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ANALYSIS OF ACTIVE ENTERPRISES ESTABLISHED IN POLAND IN THE YEARS 2012–2016

In 2013, the Polish enterprise sector generated 73.5% of GDP, of which small and medium-sized enterprises generated 50.1% of GDP – i.e. every second zloty of this value. Among all groups of enterprises according to their sizes, the largest share in generating GDP had microenterprises – approx. 30.8%. The aim of the study was to analyze the degree of changes and tendencies in the development of newly created enterprises – according to the length of years of operation and size classes – micro, small, medium-sized and large enterprises in Poland. The analysis of enterprises was based on CSO data included in the study entitled „Non-financial enterprises established in the years 2012–2016”. The analysis covered enterprises that were established in the years 2012–2016 and actively performed their business activity until the last examined year.

The following conclusions were drawn: In the structure of enterprises in the years 2012–2016, microenterprises were dominant. Together with the increase in the number of years of running business, the number and share of small, medium and large enterprises increased at the expense of microenterprises. The survival rate of enterprises established in the years 2012–2016 is the highest for large, medium-sized and small enterprises. In the analyzed period, the highest number of employees was in microenterprises, but the number of employees was constantly fluctuating over the years. The number of people working in small and medium-sized enterprises has constantly increased along with the length of business activity. The highest remunerations were observed in enterprises (successively) – large, medium-sized, small and micro- enterprises. In microenterprises, there is the largest disparity in the amount of salaries.

Keywords: entrepreneurship, micro, small, medium-sized, large enterprises.

JEL Classification Codes: L26.

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Introduction

An enterprise is an organized set of intangible and tangible assets intended for running a business. The main task of doing business by enterprises is to generate profit.

In 2013, the Polish enterprise sector generated 73.5% of GDP, of which small and medium-sized enterprises generated 50.1% of GDP – i.e. every second zloty of this value. Among all groups of enterprises according to their sizes, the largest share in generating GDP had microenterprises – approx. 30.8% (Tarnawa, 2017). Therefore, as a group, enterprises have a significant contribution to the building of social well-being, mainly through the provision of jobs. The economic condition of enterprises on the market, their development and survival possibilities (especially in the first years of running a business) depend to a large extent on macroeconomic and microeconomic conditions.

Macroeconomic conditions include, in particular, economic situation, legal regulations, level of inflation, demand and supply, dynamics of economic growth, currency stability, socio-cultural factors, development of technique and technology, as well as functioning of tax system and financial system. On the other hand, the microeconomic determinants are mainly the production profile, size of assets, amount of capital, product quality, sales profitability, cooperative connections, implementation of scientific and technical progress, skills in human resources management, level of technique, trademark, entrepreneurship of personnel, availability and acquisition of external capital (Krzemień, Struś, 2004; Mitek, Miciuła, 2012).

From enterprises, as the basic entity in the market economy, the ability to adapt tasks, functions and methods of work organization and management to the radically changing conditions of their activity is expected. The ability to adapt to the environment (its complexity, structure and dynamics) and requirements of the market economy decides about the business effects and development opportunities of each enterprise (Mitek, Miciuła, 2012).

In the new global economic reality, enterprises (in order to survive and stay in the market) must be able to effectively manage their resources and rights and be able to adapt to the constantly changing environment. They were forced to create environment adaptation measures or seek business ideas that are ahead of the market and have a change of survival. This forces flexibility of the activity and the ability to adapt or creativity in business activity. This results from the fact that in the current economic system, the market is a verifier of economic activity, forcing a proper reaction of enterprises to changes in the environment, and thus it determines the price and sense of the implementation of the activity itself (Mitek, Miciuła, 2012).

In the recent years, the world economy has undergone an enormous transformation. It can be noted that it is not only based on industry, but also on knowledge. Achieving a competitive advantage by regions is further focused on investing in fixed assets, but,

what is also important, in human capital (Kogut, Brożek, 2017; Dyr, Ziółkowska, 2017). The knowledge economy (KE) provides conditions for growing creativity, innovativeness, and competitiveness of organisations operating in an uncertain and changing market environment. Knowledge and information become the basic resources that determine success of an organisation as part of the new economy (Sieradzka, Kaliszczak, 2018).

