

Organizational Structure Forming Problems in Modern Industrial Enterprise

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Information technologies quickly develop in a knowledge society, the speed of the introduction of new knowledge also increases, so the modern enterprise seeking for the new management possibilities tries to use all these opportunities. In this process the forming of the human resources is very important in this process such is the development of the education system. Information transfer for the individual user is the inseparable part of the communication process inside the organization. For communication to be effective the organization has to distribute the positions, competences, responsibilities and motivation that are determined by the organizational structure.

The importance of organizational structures is declared by the scientists and practitioners of various countries (Galbraith, 1994; Гвунууану, 2005, Soldatos., Hardy, 2004. Minzberg, 1984; Paliulis., Chlivickas, 1998), but only few of them have modern organizational structures. The organizational structure can be discussed from several points of view: as the initial base necessary for the formation of the structure and the necessary number of employees (this special aspect is stressed in this paper) and as the system ensuring the change of effective information. Severe competition requires the creation of modern and present day changes corresponding organizational management structures. Huge, bureaucratic, high hierarchy structures with long and insufficiently motivated chains of solution approval actually are unable to work good enough in the situation when quick changes take place in business. With the speed of the changes of global economy in mind it is important to know that the restructuring of organizations in accordance with the situation in the present day business environment can improve the situation only for a short time. The possible outcome can be only the constant adaptation of the organizational structure to the changing internal and external conditions.

Keywords: *management, traditional, progressive organizational structures; formation principles.*

Research aim. The new approach to the creation of the organizational structures, and the possibility to see their development is especially acute present day problem. The changes in economics during the last decades clearly modify the activity situation and forms of organizations. Today we more often discuss the methods of the designing of new modern organizational structures. It is

very important to seek for innovative, modern organizational forms, helping to survive, adapt and cherish in the constantly changing global market. The old models of designing the organizational structures do not correspond the situation in organizations ready for restructurization, reorganization and even reconceptualization, because they have been designed for the traditional business environment that greatly differs from the modern one.

Scientific problem. The present day, dynamic environment can not have stable organizational structure that has been shown in the papers of many foreign and Lithuanian authors. The organizational structure must be flexible, able to survive in various situations and changes in the market. The problem became also much deeper because the scientific literature proposed one-sided and truly theoretical organizational design models that were not related either with the business situation realities or other management and economical theories. Thus the preparation of the methodology for the designing of modern organizational structures that could be used to form organizations in global business environment is really important scientific problem.

Investigation object. Traditional principles of the formation of organizational structures and their suitability for the modern requirements are analyzed. Advanced organizational structures are reviewed, and the peculiarities of the structure formation and the problems of their practical realization are discussed.

Investigation methods. The analysis of scientific literature and the investigation fulfilled.

Organizational structure – the base of the enterprise activity formation – traditional approach

The acceleration of the rate of scientific and technical progress, advance in technology and conduct “know-how” stimulates the further functional and qualifying division of administrative work. It is caused by the complication of functions, occurrence of new directions in activity of functional and linear parts at the enterprises, the process of being detached from traditional specific functions with their new kinds.

Perfection of calculations of requirement of the enterprises in number of manpower demands first of all a scientific substantiation of the formation process of functional structure of industrial-production personnel based

on the leading part of a functional division of labour in a system of labour division at the enterprise.

Revealing of optimum structure of manpower is also complicated because attempts to perfect the analysis are reduced to perfection of calculation of some parameters, but not the analysis technique. Such method does not give appreciable results without change of the approach for the analysis and its information base.

Manpower of the enterprises as on the number, structure, and vocational structure develop under the influence of technical, technological, organizational, economic, social and demographic factors. The account of the influence of each group of factors on the formation of the number and structure of the manpower of the enterprises is represented as being rather important for perfection of the mechanism of formation of these resources.

For the purposes of the formation of the manpower of the industrial enterprises and the analysis of the influence of technical progress on the structure of workers is shown in the following scheme (Figure 1).

Under the influence of technical progress changes not the content of production functions, but the way of their fulfillment, and, hence, the production structure, and only then the changes in professional structure of workers take place.

