CHALMERS

Effects of rewards and reward systems on changes in safety

Master of Science Thesis in the Master's Programme
Design and Construction Project Management

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Department of Civil and Environmental Engineering
Division of Construction Management
CHALMERS UNIVERSITY OF TECHNOLOGY
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Master's Thesis 2011:96

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Examensarbete / Institutionen för bygg- och miljöteknik,
Chalmers tekniska högskola 2011

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Cover: www.portstrategy.com
Department of Civil and Environmental Engineering
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ABSTRACT

Many organizations go through number of organizational changes which increase the importance of change management for success. One of the problems that are faced in the change process is human based barriers which are caused by the employees' resistance against to the change. Resistance to the change is the reason that many change attempts fail or short fall of expectations. Similarly the importance of safety in construction sites increases due to number of reasons and organizations are forced to make changes in their safety policies in order to develop it. The introduction of new regulations in safety should be observed through the change perspective as well.

Various types of solutions are offered in order to manage the change process successfully and one of these solutions is to offer rewards, reward systems and incentives to get over the resistance against to the change, motivate the employees and increase the commitment to the organization and the change. Hence the purpose of this study is to investigate the effects of rewards and reward systems on changes in safety. This is done by observing the influence of rewards and reward systems on motivation and commitment and finally to the change.

Thirteen interviews were conducted with participants from the same district of one of the largest Swedish contractors, Skanska Sweden. Twelve of the interviewees were different types of managers and one of the interviewees was responsible of business development and represented the organization's perspectives and strategy on the subject. Moreover documents from the intranet of the organization were used to gather the findings for the case.

It has been found that changes in safety in construction industry create human based barriers and it is important to get over them to be successful in terms of safety. Some of the rewards and reward systems have been found to influence the commitment and motivation positively which facilitated the change in safety. These rewards and reward systems were fit with the vision, job motivation, information, goal setting, feedback and personal interest on safety. Moreover quality of relationship with managers increases the commitment to the organization which also facilitates the change in safety. Finally participation (involvement) has been found as one of the most important rewards that influences to the change process and low involvement of the employees to the change process may create resistance. Organizations should consider rewards and reward systems as a way to get over human based barriers and manage the change process successfully.

Key words: Organizational change, safety, rewards, reward systems, incentives, construction industry.

Contents

Acknowledgements

This study is a result of four years of civil engineering studies in Karadeniz Technical University and two years of design and construction project management studies in Chalmers University of Technology. The study has been conducted in one of the districts of Skanska Sweden during the spring of 2011. I would like to thank to everyone contributed to the study.

Many people have contributed to this study in various ways. Although some of them are not mentioned specifically, I'm grateful for their participation. First of all I would like to thank to my supervisors in Skanska Henrik Strid and Anders Erlandsson who have introduced me to Skanska, given me the chance to write my study in Skanska, and supported me with their experience, knowledge and constructive critics. I also would like to mention that I'm so grateful to the ones that allowed me to interview them. Results of this study have been mostly based on the information they shared openly.

I would like to thank a lot to my supervisors at Chalmers University of Technology, Per-Erik Josephson and Roine Leiringer who have provided me with their fruitful comments and new ideas, criticized me in a constructive way and inspired me on my way through the study process.

I also would like to thank to my fellows from Chalmers University of Technology, Tobias Eriksson and Maria Lindström who have been like a family, motivated me, supported me with their useful discussions and comments and helped me to think from various perspectives.

Finally I would like to thank to my family who gave me the opportunity to make my own decisions and supported me all the time.

1 Introduction

1.1 Background

Employees are vital for the organizations that seek for success. Number of ways is suggested to increase employee performance. Rewards and incentives are probably among the most popular. It is clear that rewards and incentives influence to employee motivation and commitment to the organization (Parish et al., 2008). Rewards are given in accordance to an achievement and they can be in different forms such as money or social ones. Reward systems are the systems or channels that ties the rewards in accordance to an achievement and incentives are offered for future performance appraisals (Armstrong, 1993). Rewards and incentives are all used for the same reason but they show minor differences. However, it can be claimed that rewards and incentives might be used to motivate the employees, improve their commitment and so facilitate the change process.

Change is crucial for the organizations which increases the importance of managing the change successfully. Various drivers force organizations to change such as external ones – customer requirements, demand from stakeholders and competition or internal ones – process improvement (Oakland and Tanner, 2007). Two types of barriers; technical and human based are faced by the organizations (Bovey and Hede, 2001). Human based barriers can be described as the resistance that employees show against to the change. Resistance to change is a vital issue since it is the biggest reason that many change attempts fail or fall short of expectations (Oreg, 2006). Number of literature claim that rewards and incentives are related to the resistance and commitment which is important for the change process. Communication, uncertainty, involvement (participation), education and commitment are some of the important factors that influence to the change process.

