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FORMATION OF ORGANIZATIONAL CHANGE REALIZATION ABILITY WITHIN THE SYSTEM OF ENTERPRISE CONTROL

The paper considers the measures concerning the formation of enterprise's ability to carry out organizational changes. The analysis of evolutionary development of organizational changes is performed. The characteristics of clusters formed as a result of cluster analysis are described. Directions for enterprises' development as a result of organizational changes implementation into the control system are outlined.

Keywords: organizational changes; cluster analysis; organizational development; control system.

Ігор Б. Олексів, Тарас Ю. Лісович, Роман В. Шуляр ФОРМУВАННЯ СПРОМОЖНОСТІ ДО ЗДІЙСНЕННЯ ОРГАНІЗАЦІЙНИХ ЗМІН В СИСТЕМІ УПРАВЛІННЯ ПІДПРИЄМСТВОМ

У статті розглянуто заходи з формування спроможності підприємства до реалізації організаційних змін. Здійснено аналіз еволюційного розвитку організаційних змін. Надано характеристику кластерів, що утворились в результаті кластерного аналізу. Визначено напрямки розвитку підприємств через впровадження організаційних змін в систему управління.

Ключові слова: організаційні зміни; кластерний аналіз; розвиток організації; система управління.

Рис. 1. Табл. 3. Літ. 10.

Игорь Б. Олексив, Тарас Ю. Лисович, Роман В. Шуляр ФОРМИРОВАНИЕ СПОСОБНОСТИ К ОСУЩЕСТВЛЕНИЮ ОРГАНИЗАЦИОННЫХ ИЗМЕНЕНИЙ В СИСТЕМЕ УПРАВЛЕНИЯ ПРЕДПРИЯТИЕМ

В статье рассмотрены мероприятия по формированию способности предприятия к реализации организационных изменений. Осуществлен анализ эволюционного развития организационных изменений. Дана характеристика кластеров, которые образовались в результате кластерного анализа. Определены направления развития предприятий в контексте внедрения организационных изменений в систему управления.

Ключевые слова: организационные изменения; кластерный анализ; развитие организации; система управления.

Problem statement. The current state of machine-building enterprises in Ukraine testifies to the fact that in the period of transformation to new business regulation rules adaptation to new conditions is next to impossible or too complicated nowadays. The majority of enterprises are financially dependent and are not financially able for changes realization, which is essential for their adaptation. The majority of enterprises under analysis had losses throughout the recent years of their entrepreneurship. Therefore, setting precise directions and objects for changes realization will become one of the major steps to efficiency rise. This would allow enterprises concentrate on new opportunities for effective changes and their adaptation to the environment they are functioning in.

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Recent research and publications analysis. Recent research publications in this field belong to T.V. Oliynyk (2013), identification of objects for strategic changes in the process of enterprise adaptation has been described by M.O. Naumenko, T.V. Hurat and O.S. Krasnohrud (2013), enterprise strategic control – by Y.V. Nabok (2013), analysis of peculiarities of machine-building sector functioning in Ukraine was carried by T.V. Hrynko (2013), changes in enterprise control depending on their model and the essence of changes to ensure the cycles of control development have been investigated by V.M. Hrynyova and Y.I. Hrebenyeva (2013). However, none of the research conducted by the abovementioned authors contributes to the solution of the problems connected to the preparation of enterprises financial ability to change realization and reduction of their financial dependence, which is the most essential issue while selecting directions and objects for changes realization at enterprises.

Research objective is to elaborate the directions for organizational changes introduction into the enterprise control system.

Key research findings. Machine-building enterprises in Ukraine have a crucial role in the support of national competitiveness at both inner and outer outlets. However, the majority of enterprises in this sector run their business not effectively enough. This happens for a number of reasons, including poor banking system, lack of finances, too expensive loans. Using loans is profitless since they extremely exceed the efficiency of funds use in manufacturing. The last but not least is the problem of inaccessibility of assets which leads to financial dependence and makes impossible the adaptation to environment and changes realization.

To determine the reasons for machine-building enterprises inefficiency and to select perspective directions of change realization we have conducted a cluster analysis of 40 enterprises. Grouping enterprises by their financial ability and dependence served as the aim of the analysis. As a result of the analysis we have formed 4 clusters, presented in Table 1.

Cluster analysis has been provided for the period 2012–2013. Upon finishing the analysis, the grouped enterprises were put into a comparative table to estimate the range of enterprise financial ability change and its financial dependence throughout 2012 and 2013. According to the data in Table 2, we can observe the process of enterprise cluster change.

