprises which enter new markets in geographic terms, more frequently encounter domestic and international competition (70% of them indicate as competitors enterprises with domestic capital located in the country while 42% - enterprises with foreign capital located in the country), or in terms of type of customer (respectively 69% and 43%). Enterprises with domestic capital located in the country are relatively more often the main source of competition for SMEs from voivodeships of the highest level of investment attractiveness (63%).

Half of respondents admit that the enterprises operating on the same market use strategies of providing the lowest price services. One out of four entrepreneurs surveyed claims that participants of their market use strategies of providing unique services that differ from competition's offer. 15% of the entrepreneurs surveyed consider specialisation, that is providing services for a particular group of customers or operating on a particular geographic market (niche services), as a characteristic feature of strategies used by enterprises from their sector.

Providing lower price services is to a large extent strategy of enterprises, which do not conduct an innovative activity (55%), which consider investments in new technologies insignificant (57%), and which do not establish units for development of innovations (52%). Most frequently these are SMEs from transport, stock management and communication section (57%), which do not employ workers with higher education (55%),

thus they have no difficulties in finding workers with proper qualifications. Such enterprises provide standardised services for the population of local area and region, and they do not aim at entering new markets. Their higher expenditures cover purchase of machines and equipment (46%). They operate in voivodeships with the highest level of investment attractiveness (58%).

Specialisation/providing niche services is a strategy of enterprises slightly similar to those of the previous group. They conduct innovative activity (24%), develop innovative services on the market/in the sector (24%), they establish unit the aim of which is to develop innovations (22%). Relatively most frequently they operate in architecture and engineering/technical research and analysis sectors (23%) as well as IT sector (20%). Characteristic feature of this group of enterprises are high expenditures, firstly, on patents for an invention, licenses and know-how (49%), secondly purchase of software (22%). In general these are enterprises present on the market for a long time; their management is aged 40-59, and has the experience of working in foreign a enterprise/international corporation.

Particular sectors still provide their services only on the local or domestic markets and they are not present on the international markets (while the international competition is one of the most significant factors stimulating implementation of innovations). Although the research indicates that international service market may be more accessible, the export activity may not be available for all types of services. It may be connected with the character of service or the specific market, which exists only in a particular region and it cannot be directly transferred.

Nearly half of SMEs operating in service sector provides services for customers living in the local area (poviat). 29% of enterprises service mainly customers from the region (voivodeship), while 17% of them – from the whole country. 4% provides services for customers from the European Union, 1% for customers from the whole world. There is an obvious correlation between the area inhabited by customers and the size of an enterprise: micro- and small enterprises are concentrated mainly on the local markets (half of micro-enterprises services customers from the poviat) while medium-sized enterprises are more prone to reach foreign customers (17% of customers from the EU/whole world). It must be noted that small enterprises (10-49 employees) from the service section more often provides services for customers from the whole country in the first place (36%) and than for customers from voivodeship or poviat.

It seems peculiar that the percentage enterprises servicing customers form the whole European Union is considerably higher in case of enterprises conducting innovative activity (13%) than in case of enterprises which do not conduct such activity. It may be assumed that there is a mutual correlation between the innovativeness of an enterprise and the percentage of its foreign customers (from the EU and the whole world): implementing innovation enables entering new markets, while competing for the customer with foreign entrepreneurs demands from SME paying more attention to their innovativeness. It is shown in the gathered data concerning customers: 12% of SME implementing innovative services on the market/in the section have customers from the whole EU (against 5% of SME which do not implement such services), 12% of SME establishing units for the development of innovation (6% respectively) and 14% of SME using the aid of institutions supporting development of innovativeness (6% respectively).

Operating on foreign markets is connected with a greater willingness for applying for public support. Among the enterprises applying for such support during last three years as much as 20% were enterprises operating on the EU market (among the enterprises which do not apply for such support the percentage was only 7%). Those SMEs, which service customers from the whole EU, relatively more often receive such type of support (24% and 4% respectively).

2/3s of SME from the service sector offer services mostly to an individual customer, while one out of five enterprises provides services mainly for enterprises. The role of an individual customer is considerably more important in case of micro-enterprises (67%) while 38% of small and 36% of medium-sized SMEs aim at other enterprises.

SMEs which service mainly individual customers relatively more often do not pay attention to innovations (they constitute 63% of the group of enterprises which consider investments in new technologies insignificant/slightly significant), do not apply for aid from the institutions supporting development of innovativeness (59%) and do not employ workers with higher education (75%). These enterprises were mostly established after 2000, they provide services for local customers and do not intend to enter new markets. They constitute the majority (64%) of enterprises with the lowest sales revenues generated in 2007.

MSP which offer services mainly for other enterprises appreciate the role of innovations and implementation of new technologies. Relatively more often they implement innovative services on the market/in the section (37%), conduct innovative activity (34%) and use the aid of institutions supporting development of innovativeness (40%), operate in IT section (46%) and have revenues of PLN 5-99.99 million

(48%), enter new markets and service customers from the whole EU/the whole world (60%) which in most of the cases is connected with higher number of competitors.

One out of five SMEs from the service sector entered new market in geographic terms. Relatively more often it was done by small and medium-sized SMEs which implement innovative solutions (50%), employ workers with higher education (31%), operate in IT section (41%) and are located in voivodeships of the lowest investment attractiveness (38%). Entering foreign market is often connected with using the aid of institutions supporting development of innovativeness/entrepreneurship (46%) as well as public support. Controlling new markets requires SMEs to incur expenditures on purchasing patent for an invention, licenses and know-how (67%) and to solve problems connected with employing workers with adequate qualifications (41%).

Entering new markets in geographic terms is in case of SMEs from the service sector more closely related to the entering new market in the sense of a segment (type of customers). In 2007, new market in the sense of segment was entered by 23% of the SMEs surveyed, mainly small and medium-sized enterprises paying much attention to their innovative activity. Due to the similarity of structures of SME groups entering new markets in geographic terms and in terms of customers a hypothesis can be drawn that the territorial expansion is connected, in general, with expanding the segment of the market in which SMEs provide their services. It may be assumed that entering new markets in geographic terms (e.g. foreign markets), according to the entrepreneurs surveyed, equals gaining new customer segments.

One out of five enterprises (22%) surveyed during last three years realised a subcontract for another enterprise. 17% of SMEs commissioned subcontracts to other enterprises. The group of enterprises, which did not try such measures, was the most numerous, and micro-enterprises were the least prone to do so (69%). Small and medium-sized SMEs preferred to work as subcontractors or by outsourcing. Only 1% of enterprises transferred a part of its activity abroad.

Characteristically, the profiles of SME groups conducting subcontracts or commissioning subcontracts to other enterprises are very similar. In both cases these are enterprises introducing innovative services (38% and 32% respectively), conducting innovative activity (30% and 35%), and using the aid of institutions supporting development of innovativeness (42% and 40%). Relatively more frequently these enterprises operate in IT, architecture and engineering/technological research and analysis and employ workers with higher education. They provide customers from the whole country/EU/world services adjusted to their needs and they have a significant experience in operating in the section they represent. One out of three SMEs operating in voivodeships of the lowest level of attractiveness were subcontractors for other enterprises. The same percentage (33%) of these enterprises commissioned subcontracts to other enterprises. SMEs which are not interested in subcontracting or outsourcing do not pay much attention to increasing their level of innovativeness: they constitute as much as 69% of enterprises which do not conduct innovative activity and nearly ¾ of SMEs which declare that investment in new technologies is insignificant/slightly insignificant. These enterprises relatively more often operate in post –telecom section and in financial agencies, employing the highest number of workers with no higher education and have the lowest sales revenues (they constitute 71% of SMEs with an income up to PLN 499 thousand). They aim mainly at local/domestic market and do not intend to gain new customers neither in geographic terms nor in the terms of market segment. The majority of these enterprises operate on the market for a short time (they constitute as much as 78% of enterprises established before 2005).

7.3. Human capital in the service sector

Competiveness and innovativeness of enterprises is often conditioned by the environment in which enterprises operate – availability of partners, suppliers, possibility to learn from the competition, yet – first of all – by the quality of human capital. In many cases employees from the service sector are more engaged in creating and providing quality services for the customer as well as in innovative processes than industrial enterprises. In case of such type of services knowledge and skills of employees are the key element of enterprise's competitiveness. According to certain elaborations, employees' skills are the most significant stimulus for competitiveness, while the availability of highly qualified workers on the market is one the most important factors facilitating enterprise's development. Employees are one the main sources of innovativeness in service enterprises and the level of enterprises' innovativeness is correlated with the level of employees' qualifications (higher education, participating in trainings). In that field education of management is particularly important, since low qualifications of management are very often considered the main weakness of an enterprise. The lack of appropriate knowledge often results in not undertaking active innovative measures and choosing a reactive strategy which is base on imitating solutions introduce by the competition.

Employees' Education

72% of SMEs providing services employ workers with higher education. The percentage of employees with higher education increases with the size of enterprise and in medium-sized SMEs it amounts to 95% (in small enterprises 89% and in micro-enterprises – 71%). Employees with higher education are relatively more often hired by enterprises conducting innovative activity (93%) in which there are units/employees developing innovations (93%) and which use services of institutions supporting development of innovativeness (98%). The highest number of employees with higher education works in the following branches R&D, IT, financial agencies, architecture and engineering, as well as technical research and analysis (85%). The education of personnel increases with the level of revenues from sales (in enterprises with revenues of PLN 5-99.99 million 99% of employees have higher education). Enterprises with a higher number of employees with higher education more often decide to enter new markets (90%).

On the other hand, however, one out of three enterprises surveyed claims to have difficulties with finding employees with an adequate level of qualifications. The difficulties are least frequently experienced by micro-enterprises (63% of them have no such problem), since they most often employ non-qualified personnel or personnel with low qualifications.

Enterprises conducting innovative activity (52%), employing workers with higher education (39%), and providing services adjusted to customer's needs (43%) relatively more often experience difficulties with finding employees with desired qualifications. The most serious problems with completing personnel are experienced by enterprises form architecture and engineering/technical research and analysis branches (49%), IT branch (42%), those established after 1989, providing services for foreign customers (54%) and those aiming at expansion on new markets. It may be assumed that difficulties with finding employees are an issue of experienced enterprises with high demands as well as those conducting highly specialised activity (engineering, technical activity, etc.).

Employees' Age Structure

Enterprises' innovativeness seems not to be directly connected with an average age of the personnel. SMEs managed by persons aged 50-59 are relatively more prone to apply for public support (28% in comparison with 13% in the group of enterprises which do not apply for support) they also experience difficulties with finding employees with appropriate qualifications (23%). These SMEs operate on the market for a long time (27% of enterprises established prior to 1989) and conduct fairly specialised activity (27% of enterprises are from architecture and engineering/technical research and analysis branches).

Employees' Trainings

Nearly half of SME workers and management participate in trainings less frequently than once a year or not at all. 14% of enterprises' employees participate in trainings once a year while 28% few times a year, but not as often as once a month. Monthly trainings for personnel are organised by 4% of SMEs. Frequency of trainings increases with the size of an enterprise. For instance, 38% of medium-sized SMEs organise trainings few times a year while in case micro- and small enterprises the percentage amounts to 28% and 29%respectively.

Frequency of the inside trainings is strongly dependent on the level of enterprise's innovativeness. It is relatively higher in enterprises, which operate on the market for a long time, employing workers with higher education, providing services adjusted to customer's needs and entering new markets. Enterprises, which relatively most often train their employees, are those from post and telecom branches as well as financial agencies, while the least frequently trained employees are those working in enterprises from transport, stock management and communication sections. Frequent trainings occur in those enterprises which incur expenditures on purchasing patents for an invention, licenses, know-how – it seems that it may result from the need to teach personnel how to use new technologies.

The role of trainings is appreciated by managers experienced in a given field, particularly with the experience of working for a foreign enterprise or an international corporation. The most frequent trainings undertaken by SMEs are branch/specialist trainings (52% of indications). Second are trainings in sale (organisation, customer service, etc.) and/or marketing trainings (23%). Third is the type of trainings generally referred to as "staff" trainings (occupational health and safety trainings, SII trainings, fire trainings, etc.) while forth (13%) are financial trainings. Other types of trainings (law, management, IT, etc.) occurred in less than 10% of answers. The size of SME does not differentiate the structure of types of trainings.

The role of sector/specialised trainings is comparatively more important for enterprises employing workers with higher education (53% in comparison with 36% of enterprises, which do not employ workers with higher education, yet organise such type of trainings) and those who service customers from all over the country (66%).

Trainings in sales/marketing are more frequently organised by enterprises which do not employ workers with higher education (31%) and those which consider investment in new technologies insignificant/not vital for their activity (32%).

