

MANAGEMENT OF THE DEVELOPMENT OF SMALL AND MEDIUM-SIZED BUSINESS ON THE BASIS OF INFORMATIZATION OF BUSINESS PROCESSES

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Abstract: *The purpose of the study is to develop theoretical and methodological provisions reflecting the features of the development of small and medium-sized businesses in the context of improving information technologies and developing a conceptually effective model of informatization of business activities based on the formation of an appropriate instrumental and methodological apparatus. To achieve this research goal, the following tasks were set: to carry out a theoretical assessment of trends and identify the problems of development of small and medium-sized businesses at the present stage; to clarify the meaning of informatization of entrepreneurial activity, to determine its essence and requirements for the informatization process; study the theoretical aspects of the impact of information technology on the improvement of business management processes; to conduct a comparative analysis of the development of small and medium-sized businesses in modern conditions; to investigate the state, problems and prospects of the process of informatization of enterprises related to small and medium-sized businesses; to determine the main directions of development of information support for entrepreneurial activity at the regional level; substantiate methodological recommendations for improving business processes in small and medium-sized enterprises through their informatization and propose a system of organizational and economic measures for the implementation of information management systems for small and medium-sized businesses; to develop guidelines for determining the economic effect from the introduction of an automated management system for small and medium-sized businesses.*

Key Words: *Management, small and medium-sized business, informatization, processes,*

1. INTRODUCTION:

The solution of the existing problems of entrepreneurship development, associated with the search for ways to overcome administrative barriers, the provision of financial support, overshadowed the relevance of informatization as a tool for business development. At the same time, information support is not only one of the main priorities of the state socio-economic policy, but also becomes increasingly important for entrepreneurs themselves. As you know, economic information in modern conditions has become no less significant factor of production than material and labor resources. The introduction of information technologies based on modern management concepts has allowed enterprises of economically developed countries to reach a fundamentally new level of doing business. Leading national companies are also actively engaged in informatization, which also realized the need to change approaches to management. However, for small and medium-sized businesses in this area, there are many financial, personnel, and organizational obstacles. One of the important governmental constraints in the way of improving the management of business processes is insufficient knowledge about the features of informatization of business activity in the sector of small and medium-sized businesses. In this regard, research on the organizational and economic aspects of the informatization of entrepreneurial activity, which until now has been studied fragmentarily, as well as the development and substantiation of scientific, methodological and practical proposals for the development of small and medium-sized businesses based on the informatization of business processes, is becoming especially relevant.

2. LITERATURE REVIEW:

Studying the problems of development of small and medium-sized enterprises engaged many scientists Powell, J. A., & Houghton, J. (2008). Chanyagorn, P., & Kungwannarongkun, B. (2011), Doherty, E., Carcary, M., Downey, U., & Laughlin, S. M. (2013), Krotkova, E. V., Mullakhmetov, K. S., & Akhmetshin, E. M. (2016), Dyerson, R., Spinelli, R., & Harindranath, G. (2016) and others. Research basis for the use of information technology in management is contained in the works of G.A. Titorenko, A.M. Misheshsha, B.V. Chernikov, E.P. Bocharov, G. Smirnova, J. Cantera Drobyazko, S., Vinichenko, O., Chayka, Y., Nechyporuk, N., & Khasanov, B. Afanasieva O., Volska O., Khasanov B., Yemtsev V., Matveeva V. and etc. Solutions to a set of problems for improving control systems based on the process approach are reflected in the works of J. Champy, E. Deming, M. Robson, B. 3. Milner, V. G. Eliferov, A. A. Boyko, V. V. Kalyanov, E. V. Popov, E. G. Oikhman, V. V. Repin, A. G. Kuryan, A. Durmanov and others.

However, with all the variety of studies in this area, many theoretical and methodological aspects of the development of entrepreneurial activity based on the informatization of business processes remain poorly studied. In

particular, issues related to the optimization of business processes of small and medium-sized enterprises, increasing the efficiency of management with the help of modern information technologies and the provision of comprehensive information support to entrepreneurship at the regional level, etc., require clarification. Insufficient development of these problems led to the choice of a topic, setting a goal and tasks of the dissertation research, determined its content and structure.

3. MATERIALS AND METHODS:

Theoretical and methodological basis of the research. The study is based on the works of leading domestic and foreign scientists on the theory and methodology of the development of small and medium-sized businesses, informatization of the economy, information support of business processes. Methods of systemic, economic and statistical analysis, content analysis, abstract-logical, calculation-constructive, expert survey, etc. were used as tools in the work.

