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DETERMINING THE ADMINISTERING RADIUS AND MANAGEMENT DENSITY FOR BUSINESS PROCESSES OF THE CORPORATIONS

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The problems of developing and improving the systems of administrative management of the enterprise based on up-to-date theoretical and methodological approaches to streamline management activities aimed at forming the optimal organizational and economic structure of “business-production” systems, identifying the unused resources of business companies, strengthening the synergistic effect to their management systems were considered in the monographic works of several national and foreign scientists, in particular: M.P. Voynarenko [1, page 50]; I.G. Krupelnyska [2, p. 52]; I.I. Muzur, V.D. Shapiro [3, pages 178-251] etc. Meantime, in our opinion, there still remain unsettled issues regarding the possibilities for improvement and development of national corporate business companies (hereinafter referred to as the corporations) with purposeful optimization of their business administration.

The goal of study is to deepen the theoretical and methodological principles in respect of optimizing business processes of business administration in the organizational and economic development of the corporation.

Basic material thesis. Summarizing the results of theoretical and practical

aspects of the research of presented by national and foreign scientists upon improvement of business administration processes in the management of organizations [1, pages 49-51; 2, page 52; 3, pages 178-251; 4, pages 17-19 etc.], with regards to current changes in several laws of Ukraine [5; 6; 7], in our opinion, the category of “business administration” can be defined as the activity of a business entity (enterprise, corporation, company, firm etc.), aimed at systematic step-by-step coherence of functioning all the processes of its production and economic activities by means of rational management organizations of business structures at different levels of the corporation.

Activity performed by managers of such subdivisions or departments of the corporation has been assessed on the grounds of efficiency of operating the funds entrusted thereto.

Therefore, it is possible to emphasize importance of the business administration principles as a component of management tools in view of intensification of the competitive confrontation in the market space and serving as grounds for theoretical and methodological approaches to formation of the organizational and economic structure (regarding tasks of integration and decentralization) and functions of today corporations in the context of business administration of business processes regarding the rational use of their productive and economic potential. In this regard, let us define the fundamental principles, which in fact serve as the conceptual basis for prescribing rules of conduct and behaviour of the management system of an up-to-date corporation. In our opinion, basic provisions on the rational organization of situational control and regulation in the business administration of business processes in order to secure effective management of the production and economic potential of the corporation should be formed on the grounds of systematic principles used for fixing mandatory rules of conduct and behaviour in order to coordinate and regulate activities of all the subordinated structural business units (SBUs):

1) Compliance with the general purpose of the development and/or reorganization of business processes according to a logically justified sequence of transition from the goals of the corporation to its structure;

2) Adaptability of the structure and functions, i.e. ability to adapt effectively to new tasks and the conditions for their solution (detailed content of the structural and functional blocks of the corporation and its individual SBUs shall be reformatted constantly in line with changes in the consumption market, its conditions of operation and load);

3) Possibility of effective impact on the final technical and economic indicators of business projects at all the stages of project cycles, including at the earliest, i.e. pre-investment stages of project analysis;

4) Security of the optimal level of centralization of corporation management, which is usually based on reducing the number of functional connections, closed on top management and clear separation of management functions and improvement of the structure of the management apparatus (rationalization of “management-

subordination” and “centralization-decentralization” relations, organizational mechanism of coordination and control system; clear regulation of the SBU activity; appropriate adjustment of the structure and content and drafting new regulations on the structural units and offices);

5) Systematic use of the concept of Project Management with in-depth and comprehensive elaboration of the initial (pre-investment) stage of management projects for the purpose of developing and optimizing production and economic programs as separate SBUs and corporations as a whole;

6) Effective support and coordination of projects aimed at reducing project cycles;

7) Availability of internationally certified quality system of products and services of the corporation;

8) Regular work on improving the integral system of corporate and production-economic planning “with regards to national peculiarities and experience of the principles and recommendations required for improving the corporate management practice in Ukraine” [7];

9) Availability of a mechanism for organizing a flexible project financing system at the corporate, national and international levels;

10) Systematic use of up-to-date information technologies;

11) Marketing system development with the transfer of its functions of improving the range;

12) Existence of a subdivision being responsible for the entire complex of issues related to so-called public relations;

13) Existence of a system of personal responsibility for performance of each function of management of production and economic activities of the corporation;

14) Structure of the corporation shall provide a standard level of subordination.