The structure of types of trainings differs depending on the branch the enterprise represents. It results from the fact that enterprises organise trainings which correspond with the main profile of their activity. For instance, IT enterprises most frequently (31%) organise IT trainings while 39% of financial agencies organises financial trainings.

A significant share of sector/specialised trainings occurs in the branches connected with new technologies such as IT (65%), architecture and engineering /technical research and analysis and R%D (60%). On the other hand, standard staff trainings are relatively more frequent (27%) in transport, stock management and communication branches which are to lesser extent interested in innovations and generally provide standardised services, etc.

In more than half of SMEs (52%) at least half of their workers participated in trainings last year. In 15% of enterprises 21-50% of employees were trained while in 10% of enterprises – not more than 5% of all workers. The employees who received, comparatively, most universal training, were those employed in micro-enterprises (53% of enterprises from this group trained at least half of their personnel), yet it results from the fact that enterprises from the sector employ low number of workers, rather than from complex training programme. Data concerning medium-sized enterprises indicates considerably more important role of trainings since in one out of four (26%) enterprises 21-50% of employees participated in trainings while in 23% – 51–100% of employees.

Specialised trainings are relatively more important for innovative enterprises than for those with low level of innovativeness. It may be the reason why in case of innovative SMEs the percentage of enterprises, which trained 11-20% of their personnel last year is relatively higher. For instance, among enterprises using services of institutions supporting innovativeness/entrepreneurship, the percentage amounts to 22% and it is considerably higher than the percentage among SMEs which do not use such support (9%).

The data confirms the hypothesis stating that the enterprises with half of their personnel trained are mainly small SMEs: such SMEs constitute nearly half of enterprises with the lowest income (48%), 43% of enterprises which service mainly local customers and 61% of enterprises not employing workers with higher education. Nearly as many SMEs are managed by personnel aged 40-49 (38%) as by personnel aged 30-39% (37%). Nearly one out of five enterprises is managed by personnel aged 50-59. The percentage of enterprises managed by more experienced persons increases with the size of enterprise (47% of medium-sized SMEs are managed by people aged 40-49, in case of micro-enterprises the percentage amounts to 37% and in case of small SMEs – 41%).

Management

The highest number of SME's is managed by persons with 5-10 years of experience in a given branch. Slightly lower number of enterprises (29%) is managed by persons with 10-20 years of experience in a given branch. Nearly one out of five (18%) SMEs is managed by persons with more than 20 year of experience. The management with 10-20 year of experience relatively most often manages medium-sized enterprises (38% of them). It seems there is no correlation between the level of management's experience and the level of enterprise's innovativeness. With regard to section division, it can be noticed that the managements of IT enterprises and financial agencies are the youngest, whereas the managements in architecture, and engineering /technical research and analysis branches as well as transport, stock management and communication sections are the oldest. The management of 17% of service sector SMEs has experience in working for a foreign enterprise or an international corporation. Relatively most often (29%) those are medium-sized SMEs – least frequently – micro-enterprises (17%).

. There is a significant correlation between the management having experience in working for an international enterprise and the enterprise's innovativeness. Enterprises managed by such persons relatively more often provide innovative services on the market/in the sector (30%), have separate units and workers developing innovations (34%) and consider investing in new technologies important/crucial for their activity (23%). Experienced management more often uses services of institutions supporting development of innovations/entrepreneurship (30%) or applies for public resources (34%).

The role of management with experience of working for a foreign or an international enterprise increases with the area in which the enterprise given operates: such workers are employed by 38% of enterprises which service customers from the whole EU/world, 28% of enterprises operating on the domestic market, 15% of those operating on the local market. Similarly, nearly one out of three enterprises entering new market is managed by persons with experience of working for a foreign or an international enterprise. 2/3 of

SMEs from service sector is managed by one person (the owner), in most cases these are, naturally, micro-enterprises (68%) and small enterprises (41%). In case of medium-sized enterprises the dominating model of management is that in which enterprise is managed by several persons, each of them responsible for an individual area of activity (74%) – it is considerably less popular among small enterprises (425) and micro-enterprises (16%). Model of management with one manager responsible for the management is relatively most popular among small SMEs (14%).

The model of management in which enterprise is managed by several persons, each responsible for a particular area of activity facilitates innovativeness. Among the enterprises providing innovative services on the market/sector scale, as much as 52% is managed in such way, among those which establish units/appoint workers for the development of innovations 58%, and among those applying for the aid of the institutions supporting innovativeness – as much as 65%. IT enterprises (43%) and financial agencies (40%) relatively more often have the management consisting of several persons. Enterprises from the post and telecom section most often have one manager. Among the enterprises from transport, stock management and communication, architecture and engineering/technical research and analysis branches, usually the owner is also the only manager (50%).

Enterprises in which the management process is fully dependent on the owner, note lower revenues; they service customers from the local area, do not enter new markets and incur expenditures on purchase of machines, equipment and software. In case of enterprises managed by few people it is opposite, they service customers from the whole country or the whole world, they intend to enter new markets, incur expenditures on R&D works conducted by the enterprise, as well as on specialised services, consultancy and trainings.

7.4. Knowledge management in the service sector

Enterprises' experience indicates that the factors such as organisation of work, employees' motivation and quality of cooperation between enterprises are crucial for enterprises' innovativeness. The factors differ depending on the enterprise, yet often they include decentralisation of rights and liabilities, flat structure of management, additional payments (premiums) which encourages achievements and loyalty towards the enterprise. Altogether, these factors serve to create an environment basing on high qualifications and high level of trust , which stimulates enterprise's innovativeness. Knowledge management is assessed as important or very important by over ¾ (76%) of respondents (the average assessment 4.2 in 5 point scale). The factor is very important for one out of two medium-sized SMEs.

The results of the assessment of knowledge management importance with regard to the level of innovativeness are peculiar: enterprises of low level of innovativeness relatively more often state that management of knowledge is insignificant, slightly significant, fairly significant or even significant, however only innovative enterprises are prone to assess it as "very significant" (ca. 60% of them expressed such opinion).Knowledge management is considered very important by enterprises representing the following sections: R&D , architecture and engineering/technical research and analysis (54%), financial agencies (53%) and IT (49%) while relatively less frequently by enterprises representing transport, stock management and communication (28%) section. One out of ten SMEs from post/telecom section considers knowledge management insignificant for their enterprises' operating in the given branch.

The role of knowledge management is more important for the enterprises established prior to 1989 (average assessment 4.4), those with an income of PLN 5-99.99 million (4.6) and those entering new markets. It is assessed as very important by SMEs which incur the expenditures on patent for invention, licenses and know-how (4.8).

Over 76% of SMEs from the service sector considers the ability of using the existing procedures and solutions important (it is indicated relatively more frequently by small and medium-sized SMEs). 69% of enterprises admits that applying the existing procedures and projects reduces time of the implementation of a task/servicing a customer, while 61% stores information in databases where it can be easily and quickly accessed by each employee. 58% of enterprises uses the best practice and experience of other enterprises (particularly 2/3 of medium-sized enterprises).

Nearly one out of two (53%) of SMEs invests in IT systems which facilitate the transfer and use of knowledge. One out of three SMEs has a system of assessment of the tasks and projects (in particular, 56% of medium-sized SMEs). The abovementioned statements do not apply to 12% of micro-enterprises.

Enterprises with high level of innovativeness relatively more often invest in IT systems facilitating the transfer and use of knowledge (81% of enterprises offering innovative services and 58% of enterprises which do not provide such services) and also use the best practice and experience of other enterprises (72% of enterprises offering innovative services and 56% of enterprises which do not provide such services). In such enterprises frequently there is a system of assessment of the completed tasks, which may be connected with the fact that there are also separate units for the development of innovativeness; in as much as 68% of enterprises in which there are such units there is also the system of completed task/projects assessment.

In 78% of SMEs offering services the knowledge is passed in a direct contact when new methods of work are made. Such way of passing the knowledge is popular among small enterprises (83%). Similar number of enterprises (77%) services the customer in an individual way, adjusting to the customer's demands and expectations. Discussions, meetings and cooperation in solving problems are more important than procedures in 68% of service enterprises. The role of an informal contact is relatively more important for small and medium-sized SMEs. One out of two (53%) enterprises encourages employees to create new solutions instead of using those already existing (in particular, 2/3 of medium-sized SMEs). Relatively higher share of task groups in the activity of medium-sized SMEs is also visible (55% against 30% of all enterprises).

The importance of the transfer of knowledge through a direct contact increases with the investment attractiveness of the voivodeship in which given SME operates.

Encouraging employees to create new solutions, communication networks connecting employees servicing the customers with those responsible for innovations, as well as forming task groups for each project result in an increase in the level of enterprises' innovativeness; providing innovative services on the market/in the section, offering services adjusted to customer's needs, conducting innovative activity, etc. However, such measures of knowledge management require employing workers with higher education which often results with difficulties in finding personnel with proper qualifications.

The highest quality of knowledge management (indicated by the most frequent answers in the statements surveyed) may be attributed to enterprises from the following sections: architecture and engineering /technical research and analysis, IT and financial agencies, and in particular those enterprises with significant experience on the market. The enterprises entering new markets are also aware of the importance of knowledge management. For instance, 2/3 of them encourages employees to create new solutions, has a communication network connecting the employees who service customers with those responsible for innovations, half of those enterprises establishes task groups which develop solutions trough a dialogue between people. Task groups are very important for SMEs which incur expenditures on R&D works conducted by enterprise (74% in comparison to 30% of all enterprises). The analysed methods are more important for enterprises managed by persons with experience of working for a foreign enterprise or an international corporation.

7.5 Recommendations

One of the key factors for the service activity is the quality of the personnel – its knowledge, experience and innovative awareness. As it may be concluded from the research, the managements of service enterprises often do not considers introducing changes necessary, hindering or completely stopping the progress of their previous activity. They are interested mainly in conducting their business on the previous scale and on the previous terms. On the one hand, it may result from the fact that management's attention is concentrated on coordination of enterprise's current activity – one out of five enterprises indicated this factors as hindering innovative activity. On the other hand, however, it may also result from management's lack of knowledge or lack of ability of formulating long-term development plans. **The solutions could be the actions (for instance trainings, consultancy) aimed at increasing managements' knowledge particularly in the scope of long-term strategic management of an enterprise**.

The results of the research may also indicate low level of managements' knowledge of the market. It can be proven by the fact that significant number of respondents could not define the number of competitors who entered the market during last three years. The number of enterprises gathering customers' opinions is also low and only one out of four enterprises measures the level of customers' satisfaction with their services. Enterprises experience difficulties in obtaining information on new technologies – if management is concentrated on the current activity, then the possibility of observing the market is limited, only few enterprises appoint an employee for such task. **Public support should be aimed at delivering up-date-date**

information concerning changes, including technological changes connected with the given branch (Technical Watch).

Another issue concerning the management is that it often decides to immediately adjust to the new standards dictated by the market rather than to launch innovative measures. To a large extent a defensive strategy based on imitating competitors' solutions is applied. This indicates that the motivation for introducing changes is not so much the perspective of entering new markets but rather the fear of loosing the previous/current position on the market. Conservatism of managements may stem from the fact that they know no examples of the enterprises which achieved success due to their innovative activity. Thus the enterprises' management does not perceive innovative solutions as a mean of improving their enterprise's competitiveness. **Promotion of the "success stories" could encourage management to invest in innovative solutions connected with higher risk**.

Apart from management competence, employees' qualifications and skills are also of a great importance for the service enterprises' activity. Most of entrepreneurs value highly qualified workers and is also aware of the significance of trainings. However, there is a problem since for a number of small enterprises, in particular micro-enterprises, delegating an employee for training hinders current activity of an enterprise; it often requires closing it temporarily. **Implementation of modern forms of trainings (e-learning) as well as conducting evening and weekend classes would enable participation in trainings for those people who otherwise were not able to participate in them.**

Another issue concerning employees' participation in trainings is the lack of specialised trainings referring to the specific section. Most frequently employees participate in general trainings which are not connected with their enterprises' activity, such as language courses or accountancy courses. **Trainings offers should be specified with regard to the needs indicated by entities operating in specific sectors.**

It must be noted that while assigning public support for enterprises it must be taken into account on what stage of development they are. Enterprises' needs concerning introducing changes (innovations) differ depending on their stage of development. For instance, measures aimed at stimulating investments in development and research works or cooperation with the science section directed to the enterprises from the group 4 would be ineffective, since such enterprises do not have adequate human and financial capital in order to engage in such type of ventures.

