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The development of the individual incentive system:

A Case study of AEROC SPb

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Abstract

Purpose - This master thesis aims at describing and analyzing the development of the individual incentive system in a manufacturing company over time.

Design/method - The main theoretical approach used in the master thesis is the contingency theory. The data is collected from a single case study. Both primary (telephone interviews) and secondary (internal documentation) sources of data are used.

Empirical findings - The results of this master thesis show that the development of the incentive system passed through 4 different stages. Every stage of development, the system had its own incentive elements (Base pay, Contingent pay, Individual Cash bonuses, Competition scheme and other short-term monetary incentives) that changed under the influence of Contingency factors. The most important Contingency factors were the environment, the strategy, and the size of the company. In the master thesis it is revealed 4 main challenges associated with the incentive system development. The major challenge in regard to the incentive system is the complexity of motivating a great number of workers by the only system.

Research limitations - The research could have benefited if more interviews were conducted.

Originality value - This master thesis suggests that Contingency theory may be a valuable lens to study incentive systems.

Practical implications - Practitioners can benefit from my thesis by applying the presented incentive approaches, like competition scheme and short-term monetary incentives for boosting efficiency of production workforces.

Keywords: individual incentive system, contingency theory, manufacturing company

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MCs – Management Control System

Dmitriy Kuznetsov – DK

Aleksander Kurilin – AK

Karen Sarkisov – KS

Respondent 1 – R1

Respondent 2 – R2

SPb – Saint-Petersburg

1. Introduction

"The corporate entity by itself does not make profit. People do."

(Fisher, 2008)

The centerpiece of this paper is the incentive systems in the manufacturing company. Incentive system is a key concept in the managing employees' behavior and job involvement. As stated by Scott Stone (2015), well-designed and implemented incentive system can optimize the cost of production, increase product quality and improve employee satisfaction. Thus, to provide growth and sustainability of a business in the long-term perspective the management of the company is oriented towards development of incentive systems because it affects the employees' performance. Sum of the employees' efforts creates wealth, which provides normal operation on the market (Fisher, 2008).

This research seeks to describe and analyze the development of the individual incentive system in the manufacturing company over the time. The process of creation of incentive system is a very comprehensive activity, which requires taking into consideration lot of factors. Job satisfaction, long-term retention, reduction of job stress and improvement the quality of employees' life, all of these factors have to be considered if management wants to succeed, because these factors have a direct impact on individuals who make up the organization. Thus, the beauty of well-thought-out employee incentive system is a result of satisfying the requirements of employee and owner in the same time (Lowenberg Jr., 2007).

1.1. Background & Motivation

Multitudinous research and surveys across the years have shown that key factor of employee engagement in the work is the feeling appreciated. This feeling is inextricably connected with compensation - everyone wants to get fair assessment of their labor, in other words unfair salary can overwhelm the most creative and motivated employees (Costa, 2016). Companies hold an interest in motivation of employees and constantly investing for the future since it is expected to enhance the employees' performance and improve quality of work. In light of this, the companies' management needs to know effective approaches to motivate workers by understanding the core factors which lead to higher productivity and better performance (Gunawan & Febrianto, 2014).

Referring to Jan Mouritsen (2005) management control system is affected by time, people and environment, thus MCs is never stable and tends to change through the different stages of its development. Following this, management of the organization need to consider all impact factors and optimize parts of the MCs during the operating activity. The incentive system is also the component of the entire MCs of organization and it is subjected to changes. In the concept of MC as a package, incentives take place in Reward and Compensation system (Malmi & Brown, 2008). Based on the mentioned above, it can be concluded, that the study of the development of the incentive system is related to the study of management control systems.

The conducted literature review has shown that incentives were the phenomenon of study in many research papers during the last years. The researchers examined incentive systems within the framework of different theories and concepts. Most of the papers covered the behavioral aspects of incentive systems (Promberger et al, 2012, Abdullah & Wan, 2013, Harunavamwe & Kanengoni, 2013), also researchers used agency theory (Plambeck & Zenios, 2000, Gilliland & Kim, 2013, Kosolapov, 2012), but in my case, there was the need to find studies, which explore development of the incentives as an entire system in frame of time. None of the found articles presented the development of the incentive system within time. Some articles presented the connection between employee incentives and firm growth dynamics (Bennett & Levinthal, 2016). In this study, they tried to create the model which would link the design of firms' incentive structure to their rate of growth. The further step was the exploration of research papers which were dedicated to incentive systems within a framework of contingency theory. There were not found studies related to the development of incentive systems in the framework of contingency theory, but there were studies about other management systems. Thus, it is possible to state that there is the knowledge gap in studying incentive systems within contingency approach. The conduction of this research can be a good contribution to this knowledge gap.

One more aspect of the literature review was to find the studies about incentives in the manufacturing companies. Most of the articles were written not in the context of manufacturing companies. Due to the development of information technologies, information became a key product on the world markets, thus knowledge-based companies or companies which operate within informational markets were studied more extensively. The incentive systems in the manufacturing companies were mostly studied 1990 and earlier years (Pryor, 1984, Verespej, 1988, Imberman, 1998). Also, it was found that authors paid more attention on group-based incentives. The development of technologies and systems of control in the production processes provides more possibilities for retraining and professional development of production workers.

The management of the organization becomes more interested in training employees, because retraining of personnel leads to lower cost of production and make workers interchangeable. If one employee is absent or sick, another worker can take his/her place. The development of individual incentive systems gives direct labor employees new opportunities. This is because the functions of the individual incentive systems became more extended. They stimulate employees not only improve the efficiency, but also provide an incentive to retrain and carrier growth.

The additional attention was paid to the review of previous master theses which are related to the incentive systems. There were found that students investigated how the organizational incentives influence construction site managers in the project based organization Skanska Sweden AB (Eriksson, 2011). As was mentioned above, a lot of research papers are written about employees' perception of the incentive systems. The impact of the incentive systems on employees behavior in the different departments (Operations, Commercial, R&D and Administrative personnel) of British–Swedish biopharmaceutical company AstraZeneca were studied by Caroline Kvist and Emelie Andersson (2012). In Nord University there were also a couple of theses which were written about incentive systems. Sergei Kosolapov in 2012 had studied the evolution of the individual financial rewards system in the department of global consulting company Accenture. For further study, Sergei recommended writing similar empirical research not only within the framework of individual financial rewards system on the basis of the knowledge-based company but also in other fields of research. There were not any theses written in the context of manufacturing company, thus it is possible to argue that there is a good opportunity for me to fill this gap in knowledge.

1.2. Problem statement & Research questions

Based on the mentioned above big variety of research papers were dedicated to studying the behavioral factors of employees in the frame of the incentive system (Kvist & Andersson, 2012, Murphy, 2015, Lai, 2009, Mohd, 2014). This master thesis aims at investigating the development of the individual incentive system over the time. Thus, the primary focus was in this thesis is paid on how this system has changed and which factors have an impact on the development of the incentive system. This study is an attempt to show how the management can drive the system to operate in constantly changing environment and at the same time, match the business objectives of the company and personal needs of employees. In order to obtain a finite presentation of the system development it would be provided the relevant case study of the North-West Russian producer of aerated concrete AEROC SPb. This is the leading company in the production of aerocrete blocks which was established in 2004 and still operates in the market

of building materials. From the date of the production start-up, the company sets the tone to other producers in the market and determines the direction of the development of the aerated concrete market in Russia.

In order to describe the development of the incentive system, it is crucial to understand how the system is organized and which parts the system consists of. Also, the first research question is related to the study of changes in the parts of the system and factors which influence these changes. Thus, the first research question is:

How was the individual incentive system designed in "AEROC SPb"over the time?

The major goal of the next research question is to reveal how the system was developed and affected by internal and external contingency factors. The second question is set to reveal all the issues and challenges which have appeared during the process of the system development. The second research question is:

What are the challenges that the company has faced while implementing the incentive system?

1.3. Outline of the thesis

This master thesis consists of six chapters. The first chapter begins with a literature review, introduction of the research topic, setting the problem and research questions. Second chapter provides the insight into the theoretical framework which underpins the description of incentive systems in manufacturing companies. Another part of the theoretical chapter is devoted to contingency theory and concept of design and mobilization of MCs. Methodology is presented in the third chapter of the master thesis. This part outlines the philosophical considerations, ethical aspects of the data gathering processes, data collection tools and highlights issues related to the access of data. The next chapter presents empirical findings within the frame of the case study. The analysis of the empirical findings under the lens of the theoretical framework is conducted in the fifth chapter. Chapter 6 draws the inferences related to the research project and gives proposals for future research.

2. Frame of reference

The main purpose of this chapter is to elaborate on theoretical approaches which would help to describe and analyze the development of the incentive system. This chapter provides relevant management control theories and concepts which underpins in the studying of incentive systems from different perspectives. The elaboration on incentive systems in manufacturing company is also presented. Also, this chapter highlights the existing types of individual incentives. Part of the theoretical chapter is devoted to fundamentals of Contingency Theory. By using the contingency approach it can be presented how different factors affect the development of the system. The interplay of contingency factors allows explaining major changes which have occurred in the system. One more part of this chapter describes the concept of design and mobilization of MCs. The summary of discussed theoretical approaches is presented at the end of this chapter.

2.1. Incentives

This section is dedicated to the concept of an incentive system. There are given basic definitions of the term, describes the role and place of incentives in the management control systems.

2.1.1. Individual incentive systems

Referring to Merchant & Van der Stede (2012) the term incentive in the business context refers to things that employee value (positive) - reward. Also organizations provide negative rewards (punishments), employees mostly percepts it as an absence of positive rewards. Therefore employees prefer to avoid negative rewards. *"Performance-dependent rewards, or incentives, provide the impetus for the alignment of employees' natural self-interests with the organization's objectives"* (Merchant & Van der Stede, 2012).

Due to the fact that there is no single definition of what is the incentive system, it was found the only definition: *"An incentive system is a formal scheme used to promote or encourage specific actions or behavior by a specific group of people during a defined period of time. Incentive programs are particularly used in business management to motivate employees and in sales to attract and retain customers."* (Cram101, 2016). Thus, all the incentive systems, incentive programs, incentive plans and etc are oriented to increase organizational performance, improve employee productivity and commitment among employees (Rebunfeld & Jannifer, 2006).

In the process of designing the incentive system, the management takes into consideration factors such as work environment, type of industry and other factors to define which type of incentive scheme would be more suitable and would support the development and the growth of the business (AstronSolutions.net, 2016). There are two types of incentive systems: **individual** and **team-based programs**. In this master thesis, the main focus is concentrated on the individual incentive system. Individual incentive systems connect individual efforts and remuneration of labor (pay) (Hresources.blogspot.no, 2010). In other words it is an individual performance-related pay scheme. This scheme works when employee receives either a bonus, or increase in base pay based on the achieved objectives established earlier. Individual incentive plans are based on meeting the individual performance standards which were established earlier. Individual incentive systems are most suitable, when the performance can be measured objectively and when worker has a control over the outcomes (Compensation.blr.com, 2010). Implementation of the individual performance-related pay schemes allows managers to link the employees' objectives with the goals of the organizations (ACCAglobal.com, 2013). The similar function of the systems were suggested by Merchant & Van der Stede (2012): *"Incentive systems are important because they reinforce the definition of the desired result areas and motivate employees to achieve and exceed the performance target"*

There are three types of management benefits of Incentives:

- Informational (The rewards attract employee attention and remind them about the importance of the results (quality, cost, growth). Informational aspect informs employees about existence of competition in industry)
- Motivational (Incentives require to perform tasks better, inducing the employees work harder and succeed)
- Attraction and retention (Efforts to use compensation packages to attract and retain higher quality employees) (Merchant & Van der Stede, 2012)

Team-based incentives are designed to encourage and reward groups. The goals of the team-based incentives can be to encourage of goal-setting, collaboration, and teamwork (McQuerrey, 2017). There are different types of team incentives: profit sharing, gain-sharing, goal-based incentives and merit-based incentive (Hoffman & Rogelberg, 1998). One of the best practices in regard to team incentives is based on competition schemes among shifts (Yeon-koo & Seung-weon, 2001). It is powerful incentive tool which allows production managers achieve higher results than using other schemes with the same wage bill (Falk, et al., 2008). By using this tool, production managers set a certain prize for the best production result among production teams.

2.1.2. Incentive systems in manufacturing company

The literature review of incentives in manufacturing companies showed that there are some key features that differ manufacturing incentives from for example incentives in knowledge-based companies (Young & Lee, 2013). The major difference is the production environment. The incentives can be built upon maximization of productivity, standardization, interaction among workers and etc (Young & Lee, 2013). The incentive system for the production workers is set to encourage working harder and efficiently. At the other end of the scale the bad designed incentive scheme can replace interests of employee over the interests of the company as was stated by Magloff (2009). The individual incentive system has to take into consideration intrinsic work values and extrinsic work values of employee, because employee who value different aspects of their work would behave in a different ways (Vanderstukken, et al., 2016). Employee with intrinsic work values tends to attach importance to challenges at work. Challenges at work are the source of growth and learning for such employees. Employee with the intrinsic work values seeks to have good relationships with co-workers and make significant contribution to work (Vansteenkiste, et al., 2007). Employee with extrinsic work values would mostly pursue financial rewards and status. Also in the Vansteenkiste (2007) article it was stated that extrinsic work valued employees have a need for a job security and stable income.

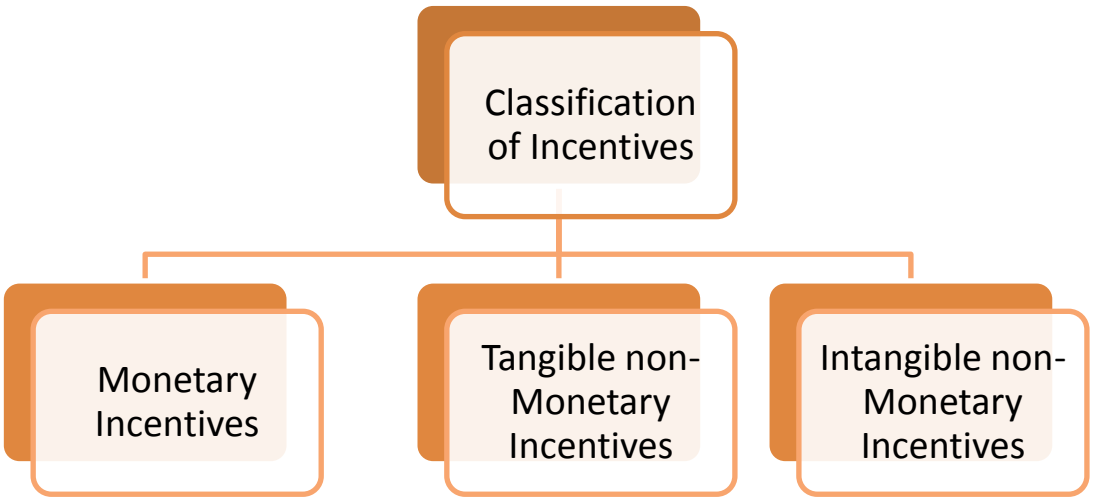

Figure 1. Classification of Incentives (Falola, et al., 2014)

Individual incentives can be classified (Fig. 1) as Monetary incentives, Tangible non-monetary and Intangible non-monetary incentives (Falola, et al., 2014). Monetary incentives are defined as monetary return which is offered by organization for the executed work (Kyani, et al., 2011).

The examples of monetary incentives: cash bonuses, stock option, pay rise profit-sharing and any other monetary rewards (Lewis, 2016).