Changes can happen in any area and safety is the one that has been chosen for this study. Changes in the safety behaviour and adaptation to the new regulations can be different than the other types of changes such as implementation of a new technological tool. Safety is a personal issue and employees might show a higher commitment to the change since it is good for them. On the other hand, new safety regulations are basically made to protect them and decrease accidents on construction sites. In literature, safety is researched from the safety performance more than the change point of view. It is important to understand that introduction of the new safety regulations is a change as well and it can be crucial.

Various types of rewards and incentives influence the changes in safety. These can be feedback, goal setting (Duff et al., 1994), personal interest, job motivation, fit with the vision, information and participation. It is obvious that employees who are motivated or committed either to the organization or the change show better performance on the changes in safety.

Thirteen interviews have been conducted managers from the same district within Skanska Sweden. One of the interviewees was responsible of business development and presented the organization's perspective in the interview. Moreover the organization's intranet has been used as a source for the findings as well.

1.2 Purpose and limitations

The purpose of this study is to investigate the effect of rewards and reward systems on the changes in safety.

Thus, the following research questions are addressed:

- How do the rewards and reward systems influence changes in safety?
- How can rewards and reward systems be developed in order to facilitate changes in safety?

Concepts such as rewards, reward systems and incentives show a big similarity and in most of the literature, one of these concepts has been used to cover the other two. Thus difference between the concepts has been understood and theories have been handled through these definitions.

Safety has been handled from different perspectives in literature though safety has been observed from the change perspective in this study. Thus, the introduction of new safety regulations has been considered as a change process and obstacles and solutions are offered from this point of view.

The change process in safety has been influenced by various types of workers on construction sites. Only the managers have been interviewed and rewards, reward systems and incentives have been offered according to the obstacles they have faced. Hence one should consider the fact that change process is influenced by other positions as well. Moreover only the human based barriers have been considered in this study since they are influenced by employees and then rewards, reward systems and incentives.

Since this study has been made in one of the largest Swedish contractors, one should consider the influence of culture on rewards, reward systems, incentives and different perceptions of change and safety according to culture.

1.3 Research process and structure of the study

The research process has been described visually in Figure 1.1. Sub sections will be explained further in the study.

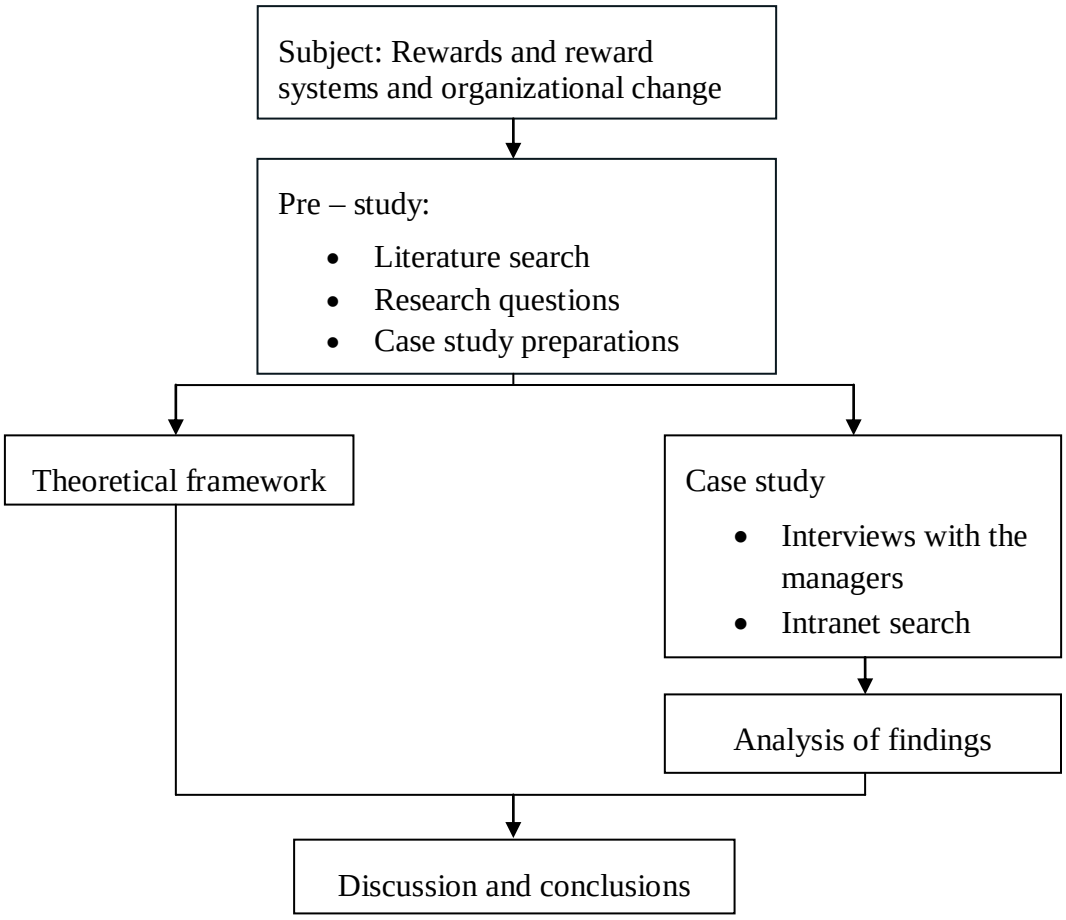

Figure1.1. Research process

This study consists of seven chapters in order to investigate the effects of rewards and reward systems on changes in safety.

