

PECULIARITIES OF MANAGEMENT OF ENTERPRISES IN THE PRINTING INDUSTRY*

Yurii Safonov¹, Svitlana Gutkevych², Lina Shenderivska³

Abstract. The aim of the study is to analyze the features of management of printing enterprises, to give recommendations for business development. The significance of the printing industry in the publishing and printing complex for the formation of the intellectual capital of the nation, the development of a democratic humane and progressive society is substantiated. The factors determining the spread of small business in printing were revealed. They are related to the peculiarities of the consumer market, which requires a wide geography of supplies and personalized orders; to the development of scientific and technological progress, the result of which is the invention of less capital-intensive technologies; to the state policy focused on the stimulation of small business development. The relevance of the business model of cooperation in the publishing and printing complex at the international level has been proved. Its appropriateness is due to the small size of the domestic market, the lack of funding sources for innovation, the undeveloped domestic material and technical base. Integration is also relevant on the domestic market. It can be implemented by concluding long-term contracts with advertising agencies and IT specialists to offer multimedia publications and printed products with augmented reality that are in demand on the market. It was found that in conditions of high competitive pressure enterprises need to improve the level of service. This requires improvements in logistics process management and marketing communication policy. Delivery efficiency and attention to individual customer needs become critical. The desire to effectively build relationships with customers stimulates the introduction of CRM-systems. Enterprise management at the planning stage should take into account the high complexity of mastering employees CRM-systems. Understanding the strategic importance of spending time and resources on mastering new technologies and on personnel development provides synergy for the entire production system, promotes self-improvement of employees, their desire for continuous progress and, finally, increases their job satisfaction. International benchmarking is relevant to improve the management of printing companies. The authors identified funding for training of talented youth, certification of production according to international quality standards, priority of investment in innovation, search for new market niches, and strengthening of inter-sector cooperation as priorities.

Key words: management of printing enterprises, process approach, publishing houses, publishing and printing complex, business model of collaboration, CRM systems, level of service, foreign management experience, development.

JEL Classification: M11, O10

¹ State Scientific Institution

"Institute of Education Content Modernization", Ukraine (*corresponding author*)

E-mail: sum1971@ukr.net

ORCID: <https://orcid.org/0000-0001-5623-1965>

² National University of Food Technologies, Ukraine

E-mail: gutkevych@ukr.net

ORCID: <https://orcid.org/0000-0003-2645-4011>

³ National Technical University of Ukraine

"Igor Sikorsky Kyiv Polytechnic Institute", Ukraine

E-mail: lina.shenderivska@gmail.com

ORCID: <https://orcid.org/0000-0003-3104-9803>

* The article is made in accordance with the scientific topic № 0122U002363



1. Introduction

A powerful incentive for the transformation of industries is the acceleration of scientific and technological progress, the development of the digital economy, and environmental safety priorities. This increases the frequency of creative destruction, encourages business to constantly change and improve in the context of limited resources. The task of improving management efficiency is relevant, especially for those industries that are losing markets in Industry 4.0. Such industries include printing, which is integrated into an integral publishing and printing complex.

Management of printing companies depends on the industry and the specifics of each company. In today's environment, the long-term prospects of enterprises depend on whether they pay proper attention to the use of appropriate information and telecommunication technologies. New technologies provide efficiency in terms of saving money and reducing unproductive labor costs (Karovich, Kovach, Karovich, Vesely, 2020). The improvement of communication policy of printing enterprises through the introduction of mobile applications, the use of CRM-systems can increase sales up to 40% (Ibrahim, Yunus, Ramadhan, et al., 2020).

Another feature affecting the management of printing companies is their sensitivity to the information environment (Khalina, Nikonenko, Mandzinovska, 2021). Thus, the development of cooperation with publishing companies, as well as the development of new inter-branch relations are among the urgent tasks of management in the printing industry.

Information security of the country, as became clear in the context of Russia's military aggression in Ukraine, should be a priority state task. The lack of real state support in Ukraine in the publishing and printing industry causes instability of economic entities, the decline of most communal and state enterprises, which in turn does not provide opportunities for development (Palyha, Basylyuk, Palyha, 2019).

The printing industry is material-intensive, so effective control of material costs, their optimization can lead to a significant reduction in costs for all types of operational activities, as well as improve the management of the company's production portfolio (Ejsmont, Lipiak, 2017). The material-intensive nature of printing production also brings to the fore the task of managing the environmental safety of printing enterprises. The concept of green growth implies not only economical production and consumption in order to reduce the harmful effects on the environment, but also to generate income from greening (Zinchenko, 2022). This point seems useful in the context of the

publishing and printing industry and means the introduction of less resource-intensive production technologies, including digital printing, the introduction of "print on demand" technology, which allows to avoid overproduction and, accordingly, overconsumption of resources.

In general, the greening and social orientation of production are among the factors that consumers increasingly take into account when making purchasing decisions. Thus, the number of management challenges is increasing. To solve them effectively, Zelenska M. (Zelenska, 2015) recommends the introduction of a project-oriented approach. Its main advantages include a clear structure of project management functions and their components (quality, risk, team, budget, production, costs, marketing, etc.), focus on managing both basic and additional business processes; standardization and regulation of processes; taking into account the interests of major stakeholders; target orientation; accumulation of competencies, potential, accumulation and preservation of knowledge, etc.