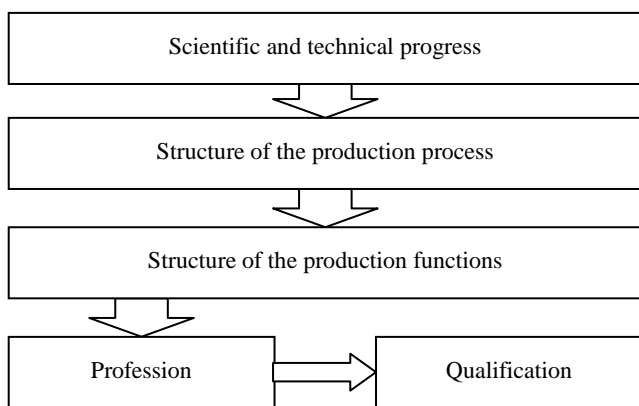


Figure 1. Influence of the scientific and technical progress (STP) on the structure of a manpower

For the characteristic of qualitative structure, structure progressiveness and manpower structure at the enterprises the following scheme of the analysis is used (Figure 2).

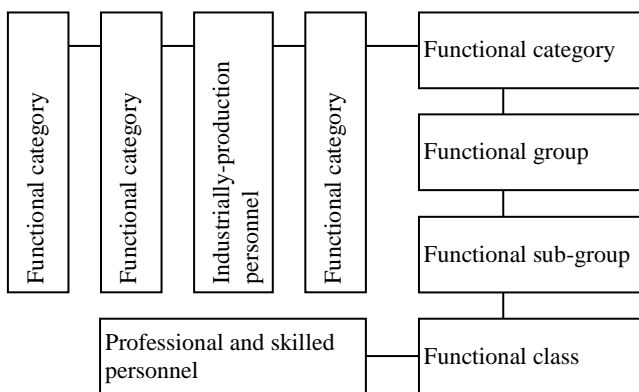


Figure 2. Formation of manpower of the industrial enterprises

The offered scheme of formation of manpower of the industrial enterprises allows using more widely the analy-

sis with a view of rational arrangements of the working process and reductions in the employee number. Thus objects of comparison can become the staff not only of the similar enterprises of one branch, but of various branches of social production. In addition, the mechanism of manpower formation of the enterprises represents the many-sided process reflecting the influence of various factors, and neither of them can be neglected. Schematically it is possible to represent it as follows (Figure 3).

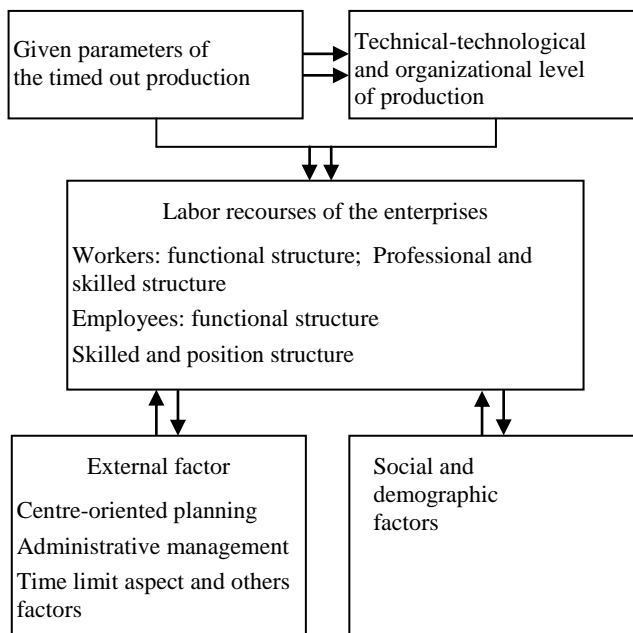


Figure 3. The mechanism of formation of manpower of the enterprises

The problem of manpower formation of the industrial enterprises has certainly independent value. It is visible that as the objects of management act such sides of industrial-economic activity as definition of rational structure of the industrial personnel, work process organization during manufacture, increase of efficiency of use of real work and perfection of qualitative structure of a cumulative labour at the enterprise.

The traditional approach to the formation of organizational structure based on traditional management structures – functional, linear, and linear-idol is presented. These structures are peculiar because of high specialization level of the employees, one-sided management, authoritarian management style, structure stability, etc. Though traditional management structure are being criticized today (Galbrait, 1994, Kozlov, 2001, etc.), this is the necessary stage while creating the new organizational structure. **The change of the situation should also bring the change of the management structure, and this change must depend on the external situation and the situation inside the enterprise.**

New organizational structures and the peculiarities of their formation

The idea that as many employees as possible should take part in the management has to find its way in **the new management structures.** We distinguish between

matrix, tensoric, divisional and Likert communicating group structures. Sakalas (2003) stated that the design management lately becomes more popular (Organizational ..., 2004), mobile, horizontal – plane, flexible, client-oriented, quick, global, undefined, quickly reacting, able to adapt, team and net type organization (<http://instruct1.cit.cornell.edu>). R. Johansen and R. Swigart (1995) describe the new organizational structures as the organizations anywhere at any time, the structure of which is net type or virtual (Figure 4).

