

Methodical Estimation Basic Concepts of Organization Changes' Requirements Level and Enterprises' Readiness to Their Implementation

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Abstract

The purpose of the article is to develop estimation's methodical instrument of organization changes' requirements level and enterprises' readiness to their implementation. In the article essence, meaning and peculiarities of organization changes' demonstration in the enterprises' activity are defined. Methodical instrument's development of enterprises' readiness estimation for changes' implementation and arrangements' development to increase changes' management effectiveness are very important in the conditions of growing change rates of global space, economic structures, rising information stream and speeding up the process of making management decisions. In the article the author classification of organization changes allowing increasing manageability process of organizational enterprise development based on the system principle of specific criteria's accounting: reasons for changes' arising, their targets and radicality. The proceeding of enterprise's research conducting which is considered as complex hierarchical system was suggested and justified, the necessity of enterprises' changes are determined by hypergenous and hypogenous systems as a ground for estimation methods' development of enterprises' changes' requirements level and industrial enterprises' readiness to their implementation and also for factors' systematization of multiplicative influence. In the article estimation's methodical instrument of organization changes' requirements level and enterprises' readiness to their implementation is represented, which contains estimation complex methods of hypergenous and hypogenous environment and analysis of their collective influence on enterprise's necessity and readiness to implement organization transformations.

Keywords: changes' management, classification, enterprise, estimation's methods, organizational changes

1. Introduction

Russian economy's modern condition stipulates the necessity for economic subjects' permanent adaptation to internal and external conditions' change where they are functioning. In this regard the research connected with studying and developing such concepts as responsiveness, adaptation and survival in a difficult unstable market environment.

Business methods' perfection, new production forms and *приемы*, progressive management methods and modernized tools require from enterprises appropriate corrections or it's impossible their further development. Global changes in external environment are the ground to implement changes inside the enterprise, their effectiveness depend on reactions' speed. All enterprises' divisions and working areas should be undergone changes including organizational structures, manner of behavior, management system, economic methods, corporate culture etc. The general goal of conducting changes is to increase activity effectiveness, enterprise competitiveness level.

To realize the following changes it's important to understand how enterprise is ready to implement them. In Russian science and practice not enough attention was given to this process, as a result Russian enterprises when they implement organizational changes they use general theoretic-methodological approaches and thesis that often it leads to planned transformations' low effectiveness or to negative deviations from expected results because of financial, material and immaterial recourses' surplus costs.

In this regard modern Russian enterprises need effective complex estimation organization changes' requirements

level methods' development and industrial enterprises' readiness to their implementation which provide them with methodical instrument to reveal planned results' achievement's conditions on the base of system and prompt analysis of internal and external environmental factors' influence. These methods' essence and significance increase together with business operation conditions' uncertainty, transition to new economic methods. At present time methodical estimation enterprise readiness instrument for changes' implementation can't totally satisfy economic subjects' needs because of limited application and focus to internal factors' influence of their development. Foreign разработки in this field require adaptation to Russian economic conditions.

Existing deficiencies in methodical organizational changes' management grounds including enterprises readiness' estimation predetermined research topic's choice and stipulated its applicability.

2. Materials and Methods

2.1 The Research Purpose Is the Scientific Ground for Estimation Organization Changes' Requirements Level Methods' Development and Industrial Enterprises' Readiness to Their Implementation

We defined the following research tasks: the most widespread organizational changes' features' analysis was carried out and the classification was made to systemize theoretical thesis; the order of enterprise research conducting was justified, which is considered as a complex hierarchical system the necessity of enterprises' changes are determined by hypergenous and hypogenous systems; methodical instrument of organization changes' requirements level and enterprises' readiness to their implementation; organization-economic directions of enterprise's readiness increase to implement organizational changes.

2.2 Theoretical and Empirical Methods

The initial theoretical research base is fundamental economic theory's grounds, scientific organization and management concepts, Russian and foreign scientists' works on organizational development issues. Article's methodical ground is a system analysis and a complex approach to organizational development issues' studying which allow providing logical orderliness of conducted research and define opportunities for system's research of organizational changes' management mechanism's formation and realization at the enterprises. To fulfill exact tasks logic methods of enterprise analysis as complex systems were applied as well as statistic methods, observation and comparison methods, empirical description, scientific abstraction and generalization, system-structural methods, management and making-decision theories, scientific assessments methods.

2.3 Research Ground

The research was carried out on the base of Samara region industrial enterprises, Russian Federation.