In this master thesis is mostly presented variable pay or result-oriented pay. The variable pay has an increasing role within the overall pay package, especially the qualified employees. Result-oriented pay finds application when the company's management wants to recognize and reward employees' contribution in the performance of the company. Variable pay can be profit sharing, bonuses, holiday bonus, annual bonus or other goods and services (Kressler, 2003). Also variable pay can be classified as short-term and long-term incentives. The short-term incentive is the promise of a reward which is based on the goals of business year. The reward depends on achieved results in comparison with the predetermined goals. The reward is calculated as a percentage of base salary (Kressler, 2003). The short-term incentive can be presented as 'annual bonus'. The long-term incentive generally covers the period from three to five years. In the production context this incentive can be a long-term bonus program (Kressler, 2003). The long-term incentives for the direct labor employees usually are not tied to the annual results. This type of incentive is connected with the requalification processes of employees.

Non-monetary incentives are another type of incentives which can be used in the designing of the incentive scheme. Non-monetary incentives are important in the perception of the employee regarding the reward climate in the workplace (Abdullah & Wan, 2013). Organization can create caring and supporting image by using Intangible and tangible non-monetary tools such as flexible schedule, education and training programs, letter of appreciation, birthday treats, certificates, social rewards (recognition), meaningful work, job rotation, support with household issues (provision of kindergarten) and etc (Abdullah & Wan, 2013). According to Hammermann & Mohnen (2014) pay increase does not have the same motivational effect as the equivalent non-monetary award because the marginal utility of additional earnings is decreasing, in the same benefits of the non-monetary award is valued independently. Hammermann & Mohnen (2014) in their article stated that non-monetary rewards have advantage over money, if they are perceived as gifts. Gifts are mostly perceived as *"...signals of kind intentions and elicit reciprocity without reducing intrinsic motivation"* (Hammermann & Mohnen, 2014).

Another important aspect of non-monetary incentives is a creation of good working environment for employee and work commitment (Harunavamwe & Kanengoni, 2013). If there is no meaning of work, there can be greater loss of loyalty and commitment of employee. The good working environment is based on high trust, fun and meaningful work. Thus, awareness of meaningful contribution is a strong incentive for employees (Harunavamwe & Kanengoni, 2013).

2.1.3. Incentives as a part of management control system

To describe which place incentives takes in management control system (MCs), it is essential to determine what management control system is and to define the major components. The first challenge which was met that there are plenty of definitions, and there is no universally accepted or single definition of what Management Control system is. A numerous amount of definitions covered different aspects of the entire concept of management control system. The first definition was offered by Anthony & Govindarajan (2007): "*Management control is the process which is used by the managers to influence other members of organization to reach the organization's objectives."* This definition describes management control as a process of influence on the behavior of members within the organization. Another definition was provided by Horngren (2012): *"Management control system is a tool of gathering and using information, which is using for coordination, planning and controlling the decisions within organization."* Horngrens' definition presents MCs as a management tool which helps organization to guide the behavior of its managers and other employees. One more definition was provided by Rosanas (2006), it highlights management control system as an instrument of manipulation, which is designed to maneuver individual interests into line with organizational interests. This definition mostly describes management control system from the point of the cultural control. The cultural control is based on the balance between employees' values and goals of the organization (Grugulis, et al., 2000).

As it can be noticed, there are big varieties of definitions, which present management control from different perspectives. As the main concept which presents Management control system from different angles was used the concept of Management control system as a package. This concept takes into consideration all different management control systems which are introduced by different groups within one organization (Malmi & Brown, 2008). The management control system in big organizations provides control among processes, resources, people's behavior and objectives. Thus, the collection of control mechanisms usually called Management Control system (Merchant & Van der Stede, 2012). Using the concept of Management control system as a package it is possible to show the place of the incentive system in the entire management control system.

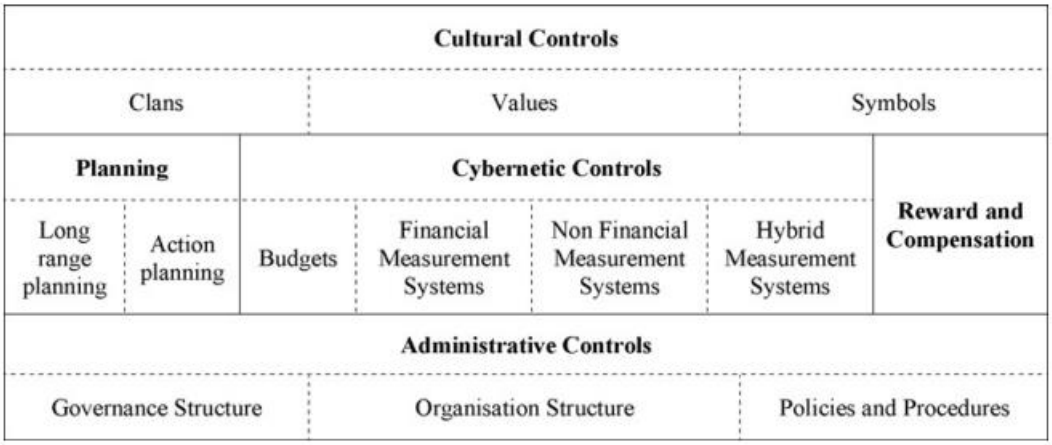

Figure 2. MCs as a package (Malmi & Brown, 2008)

According to the analytical conception of MCs as a package, there are five types of controls in the typology (Figure 2). The planning control is a form of control which sets out the goals of the functional area of the organization. Malmi & Brown (2008) stated that there are two approaches: action planning is oriented to set the goals and actions for immediate future (12-month period), the long-range planning is oriented for setting goals and actions in the long run. The next type of control according to Malmi & Brown (2008) is cybernetic control. In other word it is an information system or control system which is contingent upon how it is used. There are four main components of cybernetic systems: budgeting, financial measurement systems, non-financial measurement systems and hybrid measurement systems. Administrative control systems affect the behavior of employees through the organizing of individuals and groups. Administrative control refers to the processes of specifying how tasks or behaviors are to be performed or not performed. Administrative controls include governance structure, organisation structure, policies and procedures. Another core element of MCs package is Cultural control. Management of the organization uses cultural control to set the values, beliefs and social norms which are shared by the members of organization. As was stated by Tubagus (2015) cultural control provides possibility to control employees' actions by influencing employees' behavior and thoughts. Cultural control includes three main types of control: symbol-based control, control of values and creation of subculture within organization (clan).

The final component of typology is reward and compensation. This is most important part of MCs typology for this master thesis, because this part of MCs is inextricably linked to incentives. Reward and compensation system is concentrated on *"increasing the performance of individuals and groups within organizations by achieving congruence between their goals and activities and those of the organization"* (Bonner & Sprinkle , 2002). Malmi & Brown (2008)

reviewed the effect of monetary incentives on the performance of individual's efforts. Also, compensation system often includes retaining of employees and encouraging cultural control. Thus, it can be stated that incentive system is part of reward and compensation control system.

One more point of view about placement of incentives in the management control systems were offered by Kenneth Merchant and Wim Van der Stede (2012). They define Incentives as a core element of financial results control system. Thus, Incentives define the links between results and different rewards. Anthony & Govindarajan (2007) considers incentives as a component of compensation system which is a part of overall management control system. Authors pointed out that organization's incentives relate to the individual' goals.

2.2. Contingency theory

This section of the paper presents the examination of management control systems using a contingency theory framework.

2.2.1. What is contingency theory?

The classical definition of Contingency theory was offered by Fidler, Blanchard and Yetton (2016): *"Contingency theory is a class of behavioral theory that contend that there is no one best way of organizing and that an organizational style that is effective in some situations may not be successful in others"*

Contingency theory has four main ideas which were mentioned in the Gareth Morgan's (2007) book *Images of Organization*:

- To adapt to environmental conditions the management of the organization have to find the balance between internal needs and external factors;
- There is no best way of managing an organization;
- Management of the organization has to be concerned about all possible factors, which underlie in best practices;
- Different types of environments provide best possibilities for different types of organizations

Contingency theory includes two key contextual variables (Fig. 3), which influence on the forming of management control system: **Environment** and **Technology** (Otley, 1980).

Technology defines the way of how the work of organization is performed, and covers communication and interaction of key stakeholders and participants within organization. It also includes the core technologies of the organization's production process. Technology is hardware, software, materials, people and knowledge that are involved in the organizations work processes (Chenhall, 2007). Further technologies were divided into two parts: generic and contemporary. Generic technology refers to standardization of work, decreasing levels of complexity of production processes, interdependence of tasks and processes, and variability in the tasks. Contemporary technology is about advanced technology. An advanced technology refers to complex manufacturing processes and systems which sprung from the competitive environment. Contemporary technologies: Just-In-Time (JIT), Total Quality Management (TQM) and Flexible Manufacturing (FM) (Kamisah, et al., 2010).

Figure 3. Key contextual variables (Otley, 1980)

Organizational environment is formed by technical and institutional environment. Technical environment are those in which organizations acquire factor inputs, use this inputs within appropriate conversion technology and deliver the finished products and services to the market. The exchange between the organization and the market environment forms the reward which leads to the organizations performance. Institutional environment are characterized by amount of rules, regulations and requirements to which organizations must conform. Complying the requirements lends legitimacy to normal organizations activity. The reward in term of institutional environment is coherence between organizations activity and its legitimacy

(Stewart, 2010). *"Organizational performance is a function of the fit between the organization's key contextual variables and its management control system design."* (Gerdin & Greve, 2004). In other words, the good fit of both factors would boost the performance, and opposite the bad fit will decrease overall performance.

2.2.2. Environment contingency

Besides the classic theoretical definitions of contingency theory, there are other authors who elaborated more extended theoretical considerations in regard to classical concepts. For example additional contextual variables were examined by Kamisah Ismail et al (2010). They offered contingency variables such as structure, size, strategy, culture. Among all other variables, there are three main contingencies which are involved in the most contingency theories: **environment**, **organizational size**, and **strategy** (Donaldson, 2001). The next sections of this chapter provide more detailed explanations of each mentioned variables.

The level of changes in the environment of an organization affects the internal structure of an organization. There are two main types of internal structures: mechanistic and organic (Donaldson, 2001). The mechanistic structure operates better in the stable environment, due to the hierarchical structure, which suits better for routine operations. Conversely, there is an organic structure which suits better to a dynamic environment which is unstable. Decentralized structure is more efficient in innovative decisions and fast distribution of knowledge in hierarchical levels (Burns & Stalker, 1961). Environmental uncertainty is a very important another factor which affects in its turn the task uncertainty, which causes the adoption of an organic structure. The task uncertainty stems from the need for innovative solutions to response environmental changes (Donaldson, 2001). Environmental contingencies indirectly shape the organization through the intra-organizational contingency variables. One more contingent variable which derives from the complexity of the environment is task interdependence. The task interdependence is the way in which activities are connected within the organization. There are two types of task interdependence: horizontal (diversification) and vertical (vertical integration). Also, it is essential to mention that two types of task interdependence can be simultaneously within one organization (Thompson, 1967). High diversification for the firm which produce unrelated products is pooled interdependence among the products. Vertical integration connects the stages of the value-added chain within one firm (Thompson, 1967). Many academics also classify task interdependence in manufacturing companies as pooled, reciprocal and sequential. Pooled interdependence includes groups of employees who are working independently to produce a particular product. Reciprocal task interdependence appears when no one person or

business can produce a good without the participation of other production units. Sequential interdependence is about logical sequence of units within production, for example in aerated concrete production it is impossible to cut AAC before ending the foaming process in the certain conditions (Ciaran , 2017).

2.2.3. Organizational size as a contingency

The next variable is Size of the firm. In that context Size is measured by the amount of employees. Size has an effect on the formation and usage of management control system. Large firms usually adopt more complex management accounting practices compare to small firms (Abdel-Kader & Luther, 2008). Size contingency can adjust the bureaucratic structure of an organization. For large firms suit bureaucratic structure, because of a number of repeating operations and administration, also most of the decisions are made based on internal rules of an organization (Donaldson, 2001). The opposite situation is with small organizations, which are not rule-governed and more centralized. There is an unbureaucratic structure where management can make almost all decisions. The number of employees often correlated with other aspects sales, and assets, thus it can be used as a metric for size (Donaldson, 2001).

Technology and size are another interconnected issue for companies. Both variables determine the organizational structure. By using these variables it is possible to state a number of necessary levels of hierarchy in a company, the spans of control, the amount of administrative support staff. The size causes structural differentiation and decentralization, one more point is that size reduction would decrease structural differentiation and bring recentralization (Donaldson, 2001). Also, the size can affect the effectiveness of the company (Edwinah , et al., 2013). An organization needs to find a necessary number of employee, to operate effectively. The effectiveness of organization rises with the increase in responsiveness and flexibility of small size. In a big organization, such effectiveness can be obtained with more branches which provide a possibility to decentralize activities for being more responsive and operative (Edwinah , et al., 2013).

2.2.4. Strategy contingency

Strategy is another important element of organizational effectiveness. Strategy lets to achieve the competitive advantages, which enhance the organizational performance (Kamisah, et al., 2010). Organizational strategies have to lead the MCs design choices. *"Organizations that align their choice of MCs with their strategy are more likely to affect better control, and, thus, are more*

likely to exhibit superior performance" (Merchant & Van der Stede, 2012). Organizational structure is defined as a way in which organizations are differentiated. Functional differentiation affects the information flow within the organization and has strong impact on the performance improvement of employees. Another type of organizational structure is decentralization. Firms with decentralized organizational structure adopts more complex management accounting practices than centralized firms, thus decentralization affects the control process of organization. (Abdel-Kader & Luther, 2008) Strategy contingency has an effect on the divisional structure. There are a big variety of strategies which can be applied to achieve certain business goals of an organization. Undiversified strategy can be a good solution for the functional structure, due to the fact that all activities are concentrated on a single product or service. Thus the efficiency is increased by specialization by function (Donaldson, 2001). The opposite strategy is diversified, which fits the divisional structure. Such strategy works when there are variety of activities which are focused on the production of different goods (for example for different markets). In that case, effectiveness can be reached by the good coordination of each division (Donaldson, 2001). Organization which uses misfitting strategy becomes ineffective. High performance of strategy is based on successful implementation (Brinkschröder, 2014).

2.2.5. Other contingency variables

In frame of contingency theory, there are also other internal and external contingency variables: culture, leadership style, government etc (Fiedler, 2017). The next contextual variable is **culture**. Cultural values are another factor which has influence on the choice of MCs parameters. Just-In-Time (JIT) and Totally Quality (TQM) Management can be an example of how culture affects the MCs system. JIT and TQM is originally Japanese management systems, thus local mindset is inseparable element of these systems (Abdel-Kader & Luther, 2008). Difference between Japanese culture and Western culture led the belief that JIT cannot work in manufacturing organizations elsewhere in the world (Kootanaee, et al., 2013). **Leadership** and the good leader control over a situation also can affect the effectiveness of an organization. Thus, leaders need to be good at building the relations with team members, leaders need to set clear tasks and provide honestly rewards and punishments. The lack of a good combination of these variables will lead the failure (Fiedler , 1967). External **political uncertainty** acts is another important contingency variable which can limit the scope of the strategic choice, or determine the available resources. Political uncertainty creates the certain conditions to operate, thus management of a company need to fit such unique environment (Woods, 2007). One more key feature of non-competitive public sector environment is encouraging the conditions to exchange of knowledge across public

sector institutions, thus the exchange of knowledge give a boost to organizational learning and evolution of MCs (Woods, 2007).

2.2.6. Previous research of incentive systems within contingency approach

Management control systems were actively studied by academics in the framework of contingency theory before. But incentive systems are the phenomenon which was not widely-studied through different theoretical perspectives before. By applying the contingency theory researchers mostly suggest that companies need to adjust existing MCs with the internal and external contingency factors. The effectiveness of an organization would depend on how well existing MCs meet the requirements of the various contingencies (Macy & Arunachalam, 1995).