4. ANALYSIS, DISCUSSION AND FINDINGS:

One of the recent notable trends in the development of small and medium-sized businesses in Uzbekistan is a sharp increase in competition, which experts associate with the revival of the economy in the context of the emerging recovery from the economic crisis. The competitive struggle of business structures is often limited to the price range, as well as traditional forms of non-price competition (various types of after-sales services, promotions, etc.). At the same time, modern economic conditions require the development of new forms and the use of new factors of competitiveness. The growing importance of intangible assets is one of the most important trends in business. These include new intangible assets based on rapidly developing information technologies: brands, virtual market infrastructure, etc. On the other hand, informatization of the economy makes it possible to improve not only relations with the market environment, but also to improve the internal business environment, forming a completely new business process management level. The paper shows that the importance of business informatization is associated with all the key characteristics of entrepreneurial activity: riskiness, satisfaction of consumers' needs, the goal of making a profit. Informatization of entrepreneurial activity is an organizational socio-economic, scientific and technical process of creating conditions for meeting the information needs of a business based on the formation and use of information resources, based on the use of automated information systems. The dissertation research examines in detail the requirements for both information required for doing business and for automated information systems used in small and medium-sized enterprises.

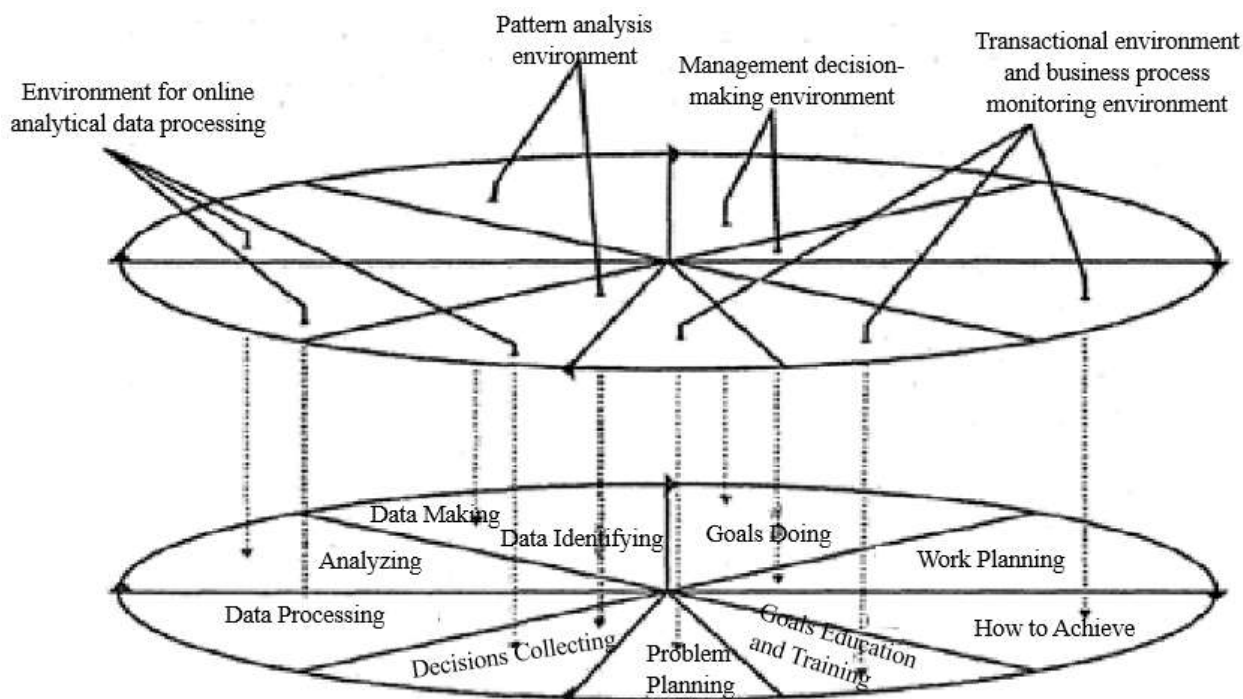


Figure 1. Sector-centric model of the influence of information environments for the management of business structures within the Deming cycle

The effectiveness of the informatization process also largely depends on the rethinking of traditional approaches to business management. In particular, the process-oriented approach, which is the basis of quality management and

contributes to the development of the elements of intellectual management in business, provides great advantages. The management system, in which the object is a business process, is distinguished by more reasonable and quick reactions to internal and external changes, optimization of the inter-functional interaction of structural units and individual employees. Information support for business process management, necessary in today's conditions, can be carried out with the help of an adequate organization of the appropriate information environments. Therefore, the study conducted a study of their complex interdependence and relationship with the business process management system within the PDCA management cycle (Deming cycle). Figure 1 shows the theoretical sectoral-concentric model developed by us, obtained by superimposing the projection of information environments on the phases of the Deming cycle, which makes it possible to analyze the structure of information support for managing business structures and justify the directions for improving the business processes of small and medium-sized enterprises using information technology.