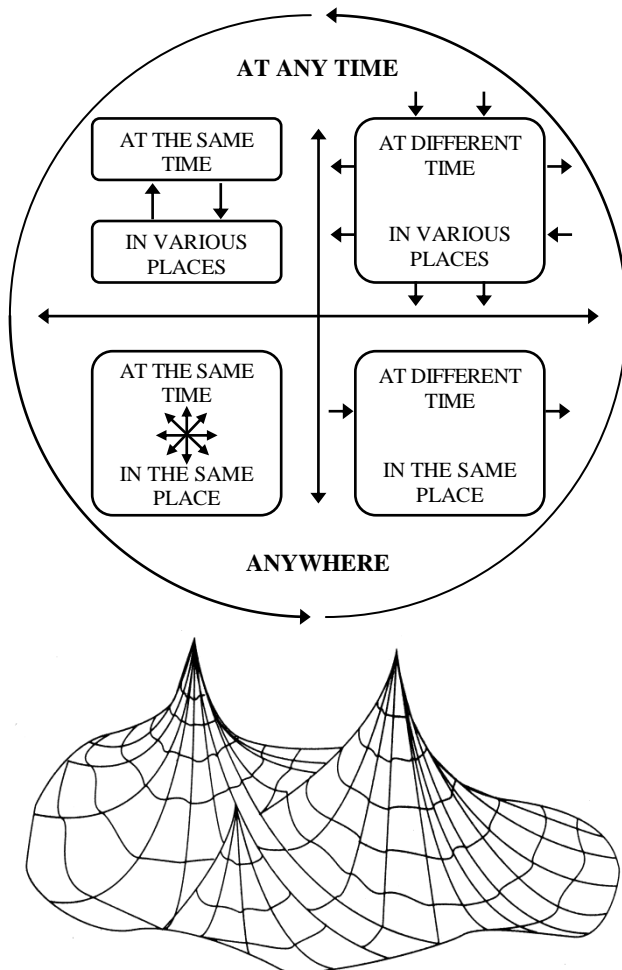


Figure 4. Net type organizational structures

The amalgamation of several business units is peculiar to these structures, where people and work processes are closely related in order to reach common results and mutual advantage.

According to A. Vasiliauskas (2006) the new structures should correspond to the following characteristics:

- the structure has to be flexible and guarantee that the experts should not only better use their skills and experience, but could conquer new fields despite traditional limitations;
- the experts of the corresponding technical or functional field but not the higher level managers of the organization should coordinate the team work;
- the power between the experts in the team should be divided only to the necessary extent;
- the main activity in the team should be based on

the cooperation and discussions.

Summarizing one can state that all the mentioned organizational structures are but temporary, and with the change of production needs, demand, and supply, the tasks also change, as well as the organizational structure. Thus new requirements for their formation and restructurization should be designed.

Methodology to form advanced organizational structures

When organizational problems arise, the leaders most often than not concentrate on the most acute problems and shortcomings and violate the systematic principle. Many theoreticians come to the conclusion that the new organizational structure is needed if one has to satisfy the demands in a quickly changing environment. C. Hastings (1993) stated that the systematic avoidance of physical, personal, hierarchical, functional, psychological limits enables the organizations to remain flexible and easily adaptable. If this is achieved then the team work will prosper in such an atmosphere. But in fact, one can encounter with the internal limits in the organization, and most often between the two elements of the organization. The investigation fulfilled by Hutt, Walker and Frankwick (1995) showed the following possible barriers of the transfer to the new organizational structure:

- *the theoretical barriers*. The power, prestige and status of the leaders arises because of their position and post, thus they oppose to the changes that will induce them to share people, information and resources with their team members;
- *the explanatory barriers*. Separate functional groups may have different approaches and goals;
- *the communication barriers*. The groups with different functions may have their own communication signs, words, abbreviations known only to the team members.