Another empirical and contingency-based paper was written by Chenhall (2003), he reviewed the development and structure of management control systems. The study was conducted based on a functionalist view. For this master thesis, the article can be relevant from the point that author provides the broad description of contingency factors. Also, as one of the key outcomes in the paper was that contingency-based research of MCs can link the organizational performance with the usefulness of some aspects of MCs within an organization. But also author states that there is no clear evidence that such links exist because it depends on the overall usefulness of MCs within a particular organization (Chenhall, 2003).

The enterprise executive' incentives were also studied in the framework of Contingency theory by Quanzhou Li (2015). The author states the there is still no fixed pattern to create the incentives and the incentive system is constantly under the changes of environment. In the process of creation of the incentive system a management firstly needs to consider factors of the environment. For the internal factors, the author has chosen the factors such as enterprise culture, enterprise scale, financial and income conditions, stage of organization development, goals for future development. The external factors, which were not highlighted before, are the nature of the industry, industry tendencies, changes of market cycles and etc. Also, the author stated that incentive mechanism will be a constantly hot topic because of the globalization of the economy. Thus, the number of factors which is affecting incentive systems will increase. Contingency theory is a useful tool for studying management systems in long-term (Li, 2015).

In 2006 was written the master thesis by Anders Rom and Anne Britt Bech-Nielsen. They studied the incentive compensation system in Fritz Hansen by using contingency theory. Students mentioned that there is a lack of theory in regard to incentive systems. The authors of the master thesis tried to explain the paradox which appeared among employees and interests of

stockholders. Thus, authors tried to find the explanations to the managerial behavior to incentive theory. In this case, contingency theory helped to identify the external key contingency variables which could explain the certain behavior of managers.

2.3. Design and mobilisation of management control systems

This section of paper provides insight into development of incentive system as a part of MCs in the frame of design and mobilisation concept which was offered by Jan Mouritsen (2005).

Changes and transformation are an integral part of MCs. *"A management control system is never stable and tends to get new functionality as time goes because it is thrown into new situations and episodes."* (Mouritsen, 2005). Incentive systems, as well as the entire MCs, are also subject to various changes, both at the design stage and in the process of operation. The **design** of MCs begins with understanding the objectives and what organizations want the employees to do. Objectives and strategies build upon good understanding of expected outcomes (Merchant & Van der Stede, 2012). Mouritsen (2005) describes the design as an artifact which equipped with calculative, organizational and technological procedures within MCs.

Design and mobilisation concept describes how the system develops and changes through the implementation and usage stage. Implementation stage is not a final point, since the introduction of new system elements affect and change the existing system. After eliminating the influence of the implementation stage, comes the next stage, the stage of use. The **mobilisation** of system is a process in which the company's management eliminates the unexpected results and outcomes of the new system and optimizes the system in accordance with the objectives of the organization. Interrelations between human actors and designed MCs produce changes, which human actors mostly do not like (Mouritsen, 2005).

During the development of the incentive schemes the management of the company expects the certain outcomes which run in parallel with the organization's goals. The company's management always considers and tries to minimize the deviation of the system, but there are always factors that cannot be predicted in advance. Due to that, managers need to optimize the system by eliminating unforeseen factors of the incentive system.

Special aspects of mindset, personal goals and views toward organizations of working processes and other factors of internal environment influence the existing management control system. Thus behavioral emerges strongly affect the system and change it (Burns and Scapens, 2000). Design and mobilization concept proposes that interplay between designed (initial) management

control system and human beings which always introduce change in the firstly-established system. The designed (initial) system always produce effects that individuals do not like, therefore individuals have to react to meet propositions (Mouritsen, 2005).

The second part of the concept is mobilizations of the system. The process of mobilization comes into effect after the initial system was modified under the action of human beings. By the process of mobilization the involved system is being transformed and redesigned to redirect previous changes of initial system in accordance with goals of organization. Thus, at the step of mobilization, managers have to take into consideration antecedent changes and make an attempt to predict where the design will fail in future (Mouritsen, 2005).

2.4. Summary

The main goal of this chapter is to provide relevant theoretical approaches for the further study of the topic. All these theoretical aspects underpin in the writing the discussion part.

This chapter begins with the determination of incentive system place in the context of management control systems. Malmi & Brown concept of MCs as the package was the foremost descriptive model to show which place incentives take in the management control systems. The next sub-section is dedicated to the phenomenon - individual incentive system. In this part, the primary focus was pointed out on the description of individual incentives. Further, the incentive system is highlighted in the context of manufacturing company.

The next section of this chapter is dedicated to the contingency theory. The contingency approach helps to describe the external and internal environment factors which affect the incentive system during work. First of all, the core paradigm of contingency theory was provided on the basis of classic definitions. Thereafter, the detailed description of several contingency variables was provided. Referring to modern academics, there are different contingency factors: environment, size, strategy, culture, leadership style and political uncertainty. The previous research of incentive systems in the frame of contingency theory was also presented in next subsection. The final subsection of the theoretical chapter presents the concept of design and mobilization of MCs. This concept helps to portray the stages of system development and how the system is changing through the different episodes.

3. Methodology

The primary objective of the methodological part is to provide information about how the research is conducted and which methods and techniques are used to achieve the goals of the master thesis. This section covers relevant approaches for conducting qualitative research. Understanding of the theoretical approaches and philosophical considerations is a very important step for any research, due to the fact that it helps to clarify the research design, it gives insight about how to interpret gathered data, also it indicates limitations of certain approaches and suggests how to adapt research designs to the knowledge structures (Easterby-Smith, et al., 2012). The chapter is divided into several parts for making an overview of the whole process from the point of research questions definition up to data analysis. First and foremost, it is a qualitative research which is based on the single case study, thus qualitative tools of data collection were mostly used. The question of data accessibility and ethical consideration related to obtaining the study are also discussed. One more important consideration of this chapter is validity and reliability of all findings and used tools within the research.

3.1. Philosophical grounding

As the main methodology of interpretation was chosen **Hermeneutics.** Hermeneutic research allows making interpretations and gives deep insight into the phenomenon. This is a qualitative research strategy which places special emphasis on subjective determination of the meaning of certain phenomenon (koppa.jyu.fi, 2010). In the case of AEROC, the phenomenon is the individual incentive system in the process of development, thus the main goal of this thesis is to shed the light on the process of system formation and changes. The main questions in this master thesis are how the system was designed and what the challenges that company faced are. Hermeneutic methodology is best suited for answering the *"how"* and *"what"* questions, which are related to the social phenomenon (Whitehead, 2004). By using the hermeneutic methodology it is possible to understand and reflect upon the lived experience but at the same moment, hermeneutic research has many challenges. The first one is that the experience can mostly be observed only through a descriptive account. The problem is that experience has to be interpreted in a certain language and some details of the experience can be unshown, due to the language limitations (Goble & Yin , 2014). The second challenge is that it can be time-consuming in regard to the collection of data and in-depth analysis. The third challenge is an emotional investment due to the depth of data shared (Whitehead, 2004).

The phenomenon of this master thesis is closely tied to humans' interaction. The incentive system is formed and changed by the interaction of employees and employer. One the main goal

of incentive system is to balance the interests of workers and managers. Due to the fact, the main research paradigm related to this master thesis is **Social-constructionism**. This paradigm stems from the idea that 'reality' is not objective, it is the socially constructed phenomenon which is given the meaning by the people around it (Easterby-Smith, et al., 2012). The main focus of this paradigm is placed on what people individually and collectively thinking, communicating and feeling and which outcomes derive from this interaction. Thus, in social constructionism, we try to understand and explain the experience that people have than to search external factors and fundamental laws to explain the situation (Easterby-Smith, et al., 2012). The major implications of the social constructionism are: human interests are considered as main drivers of science, the aim of the explanations is to increase general understanding of the situation, the research progress is depended on gathering rich data from ideas which are induced, all the concepts have to incorporate stakeholders perspectives, units of analysis can include the complexity of *"whole"* situations, generalization can be done through theoretical abstraction and sampling requires small numbers of cases (Easterby-Smith, et al., 2012).

3.2. Determining the research design

The research strategy of this master thesis is based on the **single case study**. *"A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident."* (Yin, 2014). A case study is certain research strategy which is comprised all-encompassing methods with specific approaches to data collection and analysis (Yin, 2014). The use of case study allows the searcher explores those aspects of a phenomenon which cannot be clearly evident (Iacono, et al., 2011). In the case of AEROC SPb, it is hard to claim that changes in the system are based on particular factors, due to the interplay of the many various factors on the system. Thus, it is necessary to explore and consider all these factors of impact. The single case can be used to confirm, challenge or extend the theory or even provide new alternatives which can be a significant contribution to existing knowledge. There are several rationales for a single case study: it can represent the unique case which can be very rare, the case can be revelatory, that means the phenomenon was inaccessible to scientific investigation before (Yin, 2014).

This case study can be classified as a **descriptive** because it sets to describe and analyze certain phenomenon - how the incentive system evolved over the certain period of time. The goal of the exploratory research is to give insight into certain issue or situation. This type of research involves certain research techniques: literature review and focus group interviews. Exploration of the phenomenon within such tools provides a better and more extensive understanding of it

(Harvard Reseach notes , 2017). The descriptive research is being essential in giving a precise description of observations of the phenomenon. The major objective of descriptive research is to map the terrain of a specific phenomenon (Harvard Reseach notes , 2017). One more important consideration in regard to this master thesis is that it is the continuation of my POPP. The previous paper was a good theoretical overview, which helped to make a necessary selection of literature concerning to the study phenomenon. The POPP helped to size the possibilities in an accomplishment of this research.

3.3. Data collection tools

This is **qualitative research**, thus all the tools, methods of data collection and data analysis is carried out within the framework of qualitative analysis. Qualitative approaches and techniques in research allow providing a broader spectrum of evidence and perspectives around the phenomenon. At the same time, these researching techniques increase credibility and trustworthiness of an analysis (Saldana, et al., 2011). There are two primary sources of data collection for this master thesis: **phone interviews** and **manufacturing documentation**.

The first tool of data collection is **phone interviews**. This method of data collection allows gaining insight into social and organizational realities. By using interviews it is possible to discover the views, opinions, and perceptions of individuals or groups within constraints of the situation (Easterby-Smith, et al., 2012). The thesis contains **semi-structured** and **in-depth interviews**. The decision to use semi-structured interviews was based on the possibility to use open-ended question which allows the interviewee to clarify and highlight the issues which were not covered by planned questions (Alsaawi, 2014). In-depth interviews are useful when it is important to find the detailed information about person's opinion and behavior or to explore the issue more thoroughly (Boyce & Neale, 2006). Phone interviews have certain advantages: simple accessibility to respondents, time- and cost- effective. The criterion of access is very important in conducting this master thesis. It is possible to say that I'm lucky because I have a *"gatekeeper"* in the company, who helped to get in touch with respondents on different management levels. It is significant to mention that *"gatekeeper"* provided the terms relating to ethical and privacy considerations, thus it was taken into account in the interview guides. The possible timeframe of the study was also specified, thus it is not possible to conduct the research before current period of time, due to the privacy policy. Under the time-effectiveness of interviews is meant the timing of every interview, the average duration of each interview was close to 1,5 hour. It is important to mention that there are two types of the interview guide. One interview guide is for operators and another one was made for the management levels. This solution was made to provide more

credible and *true* picture about the perception of the incentive system on different management levels. One more reason for dividing the interview guides was the purpose of *avoiding potential bias* of own perception because of the working experience in the studied company. In total it was made 6 interviews. All interviews were conducted in the Russian language, thus it was necessary to pay special attention to translation and interpretation of the answers due to the language differences (Fenna , et al., 2010). More detailed information about respondents, their positions in the company and duration of each interview, is provided in the Table 1. The cost-effectiveness can be valued in two merits: there were no traveling expenses and cost of the calls was reasonable due to the fact of usage network applications of communication: Skype, Viber and WhatsApp.

Respondent	**Occupation**	**Interviews**	**Timing**
Dmitriy Kuznetsov	Shift foreman	1	1,5 h
Aleksander Kurilin	Console operator	1	2 h
Karen Sarkisov	Console operator	1	1,5 h
Respondent 1	Console operator	1	1,5 h
Respondent 2	Technical director	2	3 h

Table 1. List of respondents for the interview

The second tool of data collection is **manufacturing documentation**. Manufacturing documentation contains data that reflect and represent the structure of the incentive system. It is a primary source of information and it is internal documents of the plant, thus the usage and publication of certain data were implemented only with a permission of the copyright holder. In the master thesis, it was used production results, parts of job instructions, regulations.

One more source of information for this master thesis is related to secondary data. In the most cases, there are web pages of building materials, building portals, reports of National Association of Manufacturers of Autoclave Aerated Concrete and official website of the company. My bachelor thesis was one more additional source of data about the company.

3.4. Negotiations planning, ethical considerations

Negotiation planning process was another significant stage of this research. All the interviews were discussed and organized in advance with the support of "gatekeeper", thus the interviews were mostly carried out in the spare time of the respondents for not distracting the attention from work. The ethical considerations and anonymity were also taken into account: every interviewee was informed about goals of this research and every participant could be included in the paper

only by own wish. The recording of the answers was organized only with the permission of respondents. The limitations in regard to interview guides were also discussed with *"gatekeeper"*. It was made for the purpose of avoiding the conflict of interests, hardball questions and for ensuring the confidentiality of the participants. All participants got the explanation about how the gathered data would be used, and all of them would get the final copy of this master thesis.

3.5. Interpretation and analysis of findings

There is a range of ways and methods in which data can be analyzed. This study is qualitative and there are some common issues which can be faced in the process of doing the research: the complexity and context-dependency of information. (Easterby-Smith, et al., 2012) It is very important to correctly and logically convert the raw data into the meaningful description of the situation or concept. Moreover, the essential part is to show and explain how the certain conclusions were reached. My advantage was the working experience and knowledge about production processes in the studied company, thus interviewing was conducted with the understanding of all concepts and technical terms on both sides.

As was stated before the main methodology of interpretation was used hermeneutics. Analysis in terms of hermeneutics is an interpretation of phenomenon based on various methods and approaches, which can vary from the discipline. Hermeneutic analysis allows getting the deep understanding of the meaning of certain phenomenon or event (for example culture, certain human type of human behavior, practices, pieces of art and texts) (koppa.jyu.fi, 2010). The understanding of the phenomenon creates through systematic processes of interpretation, which calls **hermeneutic circle**. Interpretation of all details is depended on the interpretation of each part of it. In the master thesis, the interpretation was given to every part of the incentive system in a certain period of time, to form an overall understanding of how the system was designed and how it was changed by different factors of the environment. Thus, the review of these interpretations gives a clearer insight into the understanding of the phenomenon.

3.6. Improving the research quality

The quality of the research paper is another important issue in conducting the qualitative study. There are a big variety of factors which have an impact on the final results, such as methods of data gathering, data sources, approaches of analysis, perceptions, design and etc. Thus, it is essential to make conclusions based on reliable proofs. There are two major quality criteria in this master thesis: **validity** and **reliability.**

The first criterion is **reliability**. In order to state that certain event or phenomenon has a high level of reliability, it is necessary to be sure that the similar results would be got under consistent conditions. In other words, the reliability is about a possible generalization of the case in the context of other populations. *"Reliability is the extent to which measurements are repeatable"* - (Drost, 2011). To increase the reliability of findings, it was significant to have a true picture of what happened. Thus, interview guides were divided for various workers but at the same time, both interview guides had interrelated questions. One more consideration with respect to reliability was the decision to conduct interviews on different management levels, because of the possible difference in the perception of the situations, moreover, it was possible to follow up these differences. The usage of the internal documents of the company in the master thesis also increases the level of reliability.

