Polish Printing in Transition

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Introduction

In 1989, the printing industry ceased to be licensed. The printing industry was entering the new period composed of 34 state-owned enterprises under the [then] Ministry of Culture and the Arts, 20 enterprises subordinate to other central ministries (the Ministry of National Defence, the Ministry of the Interior, the Ministry of Finance), and 16 companies which were owned by the Workers' Publishing Cooperative RSW „Prasa – Książka – Ruch". This number was complemented by 40 plants operating as cooperatives and about 1,500 privately-owned printing houses which were granted licenses to conduct printing business by the Ministry of Culture and Art. The past twenty-five years of the development of the printing sector, and basically of its complete restoration, needs a summary and an assessment. The conclusions of the assessment should be conducive to the future development of the sector.

Explanation of the basic terms

The subject of research concerned companies operating in the printing sector. These included companies involved in printing (using different technologies), preparation of production (pre-press services) and bookbinding workshops (post-press or finishing processes). A growing share in the sector has companies involved in copying electronic records. A significant part of the printing sector comprises small and medium-sized enterprises. According to the above definition, a medium-sized enterprise is one that employs fewer than 250 employees, its turnover is less than 50 million euro and the balance sheet total does not exceed 43 million euro. Small enterprises, in turn, employ fewer than 50 employees, have a turnover not exceeding 10 million euro and their balance sheet total is also less than 10 million euro. The European Union distinguishes also (like in Polish statistics) micro-enterprises, which employ fewer than 10 employees, and their annual turnover and balance sheet total do not exceed 1 million euro[1].

Previous studies

In Polish literature, there are few publications on economic issues of the printing sector (Jóźwiak, 2010; Cetera, 2007, 2008, 2009). Research centres operating in Poland: the Faculty of Papermaking and Printing (Technical University of Lodz), the Department

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[1] Article 2 of Annex I to European Commission Regulation (EC) No 364/2004

of Printing Technology (Warsaw University of Technology) and Research & Development Centre for the Graphic Arts (COBRPP) in Warsaw do not conduct research on the subject raised in this paper.

Nonetheless, it is the rich American literature that is noteworthy. The results of many years of systematic research of the printing sector are presented in publications of the Printing Industry Center at Rochester (USA). B. Pellow, M.J. Pletka and H.A. Banis (2003), F.J. Romano and M. Soom (2003, 2004), S.R. Kadam, M.A. Evans, S. Rothenberg (2005) and P. Sorce (2002) in their studies discuss issues relating to the economic and organisational sphere of printing. At the same time, since 2012, the Cross Media Innovation Center has operated at RIT, which conducts interdisciplinary research in the field of printing and media.

There were attempts of periodisation of the transformation period in relation to all the types of companies. M.J. Stankiewicz (1999) and S. Sudoł (2000) completed the analysis in 1998 by opening in that year the phase of „deteriorating profitability of enterprises (due to the crisis in Russia and the Far East)". They distinguished the following periods: the phase of „strategic shock" (1990), the phase of adaptation during the recession (1990-1991), the phase of adaptation during the initial economic recovery (1992-1993), the phase of active business strategies (1994-1998) and the last phase – of deteriorating profitability (since 1998). Subsequent periods were supposed to be added by economic life.

In contrast, T. Łuczka distinguished in Polish evolution since the 1980s „the initial phase of development of entrepreneurship" (1981 - 1988), a „period of explosion of entrepreneurship" (1989 - 1992) and a „phase of market self-regulation" (since 1993).

The following period beginning in 1994 (until 1998) was called by J. Chmiel (2002) „the golden period of development of micro-enterprises", and K. Krajewski (1999) added that in 1999 small and medium-sized enterprises took the form of a learning organisation[2].

■ Methodology

The analysis of the development of the printing sector in the period 1989-2014 was based on available statistics. The collected data was complemented with business cycle research in the printing sector, carried out for the first time in February 2012. For the second time it was organised in September 2012. Another was conducted in April 2013 and repeated the following year. The first piece of research involved 177 printing companies, the second – 330 companies. In the third one, 356 companies were surveyed, and in the fourth – 320 companies.