Improvement of management systems of printing enterprises should take into account another peculiarity of them – predominantly small business. Scientists (Soares, Santos, Ferreira, Costa, 2021) justify the expediency of using a participative management model. The authors argue that decentralized decision-making and problem-solving structures facilitate the exchange of information and opinions among all, improving the communication process.

The purpose of the study is to substantiate the directions of improving the efficiency of printing enterprises, based on the results of the analysis of the peculiarities of management of printing enterprises and their development.

2. Methodology

The issue of management of printing enterprises is investigated in the context of industry specifics. Modern transformations of inter-branch relations in the publishing and printing complex are taken into account.

The content analysis was conducted on the basis of modern scientific sources devoted to the management of printing enterprises in various functional areas. Case analysis was used to study modern management methods in printing industry. Business models of printing enterprises, the use of modern information technologies were considered in the study. Thus, an interdisciplinary approach is implemented. The method of benchmarking is used to analyze the progressive world practice of printing companies.

3. Results and discussions

The activity of enterprises in any industry largely depends on the specifics of enterprises, their size. Thus, there are various organizational-legal forms of enterprises in the printing industry. More than 90% in the structure of the printing industry are small enterprises. According to the Commercial Code of Ukraine (Economic Code of Ukraine) micro enterprises are those with an average annual number of employees not more than 10 people and an annual income of no more than 2 million euros at the average annual exchange rate of the National Bank of Ukraine, small enterprises are those with fewer than 50 people and an income of no more than the equivalent of 10 million euros, large enterprises are those with more than 250 people and an income over the equivalent of 50 million euros, other enterprises are classified as medium-sized. It is worth noting that the scale of enterprises affects the peculiarities of their management. The spread of small business in printing is influenced by such factors as type of production, development of cooperation, demand reduction, the need for territorial proximity to customers and consumers for operative production, development of technologies that reduce labor intensity and are less capital-intensive and economically beneficial for small print runs.

The peculiarities of small business management are related to the lack of resources to finance development, innovation, the lack of a complete production cycle. This limits the opportunities for market expansion, and the transfer of individual operations and functions to other market participants leads to higher costs of enterprises and does not guarantee a high quality of their work.

Based on the fact that printing enterprises provide printed products almost all sectors of the economy, so the state of the printing industry depends on their development. The peculiarity of the development of printing enterprises is the reproduction of products of intellectual consumption – books, magazines, newspapers, which are necessary for personal development, but are not basic necessities. Therefore, the demand for them depends on income and state support. The publishing and printing industries need state financing of book publishing, state support for the promotion of reading, the fight against unauthorized distribution of books. Intellectual products of consumption should be strategically important for the state, because they are the basis of the spiritual health of the nation, moral standards, priorities of humanism, business and personal ethics, high rates of scientific and technological progress, economic growth and formation of the country's image. A nation with developed intellectual capital is protected from primitivism of thought, from the

choice of power, which will destroy freedom of speech and the foundations of democracy by any means, including force, against the citizens of its own and other states.

At the meso- and microlevels, the task of building effective interaction between industry objects and industry complexes is solved. A well-functioning system of interaction between partners is necessary to ensure effective publishing activities. This system of interaction is changing in the modern period due to the emergence of a new means of communication – the Internet, which affects the efficiency of printing enterprises. Figure 1 shows the scheme of the relationship between the objects of the publishing and printing complex.

The authors analyzed the concept of publishing and printing complex, which was introduced by Roman Mashtalir and defined as a set of publishing houses, printing and bookselling enterprises that provide the preparation, production and distribution of publishing products (Mashtaller, 1987). Analysis has shown that with the active development of the Internet and electronic technologies, the publishing industry is expanding connections, electronic publishing space is being formed, and the creation of publishing products and their consumption can take two forms – paper and electronic. Printing companies are not involved in the production of electronic publications, as they traditionally print publications on paper.

Also, the transformation of interaction in the publishing and printing complex was due to the military aggression of the Russian Federation in Ukraine, which began with a full-scale invasion of the Russian occupants on February 24, 2022. Within two months of the war, 5 million Ukrainians left the country (Mazepa, 2022). To meet the needs of immigrants from Ukraine, domestic publishers implement a model of cooperation with foreign publishers or with charitable organizations and volunteers. According to this model, Ukrainian publishers provide their colleagues with electronic originals of publications, and foreign publishers print publications at their own expense. The printed books are then given to Ukrainian immigrants abroad free of charge. Alternatively, print books are given from Ukrainian publishers to immigrants abroad directly through charitable organizations. Commercial models are also being implemented: objects of the publishing-polygraphic complex of Ukraine have activated the sale of rights for the translation of Ukrainian literature abroad.