According to N. Paliulis, E. Chlivickas (1998) the organizational structure first of all depends on its objectives and long-term plans. While organizing the structure one must fulfill all the traditional jobs of the formation of organizational structure: *labour sharing* (optimum division of work as a whole into the separate jobs or operations and the appointment of specific employees or workers who will do these jobs), *formation of structural skills* (definition of the composition of the employees and enterprise divisions and communication between them), *hierarchy creation* (the creation of the specific number of the management levels), *coordination* (correction of the activities of the executives in case their actions do not correspond to the adopted plan). In this case, the operation system of the external and internal factors is significantly expanded. According to M. Goold and A. Campbell (2002) the optimum organizational structure depends on 4 organization acceptability factors and 5 organization structural principles for the investigation of which the test prepared by the Centre of London Ashridge Strategic management is suggested. This test is divided into four acceptability tests and five structure tests (Figure 5).

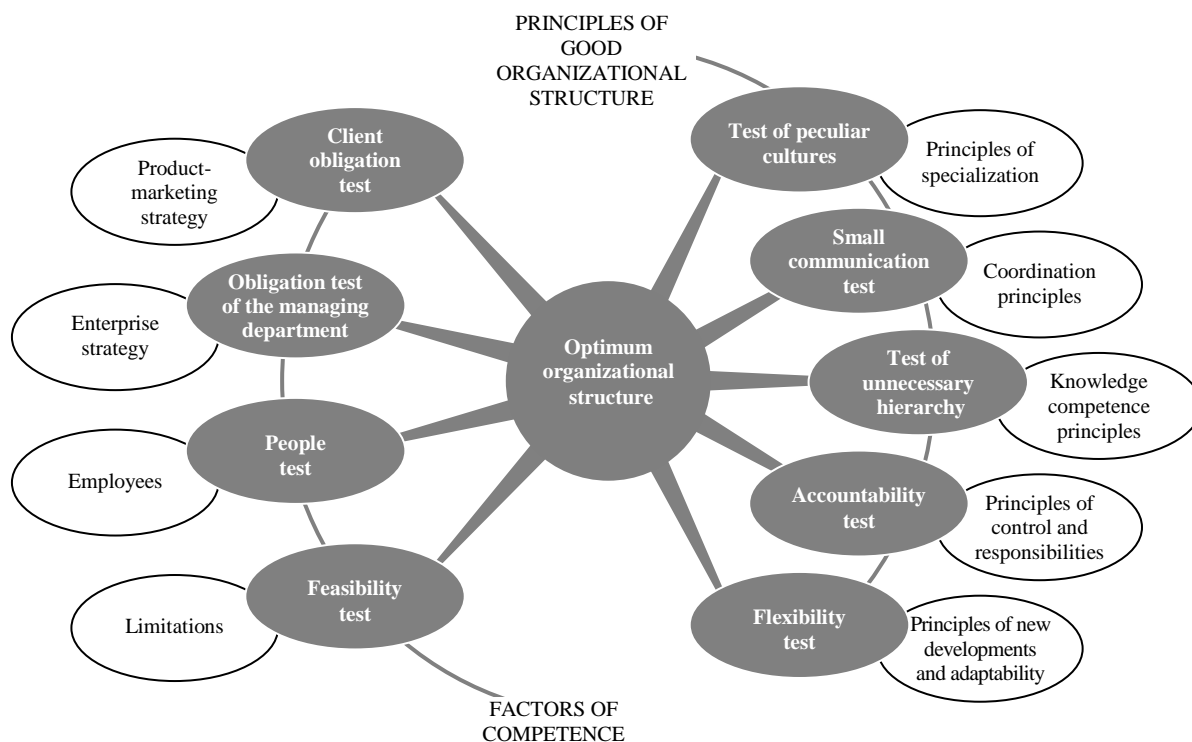


Figure 5. Optimum structure estimation tests

The four acceptability tests first of all disclose the structure alternatives showing whether the present organizational structure supports: the institution strategy, the talent group present between the employees, the present situation of the institution.

The five structural tests can help the institution to improve the perspective structure by solving the potential, problematic fields, including the feasibility and control balance.