[2] In the history of private sector in Poland in the years 1919-1999 K. Krajewski distinguished ten periods: the systematic development of private companies (1919 - 1939); the development of small-scale trade forced by the situation of people during the Second World War (1939 - 1945); reactivation of establishments by pre-war owners (1945 - 1946); nationalisation of industry and small-scale production (1946); stigmatising venturesome people and kulaks (1947 - 1955); the fight of tax authorities with signs of capitalism (1956 -1970); thaw for private business owners (1971 - 1980); increase in the number of businesses (1981 - 1988); spontaneous development of small forms of management (1989 - 1998) and SMEs as a learning organisation (since 1999). K. Krajewski: *Kreowanie miejsc pracy w małych i średnich przedsiębiorstwach [Creating jobs in small and medium-sized enterprises]*. „Wynagrodzenia" 1999 No. 19(9).

■ **Table 1.** The number of printing companies in Poland in the years 1994-2014

Liczba przedsiębiorstw w gospodarce polskiej w latach 1994-2014

Lata	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**
Liczba przedsiębiorstw ogółem	2 086 218	2 215 105	2 333 038	2 509 067	2 714 624	3 039 451	3 185 040	3 325 540
wpis do ewidencji	*1 695 495*	*1 796 407*	*1 894 120*	*2 026 266*	*2 183 141*	*2 417 737*	*2 500 952*	*2 600 126*
osoby prawne	*390 723*	*418 698*	*438 918*	*482 801*	*521 483*	*621 714*	*684 088*	*725 414*

Liczba przedsiębiorstw w sektorze poligraficznym w latach 1994-2010

Drukowanie gazet	**123**	**115**	**97**	**93**	**91**	**94**	**93**	**93**
wpis do ewidencji	76	69	66	66	64	67	65	62
osoby prawne	47	46	31	27	27	27	28	31
Działalność poligraficzna pozostała, gdzie indziej nie sklasyfikowana	**7 399**	**8 093**	**8 618**	**9 845**	**10 948**	**11 393**	**11 532**	**12 422**
wpis do ewidencji	6 624	7 253	7 983	9 196	10 276	10 684	10 792	11 533
osoby prawne	775	840	635	649	672	709	740	889
Introligatorstwo	**1 235**	**1 240**	**1 314**	**1 481**	**1 663**	**1 679**	**1 708**	**1 838**
wpis do ewidencji	1 211	1 218	1 297	1 462	1 643	1 659	1 687	1 817
osoby prawne	24	22	17	19	20	21	21	21
Działalność usługowa związana z przygotowaniem do druku	**636**	**1068**	**1409**	**1846**	**2252**	**2289**	**2315**	**2652**
wpis do ewidencji	602	1 030	1 380	1 814	2 218	2 253	2 277	2 608
osoby prawne	34	38	29	32	34	36	38	44
Działalność graficzna pozostała	**765**	**712**	**655**	**685**	**749**	**770**	**781**	**850**
wpis do ewidencji	733	682	635	664	732	754	765	827
osoby prawne	32	30	20	21	17	16	16	23
Reprodukcja nagrań dźwiękowych	**246**	**206**	**145**	**141**	**140**	**148**	**128**	**126**
wpis do ewidencji	220	181	131	124	120	125	106	98
osoby prawne	26	25	14	17	20	23	22	28
Reprodukcja nagrań wideo	**122**	**107**	**66**	**62**	**67**	**63**	**57**	**57**
wpis do ewidencji	106	90	56	53	58	55	49	47
osoby prawne	16	17	10	9	9	8	8	10
Reprodukcja komputerowych nośników informacji	**113**	**110**	**77**	**70**	**61**	**62**	**68**	**87**
wpis do ewidencji	104	101	68	63	53	54	58	60
osoby prawne	9	9	9	7	8	8	10	27
Razem	**10 639**	**11 651**	**12 381**	**14 223**	**15 971**	**16 498**	**16 682**	**18 125**

The survey covered small and medium-sized printing companies. In each of the studies the employment structure was shown to be similar. Most companies (about 60%) did not employ more than 9 employees. About 28% had between 10 and 49 employees, and more than 12% of the companies employed from 50 to 249 employees.

The survey questions focused on the current situation of the companies, as well as on the three-month period preceding the date of the study and the three-month perspective after that date. Questions were answered by company owners or managers. As far as possible, the same entities were selected to participate in the study. It was also sought to increase the population subject to the study. Unfortunately, difficult situations of the companies many times effectively discouraged them from taking part. In the last survey it was discovered that 15 printing companies from among those surveyed in April 2013 no longer existed.