Thanks to new technologies, products, certificates and patents which are vital elements of innovative capital, companies can compete and stand out in the world of business (Ślusarczyk, Dziura, 2017).

Start-up enterprises play a vital role in the knowledge economy, commonly acting as links between invention and innovation. Their development depends on an efficient start-up ecosystem including institutional environment. It comprises such classic institutions as business incubators, accelerators, technology parks, centres of technology transfer as well as increasingly popular forms of support like: mentoring, industry meetings, competitions, and hackathons (Sieradzka, Kliszczak, 2018).

Additionally, this shows that the activity of enterprises in the era of market's globalization and in the current management conditions is equally determined by what is happening in its environment and what is happening in this market (Mitek, Miciuła, 2012).

The aim of this study is to analyze the degree of changes and tendencies in the development of newly established enterprises – according to the length of years of running business and size classes – micro, small, medium-sized and large enterprises in Poland on the basis of data from the years 2012–2016.

Material and methods

The analysis of enterprises was based on CSO data included in the study entitled „Non-financial enterprises established in the years 2012–2016”. Changes and tendencies in the development of active enterprises were analyzing within the period of five years. The analysis covered enterprises that were established in the years 2012–2016 and actively performed their business activity until the last examined year. The analysis took into account the number of years of running a business and the division of enterprises by size classes. The sources of data are annual SP reports – Annual enterprise survey and SP-3 – Report of the economic activity of enterprises. The analyzed group includes entities with legal personality, entities without legal personality and natural persons, who were created in the years 2012–2016 and conducted business activity until 31 December 2016. In the study, data does not include enterprises conducting activities classified by the Polish Classification of Activities 2007 to the section: A (Agriculture, forestry, hunting, fishing), K (Financial and insurance activities) and O (Public administration and national defense, obligatory social security).

In the examined groups, size classes were determined in accordance with the Act on freedom of economic activity of 2 July 2004 (Journal of Laws 2004, No. 173, item 1807, 64–65), according to which:

- microenterprises employing up to 9 persons (annually) achieved annual net turnover from the sale of goods, products and services and financial operations not exceeding 2 million euros or the sum of assets not exceeding 2 million euros;
- small enterprises employing from 10 to 49 persons (annually) achieved annual net turnover from the sale of goods, products and services and financial operations not exceeding 10 million euros or the sum of assets not exceeding 10 million euros;
- medium-sized enterprises employing from 50 to 249 persons (annually) achieved annual net turnover from the sale of goods, products and services and financial operations not exceeding 50 million euros or the sum of assets not exceeding 43 million euros;
- large enterprises with 250 or more employees.

On the basis of the data, the percentage of individual enterprises and dynamics indicators were calculated, and the results were presented in a descriptive form, tables and graphs.

Results

Taking into account all possible microeconomic and macroeconomic conditions, as well as the growing difficulties and emerging opportunities, over the examined years, the number of enterprises had changed – many of them went bankrupt, but also new ones have been established.

The analysis of the size and structure of newly established enterprises, the number of employees in these entities, the value of funds allocated to salaries in individual groups of enterprises and the amount of gross salaries per 1 employee in the years 2012–2016, taking into account the size of enterprises and the years of their functioning, according to the authors, will enable to determine the situation and tendency of all examined enterprises with a division into size classes.

In the years 2012–2016, over 693 thousand enterprises have been established and conducted business activity (Table 1).

In the entry five-year period, the largest number of microenterprises were established. They constituted over 98% of all examined enterprises. Along with the increase in the size of enterprises, a trend of a decrease in the number of enterprises and simultaneously their share in the structure of enterprises are noticed. Thus, there were 9,712 small enterprises in the five-year period (1.4%), 1,325 medium-sized enterprises (i.e. 0.19%) and 173 large enterprises (0.02%). At the same time, it was noticed that in microenterprises, along with the increase of the number of years of running business,

the number and share in the structure decreases. The difference between the first and the fifth year of running business by enterprises amounted to 80,155 – i.e. by 55%, and in the structure – by 1.8% (less). The opposite situation occurs in other groups of entities – along with the increase in seniority, their number and share in the structure of the surveyed enterprises increase. In the total number of enterprises, the number of enterprises increased over the last five years by 930 enterprises (small), 202 enterprises (medium-sized) and 28 enterprises (large). The share of small enterprises increased from 0.77% to 2.3%, medium-sized enterprises from 0.08% to 0.34% and large enterprises from 0.01% to 0.05%.