Very important conclusion of the investigational work of the authors is as follows: after the test is fulfilled and the drawbacks of the created structure are revealed, first of all, **one should try to remedy the noticed shortcomings without changing the structure**. M. Goold and A. Campbell (2002) also disclosed the means that could be used: **the changes without changing the division** (to improve the attribution of the responsibility, to develop the relations and processes of the settlement, to improve the horizontal relations and processes, and to improve the accountability); **to newly define the skill requirements and incentives** (to change the criteria for the people selection, to improve the needs for the skill development, to improve the incentives); **to fulfill great changes in the departments** (to fully change the department limits, to change the department role, to establish new departments or to join the old ones); **finally, the great structural changes can be made** (the structure can be changed, the settlement lines can be changed, new departments can be created). If this is insufficient, the essential changes should be made and the structure should be refused.

In conclusion, one can state that all the factors influence the organizational structure itself and the preconditions of its establishment in one way or another. Thus the anticipation and estimation of its development trends is individual and specific for every enterprise.

It is stressed at present that **the strategy impact on the structure** is not fully used. The new strategy most

often requires the new structure. Different variants can be noticed here:

- new strategy often requires innovative and special means. E.g., when creating the learning organization one must solve specific problems – to foresee the means of how to motivate the knowledge exchange, how to stimulate the transfer of the hidden knowledge to the clearly expressed ones or similarly; when developing new products, new departments should be established or the means for the license purchase should be found. It should be taken into account, that the extreme concentration to the development of one trend may reduce the complex of the whole system;
- the main factor for the introduction of the new strategy is the employees of the enterprise that adopt or reject the proposed means. Thus special attention should be paid for their education, training, introduction into management and the increase of their activity;
- it is very important to choose between the revolutionary and evolutionary or gradual strategy of the changes or reorganization. Evolutionary reorganization enables us to save the existing structures and the work content changes only insignificantly. But every evolution requires greater or smaller changes, that are summed up and in the long run are transformed into an essential changes;
- the communication level has great impact on the strategy realization. 73% of American, 63% of English and 85% of Japan leaders estimate communication as the main drawback while maximizing the operation efficiency of the organizations (Paliulis, Chlivickas, 1998). Various communication forms are used for this purpose.