It should be pointed out that, however public support is indented for all enterprises, it is most frequently used by larger enterprises with higher human and financial potential. Small enterprises, particularly micro-enterprises, often cannot afford to appoint an employee who would gather up-to-date information concerning the available support, prepare an application and settle it. The minimum value of the project is often an issue since, from the point of view of micro-enterprises, it is too high (taking into account own input required).

Taking into consideration the abovementioned factors, while assigning public support to small and micro-enterprises, it is necessary to ensure that the information reaches potential beneficiary and also to simplify procedures of admitting and accounting the support. Bureaucratic difficulties connected with admitting the support should be proportional to the volume of the support – the lower the volume is, the less sophisticated procedures should be applied.

With regard to the abovementioned factors, the following directions of public support are recommended:

- improvement of human capital quality (education, trainings) with regard to employees but in particular to the management;
- undertaking measures to increase enterprises' financial potential – direct, through various types of financial tools (grants for R&D/purchase of technology, etc.) and also indirectly through improvement of knowledge and skills of entrepreneurs within the scope of attaining commercial external capital (training, consultancy);
- increase in potential and competence of intermediary infrastructure in technology transfer
- stimulating measures which facilitate establishing contacts between the representatives of enterprises and scientists;
- stimulating demand for innovative solution;

- more effective promotion of the available support and simplification of procedures connected with applying for the support – particularly in case of smaller enterprises.

Chapter 8

Introducing innovations in enterprises in cooperation with scientific environment

The Gdańsk Institute for Market Economics conducted research concerning the drivers and barriers to cooperation between science and enterprises sectors. The research was conducted in 2008 by Delphi method and in-depth interviews. The aim of the research was to perform detailed analysis of factors which most negatively (barriers) and most positively (drivers) influence innovativeness of Polish small and medium-sizes enterprises, and assessment of entrepreneurs and scientific workers awareness concerning innovations. Moreover, entrepreneurs and scientific workers awareness concerning innovations in technology transfer was also assessed.

Most frequently indicated barriers to technology transfer were financial factors connected with limited internal potential of enterprises, high risk connected with investments in new technologies, limited demand for new products, limited potential of R&D area, insufficiently developed intermediary infrastructure, legal and administrative obstacles and inadequately assigned public support.

It is slightly more difficult to indicate the drivers, with no doubt the following factors may be considered as ones: exhausting simple means of improving competitiveness, necessity of qualitative competing against price competition from other countries, expectations of customers s and enterprises from a capital group, foreign investments. Also external factors may be enumerated such as suppliers, economic growth, possibility of entering new markets, regulations and new standards, professionalization of services, workers mobility between science and business , academic entrepreneurship and increasing the scientific workers and universities authorities awareness concerning necessity and profitability of commercial use of knowledge.

8.1. Innovativeness of Polish enterprises

Polish economy in comparison to the other states is characterised by low percentage of expenditures on R&D (0.6%of GDP) against the EU average of 1.8%. Moreover, nearly 60% of all expenditures is incurred by the state budget. It results in significantly less efficient resources spending and unfavourable, from the point of view of economy needs, structure of R&D research conducted in Poland. In OECD countries scientific activity is by large financed by enterprises sector. In 2003 in Poland 24.3% of all expenditures was incurred by enterprises – the EU average amounted to 55.5%.

Comparison with other countries indicate huge gap in the area of innovativeness between Poland and other EU Member States. The reason for this is, *inter alia,* the fact that until recently processes of restructuring and creating new enterprises were given the most attention rather than developing scientific background and new technologies.

Research available indicated that Polish economy is characterised by dynamic growth rate and increasing number of innovative enterprises. The percentage of innovative enterprises increased in comparison with other EU Member States – such trend indicates that Poland is on the way to achieve level of highly developed countries. According to the research conducted most of Polish enterprises as the aim of implementation of innovations defines: improving quality of their products and diversification of assortment offered. The aim of nearly ¼ of economic entities surveyed is to meet demands of the market and adjust production to the requirements and standards. In comparison with other EU Member States motivation of Polish entrepreneurs are comparable to those in other states. It should be mentioned that contrary to the situation in most of the EU Member States Polish entrepreneurs frequently mention adjusting to standards and requirements, and regulation concerning environment protection, which may indicate that they still need to cover the gap between them and their Western competitors in the matter Expenditures on innovative activity increased in 1995-2005 four times. In the period enterprises invest mainly in embodied technology – such type

of investments is connected with higher risk than for instance research-development works. Expenditures on investment activity increased annually until 2005, when a slight decrease of expenditures on machines and equipment occurred –it was the first such decrease in recent years – which may indicate that a certain stage of modernisation of machine park ended and that in the future the percentage of such type of expenditures will be decreasing thus financial resource "saved" in that way may be assigned foe other types of actions including research development.

Polish enterprises indicated mainly business partners (suppliers, recipients, other innovations). Only a minor percentage of entrepreneurs use the knowledge generated by scientific base in Poland.

In comparison with the EU Member States Poland is characterised by comparable or huge level of cooperation with external partners. The reason for that may be an insufficient financing of technological solutions formulated in the research-development units being inadequate for practical application in economic activity, as well as difficulties in obtaining thorough information concerning teams/units and their potential.

Innovative activity of Polish enterprises is limited due to the difficulties in obtaining external financing ofr ventures connected with higher risk such as purchase of licenses or research development activity . Costs of commissioned technical elaborations and maintaining enterprises' own database are high, which is connected with the necessity of incurring significant financial expenditures. Higher risk, high costs of financing and lack of developed *venture capital* market constitute obstacles which are difficult to overcome. The issue concerns particularly small enterprises which in comparison with large enterprises experience significant difficulties in attaining commercial financing. Majority of enterprises finance their innovative activity from their own capital or by using bank credits. Poor knowledge concerning institutions supporting innovative activity of enterprises resulted in poor use of financing from public resources aimed at supporting innovations. Still only an insignificant percentage of enterprises undertakes any efforts in order to obtains financing for innovations from public resources.

8.2. Innovative activity and technological transfer - barriers and drivers. Results of Delphi research.

The conducted research, concerning innovations and transfer of technology, indicated a number of barriers hindering development of these phenomena in Polish economy as well as factors stimulating these processes. Most frequently indicated barriers were:

- Financial factors (including high cost of R&D works and technologies, limited access to capital)
- Limited internal potential of an enterprise (including lack of strategic planning, lack of innovative culture, employees' reluctance towards changes).
- High risk of investments in new technologies,
- Limited demand for a new products
- Information factors (including, lack of information concerning technology, lack of potential partners, lack of public support or protection of intellectual property),
- Limited potential of R&D area (including low expenditures, conservatism of scientists, passive attitude of scientific institutions towards enterprises),
- Insufficient infrastructure of intermediation
- Law and administrative functions
- Insufficiently and inadequately directed public support

The following factors stimulating transfer of technology from scientific institutions to small and medium-sized enterprises are indicated in the literature:

- Exhausting simple measures of improving competitiveness,
- Necessity of quality based competition against price competition from other countries
- Customers' demand for the new products /services,
- Ventures within a capital group,
- Foreign investments ,

- Suppliers ,
- Economic growth ,
- Entering foreign markets,
- Regulations, new standards,
- Increasing the access to the public resources for R&D innovations,
- Internal resources,
- Commercial companies/units conducting technological research, offering technological consultancy as well as technological transfer
- Employees educated and experienced both in science and business
- Increasing awareness of scientific workers and universities' authorities of the necessity and profitability of commercial use of knowledge
- Introducing changes in the regulations concerning universities (parametric assessment)enabling cooperation between scientific workers and the industry
- Development of intermediary infrastructure (technology transfer centres, parks and technology incubator)
- Education and trainings
- Activating scientists

2/3 of 30 experts participating in the Delhi research (21 experts) considered the scale of technological transfer from scientific institutions to the small and medium-sized enterprises in Poland definitely insufficient. The necessity of increasing technology transfer was considered crucial mainly by representatives of units intermediating the transfer of technologies (10 experts) and scientists (5 experts). Technology is transferred without participation of scientific institutions – that is directly from the scientific workers to the companies. The scale of such transfer is considerably significant – according to 40% of respondents (12 experts) it is definitely higher than the level of technology transfer with participation of scientific institutions.

More than half of experts (7 persons) who indicated such answer was representing institutions conducting transfer of technology. Less than 1/5 of persons surveyed (5 persons), in particular those representing enterprises (3 experts) claims that the scale of such an indirect transfer is lower than it is claimed by scientific institutions.

Undoubtedly the transfer of technology occurring outside the official channels of cooperation between scientific institutions and enterprises concerns contracts of lesser value – often it has a form of a certain expertise, opinion or consultancy. The reason for such situation is, on one hand, lack of clear and uniform regulations regarding intellectual property, particularly the division of the property rights (lack of rules regarding intellectual property, lack of adequate provision in the employment contracts). On the other hand the value of such contracts (services) is relatively low and sensitive to the prices' increase which means that commissioning such service to a scientific unit may be unprofitable (as it would include additional costs of intermediation).

Undoubtedly the scale of technology transfer (knowledge) in the future will depend, on one hand, on the introduction of proper legal regulations in universities (and also on the increase of awareness/knowledge of scientific workers regarding the intellectual property rights) and on the other hand on the growth of demand and economic potential of enterprises.

Experts' expectations indicate that in the upcoming five years the scale of technology transfer will increase yet inconsiderably – 2/3 of respondents supports that claim (22 experts, 7 representing intermediating institutions and 6 representing business). Less than ¼ of respondents (7 persons) predicts a significant growth in the scale of technology transfer – here the most optimistic were representatives of intermediating institutions (5 persons).

Barriers

The section of science is considered the one responsible for insufficient transfer of technology. It is emphasised by experts from that field, representatives of enterprises and scientists themselves. The sector of enterprises is said not hinder the technology transfer significantly. Enterprises sector was considered less

responsible for limiting technology transfer. Respondents decided that the least responsible for the limiting technology transfer are intermediary units which role is to facilitate flow of knowledge.

From among barriers concerning the economy the following were considered the most significant factors hindering technology transfer from the scientific: "*limited financial potential of enterprises*" and "*enterprises' limited potential of absorbing new technologies*". Respondents also indicated "*wrongly directed public finances*" and "*difficulties in obtaining external financing*". It must be emphasised that opinions of particular experts differ in case of that factor – those representing business assigned more importance to the factor (even considered it the most significant) whereas representatives of science did not considered it very important. The least importance was assigned to the factors such as, *inter alia, "low qualifications of the personnel"* or "*dispersion of information concerning technologies, potential market and high cost of obtaining the information*". It is worth mentioning that – according to respondents – in the upcoming five years nearly all the barriers concerning the economy will reduce. Inconsiderable increase is expected only in case of "*wrongly directed financial support."*

As it can be concluded from the research results, for the enterprises the main barrier to technology transfer is the lack of development capital (insufficient financial potential or difficulties in obtaining external capital). Financial impediments discourage entrepreneurs form investment initiatives while involving resources in R&D activity is connected with a particularly high risk.

Limited capacity of implementing new technologies (connected with human capital, level of skill and knowledge) also matters as it discourages entrepreneurs from investing in new technologies due to organisational difficulties and cost, which may occur during the implementation (e.g. the necessity of conducting trainings).

The factor that was considered the most significant barrier for the development and research field was *„scientists' lack of knowledge concerning the economy"*. Second were "*scientists' poor motivation for cooperation with business*" and "*lack of skill in managing organisational units of scientific entities*". Among the factors which most significantly hinder processes of technology transfer the following were indicated: "l*ack of human capital in universities able to conduct research for the use of enterprises*" and "*lack of clear and precise regulations concerning intellectual property rights*". While analysing the research results it is should be noted that significance of the two factors identified as most the most detrimental for the technology transfer processes is expected to decrease.

Experts considered the following barriers to technology transfer concerning intermediary infrastructure as the most significant: "*wrongly directed support for the development of an institution*" and "*lack of particulars specialised qualification on the market*" (only few respondents expressed an opinion that the barrier has no significance, they were mainly representing business). Other factor indicated was "infrastructure *offer not adjusted to the needs of entrepreneurs*". All the other factors in that field – according to the respondents – were of considerable less significance. No changes concerning the significance of barriers concerning intermediary the infrastructure are expected – the only factor which significance may decrease is "*underinvestment of units intermediating in technology transfer*".

Support of intermediary unit is aimed, first of all, at the development of the entities – less frequently at the process of technology transfer. Moreover, activity of entities is characterised by a moderate intensity of cooperation between enterprises' sectors and scientific base – service offer often is not adjusted to the actual needs indicated by both sectors.