Table 1. Number of enterprises established in the years 2012–2016 according to years of running business and size classes

Specification		Number of enterprises								
Year of establishment	Years of business activity	Total	Type of enterprise by number of employees							
			0–9 micro		10–49 small		50–249 medium		250 and more large	
			number	%	number	%	number	%	number	%
2016	1 year and less	179,405	177,871	99.14	1,375	0.77	140	0.08	19	0.01
2015	2 years	137,414	135,384	98.52	1,720	1.25	279	0.20	31	0.02
2014	3 years	145,786	143,328	98.31	2,149	1.47	271	0.19	37	0.03
2013	4 years	130,275	127,780	98.08	2,163	1.66	293	0.22	39	0.03
2012	5 years	100,410	97,716	97.32	2,305	2.30	342	0.34	47	0.05
	Total in the years 2012–2016	693,290	682,079	98.38	9,712	1.40	1,325	0.19	173	0.02
The dynamics of change in the number of enterprises (previous year = 100)										
2013	4 years	129.74	130.77	100.79	93.84	72.33	85.67	66.03	82.98	63.96
2014	3 years	111.91	112.17	100.30	99.35	88.78	92.49	82.65	94.87	84.78
2015	2 years	94.26	94.46	100.21	80.04	84.91	102.95	109.22	83.78	88.89
2016	1 year or less	130.56	131.38	100.63	79.94	61.23	50.18	38.43	61.29	46.94

Source: own study based on CSO data. Grabowski T. et al. *Non-financial enterprises established in the years 2012–2016*.

Changes in the number and structure of newly established enterprises are reflected by the survival rate⁵ (Table 2, Figure 1).

⁵The survival rate is the percentage of active entities at the time of conducting the study in relation to the group of active entities in the reference year (concerning the performed examination) that started their operation in the subsequent years of the analyzed period. The status of activity for the units participating in the study was determined on the basis of the statistical register.

Table 2. The survival rate of enterprises established in the years 2012–2016 according to the length of the business activity and size classes

Specification		Number of enterprises									
Year of establishment	Years of business activity	Total %	Type of enterprise by number of employees								
			0–9 micro		10–49 small		50–249 medium		250 and more large		
			number	%	number	%	number	%	number	%	
2016	1 year and less	69.9	69.9	0.00	80.5	10.60	92.4	22.50	94.7	24.80	
2015	2 years	78.3	78.1	-0.20	95.0	16.70	99.1	20.80	94.7	16.40	
2014	3 years	85.0	84.8	-0.20	98.7	13.70	94.2	9.20	96.0	11.00	
2013	4 years	90.3	90.1	-0.20	97.7	7.40	99.7	9.40	98.8	8.50	
2012	5 years	88.8	88.6	-0.20	98.8	10.00	97.6	8.80	99.2	10.40	
	Total in the years 2012–2016	82.46	82.3	-0.16	94.14	11.68	96.6	14.14	96.68	14.22	

Source: own study based on CSO data. Grabowski T. et al. *Non-financial enterprises established in the years 2012–2016*.