■ The nature of changes in the printing sector

Changes in the printing sector started quickly. In 1991, the Central Statistical Office (GUS) reported that among the printing companies 5,263 were private establishments,

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
3 468 218	3 581 593	3 576 830	3 615 621	3 636 039	3 685 608	3 716 939	3 744 776	3 782 382	3 545 838	3 551 193	3 590 428	3 602 121
2 714 118	*2 795 860*	*2 763 380*	*2 776 459*	*2 765 348*	*2 787 650*	*2 803 567*	*2 826 061*	*2 846 621*	*2 889 614*	*2 841 335*	*2 837 013*	*2 838 992*
754 100	*785 733*	*813 450*	*839 162*	*870 691*	*897 758*	*913 372*	*918 715*	*935 761*	*656 224*	*709 858*	*753 415*	*763 129*
88	**88**	**92**	**123**	**115**	**123**	**152**	**324**	**397**	**612**	**668**	**662**	**656**
55	56	58	82	79	82	108	266	331	502	538	511	504
33	32	34	41	36	41	44	58	66	110	130	151	152
12 921	**13 246**	**13 246**	**13 452**	**13 333**	**13 261**	**12 502**	**11 402**	**10 084**	**9 905**	**9 834**	**9 905**	**9 878**
11 844	12 107	12 036	12 190	12 028	11 893	11 160	10 063	8 942	8675	8517	8472	8432
1 077	1 139	1 210	1 262	1 305	1 368	1 342	1 339	1 142	1230	1317	1433	1446
1 866	**1 901**	**1 850**	**1 792**	**1 733**	**1 633**	**1 688**	**1 643**	**1 653**	**1570**	**1527**	**1492**	**1495**
1 841	1 875	1 820	1 765	1 702	1 601	1 647	1 600	1 609	1515	1470	1435	1433
25	26	30	27	31	32	41	43	44	55	55	57	62
2723	**2753**	**2759**	**2974**	**3095**	**3219**	**3483**	**3786**	**4570**	**4730**	**4702**	**4570**	**4574**
2 676	2 705	2 710	2 914	3 029	3 147	3 388	3 662	4 389	4499	4451	4284	4282
47	48	49	60	66	72	95	124	181	231	251	286	292
860	**868**	**901**	**896**	**925**	**944**	**835**	**718**					
820	823	849	846	873	890	785	670					
40	45	52	50	52	54	50	48					
127	**131**	**136**	**145**	**140**	**144**	**139**	**157**					
96	98	102	110	108	104	99	114					
31	33	34	35	32	40	40	43					
62	**69**	**72**	**84**	**90**	**90**	**90**	**79**					
52	58	62	76	82	81	82	70					
10	11	10	8	8	9	9	9					
90	**99**	**119**	**138**	**153**	**164**	**182**	**253**	**526**	**600**	**654**	**689**	**691**
57	55	62	72	80	82	83	133	353	396	430	436	435
33	44	57	66	73	82	99	120	173	204	224	253	256
18 737	**19 155**	**19 175**	**19 604**	**19 584**	**19 578**	**19 071**	**18 362**	**17 230**	**17 417**	**17 385**	**17 318**	**17 294**

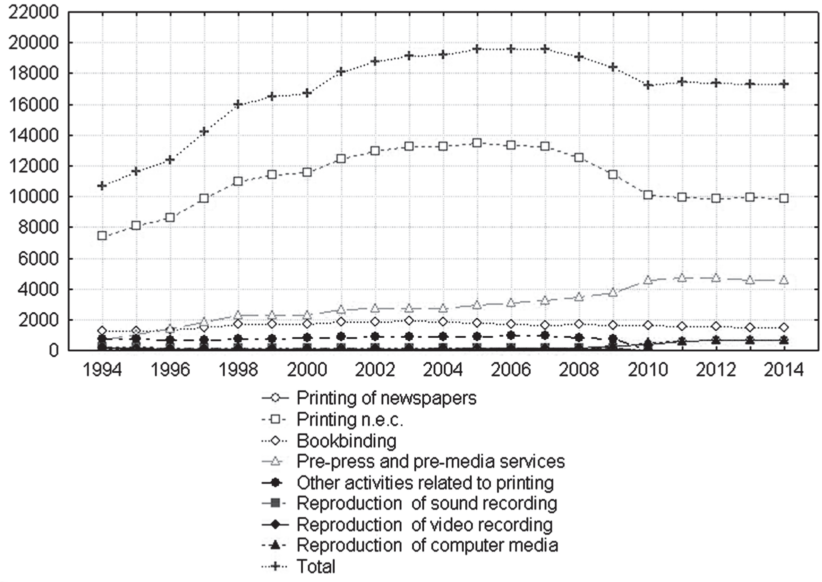
however, only four years later, in 1995, statistics showed as many as 11,510 privately-owned printing companies, which means more than twofold increase in the years 1991-1995.