Drivers

The factor considered the most significant driver of technology transfer by the experts surveyed was "*competition and exhausting of simple means of improving competitiveness*". The average assessment was high, nearly 1/3 of respondents (from different groups) assessed the significance of the factor as low, which may indicate uncertainty in regard to this matter. An increase of the factor significance is expected in the upcoming 5 years. Next factors indicated were "*access to the public resources for innovations and R&D*" and "*reducing bureaucracy in the economy, introducing changes into law and accountancy law*". The factors considered the least stimulating were "i*ncrease in expenditures on intermediary infrastructure*" and "*increase/available public resources for financing services/consultancy regarding transfer of technology to*

enterprises". In the upcoming 5 years the factors will gain importance, the most significant changes are expected in "*competitiveness and exhausting simple measures of improv*ing competitiveness" and "development of risk capital".

Drivers of technology transfer considered the most significant were those mechanisms of competition which convince entrepreneurs to initiate investment activity in order to maintain their position on the market. Low financial potential (particularly important for SME sector) limits its scale to a great extends. Thus, one of the most significant factors stimulating technology transfer is increase in the availability of public resources for financing innovative activity and development-research works. Introducing changes concerning reducing bureaucracy as well as tax and accountancy regulations also appeared to be significant. It should be noted that – according to the respondents' answers – the most effective drivers of technology transfer are the factors concerning enterprises sector (most frequently those aiming at financing). Supporting cooperation (partnership) between science and industry (e.g. technological platforms, centres of advanced technologies, clusters) or increasing among scientific workers and universities administration the awareness of the need for commercial use of science were considerably less popular. The factors considered less effective were the activity aimed at, inter alia, popularisation of information concerning the possibility of cooperation – consultancy or development of intermediary infrastructure.

Mutual influence of barriers and drivers

Cross-analysis of influence of both barriers and drivers was conducted. The aim of the analysis was to identify the barriers which may most significantly hinder drivers and the drivers which may most efficiently reduce negative influence of barriers on the technology transfer. In order to calculate the level of influence of the given factor the significance of the factor and expected changes concerning the factor were taken into account. The following factors will have the most significant influence on the reduction of barriers: access to the public resources for financing innovations, introduction of changes in regulations concerning universities (change of stimuli structure), increasing workers' mobility between science and business. The barriers will to a less extent hinder economic growth, professionalization of services connected with technology transfer and development of structures of cooperation between scientific environment and enterprises sector.

Positive influence of drivers will most significantly limit negative influence of the following barriers: poor motivation of scientific units for involvement in processes of technology transfer and to a less extent difficulties with obtaining external financing, lack of knowledge concerning the needs of economic environment, lack of innovative and entrepreneurship culture in universities as well as the fact that research conducted in the scientific units is not adjusted to the needs of enterprises.

On the other hand, the most significant barriers, which must be eliminated otherwise they will most significantly hinder effects of drivers are: limited financial potential of enterprises, wrongly directed public support (for enterprises) and lack of managing skills in scientific units, and also to a less extent limited enterprises potential of absorbing new technologies, limited scientific potential of R&D units, poor motivation of scientific units for engaging in processes of commercialisation of technology, lack of innovative and entrepreneurship culture (among students, scientists)and wrongly directed support for the development of intermediary institutions.

The following drivers will be most sensitive to the influence of barriers to technology transfer: development of cooperation structures between science and business and to a less extent changes in regulations (stimuli structure) concerning universities, improvement in identifying needs of economic entities, increasing mobility of employees between science and business, professionalization of services connected with technology transfer, increase of scientist awareness of the necessity of commercial use of knowledge, increasing the support for financing consultancy/services of technology transfer.

The analysis conducted enables identification of several main determining factors, which are the key factors for defining future scale of transfer of technology from scientific environment to the enterprise sector. First of all the scale of technology transfer is determined by the economic growth. The economic growth influences mostly the economic demand – particularly by:

- Increase of financial potential of enterprises (increase in enterprises revenues may result in generating surplus, which may be assigned for development investments),
- Easier access to the external capital (it is less difficult to obtain credit from financial institution – banks invest in entities support with equity capital in time of economic upturn)
- Increase in demand for innovative solutions – both investment demand and consumers demand (as a result of increase in population's income)

Economic growth is one of the key drivers of technology transfer, which may also contribute to reduction of one of the key barriers to the process of which is the limited financial potential of enterprises. The economic growth rate (both in the country and abroad) will significantly influence the scale of technology transfer from the science sector to the enterprises, including SME.

Second important factor which will be influencing the scale of technology transfer from the science to enterprises is a innovative policy. What is significant are not only directions of the innovative policy (its priorities, tools and do which group of entities they will be directed) but also effectiveness of implementation of the policy, that being the effectiveness of particular programmes and measures.

Analysis of the scale of public resources assigned in the upcoming years for stimulating innovativeness indicates that the may constitute a significant factor stimulating enterprises to engage in innovative activity – both by increasing the number of enterprises investing in new technology and increasing the possibility and scale of investments of those enterprises which already invert in new technologies.

The greatest uncertainty concerns actual influence of the factor on technology transfer to SME in the upcoming years . Particularly the uncertainty concerns whether or not, and to what extent the public resources will be assigned for the support of technology transfer to SME. Previous experience indicate that public support for innovations will definitely be used by large enterprises and maybe also medium-sized enterprises, whereas small and particularly micro-enterprises will use the support to a less extent. It is therefore likely that the trend will continue in the future which will result in poor motivation for transferring technologies from science to SME. Secondly, there is a question concerning performance of public support. In Poland, a poor evaluation of various programmes and tools of public supports is still an issue of public policy, consequence of which is a limited possibility of fast and effective modification of support direction. Thirdly, it should be emphasised that any public support that is a significant driver of technology transfer to enterprises may also become, in certain circumstances, a factor detrimental for the scale of the process. The situation may occur if there will be a significant increase in financial resources for research-development works in scientific units which will not be followed by changes of regulations concerning stimuli structure (more effective promotion of cooperation with economy) and promotion of high quality research, improvement of managing skills as well as encouraging young people to study science. If the enumerated actions are not implemented the public support may in fact decrease motivation of scientists/scientific units for engaging in research work for enterprises.

Third significant determinant influencing the scale of technology transfer is introduction of changes in regulations concerning scientific units (particularly in universities) which to a greater extent promote commercial effect of their research-development works and regulate applicable rules concerning the determinant (inter alia concerning intellectual property rights). Successful cooperation of science and business is possible only if there are stimuli which to a greater extent promote contact between university and particular scientists with the economy. Systematisation and simplification of rules concerning cooperation influences not only practical aspects, such as signing contracts, but also reduces mental barriers, such as scientific workers' reluctance to cooperate with enterprises and having their skills assessed. It also influences promotion of innovation and entrepreneurship culture.

The element of such changes should also by improving the competence concerning service of technology transfer from the scientific units to enterprises sector (introducing management and improvement of services' quality). The changes will significantly influence demand of research-scientific sector, which is according to the experts, responsible for the barriers which most severely hinder technology transfer to SME.

Another key factor is human capital. This factor is very important both from the point of view of enterprises (improvement of managing skills, increasing potential for absorption of new technologies) and science sector (first of all encouraging talented people – potential scientist, also encouraging young people to study science). From the point of view of human capital key determining factors are: the abovementioned introduction of changes into regulations concerning stimuli structure as well as increase of expenditures on science. From enterprises perspective the factor positively influencing the human capital will be the public support available in the upcoming years (particularly within the framework of Human Capital Operational Programme). Another positive impulse may be return of workers who emigrated few years ago and gained experience in foreign enterprises. On the other hand, however, it must be emphasised that there is still risk of "human capital flight" that is emigration of the best educated and the most active people.

In the upcoming years a general improvement of human capital quality in the enterprises sector is probable; however it will not include small and medium-sized enterprises. The quality of human capital in smaller enterprises is currently lower than in larger (large) enterprises, moreover the smaller enterprises less frequently and to a less extent invest in the development of human capital. The situation, if it prevails in the future will bring the risk of lowering the quality of human capital in SME in comparison to the larger enterprises. Secondly, situation on the labour market, connected with deficit of qualified employees, will

negatively influence the quality of human capital in smaller enterprises. Since in larger enterprises (including enterprises with foreign capital) in general remuneration is higher there is a risk of "human capital flight" in case of the best specialists from micro-enterprises. The consequence of the negative factors may be general decrease of small and medium-sized enterprises' potential for absorbing new technologies.

8.3. Scenarios of technology transfer development

The analysis conducted enabled indicating key areas and factors determining the scale of technology transfer from science sector to small and medium-sized enterprises. The analysis enabled development of potential scenarios concerning technology transfer to SME and indicating key factors determining particular scenarios.

1) **Frog Leap scenario —** result to this scenario will be a significant increase in the scale of technology transfer from the economy to small and medium-sized enterprises. The scenario will occur if there is a rapid economic growth and significant improvement of performance in all the areas connected with technology transfer processes that is fast improvement of human capital in enterprises, introducing necessary changes in regulations in scientific units and appropriate adjustment of public support performance.

2) **Trailing growth scenario** - according to the scenario the growth rate of the scale of technology transfer from the economy to small and medium-sized enterprises will be proportionate to the growth rate of economy (assuming that the economic growth rate will be comparable to the one noted in the last decade – in particular the scenario assumes there will be no recession). The scenario is based on the assumption that need for new technologies is proportional to the economic growth rate and the innovative policy (public support) can only to a less extend affect its scale. The main factor affecting the scale is the economic growth rate.

3) **Selective growth scenario** – the scenario is based on the assumption that the transfer of technology will occur between the scientific sector and large enterprises or it will take a form of technological academic enterprises. Majority of small and medium-sized enterprises will not directly participate in the process. Enterprises will invest, although to a limited extent, in embodied technology – purchase of machines and equipment. The factor determining realisation of the scenario will be an inflow of foreign investments into the most significant scientific posts, particularly technological investments, and also growing mobility of scientific workers – in the global scale.

4) **Decline and peripherisation scenario.** –it is based on the assumption that the current scale of technology transfer will decrease or remain the same. The scenario may occur in case when few negative factors will occur at once, that being low economic growth rate (possibility of economic crisis) which may result in further "human capital flight", lack of reform of science sector and unsatisfying performance of public support in regard of innovative policy.

The abovementioned scenarios definitely are not all the possible in the area of technology transfer from science sector to small and medium-sized enterprises, however they indicate main options of development and its crucial factors .It is difficult to decide which of the scenarios is most probable. However it can be stated that the most extreme scenarios (1 and 4) are the least likeable to occur in the current conditions in Poland. For one the scenarios to occur – all the positive changes/impulses or all the negative (scenario 4) would have to occur at the same time (scenario 1).On the other hand, one of the remaining two scenarios are to a great extent depended on the policy performance. The second scenario is probable in case of limited scale and the growth rate of changes in the area of innovative policy (directions and support performance) and scientific policy (changes in regulation concerning scientific units). Taking into account previous experience gained during the implementation of innovative policy and the growth rate of introducing changes into regulations the scenario appears to be the most probable. The third scenario includes introducing regulations reforming the structure of stimuli for scientific units, however, does not include introducing preferences for SME. Such situation, in connection with additional inflow of foreign investments (technological and concerning knowledge)- certain indicator are already visible – may result in the scenario becoming real.

8.4. Entrepreneurs and scientists awareness concerning innovations and technology transfer[53]

[53] The following sub-chapter presents results of in-depth interviews with 20 representatives of higher management of randomly selected enterprises from the industrial section who do not cooperate with science sector, 20 representatives of management of enterprises who maintain substantial contact with the sector science, 10 representatives of management

Management of enterprises fairly highly assesses enterprises competitiveness, enumerating among its assets flexibility concerning realisation of commissions, low price and high quality of products sold. Only few enterprises mentioned innovativeness and using of up-to-date technologies as significant factors improving competitiveness. Entrepreneurs notice technological gap between technologies they use and the standards dictated by the market, but they prefer to search for other factors determining their competitiveness. Majority of representatives of consultancy enterprises, as well as sever representatives of economic chambers (mainly craftsman) claim that self-evaluation of SME competitiveness of is too optimistic. It is worth mentioning that significant number of small and medium-sizes enterprises operate on the local or regional markets, thus their ability for assessment of the actual level of their competitiveness is limited – they compare they potential to competitors operating on the same market (local/regional).

Key conclusion of the analysis conducted is that Polish small and medium-sized enterprises vary in terms of willingness and potential for investments in new technology. The level of awareness of significance of investments in technology as well as knowledge and skills of obtaining the technology is additionally correlated with the actual enterprises potential for absorption of technology (understood as financial potential and human capital).

