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KPMG IN POLAND

Printing industry in Poland

The analysis by KPMG and PBKG
(Polish Guild of Gutenberg Knights)

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POLSKIE BRACTWO
KAWALERÓW GUTENBERGA

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1 Introduction

We are happy to present to you the newest report of KPMG on printing industry in Poland, which has been drawn up in cooperation with PBKW (Polish Guild of Gutenberg Knights) and with the support of industry experts. This publication is the first one to provide such comprehensive information on the printing sector in Poland and it is based upon the input of more than two hundred printing companies as well as numerous representatives of the industry, including those from high schools and colleges that provide training and education in scope of printing business. We believe that the conclusions provided in the report will be of interest to you and that their analysis will foster the positive sector development.

The period of 2008-09 had a negative impact upon the majority of segments in the Polish economy, and the printing industry was no exception. Due to the economic slowdown, the printing companies recorded a decrease in orders and their margins were lower as a result of a significant competition in the industry.

In 2010, the economy returns to the path of a stable development, with the upward business trend and optimistic mood at the market. Those companies which first undertook preventive measures against the economic crisis were also the first to improve their results. The forecasts for the nearest future are promising. Most of the companies predict to achieve a growth in sales volume already in 2011 as well as to modernize the utilized technology before the end of 2013. The Polish printing sector is on the eve of significant transformations. The anticipated consolidation is likely to increase the efficiency and to reduce the number of entities on the market.

One of the biggest challenges to be faced by the printing industry in the nearest future in Poland and in other countries is the development of electronic media as well as electronic information carriers. In our research we decided to verify whether or not the development of the aforesaid segments is a threat to the printing industry and how this technological advancement may be utilized to the benefit of printing companies.

We wish to express our gratitude to all individuals and institutions that contributed to the preparation of this report.

Marek Gajdziński

Partner
KPMG
Audit

Jacek Kuśmierczyk

Chancellor
PBKG

2 Major conclusions

Micro-companies dominate; lager entities generate revenue

According to the Eurostat preliminary results, there were 8,429 entities in the Polish printing industry, which made a seventh position among the European Union countries. The sector is dominated by micro-companies, which in 2009 constituted nearly 95.6 percent of all entities, while the small companies accounted for 3.3 percent of the market and the remaining 1.1 percent included medium and large companies. Micro-companies generated 34 percent of total industry revenue revenues, while 14 percent was made by small entities. The remaining part of the industry revenue (52 percent) was generated by medium and large companies. In 2009, the number of employees in the Polish printing industry reached 42,584.

> ***In 2009, there were 8,429 entities in the Polish printing industry.***

The increase of sales in 2010

Nearly half of the surveyed companies (46 percent) recorded the increased sales in 2010. An upward market trend is proved by the fact that as much as 16 percent of companies declared an increase of their sales by 6-10 percent, and 10 percent of them noted a sales increase by more than 20 percent in comparison with 2009.

Offset printing as a leading technology

Offset printing has been determined by 81 percent of companies as the leading factor contributing to revenue. They pointed that this type of technology is one of the five dominating technologies applied in their production. It is estimated that as much as 39 percent of the industry revenue is generated by utilization of offset printing. Further positions are occupied by bookbinding (10 percent) and digital printing (8 percent), followed by flexo printing (5 percent) rotogravure and typography (4 percent each). Other technologies contribute to at least 5 percent within the average revenue structure, but not more than 8 percent of total revenue.

Micro-companies affected by the economic crisis

The impact of economic crisis was experienced differently by the companies of the printing sector. The research revealed that the smallest companies (less than 10 employees) were affected to the largest degree. The most frequent countermeasures against the crisis, undertaken by the companies, were such as extension of service range (43 percent) and lowering of expenses (40 percent). The crisis countermeasures were undertaken predominately by medium and large companies (as much as 84 percent of all surveyed entities).

> ***Consolidation process in the printing industry seems to be inevitable.***

Companies have reserves of production capacity

The potential of the printing sector is further proved by considerable reserves of production capacities displayed by companies. For the purpose of this report we assumed that the full utilization of the production capacity means the machines operate 24 hours a day, six days a week. Upon declarations of the surveyed entities, we obtained an average utilization of production capacities at the level of 48 percent. This means a considerable reserve and, by implication – significant development possibilities. An important fact to be taken into account at this point is that micro-companies usually operate in a one working shift system, therefore the averaged result may seem as relatively low. In case of medium and large entities, the declared utilization of production capacities falls within 71-80 percent.

Smaller number of unprofitable companies

In 2010, the market share of profitable companies reached 64 percent, while the remaining ones were either unprofitable or on the edge of profitability. The percentage of the latter is expected to decrease quickly which implies the growth of a group of profitable entities. Upon our observations it is safe to say that the amount of companies with little or no profit should drop from 32 to 21 percent by 2013, which means that as much as 78 percent of companies operating at the market should display a profit in 2013. Although the results obtained in our research are based upon declarations of entrepreneurs, they are consistent with data provided by GUS (Central Statistical Office) which indicate that 67 percent of the printing industry companies were profitable in 2009.

Consolidation

The entrepreneurs operating in the printing industry express similar views upon the sector consolidation. The current market trend is a decrease in the number of entities in the industry and this tendency is expected to continue. Nearly 76 percent of respondents thought that the number of companies will be lowering. Only 18 percent had different view, of which merely 1 percent of respondents expressed a firm opinion with regard to the market trend. Therefore, the consolidation at the printing sector seems to be unavoidable.

Export as a driving force

Currently, exactly half of the surveyed companies sell their products or services at foreign markets. Although there is no single dominating direction of export, the most frequently indicated were German, Czech and Slovakian markets. Relatively popular destinations are also Scandinavian countries. Due to the scale of activity, the biggest benefactors of export are companies which specialize in flexo printing, of which as much as 79 percent sell their products at foreign markets.

> *As much as 61 percent of respondents have introduced process innovations in a recent time, that is, they elaborated or implemented new technologies.*

The utilization of the European Union funds

Merely 20 percent of the all surveyed companies took benefit of the European Union backing within the previous 2-3 years. In the majority of cases, the companies obtained backing within the framework of the "Innovative Economy Operational Program", and the financial resources were used for the purchase of new machines and equipment. The European Union funds are expected to gain popularity in the sector – as much as 52 percent of surveyed entities declare their willingness to apply for such backing within the next 2-3 years.

Costly consumables and labor as obstacles for market development

The industry entrepreneurs listed five key obstacles which, in their opinion, may to hamper the market development the largest extent. The most frequently indicated was the high cost of resources (38 percent), followed by high labor cost (37 percent), low margins (34 percent), as well as strong competition and considerable cost of purchase and maintenance of the equipment (33 percent each).

Innovation as a priority

The majority of respondents declared to have implemented significant innovations in their companies and merely 15 percent of the respondents have not introduced any innovation within the last 2-3 years. As much as 61 percent have introduced process innovations in a recent time, that is, they elaborated or implemented new technologies, and 69 percent of surveyed entities express their readiness to undertake innovations within the next 2-3 years. The attention should be particularly paid to the growing importance of marketing innovations (increase by 20 percentage points).

The average assessment of the profiled education in Poland

The companies operating in the printing industry express various opinions with regard to the vocational printing education. The majority assesses the education level as average (32 percent), 27 percent gave a positive assessment, while negative opinions were expressed by 23 percent of respondents.

Printing education – more or less popular?

The representatives of the educational centers vary in opinions with regard to the future popularity of the printing specialization courses. Approximately 40 percent of them expect the increase in a number of students within the upcoming 3-5 years. Exactly the same percentage think that the interest in the profession will remain unchanged. Many opinions indicate at the expected demographic slump which may render the recruitment of students difficult. As expressed by representatives of the educational centers, the chances for employment in the printing industry are not as attractive as in other sectors.

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The research methodology

The research performed by KPMG in cooperation with PBKG is the first comprehensive report on the Polish printing industry. The survey included 212 companies from the printing sector, which were polled in January – February, 2011 by means of the CATI method (Computer Assisted Telephone Interview) or were asked to complete the paper questionnaire. The selection of companies was suggested by the Norstat research agency. During the second stage of the research, KPMG experts conducted a survey in ten educational centers for printing or similar, by means of poll questionnaire.

The report includes the secondary data for the year 2009, obtained from Eurostat database. They provide an outlook upon the Polish printing industry and its position in comparison with other European countries. In order to present the condition of the printing industry against other segments of the manufacturing industry in Poland, the researchers utilized the publication of the Central Statistical Office, titled: "The expenditures and results of the industry". It must be stressed, though, that this publication is based upon results of only those companies with at least ten employees.

A section of this report has been made available to industry authorities. These individuals, meritorious for the industry development, expressed their views upon the current condition of the industry as well as its perspectives for the nearest future.

"The survey included 212 companies from the printing sector.

The size of companies

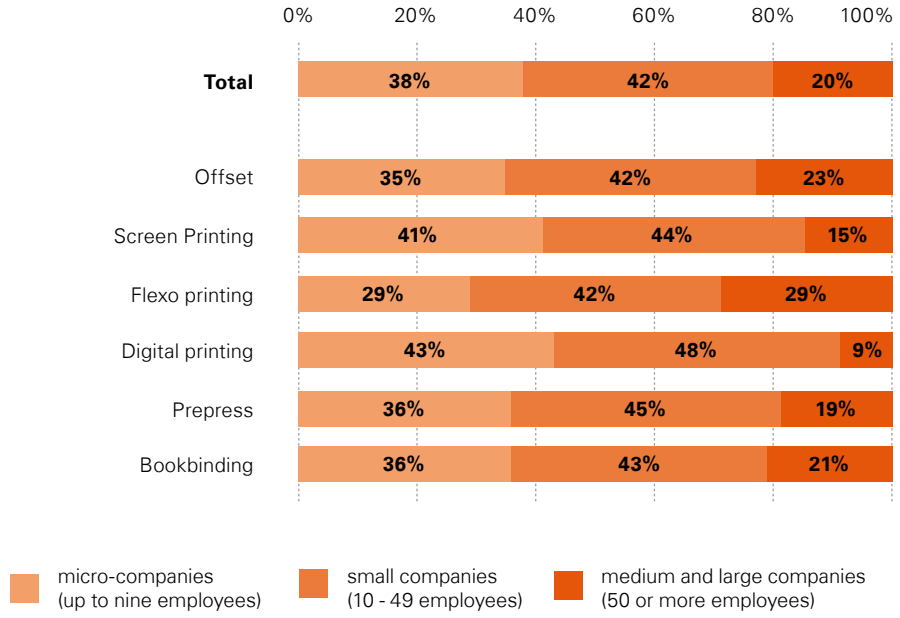
The Polish printing sector is dominated by micro-companies. Although they constitute nearly 96 percent of all the entities in the sector (according to Eurostat data), their total revenue accounts for merely 34 percent of total revenue of the industry. Therefore, for the purpose of the research, we decided to balance the percentage of companies in terms of their size. The sample for the analysis has been selected to ensure that 38 percent of the analyzed entities are micro-companies (entities with not more than nine employees); small companies (between 10 and 49 employees) constitute 42 percent. Medium and large companies (more than 50 employees) account for 20 percent of the surveyed sample.

Technological division

Each of the surveyed companies could indicate five leading printing technologies which are employed in their operation and the majority of respondents pointed more than one option. The most frequently mentioned were bookbinding (87 percent), followed by the offset printing (81 percent). However, in many instances, those technologies were chosen as additional ones and not necessarily indicated at first two positions.

As for the screen printing and flexo printing, the situation differed, as the narrow specialization of entities has been observed. If a given company selected one of these technologies as a primary in their activity, it was usually attributed the first position and, additionally, none of the remaining technologies has been included.

The structure of the printing companies participating in the survey in relation to the size of employment



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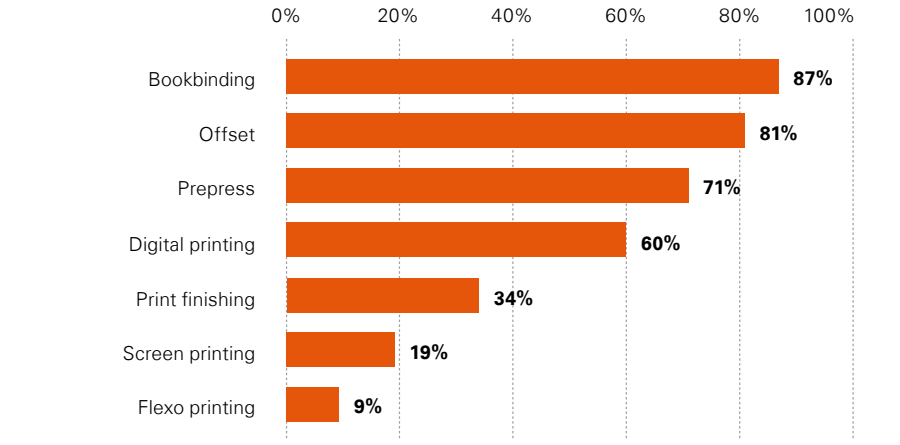
Source: KPMG in Poland.

The structure of the surveyed printing companies by the utilized technology



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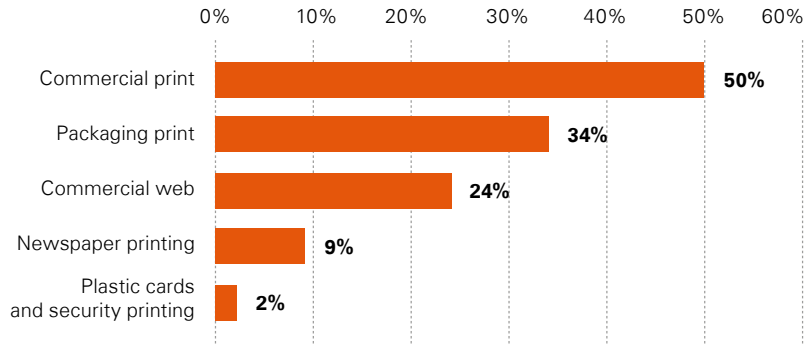
Source: KPMG in Poland.

All entrepreneurs could also indicate three dominating profiles of their business activity. As a result, exactly half of respondents is engaged in commercial print, one-third specializes in packaging printing and 24 percent in commercial web. Due to a large variety of business activities, we were forced in numerous cases to define different business activities as "other".

The research examined individuals performing managerial duties. In case of large companies it was usually a CEO or a member of a managing board (18 percent of the total number). As for the examination of the micro-company, we asked either owner or co-owners. This group constituted nearly a half of all surveyed respondents. Every fifth examined individual was a unit director or a department manager.

The structure of the surveyed printing companies in relation to profile of the business activity



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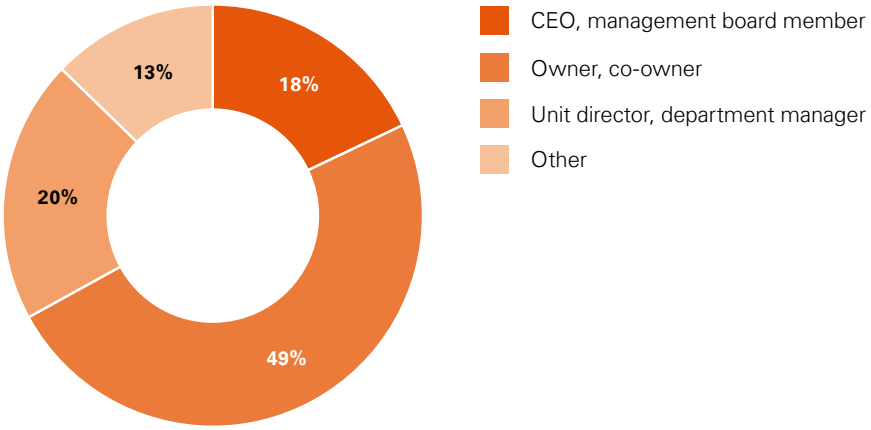
Source: KPMG in Poland.

Respondents



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Source: KPMG in Poland.

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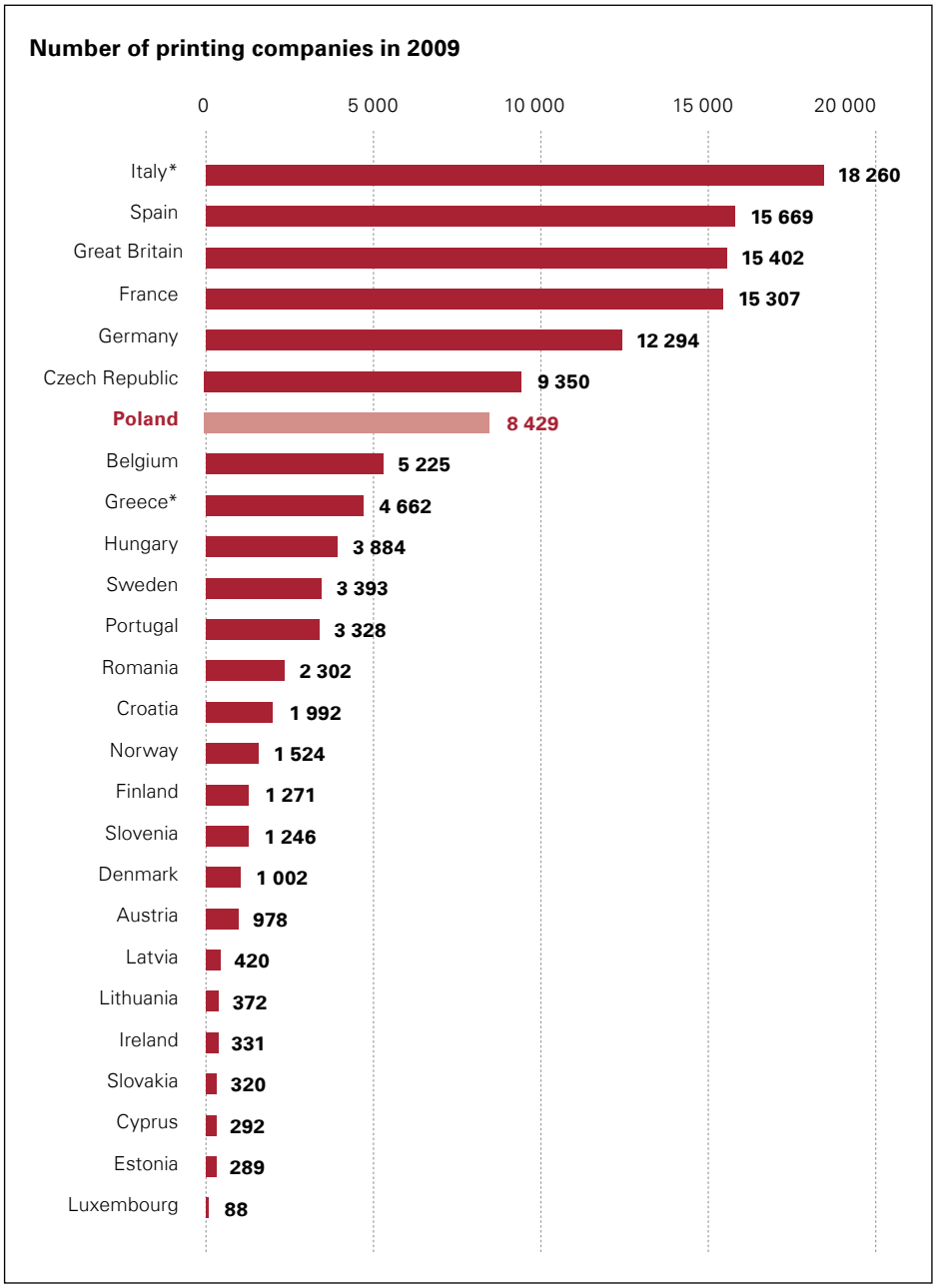
Printing sector in Poland in comparison with other European countries

In 2009, nearly 130,000 printing companies were registered in the European Union. The dominating in the graphic arts market, regardless the geographical location, are the entities which employ up to nine employees. Although the micro-companies prevail in terms of quantity, the majority of industry revenue is generated by the entities classified by the European Union as medium or large.