Chapter two (theoretical framework) includes the theories from number of literatures that are related to rewards, reward systems, incentives, safety and organizational change. Electronic libraries of the Chalmers University of Technology and Galatasaray University, which includes enormous amount of online journals and databases, have been used in this chapter. The theoretical framework has been applied in the discussion of the findings.

Chapter three (method) explains the scientific research method of the study. Moreover the information includes the reasons of the choice for the case study, interviews and qualitative approaches.

Chapter four (findings) presents the data from the case organization and analysis. First the organization and the district have been explained to make a better understanding of the case. Then the case has been handled under two main divisions, the change in safety and rewards and reward systems in the case. Results from the interviews and intranet information have been presented and analysed in this section.

Chapter five (discussion) contains the analysis of the findings with theoretical framework. Scientific arguments have been presented under this section.

Chapter six (conclusion) includes the comments and general conclusions of the research questions. Moreover recommendations for further researches and to the industry have been presented in this chapter.

2 Theoretical Framework

2.1 Organizational Change

Organizations face various types of barriers in terms of change (Oakland and Tanner, 2007). These barriers can be both technical and human based (Bovey and Hede, 2001). In literature, human based barriers are referred as individual resistance and include cognitive, emotional and behavioral dimensions (Piderit, 2000). Oreg (2006) observes the influence of contextual variables which are power and prestige, job security and intrinsic rewards on resistance to change. Singh and Shoura (1999) claims that there is not a certain path to successful change management thus one should plan and execute the process carefully.

Change process is divided into different amounts of phases by authors. Prince (2006) proposes a more detailed six step process which includes preparation of the organization, development of the vision and implementation plan, checking before the actual implementation, engagement of communications and workforce, implementation and finally evaluation (Prince, 2006).

On the other hand Singh and Shoura (1999) modifies the organizational development model of Adams (1986) in order to express the flow of the change process and suggests four phases for the process as:

- Destabilizing forces
- Anxiety and awareness
- Acceptance and managing tasks
- Integration and restart

According to Singh and Shoura's model (1999), a change begins in the leadership level of an organization and change brings instability to the organization which is the first phase of the change process. People in the organization start to become anxious and tries to understand the necessity of the change and how the change will affect to them. Thus organization creates strategies to increase awareness to the change in the second phase. In the third phase, people start to accept the change idea hence organization starts to give new tasks to them. Finally in the fourth phase, the change is integrated to the organization and loop restarts due to a new change (Singh and Shoura, 1999).

Singh and Shoura's (1999) research included senior managers, project managers, production level engineers and lower level production engineers. Three loops which refer to different positions each (i.e. first loop to project managers, second loop to production level engineers and third loop to lower level production engineers) and divided to four phases where commitment to change is the core have been used in Singh and Shoura's model (1999), see Figure 2.1. When the first loop reaches to the third phase, other two loops start with their first phases. In another way of saying, production level engineers and lower level production engineers are not involved to the change process until the project managers understand and accept it (Singh and Shoura, 1999).