Classification of entrepreneurs

Generally, three groups of enterprises may be distinguished differing in the level of awareness concerning the need of investment in technology, acquiring necessary knowledge concerning the technology and potential of its absorption.

1) Traditional enterprises (craftsmanship)to a very limited extend invest in new technologies and they are characterised by the lowest level of awareness concerning innovations and knowledge related to both sources and procedures of technology transfer , and by limited knowledge of public support available in that area,
2) "Active imitators" – enterprises which invest mainly in embodied technology and to a certain extent in development of human capital. The enterprises are characterised by average level (several even by high level)of awareness concerning sources and procedures of technology transfer and fairly satisfying knowledge of public support available in that area,
3) Innovators – enterprises which actively invest in new technologies in forms connected with the highest risk, such as conducting their own research-development works or commissioning to other research-scientific institutions. The enterprises are characterised by high level of innovative awareness and very high level of knowledge concerning sources and procedures of technology transfer as well as knowledge concerning public support available in that area.

Traditional enterprises is a group of entrepreneurs characterised by very low innovative awareness and lack of will to introducing changes in their previous activities. These are mostly small enterprises (craftsmanship) operating on the market for a long period of time (from few to more than ten years). Main factors influencing competitiveness of such type of enterprises is low price of products, flexibility and close relationship with their customers. They are usually owned by persons with elementary, vocational or secondary education who lack innovative attitude; they are not willing to change rules of conducting activity they have been using for years which ensured them their position on the market. There is a huge gap dividing such enterprises from the leading ones – their machines are out-of date since they still use machines purchased at the beginning of their commercial activity. According to the interviews conducted among representatives of craftsman chambers – a barrier for innovative measures in such type of enterprises is their limited capacity of adapting new machines. For instance small enterprise producing shoe polish using technologically out-of-dated production line. An attempt of modernising such enterprise would mean closing the previous activity and

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of institution associating entrepreneurs, 10 representatives of management of consultancy enterprises operating for SME sector, 5 representatives of institutions promoting and supporting entrepreneurship in academic environment, 5 representatives of scientific units responsible for cooperation with and 5 scientific workers from research-development institutions cooperating with the economy, engaged in realisation of research-development project together with enterprises.

establishing it from the basis. Another significant reason for lack of willingness of innovations is the lack of successor. Enterprises conducted by elder persons who do not have successor are not interested in technical solutions appearing on the market, their innovative activity concerns only minor technological improvements. According to the interviews conducted in consultancy enterprises such type of enterprises (traditional) are to ones who the least frequently use consultancy services in the area of innovative activity.

Active imitators – management of these enterprises is aware of the fact that enterprise must progress if its position on the market is to be maintained or augmented. These are mostly owners or managers of small and medium-sized enterprises operating mainly on the domestic or regional market. Main assets of their activity – indicated by representatives of such type of enterprises –is high quality of their products, competitive prices, flexibility in realisation of commissions and qualified personnel. The surplus generated by those enterprises enables undertaking innovative activity, however due to limited capital entrepreneurs are not willing to incur cost of high risk. The situation is by large determined by aspect of time. Enterprises do not have sufficient financial resources to undertake investments which will generate income in few years. Majority of them concentrates on the current activity and do not form plans in perspective longer than 1-2 years. Naturally it results in them not being interested in investments in new technologies where incomes are generated in a longer perspective.

Significant number of those enterprises do not intend to perform investments in technology which are connected with higher risk such as, commissioning R&D works or engaging in their own R&D works. Rarely ever they purchase licenses of *know-how*. Introducing changes into their previous activity is a turning point for the type of enterprises, in particularly for small enterprises since it their case it is connected with a significant financial burden. In many cases such investment is dictated by the necessity. For instance small meat processing plan which during last years introduced only one innovation that being purchase of new technology of meat preserving. The old methods did not meet the requirements of the EU. Another example is an enterprise processing plastics –its management decided to purchase new laboratory equipment for labour environment research when new legal regulations concerning medicine of work came into force.

Innovators – these are enterprises which intend to build up their competitive advantage by implementing new experimental technologies. Management of the enterprises are owners/managers with higher education, aiming at long-term plans concerning their enterprise development. These enterprises – although some of them are small – compete with enterprises from all over the country and those operating globally. Enterprises from this category actively cooperate with science, they commission individual research works to scientific units and also establish formal contracts for a long-term cooperation. Mostly they choose strategy of specialisation – they decide on one or few fields of activity in which they intend to specialise in technological terms. An example may be an enterprise conducting two types of activity, that being production of electronic components, which are distributed only on domestic market and production of reed switches which are competitive on the global scale – mainly due to up-to-date technologies used in their production and continuous research works conducted with the aim of further development of the technology. Specific group of the enterprises are spin-off enterprises (spin-off) which are concentrated on development and practical use of innovative technology developed in cooperation with universities.

It is difficult to state the number of enterprises in individual groups, since any estimate would demand for further survey research in the representative sample and this was not the subject of the project. However, taking into account structure of enterprises population in regard to the size (micro-enterprises dominate) and, on one hand opinions of associating institutions representatives (in particular craftsman chambers) and on the other hand opinions of institutions intermediating in technology transfer and scientists/representatives of scientific units which indicated limited number of entities interested in and engaging in technology transfer processes from science to business it may be stated that the most numerous group is the first one, Second, in regard to number of enterprises is the second group while the lest numerous group is the group of enterprises with significant technological potential (which to a greatest extent invest in technology).

Comparable proportion concerning the number of enterprises in the groups are natural for every economy, it can be assumed that they are comparable with other more developed economies. In Poland, in general the potential and willingness to absorb technology is lower in particular groups of enterprises in comparison with the average level in more developed states. It stems from a certain level of economic growth and also relatively short period of market economy in Poland which resulted in relatively lower accumulation of capital and lower level of organisation and managing competence in domestic enterprises.

Classification of scientific environments

In regard to the level of awareness concerning cooperation with the economy three groups of scientists may be distinguished:

Passive and not-cooperating – these are representatives of scientific environment, who are not interested in establishing cooperation with the economy. Their level of awareness concerning technology transfer is either non-existent or very limited. They are concentrated on their theoretical knowledge aimed at creating research results – something they perceive as "real science". Mostly they do not even take into account a possibility of cooperating with enterprises as they perceive such cooperation as depreciating – they are reluctant to be "downgraded" to the level of economic practice, such actions are perceived as low-esteem in scientific environment. They realise their scientific activity exclusively in universities working on the basic research.

Potentially cooperating – scientist who are willing to cooperate with business yet they are not aware who is to initiate such actions and how they should be conducted. Their attitude towards establishing contacts with entrepreneurs is rather passive, they wait for commissions. Their knowledge concerning technology transfer procedures, intellectual property rights protection and other available tools of public support stimulating cooperation between science and business is very limited (also the knowledge concerning regulations obligatory in their own scientific units). The situation in the aspect is diversified and to a great extent it depends on whether the given unit has an efficient office/team servicing technology transfer or not. Commonly such units conduct trainings and provide support in regard with commercialisation of technology; frequently it also provides support in regard to obtaining public resources. To the unfavourable situation contributes the fact that in several scientific units there are no clear regulations or procedures concerning technology transfer and division of incomes generated from commercialisation of intellectual property. According to the interviews conducted with representatives of scientific units, intermediary institutions and enterprises cooperating with science, the scientists not-cooperating with the economy constitute majority of universities employees. However, in technical universities the percentage is relatively lower.

Active cooperating – these are scientists characterised by full engagement in cooperation with enterprises. Character of the cooperation is diversified. It may be realisation of certain commissions defined by enterprises (e.g. within target projects), commercialisation of the technology developed, consultancy services or establishing their own economic activity by university workers. According to the interviews conducted with representatives of scientific units – the percentage of this category of scientists is relatively low – it may be estimated as less than twenty percent. In case of a certain technical university it was estimated as nearly 5-6%.

Conditions for the technology transfer processes from the perspective of entrepreneurs

Entrepreneurs decide to cooperate with science sector for clearly defined reasons thus most of them is able to identify the aims to be achieved by such cooperation. Majority of entrepreneurs cooperating with scientists perceive it as a chance for development of their previous activity – investment which in the future will enable the enterprise to introduce new products/services on the market. Numerous enterprises defined specific aims which they expect to achieve by establishing cooperation. For instance, the management of an enterprise producing active substances for medicines was aware of the fact that the enterprises cannot perform the research upon substances of such a complicated synthesis. Thus it established cooperation with scientific that being, technical university, Polish Academy of Science unit and pharmaceutical institute, which could provide appropriate technology.

It is worth to mention that although numerous enterprises employ engineers and technologists – they are not able to define precisely their technological needs, often not even to define the areas of their activity which need to be modernised. Entrepreneurs lack the information concerning technologies already available on the market and potential possibilities which may be obtained through further development. In such case, entrepreneurs decide to cooperate with scientific unit, which could be able to define the areas of enterprise activity to be modernised and suggest final technological solutions.

Another motivation for establishing contact with science is the lack of equipment or laboratories necessary for specialist measurements. For instance, management of an enterprise producing electronic components wanted to become acquainted with and assess parameters of organisational processes, thus the enterprise asked technical university workers to allow the access to laboratories at the university equipped with specialist tools.

The reason enterprise undertakes cooperation with science may be also by the necessity of obtaining opinion of research unit while implementing new technology. The case of procedures concerning introducing new products in construction section may be an example. Source of new ideas introduced in SME is the current situation on the market – new technologies offered by suppliers, needs defined by customers and actions of completion. Scientific units are not perceived as "accessible" source of innovations to be implemented. According to the interviews conducted with entrepreneurs there are several barriers manager must overcome in order to establish formal cooperation with scientific environment.

Awareness barrier is connected, first of all, with those entrepreneurs, who are concentrated on the operational managing the enterprise and do not develop long-term plans for enterprise development. The barrier concerns mostly traditional enterprises and to a less extent enterprises categorised as "active imitator". A number of managers who participated in the research had never considered establishing such cooperation; they claimed that their attention is focused on the current activity of enterprise. Those entrepreneurs who do not perceive R&D as factor improving competitiveness do not have the need for cooperation with scientists. According to the interviews conducted with representatives of associating institution – the attitude of the majority of entrepreneurs can be summarised in the following words: "there is no need to reinvent the wheel". Managers prefer gathering information concerning technology appearing on the Western-European markets. They assume that – had they really need it – they would be able to obtain necessary technologies from abroad in shorter time and by lower expenditures than in case of conducting their own R&D works or commissioning such works to scientific units.

Enterprises which do not cooperate with science often declare they do not need undertaking such initiative due to the specific character of their activity. There are sectors where the development of enterprises is not highly depended on introducing new technological solutions. The enterprises which are mostly interested in cooperation with science are those from *high-tech* sector, pharmaceutics, electronics, IT, biotechnology and larger enterprises from other sections. On the other hand, small enterprises are those the least interested in such cooperation, since their performance is depended on workers' skills rather than technologies used.

The size of enterprise is also significant. According to representative of associating organisations the enterprises mostly interested in cooperation with science are medium-sized and small enterprises. The entities are able to assign employees whose task is to initiate and coordinate cooperation with scientists. In smaller enterprises all the employees are engaged in work connected solely with production or services. It is a duty of a manager to develop a plan of company expansion and observe chances of development, however the manager is also engaged in coordination of current activity thus is not able to search for partners for cooperation.

Whether economic entities become involved in cooperation with scientific environment is highly depended on their financial conditions. The most significant factor deciding whether the entrepreneur will become involved in such cooperation or not are the capital resources that may be assigned for the development of enterprise. However, SME management is concentrated primarily on financing the current activity and for that reason long-term plans concerning enterprise development – aimed at, *inter alia*, investments in research – are not a matter of their concern.

The factor determining whether the entrepreneur will attempt to establish cooperation with scientific units or not is the quality of human capital, in particular management quality. The importance of the factor was particularly emphasised by institutions associating entrepreneurs and by representatives of consultancy enterprises – the management with higher education is more likely to perceive cooperation with scientific units as a chance for enterprise development. It is indicated by the fact that managers with higher education more frequently participate in trainings concerning technology transfer organised by such organisations. Small family enterprises are mostly owned by people with secondary or vocational education who manage their enterprise basing on conservative rules, were applicable several years ago and they fail to notice the need to improve their skills or to undertake innovative measures.

Another factor determining whether the entrepreneur will attempt to establish cooperation with scientific units or not is entrepreneurs mentality. Significant number of managers participating in the survey was convinced that there is a disproportion between the results of cooperation with scientific environment and the expenditures incurred for such cooperation. However, most of the managers who expressed such opinion based it on experiences of other companies not their own. The fact that information concerning benefits of cooperation with science reaches entrepreneurs to a very limited extent is an issue. Due to that managers still

perceive the cooperation with R&D as additional costs not as potential benefits which the enterprise may obtain.