The second criterion is **validity**. Validity is the extent to which phenomenon or measurement corresponds to the context of real-world. To have a high validity level of findings means that all the obtained results are correct or 'reasonable'. In other words, the findings are about what they have to be about (Easterby-Smith, et al., 2012). There are three main types of validity which would be in this research: construct, internal and external validity (Yin, 2014). *Construct validity* is about determination correct operational measures for the concepts. In the context of my research operational measures were contingency factors, because these factors have an influence on the entire incentive system. (Yin, 2014) The *internal validity* is about causal inferences within the study. The main question of internal validity: "*Can be there an alternative cause which can interpret my findings in another way?"* (Shuttleworth, 2009). To increase the level of internal validity the description of the case implied neutrality from the researcher's side. It is made to be free of bias, researcher's perspectives, background, and circumstances. *External validity* raises the question about the possibility to generalize the case in the context of other populations, settings, treatment variables and control variables. (Shuttleworth, 2009) It is hard to judge about external validity in regard to this case study. The studied company is the leader in the North-West Russian market of aerated concrete, at the same moment, this is the company which in many ways operates with innovative approaches and solutions in the industry.

One of the difficulties at this master thesis was related to the data collection, thus the number of interviews are not big enough to confirm with confidence that all results have very high level of reliability and validity. Nevertheless, it is impossible to state that all the gathered data are wrong and biased, because all the finding based on the 6 long interviews and internal documents of the company.

3.7. Summary

The main goal of methodology chapter is to provide the information about how the research would be done, which techniques and approaches would be used in the gathering, analyzing and describing the research data, which limitations and difficulties can be faced and what to do to increase the quality of the study. The first sub-section begins with the elaboration about philosophical grounding and which paradigm was chosen for this master thesis. Thus, the main methodology of interpretation was chosen - Hermeneutics and as the main paradigm was Social-constructionism. This is qualitative study. The second stage was a discussion towards a determination of the research design. Thus, my research strategy is built upon single case study, which can be classified as descriptive. The description of data collection tools was in third sub-section of the methodology chapter. Therefore there are 3 main sources of data for this research: phone interviews, manufacturing documentation and web resources. In total, there were conducted 6 in-depth and semi-structured interviews. In the next sub-section, the discussion in regard to the aspects of the negotiations planning and ethical considerations is presented. The next subpart of the chapter provides the information about the way of interpretation and analysis of findings. Due to the fact that main methodology of interpretation is hermeneutics, certain approaches to data analysis are applied (hermeneutic circle). In the final sub-section of the methodological chapter, it was described the ways of improvement the research quality through the usage of two main criteria: validity and reliability. The main limitation in regard to the master thesis is written in the end.

4. Empirical part

Empirical chapter of the thesis presents all gathered data about the development of the incentive system based on the case study of company AEROC Spb. The chapter is divided into two main integral parts: research setting and review of milestones of the incentive system. All the findings of this chapter are built upon interviews, primary and secondary sources of data. To illustrate the whole picture of the system development process, all the considerations, opinions and commentaries are included. This chapter provides insight into all challenges regarded to the incentive system during all life stages. The final section of this chapter summarizes all the findings of system evolvement.

4.1. Research setting

Originally AEROC International was the holding company and the largest producer of aerated concrete in Northern Europe. AEROC International has several subsidiary companies which produce and sell AEROC autoclaved aerated concrete (AAC) products in all Scandinavian and Baltic countries (AEROC.EU, 2016). The first AEROC plant was launched near Kunda in Estonia in 2001. A little bit later other AEROC plants were established. The manufacture in Kunda was equipped by German supplier of machinery Wehrhahn and Hess. 1.5 million cubic meters of AEROC AAC were produced and sold over the period of company's activity. AEROC blocks became a familiar product on Estonian, Latvian, Lithuanian, Swedish, Finnish, Dannish, Norwegian, German and Russian markets. It is safe to say that AEROC positioned itself behind their brand as a durable and high-quality product. On all markets AEROC operated under the same slogan: *"light as air, hard as a rock"*. The company takes an active position in the development of aerated concrete characteristics. AEROC is holding membership in organizations, like European autoclaved Aerated Concrete Association (EAACA), ICC Estonia, The Estonian Chamber of Commerce and Industry (ECCI) and The Union of Estonian producers of building materials. In the period of 3.04.2017 - 2.04.2018 AEROC as part of Estonian AS and AEROC Jämerä AS will participate in the "Reinforced aerated concrete development project". The main goal of the project is to increase the compressive strength of the material.

In 2003 AEROC came into the North-West market of Russia. The manufacturing plant in Saint-Petersburg was established in 2004 as part of LSR Group. It is a fully automated plant with high-tech German equipment «Wehrhahn». The production capacity is 400 000 cubic meters per year, thus the plant can produce up to 1300 cubic meters per day of aerated concrete. Since the time the plant was launched, AEROC SPb set the trends for all other manufacturers in the industry and determined the direction in development of aerated concrete market in Russia. AEROC SPb

takes the leading position in the Saint-Petersburg market of autoclaved aerated concrete and it is one of the most productive aerated concrete plants in Russia. Where more than 3 000 000 m3 of AAC was produced and sold in the 11 years of work, thus it is 12.5 million square meters of residential and public buildings (AEROC.RU, 2017).

The main types of activity:

- production of aerated concrete products (blocks);
- purchase and sale of glue for laying gas silicate blocks;
- purchase and sale of plaster mixture for aerated concrete;
- sale of finished products through trade networks, AEROC store and direct sales;
- packing and delivery of products

In addition to production, the company's specialists are actively involved in improving the legislation of regulating production and using of aerated concrete. The company is funding research and development. Also, manufacture is being a co-founder and one of the main participants of the "National Association of autoclaved aerated concrete." (AEROC.RU, 2017).

AEROC SPb has the widest range of products from D300 to D600, and from B 2.0 to B 5.0 It's the first manufacture which has released blocks with the grade class B2,5 and density D400 kg/m3 in 2005, furthermore, this density was about 3/4 of the total volume of aerated concrete consumption in the North-West. The advantages of D400 were the low coefficient of thermal conductivity, high concrete strength, affordable price, blocks were lighter than D500 blocks. In the march of 2009 AEROC SPb introduced aerated concrete with renewed characteristics. It was the lightest load-bearing structural insulating material with characteristics D300, B2,0 F50. This material gave new possibilities in the low-rise and tall rise buildings construction. Nowadays AEROC SPb is the only producer of D300 blocks with compressive strength B2,0.

Russian north-west market of aerated concrete has its own structure and features. There are 5 main competitors on the market: AEROC SPb, H+H, ooo211, EuroAeroBeton and Stroikomplekt (Fig. 4). The similarity of technical characteristics of the products among players creates a strong competition on the market. Thus market players have to constantly carry out analysis of competitors for choosing the most effective strategy.

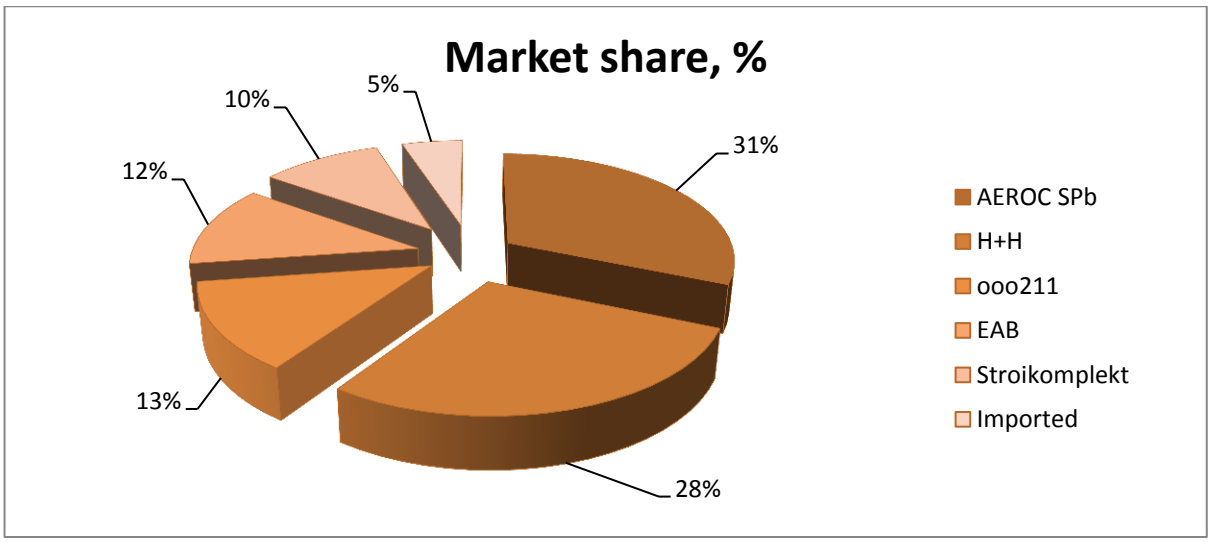

Figure 4. Competitors and market shares in 2016 (NAAAC, 2016)

The special feature of the north-west market of aerated concrete of Russia is that the most of the manufacturers are trying to produce AAC with high-density D500, and the data from National association of AAC (2016) shows it. From the figure 5, we can see that 63% of the market accrues to AAC with density D500.

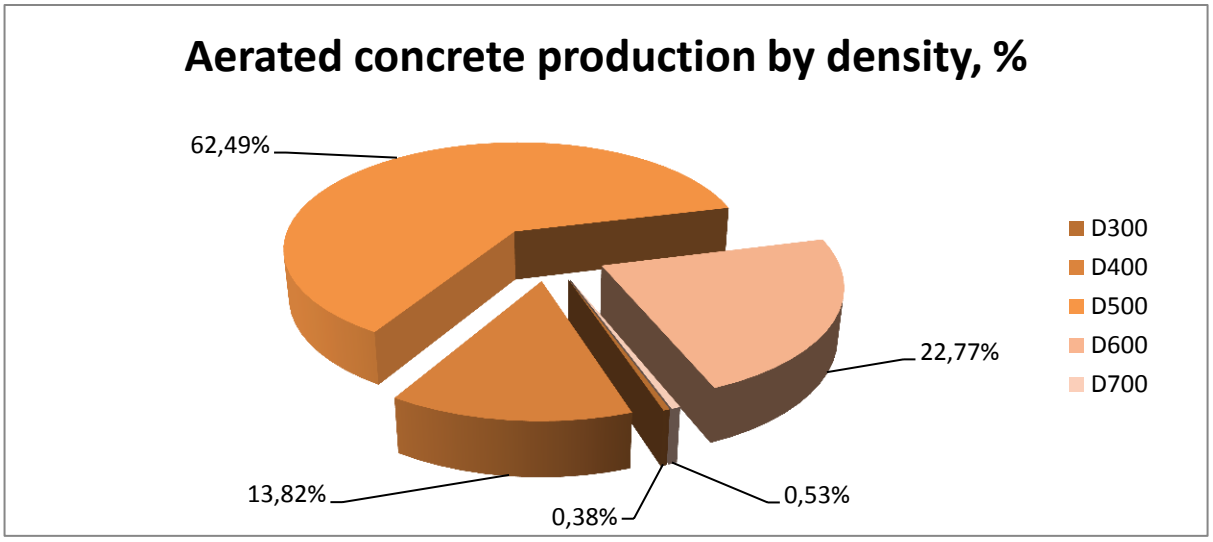

Figure 5. Production by densities in 2016 (NAAAC, 2016)

High-volume of D500 output is derived from the simple technology of production, which allows producing less amount of defecting output. A lot of players on the market (for example H+H) are trying to promote sales high-density AAC. AEROC Spb focuses on production of light-density AAC (D300, D400). Since 2004 AEROC Spb produces these types of AAC, thus the company has solid experience in production light-density AAC. Marketing research in 2014 showed that the main competitor of AEROC Spb is H+H. AEROC Spb has the following competitive

strengths: the company has its own retail stores, owns technologies and recipes of production low-density AAC and wider net of dealers. (Bachelor thesis, 2014)

4.2. Structure of the initial system

During the period of activity, AEROCs management was involved in developing the incentive system. The incentive system was the object of changes and innovations in the company (Internal reports). One of the managers (R2) in the interview claimed that: *"The incentive system is a tool to achieve strategic goals of the company"*.

Based on the interviews and internal reports it was revealed that different levels of employees have different incentives, which at the same time can be interrelated. Thus, it is necessary to point out which incentive system have been studied and who were main users of this system. The phenomenon of the study in this thesis is individual incentive system for the console operators. The position of console operators in the labour division hierarchy can be observed on the figure 6.

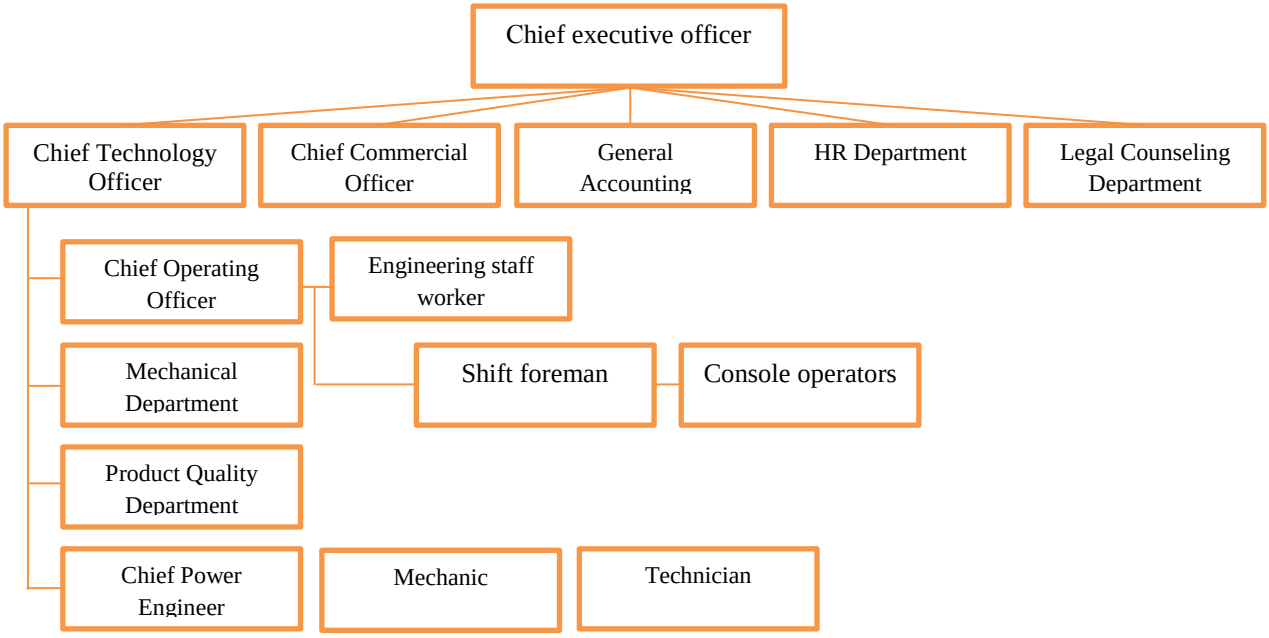

Figure 6. Hierarchy of labour divisions (Internal documents, 2017)

Over a timeframe of 6 years, the system had 4 significant stages (Fig. 7) which sprung from different factors. There were factors from an internal and external environment of the company. Every change had a strategic relevance for the company because these changes considered the further market evolution.