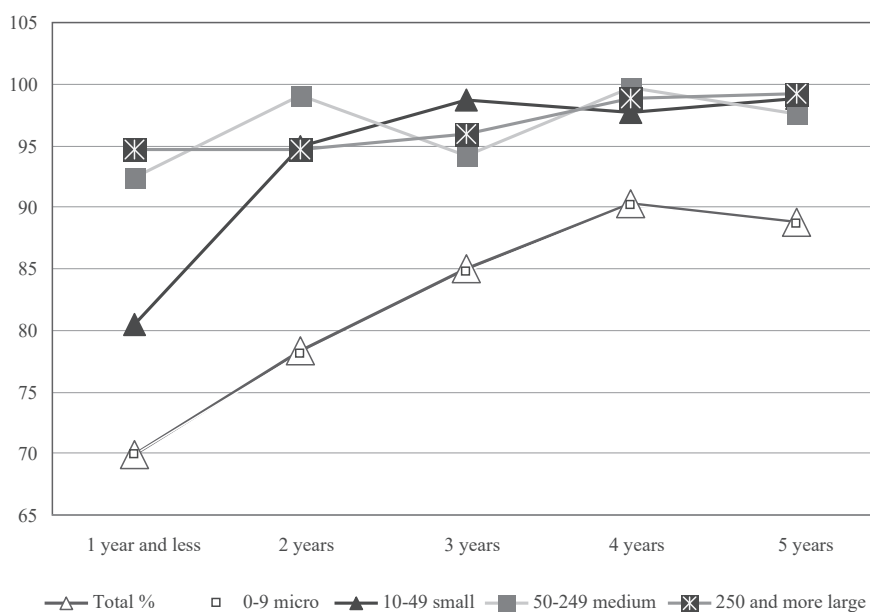


Figure 1. The survival rate of enterprises established in the years 2012–2016 according to the years of business activity and size classes

Source: own study based on CSO data. Grabowski T. et al. *Non-financial enterprises established in the years 2012–2016*.

The average survival rate for all enterprises in five years was 82.5%. The survival rate for microenterprises is almost identical to the indicator for all enterprises in gen-

eral. Along with the increase in the years of enterprises' functioning and their size, the survival rate increases. Their position is strengthened on the market, and this improves their change of survival. The highest survival rate is demonstrated by large enterprises – on average 96.7%. In the first year it is the lowest, but it amounts as much as 94.7%, in the fifth year – it reaches 99.2%. The survival rate in medium enterprises ranges from 92.4% in the first year to 97.6% in the last year. In small enterprises, the most difficult was the first year, the survival rate amounted to 80.5%, and it was 15% lower than in the second year of running business. In the fifth year, it reached the level of 98.8%. The lowest survival rate in the entire five-year period was observed among microenterprises. In the first year, over 30% of companies ceased to operate on the market. The highest survival rate was in the fourth year of business activity (90%), but it is still lower than in small (exception: first year), medium-sized and large companies in five years.

The tendency of changes in the number of employees in enterprises in the years 2012–2016 was similar to the number of established enterprises. In the discussed years, the majority of people invariably worked in microenterprises. On average, over 70% of people worked in microenterprises (Table 3). The next places in the structure of the total number of employees in newly established enterprises are occupied by (successively) small (11.85%), large (8.8%) and medium-sized (8.56%) entities. The smallest share in the total number of employees is held by large enterprises. Undoubtedly, this is related to their small share in the total number of enterprises.

Table 3. Number of employees in enterprises established in the years 2012–2016 according to years of running business activity and size class of enterprises

Specification		Number of enterprises								
Year of establishment	Years of business activity	Total	Type of enterprise by number of employees							
			0–9 micro		10–49 small		50–249 medium		250 and more large	
			number	%	number	%	number	%	number	%
2016	1 year and less	319,676	271,073	84.80	24,450	7.65	13,664	4.27	10,489	3.28
2015	2 years	316,717	211,564	66.80	34,559	10.91	28,280	8.93	42,314	13.36
2014	3 years	338,086	240,083	71.01	40,195	11.89	27,765	8.21	30,043	8.89
2013	4 years	312,264	212,518	68.06	41,816	13.39	29,074	9.31	28,856	9.24
2012	5 years	281,636	175,045	62.15	44,862	15.93	35,483	12.60	26,246	9.32
Total in the years 2012–2016		1,568,379	1,110,283	70.79	185,882	11.85	134,266	8.56	137,948	8.80
The dynamics of change in the number of employees (previous year = 100)										
2013	4 years	110.88	121.41	109.50	93.21	84.07	81.94	73.90	109.94	99.16
2014	3 years	108.27	112.97	104.34	96.12	88.78	95.50	88.20	104.11	96.16
2015	2 years	93.68	88.12	94.07	85.98	91.78	101.85	108.73	140.84	150.35
2016	1 year or less	100.93	128.13	126.94	70.75	70.09	48.32	47.87	24.79	24.56

Source: own study based on CSO data. Grabowski T. et al. *Non-financial enterprises established in the years 2012–2016*.