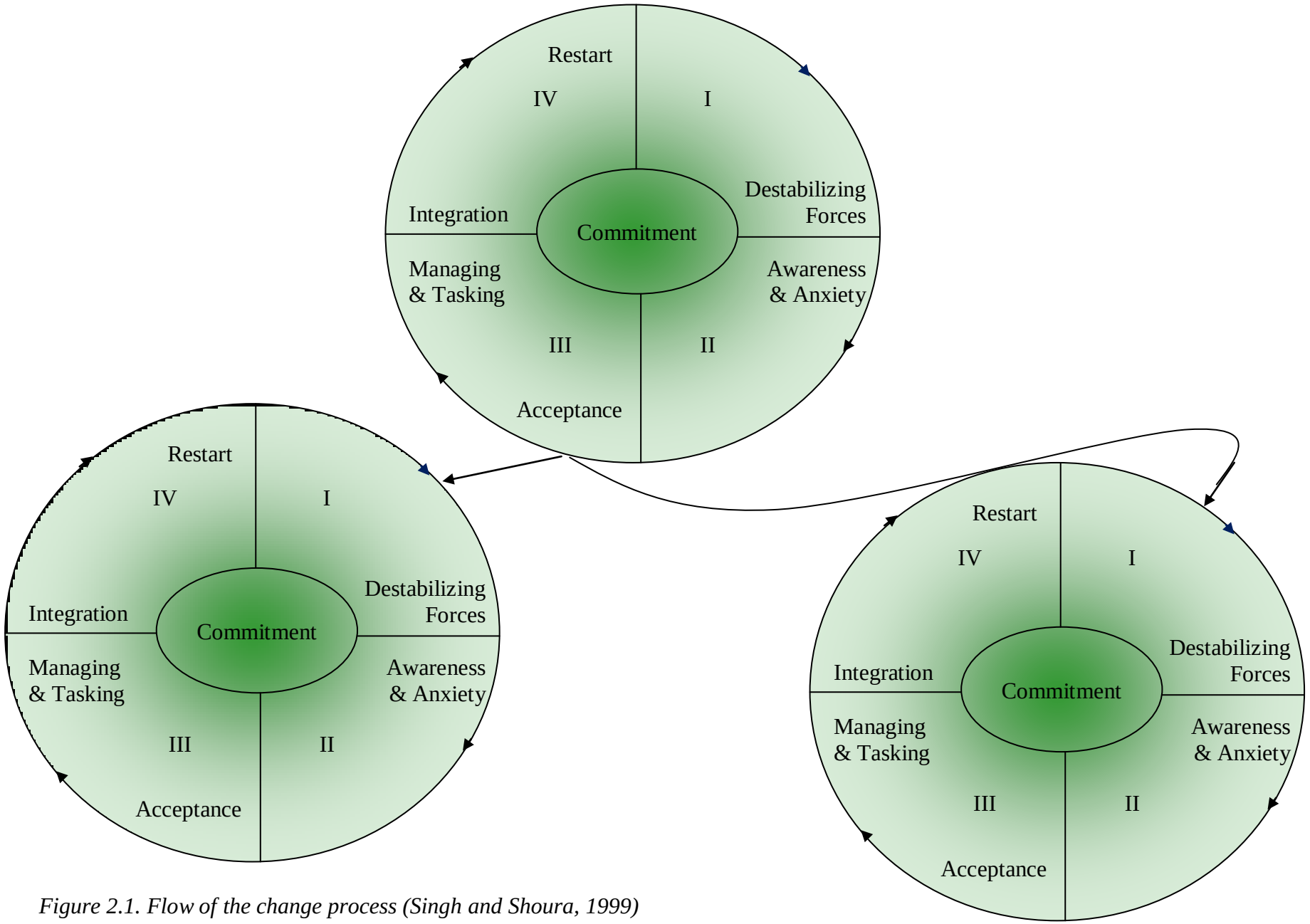

Figure 2.1. Flow of the change process (Singh and Shoura, 1999)

Change is triggered in organization's leadership level due to several drivers and then implemented in all levels of the organization through a top down approach (Singh and Shoura, 1999). Henderson and Ruikar (2010) claims that top levels of organization are more tended to embrace the change compared other lower ones.

Triggers of the organizational change can be analyzed under two groups, external (strategic) and internal (operational) drivers (Price and Chahal, 2006; Oakland and Tanner, 2007) though some researchers claim that external drivers are reasons of the internal ones (Oakland and Tanner, 2007). These drivers are presented in Table 2.1 in below.

External Drivers	Internal Drivers
Customer requirements	Improving operational efficiency
Demand from other stakeholders	Need to improve the quality of products and services
Regulatory demand	Process improvement
Market competition	
Shareholders / city	

Table 2.1 Triggers of organizational change (Oakland and Tanner, 2007).

2.1.1 Resistance to change

According to Oreg (2006) "resistance to change is the reason that efforts to introduce large-scale changes in technology, production methods, management practices or compensation systems fall short of expectations or fail together". One of the aforementioned barriers to the organizational change, individual resistance (human element) has been studied by Piderit (2000). She suggests three dimensions to explain the resistance that are cognitive, affective (emotional) and behavioral dimensions.

- Cognitive dimension is when employees question the importance or necessity of the change
- Affective (emotional) dimension is that employees might have emotional responses to change such as excitement or anger
- Behavioral (intentional) dimension refers to the positive and negative actions in response to the change

On the other hand Singh and Shoura (1999) describes those dimensions as one's belief that change is necessary (cognitive), one's desire to change (emotional) and one's intention (intentional) about the change process and claims that those dimensions are reflection of commitment.

Oreg (2006) observes the relation between resistance – cognitive, affective and behavioral dimensions - and contextual variables such as intrinsic rewards, job security, and power and prestige in an organization from defense industry facing organizational change. He finds high correlations between job security and affective resistance, power and prestige and cognitive resistance and, intrinsic rewards and both

affective and cognitive resistance. Nevertheless none of them were related with behavioral resistance (Oreg, 2006).