3. Results

3.1 Organization Changes Classification

In the article the author classification of organization changes allowing increasing manageability process of organizational enterprise development based on the system principle of specific criteria's accounting: reasons for changes' arising, their targets and radicality.

To increase manageability process of organizational enterprise development and to form scientific grounded and substantial enterprises' organizational changes research concept the classification was made which is based on the system principle. Author classification includes additional criteria, which allow considering organizational transformations' process at industrial enterprises more unprejudicedly and in detail.

In most scientific works concerning this issue organizational changes' classification was carried out applying priority, procedure and content approaches. The first approach is based on the principles of enterprise organization structure's forming up so organizational changes' classification is based on enterprise elements' priority. Content approach suggests organizational changes' classification on the base of organization links' emphasizing inside the enterprise and how all elements depend on them. Procedure approach allows carrying out classification on the base of organizational changes' process's studying and their priority over the enterprise system.

Following the procedure process authors generalized different classification variants and introduced his organizational changes' classification variant which defines three groups of organizational changes' characteristics.

Occurrence causes characterize essential classification criteria, which form organizational changes' ground;

Focus defines character, content and form of organizational changes' process realization and characterizes their effectiveness;

Radicality characterizes strategic and conceptual classification criteria.

The significance of this classification is that for the first time new organizational changes' systematization trends were segregated including enterprise's reaction to external factors' perturbation, methods of interaction with external environment and how to influence it in order to increase system functioning effectiveness.

Given classification gives the opportunity to evaluate all possible organizational changes' implementation trends and build the effective model for their realization. Given approach allows reflecting the necessity of real enterprise management processes interaction, especially organizational changes. On this base it's possible to implement enterprise development modeling by revealing the content of all organizational changes. So author's classification allows evaluating organizational changes at the enterprise more thoroughly and adequately and defining changes' process's essence and content, providing ideal balance between enterprise development and implemented enterprise organizational changes and also it gives the opportunity to manage organizational transformation' process in the conditions of unstable external environment.

3.2 Enterprise Research Mechanism

The proceeding of enterprise's research conducting which is considered as complex hierarchical system was suggested and justified, the necessity of enterprises' changes are determined by hypergenous and hypogenous systems as a ground for estimation methods' development of enterprises' changes' requirements level and industrial enterprises' readiness to their implementation and also for factors' systematization of multiplicative influence.

To define enterprise's readiness assessment to organizational changes and also factors' systematization which influences enterprise and forces it to carry out organizational transformations the proceeding of system research was elaborated explaining why the enterprise is considered as complex hierarchical system. System enterprise research predetermines methods instrument including gradual analysis, means and studying methods of enterprises' characteristics.

In my opinion the ideal enterprise research mechanism from the system analysis' point of view includes the following steps:

Finding system boundaries. Besides its own characteristics the enterprise has definite functioning boundaries, obvious or hidden at the same time depending on research tasks these boundaries can change;

Fixing all upper-enumerated systems, the part of which is researched system. Special attention should be paid to the most important systems, influencing directly the enterprise. It's necessary to consider that some contents of one system can be the contents of other system (people as a part political, social, ecological, economic and other systems) so all systems are examined in interaction and interrelation.;

Today's enterprises are analyzed as a single complex of different organizational elements, which are based on the organizational structure of management, economics, production, marketing, human resources activities of the innovation process and to ensure the work of the enterprise.

Thus, the systematic study of the enterprise allows distinguishing two types of systems. One of them includes the company as an integral part of the system; the second one covers the systems of the enterprise which are its integral parts. The systems of the first type we define as superior, the second type - as the downstream systems. The result is presented in the form of a diagram.

The hypergenous environment of the enterprise is defined by the authors as a combination of direct and indirect factors, as well as operating conditions, the influence of which the company cannot change, but their degree of impact influence the company's efficiency.

The hypogenous environment is characterized by significant factors affecting the company's activity from the inside, including the main elements and ensure the functioning of the system. All systems are interconnected, they often have common elements, but the goals and tasks of the systems are different, sometimes they can be absolutely the opposite.

The first group of the superior systems includes the system of long-range environment and indirect impact on the company, which are determined by complex and uncertain relationships within the macrosystem. These systems have an impact on the company, which is reflected in its activity. In this case, the enterprise is unable to manage the impact of factors and can only respond to them by adapting to the external conditions of functioning.