The specific nature of production of printing companies was also changing. In 1994, among 10,639 printing companies there were 123 companies printing mostly newspapers, 7,399 printing houses that dealt with other types of printed material, 636 companies involved in the preparation of publications for printing and 1,235 bookbinding workshops. This branch includes also the companies reproducing sound recordings (246), video recordings (122) and computer media (113). The group of companies not classified into any of the abovementioned categories included 765 companies (Table 1).

In relation to the printing industry, looking at the process of transformation from the perspective of 25 years, one may be tempted to conclude that this was a period of fundamental change – although the printing industry has a long-standing tradition, its current structure was basically established at that time.

Originally, the competitive advantage was built especially in the area of technology. The overall economic situation was conducive to that – the mere possibility of printing was

■ **Figure 1.** The number of printing companies operating in the years 1994-2014



a sufficient condition for the success of a printing company. This simple inspiration favoured the systematic increase in the number of companies in this sector, which lasted until 2005 (Figure 1).

The printing sector ended the first ten years of the transformation with 16,498 companies. However, in December 2005, there were 13,452 printing companies registered in Poland. The structure of printing companies is presented by number of employees in Table 2.

■ **Table 2.** Entities engaged in printing in 2004, by number of employees

	Number of employees							
	< 10	10–49	50-99	100-249	250-499	500-999	>1000	Total
Number of entities	12,094	1,104	141	81	21	6	5	13,452
Share	89.90	8.21	1.05	0.60	0.16	0.04	0.04	100.00

Compiled on the basis of *Statistical Yearbook of Industry 2005, 2007, 2008* and REGON register.

It should be noted that the structure of the printing sector by number of employees defined in the study in 2004 remains virtually unchanged to this day. Definitely the largest group of companies is created by those that employ less than 10 people – most of them operate on the basis of an entry in the business activity register.

The growth rate of the number of entities (y/y) remained at a high level, and in 1997 and 1998 reached 14.24% and 11.20% respectively (Table 3). This trend did not change until 2005, when the number of printing companies was gradually decreasing, reaching the dynamics of -8.80% in 2009. However, these changes, though less visible, applied to all companies in the Polish economy.

■ **Table 3.** Dynamics of changes in the number of printing companies in selected industry groups

Year	Printing activity	Companies in total	Companies in total
1995	9.38	6.18	9.51
1996	6.49	5.32	6.27
1997	14.24	7.55	14.88
1998	11.20	8.19	12.29
1999	4.06	11.97	3.30
2000	1.22	4.79	1.12
2001	7.72	4.41	8.65
2002	4.02	4.29	3.38
2003	2.52	3.27	2.23
2004	0.00	-0.13	0.10
2005	1.56	1.08	2.24
2006	-0.88	0.56	-0.10
2007	-0.54	1.36	-0.03
2008	-5.72	0.85	-2.59
2009	-8.80	0.75	-3.72
2010	-11.56	1.00	-6.16
2011	-1.78	-6.25	1.09
2012	-0.72	0.15	-0.18
2013	0.72	1.10	-0.39
2014	-0.27	0.33	-0.14

(Own calculations based on the data of the Central Statistical Office)

Following the changes in the number of printing companies, one can observe structural transformations occurring in the sector. Since 2003, the group of companies involved in electronic data recording (in the Polish classification of business activities [PKD] they are classified as printing companies) has been systematically increasing, whereas the number of entities involved in printing and bookbinding work has been decreasing.

The printing industry also experienced negative processes. For example, during the entire period of transformation the dynamics of work efficiency per employee, measured by the volume of production sold, represented values below the dynamics for the whole economy - (Figure 2). As a result, in 2012, work efficiency per employee, measured by production sold, in comparison to 1995 which was adopted as the base year, was significantly lower in the printing sector than in Industry (about 20%!).