It is essential to realize that enterprise shift from one cluster into another makes up a certain release from financial dependence and a rise of its financial abilities due to adaptation to the environment in which they operate. To illustrate the issue we may take the enterprises of the 1st and 2nd clusters since they are more well-prepared to full adaptation to business environment than the enterprises of the 3rd and 4th ones. To efficiently implement changes and adapt to the environment in which it operates (or the enterprise enter a new environment) we need to make specific steps to strengthen financial ability and eliminate enterprise's financial dependence.

Current trends of economic development in Ukraine produce a dilemma for machine building enterprises. We need to take into consideration that majority of machine-building export of Ukraine goes to Russian outlets amounting up to 53% (Nabok, 2013), which economic relations between these two states are worsening. Thus, the problem of outlet shift to Europe arises. To perform this shift, enterprises

need to go through a hard way of update, search for investors, implement innovations and managerial changes.

Table 1. Enterprises division by clusters, authors'

Clusters	Enterprises characteristics
Cluster # 1	Enterprises possess a sufficient amount of resources to realize changes in the system of enterprise control; however they are in the state of dependence from their creditors. Profit fall of enterprises and marketing income reduction occur. It is worth mentioning that cost of products has been reduced as well. Major rise of long-term creditor obligations and all the abovementioned factors testify to a huge financial dependence and this enlarges the risks of changes introduction into the control system. Enterprises of this cluster need planning their further activity accounting for the reduction of credit and debit indebtedness and enterprise income rise.
Cluster # 2	Enterprises which belong to this cluster are characterized with the reduction of their own funds and enterprise turnover shares. It takes place due to short and long term credit indebtedness fall. This cluster may be characterized as financially assured and independent, since enterprises are able to pay their creditors and draw new financial resources. Enterprises of this cluster tend to the smallest risks connected to control changes failure.
Cluster # 3	Enterprises are characterized with an insignificant rise of turnover assets and their own funds. A rise of both credit and debit indebtedness. Enterprises of this cluster are mostly loss making, although their income rises. This cluster is similar to the enterprises which have a rather weak financial ability and high financial dependence on the outer sources of finance. The realization of changes in a control system of such enterprises is hazardous.
Cluster # 4	This group amounts the enterprises with the least turnover assets and their own funds. Their own funds rise, however turnover assets fall. This happens due to long and short-term credit obligations pay. However, debit indebtedness rises. Enterprises of this cluster may be characterized as financially independent, thus financially unable to realize control changes in their control system. Throughout 2012–2013 the enterprises were loss making while costs were rising.

The aim of the paper is to search for optional directions of control changes implementation at machine-building enterprises to ensure their stable development and efficient realization of control changes. To find the proper directions of changes implementation we need to research a chronology of control changes development (Table 3).

When evaluating the current tendencies of economic development of Ukraine and its international relations with partners, we can claim that machine-building plants will have to make dramatic steps to adapt to the environment which is being reformed. It is recommended to make such steps in three directions, including, change of organization control; enterprise shift to new outlets and restructuring of an enterprise or activity direction change. The given directions must be connected to specific objects of changes. The objects of changes may include technical development, innovative development, investment development, information systems, intellectually-oriented aims.

It is important to know that the given complex of measures may be realized both fully and partially by its separate elements or their combination. Everything depends on specific enterprise abilities. The process of realization has two stages: firstly, this is a quality change of certain indices; secondly – cluster enterprise shift. Machine-