This is more accurately illustrated by the calculated index of employees per 1 enterprise, which takes into account the number of enterprises and employees in each group (in conversion to full-time jobs). For example, in enterprises newly established in 2016, this index amounted to 1,8 persons (average) in one enterprise, in microenterprises 1,5 (Table 4). This index was much higher in small (17.8), medium-sized (97.6) and large (552) enterprises.

Table 4. Index of employees per 1 enterprise

Specification		Index of employees per 1 enterprise*				
Year of establishment	Years of business activity	Total %	Type of enterprise by number of employees			
			0–9 micro	10–49 small	50–249 medium	250 and more large
			number	number	number	number
2016	1 year and less	1.78	1.52	17.78	97.60	552.05
2015	2 years	2.30	1.56	20.09	101.36	1,364.97
2014	3 years	2.32	1.68	18.70	102.45	811.97
2013	4 years	2.40	1.66	19.33	99.23	739.90
2012	5 years	2.80	1.79	19.46	103.75	558.43
	Total in the years 2012–2016	2.26	1.63	19.14	101.33	797.39

* calculated as the ratio of the number of employees to the number of enterprises in each group (in conversion to full-time jobs).

Source: own study based on CSO data. Grabowski T. et al. *Non-financial enterprises established in the years 2012–2016*.

In microenterprises, the number of employees within a five-year period constantly fluctuated (Table 3). In the first year of business activity it was the highest – this constitutes 84.8% of all employees. In the second year of business activity (i.e. in 2015), it decreased by almost 22%, in the third year – it increased, in the fourth and fifth year – it decreased to the level of 175 thousand employees.

In the case of small and medium-sized enterprises, in the following years of business activity, the number of employees and the percentage share in the structure were steadily increasing. In the case of large enterprises, employment in the first year of activity was the smallest – it represented 3.28% in relation to the total number of employed people in the examined enterprises. In the second year of running the business activity, there was a large increase to the level of 13.36% (42,314 people). In the third, fourth and fifth year (i.e. in the years from 2012 to 2014), the number of employed persons was decreasing, but the share in the employment structure grew (year by year) from 8.89% to 9.32%.

In the years 2012–2016, the surveyed enterprises spent (in total) over 27 billion PLN (Table 5).

Table 5. Gross remuneration in enterprises established in the years 2012–2016 according to the years of running business activity and size classes in million PLN

Specification		Gross remuneration								
Year of establishment	Years of business activity	Total million PLN	Type of enterprise by number of employees							
			0–9 micro		10–49 small		50–249 medium		250 and more large	
			million PLN	%	million PLN	%	million PLN	%	million PLN	%
2016	1 year and less	2,271	1,078	47.47	605	26.64	327	14.40	260	11.45
2015	2 years	6,372	1,541	24.18	1,405	22.05	1,171	18.38	2,254	35.37
2014	3 years	6,135	1,983	32.32	1,564	25.49	1,322	21.55	1,267	20.65
2013	4 years	6,253	1,838	29.39	1,663	26.60	1,266	20.25	1,486	23.76
2012	5 years	6,337	1,704	26.89	1,821	28.74	1,728	27.27	1,083	17.09
	Total in the years 2012–2016	27,368	8,144	29.76	7,058	25.79	5,814	21.24	6,350	23.20
The dynamics of changes in remuneration (previous year =100)										
2013	4 years	98.67	107.86	109.31	91.32	92.55	73.26	74.25	137.21	139.05
2014	3 years	98.11	107.89	109.96	94.05	95.86	104.42	106.43	85.26	86.90
2015	2 years	103.86	77.71	74.82	89.83	86.49	88.58	85.28	177.90	171.28
2016	1 year or less	35.64	69.95	196.28	43.06	120.82	27.92	78.35	11.54	32.37

Source: own study based on CSO data. Grabowski T. et al. *Non-financial enterprises established in the years 2012–2016*.

The amount of gross remuneration increased with the decreasing size of enterprises. The largest amounts for remunerations in five-year period were spent by microenterprises (over 8.1 billion PLN), then small (7 billion PLN), large (over 6.3 billion PLN) and medium-sized (over 5.8 billion PLN) enterprises. Microenterprises spent the least amount for remunerations in the first year of business activity (1,078 million PLN), despite the fact that the largest number of them was created in this period (177,871) and they had the largest number of employees (271,073).