Despite undergoing significant changes which made it attain a European level in terms of technology, the printing sector does not look good in comparison to industry as a whole (W.Z. Tarnawski, 2000).[3]

Meanwhile, in the years 2000 - 2005 the number of companies operating in the publishing and printing sectors in the largest EU countries showed a downward trend. The biggest changes were recorded in Denmark, where out of 3,065 businesses operating in

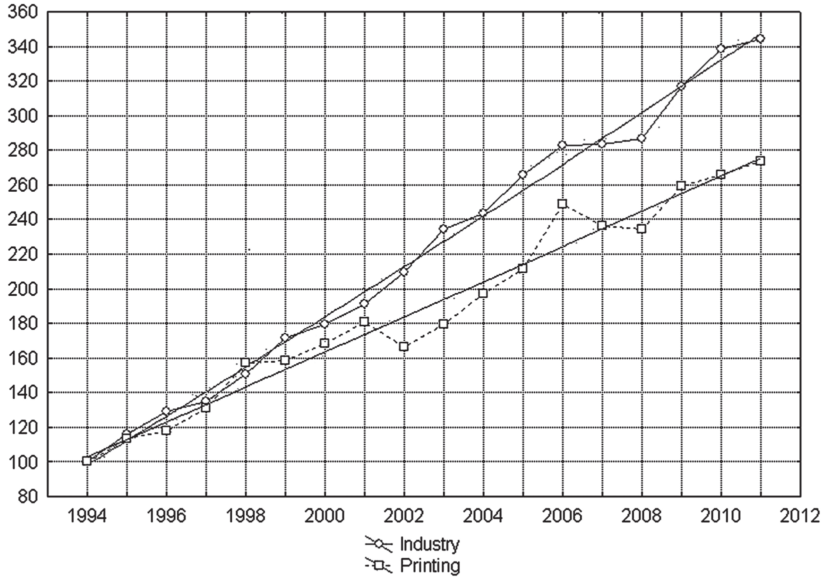
[3] Similar processes took place in the paper industry: Tarnowski W.Z.: *Popyt i podaż papieru na świecie i w Polsce – perspektywa 2010 [Demand and supply of paper in the world and in Poland – 2010 perspective]*, the Association of Polish Papermakers, Łódź 2000.

■ **Table 4.** Dynamics of work efficiency, measured by production sold per employee (year 1994 = 100)

Years	Industry	Printing
1994	100.0	100.0
1995	116.0	113.4
1996	129.0	118.3
1997	135.0	131.0
1998	151.0	157.4
1999	171.5	158.6
2000	179.4	168.1
2001	191.2	180.8
2002	209.8	166.7
2003	234.3	179.7
2004	243.4	197.4
2005	266.1	211.3
2006	282.6	249.1
2007	283.7	236.1
2008	286.8	234.5
2009	316.7	259.1
2010	338.2	265.8
2011	344.6	273.5

(Own calculations based on the data of the Central Statistical Office)

■ **Figure 2.** Dynamics of work efficiency, measured by production sold per employee (year 1994 = 100)



2000, in 2005 remained only 2,460 (a decrease of as much as 19.74%). Smaller changes took place in France, where the number of companies decreased from 29,612 in 2000 to 26,901 in 2005 (a decrease of 9.16%). Changes occurred also in the Netherlands, where out of 7,035 companies operating in 2000, in 2005 remained 6,425 – the number of companies in this sector decreased by 8.67%. A smaller scale of changes was recorded in the UK – the number of companies fell from 29,890 in 2000 to 27,816 in 2005 (a decrease of 6.93%). The number of printing companies decreased also in Italy (by 3.24%), Germany (by 6.74%), Finland (by 3.95%), Cyprus (by 3.62%) and Slovenia (by 15.00 %) (Johansson, 2006; F.J. Cost, 2002).

The reason for these changes was primarily greater productivity of printing technology, the transformation in the market of printing products and increasing labour costs. The work efficiency of printers has obviously changed. Operating time of the devices shortened by the designers, higher printing speed, shorter production cycle (e.g. the elimination of CTP), more efficient DTP software – these are all visible and measurable factors affecting that ratio (cf: *What is Print? A Characterization of the Printing Industry in the United States, 2007*).

Taxonomy of changes

With reference to the previously quoted processes taking place in the printing industry and illustrated with numbers, its development in the years 1989 - 2014 can be divided into the following periods:

- the period of rapid development of printing enterprises (1989-1995);
- the period of maturity and stability in the printing sector (1996-2004);
- the period of investments and strengthening competitive advantage (2005-2009);
- the period of reduction and restructuring of the sector (2010-2014 and beyond), W. Cetera, 2014).

In the years 1989 - 1995 printing companies were established spontaneously primarily due to the availability of the means of production (printing machines and equipment).

Most printing equipment came from the secondary market – from liquidated print shops owned by large companies and social organisations. The machine operators „privatised" the machinery on which they worked and started their own businesses.

