



**The effective System of Management Control as a factor of a
successful Lean Management at the Russian Enterprises**

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**The effective System of Management Control as a factor of a successful Lean
Management at the Russian Enterprises**

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ABSTRACT

The control role in processes of introduction, functioning and development of a lean management at the Russian enterprises is considered. By results of the conducted research need of transformation of the traditional control system is proved; the directions of changes are determined by levels of management and in different stages of a lean management. For minimization of risks at a stage of introduction of each of tools of an economical production instruments, methods and technologies of control are offered. As the main difference of the organization of control in safe system control of the formalized algorithms on the principles of self-government and self-checking, characteristic mainly for the grassroots level of management. Upon transition to higher levels of management the strategy of control changes from bureaucratic to cultural control. Control in economical production has the specific set of characteristics as a subsystem of a control system bears all system signs of lean - management. The effective control system on the basis of philosophy of economical production covering the social and technological making lean-systems is a factor of successful introduction and functioning of this concept. Analyzing the main characteristics of the concept authors tried to give the answer to a question of their compatibility with requirements of a modern business environment.

Key terms: effective control system; lean management; corporate culture; business environment; tools, methods, technologies and strategy of control



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1 INTRODUCTION

About value of the concept world is told by scales of its introduction in practice of the foreign and Russian enterprises. Researches showed that by 2012 70% of the Russian companies had the program of economic production, 36% - already introduced the concept, 39% plan to introduce in the near future. Now in a number of regions of Russia introduction of economical production is considered as one of the main directions of increase in competitiveness of the enterprises.

Authors of earlier conducted researches (Womack, J., Jones, D., Roos, D. (1990)), (Womack, J.P. and Jones, D.T. (2003)) listing problems of introduction of the concept of lean production, first of all mark out need of basic changes in system of thinking (mentality) of managers and system of management in general, culture of business management and, in wider context, corporate culture, system of valuable orientation of employees and their relationship, emphasizing at the same time complexity of such changes. Adler and Shper note that the ideas and methods of economical production could play a crucial role in transformation of the Russian industry and its approach to the level of the developed countries (Adler YU. P., Shper V. L. (2014)).

These factors emphasize value of introduction of philosophy and the principles of lean for the Russian enterprises and increase relevance of researches of problems of introduction and functioning of the concept in practice of the Russian management.

2 METHODS

By results of earlier conducted researches we marked out the principles, methods and the lean tools on levels of management and established that their greatest number belongs to operational level (Sadriev R.D., Mullakhmetov K. S., Krotkova E.V. & Gabaidullina L. A. (2016)).

The lean tools push management to the maximum standardization and formalization of processes, including procedures of preparation, acceptance and implementation of the administrative decisions (AD). Formalization of "a desirable state" of management objects allow to compare desirable and actual states and to conduct system control.

Taking the uncertainty level, UR accepted at the grassroots level of management for a classification sign call: "performing decisions" which are regulated by internal standards of execution (Hahn, D. (1997)), "selective" decisions when the task of the manager comes



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down or to identification of a situation and initiation of the beginning of actions, or to assessment and the choice of an optimal variant of the decision (Woodcock, M., & Francis, D. (1991)). At the developed and successfully working lean system, the main objective of the manager of the grassroots level comes down to realization of the elementary model of control - to comparison of the received results with planned (Mullakhmetov, K. S. (2015)). In such situation standardization of actions and their formalization in the form of internal normative documents due to saving of time for reaction gives to a problem positive effect. Functional or "selective" decisions are implemented on earlier developed algorithm; if the algorithm is implemented qualitatively and the environment of functioning did not undergo essential changes, management has the right to expect the planned result. At essential deviations managers have to initiate adaptation of standards to new conditions that in turn demands control of implementation of standards and system monitoring of an external and internal atmosphere of the organization (Mullakhmetov, K.S. (2016)).

Directly at statement of tasks rigid formalization is already not so important. The level of management is higher, the uncertainty level at acceptance is higher UR. Company management on more high demand level from management to consider a large number of the variables concerning the internal and external environment of the company. In this case bigger value is gained by an intuition and experience of the manager, than formal tools. Respectively, at the top level of management, lean has to be present not at a type of concrete tools and methods, and only in the form of philosophy and the principles of lean. Therefore authors assume that also various priorities of functions of management depending on penetration of lean on each of levels of management takes place.

Problems of lean at the operational level are first of all establishing order, establishment of rules and norms, and also control of their execution. At the initial stage of introduction of lean when there is a development of basic tools and some separate principles of lean it has to be staked on rigid control and external motivation, in process of penetration of philosophy of lean on higher levels of management, rigid forms of control should change to soft, based on corporate culture and internal motivation.