Regional authorities, like the entrepreneurs themselves, need to make a lot of efforts to correct the situation. At the same time, the informatization of small and medium-sized businesses can become one of the most important factors in increasing the competitiveness of enterprises in this sector of the economy.

Table 1 - Typical problems of small and medium-sized enterprises, solved by means of ERP - systems

| Business process | Problem | Solving a problem with ERP functionality | Result |
|--|---|---|---|
| Development of agreed conditions of activity | Difficult surgical manage geographically remote subsection enterprise (characteristic of the medium companies) | Organization network architecture management | Management of branch activities in real time; the ability to access the system for employees; on business trips |
| | Lack of an efficient document management system | Implementation of electronic workflow (DocFlow module) | Improving the performance discipline of employees; improved coordination of work and team interaction |
| | Low speed of information processing, received from disparate information systems; absence effective tools for analyzing enterprise activities | Use of modern business intelligence technologies - OLAP, BI (solution implies that all business processes operate in a single information system) | Reducing the time for collecting and processing information ; formation of consolidated reports on the activities of the enterprise |
| Material-technical security | Warehouse overstocking or absence in the warehouses of the necessary resources for timely execution business process | System organization procurement planning | Increase in the turnover of goods; release of working capital; reducing the company's dependence on loans |
| Promotion and sales | Low quality of service | Management system implementation relationship with customers (CRM module) | Increased customer satisfaction; lower administrative costs for sales and marketing; increase in sales |
| Development of and modification products | Difficult manufacture of production "Under the order", due to the complexity of the formation of the composition of the product, the calculation of the cost and resource reservation for its production (the problem is typical for small innovative enterprises) | Using the constructor to design a new products and optimization production process | Expansion of the range of products, creation of competitive goods |

The results of our survey of representatives of small and medium-sized businesses confirmed the hypothesis that entrepreneurs are increasingly aware of the need to informatize their business, even if it is necessary to spend significant funds. Thus, 39.8% of all respondents are ready to spend up to 3% of their annual turnover on the purchase of computers and software, and one in three of the category related to medium-sized businesses - up to 10%. When asked about the expediency of spending on training their employees in computer literacy, 39.2% of entrepreneurs answered that they are ready to pay for training. In response to a request to identify business processes that need priority automation, entrepreneurs noted, first of all, the area of finance, given its importance for the existence of any organization. The choice of the remaining preferred directions is associated with both the size of the enterprise and the type of economic activity. Thus, 19.5% of medium-sized retail enterprises noted the importance of using information technology in procurement, while 23.2% of small enterprises in this area consider sales as a higher priority. The majority of entrepreneurs do not assess the need for automation in the field of personnel management highly, however, medium-sized enterprises operating in the service sector (22.1%) and manufacturing (13.2%) pay more attention to this aspect. The study of the factors hindering the informatization process showed that high prices are in the first place, as well as the inherent unwillingness of small and medium-sized businesses to implement such projects. This is manifested in a lack of understanding of the very essence of automation and the benefits that an enterprise will receive from its use, as well as high remuneration for specialists in the corresponding profile. Among the measures to support business informatization, 75.4% of small business respondents named the need to expand access to state information resources, and 67.2% would like to use the services of specialized Internet centers. For medium-sized businesses, exhibitions and seminars on information technology (65.2%), as well as navigation systems and electronic catalogs (60.8%) are more significant. In the process of scientific research, we found that materials published on independent Internet portals (including forum materials) can also serve as a source of objective data on the informatization process. These are reviews of entrepreneurs dedicated to the selection and implementation of ERP-class information management systems in small and medium-sized enterprises, as well as publications of ERP-systems suppliers. To study this randomly organized, not systematized text material, invariant in structure and content, we first used the method of content analysis, the results of which are presented in Table 2.

Table 2 - Estimated characteristics of the implementation of information systems management in business processes of small and medium-sized enterprises, obtained using content analysis *

| Sense units | Nature and content text fragments | Amount mentions in the text | Ratio, % |
|--|-----------------------------------|-----------------------------|----------|
| Quality of reviews on the implementation of an ERP system | Formal | 39 | 59 |
| | Detailed | 27 | 41 |
| The essence of implementation feedback ERP systems (in general by text fragment) | Positive | 42 | 57.4 |
| | Negative | 31 | 42.6 |
| Semantic focus reviews of unsuccessful ERP systems implementation | Customers' wines | 8 | 38 |
| | Contractors fault | 13 | 62 |
| Nature of consultation experts on ERP systems implementation | Advertising | 13 | 28.8 |
| | Independent | 32 | 71.2 |
| Attention to to cost and quality ERP systems | The cost | 21 | 42.8 |
| | Quality | 28 | 57.2 |

* Proposed by the author in the process of research.