Demand for printing services increased much faster than supply. The available data show that this was the time of above-average profitability in the sector. What was characteristic of that period was that the ability to print was the basis for competitive advantage and the guarantee of economic success.

In the following years, 1996 - 2004 , the market added quality to the requirements set on the printing production. Customer demands were getting higher. Companies offering multicolour printing on a single-colour machine were slowly disappearing from the market. Printing shops began to invest in equipment. The majority of the equipment was made in the Czech Republic, Slovakia and Germany. The customer expected a quality product made in a timely manner. During that period the number of sole proprietorships decreased. Keeping the proverbial garage company became impossible. Printing companies developed, creating customer service and sales departments, and they increasingly had to solicit customers. It became obvious that having only professional competences was not enough. At the same time, Polish companies were entering the markets of Western Europe, offering quality comparable to that of European companies, and low price of the service. Relatively low costs (among other things, due to low salaries of employees) were the basis of competitive advantage.

Without a doubt, the years 2005 - 2010 was the period of the largest investments for printing. EU funds and open European markets after Polish accession to the EU were the flywheel of the development of this sector. Companies received a substantial resource of new means of production. New technologies were also perceived as the source of labour cost reduction (more efficient machinery, shorter retooling times).

The investment frenzy of Polish printing companies was accompanied by radical changes in the European printing market.

According to the analysts of INTERGRAF, an international organisation representing the interests of companies and employees of the printing sector, printing industry is dominated by small family businesses and micro-enterprises that operate primarily on the local market (cf: *The future of the European in our industry hands – what the industry says*. INTERGRAF, 2012). This fragmentation makes it easier to respond on the niche and local markets. It also provides a chance to adapt quickly to changing customer preferences.

Not without significance is also a change in reading habits and the increased use of electronic media, which significantly reduced the demand for printing and also had a negative impact on revenues from „paper" ads. The increase in printing production is limited mainly to printing packaging items (boxes, bags, etc.) and digital printing. At the same time, competitors from countries with low production costs, especially in Asia, are able to meet European quality standards and exert strong pressure on prices. As a result, for example, imports of printed products from China to the EU in the last decade have more than quadrupled (W. Cetera, 2009).

The last years of the economic crisis had a major impact on the European printing sector, which is sensitive to fluctuations in the business cycle. As a result, the demand for printed products decreased and the financial institutions are more reluctant to lend to small and medium-sized printing enterprises (which are in the majority in the sector) that have lost liquidity.

Production costs rising in Europe, especially the costs of energy, raw materials and labour, decreased the profitability of the printing sector. In response to these challenges, it is going through a profound transformation including also the liquidation of enterprises and downsizing. Opportunities arising from the development of technology and the implementation of new business models require new competencies, supplementing them with skills which current employees are often unable to present.

The development of electronic media and technologies supports building closer relationships with customers and creating greater added value through differentiating services, such as offering innovative processes and printing services together with database management. Integration of communication and multimedia services not only expands the range of products, but also increases the attractiveness of the sector both for customers and employees.

Managers of Polish printing companies did not take into account global market analyses. I pointed out this unfavourable situation in 2005 when indicating an investment direction dangerous for the future of the sector (W. Cetera, 2007). Macroeconomic processes were beyond the horizon of reflection and planning was most often limited to short-term microeconomic perspective. In contrast to the situation in the European market, in Poland, even in 2009, printing production was still on the rise. Polish businesses used to win the competition with printing businesses from the countries of the „old" European Union mainly due to lower prices. Competitive advantage based on this has, unfortunately, proved to be transitory, and investment processes taking into account the increasing integration of economies carry substantial risk.

Phenomena occurring in Europe could also be observed in the local market. This is illustrated quite clearly by the change of circulation of printed books and brochures (Table 5).

■ **Table 5.** Change in the structure of book production

Years	2006	2007	2008	2009	2010	2011
Published titles	19.920	21.810	21.740	22.480	24.380	24.920
First editions	11.990	13.260	13.280	13.310	13.430	12.180
Circulation [million copies]	133.6	146.4	145.7	144.4	139.2	122.4
Average circulation [copies]	6.707	6.713	6.702	6.429	5.710	4.912

Source: Central Statistical Office – Statistical yearbook 2007, 2008, 2009, 2010, 2011, 2012.

The last distinguished period began in 2010. In 2011, the number of published titles decreased significantly – by 9% compared to the previous year. The average circulation also decreased – to 5,410 copies, which means that it was about 5% lower compared to 2010. Total circulation of books published in 2011 amounted to 122.4 million copies and was about 12% lower than in the previous year.