Transfer of the corporation departments to new economic relations (in the status of the Central Department) facilitates the allocation of newly formed working capital in the amount of their remaining balances at the moment of making the decision to move these units to a new status.

In our opinion, it is advisable to form a system of centres of responsibility of a modern corporation based on relatively independent production and commercial divisions (SBUs) which combine all functions and activities necessary for development, production and sale of any particular type of product or group of products: revenue centres; profit centres; cost centres; investment centres. In such case, the central place and the main role assigned to the corporate centre of the corporation, where one of its key tasks is monitoring and diagnostics of assessment of the current and anticipated state of organization and management of the company based on a certain set of quantitative assessments of organizational and managerial analysis of the enterprise [3, pages 200-210] (Fig. 1).

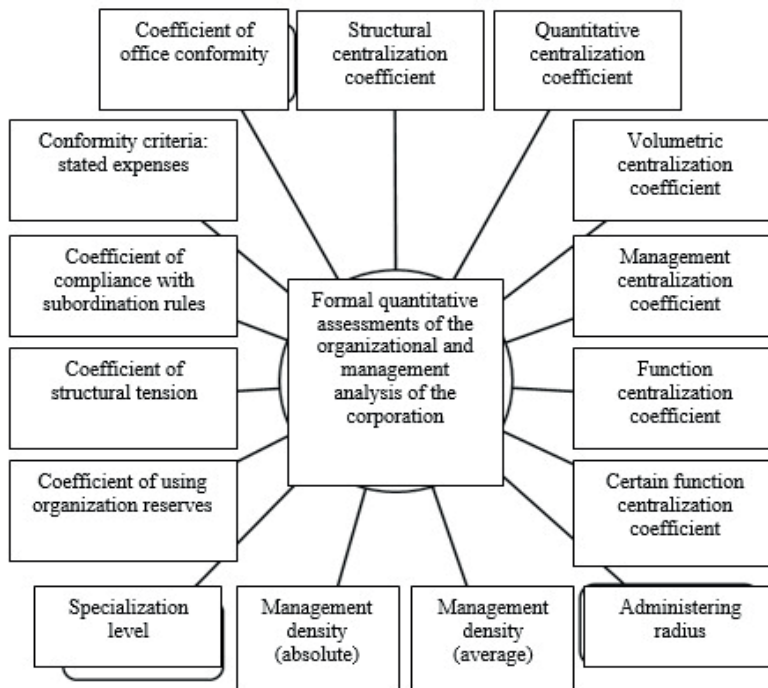


Fig. 1. System of formalized quantitative assessment of the organization and management analysis of the corporation

Let us consider the example of individual specifications of the level of business administration of their business processes based on the use of such key indicators of the proposed system of formalized quantitative assessments of organizational and managerial analysis shown in Fig. 1, as the radius of administration and the average density of the corporation management with its several SBUs in different strategic zones of management.

The above indicators of the system of formalized quantitative assessments of organizational and managerial analysis of corporations are recommended to be calculated under the following formulas:

1) average radius of administering the corporation (\bar{R} , km):

$$\bar{R} = \frac{\sum_{i=1}^n A_R R_i}{\sum_{i=1}^n A_R}$$

where A_{Ri} means annual scope of works in the remote (i) SBUs, representative

office, subdivision (at the object); R_i means the distance to SBU; n means the number of SBUs, including the corporate centre (main branch of the corporation).