The analysis of the entire data set showed that reviews on the results of the implementation of automation projects are mostly positive, but when advertising materials are excluded, the ratio of positive and negative reviews in independent sources is balanced. The calculation of the categories related to the improvement of business processes confirmed the data obtained by us during the survey. Most often, entrepreneurs refer to the labor intensity of the accounting work performed, the inaccuracy of the transmitted information about the state of production, the inconsistency of the actions of the personnel. Entrepreneurs primarily associate the improvement of the economic activity of small and medium-sized enterprises with the automation of accounting (33.3%) and managerial business processes (19.6%). The semantic orientation of the feedback on the reasons for the unsuccessful implementations is focused primarily on the lack of qualified specialists from contractors, as well as deliberately misleading entrepreneurs about the functionality of ERP systems.

5. RECOMMENDATIONS:

There are both negative and positive trends in the development of small and medium-sized businesses. Regulatory requirements have become more stringent and costly for small businesses. At the same time,

the situation has improved with the availability of key production resources - equipment, components, production facilities. One of the most important trends is the sharp increase in competition in this sector of the economy. The value of business information is determined by its importance as a commodity and that prospect of the van to meet the information needs of business entities, and as a production resource. Increasing the efficiency of the use of information resources in the management of business processes of small and medium-sized businesses is achieved through the introduction of appropriate information systems, which are classified in relation to the scale of the business, by the level of functionality and the degree of integration of the system according to the degree of realization of the possibilities of support of management levels. One of the important reasons for managerial problems in domestic enterprises is the complication of information exchange between intrafirm divisions. In these conditions, the use of partial information solutions, heterogeneous information systems, as well as outdated approaches to management significantly reduces the benefits of informatization. The transition to process-oriented approach in management allows to strengthen the effect of the use of information technology by ensuring the coordination of individual business processes, optimal organization of information environments and information flows within the management cycle. The results of the questionnaire showed that entrepreneurs not only plan to develop their activities through informatization tools, but also already have certain starting conditions for this. Thus, more than 50% of small and medium-sized businesses are represented on the Internet, 32.1% have their own websites, 38.1% use "general exchange" folders in local internal networks to organize document flow. The transition to a process-oriented approach in management makes it possible to enhance the effect of the use of information technologies by ensuring the coordination of individual business processes, the optimal organization of information environments and information flows within the management cycle. Small and medium-sized businesses count on the support of public organizations and government agencies in the field of access to state information resources, services of specialized Internet centers, would like to participate in fairs and seminars on information technology.

Content analysis of articles published on the Independent Internet portals, shows relatively high risks of ERP - systems in business processes of small and medium-sized enterprises. Entrepreneurs (62% of the mentions among the reasons for unsuccessful implementations) point to insufficient competence of contractors' employees, as well as unfair advertising. Contractors, accusing customers of not being able to formulate their needs, nevertheless do not provide them with methodological materials that allow them to assess the need to improve business processes, compare the requirements of entrepreneurs with the functionality of information systems, and correctly correlate price and quality parameters. Support for government bodies and public organizations in the field of informatization of small and medium-sized businesses should be carried out, first of all, in the field of formation of information infrastructure (including the placement of terminals in public places), interaction with suppliers of information systems (consulting, training, provision of outsourcing services, software rental for start-up entrepreneurs), organization of access to distance learning based on the Internet portal of a public organization. The Internet portal, which includes open, closed and administrative sections, will satisfy various information needs of entrepreneurs (including those of a confidential nature), manage remote divisions, and ensure interconnection with government agencies. Improvement of business processes is achieved on the basis of one of two methodological concepts: optimization or reengineering. Assessment of business problems and the state of business processes in combination with clarification of the functionality of information management systems allows you to select an adequate concept, clarify the goals and possibilities of informatization. The procedure for selecting an ERP-s and STEM supplier from the list recommended by public organizations of small and medium-sized businesses should be built according to the recommended algorithm, the observance of which makes it possible to reduce the likelihood of erroneous management decisions. The independent development of a draft technical assignment for the implementation of a standard automated management system allows entrepreneurs of the small and medium-sized business sector to save financial resources, determine the requirements for the contractor, work regulations, software and hardware, information system parameters, and protect their rights to provide high-quality information services. A simplified methodology for determining the economic effect from the implementation of a project for the implementation of an automated management system for small and medium-sized enterprises involves the selection of the most significant for the enterprise from the business processes that will be modernized during the implementation of the information system implementation project, and forecasting the annual value of the effect using the published average world indicators.

6. CONCLUSIONS:

Depending on the result obtained, one can focus on pessimistic results (risks at the level of a discount rate of 40%) or higher risks requiring economic effect at the level of average or close to the best implementations of automated systems.

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