Changes taking place on the Polish market, especially the smaller circulation of printed publications, were compensated by higher exports of services. The majority of managers attaching too much significance technological solutions remained in the illusion of increasing sales of services. In the short-term, the sector in the years 2005 - 2009 could even have been assessed as doing well. Meanwhile, in the area of demand the printing market was undergoing radical transformations.

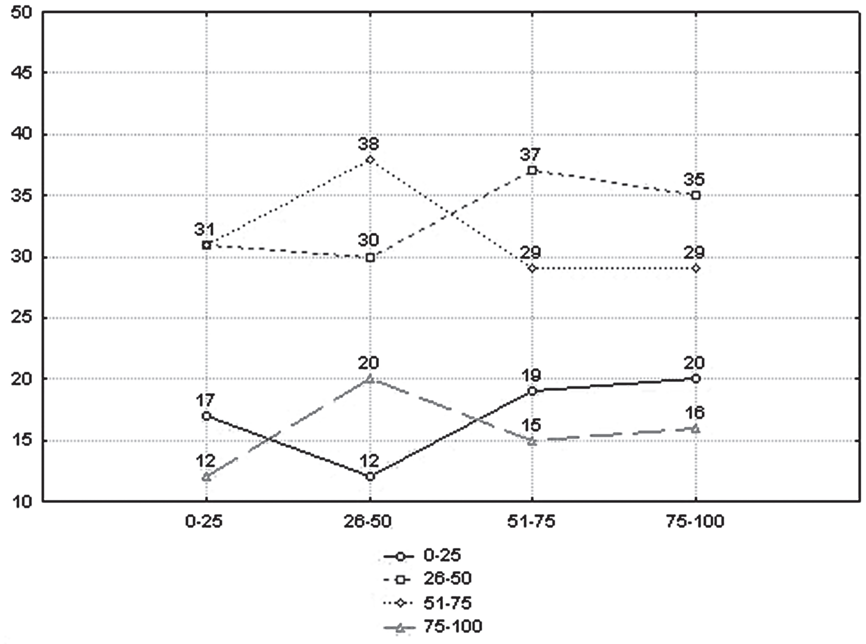
Currently, in the Polish printing industry there appears to be a lot of negative phenomena. Enterprises have excess production capacity[4]. It is accompanied by short-term production planning and falling prices of services. Most companies underestimated marketing and

[4] Business cycle research in the printing sector was carried out for the first time in February 2012 and for the second time it was organised in September 2012. Another was conducted in April 2013 and repeated the following year. The first piece of research involved 177 printing companies, the second – 330 companies. In the third one, 356 companies were surveyed, and in the fourth – 320 companies.

organisational innovations and too much importance is still attached to the technology. As a result, the financial situation of enterprises is deteriorating. Studies show that only 10% of companies are developing dynamically, responding to changes in demand.

The above situation is also confirmed by the results of measurements of the economic situation in the printing industry – respondents pointed to excess production capacity (Figure 4). In April 2014, over 50% of entrepreneurs believed that half of their production capacity was unused. This worrying issue was mentioned in all the survey questionnaires. During the research, the number of companies in the group of companies indicating the use of 51 - 75% of their production capacity decreased. In February 2012, there were 40% of such companies, and in April 2013 – 29%. In the researched period the number of companies using more than 75% of their capacity increased slightly – from 12 to 16%.

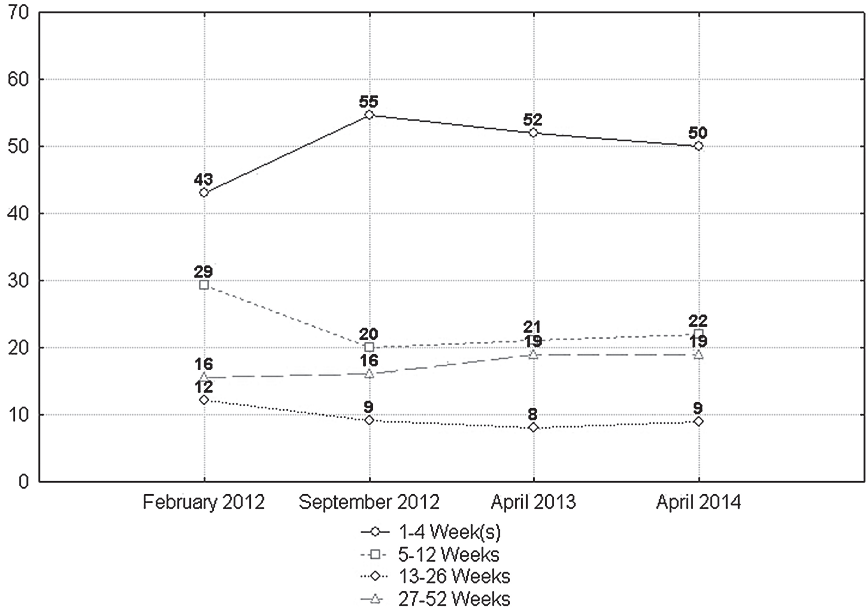
■ **Figure 4.** The percentage of used full production capacity of the company (staff, equipment, means of transport, area, machines, etc.)