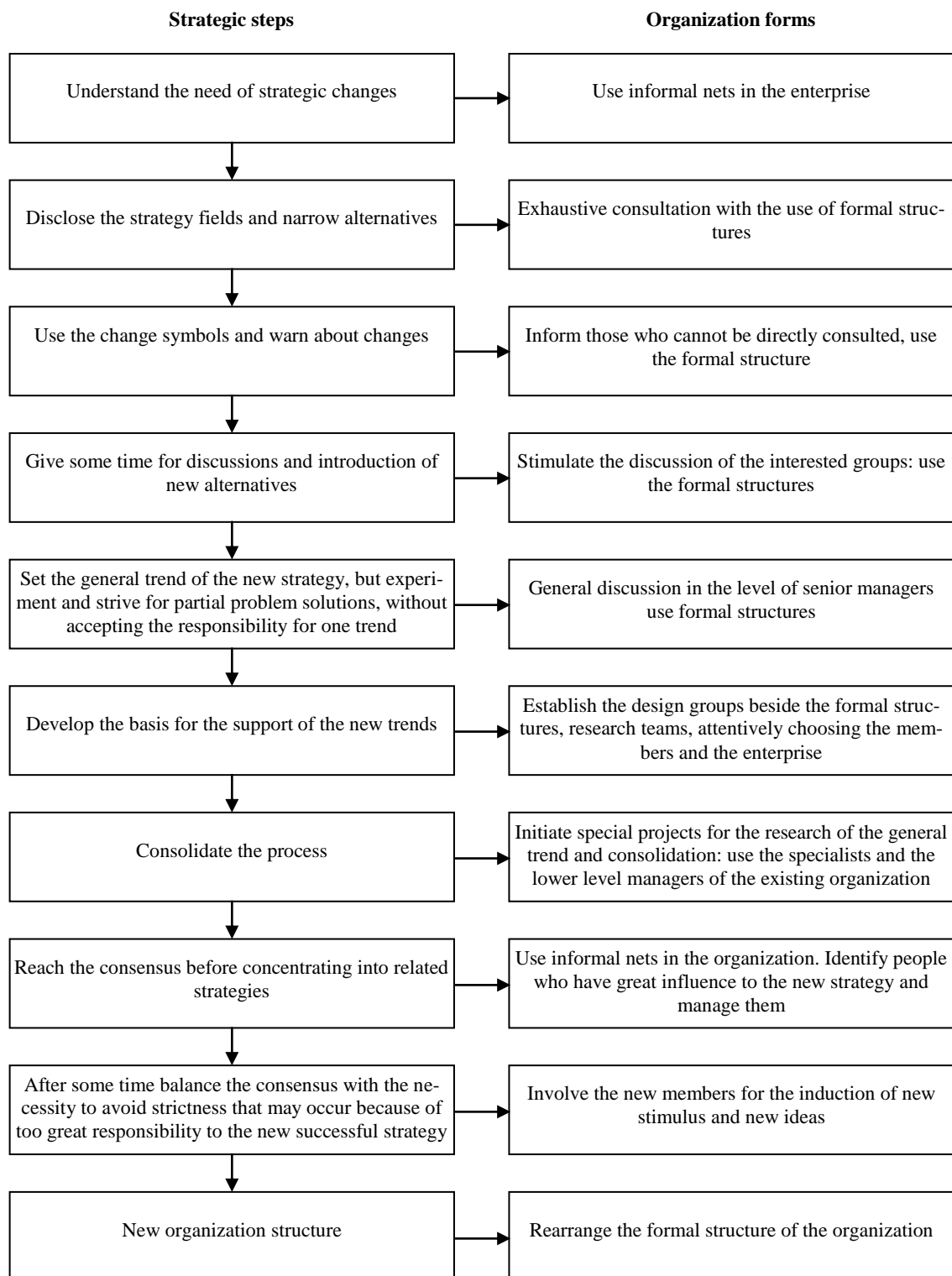


Figure 6. Logical instrumentalism and its organizational forms

The main relation of the structure and communication lies in the fact that they are used for the introduction of the novelties, the use of the possibilities and the risk accept in the organization. The communication models in the modern organizations are as follows: from top to the bottom, horizontal and from bottom to the top. In business organization one tries to avoid the case when all the communication comes from top to the bottom. Business organization used both formal and informal communica-

tion – it is best described by the concept “productive communication”. Four elements comprise the productive communication: (1) the distribution of the information (intensively, in real time, with the supportive culture in mind, and using the productive formal techniques), (2) clear communication, (3) effective listening, and (4) activity (Cornwall, Perlman, 1990; Jucevičius, 1998; Seilius, 2001; Butkus, 1996).

In conclusion, one can state, that the organizational

structure of the enterprise is the basic element of the enterprise activity, the level and development of which determines the success of the problem realization of the enterprise. Thus special attention should be given to the constant development of the organizational structure.

Conclusions

1. The organizational management structure of the enterprise makes the body of the enterprise activity, which on one hand, has to secure the stability and, on the other hand, must constantly change in relation to the changing tasks – strategy, enterprise environment, and internal level and changes.
2. Traditionally the methodology of the enterprise management structure formation is based on clearly expressed tasks, work specialization, cooperation, hierarchical structure, clear understanding of the autocracy, stability, etc.
3. The change of the environment development speed, globalization level, rivalry, the increase of the speed of the introduction of new developments and their realization, the new requirements for the formation of the management structures occur. Without denial of traditional forming principles of the management of organizational structures, one should admit, that the modern enterprise structure meets new requirements oriented into the staff participation in the management, the delegation of the tasks and responsibilities, the development of the communication system, etc. This brings to the development of new management structures, i.e., matrix, tensoric, Likert communication groups, virtual, and net type ones.
4. The formation of new management structures enables to explain some peculiarities, common features and the problems:
 - on one hand, the management structures are attributed to the hard part of the organization. They cannot be easily changed, strive to keep the already formed structure; on the other hand, the further success of the enterprise depends on its correspondence to the changing conditions;
 - breaking of the management structure is not necessary element of the structure change. First of all, we recommend to use the advantages of the introduction of partial means;
 - the enterprise structure may change revolutionary – galloping or in evolutionary way, by gradually reorganizing the structure. Both methods, in the dependence from the environment and internal conditions have their own advantages and disadvantages. This supports the statement, that the mechanism of the structure formation impacts on the external and internal enterprise conditions;
 - the enterprise management structure must be tuned with the strategy the enterprise fulfills. One of the most important moments during the realization of the tuning process is the introduction of the employees into the enterprise

management, their education and training, involvement into the existing processes;

- the enterprise management structure has to be tuned with the communication system. One can state that they are two operation parts of one system.
5. In conclusion, one can state that the reorganization of the management structures is complex and specific process for every individual enterprise that is rather fully disclosed and discussed in theoretical level but still has many weak points in the field of its practical application. The changes in this field are possible only after the real reorganization of the new organization management structures.