In comparison with other European markets, the Polish printing sector is among the distinguishing ones, with seventh position in terms of the amount of business entities. According to the Eurostat data, 8,429 printing companies were operating at the Polish market as of 2009. The country with the largest amount of companies was Italy (18,260 in 2008). More than 15,000 firms conduct their business activity in Spain, Great Britain and France. Poland is also preceded by Germany (12,294) and Czech Republic (9,350). According to the Eurostat data, micro-companies (up to nine employees) accounted for 95.6 percent of all printing companies in Poland, while small companies (10 - 49 employees) constituted 3.3 percent, and medium and large companies (50 employees and more) – merely 1.1 percent. Despite the quantitative dominance of micro-companies, the majority of the sector revenue was mainly shaped by companies with more than ten employees.

There are nearly 8,500 printing companies in Poland.

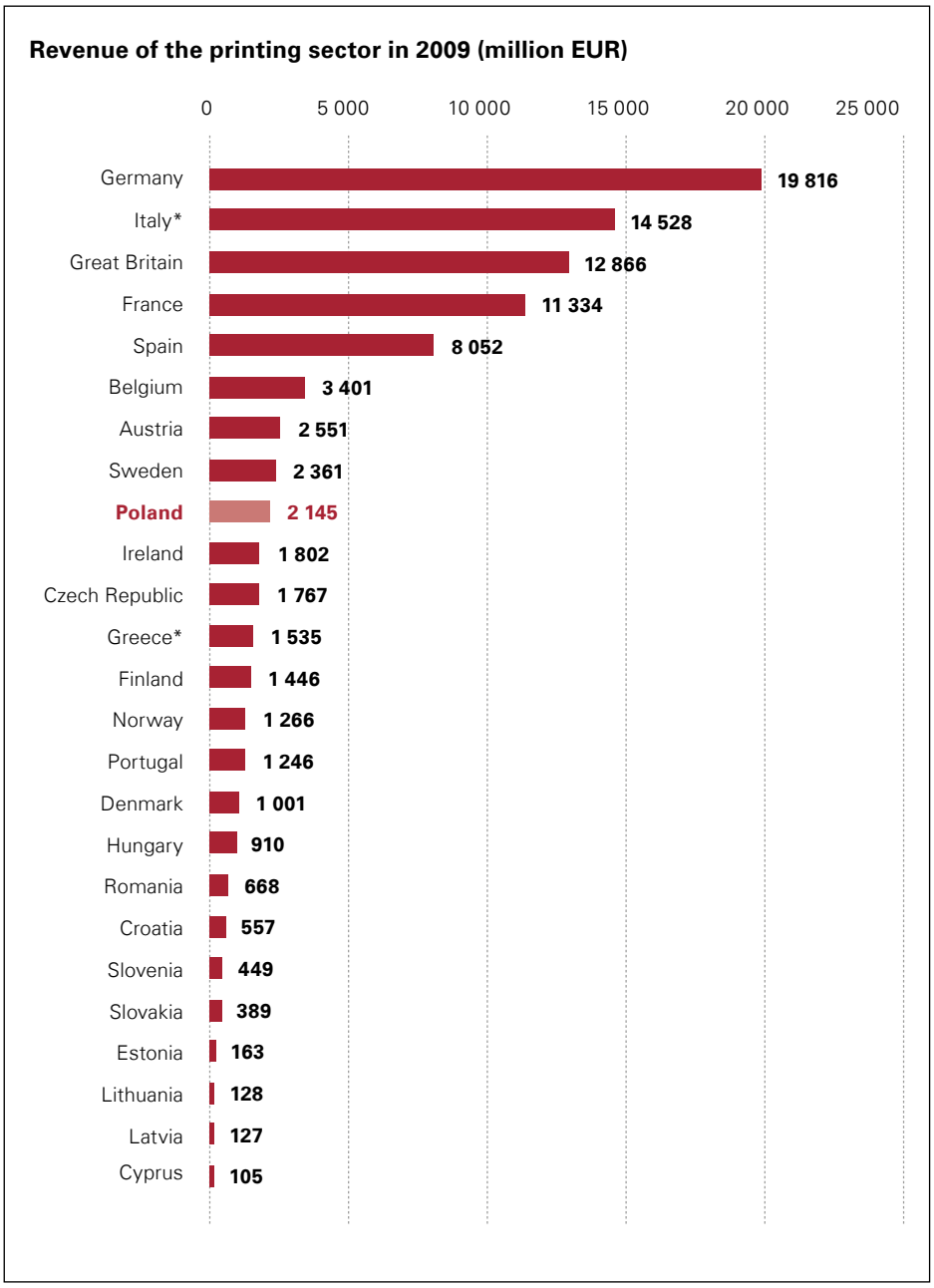


*In 2008.

Source: KPMG in Poland based upon Eurostat data (Preliminary results on industry and construction – NACE Rev. 2).

In 2009, the total revenue of the Polish printing industry amounted to slightly above EUR 2.1 billion, which accounts for 2.3 percent of total revenue of the sector in Europe. Classification by revenue differs from the ranking regarding the number of companies. For instance, Spain, which in 2009 occupied the second position in terms of the amount of companies, was fifth in respect of sector revenue. As presented at the diagram, Germany is an undisputed leader, with the total revenue of the printing companies amounting to EUR 20 billion, surpassing the second country in the ranking – Italy, by over EUR 5 billion. In 2009, the total market value in terms of revenue exceeded EUR 90 billion.

In Poland, 34 percent of the revenue was generated by micro-companies, although – as mentioned before – they constituted nearly 96 percent of all entities in the industry. Small companies (10-49 employees) generated 14 percent of total revenue, while the remaining part – 52 percent – was earned by medium and large companies.



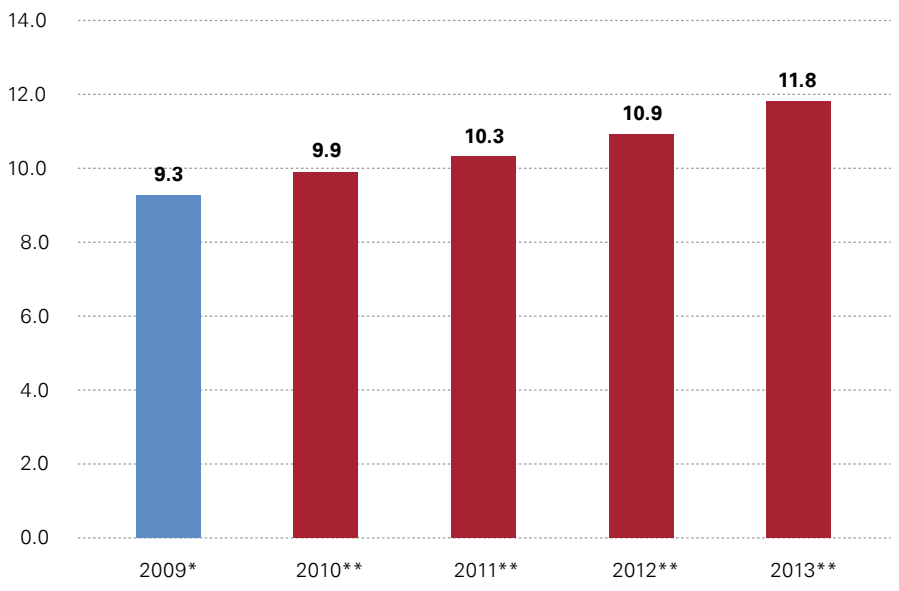
*In 2008.

Source: KPMG in Poland based upon Eurostat data (Preliminary results on industry and construction – NACE Rev. 2).

In 2010, the value of the Polish printing industry amounted to PLN 9.9 billion. It is estimated to reach the level of nearly PLN 12 billion in 2013.

Upon the Eurostat data as well as the entrepreneurs' forecasts on the sales growth, we have made an estimation regarding the development perspectives of the Polish printing industry until the year 2013. According to our forecast, the graphic arts market within the nearest future will be characterized by a gradual and stable growth. In 2009, the market value in terms of companies' revenue amounted to PLN 9.3 billion, as indicated by Eurostat. We assess that the market value rose to nearly PLN 10 billion in 2010. Taking into account declarations of entrepreneurs on the increase of the sales, it is estimated that the value of the printing sector in Poland may rise up to PLN 11.8 billion at the end of 2013. Medium and large companies are expected to develop faster than micro-companies and small companies.

The value of the Polish printing industry (billion PLN)



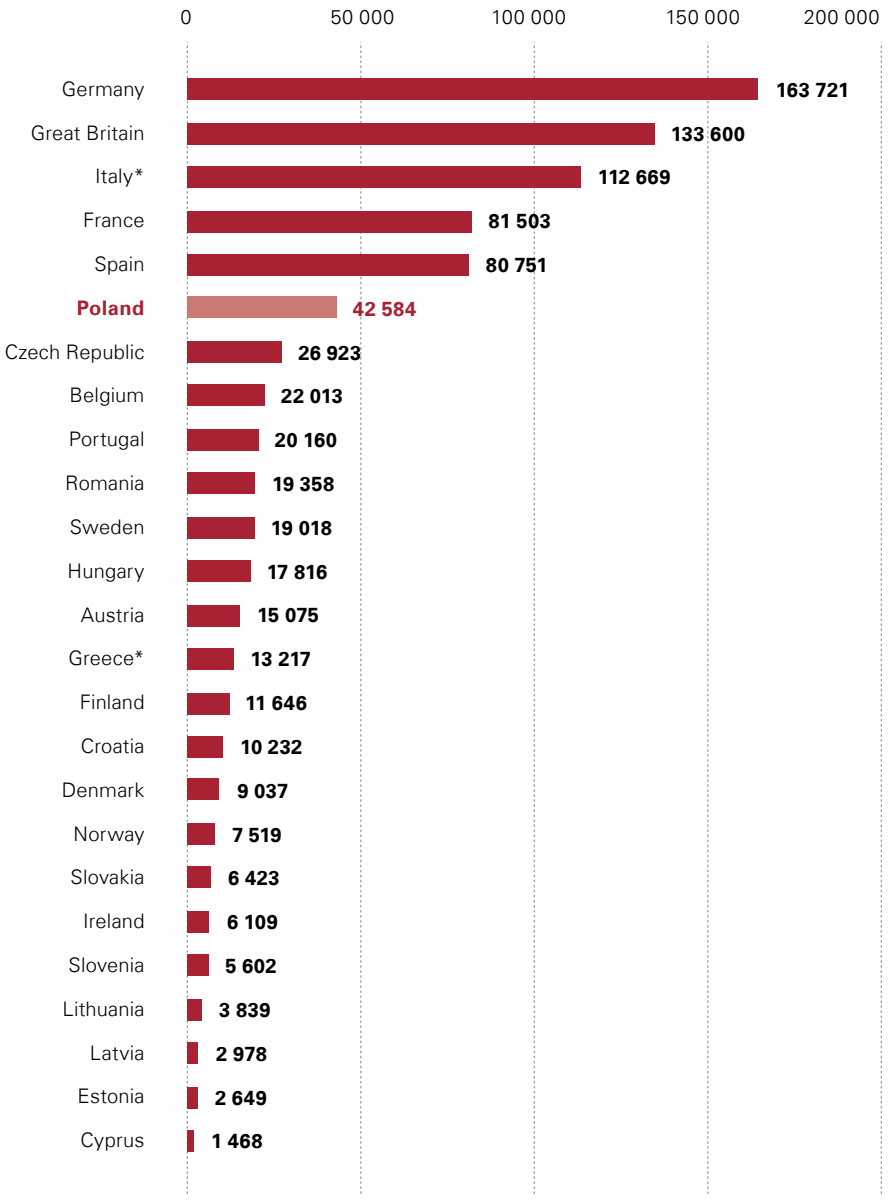
* the market value measured by the level of revenue of Polish printing companies and calculated by the average PLN/EUR exchange rate, determined by the National Bank of Poland as of 2009 (PLN 4.32 – EUR 1).
** KPMG estimations based upon the dynamics of the sold production, as published by the Central Statistical Office, and upon declarations of surveyed companies.

Source: KPMG in Poland. Estimated values are marked red.

According to Eurostat preliminary results, the number of employees in the Polish printing industry reached 42,584 in 2009 – a sixth position among the European Union countries. Out of that number, 45 percent worked in micro-companies, 16 percent were employed in small companies, while the remaining 39 percent worked in medium and large entities (50 or more employees).

In 2009, the largest graphic arts market in terms of the employment size was Germany, with more than 163,000 employees, followed by Great Britain (ca. 134,000) and Italy (ca. 113,000 in 2008). Spain, with second position with respect to the number of printing companies, was fifth in terms of the employment size (81,000 employees). In total, there were more than 830,000 employees in the printing industry in 27 countries of the European Union.

The size of employment in the printing industry in 2009



*In 2008

Source: KPMG in Poland based upon Eurostat data (Preliminary results on industry and construction – NACE Rev. 2).

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Nearly 43,000 employees work in the printing companies in Poland.

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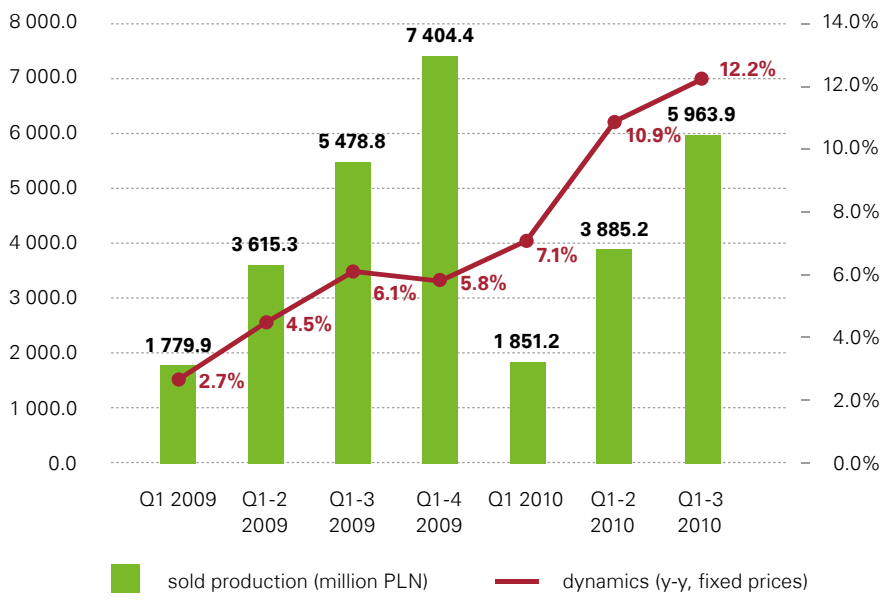
The condition of small, medium and large printing companies in Poland

> *For the printing sector in Poland, the year 2010 was marked by acceleration after the economic crisis.*

During the first three quarters of 2010, the sold production of small, medium and large companies reached the value of PLN 5.963 billion. In 2009, during the same period, the amount was lower by ca. PLN 0.5 billion and reached PLN 5.478 billion. At the end of 2009, the value of the sold production of the printing sector was PLN 7.5 billion. Taking into account the pace of growth and rebound after the economic slowdown, it is fair to expect that the above value of the sold production was also surpassed in 2010.

The dynamics indicators show that the year 2010 was marked by acceleration after the economic crisis. During the first three quarters of 2010, the value of the sold production (expressed in fixed prices) increased by 12.2 percent when compared with the same period of 2009. In the second half of 2010, the dynamics of production reached a high level and exceeded 10 percent. This tendency is very likely to sustain in the fourth quarter of 2010, in which case the total amount of the sold production i 2009 will be exceeded. It has to be taken into account, however, that the information provided by the Central Statistical Office which constitute a foundation for this analysis, include only the companies with at least ten employees.

The Polish printing sector - sold production (cumulative)



Source: KPMG in Poland, based upon the data from Central Statistical Office, published in "Expenditures and results of the industry". The data include companies with at least ten employees.

> ***During the first three quarters of 2010 the average salary per month increased by 2.5 percent when compared with the same period of 2009, and reached the gross amount of PLN 3,527.3.***

During the first three quarters of 2010, the average salary per month increased by 2.5 percent when compared with the same period of 2009, and reached the gross amount of PLN 3,527.3. The values of remuneration reflect the delayed influence of the economic crisis. In 2009, when market trends were far from optimistic, the average dynamics of remuneration exceeded 5 percent, reaching 7.4 percent during the third quarter of 2009. At the end of 2009, a drop in remuneration began and continued until the middle of 2010.

However, a significant rebound was recorded after three quarters - the average monthly remuneration increased by PLN 200, when compared with the level in the middle of 2010.

The condition of the printing industry in Poland may also be assessed against other segments of the manufacturing industry. The analysis of the sold production index reveals the poor condition of the printing industry against the general economic market in 2008.

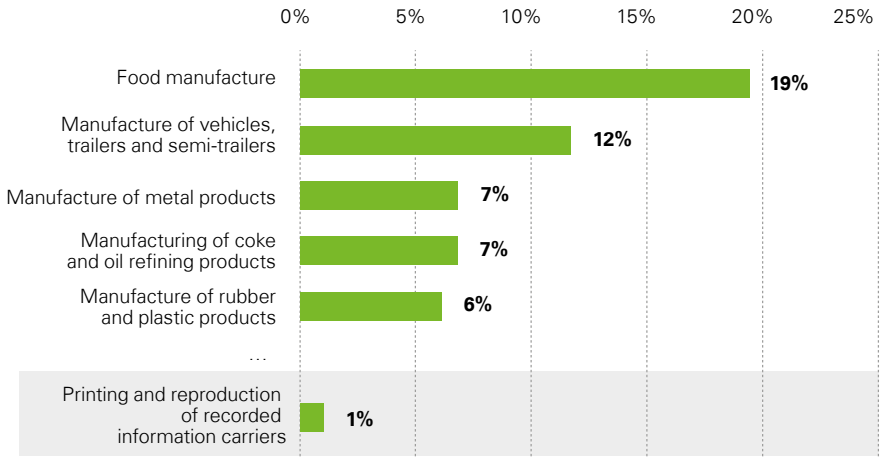
Not until the last months of 2008 did the index of the sold production for the whole market drop below the value of the index determined for the printing industry, and this level sustained until the middle 2009. At the same time, a considerable improvement of indexes is noted in 2010, both for manufacturing industry and printing. What is important – the level of the index at the end of 2010 may be 30 percentage points higher in comparison with the beginning of the year.

The printing industry in Poland in comparison with manufacturing industry in general – sold production index (the monthly average in 2005 = 100)

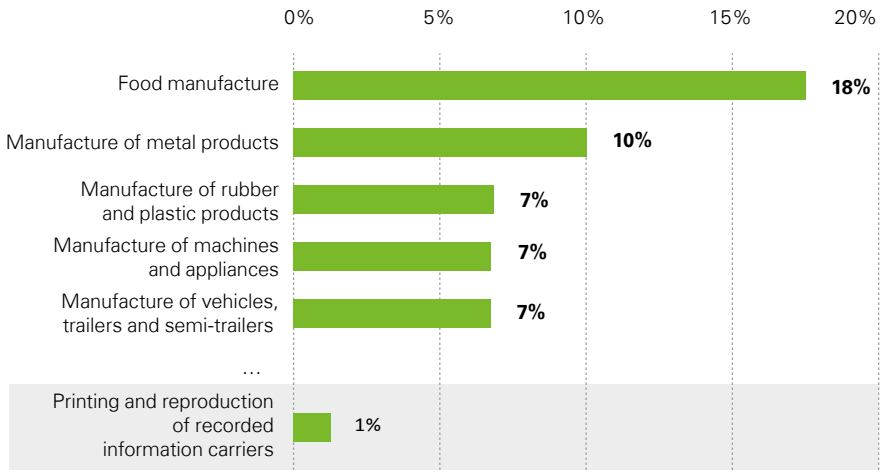
Source: KPMG in Poland, based upon the data from Central Statistical Office, published in "Expenditures and results of the industry". The data include companies with at least nine employees.