(Own study)

The situation in the sphere of production is no better. Since February 2012, the percentage of companies whose production prospect covered a four-week period remained very high (Figure 5). In the period covered by the research the group of companies whose production plan covered a period from 6 to 12 months slightly increased (from 16 to 19%). This is an unfavourable situation for businesses. In the printing services market, the fact that only 8-9% of companies can see their production prospects covering the period longer than 6 months is very worrying.

■ **Figure 5.** Guaranteed period of company's operation (in weeks)



(Own study)

■ Conclusions

The coming years will reveal the new face of the printing industry. Unfortunately, Polish entrepreneurs are reluctant to base their decisions on economic analyses and are more willing to base their actions on their own experience. I have already pointed out this alarming phenomenon in this journal in 2007 (W. Cetera, 2007). At that time, in the years 2002-2005, Polish printing industry was developing offset technologies which in the global market were no match for digital technology. Managers of printing companies in Poland did not see structural changes on the demand side.

Current situation in the printing industry confirms the excessive growth of production capacity in relation to demand. It is accompanied by short-term production planning and falling prices of services. Most companies underestimated marketing and organisational innovations and too much importance is still attached to the technology. As a result, the financial situation of enterprises is deteriorating.

In the near term, the number of enterprises will reduce significantly – unfortunately, more often due to bankruptcy rather than restructuring.

Even today, one can call for research to be carried out and transferring it effectively to the business practice of the sector. Research should include conducting comparative analyses of foreign markets in terms of demand for and supply of printing services, as well as issues relating to determining optimal regulation of business as regards technology, economy and law.

Formulation of specific recommendations addressed to managers, the academic and government sector is the subject of further research and analyses, the results of which can be expected in 2015.

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■ Summary

In the printing sector, between 1989 and 2014, one can distinguish the following periods: rapid development of printing enterprises (1989 - 1995), maturity and stability in the printing sector (1996 - 2004), investments and strengthening competitive advantage (2005 - 2009), reduction and restructuring of the sector (2010 - 2014 and beyond).

In their decisions, managers of Polish printing companies do not take into account global market analyses. Macroeconomic processes are beyond the horizon of reflection and planning is limited to short-term microeconomic perspective.

The coming years will reveal the new face of the printing industry. The current situation in the printing industry confirms excessive growth of production capacity in relation to demand. In the near term, the number of enterprises will reduce significantly – unfortunately, more often due to bankruptcy rather than restructuring.

■ Streszczenie

W sektorze poligraficznym w latach 1989 – 2014 można wyróżnić okres: gwałtownego rozwoju przedsiębiorczości poligraficznej (1989 – 1995), dojrzałości i stabilizacji sektora poligraficznego (1996 – 2004), inwestycji i utrwalania przewagi konkurencyjnej (2005 – 2009), redukcji i restrukturyzacji sektora (2010 – 2014 i kolejne).

Menedżerowie polskich przedsiębiorstw poligraficznych nie uwzględniają w swoich decyzjach analiz rynków globalnych. Makroekonomiczne procesy pozostają poza horyzontem refleksji, a planowanie ogranicza się do krótkoterminowej perspektywy mikroekonomicznej.

Najbliższe lata objawią z pewnością nowe oblicze sektora poligraficznego. Obecna sytuacja w sektorze poligraficznym potwierdza nadmierny rozwój mocy produkcyjnych w stosunku do zapotrzebowania. W najbliższej perspektywie liczba przedsiębiorstw znacznie zmniejszy się – niestety częściej droga bankructw niż restrukturyzacji.

Keywords: economy, management, printing, transformation, innovation, production.
Słowa kluczowe: ekonomia, zarządzanie, poligrafia, transformacja, innowacje, produkcja.

JEL Classifications: QR