Among mental barriers discouraging entrepreneurs from cooperating with scientific environment is the awareness of high risk connected with conducting research work. Small and medium-sized enterprises are careful while investing capital in innovating activity , they prefer to invest in something that will guarantee benefits. Entrepreneurs are discouraged by the possibility of "failed investments" – for instance receiving the results of research providing them with conclusions they have reached themselves or solution with no chance for implementation. Only guarantee of investment success would encourage enterprises to establish cooperation with scientists – the cooperation taking into regard financial and technical capacity of an enterprise. According to representatives of intermediary units – enterprises are more open for cooperation than the scientific environment what may be concluded from the fact that entrepreneurs relatively more frequently use services of such type of units.

If an enterprise with a sufficient capital is open for the cooperation than the question of finding the right partner arises. Enterprises lack knowledge concerning scientists offer, numerous enterprises – due to the lack of time - do not even attempt to find such information. On the other hand scientists, who lack marketing attitude towards commercialisation of their research results, expect entrepreneurs to take up the initiative.

Most of enterprises taking part in the survey which cooperate with science managed to establish the cooperation by direct contact with the scientific units. The choice of scientific units was dictated by previous contacts with its workers. The example may be the case of engineers employed by enterprise producing spare parts for trams. When technological problem arise they consult the academic teachers from the university they have graduated from. Other example may be an enterprise producing compressors and brakes. Technologists employed in the enterprise studied with scientists who now work at the university – their contacts with science are "friendly".

However, enterprises do not always contact scientific workers using previous acquaintances. For instance, an enterprise producing digital automation and data integration, submitted offer of cooperation directly to faculty specialising in electronics and IT operating in technical universities. In result of cooperation a scientific workers was employed at executive post in the enterprise – constant, formal cooperation with a scientific units and innovativeness was repeatedly awarded in rank of most dynamically developing Polish enterprises.

Even though entrepreneurs have desire to be innovative they are often not able to develop and file in an offer which would precisely defined technological needs of the economic entity. In such case several enterprises surveyed used service of intermediary institution (e.g. technology transfer centre) or associations (e.g. regional chamber of commerce) in order to establish contact with scientific unit. Such institutions actively cooperate with scientific units in realisation of projects aimed at connecting both environments. One of the enterprises which made use of such project was an enterprise producing transport machines. It participated in symposiums organised by science and technology park (PNT) and there managed to establish contact with a scientific unit. It also must be mentioned that the role of institution was not only to organise the symposium, PNT workers actively supported the enterprise in search for the suitable partner.

PhD practice is another possibility of establishing contact between environments. Scientists, who for a period of time were engaged in enterprise reality, wish to maintain the contact. Such persons are familiar with enterprises mechanisms of operating and they are able to suggest new suitable technological solutions. One of enterprises which established contact by this method was a enterprise producing electronic components. Research activity of futures PhD doctors created a possibility of establishing cooperation between science and producer of fire protection system. Candidates for doctor's degree asked the enterprises for the materials to their research works. The enterprise agreed to share information and gained access to expertises prepared by scientists.

Overcoming information barriers and finding the suitable partner for cooperation must be followed by establishing a formal cooperation. An issue in that matter is a bureaucratic machine and lack of knowledge concerning technology transfer process among entrepreneurs. Most of representatives of institutions associating entrepreneurs claims that the volume of documentation discourages members of organisations from undertaking such types of initiative.

Difficulties occur also in scope of knowledge concerning servicing technology transfer process. Several enterprises employ patent attorneys, however according to scientific workers who work with them; they usually lack sufficient qualifications and experience. Enterprises associations offer trainings in regard to intellectual property rights and provide their members with information concerning institutions which may intermediate in formal servicing technology transfer process. However, it must be pointed out that relatively inconsiderable percentage of entrepreneurs use such types of service. Trainings concerning the European Union funds are much more popular.

Entrepreneurs, consultancy enterprises associations and representatives of several intermediary institutions agree that barriers to technology transfer processes do not stem from lack of entrepreneurs awareness and knowledge bur rather from scientists attitude. Entrepreneurs who do not attempt to establish cooperation with scientists claim that science sector is close, hermetic environment, concentrated on didactic and theoretical activity – which has nothing in common with economic practice. To certain extent this claim is true; scientists' awareness concerning industry is limited. Although the negative opinion prevails among the majority of representatives of economic environment it must be emphasised that even though there are more scientists who do not cooperate with enterprises there is a group of scientists which is very active in that field. As in case of entrepreneurs the level of awareness of technology transfer is varies among scientists.

Conditions for the technology transfer processes from the perspective of scientists

Crucial factor determining whether there will be cooperation between the environments is scientist attitude. The scientist must decide whether he or she is ambitious and determined enough to review his or hers scientific achievements by applying them in practice in the economy.

According to scientists' statements the most frequently indicated motivation for engaging in cooperation with enterprises sector was willingness to apply in practice the developed technologies – the form of cooperation was both establishing agreements with enterprises operating on the market and establishing spin-off enterprise based on the technology developed (spin-off). Owners of spin-off enterprises emphasised that establishing their own economic activity was connected with numerous difficulties (mainly difficulties of a legal nature and lack of initial capital were indicated) and it required determination to launch production.

Another motivation indicated by scientists was a possibility of obtaining the EU funds for financing academic research. Public resources available at universities are mainly assigned for financing basic research – thus scientist have little chance for obtaining resources for realisation of typically experimental development research, which are connected with relatively high risk.

A motivation of considerably lower significance was the need of gaining respect in scientific environment due to cooperation with economy sector. One of the representatives of technical universities observed that there is obvious competition among faculties for the highest number of practical implementations. However there are only few scientific units which perceive cooperation with the economy as the method of building their own prestige, the majority of universities have no such attitude. A scientist, who is interested in cooperation with the economy, just as an entrepreneur, needs to overcome barriers hindering access to formal cooperation.

Barriers of awareness stems from the lack of interest in cooperation in the scientific environment, which to a large extent is connected with the fact that scientific workers are primarily concentrated on didactic activity. Few entrepreneurs remarked that scientists are focused only on their scientific field. They continuously produce scientific written works which have no practical use. Frequently scientists are mainly interested in building up their own prestige in their environment through gaining further scientific titles. Lack of clear procedures of submitting potential inventions/technologies is one of the factors due to which a number of scientific workers is not aware of the fact that their research could be practically applied.

A factor significantly limiting the scale of cooperation with entrepreneurs is the fact that authorities of scientific units or authorities of particular departments/institutes and individual scientific workers do not agree. One the scientist specialising in pharmaceutical technologies stated that the most sufficient form of support that can be obtained from the university's authorities is lack of interference in the scientific research.

In other case scientists' enthusiasm was systematically hampered by commission authorising projects. Several scientists indicated that even if the university authorities are favourably disposed and supportive for the cooperation with entrepreneurs the attitude of authorities of particular departments and faculty is exactly opposite and they do not favour cooperation between scientists and entrepreneurs.

The reasons for the lack of engagement of university's workers in that matter may stem from the system of factors stimulating scientists to undertake cooperation with the economy. Financial factors are significant. According to interviews conducted among the representatives of scientific units, university workers benefit more from conducting classes and giving lectures. Due to that scientists choose the didactic activity as their priority. Due to their lower financial resources enterprises are not able to finance research for the period required by scientists. On the other hand scientific environment is not prepared to work in conditions expected by the entrepreneurs (who value time and punctuality).One of the factors discouraging scientists from cooperation with the economy is a system of parametric assessment of scientific workers which only until recently to a very limited extent promoted cooperation with the economy thus scientific workers were concentrated on the actions contributing to their professional career that being scientific research and publications.

Another factor limiting the scale of technology transfer processes is barrier in communication, connected with a lack of efficient flow of information between science and business. First of all, scientist lack knowledge concerning enterprises needs. Research conducted in Polish universities is in majority dictated by Ministry of Science (particularly in universities) rarely ever it depends on workers of scientific units, and ever less frequently it inspired by needs indicated by the economy. Relatively there is a closer correlation between enterprises needs and research conducted by technical universities and, which most frequently realise scientific research commissioned by enterprises. Representatives of the units' authorities claim that they do not undertake any action in order to define enterprises needs. One of the technical universities conducted a programme in order to identify innovative activity and needs of economy in three regions of Poland. Project was concluded this year and it is going to be continued. The programme is base on the webpage where entrepreneurs can submit subjects of MA and engineering thesis which may be implemented in their enterprises. Apart from that, competitions of students' inventions are organised and representative of enterprise are invited. Another measure aimed at identification of enterprises needs was undertaken by a technical university which systematically conducted technological audits and survey research. Regrettably scale of such measures is limited due to lack of resources which could be assigned for such aims. Authorities of one of the universities had to terminate the measures when they could no longer obtain the EU funds.

Difficulty in reaching entrepreneurs with scientist offer is the second important factor of communication barrier. One of the measures undertaken by university to overcome the obstacle was organising business-science meetings. Organisation of such types of initiative involves not only authorities of university but also particular faculty. It is worth to mention the example of faculty specialising in research microwave and wireless technology. At first stage of attempts undertaken in order to establish contact with industry was establishing a forum where both parties could express willingness to cooperate. When faculty received co-financing from the EU funds it organised training for entrepreneurs concerning technology in which the faculty specialised, so-called "technological demonstrates" meeting of both environments during which worker of faculty demonstrated microwave and wireless technology. Next program initiated by the faculty was practice project within which graduates of electronics could find work in enterprises as partners in projects with innovative component. Frequently participation in such projects resulted in trainee being employed. Representatives of faculty assessed such projects as very effective since significant number of entrepreneurs changed their previous reluctant attitude towards technology. Entrepreneurs are less enthusiastic about the science- business meetings organised by universities. One of the representatives of institutions associating entrepreneurs claimed that although such meeting indicate scientist willingness to cooperate the language they operate is incomprehensible for enterprises. Scientific environment lack marketing attitude. During the meetings they present their scientific achievements but they do not encourage their implementation for instance by applying them into practice in the economy. Sublime, academic discourse is often incomprehensible for the entrepreneurs, what results in entrepreneurs being reluctant to cooperation with persons of higher intellectual capacity.

Lack of formal procedures regulating commercialisation of technology is also a barrier to establishing contact between the environments. A question of intellectual property right remains an issue – particularly

share of rights for the developed technology and division of income generated by its exploitation. Majority of representatives declare that such procedures were recently introduced in universities or are they are in the stage of development. The form of the regulations most frequently depend solely on institutions. In one of the universities the decision concerning admitting rights for the technology developed is made by rector and a council formed of members selected by the rector. On the other hand in other institutions property rights are divided according to fixed proportions of division. What must be noted is that – even if a there are regulations concerning commercialisation of knowledge in a university – frequently scientists no nothing about them. It may be proved by low interest in trainings concerning intellectual property rights protection organised by patent attorneys employed by universities in offices of technology transfer. Authorities of one of the technical universities intend to implement audits aimed at review of awareness of regulations among scientific workers.

In order to establish formal cooperation between sectors of science and enterprises authorities of universities launch specialised units intermediating in the process of technology transfer, *inter alia*, technology transfer centres and entrepreneurship incubators. Such units are to service cooperation between science and business, in compliance with rules established by several universities. Scientific workers are obliged to comply with the rules while initiating cooperation with enterprises sector. Establishing "brokers" intermediating in technology transfer processes was determined by low level of scientists' knowledge concerning formal service of cooperation. Majority of scientists participating in the interviews positively assessed work of such intermediary units. On the other hand entrepreneurs assessment of the same units is different (cooperation partners, institutions associating entrepreneurs and consultancy enterprises). According to representatives of economy sector intermediary infrastructures of technology transfer is unsatisfying since usually it employs young people who lack sufficient experience for managing such units.

8.5. Recommendations for public support

Results of the conducted survey indicate that the awareness, knowledge and expectations concerning transfer of technology from science to enterprises are varies both in enterprises and scientific sectors. Thus tools of public support should be appropriately assigned and adjusted to the needs of particular target group. The following aspects should be primarily taken into consideration while developing particular programmes of support:

- Which barrier is to be overcome?
- If the barrier given occurs in the targeted group to which support is to be assigned?
- Whether elimination of the barriers will result in involvement of the enterprise/scientist given in the process of technology transfer?

It is significant to perceive technology transfer and barriers, both defined by enterprises and scientific workers, as whole. In order to enable technology transfer barriers defined both by enterprises and scientific workers must be overcome.