The sold production value of the Polish printing industry accounts for 1 percent of the total sold production of the manufacturing industry. The analysis of the employment size gave the same figure, which means that the employment size in the printing sector accounts for 1 percent of the total employment in the manufacturing industry. The undisputed leader in both cases is the food manufacturing (19 percent of the total sold production and 18 percent of total employment in manufacturing industry). Among the major sectors of the manufacturing industry in 2009 there were also manufacturingof metal products, manufacturing of rubber products and automotive industry.

The sold production of the printing sector in comparison with other segments of the manufacturing industry – 2009



The employment size in printing industry in comparison with other segments of the manufacturing industry - 2009



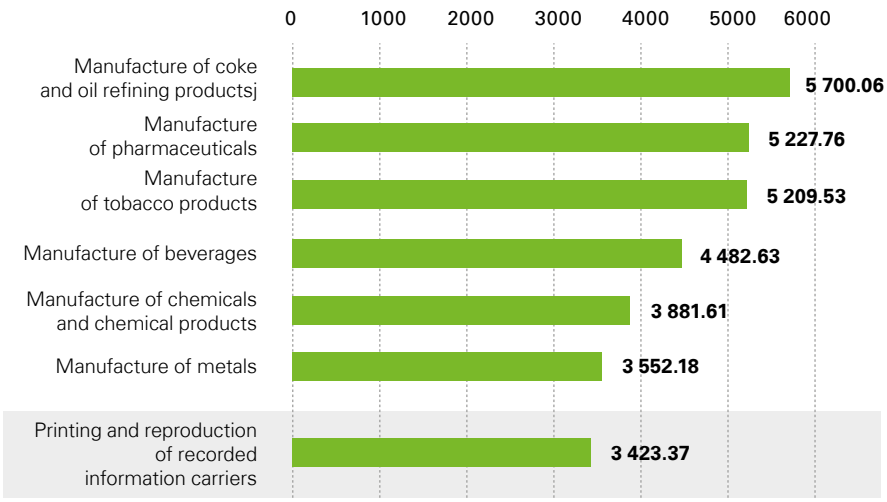
Source: KPMG in Poland, based upon the data from Central Statistical Office, published in "Expenditures and results of the industry". The data include companies with at least nine employees.

In 2009, the average gross remuneration in the Polish printing segment was at the seventh position when compared with other sectors of the manufacturing industry and reached the amount of PLN 3,423.37 at the end of the year. The highest remuneration was recorded in the sectors connected with the manufacture of coke and oil refinery products (more than PLN 5,700). The average monthly remuneration exceeding PLN 5,000 was earned by employees of entities manufacturing pharmaceutical as well as tobacco products.

Remuneration should be correlated with the work efficiency[1]. The printing segment occupies further position in comparison with other sectors of the manufacturing industry. In 2009, the value of the work efficiency reached the amount of PLN 280,000. As already indicated above, these statistics are calculated only for companies with at least ten employees.

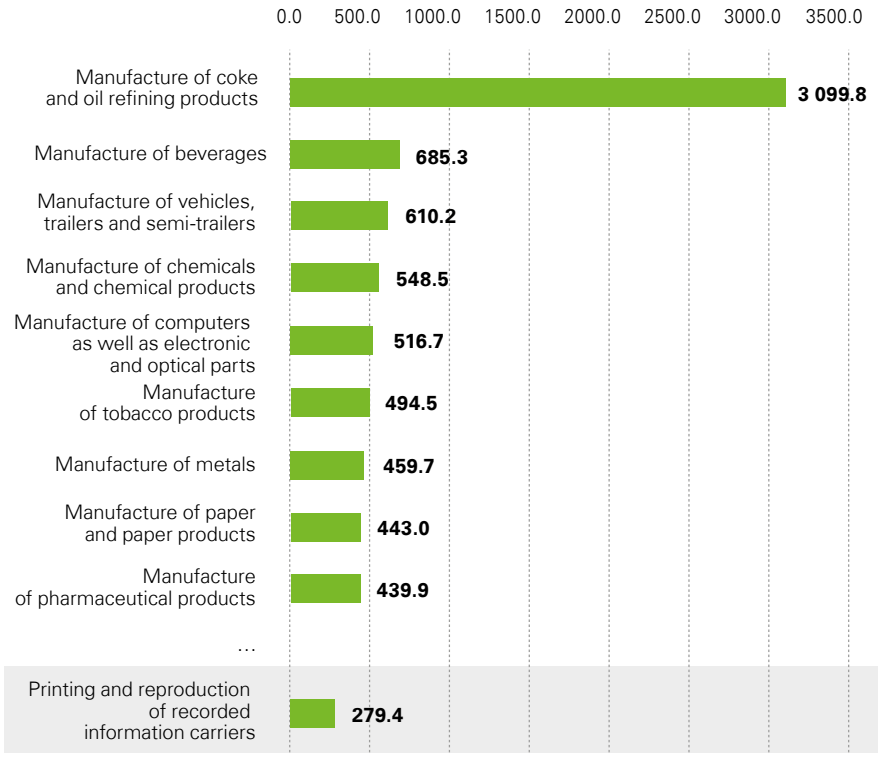
[1] The work efficiency defined as the sold production per one employee

The average monthly remuneration in the Polish manufacturing industry in 2009 (PLN)



Source: KPMG in Poland, based upon the data from Central Statistical Office, published in "Expenditures and results of the industry". The data include companies with more than nine employees.

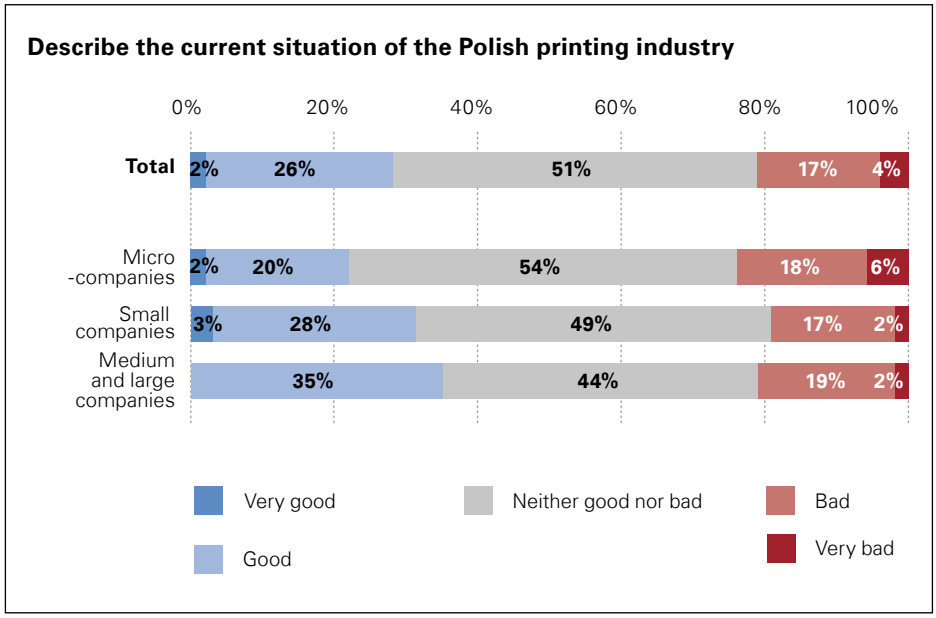
Work efficiency in the manufacturing industry in 2009 (thousands PLN)

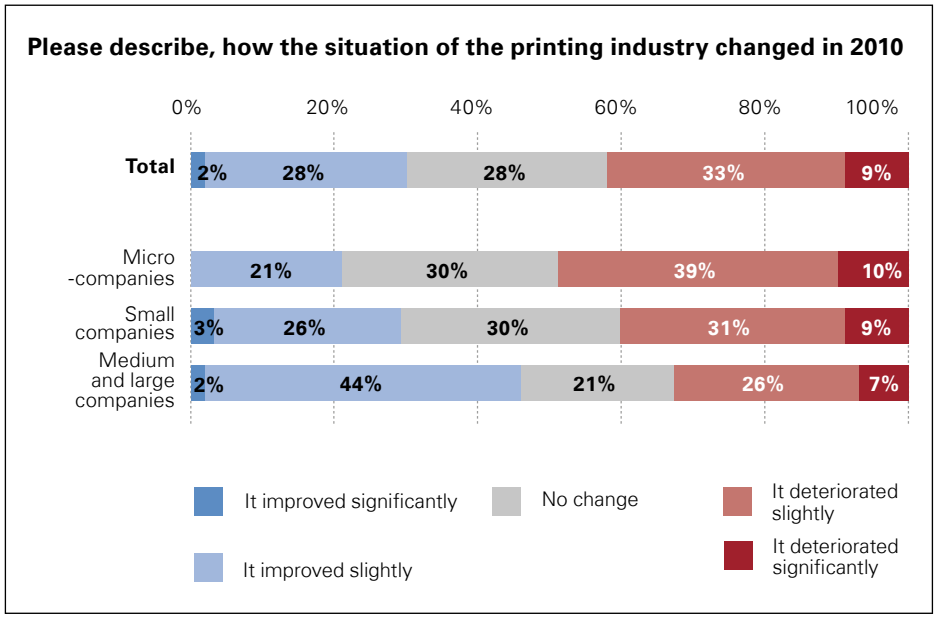


Source: KPMG in Poland, based upon the data from Central Statistical Office, published in "Expenditures and results of the industry". The data include companies with at least nine employees.

The current situation at the printing sector is viewed as good by 30 percent of companies, while 20 percent assessed it as bad.

6 Printing industry as viewed by entrepreneurs





6.1. The condition of the industry

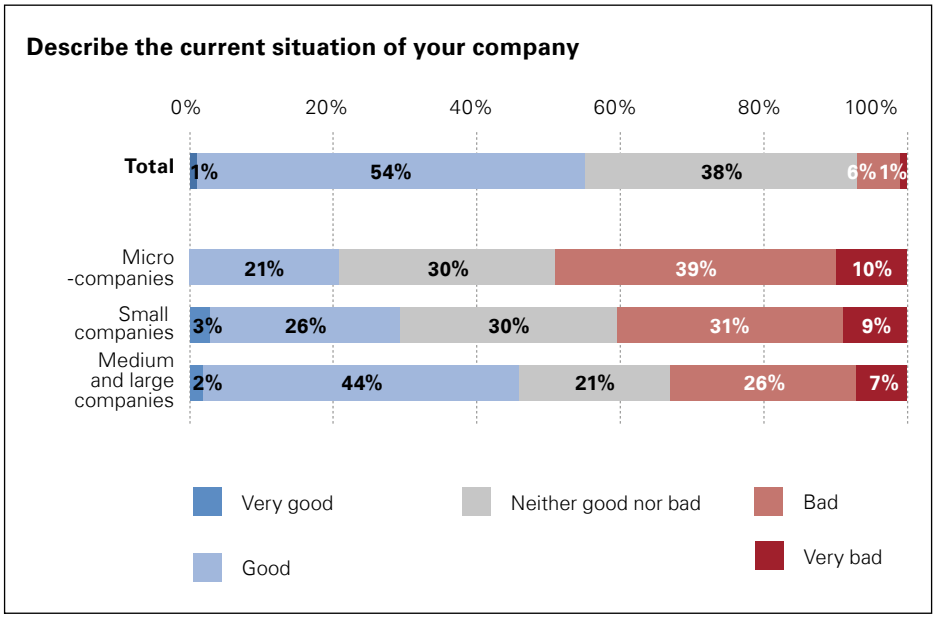
In 2010, the printing industry in Poland experienced a slight rebound, expected after the economic crisis of 2008 – 09. When recession occurs, the companies reduce their expenses and marketing costs are first to go. This means that the demand for advertisement printouts and materials is lower and that affects the printing industry. In 2009, the market trends in Poland and other countries were far from optimistic. However, the recession slowed and the upward economic trend gradually reappeared, also at the printing segment. This tendency was reflected both in the data gathered by the Central Statistical Office as well as in information provided by the sufficient number of the printing companies.

After the unsuccessful 2009, the entrepreneurs who participated in the survey expressed three different opinions – more than a half of respondents pointed that the situation of the industry is neither good nor bad, 28 percent decided that the situation was good or very good, while 21 percent decided that the situation was bad or very bad.

N = 212

Source: KPMG in Poland.

Out of all the surveyed companies, twenty-eight percent think that the situation of the industry in 2010 has not changed in comparison with the previous year. One-third of the respondents think that the situation has improved, while the remaining respondents regarded the situation as worse. The economic crisis of 2008-09 had a significant impact upon the business activity of the printing companies. Nonetheless, overcoming the results of the crisis was already possible in 2010, but the pace of this process depended to the largest extent upon skills of managers as well as upon the undertaken countermeasures. Although the entrepreneurs are still careful about expressing positive opinions on the segment condition, there is a considerable number of entities, which perceive their own situation as good when compared to the general market, and this reflects well the reoccurrence of positive trends.



N = 212

Source: KPMG in Poland.

More than 40 percent of the companies assessed that the situation of the industry worsened during 2010. However, merely 7 percent of respondents stated that their situation may be described as bad or very bad. What is more, more than a half of entrepreneurs (54 percent) described the condition of their companies as good or very good. Therefore, it is safe to say that the industry is gradually returning onto the path of the stable development after the economic crisis of the 2008-09.

We decided to verify which companies assessed the situation of the industry as good or very good in relation to the technological division as well as in terms of the company size. The situation was assessed positively by prepress (41 percent of opinions were good or very good). It was undisputedly the best result, considering the technological division. The following positions were occupied by companies which specialize in digital printing, screen printing and offset printing (28 percent of opinions were good or very good).

Positive opinions on the industry condition were more frequently expressed by the larger entities than by small ones. It is therefore safe to say that micro- and small companies were to the largest extent affected by the economic slowdown. More information on recession countermeasures may be found in the subsequent part of this report. The situation of the printing industry was viewed positively by merely 22 percent of the entities with less than 10 employees. Conversely, larger companies (50 employees and more) expressed rather positive market assessments (35 percent).

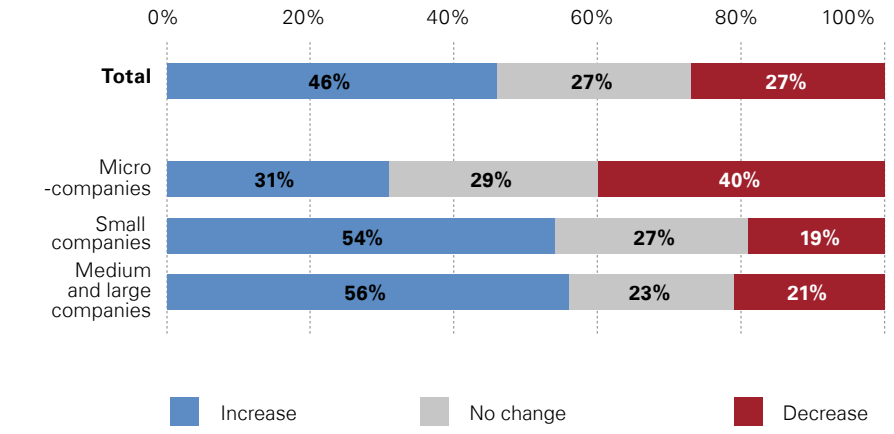
The additional analysis in terms of the company size reveals that the situation is improving considerably faster in the sector of medium and large business entities. Nearly half of the companies with 50 or more employees (46 percent) acknowledged the industry condition as better, when compared with the year 2009. In the group of micro-companies, this percentage reached only 28. The opposite tendency is observed in a group of companies that describe the situation as worse – almost half of the micro-companies (49 percent) claimed that the situation has deteriorated, whereas only one-third of medium and large companies expressed similar opinion.

6.2. Sales

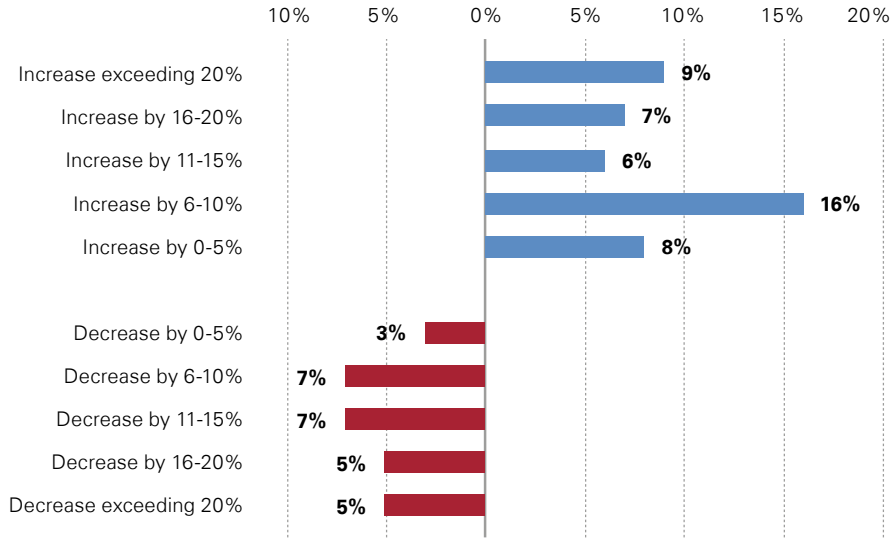
The year 2010 was assessed as worse than the previous one by a relatively big number of respondents. However, nearly half of the companies (46 percent) recorded the increase in sales in 2010. The good economic trend is reflected by the fact that as much as 16 percent of respondents declared the increase in sales by 6 - 10 percent. Surprisingly large number of companies recorded the sales growth by 20 percent in comparison to 2009 (9 percent).

Within the group of small companies as well as medium and large ones, the majority of respondents recorded the increase in sales in 2010, with a 35 percentage points difference between them and the entities that display a drop in sales in 2010. Conversely, as much as 40 percent of respondents within the group of micro-companies reported a decrease in sales in 2010 and they predominate by 9 percentage points over companies that increased their sales, Therefore, it may be acknowledged that the results concerning the general outlook upon the industry were slightly reduced by the micro-entities, which have less than ten employees.

Please describe the change in sales of your company in 2010 in comparison with 2009



Please describe the change in sales of your company in 2010 in comparison to 2009



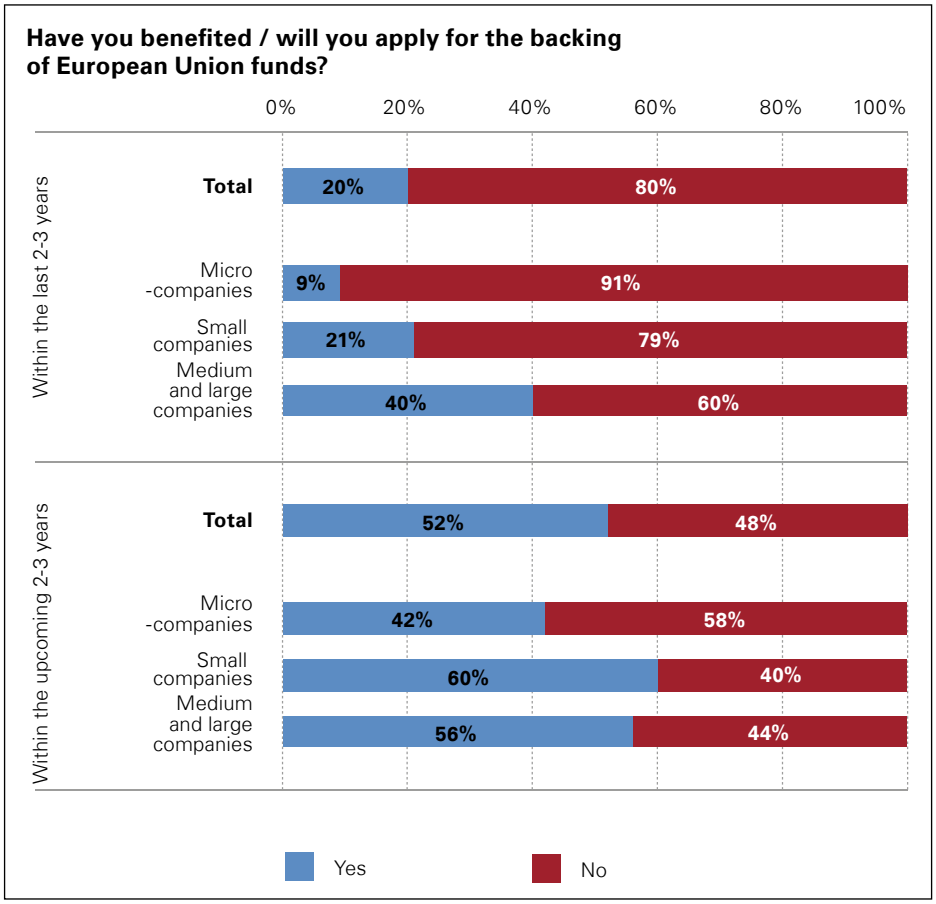
N=212

Source: KPMG in Poland.