The second group of the superior systems can be called as a system of direct influence or systems of the inner circle. Among them there are the following systems: the regional system, the branch system (including the system of suppliers, the system of competitors and the system of consumers), the system of shareholders.

The company may have an impact on this group of systems and control these factors. These systems compile a group of inner circle and the factors determining competitiveness of enterprises.

All systems of boundary and inner circles affect the company multiplicative because they are complex, dynamic systems, and the effect of their combined impact cannot be determined by simple summation. The changes that occur in the same system, lead to the inevitable changes in all the related systems, and these changes are of diverse nature. Thus, an increase of the company's output increases the load on the environment, the wage growth leads to an increase in inflation, etc.

Let us turn to the second block of systems that characterize the work of the enterprise and its structure. These lower level systems are included as the main components in the system of the enterprise. These systems can be classified by various criteria. The functional approach has been chosen to determine the features of these systems. Thus, several subordinate systems, that perform some specific tasks and functions, have been allocated. All systems of the enterprise are divided into two subgroups: the main systems and the systems providing the enterprise.

The change management system, which ensures the enterprise development in accordance with the intended targets by adapting to changing operating conditions, is set aside. This enterprise system has its own functions and tasks that are different from other hypogenous systems, the detection of changes in environment, forecasting the development, the development of programs and activities to respond rapidly to changes in operating conditions.

The system research involves the study of the enterprise structure of each of these systems, i.e. the internal structure of its components, their relationships and interrelationships. In addition, it is necessary to determine the functions of the individual systems and their contribution to achieve the main goals of the enterprise.

3.3 The Methodological Tools of the Systems Research Necessary in Organizational Changes and the Enterprise Readiness to Conduct Them Containing Complex Methods of Assessing the Impact of the Hypergenous and Hypogenous Environment and Analyze Their Overall Impact on the Needs and Readiness of the Enterprise to Carry out Organizational Changes

On the basis of the company's systematic research the authors have highlighted the main impact systems, which determine its ability to implement organizational changes, the methods of assessing the enterprise readiness to organizational changes, including the following steps.

- 1) We assess the hypergenous and hypogenous environment affecting the enterprise readiness to organizational changes.
- 2) We determine the stage of the life cycle in which the enterprise is located.
- 3) We analyze the comfort environment level affecting the company in terms of complexity, uncertainty and stability.
- 4) On the basis of the data we set the enterprise readiness for organizational changes, the need to implement them, we choose the areas for organizational changes and identify the problem and the most promising areas for the business development.

The methodology of systems research at the enterprise is the basis for this process. In our view, the most significant impact on the need for organizational changes and the enterprise readiness to implement them has the following superior systems: economic, social, environmental, technological, industrial and the system of stakeholders. As for the lower systems most important are: financial, personnel, production, innovation, marketing, information, management and support systems.

For each of the systems the authors have analyzed the specific indicators with absolute values, which have become the basis for expert estimation of the impact of these systems on the need for organizational changes and the enterprise readiness to implement them (Table 1).

Table 1. Status indicators for hypergenous and hypogenous systems

System	Indicators
Hypergenous systems	
Economic	The inflation rate, the total GDP, the foreign trade turnover in the structure of the balance of payments, the amount of tax revenues, the investment activity and others.
Social	Indicators that characterize the demographic level, the unemployment rate, average wages, the social structure of the population, the educational level, etc.
Ecological	The level of environmental safety, the volume of spending on ecological activities, environmental pollution, the amount of national environmental programs and others.
Technological	The level of innovation activity, the volume of research and development, the degree of manufacturing application, the degree of being equipped with new machinery, the update rate of the produced goods and others.
Industrial	The level of the industry product production, the amount of industrial producers, the level of free-to-market, the level of competition in the industry, the average price of industry products, the industry market segmentation, etc.
The systems of stakeholders	Indicators that determine the amount of stakeholders, their main characteristics, and the level of their impact on the company's activity, the degree of the enterprise interest in a particular stakeholder.
Hypogenous systems	
Financial	Indicators of the financial stability level, structure, balance of payments, the amount of financial debt, and the level of solvency, liquidity and profitability of production.
HR	The age and gender composition of employees, the educational level, the skill level, the level of staff turnover, average wages, etc.
Production	The enterprise capacity level to ensure the production means and objects of labor, the degree of hardware upgrades, the production volume, etc.
Innovation	The innovative product range, the level of employees' innovation activity, the level of production technology updates, the amount of new ways of doing business, the implementation level of STP' achievements and others.
Marketing	The level of product sales, the amount of the advertising costs, and participation in exhibitions, the amount of inter-regional relations, retail sales centers' branching and the amount of signed contracts, etc.
Information	The availability and amount of information databases, the amount of technical information resources, the level of renovation, the equation of information flows, the level of information security of the control unit, the amount of the local corporate networks, the level of confidential information security, etc.
The management system	The level of organization of production management, flexibility of organizational structures, the level of management functions centralization, the quality implementation of management functions, the speed of management decision-making, the level of advanced management methods' implementation, the development of internal production relations and others.
Supporting system	The level of supplying the main company's activity with the necessary resources, the level of the system fitted with equipment, the amount of the costs to provide the main activity and others.