2.1.2 Managing the change

In order to manage the change successfully, a couple of measures are suggested (Henderson and Ruikar, 2010). Communication is one of those measures and vital in the change process (Azzone and Palermo, 2011) since employees must know what they will face after the change, how it will influence to their role (Price and Chahal, 2006; Oakland and Tanner, 2007; Singh and Shoura, 1999) and how the organization will change (Hoag, et al. 2002). Incentives (Singh and Shoura, 1999), training, involvement (participation) and education are other important measures that shall be taken into account (Henderson and Ruikar, 2010).

Commitment is vital for successful change. In order to explain the relation between commitment, antecedents of commitment and organizational outcomes which influence change, Parish, et al. (2008) classifies commitment as affective, normative and continuous commitment.

- Affective commitment is when change is supported by employee's own will
- Continuous commitment is when employee may support the change because resistance would cost to him/her
- Normative commitment is that employee supports the change by the feeling of obligation

In the same research, Parish et al., (2008) proves that affective commitment has a great influence on all three determined organizational outcomes - individual learning, improved performance and implementation success - compared to other two commitment types. Moreover affective commitment is positively influenced by the antecedents, fit with the vision, quality of relationship with manager, job motivation and role autonomy (Parish et al., 2008).

2.2 Rewards

Effects of rewards to employee motivation are significant (Danish and Usman, 2010), which then influences to commitment and change process (Parish et al., 2008). Rewards can be defined as financial and non financial benefits which are given in accordance to an individual or team achievement (Armstrong, 1993). Promotion, pride, job security, good relations with colleagues and superiors and monetary rewards – salary increases, bonuses and benefits are the rewards that has been studied and positive relations with the employee motivation has been found (Danish and Usman, 2010). Similarly Kanungo and Hartwick (1987) observes the motivational effectiveness of rewards and finds that promotion, pay, personal challenge, recognition, authority and job security are the most effective six rewards out of forty eight of them. Mahaney and Lederer (2006) make a more direct conclusion and claims that rewards influence to project success in terms of client satisfaction, perceived quality and implementation process positively (Mahaney and Lederer, 2006). In literature, rewards are classified in various ways like individual rewards and systems (team) rewards (Lloyd, 1979; Kerrin and Oliver, 2002), intrinsic rewards and extrinsic

rewards (Mahaney and Lederer, 2006) and, direct economic rewards, indirect economic rewards and psychosocial rewards (Reif, 1975).

Individual rewards are the ones determined through the individual role while participation and contribution to the team is rewarded in systems rewards. Influence of systems and individual rewards differ in terms of performance and satisfaction, where high performers are satisfied in individual rewards. On the other hand in systems rewards average performance gets lower while average satisfaction is high (Lloyd, 1979).

Reif (1975) proposes another categorization for the rewards, direct economic rewards, indirect economic rewards and psychosocial rewards which is subcategorized as working conditions, self actualization, security, compensation, autonomy, social and esteem, see Table 2.2.

Finally, Mahaney and Lederer (2006) classify the rewards as intrinsic and extrinsic ones. Intrinsic rewards are defined as the ones exist in job itself while extrinsic rewards are external. Thus achievement, variety, challenge, autonomy, recognition and personal satisfaction are the examples of intrinsic rewards whereas hand pay, benefits, job security, promotions, private office space and bonuses are examples of extrinsic rewards (Mahaney and Lederer, 2006). Kanungo and Hartwick (1987) tries to separate forty-eight rewards in practice to categories as intrinsic and extrinsic ones by their relation to task (if the reward is derived from task or not) and the source (if the reward is self administered or comes from others. However, a clear distinction in rewards could not be made in terms of extrinsic and intrinsic though rewards were classified in relation to task and the source.

Extrinsic and intrinsic rewards influence in different ways to the components of project success; client satisfaction, perceived quality and implementation process. While intrinsic rewards affect positively to client satisfaction and perceived quality, extrinsic rewards improve the implementation process. This result is explained as employees who are attracted by the extrinsic rewards focus on the tangible outcomes such as the completion time and budget and the ones who are attracted by the intrinsic rewards focus on intangible outcomes such as satisfaction and quality (Mahaney and Lederer, 2006).

2.2.1 Reward systems

Reward systems refer to mechanisms which forms an individual's behavior through the organization's strategy (Kerr, 1985). Cissell (1987) uses another definition, "a reward system ties a tangible award directly to measurable performance improvement". In literature, there are various ways to define and classify the reward systems. Reward systems can be classified as financial rewards (payments), other material rewards (benefits) and psychological rewards (recognition) (Perkins and Vartiainen, 2010). Kerr (1985) classifies the reward systems from the design perspectives as hierarchy based reward systems; performance based reward systems and mixed systems.