> ***Nearly half of the printing companies recorded the increase in sales in 2010.***

6.3.The use of the European Union funds

The return onto the path of a stable growth may be facilitated by the financial backing. So far, the companies of the printing sector were reluctant to appreciate the importance of this support. Within the previous 2-3 years, only 20 percent of the businesses in the printing sector benefited from the European Union funds. In most instances, companies obtained support within the framework of the "Innovative Economy" operational program and the financial resources were utilized for the purchase of machines and equipment. However, within the nearest future we should experience a growing interest in the European Union funds, since 52 percent of the surveyed entities declared their willingness to apply for such backing within the upcoming 2-3 years. The European Union funds may constitute a significant driving force in the sector development. Unfortunately, the resources available for the Polish companies within the current financial perspective are expected to deplete, therefore the entities, which apply sooner for the financial backing will find themselves in more favorable condition.



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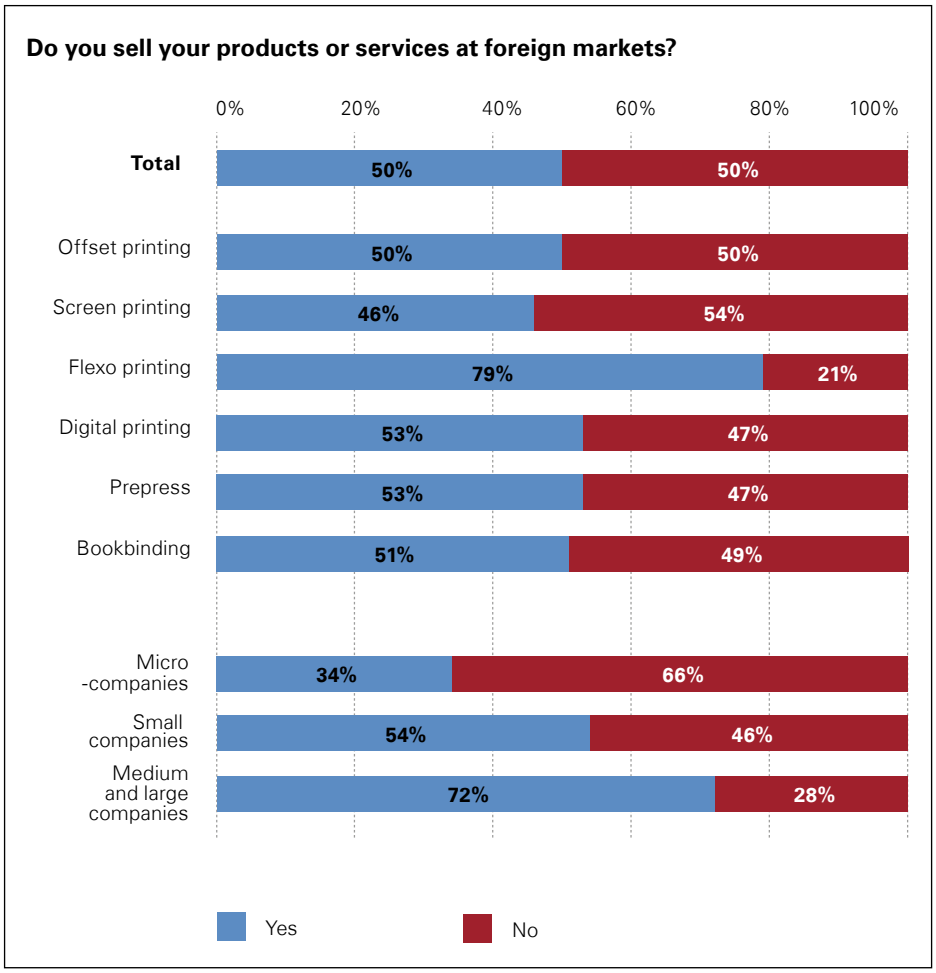
Source: KPMG in Poland.

> ***More than a half of the printing companies declare their willingness to take benefit of the European Union funds. So far, only 20 percent of the companies have utilized the financial backing within the framework of the European Union programs.***

6.4. Presence at foreign markets

Another factor contributing to the development of the printing segment is the export of printing products and services. The research proves that exactly half of the surveyed businesses sell their products or services abroad. Although there is no single dominant destination of the export, the most frequently indicated were markets of Germany, Czech Republic and Slovakia. Also, Scandinavian countries are relatively popular destination. The export of Polish printing products and services is expected to play an increasingly important role within the nearest future. Currently, the most frequently exported are flexo printing products.



N=212

Source: KPMG in Poland.

> ***Half of the printing companies declare that they sell their products/services abroad.***

As much as 79 percent of the surveyed companies which indicated flexo printing as a leading technology in their operation, confirmed that they sell their products abroad. On the other hand, the companies specializing in screen printing take benefit of export in the smallest degree (46 percent). It is mostly a consequence of the operation specificity within the given market segment. Screen printers - usually small entities - address their products mainly at local markets. Due to a large scale of business activity, the companies specializing in flexo printing are simply forced to sell their products and services aboard.

The characteristic approach towards the export may be observed upon its analysis, while taking into account the size of the surveyed companies. Larger entities sell their products and services abroad more frequently. The percentage of micro-companies which export their products or services reaches 34 percent of their total quantity, whereas for the medium and large businesses the percentage is considerably higher, even reaching the level of 72 percent. Considering the size of micro-companies, they still have obtained a very good result.

6.5. Revenue and expenses

The printing sector in Poland is characterized by a significant differentiation – one segment groups business entities which offer very diversified products and services. The specificity of business operation within a given segment as well as the related structure of expenses and revenue may differ considerably between entities, which specialize in various printing technologies.

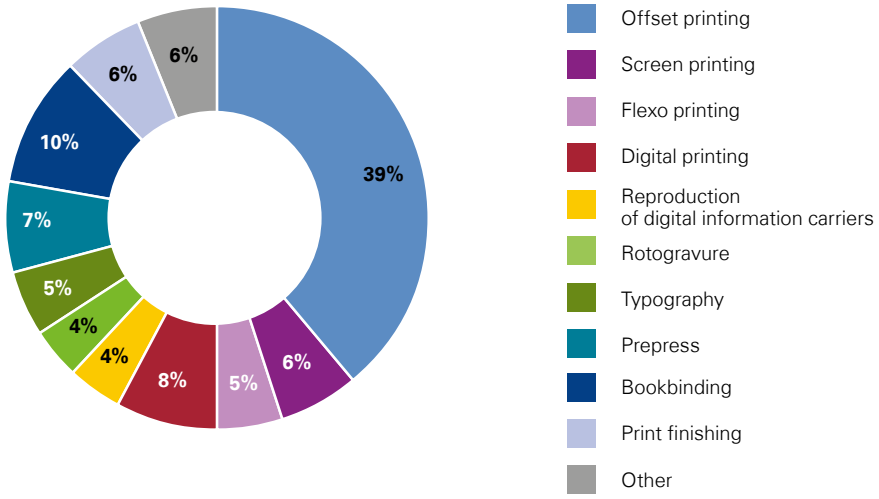
We decided to analyze the average operation in the sector in terms of the business and technology. For that purpose, respondents provided information on their structure of expenses and revenue. In spite of our concerns, the printing companies were extraordinarily helpful and eager to share those data with us.

The analysis of the averaged expense and revenue structure led to some interesting observations. Offset printing is undisputedly the major factor contributing to the revenue – as much as 81 percent of the respondents pointed that offset printing in one of the five major technologies in their companies. This technology generates 39 percent of total sector revenue. Offset printing is followed by bookbinding (10 percent), digital printing (8 percent) and flexo printing (5 percent). Out of technologies, selected for the analysis by means of the expert method, the smallest revenue is generated by rotogravure and typography (4 percent each). Other technologies generate at least 5 percent of the revenue within the total revenue structure, but they do not exceed 8 percent of the total revenue value.

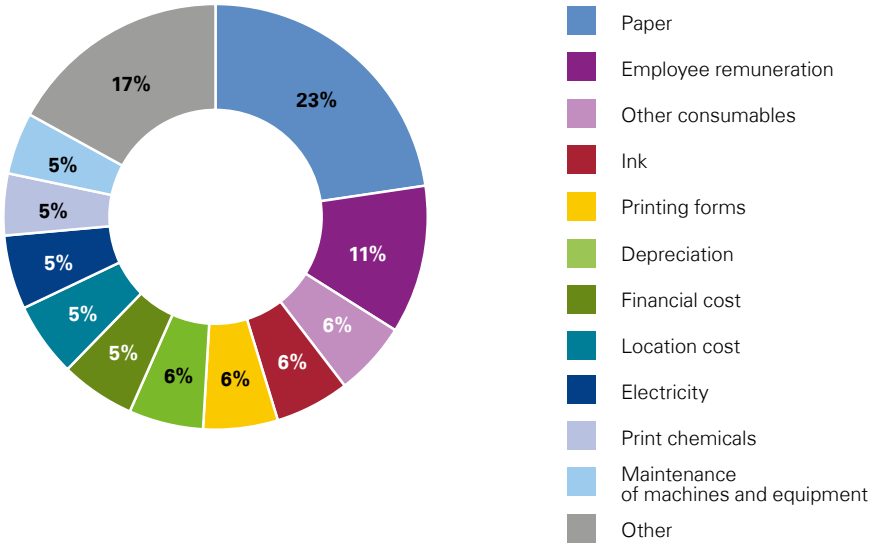
As expected, the biggest expense of business activity is the cost of paper, which constitutes as much as 23 percent of total expenses. The second position is occupied by the employee remuneration – 11 percent of total expenses, as revealed by our analysis

As much as 17 percent of expenses were defined as "other", which implies that the business activity expenses depend to the largest extent upon the specialization of a given company. Therefore, the expenses of companies specializing in offset printing may differ considerably from the expense structure of an entity which employs flexo printing as a leading technology.

The averaged revenue structure



The averaged expense structure



N=212

Source: KPMG in Poland.

6.6. The influence of the economic crisis on the industry

Experts agree that the printing industry in Poland was developing very fast until 2008. The impact of the economic crisis forced many business entities to reduce the marketing budget which in turn affected the national printing sector. This impeded to a certain extent the harmonious development of the printing sector. Approximately 38 percent of the respondents stated to have been averagely affected by the crisis. However, many companies declared that the crisis of 2008 - 09 had a significant impact upon their business activity.

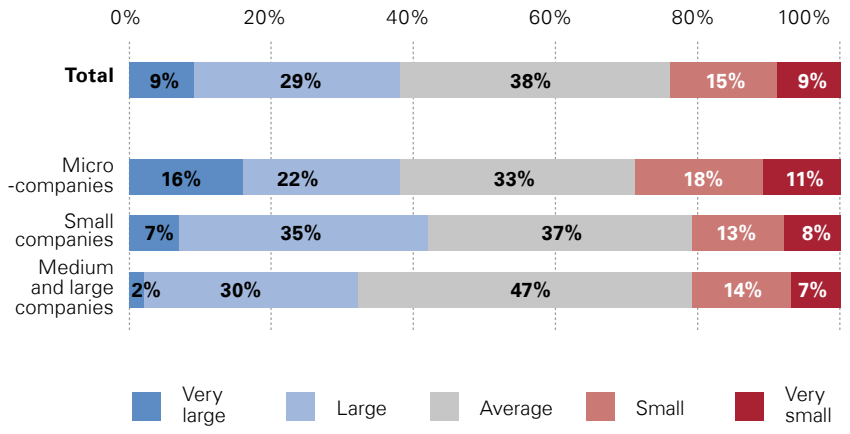
The gravity of the crisis was experienced differently by the printing companies. Our research reveals that the micro - companies (less than ten employees) and small entities (10-50 employees) were affected at most. By implication, larger companies suffered less – only 2 percent of the biggest enterprises admitted to have been seriously affected by the crisis whereas 30 percent were affected to a considerable degree.

However, previous analyses indicate that the companies are gradually re-establishing their stable development and the biggest entities (50 employees and more) display the fastest recovery. It was possible due to appropriate countermeasures undertaken by the companies. In total, 67 percent of companies operating in the Polish printing sector declared to have applied measures aimed at overcoming the crisis situation.

As before, also here a relation was observed between the size of a company and a pace of undertaking countermeasures against the crisis.

As much as 84 percent of medium and large businesses declared to have undertaken anti-crisis activities. It is probably the factor which contributed to the fast pace of recovery displayed by such enterprises. By comparison – the percentage of micro-companies which undertook countermeasures is significantly lower - only 52 percent. This explains why opinions and sales forecasts among the smallest businesses are still not optimistic.

To what extent was your company affected by the economic crisis in 2008-09?



N=212

Source: KPMG in Poland.

> ***More than two-thirds of the printing companies have undertaken countermeasures in response to the world economic crisis.***

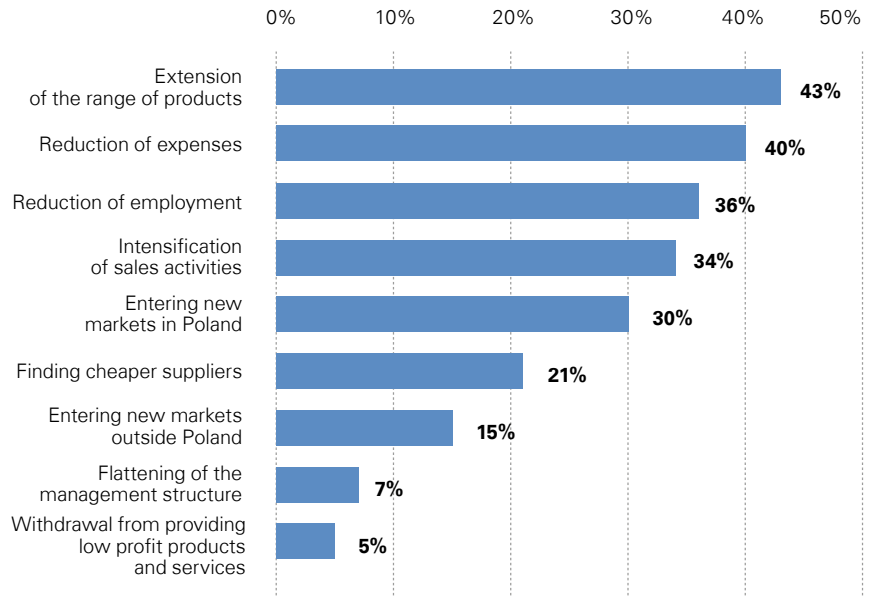
The most frequently undertaken measure against the crisis was extension of the range of products and services (43 percent). This means that the crisis helped the companies to notice their chances to initiate activities which may develop, once the negative market trend finishes. The measures aimed at the broadly understood reduction occupy further positions – 40 percent of the surveyed businesses declared to have decreased their expenses and 36 reduced the quantity of employees. The smallest number of respondents decided to withdraw from providing products and services which generate low profit. It is clearly visible that business entities did not want to narrow down their offer and specialization and decided to maintain – or even enlarge - the range of products and services.

It is interesting to observe the actions of the printing companies in view of the technologies applied by them.

Extension of the range of products and services was indicated most frequently in four out of six major groups of printing technologies.

Conversely, entities specializing in screen printing and flexo printing displayed a different approach – the majority of them were forced to reduce the size of employment (48 percent of screen printing companies and 56 percent of flexo printing).

Indicate the countermeasures which you have undertaken



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Source: KPMG in Poland.

Indicate the countermeasures which you have undertaken

	Offset printing	Screen printing	Flexo prining	Digital printing	Prepress	Bookbinding
Extending the range of products	44%	34%	44%	58%	44%	41%
Reduction of expenses	39%	38%	44%	38%	36%	36%
Reduction of employment	37%	48%	56%	37%	38%	38%
Intensification of sales activities	32%	28%	22%	29%	30%	36%
Entering new markets in Poland	31%	31%	33%	25%	35%	29%
Finding cheaper suppliers	21%	17%	33%	17%	18%	22%
Entering new markets outside Poland	15%	10%	22%	17%	18%	15%
Flattening of the management structure	7%	10%	11%	8%	5%	7%
Withdrawal from providing low profit products and services	6%	10%	11%	2%	7%	3%

N=140

Source: KPMG in Poland.

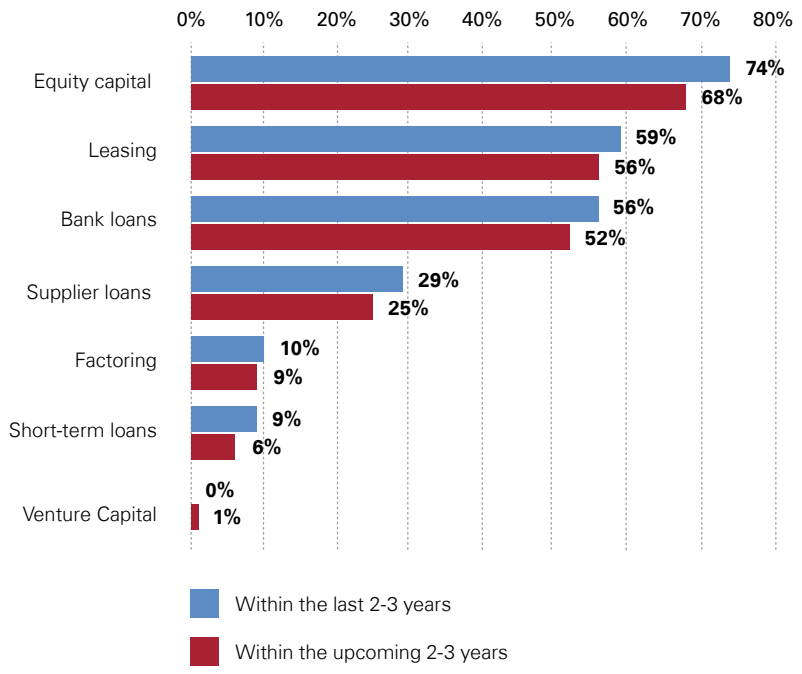
> *Equity capital remains the most popular method of investment financing in the printing industry.*

6.7. Financing of investments

We have decided to verify whether and to what extent the crisis has influenced the financing of investments. We compared the declared financing methods applied during the last 2-3 years with the planned financing for the upcoming 2-3 years. The study revealed that the economic slowdown had no significant influence upon the financing methods and the financing structure is not likely to change dramatically within the future. In most instances, the financing is based on equity capital, leasing and bank loans. It is possible that within the next 2-3 years the number of investments financed by the aforesaid methods may decrease by several percentage points, but no substantial changes are expected.

The factor contributing mostly to the lowering of the investment level within each financing method is the mood of investors, since many of them is still cautious in assessing the upward market trend. According to data by Central Statistical Office, the level of investments in the Polish printing sector during the first three quarters of 2010 reached PLN 265.8 million, of which as much as 86 percent was utilized for the purchase of new machines and equipment. The value of initiated investments is nearly PLN 100 million. When compared to the similar period of 2009, the capital expenditure decreased by 13.5 percent.