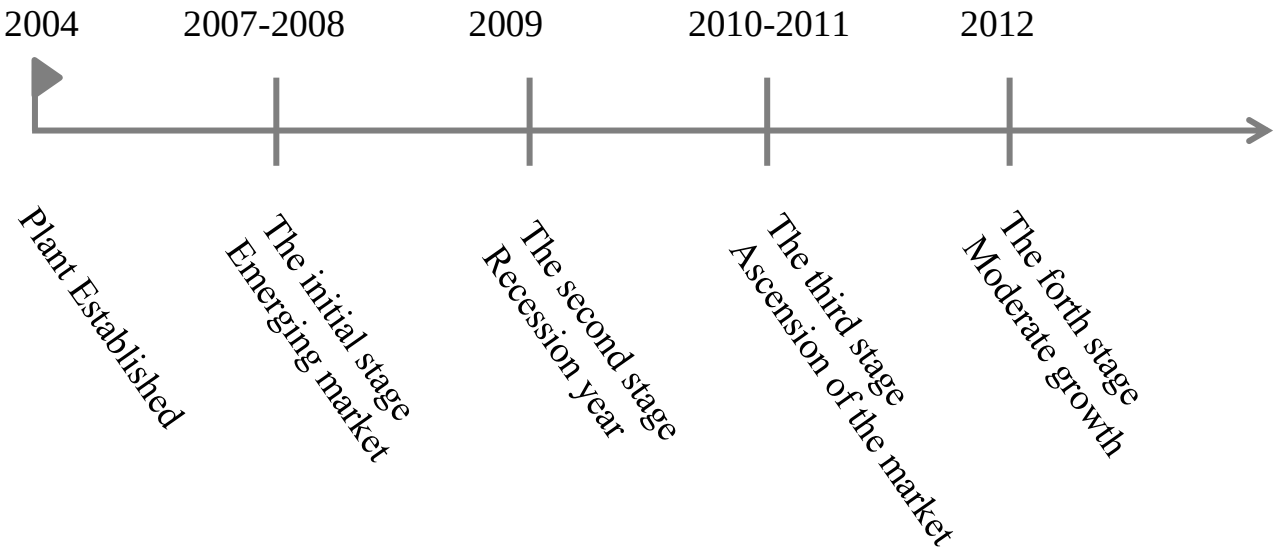

Figure 7. Milestones of the incentive system

According to internal documentation, the incentive system in 2007 was comprised of three parts of **monetary incentives**: Base pay, Contingent pay and Cash bonuses and three-part of **non-monetary incentives**: Recognition, Career progression and Flexibility (Tab. 2).

Type of incentive	Description
Base pay	Salary, fixed compensation, monthly rate
Contingent pay	Monetary bonus concerned to production results
Cash bonuses	Individual cash bonuses of employee
Recognition	Relations based on trust, mutual respect and equality
Career progression	Real possibilities of growth and development
Flexibility	Recognition of employee needs by upper managers

Table 2. Types of Initial incentive system

Base pay

Through my documents studies, it was revealed that Base pay is the minimum salary of an employee which is paid monthly if the worker carrying out all professional activities in accordance with employment position instruction. Therefore, different professional qualification groups have a different level of base pay. One of the managers (DK) in the interview stated that: *"There are no big basic salaries, there is stability thus money plays the certain role in the organization of working processes but not the key role".* Basic salary for direct labour employees in AEROC is market driven. The calculation of monthly salary for the control operator is built

upon the base salary rate per hour. As long as it is a process flow production, employees have night shifts. Salary in a night time is calculated within another salary rate per hour. The amount of hours in the night shift is taken in accordance with Labour Code of the Russian Federation.

Contingent pay

Contingent pay is an extra payment to the base salary, which is tied to production results during a certain month. The size of the bonus depends on the fulfillment of the plan of production and calculated based on the figure 9. The full bonus is paid only if the worker passes a probation period and has two specialties which are approved by technical department.

As an illustration of a contingent pay can be a shift bonus. The shift which reaches the highest production results during one particular month gets an additional bonus. The calculation of the production performance of shift determined by the formula (1):

$$\text{Av. Value n} = \frac{(\sum \text{nFF} + \sum \text{nFPL})}{2} \quad (1)$$

Av. value n – estimated production results

$\sum$ nFF – the amount of filled forms per shift

$\sum$ nFPL – the amount of forms which passed the packing line

n – the amount of shifts

This system doesn't take into consideration unexpected breakdowns, scheduled maintenance operations, repair works and also two shifts, the results of which were the worst. Every worker from the winning shift get monetary bonus to the base pay which in 2008 was equal to 1500 Rub (225 NOK).

Cash bonuses

Individual cash bonus is a single payment which is used for awarding an employee for good performance, achieving certain results or actions which entail a significant contribution to the support of normal flow of production processes.

Individual cash bonuses are developed to increase the interest towards work among employees. Below is the list of bonus pay performance targets for the production workers:

- Simultaneous work on the two operational areas without shiftman and with a time duration more than operators' lunch break from the parallel operational area;
- For the liquidation of emergency situations related to the operational necessity;
- Best operator of the operational area. 1 operational area operator from each shift;
- Proposal for the technical improvement, approved for implementation by technical department;
- Detection of hidden faults of the production facility (prevention of big operational down time of production line and control of scrap formation);
- Completion of additional training and certification by the technical department.

Training and certification are not mandatory. A motivational factor here is the fact that employee can increase an amount of base pay by learning other operational areas of manufacture. By increasing base pay worker also increases the amount of bonus. From another side, workers with a few specialties are very useful for production processes because they are interchangeable.

There are also three-part of non-monetary incentives in the AEROC SPb. The description of these incentives based mostly on the interview findings and own working experience in the company. It may be said that it is internal unwritten rules of AEROC SPb.

Recognition

As was said before in the section, monetary incentives play the certain role in the company, but employees' work in teams (shift) thus there can be a place for trustful relations and mutual respect. It is hard to tell that all the relations among employees in production are based on moral norms and values due to the fact that it is very individual. Mostly workers operate as a team if there is a breakdown or any other problem, production managers solve the issues together with workers in the production. It can sound naive, but the further production results, which were described, cannot be reached without professionalism and good teamwork.

There is a strong interaction between employees and higher level managers. Production managers don't sit constantly in the office the whole working day, they interact with workers and replies workers needs as long as it is possible and the received data from interviews with direct labour employees shows it. KS noted that: *"Dialogue between employees and managers absolutely was. There was a constant correction of daily plans, correction of scheduled maintenance and remedial operations."* The confir mation of interaction was also found in

answers of other operator AK: *"Most of the suggestions were heard, but it depended on who and which ideas were provided. I really loved to offer and sometimes I even could motivate production management. And it was very pleasant that ideas were taken into consideration. There also were rewards and it was grateful"*.

Another fact which supports a high level of interaction between employees and management is that workers union never existed in the enterprise. Workers union is usually created to protect rights and defend the interests of employees. In AEROC SPb all the problems and needs among employees were solved on the basis of personal interrelations and understanding the needs of both sides. The employer is committed to create the best conditions for work. During my work time at the plant, I have seen the relation of management to operators. Simple example, which was observed, can be illustrated. There was the request from operators of the cutting line that temperature at the operational area is very high, thus it is hard enough to work. The operational area is not a big place, and originally air conditioning is not designed for this type of work site. Nevertheless, this issue was solved fast enough. The special area with air cooling was designed for this operational area and operators could use it to cool during the work time.

Career progression

The career growth is also possible in the company. All of three operators who participated in the interviews occupied another job position in the beginning of their career in AEROC SPb. Karen and Aleksandr began from the position of operation area controller and had a career path till the head of shift. The management of AEROC SPb is very interested in competence development of the staff, because it has a direct relation to the quality of products and how fast the problems with production breakdowns can be solved. With the reference to documentation, every production worker in AEROC SPb has possibilities to study new operational areas of manufacture or upgrade qualifications. Further, the education of employees was used as a type of incentive. The more detailed description of it is presented in the next subsections which are dedicated to the exploration of milestones of system development. Overall, every production worker has the possibility for a growth, anyway it is growth in salary or in a career position or both way. The internal report of 2008 shows that 11 workers began to study other operating areas, 11 more started to study their second and third specialities.

Flexibility

Flexibility is about an interaction between worker and employer, it is about when, where, and how employee can work to better meet individual and business goals. Flexibility is mutual

beneficial to both working sides, and it can be a good basis for creation trustful relations between employee and employer. In AEROC SPb flexibility can be formal and informal. Formal flexibility is based on internal policies of the organization which provides certain rights and limits in a policy of all-permissiveness. Informal flexibility is unwritten rules, which are available to production employees. It was not the planned topic to discuss during the interview, but one of the unwritten rules was presented to me by the manager R2. This example illustrates the situation of a breakdown of equipment by the employees' fault. If the employee describes in written form what he/she has done and coordinates the approval of this form with a shift foreman. This paper is being presented to the management on behalf of the shift. Then employee doesn't get a punishment, because the problem was not hidden and the employee recognizes his\her guilt. The main attention is paid on the solution of the problem, and avoidance of such problems and mistakes in the future.

The organizational structure aspect is one more internal factor which has an influence on the incentive system. One of the managers who created the incentive system R2 admitted that adhocratic organizational structure plays a big role in a process how workers behave and act. Adhocracy is a flexible, creative and informal organizational structure which is characterized by the low level of formalities in the processes. The main advantage of this type of organizational structure is a high adaptivity of the company in the turbulent environment, because of company's fast respond, which is not fast in bureaucratic organizations. Adhocracy gives more freedom in actions and decisions for every employee. The adhocracy can exist mostly in a dynamic business environment with a highly fluctuated demand, thus it is more natural for IT industries and higher level consulting services and film production. It is a very rare situation if there is such organizational structure in the manufacture, because usually there is a strong hierarchy in the manufacture. According to an adhocracy, there is no centralized power, but in AEROC SPb there are upper managers who control the whole situation if it goes out of control. It is possible to say that there is a modified version of adhocracy at AEROC SPb.

Summarizing the above, this section was devoted to shed the light on the history of the company, its organizational structure and information about main parts of the initial incentive system. This section is a departure point for the further elaboration on how the incentive system transformed through the time.

4.3. Stages of the incentive system

4.3.1. Orientation on the output quantity (2007-2008)

In the beginning of the way, it is relevant to make one important remark. *"Every incentive system in AEROC SPb is aimed at a specific target which is set by the management"*, as was stated by R2.

The incentive system for the direct labor employees in 2008 was mostly knotted to the volume of production. It was newly established manufacture with unused production capacities and fresh equipment thus the goal was to accelerate the possible production and to maximize the utility of production capacities. For the manufacturers, to produce as much as possible, for the sales team, to sell as much as possible.

For the more descriptive presentation of all factors which have an impact on the incentive system, it was taken the decision to divide the factors into internal and external factors from the environment of the company. Internal factors represent all the conditions and events which happen inside the production processes and plant. External factors represent the external environment of the company.

Thus, the realization of this strategy was possible because of the certain environmental conditions: market capacity, high demand on the material, leading position among competitors, good suppliers of raw materials and etc. In 2008 was a good and fast growing market capacity because the market of aerated concrete was in the stable development. High demand for the AEROCs aerated concrete was based on high quality of blocks and also company offered an innovative product. AEROC SPb was the first company which produced aerocrete with density D400 with concrete strength B2,5 at the same time competitors couldn't offer blocks with the same quality characteristics. Mostly competitors sold aerocrete with density D500, because they had less experience in production of aerated concrete with low density.

At the same time, there were other internal factors for AEROC SPb, such as unused production capacities, well-trained and ambitious team of professionals, features of organizational structure, new equipment, good modernization of equipment and possible optimization of the production processes. One more important internal factor was how managers conducted the organizational governance. In 2008 owners of the plant and company were from Europe (Estonian), thus organization of the processes were conducted in the same manner as at European plants. There were innovative approaches in the processes of governance of labor and the training of staff. In

the process of recruitment of new employees, production managers had personal interview with each potential candidate. Thus, it was very selective recruitment.

The incentive system in 2008 combined monetary and non-monetary incentives. Monetary incentives were marked driven base pay, contingent pay which had a direct relation to the production results. It was the first time when was presented the competition scheme for shifts. The third monetary incentive was cash bonus which was depended on the individual results of every employee. Non-monetary incentives also existed that time, but during the process of gathering data, it was not found much information about these incentives, due to the fact that it was hard for respondents to remember all the details about these incentives. Mostly all the elements of the incentive system were described in the previous section of this chapter.

What can be said about the initial system is that expectations and requirements for this system were met. Based on the AEROC SPb output production results (Figure 8), it is possible to see that level of production where much higher than in previous year. Thus, it is very hard to elaborate about which problems the system had in that period of time.

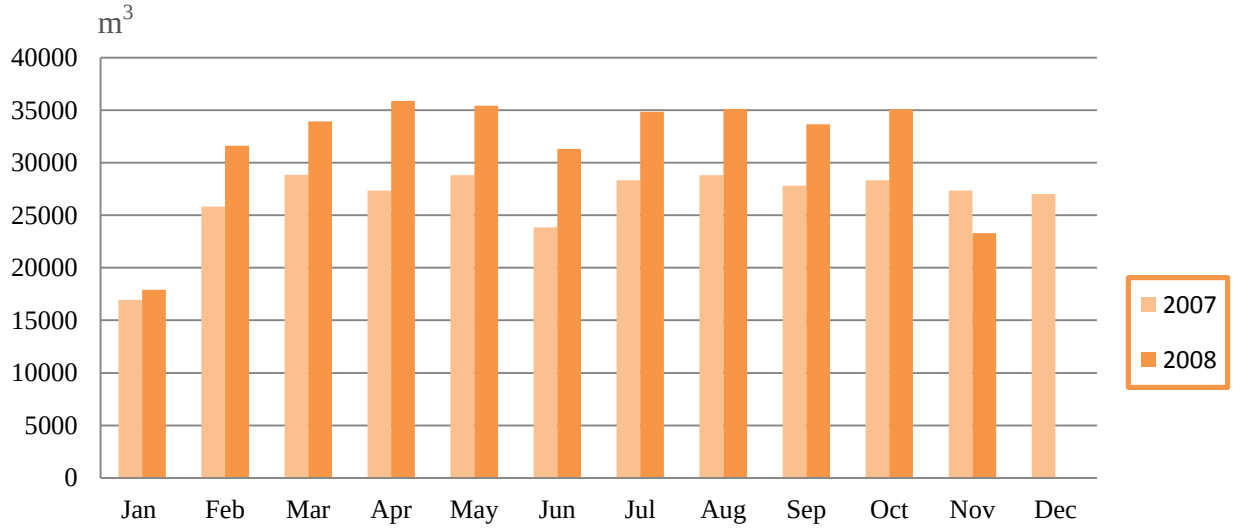

Figure 8. Volume of production in 2007-2008

4.3.2. Minimization of defective production (2009)

Incentive system in the period from ending of 2008 to 2009 had significant changes. As stated one of the production managers in the interview (R2): *"...the incentive system in 2009 was oriented towards survival of the plant, because it was a period of economic crisis*." That time was a huge drop of consumers demand on the market, and sales also went down. One more external factor was the reduction of the market capacity. This was particularly noticeable, because a significant part of consumers were private developers. "*All the actions were aimed at preserving the profitability of the enterprise, sometimes minimal, but profitability."* - said R2.

According to data of AEROC SPb and building portal ASN info the consumption of aerocrete in 2008 was 5,2 million cubic meters, in 2009 was the downfall to 4,7 million cubic meters and in 2010 the market started to grow again 5,4 million cubic meters.