At the grassroots level for ensuring effective management on the principles of the traditional control system aimed at providing an order and sense of duty. However,



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ensuring predictability completely does not exclude flexibility of behavior of personnel. The task consists in finding of balance between the aspiration to increase predictability of activity of personnel and desire to develop at them the initiative and creative relation to work, and also, ability quickly and to react adequately to change of rules of the game and a deviation from the expected results (Mullakhmetov, K. S., Aminova, R. M., & Akhmetshin, E. M. (2014)).

3 RESULTS AND DISCUSSION

For our research the following conclusions are the most significant.

1. The principles of standardization and formalization of operation which is the cornerstone of the concept of lean unambiguously defining "a desirable condition" of objects of management create conditions for effective system control.
2. The role of control is most significant, first, during an initial stage of introduction of the lean system and, secondly, at the operational level of management.
3. At the operational level of management where the greatest number of the principles, methods and the lean tools is applied, it is necessary to create the rigid control system of execution of formal institutes (standards, algorithms) and mechanisms of expeditious information transfer on deviations of results at their realization.
4. At the average and highest levels of management according to administrative and control roles, first, and, secondly, the realized lean tools, the strategy of control from bureaucratic to control by results and cultural control has to change (by Childe).
5. The current trend of development shows insolvency of the companies with traditional organizational structure and authoritative management style and put forward the global problem which took place in establishment of balance of stability and flexibility in system of management for each separately taken organization. The balance of these opposite tendencies defines characteristics of system of management in general and subsystems of control of the organization.

Let's consider control tools from the point of view of minimization of risks at a stage of introduction of each of instruments of economical production (Tab. 1) (Gabaydullina L. A. (2015)).

Table 1 - Interaction of the lean tools of control



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Instruments of economical production	Main risks	Tools, methods and technologies of control
Mapping of a stream of creation of the value (ValueStreamMapping)	<ul style="list-style-type: none"> - not identification (concealment) of problems; - the constant analysis instead of continuous improvements; - incorrect measurement of time of a step; - inability to define time of the operations which are creating and not creating value. 	Control leaf – the instrument of collecting and streamlining of data for simplification of further use of collected information; The chart "spaghetti" (spaghettichart) — a trajectory which is described by a product, moving on a stream of creation of value.
Kanbang, the extending line production	Kanbang, the extending line production	The analysis of returnable streams (turn-backanalysis) — the analysis of performance of production operations with the purpose of definition of number of returns on the previous stage for correction or utilization.
System 5C — technology of creation of an effective workplace	- weak involvement (motivation) of personnel	Tools of self-checking of employees.
The SMED system — Fast readjustment of the equipment	<ul style="list-style-type: none"> - correct definition of optimum parties; - high expenses of resources: time, labor, etc. 	Autonomism ("dzidoka") — introduction of human intelligence into the automatic machines capable to independently find the first defect then at once to stop and signal that the help is necessary.
Just-In-Time System	- risk of failure of deliveries.	Self-checking of suppliers.
Visualization	- failure of technical and information systems.	Andon — device of visual control of production. As a rule, represents highly located monitor (the bench, etc.) to which data on a current status of production and warning to members of the team about urgent problems are output.
Standardization	- personnel resistance.	Control of efficiency of processes on integrated indicators.
U-shaped cells	- discrepancy to individual preferences.	Visual control (visualcontrol) — such placement of tools, details and indicators of a condition of production at which everyone at first sight can understand a condition of system.
Kaydzen — continuous improvement	- resistance to changes. 1005	Cycle Deminga.

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Consequences of lack of the effective control system were revealed by the previous researches on the example of programs of support of small business in the Republic of Tatarstan (Krotkova E. V., Mullakhmetov K. S., & Akhmetshin E. M. (2016)). Results of researches once again confirm the importance of a role of control, distinguish additional requirements and changes accents in a control subsystem depending on characteristics of objects of management.

What lean characteristics are compatible to changes of the environment of modern business and allow to solve management problems; what, are on the contrary incompatible and disturb? How characteristics of lean influence the organization of the control system within this concept?

I. Adizes allocated a number of processes which arise in response to changes in world economy:

- decline of authoritative management style;
- end of hierarchy;
- strengthening of command spirit, helping to solve complex problems at the heart of informal interaction in despite of organizational borders;
- need of the accounting of features of the representatives of new generation who do not perceive authoritative style of the management (Adizes I.(2017)).