Investment financing methods



N=212

Source: KPMG in Poland.

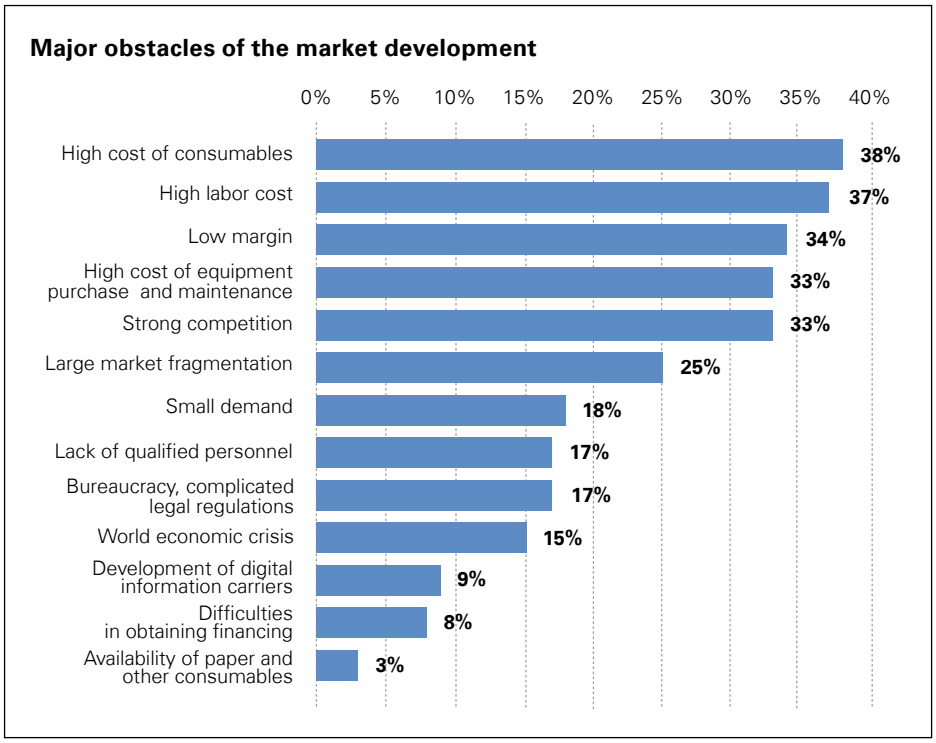
> ***The most frequently pointed barriers in the development of printing companies were high cost of consumables and high cost of labor.***

6.8. Development obstacles

The minimal decrease in the level of the planned investments may be caused by factors other than the economic crisis. The market undergoes continuous changes and certain obstacles, hampering business activity, are possible to occur. The entrepreneurs listed five key barriers viewed by them as the major constraints of the sector development. The differences in indications are minor, it is therefore safe to assume that there are five equally important factors. The most frequently pointed was the high cost of consumables (38 percent), followed by the labor cost (37 points). At the further position respondents listed the low margin (34 percent), strong competition and considerable cost of purchase and maintenance of the equipment (33 percent each), followed by a significant market fragmentation. However, the latter was regarded by entrepreneurs as a substantial characteristic of the market, not its shortcoming or restraint.

The results become interesting when the size of companies is considered. The majority of micro-companies (40 percent) pointed at the low margins as a main development barrier, while for the small companies the biggest obstacle was the high labor cost. The large entities (50 or more employees) pointed at a strong competition as the biggest concern. The perception of the industry is visibly diversified in relation to the company size and its development.

None of the respondents reported any difficulties with obtaining paper, other consumables or with the availability of modern technologies or know-how.



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Source: KPMG in Poland.

6.9. Utilization of production capacities

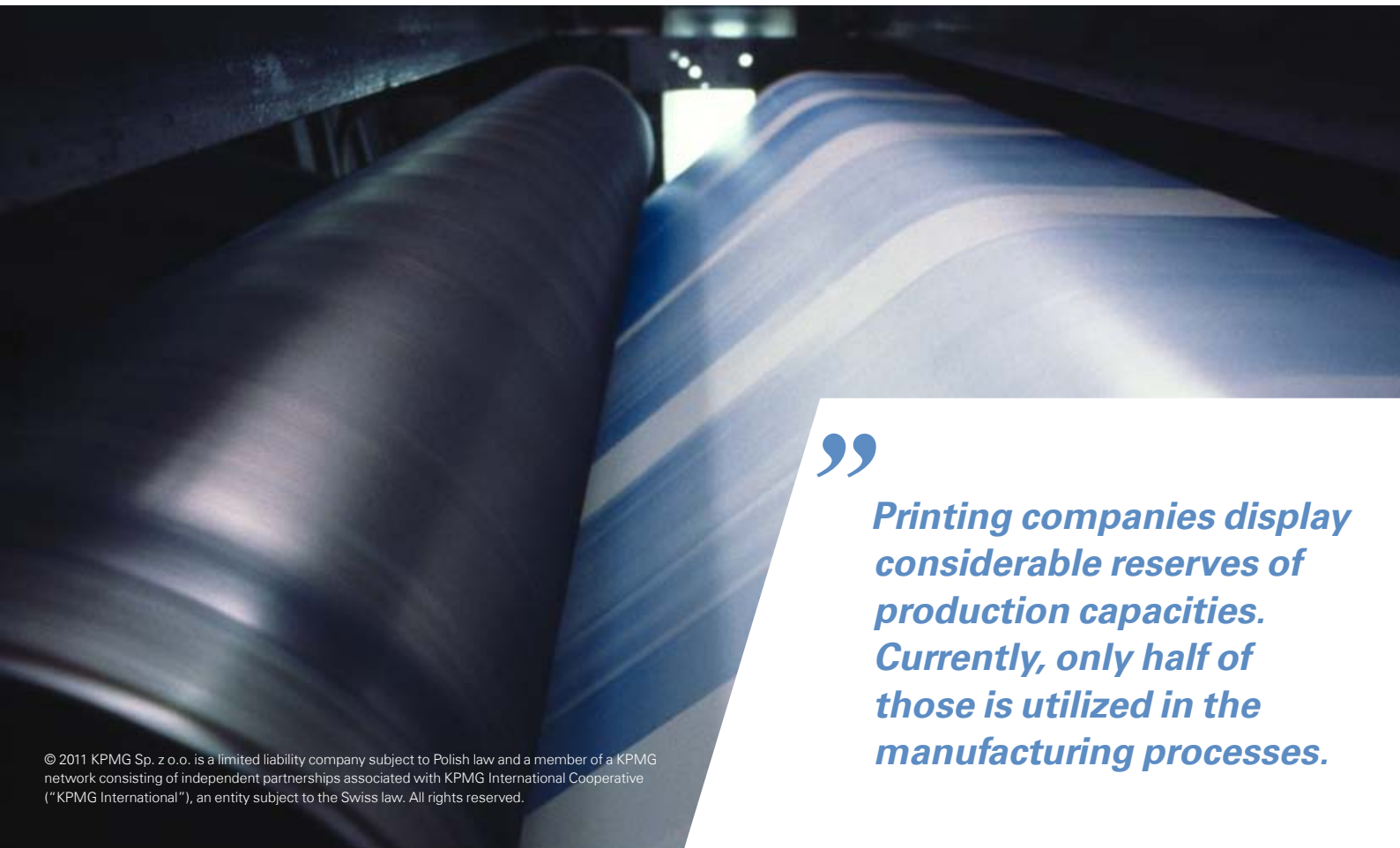
The potential for the industry development is reflected by the reserve of production capacities. For the purpose of this report we assumed that the full utilization of the production capacities means the machines operate 24 hours a day, six days a week. While maintaining the characteristic structure of companies for the purpose of research we have obtained a use of the production capacity at the level of 48 percent, which makes a significant reserve and indicates the considerable potential for development. It is also important to mention that micro-companies usually employ a single-shift working system and this may cause the averaged result to appear relatively low.

The utilization of production capacities in 2010

	Total	Micro-companies	Small companies	Medium and large companies
0-10%	6%	12%	-	-
11-20%	8%	17%	4%	-
21-30%	16%	21%	18%	6%
41-50%	15%	21%	16%	5%
51-60%	15%	8%	24%	13%
61-70%	21%	16%	25%	21%
71-80%	11%	3%	10%	26%
81-90%	5%	-	3%	18%
91-100%	3%	2%	-	11%

N=212

Source: KPMG in Poland.

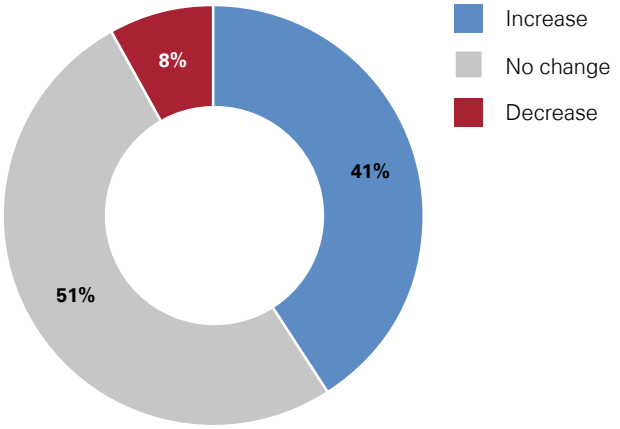


Printing companies display considerable reserves of production capacities. Currently, only half of those is utilized in the manufacturing processes.

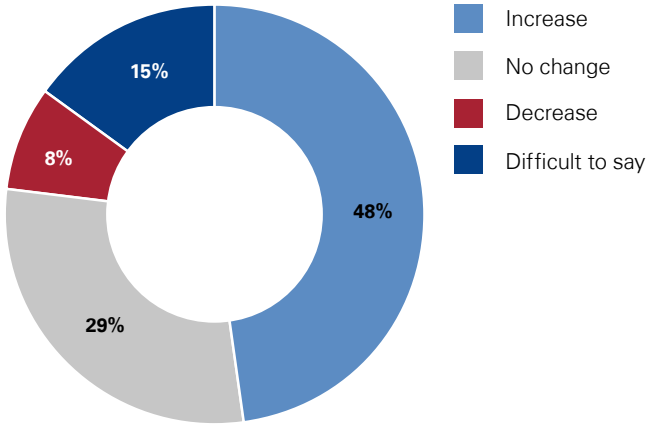
Due to the economic upturn at the printing segment and the expected growth of demand, the entrepreneurs predict the increased use of the production capacity during 2011. Although the majority of respondents (51 percent) claim to maintain the current level of the production capacities, 48 percent of entrepreneurs predict that the use of production capacities will rise. In addition, merely 8 percent of surveyed companies have an opposite opinion. Within the longer time perspective, the proportion between two biggest groups of respondents begins to change. The percentage of companies which predict the increase in use of the production capacity will grow to 48 percent in 2013, while the number of entrepreneurs who forecast no change of the situation will drop to 29 percent. In a quantitative approach, the forecasts of 6-10 percent growth prevail, also in the longer time perspective.

The forecasts of growth are expressed cautiously by the entrepreneurs. Most of them (39 percent) predict the growth within 6-10 percent range, but there were also opinions of significantly higher increase – even exceeding 25 percent within the upcoming twelve months.

In your opinion, how will the use of the production capacity in your company change in 2011 in comparison to 2010?



In your opinion, how will the use of the production capacity in your company change in 2013 in comparison to 2010?



N=212

Source: KPMG in Poland.

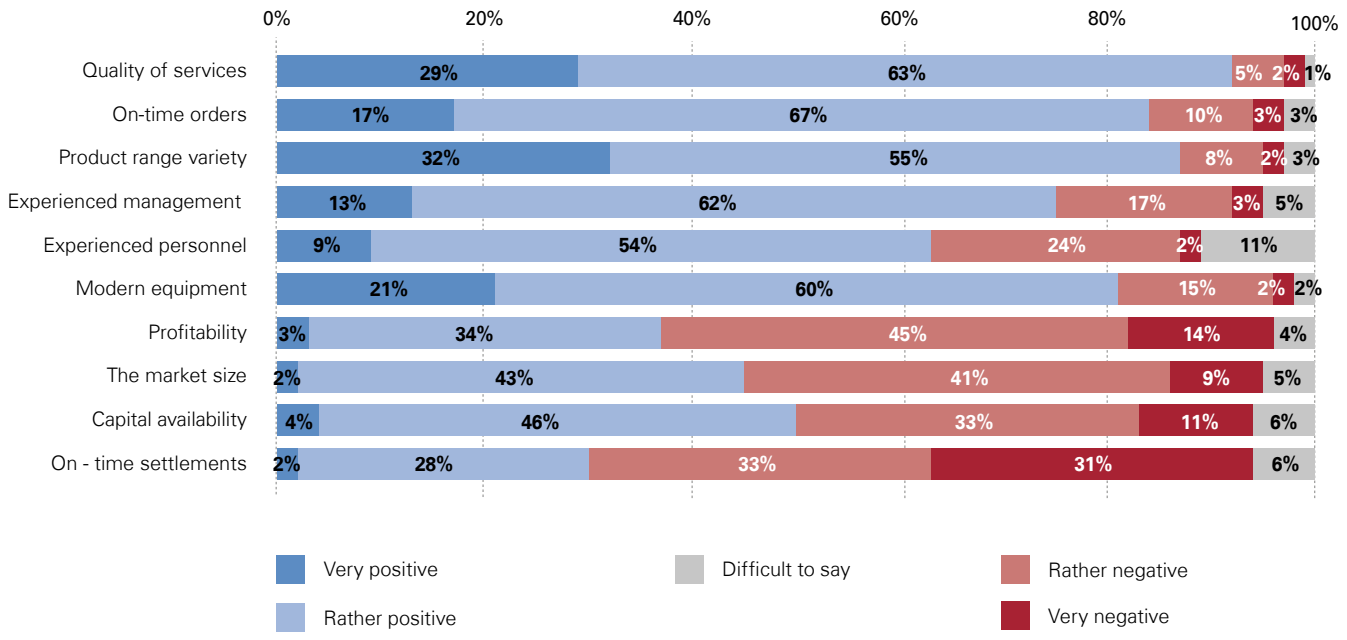
6.10. Industry strengths

Although the entrepreneurs express numerous remarks with regard to the operation in the industry, their views on its strength are coherent.

The majority of positive opinions on the Polish printing segment were given to high quality of services and on-time orders. Negative opinions for these categories were very rare.

It is important to stress a very high assessment of the product range variety. Note, that the increasing of the product range was the most popular measure against the economic crisis. This category was given a positive assessment by 32 percent of respondents. On the other hand, the majority of negative opinions were given to punctuality of financial settlement and sector profitability. In case of the first category, one-third of the respondents marked it as "very negative" and, by implication, acknowledged that on-time settlement is a problematic issue. A relatively large number of "rather negative" opinions for the industry profitability category may imply higher expectations towards the market. Some entrepreneurs stress that within the past few years the strong competition has forced the decrease of margin. It is also pointed that certain products were subject to price wars which in some instances caused the manufacturing to be unprofitable.

Assessment of the printing sector in Poland



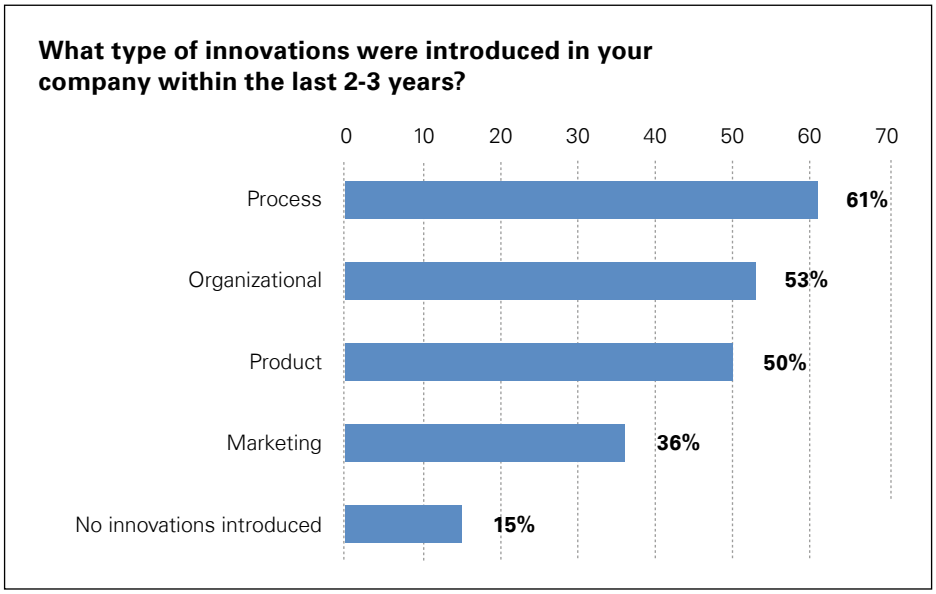
N=212

Source: KPMG in Poland.

> ***Within the last 2-3 years, merely 15 percent of the printing companies have not introduced any innovation. Nearly 70 percent of entities plan to implement innovation in the nearest future.***

6.11. Innovation

Innovations may be one of driving forces for the sector. They are defined as substantial improvements that lead to the increase of efficiency and, as a consequence, the growth of sales and profitability. Within the last 2-3 years, merely 15 percent of the printing companies have not introduced any innovations, while others declared to have implemented substantial improvements. Following the definition coined by the European Union, we divided innovations into four groups. The majority of entities – 61 percent – introduced process innovation.



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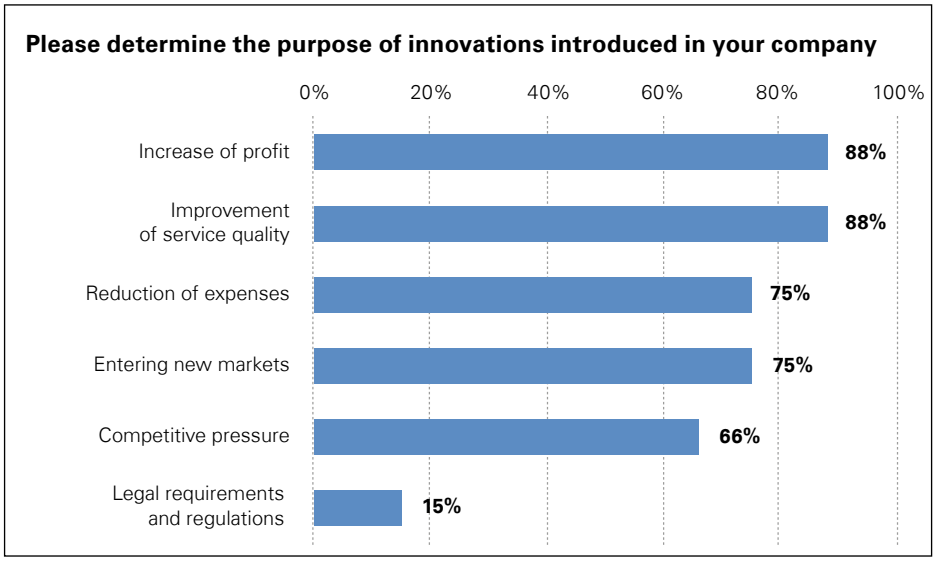
Source: KPMG in Poland.



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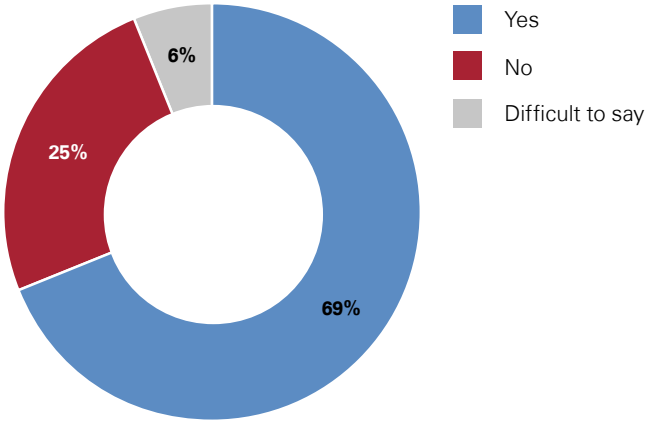
Source: KPMG in Poland.