The main priority in the production processes was paid on the quality of the material, not the quantity, thus the incentives were mostly based on the qualitative characteristics of the blocks.

The base pay was the same, market driven. Main changes were made in contingent pay. Before 2009, the possible contingent pay could be 50% of base pay. The whole amount of contingent pay was knotted to the quantity of filled forms. In 2010 the contingent pay was allocated on two parts. 25% is quantitative indicators and 25% of qualitative indicators. Every indicator was set by the production plans, which were in the previous periods of time. Quantitative indicators are controlled by plant foreman and qualitative indicators are monitored by the head of quality department. Thus, the final amount of contingent pay was depended on the data of both indicators. Individual cash bonus was still 10% of base pay, and this bonus was independent from other production results (Figure 9).

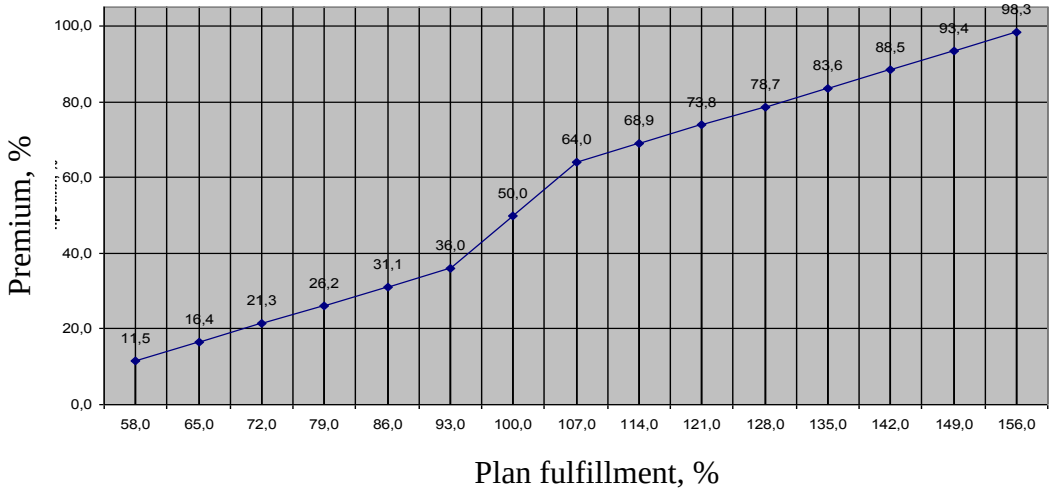

Figure 9. The dependence of bonus with the plan implementation (2009)

Another core point in that period was the reduction of staff, thus one of four shifts was reduced. Management of the company tried to save the working places as much as possible. During the down time of production, all operators and other production workers were involved in overhaul of Estonian aerated concrete, which was imported to Russia by barges. The daily norm for the employee was to sort 18 pallets of aerated concrete.

As was stated before, the incentive system in AEROC SPb had several changes towards the qualitative characteristics of the material. Management of the company very carefully paid attention to a product quality. Thus, there were two more internal events, which had a high

impact on the organization of workflows. Firstly, the quality management system was implemented in 2009. All structures of the plant were involved in the writing process. The quality management system has to describe what workers have to do to achieve the appropriate quality level of final product, thus employees have to carry out their work good enough to show how well the work could be done. It also can be considered as the incentive for the better work execution. It should be noticed that in 2007-2012 AEROC SPb was the only production company among competitors, which had a quality division on the plant. Thus, it was daily control of the blocks quality. R2

The second internal event was the introduction of a new type of blocks, at some point it was innovative blocks. In the march 2009, EcoTerm Plus blocks were certified with technical characteristics D300, B2,0 F50 (AEROC.RU, 2017). AEROC SPb developed the market of low-density aerated concrete. Moreover, during the 2009 also were invented and developed different new recipes for the production. As manager R2 stated these recipes were developed to make production process little bit longer. *"It doesn't affect the quality of the blocks, it was the just recipe which required a longer time for production"* - said R2. The idea for this recipe came when it was necessary to make workers busy. It was not necessary for the company to produce a big amount of output, due to the low level of sales.

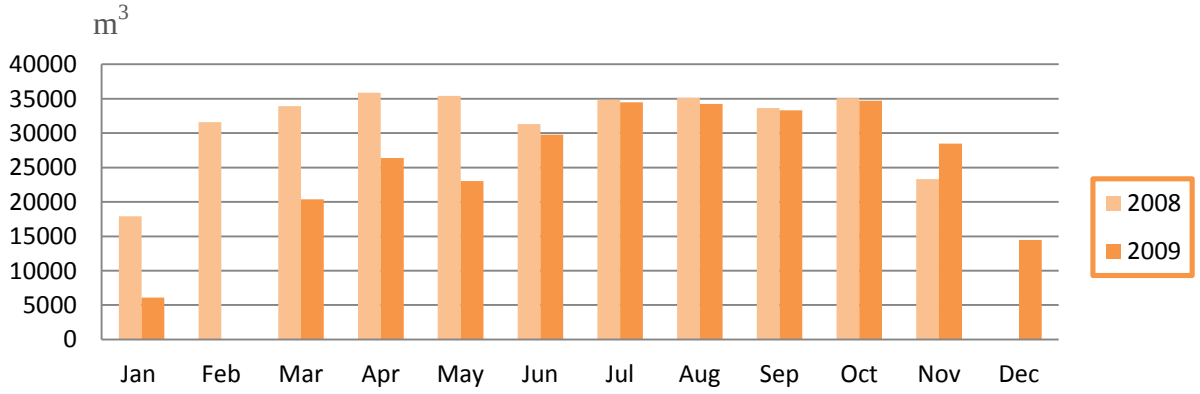

Figure 10. Volume of Production 2009

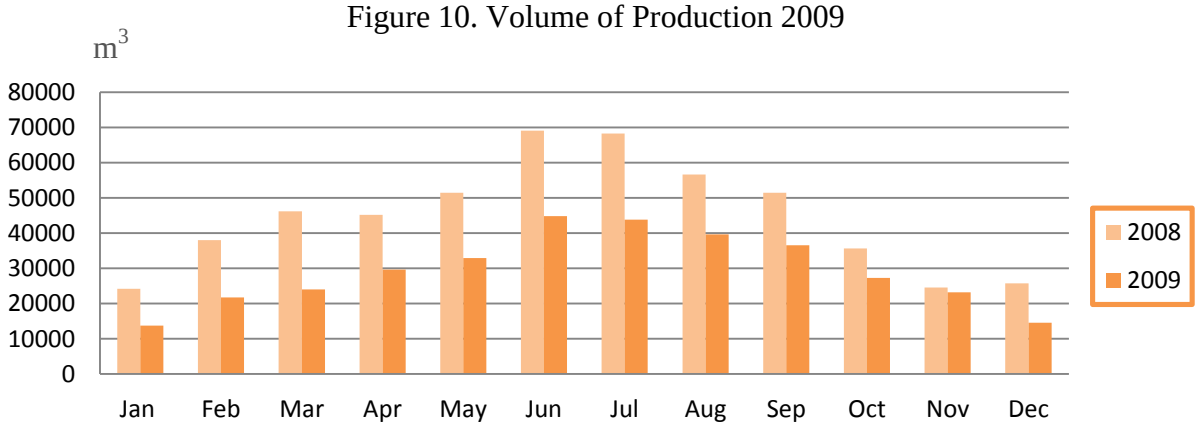

Figure 11. Sales 2009

On the figures 10 and 11 it is possible to observe the full dynamics of production and sales of aerated concrete in the crisis period of 2009. Thus, in February, it can be seem complete stoppage of production. Following the next 3 months, amount of production was reduced by 10.000 cubic meters each month. Sales hardly reached the plan at first half of the year, even in the period of seasonal demand. At the second half of the year the situation changed, and sometimes, sales team could over-fulfill the sales plan.

According to the obtained results from interviews, the first challenges to the incentive system could be observed at this stage of system development. Most of the respondents considered the factor of individuality and difficulty to motivate big amount of workers by the only system. KS mentioned: *"Different people are driven by different needs. It is all about individuality, someone cheers for production results, trying to reduce the downtimes and someone works without interest and does not think about efficient results."* A very important factor is the personal motivation of each employee, his/her commitment to the production processes. Operators also mentioned that those who worked very hard and was interested in the development of production managed to continue work in the company after the crisis period. One more challenge which is associated with this system and previous system was mentioned by one of the operators: *"The old system with contingent pay of 50% of base pay is outlived its usefulness, so there were no new levers to incentivize. Some workers took work easy, but some workers worked as hard they could and got the same salary."*

To sum up, the incentive system of that period was affected mainly by the crisis on the market of building materials. All the internal factors also depended on economic situation of that period. The main goal in front of management was to provide the survival of production and save the well-trained personnel. One of the managers in interview stated (R2): *"There were a large number of defective blocks at that time, we were trying to use all the staff in different tasks, created huge variety of tasks. We perfectly understood that it were very skilled workers, moreover team. But as a result, we had to reduce one shift because of the crisis situation."* Another interesting fact, when situation became more stable in 2010, managers called to each of employees from that shift to employ them, but all of them were already employed.

4.3.3. Competition between shifts (2010-2011)

The end of 2009 and 2010 year was the rise of the market, thus the demand on the building materials was stabilized. The plant started to increase output, and sell more. The market capacity also became bigger. Another important event was appearance of new competitive player on the market. Danish producer H+H runs a new plant of aerocrete with same production capacities

(400.000 cubic meters per year) as AEROCs plant. As was mentioned in the previous section, one shift was laid off. Thus, most of the workers crossed over to a competitor's plan. One more important event for the plant was a change of management. All of these factors had an impact on the existing incentive system for the production employees.

The main part of the incentive system in 2010 was borrowed in the previous period. *"In 2009 period, we suffered from poor quality of raw materials, and consequently the low quality of blocks. Thus, the system of scrap accounting and ways of its reduction had an effect on future incentive systems"* - stated the R1. Operation area controller had a stable market driven base pay. The structure of Contingent pay was the same, 25% of contingent pay was tied to qualitative coefficients, the rest 25% related to quantitative results. The main difference between prior period and system in 2010 is amount of output. The amount of output had to be bigger. The individual cash bonus was as usual 10% of base pay with a certain requirements.

The novation of the incentive system in 2010 was more advanced system of competition between shifts and more extended system of ranking among employee specializations. If in the previous period it was only possible to learn other operational areas, in 2010 appeared grades. *"Every speciality had at least 3 grades."* – said DK. Thus, controller had to pass special exam to get an approval of grade from the technical department. The higher was class of worker, the higher was the personal bonus in cash equivalent. During the interview, production manager noticed (R2) that these exams were very hard to pass. A worker had to work and get experience at least for 3-5 years to know all the certain specialities of studied area.

In the competition part, amount of prize winners became two: first place and second place, in the previous similar system the winner could be only one shift. The first place got fixed amount of pay, for the second place the amount of pay was little bit lower.

To calculate the overall monthly result management used following indicators: actual number of filled moulds, planned number filled moulds, diagonal cracks, side cracks in some blocks (cutting line) and scrap of finished products. The percentage of monthly filing plan completion is calculated by dividing actual number of filled moulds on planned number filled moulds. The second part of calculation is to count the amount of defective products by summarizing diagonal cracks, side cracks in some blocks (cutting line) and scrap of finished products. Additional part in calculation of loss was calculated by management. There were scrap which was produced without fault of production staff, scrap which was got during experiments and other factors of production. The additional part was added to the second part of calculations to each shift. The final part of calculation was related to percentage discrepancy of filled moulds. Total amount of

scrap was divided on factual number of filled moulds during the month. The results of each shift posts daily on the desk, thus every employee can check the status of shift on the board.

During the interview, almost all of the respondents paid special attention to the competition scheme. They mostly remembered competition schemes compare to any other parts of the incentive system. The competition scheme as any other system had weak places and respondents from the both sides, managers and workers, told about it. From the position of an employee, the main problem was related to ambiguity of accounting the scrap. One of the production managers marked that competition scheme about the quality could be not that accurate because of the **human factor** (DK). The core issue for the management was to make this system more *transparent* and *unbiased*. Another question is fairness of players because of the special aspects of production processes (R2). Due to the fact that production is a non-stoppable process, daily results of one shift is tied with actions of previous shift. Thus, if one shift finished the working day on the autoclaving stage, the another shift could get a scrap of a previous shift. The same situation could be on the stage of filling the moulds if the mistake was made before in the recipe. Managers knew about these weaknesses of the competition scheme and all of these situations were considered in the final results.

One of the operators (R1) mentioned that: *"New system was perceived warily but after manager's explanations were provided, everything became clear. There were more opportunities for certain employees to earn extra money."*. The first results after implementation of the competition system were good. During the 2010 completion of a plan was close to 100% almost every month, moreover, sometimes plan was overachieved, in 2010 it happened 4 times. Despite the fact that this system had some weaknesses it was successfully implemented. The main goal of the production management was to boost the production and come closer to possible production capacities. In the end of 2010, mostly all the performance targets around production level were achieved.

But even if the results of production are good, it does not mean that everyone cheered for the production and its development (AK). Also, there were workers who went through the motions. One of the operators in the interview mentioned that problem with a low motivation of employees is not the only fault of poorly designed incentive system, there are also behavioural factors and workers attitude towards labour. AK stated that: *"In the last 20 years, there is a decline in the prestige of direct labour professions on the manufacture. Complete loss of respect to the worker as the unit of production. Follow the above, we got a typical worker who initially doesn't get satisfaction from the actions and also a person with a lack of potential and*

ambitions...". Thus, a very important factor is the initial ability of an employee to be motivated and also his/her commitment to the production processes. AK also added that: *"The key point is the fibre of employee and his/her personality, those who are not interested at all, they still don't have a desire to get extra money or they still hold the old positions without any hope of promotion. The same idea about people who is with the focus on money incentives, they would be still dissatisfied, because they would constantly expect more than they get."* The similar ideas were found in the other answers of the respondents, but they didn't pay much attention to these aspects.

After the successful results of 2010, there were still unused production capacities and underserved market capacity. During several months of work in 2011, management came to the conclusion that inability to produce more is related to psychological factors. It can sound ridiculous but staff could not believe that they can produce more. The production was steady, the teamwork of maintenance services was well-coordinated and fast, a number of breakdowns and downtimes were small and production capacities allowed producing more, as stated R2 in the interview. The management had to force workers to believe the fact that it is possible because most of the time employees told that it is impossible

"The production has an exponential character of growth, in the beginning, it increases fast but at a certain point, the growth becomes slow, thus we reached and supported that certain level of production. The further growth was hard. It was not that complicated for workers to realize the plan, the hardest part was to fill last moulds in the shift for overcoming the plan. That was the toughest part." - said R2.

To solve this problem management introduced the financial incentive. For each additional filled mould, every employee from the shift received the bonus, which is equal 1000 rub (152 NOK). In some stance, management wanted to play on greed factor, because this amount was very high as a reward. The duration of this experiment was about one month. For the workers, this incentive had to seem achievable. Finally, all the expectations of this incentive were met, because workers were mostly driven by the idea of earning big profit. The main role here played factor of greed. The necessary production result was reached and all participants were rewarded. From the one side, this result was very important for the management because it was the evidence that growth is possible, from another side employee could not say that it is impossible to do that.