References

1. Baliga, B. R., & Hunt, J. G. An Organizational Life Cycle Approach to Leadership // J. G. Hunt & B. R. Baliga & H. P. Dachler & C. A. Schriesheim (Eds.), *Emerging Leadership Vistas*. Lexington, MA: Lexington Books, 1998, p. 129-149.
2. Butkus, S.F. *Organizacijos ir vadyba*. Vilnius: Alma Litera, 1996.
3. Cornwall, J.R., & Perlman B. *Organizational entrepreneurship*. Homewood. Irwing, 1990.
4. Donald, A.W. *Organizational structure of open source projects: a life cycle approach*, 2004.
5. Galbraith, J.G. *Competing with Flexible Lateral Organizations*, 2nd ed.-Reading, Mass.: Addison-Wesley, 1994, Ch.1.
6. Galbraith, J.R. *Organization Design*. Reading, Mass.: Addison-Wesley, 1977, Ch. 1.
7. Hastings, C. *The New Organization Books*, 1993. [http://www.gurteen.com/gurteen/gurteen.nsf/id/X000239EE/Hurdle the Cross-Functional Barriers to Strategic Change](http://www.gurteen.com/gurteen/gurteen.nsf/id/X000239EE/Hurdle%20the%20Cross-Functional%20Barriers%20to%20Strategic%20Change).
8. Johansen, R., Swigart, R. Upsiting the individual in the downsized organisation: management in the wake of reengineering, globalisation and overwhelming technological change. *Weslag*, 1996.
9. Jucevičius, R. *Strateginis organizacijų vystymas*. Monografija. Kaunas: Pasaulio lietuvių mokslo ir kultūros centras, 1998.
10. Mintzberg, H. *Power and Organization Life Cycles* // *Academy of Management Review*, 1984, 9(2).
11. Paliulis, N., Chlivickas, E. *Vadybos pagrindai: mokomoji metodinė medžiaga*. Vilnius: Technika, 1998.
12. Sakalas, A. *Personalo vadyba*. Vilnius: Margi raštai, 2003.
13. Seilius, A., *Vadovavimas sprendimų priėmimo procesui*. Monografija. Klaipėda: KU, 2001.
14. Soldatos, J. & Hardy, J. *Organisational Structure and New Product Development in the Australian Grocery Market* // *Economics*. 2004, Vol. 65, No. 1.
15. Vasiliauskas, A. *Strateginis valdymas*. Vadovėlis. Kaunas: Technologija, 2004.
16. Ward, A. *The Leadership Lifecycle*. Houndsmill, Basingstoke, Hampshire: Palgrave MacMillan, 2003.
17. Бовыкин, В.И. *АСНовый менеджмент (управление предприятиями на уровне высших стандартов, теория и практика эффективного управления)*. М: ОАО Экономика, 2004.
18. Гвишиани, Д.М. *Предприятие и управление*. Изд. 3-е, перераб. М: Изд. МГУ им. Н.Э. Баумана, 2005.
19. Козлов, А.А. *К вопросу управления персоналом в условиях переходной экономики* // *Менеджмент в России и за рубежом*. 2001, No.1.
20. Маршалл, А. *Принципы экономической науки*. Пер. с англ. М: Прогресс, 1993.
21. Яковлев, А. *Промышленные предприятия на рынке – сдвиг в структуре хозяйственных связей – состояние и перспективы конкуренции* // *Вопросы экономики*. 1996, No.11.

Organizacinės struktūros formavimo problemos šiuolaikinėje pramonės įmonėje

Santrauka

Žinių visuomenėje sparčiai tobulėja informacinės technologijos, didėja naujų žinių diegimo Sparta, todėl šiuolaikinei įmonei, ieškančiai naujų valdymo svertų, labai svarbu šiuos privalumus panaudoti. Šiame procese ypač reikšmingas įmonės žmogaus išteklių formavimo, ugdymo sistemos tobulinimas. Kad komunikavimas vyktų efektyviai, organizacijoje reikia paskirstyti pareigas, kompetenciją, atsakomybę ir motyvavimą, o tai lemia organizacinę struktūrą.