On the analysis of the absolute values of individual indicators of each system the authors have identified the score values of these systems impact on the need for organizational changes by expertise. On the base of the

experts' scoring the influence matrix systems of the hypergenous and hypogenous environment have been drawn, in which each system corresponds to one row, and the expert estimation of system impact is presented in scores (Table 2). The example shows the effect that the systems have on the conventional enterprise.

Table 2. The matrix systems influence of hypogenous and hypergenous environment on the need for organizational changes

	Expert estimation	Scores									
		1	2	3	4	5	6	7	8	9	10
Hypergenous systems	The conomic system		x								
	The social and political system				x						
	The ecological system		x								
	The technological system				x						
	The industrial system						x				
	The system of consumers									x	
	The system of suppliers							x			
	The system of competitors					x					
	The financial system				x						
	The HR system			x							
Hypogenous systems	The production system						x				
	The innovation system							x			
	The marketing system			x							
	The information system							x			
	The management system				x						
	The supporting system								x		

The closer the values of systems influence levels to the set parameters are (10 scores), so the lower the need for organizational changes is. In order to find out the degree of the need for organizational changes we determine the median value of the scoring. If the median is in the range from 1 to 3 - the degree of the need for organizational change is high. With the median of 4-7 scores, the degree of necessary for organizational changes is medium. When the median is from 8 to 10 scores, the degree of the need for organizational changes is low.

At the next step the stage of life cycle was defined at which the enterprise is at the moment. To carry it out it's

necessary to set an enterprise performance effectiveness indicator, to evaluate its dynamics during the last period (5 years), and on the base of which the conclusion about what stage the enterprise is developed was made by expert method.

Then on the questionnaires' ground of enterprises management sector the comfort level of the working environment was analyzed by complexity, uncertainty, stability. One of considered indicators is characterized by some characteristics, enterprises manages evaluate them in questionnaires. Following the results of questionnaires the environment's comfort level is defined for the exact enterprise by an expert way. We allocated four comfort levels influencing enterprise readiness for organizational changes' realization: comfortable environment, neutral environment, hostile environment and catastrophic level.

By comparison of enterprise life cycle's stages and comfort level of the environment the matrix is formed which allows it to determine enterprise readiness level for organizational changes (table 3)

If the enterprise gets into area with the value of readiness level of "4" , it means that possibility for organizational changes realization and results' achievement is very high, value "3" characterizes average degree of enterprise readiness for organizational changes and possibility for goals' achievement, "2" defines low degree of opportunity to carry out organizational changes and to reach the planned results, "1" means that in these conditions to carry out organizational changes is inexpedient.

Table 3. Matrix of enterprise readiness to organizational changes

Environment comfort level	Enterprise life cycle			
	Formation	Growth	Maturity	Decline
Comfortable	4	4	4	2
Neutral	3	4	3	1
Hostile	2	3	2	1
Catastrophic	1	2	1	1

The developed complex research mechanism of necessity for enterprise organizational changes implementation and its readiness allows to receive more exact assessment of various systems influence on enterprise functioning, to carry out comparison of competing companies, to form the effective program of these changes in according to a stage of enterprise life cycle.

3.4 The Organizational and Economic Directions of Enterprise Readiness Increase to Implement Organizational Changes Containing Program Development of Organizational Changes' Management and the Creation of Special Structural Division of Organizational Changes' Management Are Offered

The author developed a package of measures, aiming the enterprises readiness for organizational changes, to carry out this it's necessary to develop management program allowing to minimize negative consequences of hypergenous and hypogenous environment influence of the on functional stability of enterprise's operation.