To improve the efficiency of the book market development it is necessary to improve the system of wholesale and retail book distribution. According to the analysis, the retail book trade is declining. As of December 2021, there were about 200 bookstores

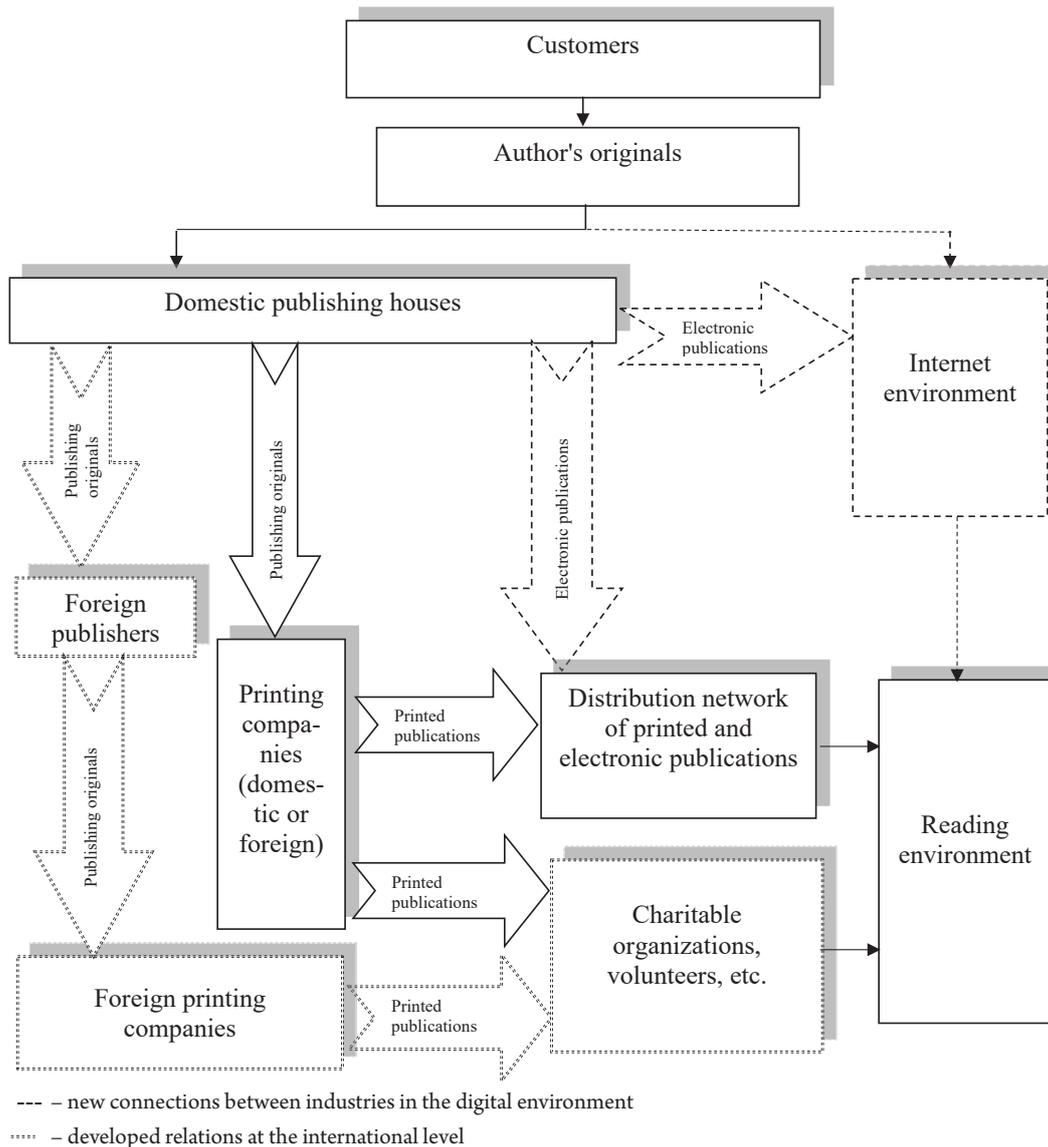


Figure 1. The scheme of connections between the objects of the publishing and printing complex

Source: author's own work

in Ukraine, 15 times less than at the beginning of 1991 (Kruglov, 2021). Considering that books are among the goods of spontaneous purchase, the development of a bookstore network is important for increasing turnover. At the same time, the growing demand of the population for purchases on the Internet creates significant potential for the development of e-commerce in the publishing and printing industry. The successful realization of this potential depends directly on effective management in areas such as:

- logistics processes. Since in a highly competitive environment, ensuring prompt delivery and providing timely information about the status of orders become important competitive factors;
- marketing communication policy. Actual tasks are formation of personal assortment offers; wide

and timely informing about advertising offers, current prices, etc., diversification of communication channels.

Thanks to effective management in these areas, the company achieves a high level of service. And at a time when many manufacturers are able to produce high quality goods at competitive prices, the level of service becomes the decisive criterion by which consumers make their final decision on choosing a supplier. Zhovnovach R. (Zhovnovach, 2015) notes that service allows to form individual relationships with each client, creates conditions for maximum satisfaction of consumer needs, and provides a unique position of the company in the market. To increase the efficiency of customer relations it is reasonable to implement CRM-systems. As a priority direction of managing the implementation of CRM-systems,

the authors identified a process approach. Thus, at the planning stage of CRM-system implementation it is necessary to critically assess the market offers, taking into account the needs of a particular enterprise. At the organizational stage, it is important to provide quality training for employees to work with the CRM-system. Indicators of the effectiveness of the introduction of CRM-systems in enterprises should be introduced into the system of motivation of labor. Qualitative control over the use of CRM allows to improve its functionality and increase the efficiency of its use in the specific conditions of production, taking into account the specifics of the industry, markets. It is worth noting that the competent management of the introduction of new technologies, when sufficient time and resources are allocated for their mastering by employees, provides the synergy of socio-economic growth of the company. Enterprises that encourage employee development and self-improvement are more competitive on the labor market and commodity markets.