Almost all the respondents mentioned about this event and reward because they have never experienced such incentive before. KS added that: *"Of course, in a certain stage, this incentive*

was stimulating. My attitude towards work changed but not that much, an additional bonus to the base pay it is very good, but the quantity should not be to the prejudice of quality." But at the same time, this short-term incentive had some problems, which were mentioned by one of the respondents (R1): *"From one side this system worked well - the more moulds you have grouted, the bigger salary you got. From another side, a lot of conflict situations arose between shifts. So, one shift can hurry, grout lot of forms, close their eyes to current equipment maintenance and move it for the next shift. Then, the next shift comes and finds plenty of surprises and finally gets an unforeseen breakdown of equipment. In the end, this shift cannot fulfill the plan."*

Summing up all the findings of the incentive system in 2010, the system was oriented towards the increasing of output with a certain level of quality. Another event of 2010 was the appearance of a new strong competitor on the market with the equal production capacities. One more change was an evolution of competition scheme among shifts. During the work with a new system, several weaknesses were revealed. Most of them were connected to the system of scrap accounting, thus there were many questions from employees towards final results. Looking ahead, the system of competition found its development in the future, thus in the further periods, it was the constant object of exploration. In the interview manager (SE) said that the main strategy which they had that time was first to boost the production level as much as possible and then slowly ramp up production in long-term, at the same time, another core goal was to save the quality level of production because AEROC had a good reputation on the aerated concrete market of North-West region of Russia. In 2011 the main event was the overcoming the barrier in the volume of production, thus there was implemented short-term incentive system with a very munificent reward. The results of implementation were successful.

4.3.4. Current system (2012-...)

Further development of aerated concrete market was gradual. According to the production documents, there was still growth of the market capacity, but the upward trend was slower than in previous periods. There were no significant changes in the competitive environment. It was still fight for customers, suppliers, partners and the dominant position in the market. H+H increased the production capacity to 50%,EAB to 25%, Stroikomplekt to 28% and ooo211 90%. In the 2012 the market share of AEROC SPb is reduced from 35 to 31% in comparison with the previous period(Bachelor thesis, 2015). There were lots of breakdowns during this year.

The incentive system for production workers of that period of time was the continuation of the previous system. The main goal for the company’s management was to increase the market share

by keeping the growth of production and save the quality level. Thus, these factors underlie in the basis of incentive systems.

The incentive system consisted of Base pay, Contingent pay, Individual bonuses, and Competition system. There were no big changes in the structure of the base pay for the direct labour workers. The contingent pay was a monthly premium payment which is dependent on the rate of effective production. This rate connects amount of extra output with the index of bonus payment. The maximum size of contingent pay can be 10% of Base pay. Individual bonuses are made of several parts: personal achievements, qualifications, and other factors. Qualifications usually are very tied with work experience of an employee, thus more experienced workers get a little bit more. The competition system had several changes, first of all, the amount of pay was increased, and the main change was related to the method of calculation. In the previous periods, the computation of results was based on the system of scrap accounting (quality of output during the production processes). Sometimes the final results were not precise, thus there were a lot of questions from employees about the justification of the results. The human reliability was the main problem in that system. The human reliability is the possibility of making wrong or illogical decisions by the person in specific situations. Thus, to make the system of accounting more transparent the management decided to count an amount of filled moulds and amount of packed finished goods. The monthly plan is approved by the production plan and amount of shifts in a certain month. The shift which produced more finished goods is the winner.

Another milestone of AEROC SPb was a training of managers. The training was dedicated to an improvement in production processes, development of support processes and continuous improvement of all functions and activities of the production on the basis of Japanese philosophy and practice Kaizen. The tutors were Japanese colleagues who taught Toyotas staff earlier and nowadays. Later the experience of education was implemented in the processes and several results were got. To a greater extent, this training affected the arrangement (management) of the service processes, which supports the normal flow of the production and fast solution of unforeseen events.

One of the core events of 2012 happened in the end of the year. It was the world record in the production volume, AEROC SPb was the only plant who managed to produce 400.000 m3 of aerated concrete per year, by using "Wehrhann Plus" equipment.

The opinions about this achievement sometimes were different. Thus, it was necessary to figure out if the existed incentive system had an impact on the attainment of this result. Some of the production workers (KS) pointed that the existed incentive system was one of the factors but not

the main one. He stated that: *"Modernization and different modifications of equipment which affects the clock cycle of filling, reduction of the cycle of autoclave curing. Well co-ordinated work of service facilities and maintenance service."* Another operator AK also mentioned that the record was achieved because of well-coordinated teamwork. *"Reduction of downtime amount, and operational staff work, but not the acceleration of processes, as it was stated by Japanese specialists"* – said AK. One more opinion was provided by another operator: *"Grouting of high-quality materials, low percentage of scrap and competition scheme. This achievement became a reality because of sum of these components."* At the management level (R2), one of the ideas was that incentives with extra payment for additional filled moulds, was a good start which dissolved the limitations related to a volume of output. But manager (R2) also marked that: *"Good cohesiveness of the production units, team spirit and homebuilt improvements of equipment"* were the elements of this achievement. Another manager (DK) stated that there is no relation between existed incentive system and the production record, this situation looked like the conjunction of circumstances. *"At that time was few amount of machinery breakdowns, but the main thing was systematic equipment maintenance and good team play of all production units"* – added DK. Overall it is possible to say that most of the respondents agreed that the core elements of the record were good team play among all services on the manufacture and good improvements of the equipment.

During the interviews and later analysis, there was found one idea which united all the interviewers, they all were the people who were enthused about things they do. In other words, they all loved what they do. AK said: *"Personally, my attitude - it was a pleasure to go to work and to go home from work. And it's not about the money, it is about meeting the needs. Even if I had a certain possibility to earn more, but had to do my job in a shoddy way... why do I need this money, if I would be ashamed for this scrap after? I will die, but someone will be glad to be in a warm house with the walls which were produced at our manufacture. And I know that I have a direct bearing to these blocks. But this is not a motivation factor for the person, who constantly measures his/her actions in monetary equivalents."*

Even if the record was not directly knotted to the incentive system, the incentive system plays the certain role. The solution was in a careful recruitment of workers and in upbringing the love for the job and product. That was a key success factor for this manufacture. One of the questions in the interview guide was related to the personal achievements and overall production achievements of the employee, what was more important, thus all the respondents put the production results and quality of a product in front of personal achievements.

4.3.5. Summary of incentive system development

The incentive system of AEROC SPb was the object of study and improvements. It was not the only tool for speeding up the individual labour productivity, this system helped to support the survival of the company in a certain period of time. One operator stated R1: *"The importance of AEROC's incentive system resides in the fact that the employer searched and provided the conditions which matched the interests of both workers and the company…"*. It was a tool for overcoming production barriers in a volume of output and instrument of upbringing the cohesive team which achieved high results. The good description of the individual incentive system in AEROC SPb was given by one of the operators, AK: *"The best positive reinforcement is not a money equivalent, it is the benefit. Opportunity for growth - if there are efforts. Opportunity for changing the conditions - if there is a need. Shifting the labour conditions - if there is a requirement. Thus, AEROC was a great forge and platform for the beginning. There was no need to motivate those who wanted to work, could do that and got what he/she deserved."* At every period of time, the system had a defined goal, which was aimed at a certain result. Thus, all of the system parts were built upon necessary targets. The structure of the system was mostly permanent and was composed of monetary incentives: Base pay, Contingent pay and Individual Cash bonuses and non-monetary incentives: Recognition, Career growth and Flexibility.

During the 6 years, the system had significant changes which were caused by the different internal and external factors.

The initial system in 2008 was mostly oriented towards a volume of output. Management had the goal to produce and sell as much as possible. This strategy was possible because of the growing market of aerated concrete. Aerated concrete was a good alternative to wood, sandwich panels and other materials with reasonable prices. One more external factor was a low level of competition on the market. The monetary incentives were connected to the overall production results during the particular month, also there were elements of competition among shifts and additional bonuses for personal achievements.

The next reformation of the system was in 2009. It happened because of the market meltdown and economic crisis. Big reduction of the demand had a significant impact on the earning power of the plant. Thus, high amount of output was not a key factor for surviving under such conditions and all efforts were put into a securing high quality of blocks. The main changes were made in a part of the contingent pay, the full payment depended on two indicators: qualitative and quantitative. There was no competition scheme anymore. At some period, the incentive

system had absolutely no relation to production processes and the system was built on specific indicators.

Period of 2009-2011 varied from previous stages by the rise of the market and appearance of new strong players on the market. The goals of updated incentive system were to stimulate workers to produce a bigger amount of blocks and keep the same quality level like in previous period. The structure of contingent pay did not change much and requirements for the individual bonuses were the same. The developments of 2010 were the introduction of a renewed competition scheme between shifts and enhanced system of ranking among employees specializations. The key milestone of 2011 was an implementation of the short-term monetary incentive for overcoming the production barrier in a volume of filling the moulds.

In 2012 market situation was stable enough, there was slow growth of the market capacity and very competitive environment. Management was oriented to hold and grow the company's market share and the incentive system of previous periods fit for that. It was optimization of the previous system. The main change was the modification of competition scheme, the new methods of accounting made the system totally transparent for the employees.

In order to illustrate all stages of development and factors of impact visually, there is Table 3 which summarizes all the key milestones of the incentive system.

Period name	Main objectives of the system	Main elements of the system	Internal factors	External factors
Emerging market (2008)	Increase volume of production, maximize the utility of production capacities	Base pay Contingent pay (Output bonus, Competition) Ind. cash bonuses (education, achievements)	Unused production capacities, Well-trained and ambitious team, Organizational structure, New equipment	Growing market capacity, high demand, leading position on the market and good suppliers
Recession year (2009)	Support and improve the level of blocks quality, provide survival of the plant	Base pay Contingent pay (25% quality, 25% quantity indexes) Ind. cash bonuses (education, achievements)	Staff reduction, ISO 9001, Higher internal control of processes, New products	Drop of demand, Market crisis, Reduction of the market capacity, Holding the market position
Ascension of the market (2010-2011)	Increase output, support high standards of quality, provide competitiveness of the company	Base pay Contingent pay Competition scheme Ind. cash bonuses (Spec. ranking, Short-term incentive)	Unused capacities, Well-coordinated team, Psychological limitations, Modifications of equipment, New market	Grow of the demand, New competitors Growth of old competitors, Growth of the market after crisis
Moderate growth (2012)	Strength the brand by saving high quality of output and support higher level of production	Base pay Contingent pay (Renewed competition scheme) Ind. Bonuses	Breakdowns, Down times, Internal training, Optimization of production processes	Strong competition Period of marketing wars

Table 3. Key milestones of the incentive system

5. Discussion and analysis

This part of master thesis collates the theoretical framework and concepts of the master thesis with the empirical findings from previous chapter. In other words, the appliance of the theory for description of the empirical evidences. The object of discussion and analysis in this chapter is the design of the incentive system and challenges which this system faces within the time framework. As the main basis for the elaboration would be used Contingency theory and concept of design and mobilization of management control systems which was offered by Jan Mouritsen. In order to systematize the analysis process of findings with the theoretical approaches Table 4 is presented below. During the process of writing this master thesis, it was necessary to take into consideration previous research in regard to this thesis. The only master thesis which can be in lined with this thesis is the master thesis of Sergei Kosolapov. He studied the development of the individual financial rewards in the frame of time.

			The initial stage Emerging market (2007-2008)	The second stage Recession year (2009)	The third stage Ascension of the market (2010-2011)	The forth stage Moderate growth (2012)
5.1	Types of incentives		Base pay Contingent pay (Output bonus, Competition) Ind. cash bonuses (education, achievements)	Base pay Contingent pay (25% quality, 25% quantity indexes)	Base pay Competition scheme Ind. cash bonuses (Spec. ranking, short-term incentive)	Base pay Renewed competition scheme
5.2	Contingency factors	Internal	Unused production capacities, Strategy (Higher production)	Size (Staff reduction) Strategy (Orientation on quality)	Size (Staff extension) Unused production capacities Strategy (Growth in production)	Strategy (Strengthening of market position) Unused production capacities Breakdowns
		External	Environment (Growing market)	Environment (Market crisis)	Environment (Grow of the demand)	Environment (Increased competition, good suppliers)
5.3	Design and Mobilization				The design of competition scheme	Mobilization of the competition scheme

Table 4. The analysis process of the system development

5.1. Contingency approach in the light of types of incentives

The essence of contingency theory states that the effectiveness of a firm depends on how characteristics of the firm align to contingencies which create different situations for the firm. (Donaldson, 2001). Contingencies comprise of external attributes as an environment and internal attributes as a strategy (Hogue, 2004). In this master thesis, external attributes are any events or situation which comes from external environment of the plant, by internal attributes are counted all internal events, situations.

The further elaboration would be related to the description of how different parts of the incentive system have been developing through the various stages of time and under the conditions of the internal and external environment. According to the classical statement from the contingency theory - there is no one best way of managing a company and that an organizational style that is effective in some situations may not suit in other episodes which they faced (Donaldson, 2001). Thus, to manage the company in a successful way, a management has to find new key solutions to different conditions of the environment. The first element of the incentive system is **Base pay**. This element underlies in the basis of the entire incentive system. The base pay has to be a kind of guarantee for an employee that he/she would stably get fixed amount of money independently from the situations which can occur with the company. For the employer, the base pay is a guarantee that employee would stably complete necessary tasks which provide the survival for the plant. The main contingency variable related to the base pay is *environment*. Constantly changing conditions of the labour market can affect the employer and employee. Thus, the company has to constantly monitor the trends on the market of labor, to provide competitive pay, otherwise, employee can go to a competitor if the amount of base pay is more attractive than at current position. By offering stable and competitive base pay, the company could keep qualified personnel and meet the harder challenges with a foundation of employee experience. During all stages of incentive system development, there were no big changes in the structure of base pay, but the employer provided a stable and competitive level of base pay.

The second element of the incentive system was **Contingent pay**. This incentive is an additional impetus to reach certain company goals. This incentive set the achievable production goals, thus it was possible to get extra money every month. The structure of the contingent pay changed on the different stages of the system development. Thus, there were certain contingency factors which had an impact on the contingent pay. External factor is the *environment* and internal factor is the *strategy* of the company. The scheme of contingent pay changed through the different periods because it was directly knotted to the strategy. In 2008 the strategy was oriented to increase the volume of production, thus the contingent pay was related to the amount of output.

In 2009 the environment conditions changed and the strategy was also revised and adapted to new realities. The contingent pay was tied up to quality and quantity. New contingency factors as grow of demand and appearance new competitors in 2010-2011 were another foundation to rethink the existing strategy. The main change in the contingent pay scheme was another volume of output. In the final stage of development strategy was also revised due to the new goals. The structure of the contingent pay didn't change that much compared to last period. The scheme was still about quality and quantity of production.

The third element of the incentive system is **Individual bonus.** This system was mainly developed for retaining qualified employees. An additional amount of money which is paid for personal achievements or higher qualification of employee. During the entire development of the system, this incentive had not that many changes. The major change was in the 2010 year when the individual bonus system became more complicated. During the constant changes of *environment*, this incentive was a tool for a personal encouragement of employees, within the whole period of time.

One more important incentive which was mentioned in previous chapter is the **Competition scheme** among shifts. This type of incentive was implemented due to the changes in *environment* and *strategy* in the third and fourth stages of the system design. On the third stage of the incentive system development, there was the need to boost the level of production, due to the supportive environment conditions and market growth, otherwise the company could lose certain position on the market. The **Short-term incentive** is another type of incentive which was developed as necessary. There was the need to overcome the particular level of production, due to the fact the plant had unused production capacities and growing demand on the market.

5.2. The impact of contingencies over the time

The use of contingency theory in MCs shows the effects of the interrelatedness between contingency factors and internal structure of a company (Donaldson, 2001). In the case of AEROC, it can be observed that the incentive system as part of MCS was under the influence of different factors. Most of the books and papers, which were written about contingency theory of organization, consider three main contingencies: **environment**, **size** and **strategy** (Donaldson, 2001; Abdel-Kader at al, 2008; Ghofar & Sardar, 2015; Kamisah, et al., 2010). Thus, to be efficient on the market company has to adapt to changing environment (Ghofar & Sardar , 2015).