Organizacinių struktūrų svarba yra deklaruojama įvairių šalių mokslininkų ir praktikų, tačiau tik nedaugelis įmonių turi pažangias organizacines struktūras. Organizacinė struktūra gali būti nagrinėjama keliais požiūriais: kaip pradinė bazė reikalingam darbuotojų skaičiui ir struktūrai formuoti (šis aspektas akcentuojamas šiame straipsnyje) ir kaip efektyvios informacijos kaitą užtikrinanti sistema. Aktuali konkurencija reikalauja kurti modernias ir šiuolaikines pokyčius atitinkančias organizacines valdymo struktūras. Tradicinės organizacinės valdymo struktūros nėra pajėgios efektyviai dirbti nuolat greitėjančių pokyčių versle sąlygomis. Turint omenyje globalios ekonomikos pokyčių tempus, svarbu suprasti, kad organizacijų restruktūrizavimas pagal šiuolaikinės verslo aplinkos sąlygas tik trumpam gali pagerinti situaciją. Išėjimas gali būti tik nuolatinis organizacinės struktūros prisitaikymas prie kaskart kintančių aplinkos vidaus sąlygų. Šiame straipsnyje nagrinėjamos problemos, su kuriomis susiduriama diegiant pažangias organizacines struktūras.

Įmonės organizacinė valdymo struktūra sudaro įmonės veiklos karkasą, kuris, viena vertus, turi išlaikyti tam tikrą stabilumą, antra vertus, turi nuolat keistis, derindamasis prie kintamų uždavinių – strategijų, įmonės aplinkos ir vidinio lygio bei pokyčių. Tradiciškai įmonės valdymo struktūros formavimo metodika remiasi aiškiais uždaviniais, darbo specializavimu, kooperavimu, hierarchine struktūra, aiškiu vienvaldiškumo supratimu, stabilumu ir kt. Pasikeitus aplinkos vystymosi tempams, globalizavimo lygiui, konkurencijai, išaugus naujųjų įsisavinimo ir diegimo tempams, formuojasi nauji

valdymo struktūrų formavimo reikalavimai. Neneigiant tradicinių valdymo organizacinių struktūrų formavimo principų, reikia pripažinti, kad šiuolaikinės įmonės struktūrai keliami nauji reikalavimai, orientuoti į kolektyvo dalyvavimą valdyme, uždavinių ir atsakomybės delegavimą, komunikavimo sistemos tobulinimą ir pan. Tai sąlygoja naujų valdymo struktūrų – matricinių, tenzorinių, Likerto susisiejiančių grupių, virtualių, tinklinių struktūrų – formavimąsi.

Naujų valdymo struktūrų formavimas leidžia išaiškinti kai kuriuos bendrumus ir problemas:

- Viena vertus, valdymo struktūros priskirtinos kietajai organizacijos daliai. Jos gana nenoriai keičiasi, stengiasi išlaikyti jau susiformavusią struktūrą; antra vertus, nuo jos atitikties besikeičiančioms sąlygoms priklauso tolesnė įmonės sėkmė;
- Valdymo struktūros laužymas nėra būtinas struktūros keitimo elementas. Rekomenduojama pirmiausia pasinaudoti dalinių priemonių įdiegimo teikiančiais privalumais;
- Įmonės struktūra gali keistis revoliuciniu būdu – šuoliškai arba evoliuciniu būdu, struktūrą pertvarkant laipsniškai. Abu šie būdai priklausomai nuo aplinkos ir vidaus sąlygų, turi savo privalumų ir trūkumų. Tai patvirtina teiginį, kad struktūros formavimo mechanizmą lemia įmonės vidinės ir aplinkos sąlygos;
- Įmonės valdymo struktūra turi būti derinama su įmonės strategija. Vienas svarbiausių momentų realizuojant derinimo procesą yra darbuotojų įtraukimas į valdymą, jų mokymas, sudominimas vykstančiais procesais;
- Įmonės valdymo struktūra turi būti derinama su komunikavimo sistema. Galima teigti, kad tai yra dvi vienos sistemos sudedamosios dalys.

Reziumuojant pasakytina, kad valdymo struktūrų pertvarkymas yra sudėtingas, kiekvienai įmonei individualus procesas, kuris gana išsamiai apibūdintas ir išnagrinėtas teoriniu lygiu, tačiau turi daug silpnumų taikant praktiškai. Poslinkiai šioje srityje galimi tik gerokai suaktyvinus naujų organizacinių valdymo struktūrų realią pertvarką.

Raktažodžiai: *valdymo, tradicinės, pažangios organizacinės struktūros; formavimo principai.*

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