Of particular interest is the activity of printing enterprises associated with the production of publishing products for publishing houses and non-publishing products for various consumer groups – industrial and non-industrial. Analysis of the structure of the print products market showed that it includes traditional publishing products – books, newspapers, magazines and other continuing and periodicals, and non-publishing products – packaging, labels, paper and white goods, sheet products, stationery, etc. In modern conditions, the introduction of electronic administration, leads to the fact that the demand for printed stationery decreases. Accordingly, the level of capacity utilization of printing enterprises engaged in its production decreases, resulting in an increase in fixed costs and a decrease in profits. It should be noted that a peculiarity of printing companies is that they do not produce on their own initiative, but only on the B2B model. The exception is paper and white goods. Paper and white goods were produced by printing companies of various specializations. This allowed them to supplement their existing production capacity. But under the influence of modern information technology, demand for paper and white goods has declined. At this stage, the market is dominated by the largest producers, in particular, PJSC "Biblos" (Lviv), State Publishing House "Press of Ukraine" (Kyiv), Factory "Polygraphist" (Kyiv). They are developing their own retail networks to stimulate sales. The expansion of the sales market is also connected with the increased attention of enterprises to corporate culture and branding. As a result, the demand for business diaries, notepads, folders with corporate symbols is growing.

The analysis of enterprises of the printing industry has shown that the peculiarity of development is the operation of enterprises specializing in the production of newspapers and magazines. The main factors of competitiveness of products of these enterprises include speed, which is ensured by high-performance equipment and efficient management of operations. Technical equipment is mainly due to web printers, which have a limited scope of application, making it difficult to change the specialization of enterprises. Given the significant amount of investment in the creation of newspaper products and the current trends to reduce print runs, this segment of the market has a low level of investment attractiveness. Vertical or horizontal diversification may be a promising direction for the development of these enterprises.

According to the analysis, domestic printing companies, based on the improved material and technical base, increased the level of product competitiveness, which allowed to expand the sales market by attracting orders for magazines that were previously published abroad.

The authors considered the changes taking place in the book market. They are caused by the expansion of the range of books, a decrease in the average circulation, which is associated with new approaches to the management of publishers, with the development of differentiation. Printing companies are adapting to smaller print runs by introducing digital printing, replacing a number of post-printing operations, such as sheet selection, cover making, and insertion of blocks into the cover from mechanized to manual. And enterprises that have carried out technical re-equipment, in particular, PJSC "Bila Tserkva Book Factory", PJSC "Vipol", State Publishing House "Press of Ukraine", Printing House "Huss", gained competitive advantages in quality, efficiency, price and increased market share.

The issue of print advertising is one of the priorities for the development of printing companies. Merch is becoming especially popular in modern conditions. It allows to stay in touch with the target audience: to strengthen relationships with employees, to attract the attention of customers and partners (Kapska, 2021). Merch is a means of expressing the company itself and its values. More and more manufacturers are turning to eco-friendly merch – shopper's merch, clothing (T-shirts, skinny, etc.) made of durable materials, etc. It is worth noting that the quality of advertising is influenced by the state of the economy. For example, during an economic downturn in the economy, advertising budgets are redistributed in favor of cheaper types of advertising products – leaflets, newspapers or Internet advertising, and the demand for the products of printing companies that produce advertising products in expensive

price categories decreases (Glossy Press Market, 2014). Factors in the development of the advertising segment of the market are constant demand, the moderate cost of creating printing products to serve this segment.

The peculiarities of the development of the print advertising market are related to changes in the regulatory framework. Thus, based on the decisions of local authorities, the number of places for outdoor advertising is reduced, which leads to a decrease in demand for printed advertising products. Therefore, printing companies, in order to ensure sustainable development, are implementing such areas as:

- strengthening of integration by entering into long-term cooperation agreements with advertising agencies, and to increase the volume of orders – with companies that have an extensive network of offices and branches;
- with IT specialists – for the production of multi-media publications, augmented reality products;
- provision of product design services, which allows to attract individual customers;
- introduction of innovative technologies, these include the manufacture of complex advertising structures, printing on complex surfaces and others.

Given the projected decline in advertising spending in the print advertising segment from \$44.173 million in 2021 to \$40.019 million in 2023 and \$35.628 million in 2025, print companies need to develop multi-branch collaboration. Because combining print and digital advertising will make online campaigns 400% more effective (26 Relevant Print Marketing Statistics).

With the digitalization of the economy and the growing demand for online content, the structure of print markets is changing. At the same time, label and packaging products are consistently in high demand. They dominate the print market. PJSC "Kyiv Printing Factory Zorya", "Tetra Pak", "Packaging Plant ROTEX", "Lunapack", "Impress", "EKKO" and many others specialize in the production of labels and packaging. The development of printing companies specializing in the production of labels and packaging is related to the growing demand, market expansion due to increased environmental properties of products, as well as the entry barriers to the industry, namely high investment and high quality requirements.