They are understood as an invention or implementation of new technologies. This type was followed by organizational innovation, aimed at streamlining of the manufacturing and company management. Half of the surveyed companies have also introduced product innovation. Slightly above one-third of all companies have implemented marketing innovations.

We have asked the companies to indicate the most important reasons for implementing innovation. As expected, the majority (nearly 90 percent) of companies pointed at the attempt to increase the profit and improving the service quality as two main causes. These were followed by: reduction of expenses, entering new markets (75 percent each) and the competitive pressure (66 percent). The least frequently listed were legal requirements and regulations. This clearly proves that the source of changes and the willingness of improvements is the initiative of the companies. The only important external reason for introducing innovation is the competitive pressure.

Innovations are expected to play a major role in the sector development. As much as 69 percent of the surveyed companies declare their readiness to introduce innovations within the next 2-3 years. The percentage of companies which plan to implement particular types of innovations (apart from organizational) is likely to grow. Note the importance of marketing innovations (an increase by 20 percentage points). It is therefore safe to say that as entrepreneurs analyze the current industry condition, they realized that the reasonable solution of maintaining own market share, in a situation of dropping margins and strong competition, is to implement marketing changes.

Are any innovations scheduled to be introduced in your company within the upcoming 2-3 years?



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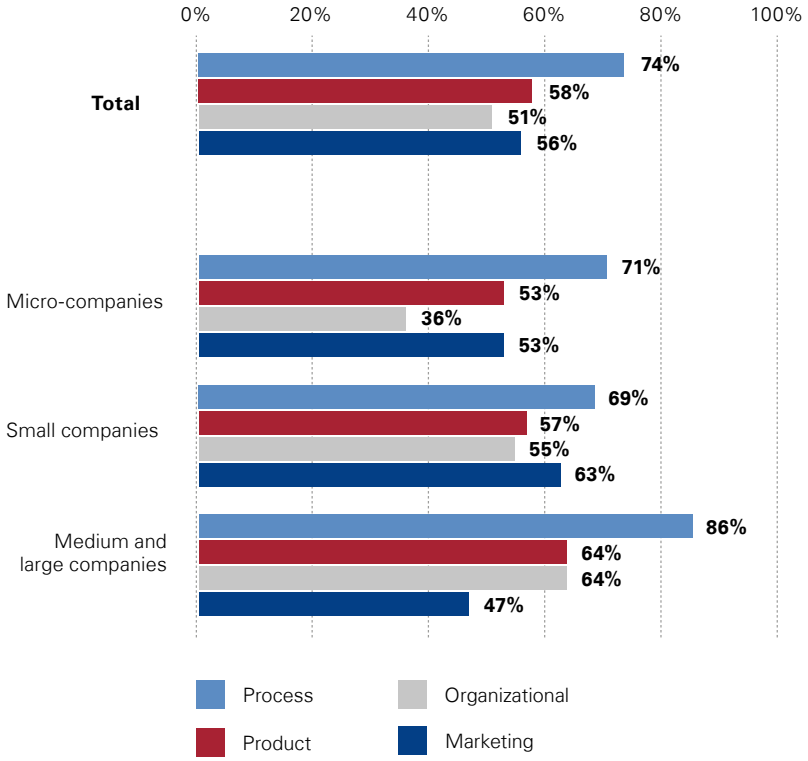
Source: KPMG in Poland.

Which innovations are planned in your company?



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Source: KPMG in Poland.

7

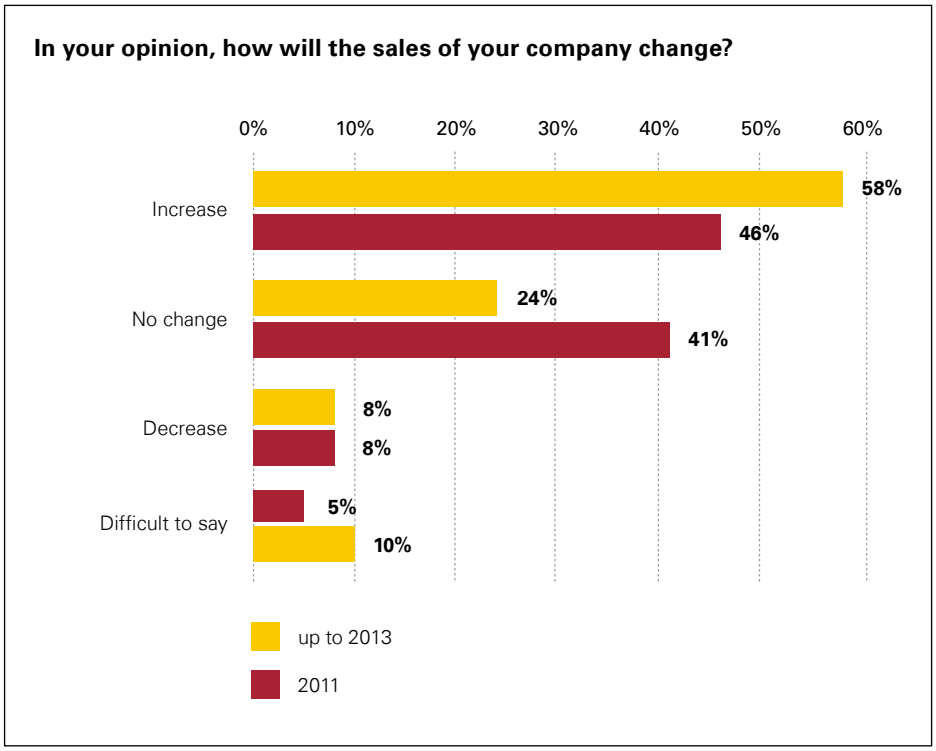
The future of the graphics art market

The Polish printing industry will undergo substantial changes within the nearest future. The return of the upward market trend is a matter of the upcoming 2-3 years. In addition, the segment is expected to consolidate, with the drop in the number of micro-companies, which will either merge with other businesses or will be subject to acquisition by larger entities.

More than 46 percent of the printing companies think that the sales will increase as early as in 2011.

7.1. Sales and profitability

The entrepreneurs operating in the printing sector forecast the growth of sales. More than 46 percent think that the sales will increase as early as in 2011. Likewise optimistic is the information that only 8 percent of respondents think otherwise and predict the sales to drop. In turn, more than 40 percent of entrepreneurs think that their sales volume will not change in 2011. Such forecasts should be viewed cautiously; nonetheless the financial situation of most of the companies is likely to improve due to the expected demand increase.



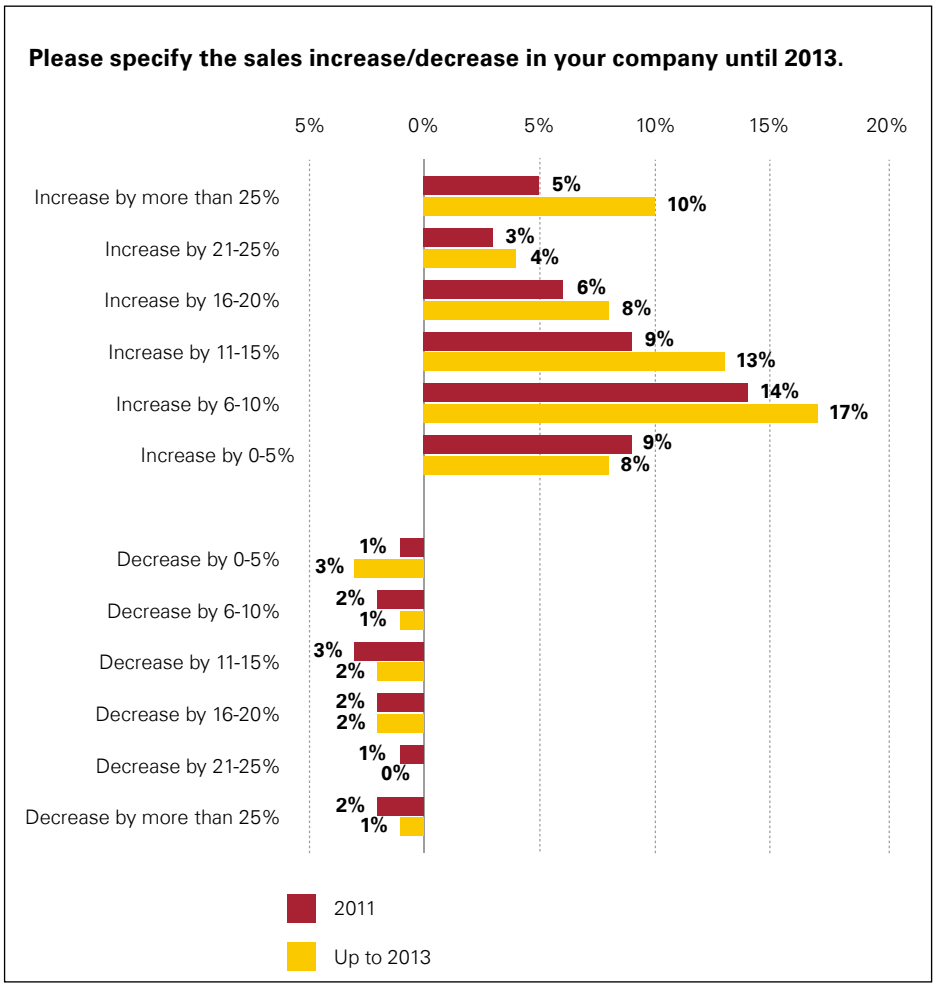
N=212 Source: KPMG in Poland.

The percentage of companies forecasting the sales growth up to 2013 is increasing considerably (58 percent), which is yet another evidence of the returning upward economic trend. The growth within this category results from the influx of entities which expected no change in their sales during 2011. The sales volume of the majority of respondents should therefore gradually increase, regardless the company size. No substantial changes were observed while taking into account the employment size. There has been a moderate increase in the number of companies which were unable to provide information on their future change in sales (up to 10 percent). It should not come as a surprise – longer forecast perspective renders predicting the sales figures more difficult.

In quantitative terms, companies are cautious to predict sales growth. As for 2011, as well as for longer time perspective, the most frequently indicated was 6-10 percentage range. Nonetheless, there are entities which predict very high growth levels, exceeding 25 percent within the upcoming 2-3 years.

Among the companies expecting the sales drop in the longer time perspective (until 2013), the majority (3 percent) predict a minimal decrease (by 0-5 percent). However, there are separate opinions on possible substantial collapse of sales (by more than 40 percent). In general, the sales growth should be a dominating trend and the financial results are likely to improve in comparison with previous years.

Although the entrepreneurs are optimistic with regard to the sales growth, their opinions on the issue of the future industry profitability differ. Approximately 32 percent of respondents claim that the profitability will remain unchanged, 24 percent of the surveyed companies think the profitability will rise, while another



N=212 Source: KPMG in Poland.

24 percent expect the profitability to fall. Thus, it is difficult to assess the future profitability accurately only upon the respondents' opinions. However, taking into account the companies which selected extreme options ("definitely yes" and "definitely not"), the negative forecasts on profitability prevail (10 percent of "definitely not" replies).

In terms of the technology applied and with regard to the profitability in 2011 compared with the year 2010, the most optimistic were entities specializing in flexo printing (in total 43 percent of "rather yes" and "definitely yes" replies). The offset printers and paint shops were at the opposite, with combined 38 percent of "rather not" and "definitely not" replies.

"The percentage of profitable printing companies should increase from 64 to nearly 80 percent in 2013.

The perception of profitability depends upon the market segment in which a given company operates. Experts agree that the business entities specializing in flexo printing have the best perspectives for the future.

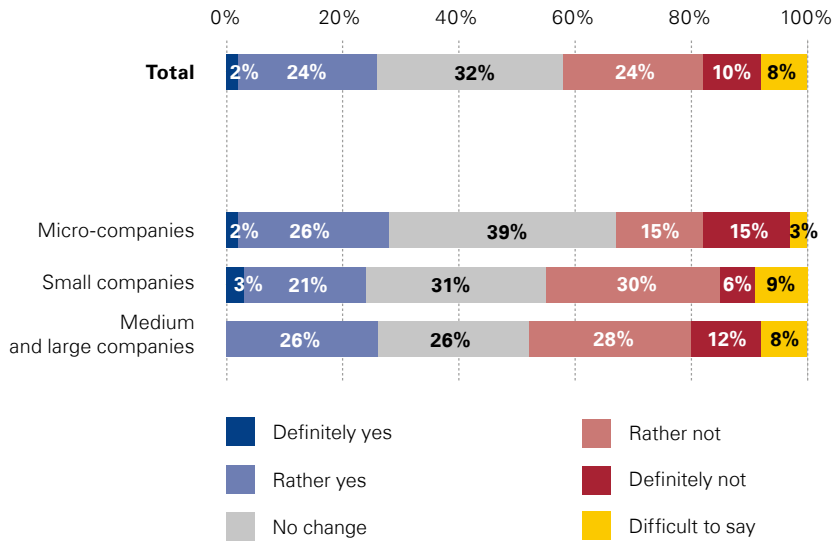
The percentage of entities being on the edge of profitability is bound to decrease quickly. Our observations reveal that up to 2013 it should fall from 32 to 21 percent. The same applies to non-profitable companies. According to entrepreneurs' declarations, the number of non-profitable entities in the printing sector reached 4 percent and within the upcoming 2-3 years it is possible to drop to even 1 percent. The substantial majority of printing companies is profitable. It is estimated that in 2013, 78 percent of companies will generate profit and the profitability growth will be further enhanced by processes that are to occur at the market within the nearest future. The expected consolidation should eliminate businesses at the edge of profitability. Although our results are based upon entrepreneurs' declarations, they are coherent with the data provided by the Central Statistical Office. In 2009, 67 percent of the printing companies generated profit.

	2010	2011	Up to 2013
Unprofitable company	4%	2%	1%
Company at the edge of profitability	32%	27%	21%
Profitable company	64%	71%	78%

N=212

Source: KPMG in Poland

Will the industry profitability increase in 2011, in comparison with 2010?



N=212 Source: KPMG in Poland.

Will the industry profitability increase in 2011, in comparison with 2010?

	Offset	Screen prining	Flexo printing	Digital printing	Prepress	Bookbinding
Yes	25%	32%	43%	24%	25%	29%
No change	30%	37%	29%	32%	31%	31%
No	38%	26%	21%	36%	38%	36%
Difficult to say	7%	5%	7%	8%	6%	4%

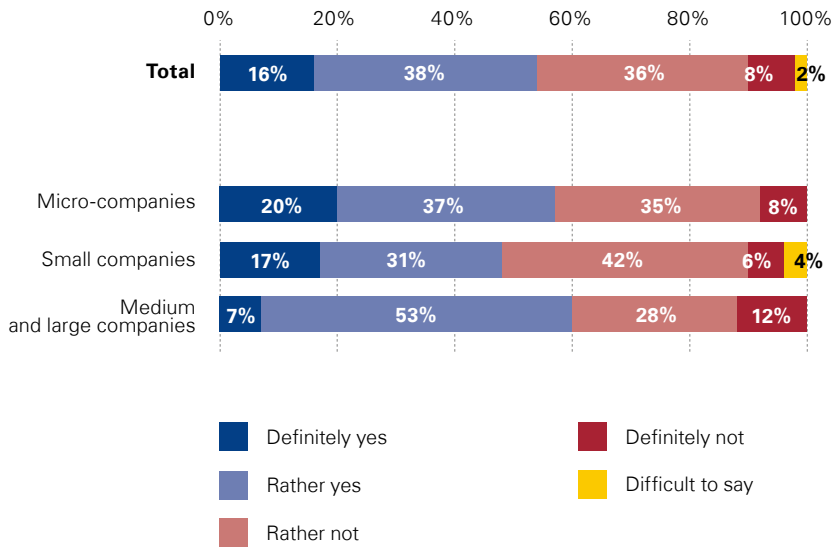
N=212 Source: KPMG in Poland.

7.2. Development of the digital information carriers – an opportunity or a threat?

The idea of electronic media superiority over traditional paper ones is gradually becoming popular. By definition, the digital media may be perceived as a threat to the development of the printing industry, as the society changes its habits and give up traditional newspapers for digital counterparts. We have verified entrepreneurs' concerns and their intensity about the risk connected with the development of the electronic media and digital information carriers.

Nearly 54 percent of the surveyed companies think that the development of the electronic media may impede the growth of the printing industry (16 percent of "definitely yes" and 38 percent of "rather yes" replies). The remaining group of respondents thinks otherwise and 2 percent of them have no opinion on the matter. While asked to justify their opinion, the entrepreneurs pointed at changes in consumers' behavior and the dominating attitude of obtaining information immediately. The analysis with consideration for the company size provides interesting conclusions. The biggest percentage predicting the negative influence of the electronic media upon the development of the printing industry was found in the group of the medium and large companies. The sector of small companies decided otherwise, but the obtained result is divergent, though – 48 percent confirmed the hampering of the printing sector by the digital media, another 48 percent had the opposite opinion.

Will the development of the electronic media impede the Polish printing sector?



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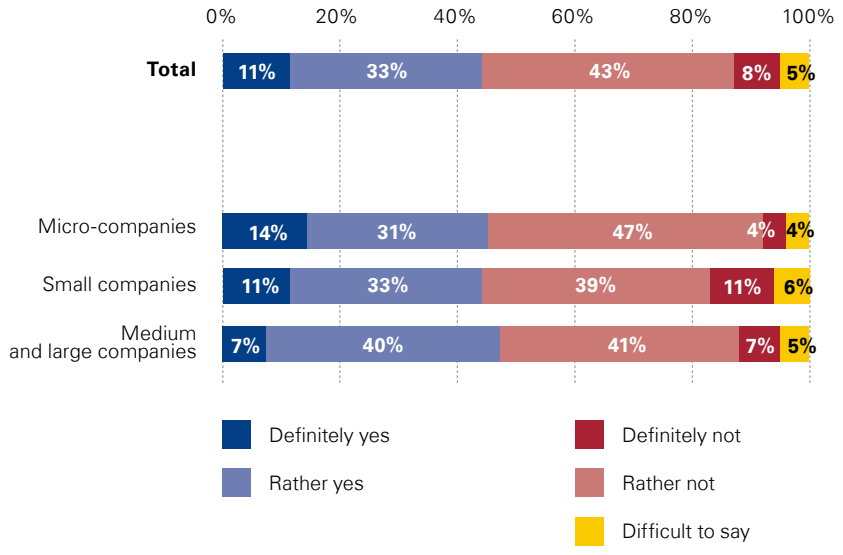
Source: KPMG in Poland.

The digital information carriers also gain popularity. Several years ago the ideas of reading electronic books would evoke science-fiction connotations; however, today seeing people with e-book readers is nothing unusual. A development of the digital information carriers seems to be a considerable threat for traditional products offered by the printing industry. Again, the respondents split into two, almost equivalent groups. In terms of numbers, the companies which think that the digital information carriers will not impede the Polish printing sector have a slight advantage (51 percent) over those expecting a potential threat (44 percent).

In terms of the company size, the percentage ratio is very similar in every group, with a slight dominance of those entities which do not perceive the increasing popularity of DVD records, e-books, and mobile memory sticks as a development constraint for the Polish printing industry. The biggest percentage of digitally-friendly entities (51 percent) was recorded in the group of micro-companies (up to 10 employees).

The perception of the digital information carriers depends upon the segment of the graphic arts market, in which companies operate, as the traditional products seem to be under the biggest threat. The entrepreneurs stress that in certain segments, the digital information carriers do not affect the sector development. In most instances, such opinions are expressed by packaging printing companies or the enterprises which operate within the large-format advertising segment.