Thus defining appropriate target group is significant from the perspective of action aimed at overcoming l barriers concerning awareness, mentality and lack of knowledge. It must be a group in which the barrier given actually occurs and overcoming it will lead to involvement of the enterprises in technology transfer processes.

However, in case of micro-enterprises – awareness barriers or mental barriers (*inter alia*, perceiving scientists as theoreticians)are relatively significant their elimination will not lead to enterprises involvement in technology transfer processes since financial barriers (lack of capital) or competence barriers (lack of appropriate workers) will hinder it.

The situation is comparable in case of scientists. Although in the case it is possible to state that awareness barriers or mental factors are more significant than in case of entrepreneurs still the factors hindering scientists involvement in technology commercialisation processes must be perceives as whole. Changes of awareness and attitude towards technology commercialisation will not be sufficient to trigger increase of technology transfer scale if the issues such as regulations concerning technology transfer procedures, protection of intellectual property rights are not solved, and if there is no consultancy and administrative support for the scientific works is not implemented.

Without any doubt trainings for scientific workers may to a certain extent improve scientists knowledge in the matter. On the other hand, however it is more important to increase competence of units servicing technology transfer so that scientific workers who are willing to cooperate with entrepreneurs will be provided with professional consultancy and relived from administrative duties. If the measures are not implemented it will be difficult to convince scientist to engage in cooperation with economy-taking into account limited time scientists have.

Among the factors enumerated, in opinion of the authors of the report, the following should be particularly include into public policy:

- Improvement of human capital quality – both in case of employees and management;
- Measures aimed at increasing financial potential of enterprises – both directly through different types of financial tools (loans, grants for R&D /purchase of technologies etc.), and indirectly through improving knowledge and skills of entrepreneurs in connection to obtaining external commercial capital (trainings, consultancy);
- Analysing competiveness, including benchmarking enterprises with the aim of improving access to the information concerning competition (*inter alia,* so that enterprises could realistically asses their own competitive advantage);
- Promotional actions aimed at increasing awareness of need and importance of investments in technology and presentation of good practice, examples of success to follow;
- Improvement of competence of institutions/teams intermediating in technology transfer
- Stimulating broker measures – facilitating contacts between representatives of enterprises and scientists, also by “vouchers” for R&D

The form and method of implementing various types of support tools is also very important matter. It is very significant to programme support so that it would reach target group. It is particularly important in case of support aimed at micro and small enterprises. The enterprises rarely participate in trainings, do not use consultancy services and they do not receive information e.g. concerning the available support. In consequence their employees (and entrepreneurs) are overburdened with the current activity and they cannot find time for improving their competence.

One of the solutions would be to organise trainings in weekends or after the working hours. Reaching micro-enterprises with information concerning the support available is crucial. Such enterprises – due to the lack – do not observe information concerning the support available (frequently they do not even know where to search such information) and often (particularly in case of innovations) they perceive innovations as advanced technology – something which does not concern their enterprise thus they do not apply for public support. Another solution was organising on-line trainings which would enable “participation” of those interested at any time. However, not everyone are familiar with the use of the Internet tools which to certain extent limits performance of the tool – particularly in case of certain target groups.

The most significant gap in awareness, knowledge and skills concerning technology transfer from science to enterprises (generally)relates to micro- and small enterprises (precisely those categorised as “traditional enterprises”). However, concentrating public support stimulating cooperation of science and enterprises, on the group would not be appropriate since majority of those enterprises will never become directly involved in cooperation with science sector – particularly it will not purchase licenses, know-how or commission research. Certain measures should be aimed also at this group yet it must be taken into account

that these enterprises will indirectly use science sector – through consultancy and obtaining knowledge concerning technological changes , rather than in form of investments in purchase of technology generated by the science sector.

Chapter 9
Targeted Projects – study of the use of public resources for research and development activity in Poland

Commissioned by Polish Agency for Enterprise Development, PAG Uniconsult and PENTOR Research International in the first half of 2008 conducted research on the efficiency of using the resources assigned for the so-called targeted projects support. The following chapter was developed on the basis of the report from the research[54].

Targeted projects enable enterprises obtaining financial support for the realisation of R&D works connected with technological and product innovations. The research covered projects realised on the basis of three available sources of financing:

a) projects dedicated to small and medium-sized enterprises (SMEs), realised on the basis of funds from the State budget. Polish Federation of Engineering Associations – NOT (FSNT NOT), within the framework of the FSNT NOT programme, was responsible for the coordination of the projects including admission of applications, assessment and accountancy of the projects and their financing.

b) targeted projects realised within sub-measure 1.4.1. of SOP-ICE (Sectoral Operational Programme "Improvement of the Competitiveness of Enterprises"). These projects were financed from Structural Funds resources. The projects could be realised by enterprises or groups of enterprises, independently and in cooperation with institutions of the R&D area.

c) targeted projects realised with financial support from the budget of Ministry of Science and Higher Education. These projects could be realised by enterprises or groups of enterprises, independently and in cooperation with institutions of the R&D area.

Research and development activity is vital for enterprises' innovation as well as the innovation and competitiveness of the whole economy. Taking into account the imperfections of the market, smooth functioning of mechanism which, on the one hand supports entrepreneurs in realisation of ambitious research and development projects, and on the other hand encourages them to do be active in this field, is very important. On the basis of the research conducted it can be stated that entrepreneurs' assessment of research and development activities support mechanism, i.e. targeted projects, was in most cases positive. They were indicating that despite high level of formalism, the projects allow for realisation of ambitious projects, which would be to expensive for their enterprises without the support. Entrepreneurs also underlined the benefits of cooperation with scientific and research units. According to them, projects on the one hand required entrepreneurs' cooperation with scientific and research units and on the other hand enabled covering high costs of such cooperation. It is a significant factor, as most of entrepreneurs realising targeted projects had not cooperated with R&D entities before.

Another advantage indicated by the respondents was the opportunity to engage other enterprises in activities conducted within larger projects. Therefore, the costs of relatively expensive investments, which will be refunded in the long-term perspective, could be covered. It is interesting that a number of enterprises appreciated high level of formalism in the preparation of application forms and the later realisation and accountancy of the project. Respondents stated that although the preparation of application form and project realisation required much effort, the need to plan the project precisely facilitated the realisation. Such

[54] Research was conducted with the use of qualitative method (30 in-depth interviews (IDI) with randomly chosen contractors of targeted projects) and quantitative method (surveys within a group of 108 enterprises implementing targeted projects). The results of the qualitative research has been presented in this chapter.

advantage was indicated mostly by the respondents realising sequential project and the respondents whose enterprises were better organized and presented higher than average organisational culture.

Frequently highlighted problem was the lack of money for the implementation of technology developed, or for the construction and testing of the prototype of designed devices. According to respondents' assessment, in many cases this is a barrier to having the full functionality of technology or device, because often after a prototype is constructed there is a need to conduct researches in order to improve technology, which is impossible considering the termination of the project.

All the respondents shared the opinion that enterprises' own shares should be present in such projects.

Realisation of the projects most frequently was possible only due to the support from public funds. Without the support the projects would not be realised or their scope and level of innovation would be limited. Then, in most of the cases, enterprises would not decide to cooperate with scientific units, which would significantly decrease their substantive value. Some of the respondents indicated the possibility of realising the projects in the same scope without the support from external sources, yet it would require more time and might have a negative impact on their market situation and the results achieved (originally innovative solutions might have turned out obsolete during the process of realisation). The realisation of the projects researched required significant financial commitment of enterprises , including commercial resources – the costs were connected with the implementation of projects' results.

Theoretically, increasing the participation of the public funds in financing targeted projects should enable realisation of a greater number of projects. However, the respondents indicated that a significant increase in funds could result in extending evaluation criteria and therefore – financing poor projects. An increase in funds with the promotion of the pro-innovative attitudes in enterprises, so that the number of innovative enterprises increases, would be beneficial. The research indicated that it would be reasonable to assign the funds for the activities which would help small enterprises, having interesting ideas and realising targeted projects, to use professional counselling services in the scope of strategic planning, technology development and effective commercialisation of projects' results. Limiting the funds would lead to decline in the number or scale of realised projects and therefore, to a large extent, their innovation.

One of the questions asked during the research concerned the possibilities of financing projects from commercial sources, such as bank credits or venture-capital funds. In the case of bank credits, the respondents definitely claimed that it is not a good source of financing, due the problems with gaining credits, the amount of interest rates, time needed for implementation of innovations, high risk and limited credit capacities (especially in the case of SMEs). The respondents were also asked about the possibility of financing projects from venture-capital funds. Small enterprises are afraid of that type of financing or are reluctant to use it due to the necessity of decreasing their own shares in the enterprise. However several most innovative enterprises subject to research develop owing to such funds and targeted projects are additional source of financing increasing their development opportunities. In the case of these enterprises fund investment was conditioned by receiving the aid within targeted projects. Technology development was financed from targeted projects, while the initial research preceding the realisation of the project and the construction of production quarters afterwards were financed from venture-capital funds. This appears to be the best model of development for innovative enterprises.

To conclude, it should be stated that the groups of enterprises, which:

1. **would not undertake the realisation of the project**, if they did not receive the support from public funds – can include about half of the projects researched, very often these are large and ambitious projects, yet also less innovative ones,

2. without public support **would realise the projects, yet in limited scope** and much less ambitious – include almost half of the projects researched. It should be underlined that without the support these projects would not have innovative nature,

3. even without the support **would realise the analysed projects** – during the research only 2–3 such projects were identified and they were rather not ambitious, initially planned for realisation with internal resources.

The issues of market imperfection

The formula of targeted projects aims at financial support of enterprises in the scope of conducting research and development works. These activities are supported due to their specific nature and vital role in development of enterprises and the whole economy. Specific nature of research and development projects consists in high costs of their realisation, the necessary participation of highly professional experts from research and development units, relatively high risk of failure and the fact that results of the project bring business benefits in a longer perspective than, for instance, investing in the new machines or in commercial network development. At the same time conducting research and development works, which aim to develop new innovative products and technologies, is the easiest and frequently the only way to ensure the success of enterprises as well as the whole economy. Therefore such activities are financially supported in all developed countries.

The most frequently cited phenomenon of market imperfection is the high cost of research and development units services, which have specialised knowledge, personnel and specialist laboratories. Other issues of market imperfection identified were the lack of specialised knowledge and personnel and resulting from that necessity to cooperate with external enterprises. The imperfections include also technological, economic and market risk – it is a result of the specific nature of R&D projects. Lack of ready technology may also be considered as a market imperfection. On the other hand the lack of ready technology, in case of some of the realised projects, produced good results: highly innovative projects, often globally, were realised. Disappearing of the identified market imperfections or decreasing their impact cannot be expected in the nearest future.

Funding projects realised by enterprises, including research and development projects, from public sources should be the answer for the existing market imperfections. As the research conducted has proved, in the scope of analysed projects, the lack of personnel with sufficient knowledge was the main imperfection hindering or, in many cases, rendering the realisation of research and development projects impossible. Most frequently it was specialised knowledge and the knowledge essential for seeking new solutions. The research included production, IT and design enterprises. However, even if they employed highly professional personnel, it lacks experience in conducting research, especially if the research goes beyond enterprise current competence. The issue is essential especially in case of SMEs, however also concerns large enterprises. Support important for the researched enterprises, given by targeted projects, was the opportunity to cooperate with other enterprises and scientific entities – the researched enterprises would not afford it without funding from public sources. It should be underlined that the relations established during projects' realisation are maintained even after termination of projects. On the basis of the relations enterprises cooperate on the purely commercial grounds and prepare new projects, which develop new products and new technologies.

It should be noted that some respondents stated that scientific entities have high costs of activity, which is not always connected with the services provided and the costs of using their equipment. However, using science and research entities services is a significant factor conditioning innovation projects success, due to personnel's required qualifications, laboratory equipment and the experience in conducting research and development works. Nevertheless, it should be underlined that the research revealed completely different opinions, in which the respondents questioned the idea of using entities services.