5.2.1. Environment contingency

The first contingency factor is an environment. In regard to the environment contingency, Lex Donaldson (2001) states that environmental contingencies indirectly shape the organization through the intra-organizational contingency variables, environment affect task interdependence and task uncertainty which stems from the need for innovative solutions to response environmental changes and finally environment has an impact on the internal structure of an organization. The environment contingency can be divided into internal and external types of environment of a company. In the first stage, the external factors were **growing market capacity**, **high demand on blocks** and **good suppliers of raw materials**. The internal factors were **new equipment with high production capacities**, **experienced production management** and **features of organizational structure** with not local approaches in production. The interrelatedness of the incentive system and all factors described above is that incentive system was designed with consideration of these factors. The management of company matched the internal and external contingency factors with goals of production in a particular period of time. The relation between contingencies and company's governance produces certain results. In the case of AEROC, the results of the first stage of development were successful. The effectiveness of governance structure would depend on how good management corresponds to the internal and external contingency factors. To be effective the company has to structure own corporate governance by taking into consideration environmental and organizational factors (Ghofar & Sardar , 2015). Coming back to the empirical case, main elements of the incentive system were specified for increasing the volume of production, such as Output bonus or Competition scheme which are directly tied the reward to a bigger amount of output.

The core feature of 2009 was crisis conditions of the market and as a consequence of this**, low demand for products** and **weak purchasing power**. In order to operate effectively in such market conditions, a company has to adjust its own actions and priorities. The environment contingent factor for the company was a crisis situation. As was mentioned in the empirical part, all actions of AEROC's management were aimed at plant survival and the incentive system was adapted to this market situation. The management rearranged the priorities and put pressure on the quality of blocks and development of new recipes. The main elements of the incentive system were knotted to qualitative characteristics of blocks, such as contingent pay. In previous period this bonus was directly linked only with product quantity, in crisis period the total amount of bonus depended on 50% from quality and 50% from quantity. Implementation of ISO 9001 was another fact which supports the company's commitment to quality during this time interval.

The major changes in regard to the environment were **market growth** after the crisis, increase in market capacity and **entrance the competitor** on the market. Due to the fact of rising market, the target was to sell and produce more than in previous periods. From the internal environment, there were unused production capacities and the market for growth, from the institutional environment there were not that many legal restrictions that limits production, and also all blocks conform to the government standards in construction.

As a previous stage of the system development, the fourth or the final stage (2012) has own features. The contingent variables also transformed in accordance with this time period. The company had to force new challenges which came from the dynamic market environment. The main challenges with regard to company's environment were an **intensification of competition** on the market. AEROC's strategy in this timeframe was oriented to hold the market share and to offer high-quality blocks on the market. Thus, the company paid special attention to quality of blocks and ways of its distribution. The **growing market capacity** and **unused production capacities** allowed producing more. The main internal contingencies of the plant in the beginning of 2012 were **breakdowns** and as a consequence long downtimes. Such plant failures destabilized normal flow of production and made it difficult to reach the production plan. The reasons of unexpected breakdowns were revealed after several months of work. As it turned out later, the main problem was occurred due to a quality of raw materials. When the problem was identified the certain decisions were made and situation stabilized.

Through all stages of the system development, the environmental contingency had an effect on the system design. The management made the solutions in the systems design to correspond the changing features of the market. In the period of the market crisis, it can be seen how the external environment affects the company's structure and priorities. In the period of market growth, the management tried to use environmental conditions as effectively as possible, by increasing the production and sales.

5.2.2. Size contingency

Size is another important contingency factor, which has a significant impact on the company's' activity. This contingency can adjust bureaucratic structure, organizational structure, and effectiveness of the company (Donaldson, 2001; Abdel-Kader et al, 2008; Edwinah et al, 2013). By size is meant the number of employees.

In the case of AEROC, the size contingency also played a significant role at different periods of the company. The first time, when the size affected the performance of the company, was in the

period of the crisis. During the whole period of production, the company operated with 4 shifts, but in crisis time, the amount of necessary output for that period could be produced with 3 shifts. Keeping one more shift for the manufacturer, was inappropriately and unprofitable. In some stance, further survival of the company was depended on it. As the result, one shift was cut. In the next stage of the system development, the appearance of the 4th shift was necessary, due to the environmental conditions of growing market. The management created four shifts from three and employed new workers. The expansion in the number of employees changed the size of the company. At the fourth stage, the size of the company didn't change that much from the previous periods, the number of employees was enough to produce the necessary amount of output. Four shifts were enough to produce the necessary amount of output in the conditions of growing market.

Overall it can be stated that size contingency is one more important contingency variable which has an impact on the effectiveness of the plant. The necessary number of employees in the production processes allows fulfilling the production plan and reaching business goals.

5.2.3. Strategy contingency

Strategy contingency is a core element of organizational effectiveness. The right choice of organizational strategy leads the better control within the organization, affects the superior performance, and lets to get competitive advantages (Kamisah et al, 2010; Merchant & Van der Stede, 2012; Abdel-Kader & Luther, 2008). Strategy bears upon decisions which build actions in long term and short term and specifies the direction of development in the market (Ghofar, 2014).

Thus, there are many different types of strategies existing and which strategy would be chosen depends on management and business environment of a company. Relying on Miles and Snow's (1978) typology of strategies, the management of AEROC acts as **Analyzer** firm, by combining defenders and prospectors types of strategy. The empirical findings show that, from prospectors view, the company actively develops and offers materials with new characteristics. But at the same time in the less dynamic environment of crisis in 2009, the company paid careful attention towards the quality of product and protection of the market share in accordance with defenders type of strategy. The interrelation between firm's strategy and internal and external contingency factors can be illustrated during the whole period of changes. Strategy is one more contingent variable. The AEROCs strategy is mostly undiversified because the production is focused on a single product. Despite the fact that production was engaged in different goals, everything was about one type of material. This strategy is very similar to what Lex Donaldson (2001) describes

for functional structure and departments of production. Such strategy enhances the efficiency of activities by specializing on a certain function.

In the first period of the incentive system development, the strategy was associated with growing market capacity and demand. The environmental conditions let **to sell more** and the strategy was oriented to it. In the second period, the strategy was adjusted **to survive**, thus some significant decisions and priorities were set. The third stage of the development was the ascension of the market and appearance of the strong competitor, thus the management chose the strategy of **active growth** in production and sales. The fourth or the final stage (2012) has own features and the main was an intensification of competition on the market. AEROC's strategy in this timeframe was oriented **to hold the market share** and to offer high-quality blocks on the market. Thus, the company paid special attention to quality of blocks and ways of its distribution.

Strategy contingency is directly tied to the organizational effectiveness. The case of AEROC SPb shows that the choice of a correct strategy affects the performance and survival of the company. Also, the strategy can strength the competitive advantages of the company and make a company more competitive.

5.3. Design and mobilization of the system: competition scheme example

With the changes in strategy at the third stage of development, the new elements of incentive system were introduced: the competition scheme and short-term monetary incentives for boosting the production. These updates would be examined through the prism of concept design and mobilization of MCs which was offered by Jan Mouritsen in 2005.

This concept suggests that interrelation between designed system and human actions create change. The outcomes or effects of this change are mostly not what human actors want to get, thus there is a need to reconsider current system for further optimization of it (Mouritsen, 2005). The competition scheme would be considered as an **initially designed system**. First of all, the competition scheme was developed to stimulate workers to produce more output, by offering the monetary reward for the best production result during each month. For the evaluation of results, the system had certain criteria, which helps to define the winner. The first results of this system implementation were successful, but the further use revealed that at some point shifts started to pursue only the best final results. Workers paid less attention to maintenance or made mistakes that lead the difficulties or unexpected breakdowns for the next shift. In the end of a month, it was hard enough to define the winner, due to plant breakdowns and sometimes unfair play

among shifts. A lot of workers were not agreed with results in some periods, thus the conflict of interests arose due to the lack of transparency in the system. The **mobilization stage** of this system was in the next period of company's activity. Managers reviewed the valuation system and made the system more transparent for the workers. It is possible to say new approaches and criterias of evaluation made this system more honest. The final result of each shift was connected to the number of finished goods and it totally differed from the previous system, where a shift result was tied to filled moulds and amount of scrap. The redesigned system took away the impetus for cheating, thus shifts had to be focused on whole production process. The situation described above is conformed the concept of design and mobilization of MCs.

5.4. Summary

Summarizing, it is possible to say that contingency approach can be used to describe the practical case of this company. The goal of this chapter is to collate the theoretical foundations and concepts with the empirical findings of the previous chapter. To reach the goal, the elaboration about system development was presented.

The discussion subsection begins with the presentation of the analysis process of the system development. Thus the analysis process contains of 3 major stages. At the first stage, contingency approach was used in regard to the types of incentives. Every part of the incentive system was elaborated within the contingency approach.

The further stage of analysis was dedicated to the interplay of 3 main contingency factors and company's actions at different stages of the system development. Stated differently, how the firm's management correlated the internal possibilities with the external environmental conditions and how the company changed its strategy and size.

The final part of discussion subsection covers the design and mobilization approach in relation to the competition scheme at AEROC SPb.

6. Conclusions and Proposals for future studies

6.1. Concluding the master thesis

My master thesis is dedicated to the exploration of the development of the incentive system in the manufacturing company. The incentive system had 4 stages of the development and run under the different conditions of the environment. These conditions were studied by me with the perspective of the contingency theoretical framework and previous research in the field of development of incentive systems. Another crucial component was an availability to use and present the single case of AEROC SPb. All the empirical findings allow me to provide the comprehensive view of the incentive system in the company and changes which occurred. My study concludes that effective operation of incentive system is essentially dependent on environmental factors and wise usage of these conditions by the management. To sum up, all written above affords ground for answering two main questions of this study.

In order to answer the first research question: "*How was the individual incentive system in "*AEROC SPb*" designed over the time?*". The initial system of 2008 was already well-structured and customized management tool for the certain goals. During the time frame, the incentive system functioned in accordance with the strategic perspectives of a particular period. The given system comprised of **3 parts of monetary incentives** (Base pay, Contingent pay, Cash bonus) and **3 parts of non-monetary incentives** (Recognition, Career progression, Flexibility). Almost all parts of the incentive system were changed and modified over the 4 stages of the incentive system development. It may be noted major changes in the structure of Contingent pay and Competition scheme. The contingent pay structure was significantly changed during the first two stages of development, at the first stage, this part of the incentive system was oriented to high output volume, at the second period, this incentive was retargeted towards higher quality. The competition scheme was changed during 3 stages of the development. Main changes were related to performance measurement of shifts. The **prime factors** which had an impact on the incentive systems' parts were: **strategy** and **environment** of the company. The environment factors affected the strategy at every stage of the development and as a consequence, the incentives were changed in accordance with the strategic goals of the company.

For answering the second question: *"What are the challenges that the company has faced while implementing the incentive system?"* It was necessary to study in depth how the system was developed and affected by internal and external contingency factors. Based on all empirical findings of the case study, it can be pointed out **4 main challenges** associated with the incentive system:

- The complexity of motivating great number of workers by the only system
- Deviation of the system workflow from expected workflow (need to optimize the system)
- The human factor in assessing the performance
- The complexity of staff motivation in achieving even better results

The system also faced different challenges generated by an internal and external environment of the company, but at the same time it provided the conditions which matched the interests of workers and the company. The internal factors were unused production capacities, breakdowns of equipment, down times, staff reduction, psychological limitations, implementation of ISO standards and etc. As external environmental factors, it were considered the growing market capacities, the crisis of the building materials market, entrance of new big competitor to the market, drop in the demand and other factors. At some periods of time, the usage of the system comes with certain issues which were revealed only in use, and the implementation of competition scheme was the good illustration of it. Also worth noting is that the incentive system was not only the stimulating tool, it was the system which helped to overcome the psychological constraints, and a great example of it was the situation with grouting moulds and short-term monetary incentives.

Based on the all mentioned above, this master thesis is a good attempt to show the development of the individual incentive system in the manufacturing company within the certain period of time. On the basis of the case study, it was presented that individual incentive system had been evolving over the time. The incentive system is in constant change. In its turn, the changes occur under the influence of various factors, which were studied in the framework of contingency theory. These contingency factors are environment, strategy and size. My study concludes that these factors are the most crucial elements in the process of the incentive system formation. Thus, for achieving a good performance, the company's management has to consider these factors and adjust the system in a good time. The results of my master thesis are in line with the findings of previous contingency theory studies, which state that the degree of fit to the contingency variables is essential for increasing the organizational performance (Donaldson, 2001; Burns & Stalker, 1961; Fiedler et al; 2017).

6.2. Limitations & Suggestions for further study

One important point of this master thesis is limitations concerning the number of interviews. It is possible to admit it like a certain weak point of this master thesis but at the same time it necessary to mention that all interviews were conducted minimum 1,5 hour, and some respondents were interviewed several times. Initially, it was planned 9 interviews for this thesis,

but at the stage of conduction interviews, some respondents could not find enough time to answer all the questions, because of the certain causes. It was paid special attention to each of conducted interviews. Also, it is important to emphasize that, in the thesis was used my work experience at AEROC SPb, thus observation methods were also used in this thesis to some extent. The possibility of potential bias of own perceptions was taken into consideration, thus It were used really-observed facts excluding own emotions and opinions. Due to that fact of few numbers of interviews it is hard to generalize the case of the company. It is difficult to state that similar results can be achieved by every company with the same incentives, but it would be very interesting to know more about the experience of other companies in the industry. Another important factor is the context of particular culture. The cultural values of every country can vary significantly, the work ethic can be different, thus it has to be considered. In this master thesis, it was the foreign company in the context of Russian culture and it had a significant impact on the achievement of the results. The similar studies can be done in the context of other cultures.

To sum up the suggestions for further studies, this thesis gives ideas to write about incentive systems of other companies in the industry. Also, it would be interesting to study the experience of companies in the framework of other cultures. One more idea can be the conduction of comparative study of another player in the North-West Russian market of aerated concrete.

From the viewpoint of studying incentives in the manufacturing companies, it is safe to say, that there is a space for new approaches and ways in regard to the development of incentive systems. Thus, innovative solutions would appear and it would be interesting to study, not only for academics but also for managers, as long as they will seek to search new, more effective solutions in incentive schemes.

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Appendixes

Appendix A: All questions for the interview guides

1. What was the most memorable element or event regardless of the incentive system for you?
2. What have been changed in the system since 2008-2012? Why it happened?
3. How did you perceive changes in the incentive system during the 2008-2012 years?
4. How well has the system functioned in previous periods of time?
5. How well have you been driven by the system during 2008-2012?
6. Which part of incentive system was the most remembered and why?
7. What challenges did you meet related to the incentive system during the working process in 2008-2012?
8. How do you feel about the changes in the incentive system, were they reasonable?
9. How had your attitude towards work changed after the introduction of extra monetary incentives in 2011? (The system when you got extra charge for grouting extra forms in 2011)
10. How do you think, what factor had the most impact on the achievement of record results in 2012?
11. How can you relate this achievement to extra charging in the previous period of time (2011)?
12. What is your point of view about feedback on your suggestions concerning the incentive system during the period of changes? (2009-2012)
13. Which of your suggestions were taken into consideration?
14. How can you describe present individual incentive system in AEROC SPb?
15. By your own perception, which part of the individual incentive system is the most important for an employee? Incentives which are related to the personal growth of employee or Incentives related to the overall results? Why?
16. How do you value the overall role of the incentive system in AEROC SPb? Why this system important or not?