Will the development of the digital information carriers (DVD, e-books, memory sticks) impede development of the Polish printing sector?



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Source: KPMG in Poland.

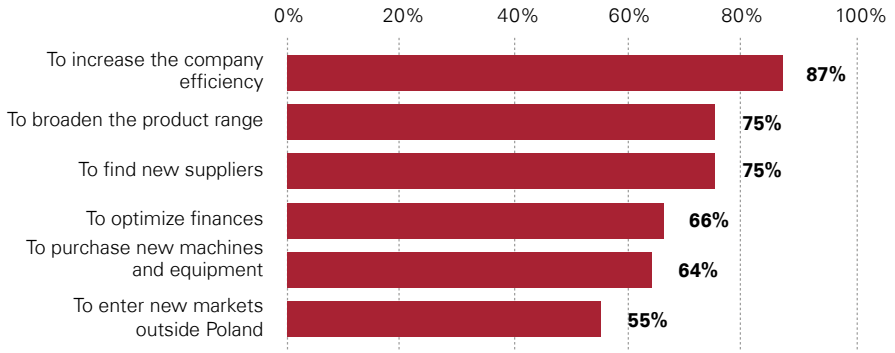
7.3. A perspective of the industry consolidation

The reoccurrence of the upward market trend and the forecasts of the sales growth should trigger the development of the Polish printing sector within the upcoming few years. As the market is considerably fragmented, consolidation processes are expected. Entrepreneurs realized that purchasing a new machine is not the only method of company development.

We decided to verify the most important plans of the companies for the upcoming 2-3 years. As much as 87 percent of the entities from the Polish printing sector pointed at the increase of the efficiency as the major objective. This was followed by the broadening of the range of products and finding new suppliers (75 percent each) as well as the financial optimization (66 percent). The survey revealed that the purchase of machines and equipment was only fifth at the list, although it was indicated by two-thirds of the respondents (64 percent).

The entrepreneurs stress that new investments at the broader scale will only be possible when alternative forms of financing become generally available in the Polish printing sector. Several years ago, leasing of machines and equipment was a serious and problematic issue. Nowadays, it is becoming the most popular form of financing and it enhances the development of the sector. The second most popular method of financing the purchase of new machines and equipment is the company's equity capital, indicated by 42 percent of respondents, 11 percentage points less than leasing. Another factor facilitating the market development is the wide availability of bank loans. In the aftermath of the economic slowdown, banks are more eager to grant loans to the companies from the printing sector. More than 41 of respondents plan to finance

Plans of the printing companies for the upcoming 2-3 years



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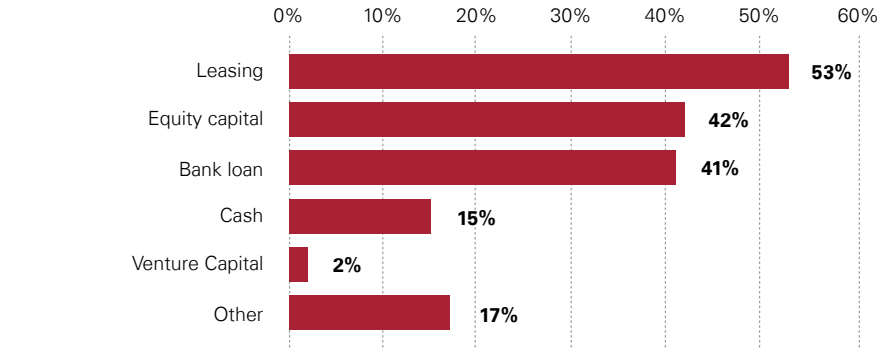
Source: KPMG in Poland.

If you plan to purchase new machines and equipment, please specify the investment financing method.



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Source: KPMG in Poland.

> ***The major goal of the printing companies for the nearest future is to increase efficiency.***

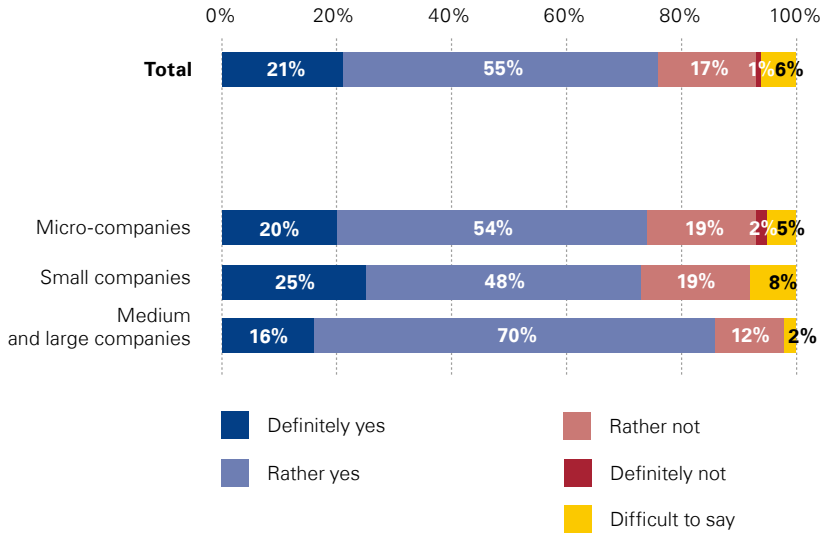
the purchase of new machines and equipment by means of bank loans.

Entrepreneurs express similar opinions on the sector consolidation. The lowering number of entities operating in the segment is the current trend which is forecast to continue. As much as 76 percent of respondents claim that the number of companies at the market will be decreasing. Only 18 percent thought otherwise, out of which merely 1 percent expressed it firmly. It seems that the market consolidation process is inevitable. Such was the case of the Western European industries, where the number of entities dropped significantly at one point, as a result of take-over processes of the smallest companies.

Consolidation process in the printing sector seems to be inevitable.

The sector potential may be assessed upon the percentage of companies which predict the development of applied technologies. Nearly two-thirds of the surveyed entities plan to modernize utilized technologies and it could be perceived as a factor allowing companies to return onto the path of a stable growth after the economic slowdown of 2008-09. Therefore it is safe to say that the Polish printing companies will continue to develop and the necessity for changes is their internal initiative, undertaken to improve efficiency.

In your opinion, will the number of entities at the printing sector continue to decrease?



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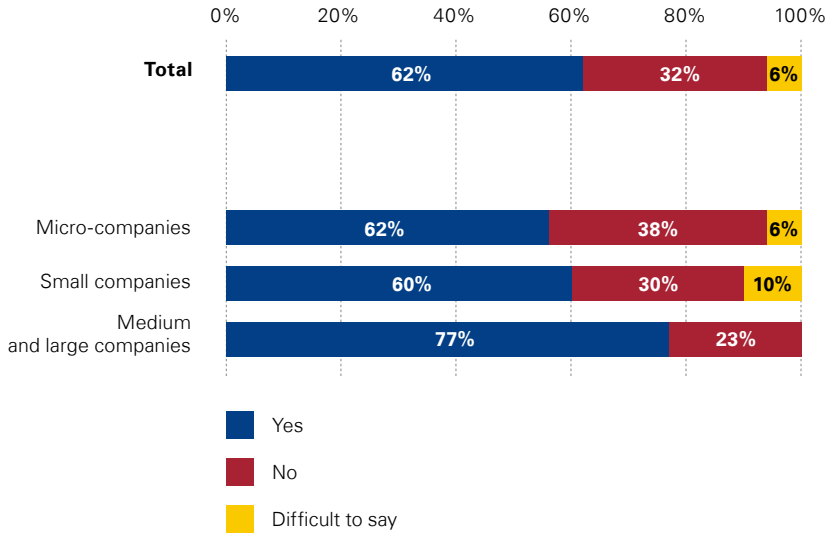
Source: KPMG in Poland.

Do you plan to develop currently applied technologies within the upcoming 2-3 years?



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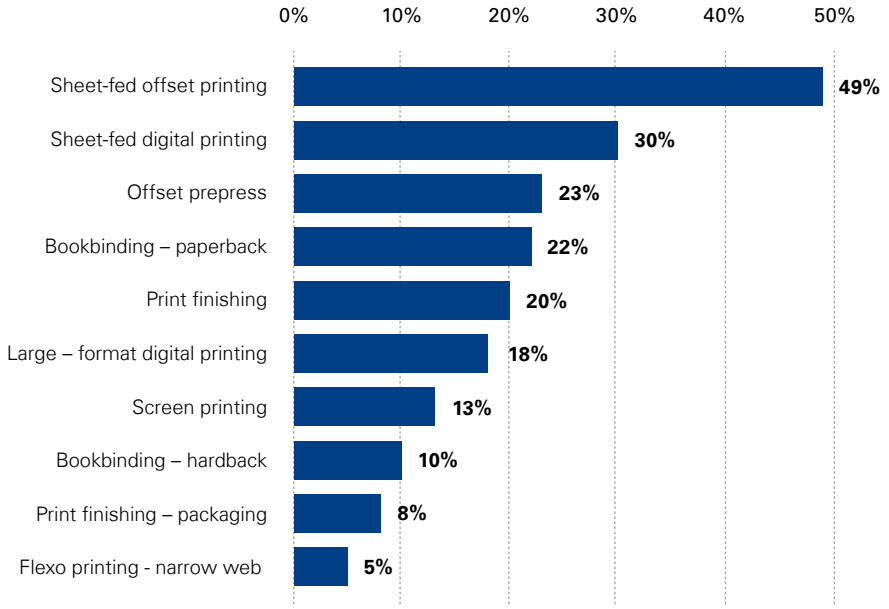
Source: KPMG in Poland.

Within the nearest future offset printing will remain the most popular technology applied – 49 percent of the companies plan to develop it. It is expected to be followed by the development of the digital printing (30 percent) and offset prepress (23 percent). Generally, the majority of surveyed companies declared their intention of developing at least one currently utilized technology.

To summarize, the Polish printing sector is bound to continue its development after the short time of economic slowdown. The entities on the edge of profitability will gradually disappear from the segment and the number of businesses will decrease systematically. Due to the modernization of utilized technologies, the quality of products manufactured by Polish printing companies will improve.

Technologies to be developed by Polish companies within the upcoming 2-3 years:



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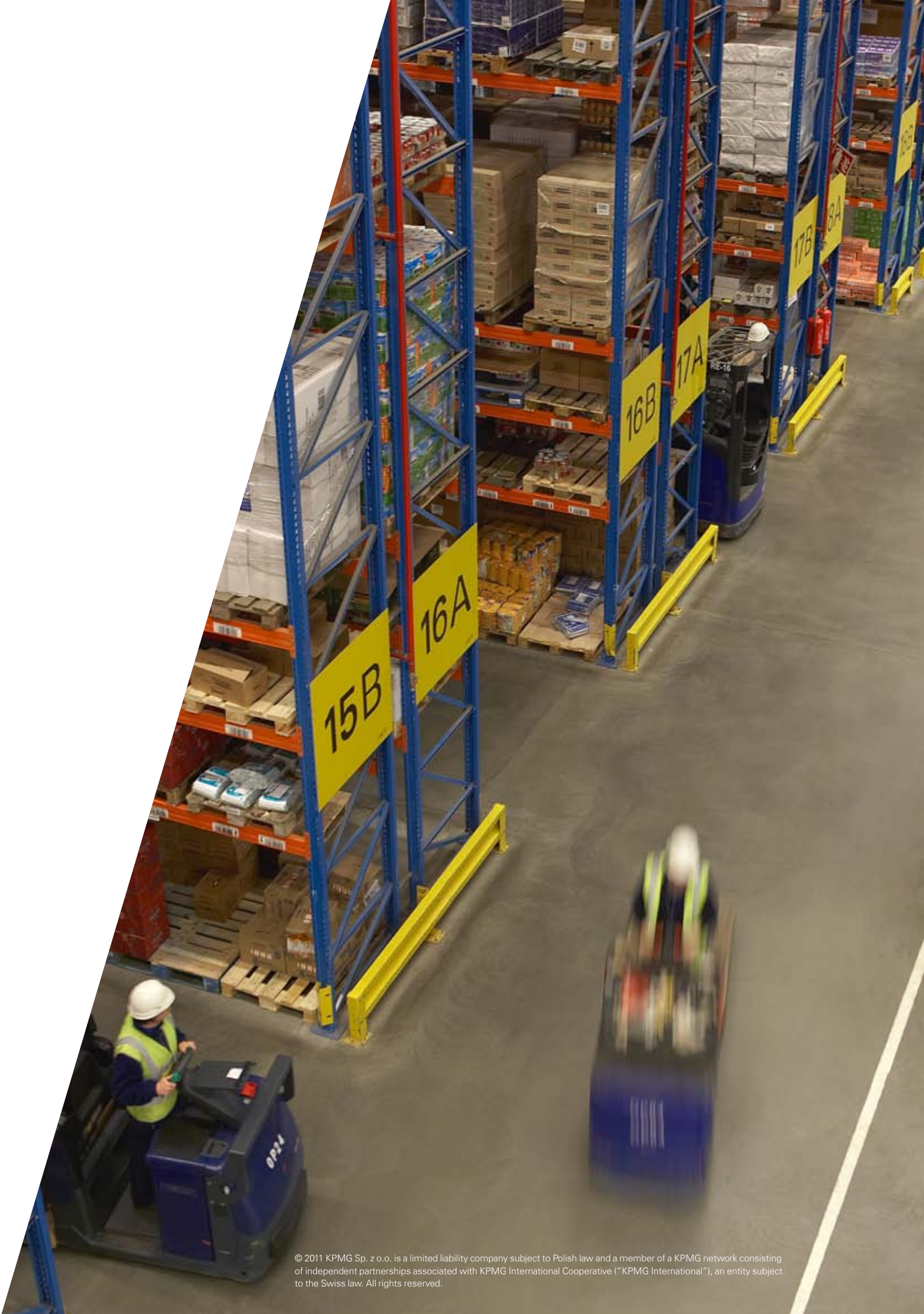
Source: KPMG in Poland.



8

Education for printing industry

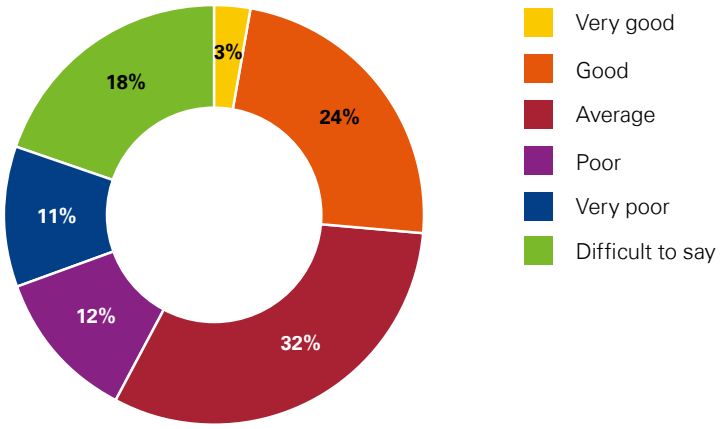
We have devoted the last part of our research to analyze the cooperation between educational centers an printing companies in Poland. For this purpose we have examined technical high schools, vocational school as well as colleges which provide a specialized training for the printing industry. The output obtained from schools was compared with information provided by printing companies.

> ***Merely one-fourth of printing companies cooperate with educational centers that provide training in scope of printing or similar.***

8.1. Education as viewed by entrepreneurs

Companies express different opinions on the vocational education for printing industry. The biggest group (32 percent) assessed it as average. After summing up all positive opinions about education ("very good" and "good") as well as all negative ones ("poor" and "very poor") two almost equal groups of respondents constituted - 27 percent and 23 percent respectively. The group of respondents unable to provide the assessment of education is also relatively numerous (18 percent).

Please assess the level of printing education at schools and colleges in Poland.



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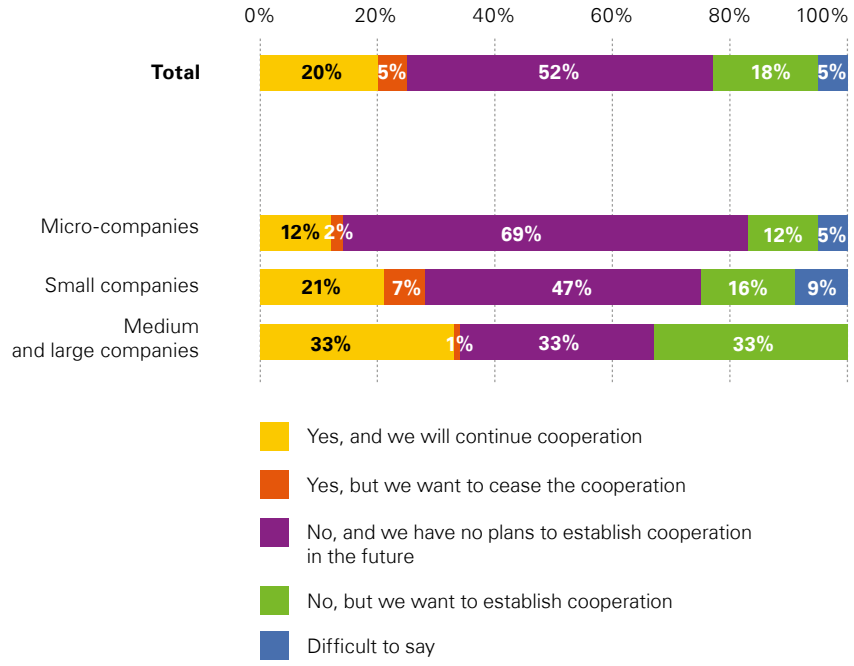
Source: KPMG in Poland.

The companies of the printing sector take a minimal benefit from cooperation with educational centers in terms of their development. Unfortunately, more than a half of respondents do not cooperate with printing school and have no intention to establish such. For comparison, only 20 percent of companies do cooperate with schools and plan to maintain it. The number of companies which had not yet established any cooperation with educational centers but intend to do so in the future is average. Therefore it may be expected that this area will probably experience a gradual development within the nearest future.

By far, the most popular form of collaboration between printing schools or colleges and companies from the printing sector is the internship for students, as indicated by 88 percent of companies who had established any form of cooperation with schools. Another important element is broadly understood support in hiring school graduates – more than a half of business entities collaborating with school pointed it as relevant. This is followed by rather temporary forms of cooperation, such as meetings (33 percent) and conducting lessons by experts working in the printing industry (23 percent).

The most popular form of collaboration between printing schools and companies is the internship for students.

Do you cooperate with printing school, a college printing department or similar?



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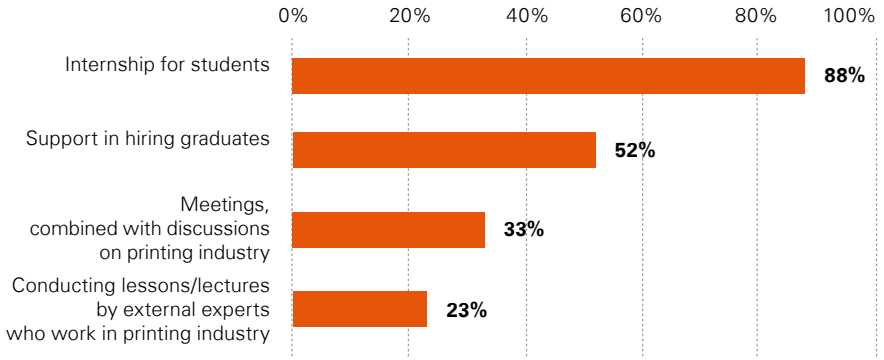
Source: KPMG in Poland.

Please specify forms of cooperation with printing schools



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Source: KPMG in Poland.

8.2. Education as viewed by educational centers

In order to provide the comprehensive outlook upon the printing industry, we have decided to conduct a research among schools and colleges which offer at least one printing faculty. Ten entities, including two colleges, have replied to our inquiries. Thus we have obtained a reliable image of the printing education in Poland.