Another peculiarity of the development of printing enterprises should be noted – it is participation in tenders, which are held both at the expense of the state and private companies. Tenders are organized by companies with foreign investment, whose volume of orders is constant. Participation in procurement tenders requires printing companies to ensure the appropriate level of product quality and competitiveness. The complexity of solving the problem of increasing the competitiveness of printing products

in terms of price can be explained by a number of factors. Given that the printing industry is characterized by a high level of material intensity – the main reserve for reducing production costs are material costs. Also in the industry are used mainly imported materials, higher in price than domestic, so a significant factor is the instability of the hryvnia exchange rate.

Printing companies can adjust material inventories to adapt to changes in material prices. However, the use of this method is limited due to a lack of funding. The difficulty of stocking is also due to the wide range of printing products, the tendency to use non-standard formats, and to change them with each new order in search of a more economical option.

For enterprises of the publishing and printing complex, an important indicator is the quality of products, which depends on many factors, including the level of logistics. The low level of development of domestic printing engineering also increases the import dependence of printing companies, respectively, the capital intensity of production. In Ukraine, mainly equipment for special types of printing is produced, as well as for post-printing processing. The main producers are PJSC "Kyiv-poligrafmash", PJSC "UkrNDISVD", JSC "Research Institute of Laser Technologies" and LLC "Laser Flex".

The peculiarity of the development of printing enterprises in modern conditions is related to the search for ways to reduce the capital intensity of production. In the conditions of deficit of own investment resources, the demand for lease of operating equipment and financial leasing is growing. Print shops also prefer to equip themselves with equipment from Asian manufacturers, which is cheaper in price than European manufacturers, but inferior in product quality.

The organization of the complete production cycle, namely pre-press, printing and post-press processes in enterprises of different business sizes leads to an increase in investment costs, while in developed countries the specialization of enterprises prevails (Gutkevych, Shenderivska, 2018). The exception is some bookbinding work, so printing companies that have the technical capabilities to perform them have an additional market, providing the relevant services on a cooperative basis.

In modern conditions, medium and large businesses are diversifying their activities towards the introduction of technologies that are economically feasible in terms of reducing turnover. Enterprises determine the areas most attractive for investment in terms of profit, choose areas in which it is possible to achieve the greatest increase in added value (Shenderivska, Guk, 2018). Profit, as an indicator of the effect obtained as a result of economic activity, is the main component of the financial resources of the enterprise, the source of formation of budgets at various levels.

For the development of printing enterprises it is necessary to attract skilled labor. It should be noted that the growing degree of mechanization and automation of printing production tends to reduce the demand for labor.

The structure of the printing industry is changing by forms of ownership due to the reduction of the public sector enterprises. There are various forms of ownership in the industry: private – 91% (Kotlyarevsky, Shtangret, Melnikov, 2012), state, and municipal. As already noted, small enterprises, which develop at the expense of private purchases and produce a wide range of products, prevail in the scale of the industry. Their economic growth requires an active policy of searching for and attracting new customers. The urgent tasks are to ensure stable product quality indicators, to reduce the percentage of technical losses, to apply a customer-oriented approach based on ensuring such a combination of the key factors of competitiveness of printed products – price, quality, speed, which meet the needs of specific customers. Private companies have more credit opportunities because their activities generate income and allow them to repay loans. Joint-stock companies were established in the industry, mainly on the basis of privatization of state property, but not all of them were able to ensure the utilization of production capacity, so they ceased to operate, including enterprises "Book", "Polygraph Book" and others. The number of utilities is shrinking due to a decline in demand for their main product, newspapers.

Based on the analysis of state-owned enterprises, we have divided them into the following groups: Group I – specialize in the execution of state orders (Polygraph Plant "Ukraine", The Mint of the National Bank of Ukraine); Group II – self-accounting (SE "Kyiv Offset Factory", State Publishing House "Press of Ukraine", State Self-accounting Publishing and Printing Enterprise "Foreign Trade Publishing House of Ukraine" and others). These enterprises are medium and large in scale. The greater stability of orders is inherent in the first group of enterprises. For example, Printing Works "Ukraine" is a monopolist in the production of envelopes with stamps, blanks of passports of citizens of Ukraine, as well as produces other types of blanks. Except in the Polygraph Plant "Ukraine", only one other company, "Kyiv Offset Factory", has a license to issue strict reporting forms, which restricts competition in this market. In contrast to state budget printing enterprises, state self-supporting enterprises ensure profitability mainly at the expense of non-state commercial orders. However, in the absence of state financing of investment activities and deficit of own funds, they are limited in development at the expense of credit resources, since the main object of collateral – fixed assets – belongs to the state.