Economic and market effects of realised projects – results of the qualitative research

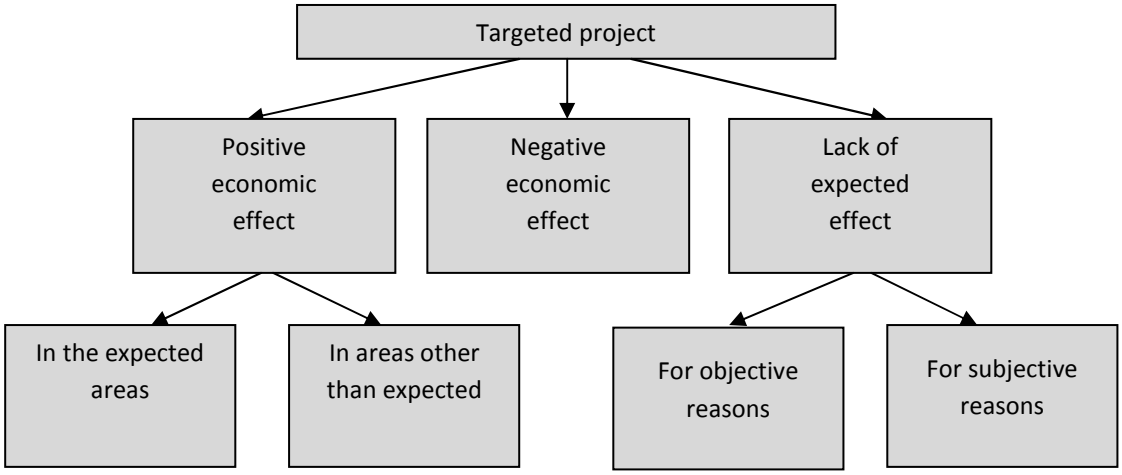
The analysis of targeted projects subject to research allows defining numerous types of effect the investment had on the functioning of enterprise. An interesting fact is that it does not matter whether the project was financed from NOT sources, the Ministry or measure 1.4.1. SOP-ICE. The conclusions from the analysis of all groups of projects lead to very similar results. Source of financing could have affected the assessment of support projects implementation system or the assessment of cooperation with the implementing enterprise, but not on the economic and market performance.

In the case of several enterprises (7 out of 30 analysed) there was a situation in which the economic and market results **reached the level assumed** in the application or even exceed it and they were related to the areas expected from the very beginning.

A key to achieve the effect exactly the same as the one assumed in the application form seems to be very thorough research preceding the application. Only detailed research on market demands leads to full realisation of the objectives.

However, it is worth mentioning that such approach marginalizes the significance of the most innovative projects, concerning products not yet existing on the market the demand for which is hard to determine.

Picture 9.1 Economic and market effects of realised projects



Source: PAG Uniconsult, PENTOR, *Research on the effectiveness of using public sources for research and development activity in Poland for enterprises and economy ; Targeted projects Report on the research*

The situation described in this part is highly characteristic of innovative projects. Innovation itself, as a modification of a stable structure, i.e. an operating enterprise, may cause unexpected effects. The main advantage of innovative projects both on the macro- and micro-economic scale, is its considerable and interdisciplinary impact on the reality. Solutions applied as an innovation in one area sometimes change other socio-economic areas. The best example is mobile communication, based on the honeycomb scheme, developed to administer large groups of tanks. Currently tanks are operated with the use of other systems, whereas mobile telephony has changed social and economic reality, including e.g. human relations.

A group of several enterprises (6) declares that targeted project did not produced the expected effects in the area for which it had been initiated, but it significantly improved the enterprise's market position and entrance to new markets. To conclude, economic effects of targeted projects, particularly the explicitly innovative ones, should be sought not only in the area assumed in the application form but also outside of it. It

cannot be stated that the cases described did not bring enterprises any results. If we were relying only on the impact indicators provided in the application form, we would have to assessment their performance negatively. In fact, this performance can be even higher than the assumed.

In about 10 cases we face a situation in which various **objective factors hindered the expected economic or market result**. This group is relatively numerous, yet it should be considered that these projects are of high level of innovation and therefore – high level of risk.

Many factors are difficult to predict in the application stage. Some of them can be even considered as absolutely impossible to predict, even with every analytic effort.

Also a relatively high number of projects in this group should not be surprising. It is a prove for the high rate of changes in present economy and for the frequent and unexpected reversals in law, technology or the consumers' attitudes. This specificity must be taken into account while creating innovation support programmes. In practice it means the necessity of focusing on holding the beneficiary accountable for the results and not for the aims on the impact level. In targeted projects, more often than in traditional projects, connection between the results level and the impact level is very difficult and definitely less obvious.

It is extremely important to properly distinguish between the situation, in which the lack of effect was objective and caused by the new, unpredictable factors, and the situation in which this effect was unattainable from the very beginning. However, the later should not be equated with beneficiaries' unreliability or even dishonesty. In the researched cases no signals of such features were found. In the majority of the cases not defining the ex-ante factors, which rendered realisation of the assumed aims on the impact level impossible, resulted from the lack of or inadequate scale of initial research. What should be taken into account is the range of numerous funds (particularly granted by NOT), which did not create opportunities to conduct extensive research preceding the application. In consequence, entrepreneurs, acting in good faith, were conducting the research that occurred to be insufficient and confusing.

Another, the last and the least numerous group, consists of entrepreneurs among which **a negative impact** of funds on the financial performance was observed. Those are the cases in which the positive effect, expected in the application form, was not achieved and at the same time the entrepreneurs incurred costs connected with the application itself.

The cases of negative impact are nevertheless incidental. They should not determine the assessment of the whole system of financing and its economic and market performance.

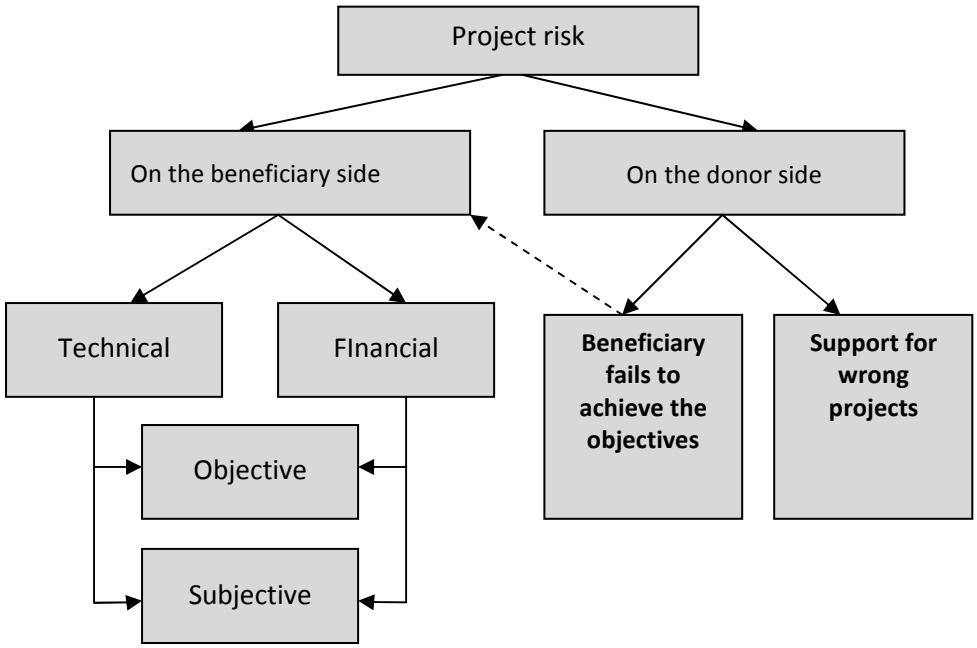
To conclude the analysis of performance it should be stated that:

- almost all projects realised the objectives on the result level,
- only the minority of projects realised the assumed economic objectives,
- some of the projects, which achieved positive economic performance on the assumed level, recorded the increase in sales and profits in an area other than the expected,
- the level of economic risk in the highly innovative projects is relatively higher than in other projects – thus it should not be surprising that so many projects, despite their technical and organisational success (result aims achieved) did not succeed in terms of economy,
- a success on result level creates a substantial opportunity for future concrete economic effects – maybe during realisation other projects.

The risk connected with the realisation of targeted projects

The analysis of 30 cases of innovative targeted projects support enables defining several types of risk connected with the process of financing. A graphic scheme below presents the types of risk defined.

Picture 9.2. The risk connected with the realisation of targeted projects



Source: PAG Uniconsult, PENTOR, *Research on the effectiveness of using public sources for research and development activity in Poland for enterprises and economy ; Targeted projects Report on the research*

The inappropriate choice of projects may have numerous reasons. Definitely, there is the risk of not reaching donor's objectives by choosing the beneficiaries who do not meet the basic criteria in full, which in this case was the implementation of innovation project. The scale of the phenomenon in the research sample was circa 20%. It can be concluded that the level of risk does not jeopardize the general validity of the method of financing.

Somewhat more difficult, and probably more common problem concerns the degree of innovation enforced by the procedures. According to the principle, supported projects were to be characterized by maximum degree of innovation. However, the result indicators are the key measure enabling effective settlement of the grant. It means that the donor does not want to participate in the risk connected with the realisation of innovation project. Some answers in the interview indicate that not the most innovative but only the relatively safe projects are later supported from public resources. They may prove the systemic risk, resulting from the necessity of compromising high-risk innovative projects with the safety requirements of public resources. Apart from few exceptions, it can be stated that the risk connected with the realisation of the venture is directly proportional to the degree of innovation of this venture. To minimize the risk of failure, the innovation threshold must be decreased. In the effect, only moderately innovative projects may receive public support. Even the group of projects already researched indicates that only some of them achieved the expected economic effect. It should here be emphasised that the risk is immanent in innovative projects. The agreement for the realisation of innovative projects must always be connected with the consent for taking a higher risk. Otherwise, there is a serious threat that the funds for the innovative projects are given to unsuitable, moderately innovative entrepreneurs. From the formal perspective all the results assumed by entrepreneurs will be achieved, yet the level of innovation of economy will not increase.

Technical risk did not play a key role in the analysed group of beneficiaries. It may be the effect of the mechanisms described in the previous paragraph. There is the presumption that beneficiary, aware of the fact that in the case of failure he would have to not only spend internal resources but also return the grant, included in the project only the research which had been verified earlier.

In several cases concerning complete devices, which later were to be subject to certain parametric standards, a certificate risk occurred. Such subjective technical risk must be explicitly separated from the objective phenomena. Beneficiary cannot be held responsible for objective, technical failure. If the entrepreneur from the beginning had known that the device would work he would not need the research. However, beneficiary can be expected to foreseen the subjective risk. The knowledge of standards, law, customs, the scope of permissibility of certain solutions, minimizes the subjective risk. If beneficiary undertakes project realisation, he should consider all the conditionings. An obvious exception is a change in principles during the realisation of the project.

However generally, in none of the analysed cases the technical risk, both objective and subjective, was high enough to cause failure of entire project. It is a very interesting conclusion, as usually the innovation risk is expected in the technical area. Of course, the fact of application forms selection was of some importance here. Projects with a greater chance to succeed were financed.

In contrast to the technical risk, the **financial risk**, or widely considered economic risk, occurred in a great number of responses of beneficiaries of targeted projects support subject to research. Moreover, effects of this risk in many cases contributed to the failure of the assumed economic performance. An economic risk was a reason for the failure of the assumed financial parameters. It is interesting that the economic and not the technological factor determines the success of an innovative project.

It happens that the product, despite its innovative character and the fact that from the technological point of view it can be considered as a success, is not implemented for financial considerations. Objective market risks are the greatest threat to innovative projects. It does not matter that an aircraft produced by one of beneficiaries occurred to be technologically perfect, which was proved by winning all the significant competitions in the world, if the enterprise cannot sell more than several aircrafts. It should here be emphasised that this risk is particularly dangerous for small economic entities, including the so-called spin-offs. Such enterprises encounter the organisational, financial and human barrier to the technological success consumption.

Unfortunately, in several researched cases financial risk was of subjective nature. To express it in concise way – it resulted from the undertaken or not undertaken activities of the beneficiaries themselves. Entrepreneurs are usually aware of their own mistakes. This type of risk is in particular characteristic of technostarters or enterprises like spin-offs. It is possible that an experienced entrepreneur would be more sensitive to market phenomena than a scientist who is only beginning the commercialisation of his invention.

To conclude the risk analysis, it can be stated that:

- the research indicates the significance of risk connected with the choice of projects for support, maybe safer, but less innovative and developing ones; this factor is difficult to detect with the use of traditional evaluation methods (because the nominal indicators are realised),

- the thesis concerning high importance of technological risk does not prove –entrepreneurs usually undertake the realisation of targeted projects if they are firmly convinced about their chance to succeed; there is no tendency to take higher risk in this respect,

- financial risk, resulting mainly from the reaction to innovative product on the market, is not estimated – beneficiaries are convinced that the sole fact of appearance of truly innovative product would solve all the market problems,

- with reference to both the technical and financial problems, these resulting from external phenomena, on which beneficiary did not have real influence (majority) and these which are the effect of improper activities

of beneficiaries themselves (minority) were registered – individual risks must always be researched as they may be of different characters.