The concept "Management 2.0" represents the plan of updating in which the major problems of management of 21 centuries were. They consist not only in need to consider interests of the employees and local communities, but also in replacement of traditional hierarchy "natural" at which the status and extent of influence depends not on a position, and from a contribution to work, need to stake on self-checking of everyone, on creation of the control system by the horizontal principle (Management 2.0: the new version for a new century,2009,, page 91-100). How the control system according to the new concept of management stated in "Management 2.0" changes?

V.P.Shper notes that if were characteristic of old management obsession with profit, a pursuit of levels, then for new - obsession quality, variability understanding, the person and system (Shper V. L. (2016)). As P. Druker spoke: "People should not be "operated". A task - to direct people and to make the most productive skills and knowledge of each



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worker" (Druker of Item F. (2007).). Seddon J. notes that the management style based on return of orders and control of their execution loses the relevance (Seddon J. (2009).).

For effective achievement of the objectives of the organizations in modern conditions the system of management has to have as a subsystem of the administrative control based on hierarchies, and the cultural, moral and ethical tools based on social impact on workers. Establishment thanks to social norms of desirable acts and personnel behavior to all range of activity allows exercising system control, to accept UR taking into account social factors and to increase their efficiency (Mullakhmetov H.(2016).).

Thus, the main difference of control in system of economical production is system control of standard algorithms on the principles of self-government and self-checking, characteristic first of all for the grassroots level of management. Upon transition to higher levels of management the strategy of control changes from bureaucratic to cultural control.

It is difficult to formulate definite answer to a question of compatibility of characteristics of lean with present calls. It is possible to claim that dynamism (swift and proper response to changes), mobility and personnel liability (to give help where it is most necessary), and also aiming at increase in efficiency are mainly demanded.

The stability provided with standardization and formalization of processes in a combination to aspiration to constant improvement can solve a problem of dual requirements of the present: need to adapt to changes for ensuring survival and competitiveness and to have the necessary level of stability for ensuring high-quality realization of conceived.

4 SUMMARY

Current trends of development show that the existing paradigm of management based on hierarchy, authoritative management style, rigid control of conditions of contracts with workers becomes insolvent and put forward a problem of ensuring balance of stability and flexibility in system of management of the organization. The balance of these tendencies becomes the key factor defining characteristics of a subsystem of control of the organization and system of management in general.

The system of economical production can be considered as one of mechanisms of establishment of balance and harmonization of management. Stability, provided with



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standardization and formalization of processes in a combination to aspiration to constant improvement (caizen) can solve a problem of dual requirements: need to adapt to changes for ensuring competitiveness and to be stable for the creation of competences, focusing and high-quality realization conceived.

For ensuring efficiency the subsystem of control has to lean as on tools of the administrative control based on the hierarchical relation (especially at the grassroots level of management), and on the cultural tools moving emphasis on self-checking.

Condition of successful introduction, steady functioning and development of lean is the model of "cultural control" on the basis of strong corporate culture relying on the principles of self-government.

Control in system of economical production has system character and the specific set of characteristics as a subsystem of management bears all its system characteristics.

5 CONCLUSIONS

The philosophy of economical production, conformable with the concept "Management 2.0", assumes basic changes of approaches in the organization of processes at the enterprises and demands change of thinking of managers of all levels, creation of the strong corporate culture coordinated by strategy, high-quality changes of communications. Modern technologies allow accepting UR quicker, respectively, reaction of management to changes has to be instant and adequate. Valuable reference points and motivation of personnel and as the result, is harder and harder to operate workers by traditional methods change; in process of qualitative the personnel transformation, such control system will become unacceptable. Today it is effective to operate personnel as it was 20, and even 10 years ago, it is impossible.

In a subsystem of control of change lead to reduction of control procedures, "mitigation" of technologies and methods of their realization. Use of social, moral and ethical and cultural tools shifts focus towards self-checking and public control. The creative role of control (distribution of positive experience and the training effect) rises. In the classical dilemma of control consisting in search of balance between order and flexibility, accents move towards the last (Mullakhmetovkh.Sh. (2013).).

As show researches, the majority of the problems connected with introduction of the concept of lean production at the Russian enterprises are caused by characteristics of



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management, its discrepancy to modern requirements of management, unwillingness and inability of heads to adequately apprehend and introduce the basic principles of lean which would become base of system of management subsequently in general in a control system. One more obstacle for successful introduction of the principles of lean, are various manifestations of distortion of the competition in the Russian business environment (Sadriev R. D., Mullakhmetov K. S., & Akhmetshin E. M. (2016).).