2) average density of the corporation management (H_C , monetary unit per square km):

$$H_C = \frac{A_O}{\pi \cdot (\bar{R})^2}$$

where A_O means annual scope of works in the remote territory, monetary units:

$$A_O = \sum_{i=1}^n A_R$$

In this case, the optimum value of the average administering radius ($\bar{R}^{optimal}$) of the corporation can be determined by the formula (1) with regards to the coordinates of individual remote SBUs on a geographic map calculated by the method of gravity center [8]:

$$\bar{X}^{optimal} = \frac{\sum_{i=1}^n A_R X_R}{\sum_{i=1}^n A_R} ; \quad \bar{Y}^{optimal} = \frac{\sum_{i=1}^n A_R Y_R}{\sum_{i=1}^n A_R} ,$$

where

$$R_i = \sqrt{(X_R - \bar{X}^{optimal})^2 + (Y_R - \bar{Y}^{optimal})^2}$$

However, in practice, usually real values of the coordinates ($\bar{X}^{real}; \bar{Y}^{real}$) of the average administering radius (\bar{R}^{real}) of a currently existing corporation do not coincide with the corresponding optimal coordinates determined by the method of gravity centre.

Therefore, the distances to individual SBUs, with regards to actual values of coordinates ($\bar{X}^{real}; \bar{Y}^{real}$) of the average administering radius of a currently existing corporation, should be calculated according to the formula:

$$R_i = \sqrt{(X_R - \bar{X}^{real})^2 + (Y_R - \bar{Y}^{real})^2}$$

According to the foregoing, we may propose the following target function for optimizing the level of average density of management of the corporation with the branched-off network of SBUs:

$$F = \sqrt{(\bar{X}^{real} - \bar{X}^{optimal})^2 + (\bar{Y}^{real} - \bar{Y}^{optimal})^2} \rightarrow \min$$

As shown by the target function (6), by means average administering radii $\overline{R}_{optimal}$ and \overline{R}_{real} which determine the corresponding density of the corporation management with the branched-off network of the SBUs, it is possible to present some aspects of the integrated specifications (in the form of average circles of administering efficiency level) in order to assess the results of the situational control process and regulation of business processes in business administration, in order to secure the effectiveness of implementing the potential of the corporation management as a whole.

Therefore, if the circle area formed by means of the average administering radius $\overline{R}_{optimal}$:

$$S_{optimal} = \pi \cdot (\overline{R}_{optimal})^2$$

is accepted as a standard integrated assessment of the impact of administering density efficiency level, correlation between cross-sections of the areas $S_{optimal}$ and S_{real} (formed by means of the average administering radius \overline{R}_{real}) against the area $S_{optimal}$ [9]:

$$E_{adm\tilde{t}} = \frac{S_p}{S_{optimal}} = \frac{1}{2\pi \cdot R_{optimal}^2} \cdot [R_{optimal}^2 \cdot (F_{optimal} - \sin(F_{optimal})) + R_{real}^2 \cdot (F_{real} - \sin(F_{real}))]$$

may be treated as an integrated assessment of the impact of administering density efficiency level on management of the corporation with the branched network of SBUs.

Fig. 2 shows a conditional example of determining the level of average radius and density of administering the corporation business process (with main branch located in Krryvyi Rih and SBUs located in other cities in the regions of Ukraine).

Fig. 3 shows a conditional example of optimizing business processes of the corporation in order to increase its efficiency of using its production-economic potential based on improving the value of average radius and density of administering the corporation (by formulas (1) - (8)), with regards to actual values of their geographical coordinates.

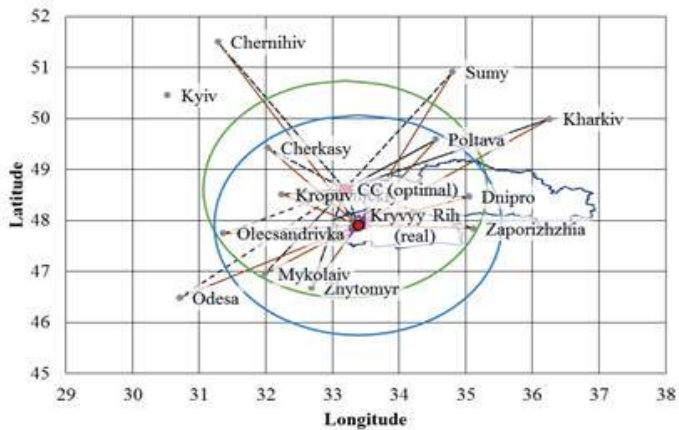


Fig. 2. Average areas of administering the corporation regarding the coordinates of real and optimal administering centres before optimization of SBU business processes