A special group is the infrastructure of the publishing and printing complex, in particular, institutions that provide scientific services. The State Scientific Institution "Book Chamber of Ukraine named after Ivan Fedorov" conducts bibliographic and bibliographic research, cataloging of publications, statistical accounting of publishing products of Ukraine (Basic provisions). Development of new equipment, materials, technologies, quality standards, labor standards, material costs, instructions are performed by PJSC "Ukrainian Research Institute of Special Types of Printing", JSC "T.G. Shevchenko Ukrainian Research Institute of Printing Industry", Design and Research and Production Center "Polinom". Insufficient state funding for these institutions has a negative impact on their scientific activities, respectively, on the development of innovations for the printing and publishing industry. Therefore, printing companies mainly implement innovative developments of foreign companies, among the most common being UV printers and digital printing machines, which increases the economic efficiency of production in the segments of large-format printing and small print runs; equipment for the production of printing plates using computer-printing plate technology, which increases speed and reduces production costs, and hybrid equipment that combines several printing methods or printing techniques to meet customer requirements in a differentiated way.

Scientists predict the prospects for the industry when it shifts from specializing in books to more stable demand products – periodicals and packaging (Vorobyov, Shtangret, Petrashova, 2010). The strengthening of European integration processes will have favorable consequences for the publishing and printing industry, namely attracting consumers ordering large-scale printing services, in particular, the food, construction, banking and advertising industries.

Thus, the structure of the print products market in Ukraine is changing. This is due to the intensification of marketing activities of enterprises-customers of printing products, changes in the structure of consumption of goods, competition from modern information technology. For the development of measures aimed at improving the efficiency of development of printing enterprises, a more thorough analysis of individual activities, taking into account internal and external environment factors.

In the context of increasing competitive pressure, it is necessary to study and implement effective international experience in order to promote the economic growth of printing enterprises. There is a worldwide trend toward cooperation, the creation of various forms of business associations. In Europe, for example, 23 national press associations have

united to form the Intergraph Federation. This organization brings together the printing industry and digital communications for common tasks, namely the promotion of the printing and related industries, maintaining competitiveness through lobbying, information and networking. There is also a global network of printing associations "World Printing and Communication Forum", which includes representatives of China, the United States, Europe, India, Japan, Hong Kong and other countries.

From the point of view of implementation in Ukraine the experience of Poland is of interest. The Polish printing industry has a number of positive developments, in particular, market expansion due to exports, which account for 42% of total income and have a tendency to grow (Printing Industry in Poland). For printing companies that provide systematic technical and technological renewal of production, implement quality management systems and, accordingly, produce products that can be competitive in international markets, it is also advisable to develop such activities as export. It should be noted that the export orientation of the Polish printing industry is explained by an active investment policy, which is facilitated by reasonable prices for loans and leasing. In particular, 60% of companies invested through leasing. Participation in the European Union is also a favorable factor.

Polish printing companies are expanding their sales not only by entering international markets, but also through diversification. It is mainly technological and consists in the introduction of digital printing, or through the introduction of new services, namely: online ordering, which is used by more than 50% of consumers, consulting, assistance in the distribution of finished products, product design, electronic development of versions of publications (Printing Industry in Poland). For Ukrainian printing companies, especially those involved in the production of advertising, books, newspapers and magazines, experiencing the greatest competitive pressure due to the development of Internet technologies, these areas are also relevant.

A lot of attention in Polish printing companies, as well as in Ukraine, is paid to personnel policy. This is due to the fact that up to 67% of industry employees have no specialized education, respectively, there is a need to train employees on the specifics of the industry, in addition to systematic work on the training of specialists in technological training, etc. (Printing Industry in Poland). It is also advisable for printing companies in Ukraine to intensify social development through the organization of staff training to master new technologies, learning from the experience of foreign colleagues, etc.

In Poland, the development of the printing and publishing industries has state support. Thus, the

state regulates the publishing and printing business, compensating the translation of publications of Polish authors into foreign languages and foreign authors into Polish, creating favorable conditions for investment, setting prices for certain products. The implementation of the first direction is supported by the growing interest of the world community in the political situation in Ukraine, which requires not only timely information, but also thorough analytical reviews, which can be prepared in the form of books. Financing of these publications and their translation into foreign languages can be provided both by state support and private investments.

The first place in the world in terms of annual income of the printing industry – \$80 billion – is occupied by the United States (Printing in the US), so it is advisable to study the experience of this country. Compared to other sectors of the economy, the printing industry is one of the most active in terms of investment. The share of large and medium-sized enterprises in market income is 80%, associations are formed with a significant number of participants and representative offices, including "Consolidated Graphics, Inc." has 70 divisions in the USA, Canada, the Czech Republic, "VST" has 45 divisions in the USA and owns a paper sales firm. As around the world, the printing industry is under competitive pressure from the Internet, electronic reading devices, and an adaptation strategy that is growing popular in the United States, including diversification of multimedia design, can be implemented in Ukraine. To avoid increasing the costs of printing companies to maintain the staff of designers, implementing a strategy of diversification, it is advisable to involve them only in the implementation of projects.

Canada's experience is also interesting for Ukraine. The country's printing industry is characterized by a high level of development – its share in the total volume of industrial production is over 5%, while in Ukraine this figure is less than 1%. There is active investment activity – the share of investments in the purchase of machinery and equipment in the printing industry reaches 65% of the total volume of investments. Some of the difficulties associated with a shortage of orders and overproduction, which are also characteristic of Ukraine, are solved by the consolidation of large enterprises seeking to maintain profits (Printing in Canada Industry). Canada's experience in cross-sectoral integration in areas such as investment and innovation, international trade, strategic management, education and training, and performance management is also useful, contributing to the progressive development of the printing industry and the national economy as a whole. As in many countries, Canada has a printing industry association, and it has a feature that can be

implemented in Ukraine. So, at the initiative of the association was created Trust Fund for Canadian Printing Scholarships, which aims to promote the future economic growth of the industry by attracting the most talented young people, providing places for internships, and funds for the fund, scholarships are provided by Canadian printing companies (Canadian Printing Industries Scholarship Trust Fund). The development of this direction is relevant for Ukraine in order to help solve the problems associated with the reduction of state funding for higher education, as well as to provide internships for students.