As much as 56 percent of surveyed entities conduct an ongoing monitoring of their graduates. This very important activity allows to create carrier path patterns. Upon the graduates' opinion it is possible to introduce changes in the syllabus and adjust it to most recent market requirements.

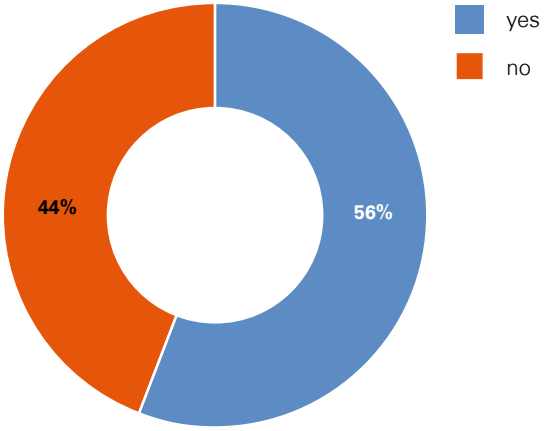
In addition, all surveyed education centers confirmed their collaboration with the printing sector. With regard to forms of cooperation, they are coherent with those indicated above by printing companies – the most popular type is internship for students.

Representatives of schools and colleges also pointed at organizing meetings as well as conducting lessons by industry experts (70 percent each). According to surveyed education centers, ca. 40 percent of graduates are employed in the industry every year. All respondents underline that this number is likely to increase within the nearest future and will probably exceed 50 percent. Schools also monitor the possibilities of continuing education abroad by the best graduates.The majority of respondents claim that such option is possible, but only in individual instances. Only two schools claimed that their graduates often decide to undertake further education in other countries.

In terms of the future popularity of printing education, respondents' opinions vary. Ca. 40 percent of them expect the increase in the number of students within the upcoming 3-5 years. Exactly the same percentage forecast no substantial change in the popularity of printing education.

Respondents express subjective opinions with regard to upcoming demographic slump that is expected to render difficult recruitment of students for printing faculties. As indicated by school representatives, the employment prospects for graduates are not as attractive as for other professions.

Do you conduct an ongoing monitoring of your graduates?



N=9

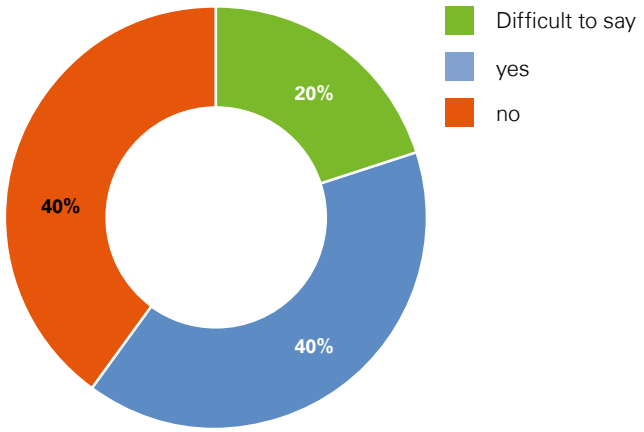
Source: KPMG in Poland.

Representatives of educational centers are rather unanimous with regard to assessment of the mood at the market. As much as 60 percent of respondents acknowledged the industry condition as good, followed by 30 percent who decided that the situation is neither good nor bad. It needs to be stressed that none of the surveyed entities expressed a negative opinion about the situation on the market. Expectations for educational centers have a reverse trend – 60 percent of respondents decided that the perspectives of education within the upcoming 3-5 years are neither good nor bad, which may be explained by the concern of demographic slump. Some experts also stress the high cost of education – very often schools have no sufficient financial resources to purchase modern machines and equipment, and printing companies are not always eager to cooperate and support schools in this respect. The opinions on insufficient teaching personnel and a necessity to organize lessons and lectures conducted by industry experts were relatively frequent in the survey.

There have been certain positive signals related to establishing new profiles in technical high schools, adjusted to market requirements, as well as organization of specialized education at second degree studies.

During the current school year, 1,722 students take training in printing in ten surveyed educational centers. The total number of school and collage graduates in the previous year reached 425 students. According to forecasts for this school year, the expected number of graduates in printing education will amount to 445.

Are you expecting an increase in the number of students in your school within the upcoming 3-5 years?



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Source: KPMG in Poland.

9 Summary

The Polish printing industry will face substantial challenges within the nearest future. After the economic downfall of 2008-09 which affected the printing sector, the year 2010 seems to be the period of returning upward market trend and stable development. During the upcoming years, an increase of sales is expected as well as a gradual lowering of the number of entities at the market. Experts agree that the market consolidation is necessary due to its considerable fragmentation.

In terms of quality, the Polish printing industry is one of the leading in Europe. Investments in technology and extension of the range of products are likely to elevate it even higher. The excellent quality and the variety of products are viewed by entrepreneurs as very strong points of the Polish printing sector. It is difficult to assess whether the sector profitability will increase within the nearest future –opinions differ in this respect and they usually depend upon the area of business operation of a given company.

Printing companies realized that there are more ways of development than just purchasing new machines and equipment – more often than before they consider to introduce innovations in manufacturing process but also in company organization. Larger number of entities noticed the necessity to improve their marketing actions in order to gain new customers or to retain the market position. What is important, the majority of companies point at the improvement of efficiency as their main objective. Therefore, it may be assumed that the need of changes and reorganization stems from within the companies and that should facilitate the development of particular businesses as well as the industry in general.

The investments are expected to increase due to a growing interest in the financial backing within the framework of the European Union funds. Our research reveals that even those companies which did not display any interest in obtaining such backing in the past, now have plans to do so. Unfortunately, within the ongoing financial perspective, the financial resources reserved for the Polish companies will gradually deplete. Those entities, which apply sooner for the financial backing will find themselves in more favorable condition.

New investments will be possible provided that the availability of the alternative financial sources is easier. The purchase of new machines or equipment should be financed by means of leasing and bank loans to a larger extent than it is now, and the role of company's equity capital in this respect should be reduced. The survey also revealed that the Polish companies display considerable productions capacity reserves. Therefore, internal reorganization may release reserves and lead to a production growth.

Despite the threats from the digital information carriers and electronic media, the printing sector is expected to record an increased number of orders, mainly due to reoccurrence of the upward market trend as well as optimistic moods at the market. The segment of traditional printing products (newspaper printing, commercial web, books) may be affected and experience the drop in demand. However, this will be balanced by the growth in other sectors, especially flexo printing and rotogravure. The companies which specialize in these technologies are expected to develop at the fastest pace.

10

The present day and the future of the printing industry - experts' opinions

The period of large profits and the market oriented at service providers in the printing industry has ended. After the Poland's access to the European Union, the market experienced an economic recovery. Due to changes in market relations, the competitive advantage may be achieved only by way of providing higher quality and offering lower prices, and this is connected with utilization of technologically advanced means of productions as well as with streamlining the work organization (automation of manufacturing processes). Generally, perspectives are promising for the printing industry in Poland. The number of exported goods is growing and the leading companies export as much as 20 percent of their total production. The comparison of the Polish printing industry with other European markets is business-like and reasonable. The competitiveness of the Polish printing entities is displayed through modern machinery stock as well as through qualified and relatively cheap (but gradually becoming more expensive) workforce, and, above all else, through the excellent quality of provided services.

With regard to the evolution of the major markets, it is expected that the rise will occur in the manufacturing of packaging materials and, what follows, the market share increase of the flexo printing products. The market of color magazines will experience slowdown or stabilization. There is a growing number of machines for the digital printing in all its systems, including the large-size machines for outdoor billboards. The downward tendency is only observed at the market of daily press. As previously mentioned, the consolidation of the printing companies is continuous and inevitable. Its main objective is to generate profit that will enable investments allowing to retain present customers and to gain new ones by offering competitive prices.

Ryszard Czekała
Director
Polish Chamber of Printing

Currently, the Polish printing industry is one of the best developed in Europe in terms of equipment and technical capabilities. With regard to the production organization, however, as well as the sales and marketing operations – we all have a lot of work ahead.
During the upcoming 2-3 years, we will experience substantial transformations within the printing companies. It will be the period when the weakest entities disappear from the market while the strong businesses will consolidate and reinforce. For many of us, it is both a chance and a challenge. Obviously, this is a very general outlook on the industry as a whole. The situation may vary substantially in different segments of the printing industry – companies specializing in packaging printing manufacturing should be assessed by different criteria than commercial web or sheet-fed printing. Their situation depends directly upon the condition of the segment of economy where their major customers operate , that is food industry, pharmaceutical or chemical companies, publishing or advertising. And everyone knows how changeable this may be.

Dariusz Tomczak
Vice-president of Sales
QuadWinkowski

The printing industry recovers from the impact of the economic crisis, which caused the drop of margins and forced the long postponed changes in the production organization, estimation of costs and quality improvement.
The printing companies resting upon unrealistic commercial foundations were eliminated from the market or they face serious problems. The industry undergoes a clearly visible polarization process, with small family companies on one end and large printing enterprises on the other. Internet is perceived by numerous companies of the printing sector as a substantial threat. I think the Internet will be a great chance and the challenge for the Polish printing sector. The questions which arise here are: how will the companies cope? Will they consider it a threat or a chance for fast development? Two buzzwords will be gaining popularity soon: digital print and web2print (printing through the Internet or remote publishing). The companies are already setting at positions in the race for the Internet in printing. But without scrupulous analyses of all processes and implementation of tested ERP class systems, the companies will not succeed in a new digital reality.

Rafał Kubiak
CEO
CGS drukarnia Sp. z o.o.

I have a high estimate for the Polish printing sector, which has developed greatly in recent times. My impression is that this happened because of Poland's access to the European Union and financial backing as well as opened borders that enabled to enter new foreign markets. A contact with printing companies from other European countries was a specific driving force. If you want to be considered a serious business partner, take action, change habits and believe you can become one. I think the Polish printing sector has every chance to become a European leader. In my opinion, the management model constitutes the greatest challenge – many things must change in this respect. The awareness with regard to decision making process must constantly grow, consequences should be adequately predicted and appropriate conclusions drawn. Companies should learn from successful but also from wrong decisions. We must bear in mind that implementing new and favorable solutions here does not mean the rest of Europe will rest on its laurels.

Bogdan Baszak
Owner
KEA

The year 1989 marked the profound transformation of the Polish printing industry. Dominating national companies gave way to private entities, which quickly developed their manufacturing capabilities and created the market, where the competitive rivalry influences the general economy. The printing sector is sensitive to changes on the side of supply and demand. The ongoing crisis has a negative impact upon the printing companies – printing media and publicity are substantially affected. Furthermore, electronic media gain the new territories so far dominated by the traditional printing, which puts companies from this sector in awkward position. It also impedes the business activity of companies where the production is based upon the capital intensive innovative technologies. We may assume that the upcoming years will be marked by the growing import of printing services from the Eastern countries, while the competitive advantage of the Polish companies will diminish as the labor cost (including remuneration) is going up. At the same time, importing of services will release production capacity reserves of many business entities, in which the lowering of expenses and, what follows, decreasing prices of services is not possible. Currently, the production capacities of the Polish printing companies exceed the demand for their

services. The collapse of the printing vocational education is very disturbing. Study programs are not coherent with the fast changes occurring in printing techniques and technologies. At the same time, the market creates new needs and presents new challenges for the printing sector – the role of the digital printing and personalized advertisement rises and so does the "on-demand" printing. Managers of the printing businesses are facing more problems than only technological ones – in the near future they will have to devote much of their time for analyses of the market forecasts.

Wiesław Cetera
Director of the SIMP Research and Analysis Center
Member of the Executive Board of the SIMP Section of Typographers

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Within the last ten years the Polish printing sector has been a subject to a diametrical change. Thanks to large-scale investments in new technologies we have created a solid base of printing facilities equipped with the state-of-the art printing machines. We have made a great leap towards modernity. We had an opportunity to conquer the position of the dominating European companies. It is a pity that the attempt to establish the "Polish Printing Cluster" was unsuccessful due to a lack of vision, imagination, investors' courage… nonetheless, there is still a chance. Investments in the innovative solutions are crucial. Today, everyone has a solid machine stock at their disposal. The winners may only be found among those business entities which distinguish themselves from the competition by introducing bold ideas, by being more open to a collaboration with a network of cooperators both from printing sector as well as other modern segments of economy, by implementing new logistic and marketing solutions. In Europe, the competitive advantage through innovations is a triviality, but it is a real one.

Jerzy Czubak
COO
Amcor Tobacco Packaging

It is difficult to define briefly the complexity of the Polish printing sector. In general, I mark it positively. Despite numerous turbulences within the last few years, our graphic arts market displays a dynamic growth in all its segments. We have witnessed the birth of the digital printing which provoked the origin of many new business entities as well as made possible the substantial broadening of the product range by printing companies. I think that Poland's access to the European Union and, in consequence, the availability of the financial backing contributed greatly in this respect. Modern technologies and know-how became available, which translated into considerable positive transformations in our companies. The quality of products has improved and the production capacities rose. By Adding to it an efficiency and creativity of Polish entrepreneurs, we will have an interesting and sizable space for operation. Obviously, it is not always easy to conduct activities there, very often for reasons completely independent from typographers. However, I think that the Polish market has already gained sufficient maturity and stability that its further development may be expected within the upcoming years. The dynamics of the growth will depend, among others, upon the condition of our national economy which has close relations with the printing industry, to mention the segment of packaging, clothes, press and advertisement. I think that the problematic issue nowadays is the fluctuation of foreign currency exchange rates as well as prices of consumables utilized in our industry, which are frequently caused by external factors. It makes the companies' operation and conducting the price policy difficult, particularly in a long term. The changes within the sector of electronic and internet media will create a serious challenge for many companies operating at the market. A particular consideration should be given to electronic information carriers, as they constitute a new competition dimension for traditional printing forms. We can expect significant changes in the companies related to the markets of magazines, books and music publications. In my opinion, we are about to experience another phase of digital printing development, and what follows, the increase in its market share. New technology will create new segments, where it will be applied and this will provide a chance to enter new markets or replace those already occupied.

Jacek Stencel
President
Polish Association of Screen and Digital Printing

The recent economic crisis has shown that our sector is prepared to face the new challenges. We take benefits of chances appearing at the market and we are able to avoid threats. Therefore I assess the printing sector in Poland very highly and I believe it will continue to develop. The question we will have to answer within the nearest future is – to which extent is the sector shaping the market and how big is the influence of the market upon the industry. As the way of using media is transforming, so may the expectations of the printing content suppliers and that could be an impulse for the development. I also notice opportunities and challenges in a possible synergy of the printing sector cooperating with electronic media

Robert Musiał
Dyrektor Pionu Druku
Agora S.A.

I wish to express my opinion with reference to the flexo printing, which in Poland is primarily connected with the packaging printing. In my opinion, the flexo printing is in a good condition. The technology has been recognized as one that is able to deliver high quality printed packaging products, its market position is stable and I do not expect this to be under threat within the nearest future. On the other hand, the complacency is not a good solution. Other technologies, both traditional and digital, develop as well and provide a variety of possibilities in manufacturing of printed packaging. It is definitely positive trend that the packaging market (for instance in such areas as food industry, cosmetics, hygiene products, etc.) also grows, providing the opportunities for development regardless the technological advancement. It refers to both domestic market as well as foreign customers. I see the following chances for the market: better and faster response to customers' needs, repeatability and coherence of products with the original project as the technology is continuously perfected and advanced. This allows to increase the share of the flexo printing in the packaging market and to enlarge the export volume. As for the challenges: globalization, especially for domestic companies without the support of foreign equity capital; a concern for the subsequent stage of business operation after the utilization of the European Union financial backing, particularly in a situation when lack of authorities' interest and support for the vocational education of specialists in flexo printing becomes a bottleneck for the development of this segment. With regard to industry-extrinsic challenges, I would point at financial and legal stability of the business environment.

Krzysztof Januszewski
Polish Flexography Technical
Association

The Polish printing industry is extremely diversified in specific segments. Some of them (packaging printing, narrow web flexo printing) have efficiently resisted the crisis, while others (commercial prints) are experiencing difficult times. These trends are related with the structural changes, such as an increasing popularity of electronic media as well as the growing competitiveness of the Polish economy, the consequence of which is enlarging demand for highest quality and low price packaging. We are bound to witness several interesting processes within the upcoming years. Traditional offset printing facilities will have to acquire skills and knowledge of digital printing, to complement their range of products. This will be a significant factor in most of the graphic arts market segments. A key part will also be played by the efficient management and control of the production process, that is - an effective implementation of adequate management and information programs. The printing production processes are gradually becoming highly-automated and industrial, while printing personnel is given a strictly specified time to accomplish their work. The key factor of achieving economic success is the accurate knowledge on efficiency and expenses. For many companies, the opportunity may lie in finding niche solutions, high-degree specialization and finally – offering complex services, from data management though printing, bookbinding and print finishing to personalized mailing services.

Krzysztof Pindral
President
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When compared with most of the European countries, the Polish printing businesses display a good condition. Although it varies among particular market segments, it may be generally stated that the companies in the most favorable condition are those which specialize in packaging printing as well as those handling niche areas with highly-processed product and utilization of advanced technologies.The range of the machine stock is growing while its modernization is based upon the European Union funds, and the cost of the qualified labor force remains relatively low. The positive situation has a rather dramatic background, as poorly-managed and insufficiently financed entities are disappearing from the sector, which, however, should improve the market balance. Currently, it

is evident that the threats in the printing industry stem from the low equity capital levels, difficulties in accessing external financing sources, insufficient education in scope of management skills, particularly in case of small and medium companies, oversupply of the production capacities (true for sheet-fed offset printing), faulty functioning of the financial settlement system, insufficient number of reliable advisory, audit and arbitral institutions, and finally – educational system that is not combined with practical vocational training.
To summarize, the condition should be regarded as relatively good which could serve as a solid foundation for further development.Within the upcoming three years the condition of the Polish printing industry is not likely to deteriorate, unless another world economy downfall occurs. However, we should not expect a steep increase of the positive economic cycle, but rather a stabilization of the upward trend. Only those segments which are already displaying a development tendency will record a clear and strong growth, for instance, the entities which specialize in printing on non-absorbent substrates, packaging printing, as well as the areas connected with digital printing or supported with Internet platforms. Serious problems await the sector of commercial print and newspaper printing. It is also worth to stress the growing number of business entities that will export their products. This positive trend will sustain, as domestic businesses have access to modern technologies, well-qualified and highly-determined workforce as well as to ready local and foreign markets. The management adaptability to changeable and sometimes difficult market circumstances as well as readiness to integrate new technical solutions will be crucial. The utilization of domestic and foreign patterns will become more common as so will the employing of reliable advisory services. Within the nearest future, a new trend in the industry is likely to emerge, which may be referred to as "integration of printing and finishing processes". The roles of the web-based purchasing platforms as well as the presence of the Polish companies at foreign markets will considerably increase. An exchange of information between companies with regard to unreliable payers and customers still leaves a lot to be desired. Another group of "to do" issues includes matters related with vocational education and sector initiatives, for instance the implementation of the First Mutual Credit Funds for Graphic Arts Industry, which only then will be realized when undertaken by a strong representation of entities of the sector. The following investment directions will be preferred: alternative printing technologies, mergers and acquisitions, electronic systems of communication and management as well as building the market position founded upon efficient and innovative marketing operations. Provided that no significant mistakes are made and possibilities are exploited, the Polish printing industry is bound to increase its position in Europe within the upcoming two or three years.

Jacek Kuśmierczyk
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In my opinion, the Polish printing sector is very perspective, but taking into account the existing competition, it requires additional financing, particularly in scope of the modern printing machines. The Polish printing segment is mainly founded upon the sector of small and medium companies, and the gauntlet is thrown down by the aggressive international competition. It is therefore necessary within the upcoming 2-3 years to consider the quality, the price and marketing factors as well as to take advantage of the European Union financial backing. A separate issue is the continuous education in printing, so that the competition is matched and then surpassed.

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