Hierarchy based reward systems are the ones where qualitative measurement is used by observing the employees' performance subjectively and rewarding them in accordance to their position in the hierarchy. Unlike the hierarchy based systems, employees are measured quantitatively and rewards are determined through the precise performance in performance based reward systems. Finally, combination of

the first two systems forms the mixed systems where employees are measured both qualitatively and quantitatively (Kerr, 1985).

Reward Category	**Description**
Working Conditions	Working conditions associated with the job
Self-Actualization	Opportunity for growth and development, feeling of self-fulfillment and feeling of worthwhile accomplishment
Security	Security in job
Compensation	Direct pay and fringe benefits
Autonomy	Opportunity for independent decision and action, authority in position and opportunity to participate in goal setting
Social	Opportunity to help people and opportunity for friendship
Esteem	Feeling of self-esteem, prestige inside and outside company
Direct Economic Benefits	Overtime pay, salary/wages, profit sharing plan, incentive plans and cost of living adjustment
Indirect Economic Benefits	Retirement benefits, stock purchase plan, insurance benefits for life, health and disability and, sick or absence pay benefits

Table 2.2 Categorization of rewards (Reif, 1975).

2.2.2 Reward and task interdependency

Changes in the organization of the work, structure and technology have increased the task interdependency and made it harder to measure the individual contributions (ibid). Similarly, organizations are forced to focus on team rewards due to the same reasons mentioned above (Milne, 2007).

Team performance is influenced by two major factors; reward interdependency and task interdependency (Milne, 2007). Task interdependency is the distribution of the inputs necessary to complete the project such as materials and information and reward interdependency is the distribution of task outcomes. Thus a person's task performance is based on others' in task interdependency and rewards are determined through the performance of the team and then shared to individuals in reward interdependency (Wageman and Baker, 1997; Milne, 2007).

It has been found that high reward interdependency such as organization wide rewards brings a problem called free-riding since a single employee would not have a great impact on the organizational performance (Wageman and Baker, 1997; Milne, 2007). In order to improve team performance, high task and reward interdependencies are

important. In case of low task interdependency, reward interdependency does not have a big impact since free-riding effect may occur and decrease the performance (Wageman and Baker, 1997).

Milne (2007) suggests managers to be sure about the behavior that is planned to be rewarded since in many cases discouraged behavior is rewarded and adds that performance measurement is a crucial aspect and must be done correctly. Hence rewarding in both team and individual levels are suggested (Milne, 2007).

2.3 Incentives

In order to stimulate an employee to accept tasks and set down goals, incentives can be offered (Locke 1968). Incentives encourage people to improve their performance by offering them rewards (ibid). While rewards are given in accordance to the recognition of past achievements, incentives are offered for the future performance appraisals (Armstrong, 1993). According to Rubenfeld and David (2006), incentives can decrease the motivation due to high uncertainty.

A couple of factors; criteria, frequency and timing, payout level and employees covered should be considered in design and implementation of incentives. Criteria for the incentive should be measurable and aligned with the strategy of the organization, an incentive should be logically sequenced and employees should be rewarded as soon as they succeed, payout level should depend on the value of the criteria for organization and the sufficient level to motivate employees and finally, employees who are covered under a specific incentive should be defined (Rubenfeld and David, 2006).

2.3.1 Incentives in practice

Number of incentives is used in practice to motivate employees and according to Locke (1968) incentives can be utilized by either manipulating goals or behavioral intentions. In another way of saying an employee's goal or behavioral intention is influenced by the incentives. Behavioral intention can be defined as "the intention to make a certain task choice or respond in a certain way" (ibid). Instructions, money, knowledge of score, time limits, participation, competition and praise and reprove are the incentives that are studied and their influence on both goals and behavioral intentions are questioned. Results show that while all of the incentives influence to the goal directly or indirectly, only instruction type of incentive influence to behavioral intentions (Locke, 1968). Those incentives are presented as:

- **Instructions** are the most common types of incentives where one assigns another person to a task by asking. Conscious acceptance of the task is crucial for success in instructions.
- Through **money**, employees can be assigned to tasks which they would not otherwise.
- Measuring and giving feedback to one's performance is called "**knowledge of score**" and helps people to set better goals and increase their performance.
- Putting **time limits** for the tasks are other efficient types of incentives where people with less time work faster to reach the goal.

- **Participation** while setting goals increase the intrinsic motivation and helps employees to devote themselves to the task.
- **Competition** can also be used as an incentive through readjusting goals or determining new ones which would not otherwise.
- A standard can be determined and then the performance can be measured, while above the standard means **praise**, below does **reprove** (Locke, 1968).