Taking into account the criterion of the monthly gross remuneration per one employee, it was noticed that along with the increase in the size of enterprise, the average gross remuneration grows (Table 6).

Microenterprises are characterized by the lowest level of gross salaries per one employee, both in total terms and as compared to each group of enterprises. In the entire five-year period, remunerations in these enterprises were lower by over 751 PLN as compared to the average remuneration.

Table 6. Monthly gross remuneration per one employee in enterprises established in the years 2012–2016 according to years of business activity and size classes in PLN

Specification		Monthly gross remuneration and the difference in remuneration in relation to the total in PLN								
Year of establishment	Years of business activity	Total	Type of enterprise by number of employees							
			0–9 micro		10–49 small		50–249 medium		250 and more large	
			amount	difference	amount	difference	amount	difference	amount	difference
2016	1 year and less	3,156	2,937	-219.0	3,467	311.0	3,342	186.0	3,256	100
2015	2 years	4,169	2,982	-1,187.0	4,029	-140.0	4,036	-133.0	6,053	1,884
2014	3 years	3,447	2,726	-721.0	3,694	247.0	4,360	913.0	3,886	439
2013	4 years	3,602	2,772	-830.0	3,735	133.0	3,910	308.0	4,887	1,285
2012	5 years	3,564	2,765	-799.0	3,800	236.0	4,355	791.0	3,795	2,31
	Average in years 2012–2016	3,587.6	2,836.4	-751.2	3,745	157.4	4,000.6	413.0	4,375.4	788

Source: own study based on CSO data. Grabowski T. et al. *Non-financial enterprises established in the years 2012–2016*.

The largest difference in the amount of remuneration was in the second year of business activity of these entities and amounted to 1,187 PLN. Only in 2015, small and medium-sized companies had lower remunerations in relation to the total amount of remunerations – respectively by 140 PLN and 133 PLN. In these entities, the average remuneration for the five-year period of conducting business activity was higher than the average remuneration by 413 PLN in medium-sized companies and by 157,4 PLN in small enterprises. In large enterprises, regardless of the length of the business period, the monthly gross remuneration per one employee was the highest. In the entire examined period, salaries per one employee were higher by 788 PLN – the highest salaries were paid in the second and fourth year of business activity. The largest disparity in the amount of remuneration per one employee occurs between microenterprises and large enterprises. In five-year period, it is 1,539 PLN.

Summary and Conclusions

In summary, the following conclusions can be drawn:

1. In the years 2012–2016, in the structure of enterprises, microenterprises significantly dominated. Along with the increase in the size of the enterprises, their share in the structure of the surveyed entities decreases.
2. Along with the years of business experience of enterprises, the number and share of small, medium-sized and large enterprises increase at the expense of microen-

terprises. The results indicate that there are stronger entities on the market that better cope with market conditions.

3. The survival rate of enterprises established in the years 2012–2016 is the highest for large, medium-sized and small enterprises, while for the small enterprises (in the first year of business activity) it is the lowest. Microenterprises have the lowest survival rate over the five-year of operation.
4. In the examined period, the majority of persons were employed in microenterprises, but their number has been constantly fluctuating over the years. The number of employees in small and medium-sized enterprises has steadily increased along with the length of business activity. In large enterprises, after a high increase in 2015, the number of employees (in the years of further functioning of enterprises) have been decreasing, but this share in the structure grew at the expense of microenterprises.
5. The amount of gross remunerations increased as the size of enterprises decreases. On the contrary. There was a different situation with the amount of gross remuneration per one employee. The highest salaries were in (respectively): large, medium-sized, small, and micro- enterprises. In microenterprises, there is the largest disparity in the amount of salaries.

The analysis of the number of newly established enterprises, number of employees, gross salaries and the gross monthly remuneration per one employee, as well as the survival rate of enterprises in the years 2012–2016 enabled to present the situation in the whole enterprise sector and in individual groups (according to size of classes). In the analyzed period, the quantities and sizes in the above-mentioned classes have evolved in both directions of reduction and growth. However, regardless of the situation in particular years, it must be emphasized that all groups of enterprises affect the development dynamics of the region and Poland in a positive way.

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