By results of earlier conducted researches we established interrelation of characteristics on a chain object of management - a control system of an object - a subsystem of control (Krotkova E. V., Mullakhmetov K. S., & Akhmetshin E. M. (2016).),(Mullakhmetov K.S., Sadriev R.D., Gabidinova G.S. & Akhmetshin E.M. (2016)). Control in economical production has the specific set of characteristics as a subsystem of a control system too bears all system signs of lean - management.

The effective control system on the basis of philosophy of economical production covering the social and technological making lean-systems is a factor of success of this concept.

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7 REFERENCES

- Adizes I.(2017). The theory and practice of management is transformed in the face of new calls - and Russia needs to be tightened//HarvardDusinesReview-Russia. January-February. Page 6-10
- Adler YU. P., Shper V. L. (2014) Thrift not luxury, but means survival / Forward to the book Vumek J. Economical production: how to get rid of losses and to achieve prosperity of your company / James Vumek, Daniel Jones; The Lane with English - the 8th prod. - M.: ALPINA PABLISHER, 472 pages.
- Druker of Item F. (2007). Management tasks in the 21st century. M.: Williams, 2007. - 272 pages.
- Gabaydullina L. A. (2015).A control role in system of economical production.//Kazan economic bulletin. - No. 2. - page 20-22



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- Hahn, D. (1997) Planning and control: concept of controlling (pp.29, pp. 30, translated from Germ), Moscow: Finance and Statistics.
- Krotkova E. V., Mullakhmetov K. S., & Akhmetshin E. M. (2016). State control over small business development: approaches to the organization and problems (experience of the Republic of Tatarstan, Russian Federation). *Academy of Strategic Management Journal*, 15 (SpecialIssue1), 8-14.
- Mullakhmetov, K. S. (2015) Some approaches to the development of the management control concept. *Journal of Advanced Research in Law and Economics*, 6(1), 128-137. Doi:10.14505/jarle.v6.1(110/15)
- Mullakhmetov, K.S. (2016) Control in the system of managerial decisions procedures: A conceptual view.//*Problems and Perspectives in Management*. 14(3). p. 64-76.
- Mullakhmetov, K. S., Aminova, R. M., & Akhmetshin, E. M. (2014). Control in a management system in modern conditions. *Asian Social Science*, 10(24), 237-247. <http://dx.doi.org/10.5539/ass.v10n24p237>.
- Management 2.0: the new version for a new century//*HarvardDusinesReview-Russia*. 2009. October. page 91-100.
- Mullakhmetov H.(2016). Sh. Corporate culture in system of management//*Society and economy*,№ 11. - page 41-53.
- Mullakhmetovkh.Sh. (2013).Organization management influence//4th International scientific conference "European Applied Sciences: modern approaches in scientific researches": Pages of the 4th International scientific conference. - Studgard, Germany: P. 176-182.
- Mullakhmetov K.S., Sadriev R.D., Gabidinova G.S. & Akhmetshin E.M. (2016) Control in marketing-based management. *Academy of Marketing Studies Journal*, 20 (Specialissue2), 13-19.
- Sadriev R.D., MullakhmetovK. S., Krotkova E.V.&Gabaidullina L. A. (2016). Introduction of Lean Production at Russian Enterprises: Perspectives and Problem//*International Journal of Economics and Financial Issues*, 6(S8) 1-10.
- Shper V. L. (2016). Future of Russia = quality of management + modernization of all country//*Quality and life*. - No. 4(12) - page 134-148.



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successful Lean Management at the Russian Enterprises**

Revista Publicando, 4 No 12. (1). 2017, 1001-1011. ISSN 1390-9304

- Seddon J. (2009). Freedom from orders and control. Way to effective service / A. L. Raskina. - M: RIA Standarty i kachestvo- 232 pages.
- Sadriev R. D., Mullakhmetov K. S., & Akhmetshin E. M. (2016). Russian Business Medium: Competition Problems. International Journal of Economics and Financial Issues, 6(S8), 30-38.
- Womack, J., Jones, D., Roos, D. (1990) The Machine That Changed the World. The Story of Lean Production. How Japan's Secret Weapon in the Global Auto Wars will Revolutionize Western Industry. - New York: Rawson Associates.
- Woodcock, M., & Francis, D. (1991). The Unblocked Manager. For a practical manager (Translated from English). Moscow: Business.
- Womack, J.P. and Jones, D.T. (2003) Lean Thinking. Banish waste and create wealth in your corporation. - New York at al.: Free Press, 397 p.