2.4 Safety rewards and incentives

Incentives can be used to motivate the ones who follow the safety rules on construction sites (Teo et al., 2005b). Similarly Haines (2001) finds that group functioning dynamics, organizational support and leader follower relations are some major factors which influence to safety incentives. Motivational tools including rewards and incentives influence to fostering safe work behavior in construction sites (Teo et al., 2005a). Each of these tools contains various sub tools as shown in below:

- Positive Reinforcement: Monetary reward/bonus, job promotion, certificate of recognition, rewards in kind (overseas trips), personal recognition
- Negative Reinforcement: Close and strict supervision
- Extinction: Termination of service, reporting to authorities
- Punishments: Imposing fines, suspension from work, demotion

Teo et al., (2005) finds that close and strict supervision among negative reinforcement is the most effective, monetary rewards are the second, and imposing fines and suspension from work are the third most effective way to foster safe work behavior.

Number of other rewards and incentives are suggested to improve safety performance (Duff et al., 1999; Austin et al., 1996; Mattila et al., 1993; Langford et al., 2000; Sawacha et al., 1999). Goal setting and feedback influence to safety performance in construction sites positively and commitment of site management increase their effectiveness. However, feedback without the goal setting does not show the same affect (Duff et al., 1994). Similarly, Austin et al., (1996) questions the effects of feedback and reinforcement (extrinsic reward) on safety behavior by observing roofing crew and finds that feedback and reinforcement can be used to improve safety. Mattila et al., (1993) underlines the importance of reliable and visible feedback in safety management and claims that communication is vital since feedback is influenced by it (Mattila et al., 1993). On the other hand, safety bonuses for the successful construction sites in terms of safety increase the safety performance (Langford et al., 2000). Finally, Sawacha et al., (1999) claims that employees who care about their personal safety show a better safety performance.

3 Method

The aim of this study has been to investigate the effects of rewards and reward systems on the changes in safety. In order to gather the information for the findings, a district which includes various types of projects has been chosen as a case study. A district is the smallest unit of the organization and it carries the same features with other districts of the organization, only the amount of the workers differs. Therefore results that have been found for the case district can show similarities with other districts.

Various alternatives have been considered to gather the information for the findings related to the research questions. However a qualitative approach with semi structured interviews in a case study has been found to be most efficient way to acquire the required data.

3.1 Case study

In this study, implementation of the new safety regulation, usage of safety goggles and protective gloves has been observed. This specific change has been chosen due to two reasons:

- The change, usage of safety goggles and protective gloves has already been implemented in the organization which made it easier to observe the results and interviewees perceptions
- The change has been influenced by the participants of the interviews

3.2 Semi-structured interviews

It has been decided to make semi-structured interviews due to number of reasons such as the amount of people, high response rate, decreased complexity through probe questions and benefit from the flexibility (Williamson, 2002). Furthermore, interviews are suitable with case studies. Twelve interviews with production, project, district and region managers and one interview with the person responsible from business development have been made. The interviewee from the business development had a more theoretical perspective and provided the information from the organization's perspective while the other twelve interviewees presented their own perspectives on changes in safety and influence of rewards. Moreover, a short interview has been made with the safety manager to get a better view of the safety issues and new regulations.

Interview questions have been modified and probe questions have been added in order to gain better results. Since the interpretation of the interviewers on the studied subject has played a great role, semi-structured interviews have been chosen. Thus a list of core questions has been prepared and then in the interviews order of the questions has been changed and probe questions have been added.

Interview questions were organized in a way to observe the rewards and reward systems and the change process in the district. Questions were separated under two main chapters, firstly reward and reward systems and secondly the change. Since it

was important to see what motivates interviewees under normal conditions and under change process, separation played a big role.

3.3 Studying documentation

Relative information from the organization's intranet – OneSkanska - has been used to gather findings. Business plans, project plans, surveys, strategies and similar documents have been found in OneSkanska and they have been filtered through the subject rewards, reward systems, incentives and the change in safety. Filtered information has been used to present the organization's perspective on the subject of the study.

3.4 Data analysis

Literature does not suggest a best way to analyze the data gathered from interviews in qualitative approaches. However most of them pointed out to begin with summarizing the information (Williamson, 2002). First of all interviews have been transcribed and then summarized under two main chapters, rewards and reward systems, and the change. First part, reward and reward systems information have been classified under sub sections such as reward types, prioritization, expectations and measurement. One more document has been made only for the rewards and reward systems and their features to make it more clear and understand the each reward and reward system. Second part, the change has been classified under sub sections as well such as interviewees' views on the change, the process and what motivated them to implement the change.

4 Findings

4.1 The case company – Skanska Sweden

The case district is a part of Skanska Sweden which belongs to Skanska AB. Business streams in Skanska AB are construction, residential development, commercial property development and infrastructure development. Skanska AB's mission has been stated as "developing, building and maintaining the physical environment for living, travelling and working". The group's revenue in 2010 was 122 billion SEK and Skanska Sweden has contributed to the total amount with 28 billion SEK. Approximately 11000 people work in Skanska Sweden's construction business which is the largest part (Skanska homepage, 2010).