The printing industry in Finland has a progressive track record of finding new market niches, which is relevant due to the decline in demand in traditional markets. For example, some printers have found narrow niches, namely serving architectural and construction firms, while providing not only printing services, but also creating electronic archives based on digitization of old drawings, as well as effective experience in expanding the services of printing companies that produce advertising products. Printing companies in Ukraine can also develop in this direction, namely to provide a service for the distribution of promotional products.

The achievements of Latvian printing companies in finding ways to increase efficiency under the conditions of growing competition are of interest. For example, promising measures include the introduction of innovative technologies allowing the production of personalized advertising. In Ukraine, this direction also requires development, as producers of different industries improve advertising activities on the basis of segmentation.

Singaporean printing companies have achievements that are effective for imitation in Ukraine. In particular, the problem of reducing the circulation of newspaper products is solved through the implementation of the strategy of commercialization of newspapers, i.e., increasing their attractiveness as a means of advertising. For this purpose, newspapers started printing QR codes, with the help of which it is possible to view multimedia dynamic materials in the Internet. Thus, newspapers have gained the

advantages of electronic editions, while the cost of their production has not increased. The functionality of newspapers is also enhanced by their additional processing – sewing on a staple, which helps to attract customers of specialized advertising newspapers.

The experience of the Chinese printing industry is also of interest, with companies devoting considerable attention to improving product quality by implementing the ISO 9001 series quality management system and their own product quality management systems. Enhanced quality control is carried out in associations of enterprises, the essence of which is that this function is performed by specialists of individual enterprises and specialists of the central body of the association (Quality Control, AsiaPacificOffset). Chinese printing companies also create associations to enter international markets, and they may include members from other countries. To effectively position themselves in international markets, Ukrainian printing companies should learn from China's experience in creating associations, providing quality information support, namely: the maintenance of English-language sites, product price calculators, sample assortment with average prices.

Based on the study of effective international experience in the printing industry, the authors identified promising areas of development of printing enterprises (Table 1).

A study of the experience of the printing industry in different countries shows that all countries have their own characteristics, but at the same time there is a general trend toward mergers and acquisitions, both vertical and horizontal. One important factor in the creation of associations in the printing industry in the long term will be the trend toward globalization of customers – publishers, advertisers, buyers of packaging, who require high-quality products.

4. Conclusions

The basis of any company's management philosophy should be to create value for consumers. In modern conditions the availability of technology,

Table 1

Prospective areas of development of printing enterprises

Country	Country experience relevant for implementation in Ukraine
Canada	Increasing the level of social responsibility of printing companies by financing the training of talented young people – future employees of the industry
China	Active implementation of international quality standards, additional centralized quality control in business associations
Poland	Investment in new technologies, increase in exports
Singapore, Finland	Search for new market niches
USA	Involvement of product designers during the implementation of projects

Source: compiled by the authors according to (Canadian Printing Industries Scholarship Trust Fund; Printing in Canada Industry; Printing Industry in Poland; Printing in the US; Quality Control, AsiaPacificOffset)

material and technical resources is increasing, so the supply of high quality products is growing. With this set of factors, companies need to improve service quality to win the competition. Prompt delivery and customer information support become crucial. In this context, it is important for printing companies to improve, above all, marketing communication policies and logistics processes. Automation of processes of interaction with clients will promote realization of the client-oriented approach and orientation on continuous development of the company. Orientation on continuous personnel training will promote realization of

social function of the company – higher level of job satisfaction, and also economic – acquisition of strategic competitive advantages.

Strengthening of integration processes to improve the efficiency of individual enterprises and the industry as a whole should take place at different levels: intra-industry, inter-industry, international. This will help improve product quality, boost innovation and investment, fill market niches, and create new industries. Effective management of publishing and printing companies should focus on greening production and adapting to the digital economy.

References:

- 26 Relevant Print Marketing Statistics: 2022 Ad Spending & Impact. Available at: <https://financesonline.com/print-marketing-statistics>
- Basic provisions. Book Chamber of Ukraine. Available at: http://www.ukrbook.net/osnov_polozh.html
- Canadian Printing Industries Scholarship Trust Fund. Available at: <http://www.printscholarships.ca/en/about-us/>
- Economic Code of Ukraine: Code of 16.01.2003. № 436-IV. Available at: <http://zakon4.rada.gov.ua/laws/show/436-15>
- Ejsmont, K., & Lipiak, J. (2017). The Use of Controlling in the Printing Company – Case Study (Zastosowanie Controllingu w Przedsiębiorstwie Poligraficznym – Studium Przypadku). *"Business management"*, vol. 1. Available at: <http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.ekon-element-000171466909>
- Glossy Press Market (2014). Materials of the Round Table. Available at: <http://www.telekritika.ua/rinok/2014-09-17/98226>
- Gutkevych, S. O., & Shenderivska, L. P. (2018). Management of Printing Enterprises Development. *"Intellect XXI"*, vol. 6. Available at: http://nbuv.gov.ua/UJRN/int_XXI_2018_6_30
- Ibrahim, A., Yunus, H., Ramadhan, D., Setiawan, I., Rayyan, A., Barata, G., & Yusmaniarti (2020). E-Marketplace Printing Services Using Mobile-Based Application with Customer Relationship Management Approach. *"Advances in Intelligent Systems Research"*, vol. 172. Available at: https://www.researchgate.net/publication/341392068_E-Marketplace_Printing_Services_Using_Mobile-Based_Application_with_Customer_Relationship_Management_Approach
- Kąpska, V. (2021). *IT-merch: Top 5 Trends for the New Year 2022*. Available at: <https://hurma.work/blog/it-merch-top-5-trendiv-do-novogo-roku-2022/>
- Karovich, V. Jr., Kovach, F., Karovich, V., & Vesely, P. (2020). Print Management System Model in a Large Organization. *"Applied Sciences"*, vol. 10, issue 12. DOI: <https://doi.org/10.3390/app10124193>
- Khalina, O. V., Nikonenko, U. M., & Mandzinovska, Ch. (2021). Theoretical Generalization of the Main Factors of Influence on the Efficiency of the Risk Management System of a Polygraphic Enterprise. *"Economic Scope"*, issue 167. Available at: <http://prostir.pdaba.dp.ua/index.php/journal/article/view/837>
- Kotlyarevsky, Ya. V., Shtangret, A. M., & Melnikov, O. V. (2012). *Organizational and Economic Mechanism of Development of Publishing and Printing Industry in the Process of Guaranteeing Information Security of Ukraine*, Ukr. acad. Drukarstva, Lviv.
- Kruglov, V. (2021). *Book Results-2021: Turns Half a Step to the Abyss*. Available at: <https://life.pravda.com.ua/columns/2021/12/30/247011/>
- Mashtaller, R. M. (1987). *Economics of the Printing Industry*. Moscow: Knyga.
- Mazepa, I. (2022). How the Great Resettlement of Ukrainians Will Affect the Economy. *"Economic truth"*. Available at: <https://www.epravda.com.ua/columns/2022/04/25/686191/>
- Palyha, Ye. M., Basylyuk, V. B., & Palyha, I. Ye. (2019). Improvement of Corporate Governance of Publishing and Printing Enterprises. *"Bulletin of Economic Science of Ukraine"*, vol. 2, issue 37. Available at: <http://www.venu-journal.org/download/2019/2/12-Palyha.pdf>
- Printing in Canada Industry: Market Research Report, IBISWorld. Available at: <http://www.nbc4i.com/story/28152514/printing-in-canada-industry-market-research-report-from-ibisworld-has-been-updated>
- Printing Industry in Poland: The Analysis by KPMG in Poland and PBKG (Polish Guild of Gutenberg Knights). Available at: <http://www.kpmg.com/PL/pl/IssuesAndInsights/ArticlesPublications/Documents/2012/Rynek-poligraficzny-w-Polsce-2012.pdf>
- Printing in the US: Market Research Report, IBISWorld: Where Knowledge is Power. Available at: <http://www.ibisworld.com/industry/default.aspx?indid=433>
- Quality Control, AsiaPacificOffset. Available at: <http://www.asiapacificoffset.com/index.php/quality>

- Shenderivska, L., & Guk, O. (2018). Enterprises Development: Management Model. *"Baltic Journal of Economic Studies"*, vol. 4(1). DOI: <https://doi.org/10.30525/2256-0742/2018-4-1-334-344>
- Soares, A. P., Santos, L. A., Ferreira, Th. F., & Costa, V. M. (2021). Participative Management for Competitiveness: an Approach in the Context of the Printing Industry. *"ECOINOVAR"*, vol. 14. Available at: <https://www.scielo.br/j/reaufsm/a/MGwghQFwSSxd8GLX3B4G6Nt/?format=pdf&lang=en>
- Vorobyov, V. I., Shtangret, A. M., & Petrashova, A. M. (2010). *Improving the Methodological Support of Crisis Management at the Publishing Industry*. Kyiv: UkrNDISVD.
- Zelenska, M. O. (2015). Implementation of the Project Approach in Activities of Printing Enterprises. *"Scientific Bulletin of KSU. Series "Economic Sciences"*, vol. 13. Available at: http://www.ej.kherson.ua/journal/economic_13/100.pdf
- Zhovnovach, R. I. (2015). Service Maintenance as the Condition for the Competiveness of Enterprises of Agricultural Machine Building. *"Scientific works of Kirovograd National Technical University. Economic sciences"*, vol. 2. Available at: <http://economics.kntu.kr.ua/pdf/28/25.pdf>
- Zinchenko, O. A. (2022). World Trends of "Green" Investment. *"Economic Scope"*, vol. 177. Available at: <http://www.prostir.pdaba.dp.ua/index.php/journal/article/view/1049>

Received on: 21th of July, 2022

Accepted on: 25th of August, 2022

Published on: 30th of September, 2022