In this program the directions of carrying out organizational transformations are chosen, and also problem and most perspective sites for enterprise development are defined, and also the principles of fast response to any environment changes from the part of enterprise management, the systematic environment analysis, and timely changes' identification which can negatively influence enterprise's work are consolidated. Besides, there should be maximum system adaptability that will allow to provide management flexibility structure.

The program has to include the main objectives of organizational changes realization, tasks aimed at the organizational enterprise development in the field of production and administrative activity, namely change of resource raw materials, the production technology, functioning tactics and strategy, organizational structure, purposes and methods of business running, corporate culture taking into account the stage of enterprise life cycle. Also terms and stages of organizational changes' implementation have to be stated in the program, the main actions promoting their effective realization are listed. Besides, in the data control changes program volumes and financing sources are specified, the main performers and their powers, manager's competences responsible for changes realization the who makes decisions about time and sequence of carrying out these or those transformations. The expected results of organizational changes' realization are reflected in the program and the monitoring organization system is registered.

Enterprise readiness increase to organizational changes will be promoted by separate division creation which is responsible for this direction realization. Such department can be created on a constant basis, on a temporary basis, and also experts in the field of changes can be attracted for a certain term from the specialized companies. The form of department organization depends on enterprise's requirements, its size and work specification. Process management of organizational changes' implementation has to be the main function of the department.

Competence of organizational changes management department has to include powers on tendencies research of enterprise external and internal environment, the analysis of occurring transformations and future transformations forecasting, definition of the enterprise development tendencies, strategy development and changes realization methods' development, control of their implementation, correction of the main activities if it's necessary.

In this department all information on the carried-out changes which is subject to the detailed analysis of effective remedies' identification and realization methods has to be collected. Besides, in the direction realization course, the opportunities to coordinate activity of other enterprise division for the purpose of efficiency increase of organizational changes realization have to be in the competence of this department.

Enterprise readiness increase to changes is promoted by staff overcoming the resistance. Resistance to organizational changes causes relations destabilization between employees and managers, puts at risk the productivity of implemented transformations.

To overcome the resistance at the initial stage it is necessary to involve all employees in decision-making process that will allow to lower degree of discontent and denial on happening changes. It will be promoted by enterprise Organization Council's creation to manage changes in the content of which there should be the representatives of labor collective nominated by workers, the representatives of the management responsible for changes realization, and also the representatives of trade-union committee.

To implement organizational changes it is necessary to provide staff employment, regularly to inform workers on the course of changes and the reached results, to establish the comfortable psychological atmosphere, to motivate the personnel on active participation in changes. For this purpose it is necessary to create stimulation achievement system of separate results promoting objectives' achievement of the organizational changes including psychological encouragement, costs compensation, providing social benefits. During changes at each enterprise special incentives for employees have to be found, aiming to reduce personnel resistance constraining efficiency of changes implementation.

Also successful changes realization is promoted by organizational culture level increase by introducing special training programs forming the positive employees' attitude to changes and their results through personnel training organization.

In the conducted dissertation research methodical tools were developed allowing the enterprises to increase readiness for organizational changes' implementation the essence of which is changes management program development, organization of special changes management division, and also conditions' creation to overcome the resistance to changes from the personnel.

4. Discussions

Scientists from different countries were engaged in consideration of the problems connected with organizational changes. The significant contribution to theory research and a conceptual framework in the field of organizational changes was brought by Akoff (1981), Ansoff and McDonnell (1990), Boyett J. H., and Boyett J.T. (2014), Chernetsov (2004), Gitelmann (1999), Harrington (2006) and other scientists.

The most known scientific development in the field of organizational enterprise management development was carried out Gulati, Lawrence, & Puranam (2005), Hiatt (2006), Piscitello (2004), Prigozhin (2003) and other researchers.

Such works of Russian and foreign scientists in the field of enterprise conditions diagnostics during organizational changes, namely: Duck (2001), Duncan (1992), Konev (2005) etc.

At the same time it should be noted that, despite research divergence in the field of organizational changes, authors insufficiently consider peculiarities of domestic enterprises activity, mentality peculiarity and corporate cultural traditions. There is no unique approach to requirements level and enterprise readiness to organizational changes implementation. The necessity for theoretical and methodical solution to specified problems allowed to define the purpose and to set the tasks of the real research.

5. Conclusion

Introduction of authors' proposals to enterprise requirements level implementation and its capacity to implement organizational changes allowed to increase objectivity, efficiency and speed of administrative decision-making process. The proposed solutions allow to plan production effectively, increase decision-making objectivity, and influence economic activity's efficiency essentially.

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