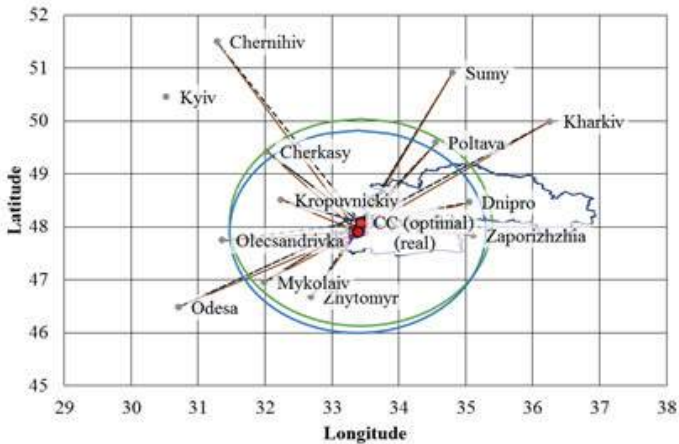


Fig. 3. Average areas of administering the corporation regarding the coordinates of real and optimal administering centres after optimization of SBU business processes

In order to demonstrate the essence of the proposed methodological approach aimed to assess efficiency of using the potential of the corporation in order to optimize the functioning of its SBUs in the context of business administering its organizational and economic development, it is assumed that distances from the administering centres to individual SBUs are calculated by formulas (4) and (5). Meantime, it was assumed that annual volumes of work performed in the remote (i)

SBUs of the corporation for Variant 1 are equivalent, while for Variant 2 they are simulated, so the target function (6) could reach the minimal value.

Results of the calculation of the integrated assessment of the impact of administering density efficiency level for two variants, in the context of improving the organizational and economic management of the corporation with the branched-off network of the SBUs, as conditional example (Fig. 2, Fig. 3), are given in the Table 1

Table 1

Results of calculating integrated assessment of the impact of administering density efficiency level, in the context of updating the corporation organizational and economic management

		Variant No.	
		Variant 1 (fig. 2)	Variant 2 (fig. 3)
Average administering radius, km	optimal	236,51	217,47
	real	239,58	212,57
Distance between optimal and real administering centres, km		81,01	20,3
Administering density in respect of corporate centre, monetary unit per square km		7,21	40,15
Integrated assessment of the impact of administering density efficiency level, unit share		0,79	0,92

According to the results of a conditional example of optimizing business processes of the corporation in respect of increasing efficiency of the use of industrial and economic potential of its SBUs, we got an increase in the

integrated assessment of the impact of administering density efficiency level by 16.46%. (correlation between Variant 2 and Variant 1).

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CORPORATE MANAGEMENT: INFORMATIONAL ASPECTS

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Information as a phenomenon is a special universal immaterial good, which, depending on its content, form, purpose and application sphere, can become an effective business activity influence tool. On the one hand, well-used information can become a powerful engine for enterprise` progress and development, in the other - a devastating force. In both cases, information at the stakeholders hands serves as something to reach a certain goal, so it is important to understand the role and importance of information within the business activities.

The corporate organizations peculiarity is that their authorized capital is divided into shares among owners, the number of which can be very significant (depending on the organizational and legal form of the partnership). Each shareholder has equal rights and can exercise it at his own discretion. Naturally, a situation arises when each owner wants to realize and protect his property interest - to get the most revenue from his property. Each participant understands that the activity stability and the corporate organization development is a way to profit and increase the value of its share within authorized capital in general.

Access to corporational information can become an effective instrument of influence on the corporate management mechanism in order to increase its efficiency,