Table 2. The summary of cluster analysis for 2012–2013, grouped by the authors

Cluster # 1	2012	2013
Enterprises	"Kovelsilmash", "Krasnolutskiy Machine-Building Plant"	"Kovelsilmash", "Dnipropetrovskiy Plant of Rolling Rolls", "Krasnolutskiy Machine-Building Plant"
Cluster # 2	2012	2013
Enterprises	"Dnypropetrovskiy Plant of Rolling Rolls", "Hrebenyvskiy Machine-Building Plant"	"Drohobytskyi Machine-Building Plant", "Hrebeniv Machine-Building Plant", "Ukrainian Research and Design Technological Institute of Transformer Building", "Electropivdenmontazh-10", "Verstatuniversalmash"
Cluster # 3	2012	2013
Enterprises	"Lviv Insulator Plant", "Drohobytskyi Machine-Building Plant", "Electropivden montazh-10", "Donetsk Machine-Building Plant "Eksperiment", "Berdychyvskiy Machine-Building Plant "Progress", "Korosten Plant of Chemical Machine-Building", "Electrometer"	"Vinnitskiy Instrumental Plant", "Berdychivskiy Machine-Building Plant "Progress", "Korostenskiy Chemical Machine-Building Plant"
Cluster # 4	2012	2013
Enterprises	"Striyskiy Plant of Smith Pressing Equipment", "Lviv Plant of Artificial Diamonds and Diamond Instruments", "Lviv Instrumental Plant", "Kolomyiskiy Plant of Farm-Building Machines", "Pavlogradskiy Plant of Automatic Lines and Machines", "Verhnyodnyprovskiy Foundry-mechanical Plant of the 1 st of May", "Irpinmash", "Ukrainian Research and Design Technological Institute of Transformer", "Melitopol Plant of Freezing Machine-Building "Refma", "Agrotech Machine Plant", "Zaporyzhautomatics", "Artemyvskiy Machine-Building Plant "Pobeda Truda", "Vinnytskiy Instrumental Plant", "Khmylnyksilmash", "Dashyvskiy Repair and Mechanics Plant", "Kalinyvskiy Repair and Mechanics Plant", "Lutsk Air Plant", "The Plant of Aparatus and Connection "Iskra", "Korostenskiy Machine-Building Plant", "Verstatuniversalmash", "Novohrad-Volynskiy Plant of Farm Machines", "Korostenskiy Plant of Itinerary Machines "Zhovtneva Kuznya", "Radomyshl Machine-Building Plant", "Stakhanov Repair and Mechanical Plant", "Odesa Production Association "Holodmash", "Odesa Plant of Piston Circles", "Odesa Plant of Printing Machines".	"Lviv Insulator Plant", "Striyskiy Plant of Smith and Pressing Equipment", "Lviv Plant of Artificial Diamonds and Diamond Instruments", "Lviv Instrumental Plant", "Kolomyiskiy Plant of Farm Machines", "Pavlohradskiy Plant of Automatic Lines and Machines", "Pavlogradskiy Plant of Automatic Lines and Machines", "Verhnyodnyprovskiy Foundry-Mechanical Plant of the 1 st of May", "Irpinmash", "Melitopol Plant of Freezing Machine-Building "Refm", "Agrotech Machine Plant", "Zaporyzhautomatics", "Artemyvskiy Machine-Building Plant "Pobeda Truda", "Donetskiy Machine-Building Plant "Eksperiment", "Khmylnyksilmash", "Dashyvskiy Repair and Mechanics Plant", "Kalinyvskiy Repair and Mechanics Plant", "Lutsk Air Plant", The Plant of Aparatus and Connection "Iskra", "Korostenskiy Machine-Building Plant", "Electrometer", "Novohrad-Volynskiy Plant of Farm Machines", "Korostenskiy Plant of Itinerary Machines "Zhovtneva Kuznya", "Radomyshl Machine-Building Plant", "Stakhanov Repair and Mechanical Plant", "Odesa Production Association "Holodmash", "Odesa Plant of Piston Circles", "Odesa Plant of Printing Machines".

building plants must strive for results by controlling changes implementation, which are peculiar to the enterprises in the cluster # 2. The measures of control implementation changes to the control system are depicted in Figure 1.

Table 3. Control changes evolution, grouped by the authors

#	Social and economic features	Peculiar changes	Major scientific approaches	Management style
The end of World War II				
1	Economic rise and stability. Changes associated with progress, where the very process is characterized by consecutiveness and continuity.	Changes are the synonyms of control development, rise and adaptation rise. A process approach to changes. Special attention is paid to the methods of implementation of transformations and staff resistance overcome.	The theories of economic rise and a life cycle; unpredictability of control development.	Control on the basis of extrapolation. The speed of changes is accelerated, however future may be still predicted via extrapolation.
The end of 1970s – the beginning of 1980s				
2	Recession and fall. Power crises of 1970s; new competitors rise; high level of unemployment; long-term stagnation of industrial and manufacturing systems.	Changes are considered as negative, unwanted and dramatic phenomena, which reflect the crisis state of an enterprise. The implementation of revolutionary and dramatic changes which predict changes in culture, strategies of control and culture of an enterprise is widely spread.	The theory of population ecology; configuration approach; culture and cognitive theories; the theory of intermittent equilibrium (quant evolution)	Control on the basis of changes prediction, when unexpected phenomena started to arise and the speed of changes is accelerated, however not to the extent to make it impossible to timely predict future tendencies and form the reaction to them.
The end of 1880s – the end of XX cent.				
3	Globalization, world crisis, high level of unemployment and competitiveness.	Changes are of intermittent nature and are part of enterprise reality. Considerable attention is paid to the continuous process of staff training.	Evolution theories; the theories of chaos and training; constructivist approach.	Control on the basis of flexible urgent decisions. Changes are of proactive and reaction nature.
The beginning of XXI cent. – nowadays				
4 ¹⁾	<i>High competitiveness, innovational technologies, information systems implementation, high changeability of the environment in which enterprises exist.</i>	<i>Changes are the condition of enterprise functioning. On the whole, this is the complex of recommended measures, full and partial implementation of which help enterprise to adapt to conditions.</i>	<i>Situational approach</i>	<i>Is applied in non-standard situations when under uncertainty we need to react to changes in business environment. It is used for a crisis fight when there are no formulae control for decisions.</i>

¹⁾ supplemented by the authors on the basis of (Hrinyova, 2013; Tarasiuk, 2010).

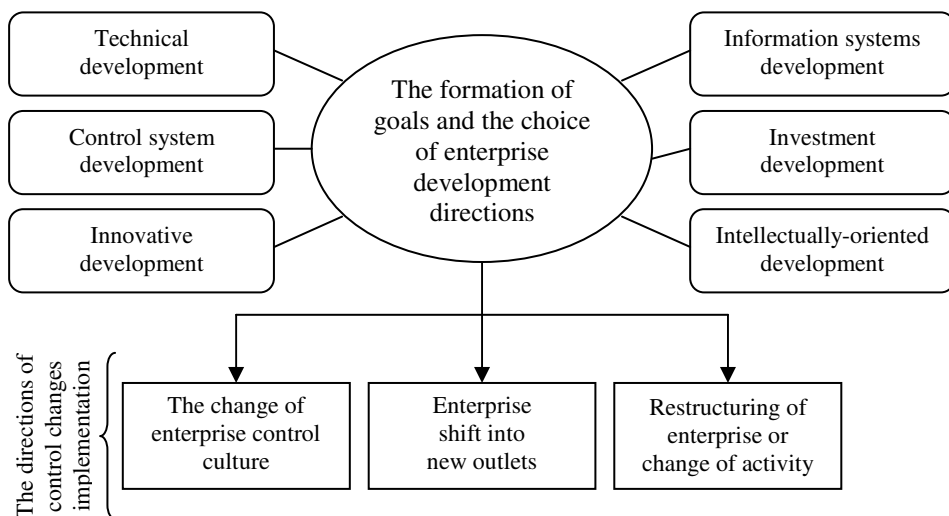


Figure 1. Measures on implementation of organizational changes into the system of enterprise control, completed by the authors on the basis of (Hrinyova and Hrebenyeva, 2013; Hrynko, 2013; Nabok, 2013; Naumenko, 2013; Olyynik, 2013)

Having chosen specific directions of enterprise development, a control system carries out a complex of measures concerning organizational changes for the development of all or one specific direction. The realization of changes concerning each of these directions is characterized by the realization of certain goals within the direction. These goals may be, for instance, the realization of the direction "enterprise shift into new outlets". Implementation of changes will provide technical, innovative and informational enterprise development. As for the direction of change of "enterprise corporate culture", it is to be accompanied by changes in intellectually-oriented development and enterprise control system improvement. Thus, we are not able to claim that a specific direction consists of a certain improvement or development of certain elements. According to the abilities of an enterprise, environment in which it exists or is about to work, has to reach its own decision as to what changes and in which elements an organization should fulfill to ensure a selected direction of enterprise development.

The results of the implemented changes and the correctness of the selected directions may be investigated in two ways:

The first lies in the change of cluster for an enterprise. If an enterprise belongs to clusters # 3 or # 4, the question arises whether this enterprise managed to shift to clusters # 2 or # 1. It is worth mentioning that the first cluster, though being positively characterized, includes enterprises rather dependent on loans.

The second way is realized with the help of evaluation method. This is the method of efficient organizational changes implementation into the system of enterprise control (Oleksiv and Lisovych, 2014).

It is worth mentioning that implementation of organizational changes into the system of enterprise control must be characterized by a quality change of such indices

as: financial ability, financial independence, the level of vertical integration, payback of investment, industrial funds mobility, business success centralization.

Conclusions and perspectives. The article considers the evolutionary stages of organizational changes implementation at enterprises from the mid- of the XX century until now. Under current trends of economic development in the country, three main areas of organizational changes implementation in enterprise control system can be singled out.

Each of the proposed directions has certain characteristics and can be implemented as a single option of changes development and implementation and together with other directions as well. It is important to note that efficiency of enterprise development directions depends on company's capacities, both financial and technical ones. The ability of enterprises to implement organizational changes can be realized through raising funds from external sources, and by combining companies into clusters.

Enterprise positioning in a certain cluster demonstrates its ability to implement organizational changes for further development in accordance with the directions of the proposed transition from one cluster to another. Further research is worth being conducted in the direction of different sections interaction under the process of changes implementation, the optimization of abilities and resources of organizations for the sake of efficient realization of organizational changes.

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