Skanska Sweden is divided into division and then regions and finally to districts, see Figure 4.1. A region consists of various districts which are operational units. Around 100-200 employees work in each district. Each district has a district manager and project managers leading the projects. While a district manager is operation focused, the regional manager is more business and strategy oriented.

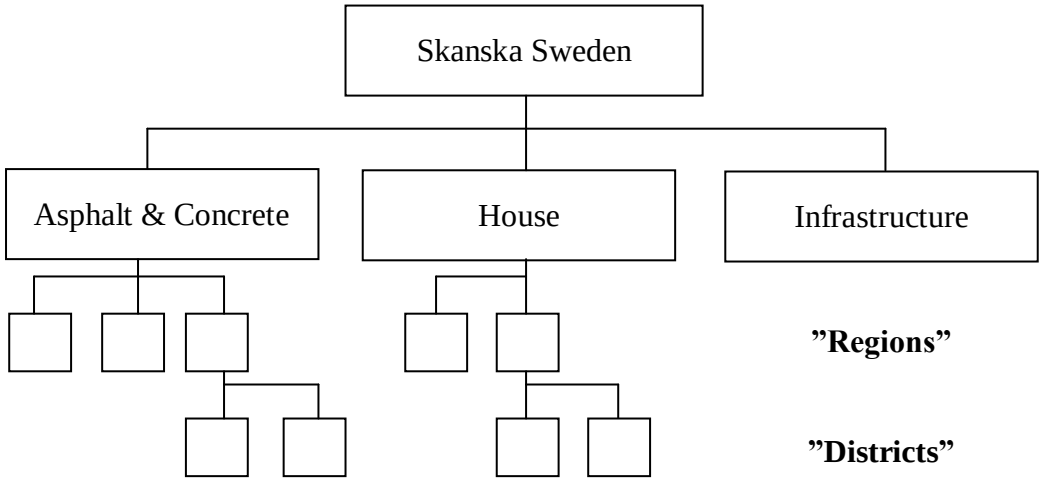

Figure 4.1. Organizational structure

4.1.1 Safety in Skanska AB

Skanska AB emphasizes the importance of safety through strategies, values and business plans. In the annual report 2010, number of strategies of Skanska AB is stated and "to be an industry leader in sustainable development, particularly in occupational safety and health, ethics and environment" is one of them. According to the report, analyzing and understanding why accidents happen, managing risk and providing education and training are the key issues to improve safety performance. Moreover Skanska AB has five zeros policy as values and zero work site accidents is one of these core values.

According to Skanska Sweden's general conduct and safety rules, personal protective equipments must be used if there are risks remaining. Safety helmet, safety goggles, protective gloves, protective shoes and upper body high visibility clothing are the mandatory personal protective equipments at all buildings and civil engineering sites

and the employer is the one who is responsible to provide the correct equipments (Skanska Homepage, 2011).

4.2 Change in safety regulations

4.2.1 The Change - Safety goggles and protective gloves

In order to achieve consistency in terms of safety between the business units, Skanska AB has developed "Global safety standards" which includes twelve major issues: risk assessment, personal protection equipment, working at heights, induction training, incident management, confined spaces, electrical safety, excavation and trenching, fire prevention, lifting operations, temporary works and management of vehicles (Skanska.com). So far personal protection equipment is the only standard that has been introduced in the case district and eight new global safety standards are planned to be introduced in the next two years (Skanska's intranet, 2010a). Since safety goggles have been introduced in the beginning of 2009, a great decrease in the amount of eye injuries has been observed in Skanska Sweden between the years 2009 and 2010 (Skanska's intranet, 2010b).

Production and project managers have different views on the change in safety regulations. Ones who have a positive view on the change share the same reason that new safety regulations decrease the amount of injuries and they were necessary. However ones who have negative views on the change state different reasons due to their positions. Project managers mention the technical problems that the templates, contracts and similar documents are not updated according to the new safety regulations. Another reason from the project managers is that new regulations are created in the office without collaboration with the ones working on construction sites. On the other hand, production managers state their reason that the new safety regulations create extra work load to them and they are not rewarded for these extra works.

Production managers are responsible for the implementation of the new safety regulations. That is why it has been stated that the change has generated extra works to production managers.

4.2.2 Processes of the change

Triggers of the change and planning

One of the triggers of the subject change was high expenses of the health issues. Skanska Sweden was obliged to pay for the health expenses of the injured employee for the first two weeks and Swedish government was obliged to pay if an injury takes longer than two weeks. Moreover injuries affect the production negatively. Another trigger of the change is that Skanska AB sets number of global safety standards to achieve the consistency in terms of safety between the units.

Change decision is made in the board of Skanska Sweden. Then the decision is sent to the region and then it follows the way down to the districts.

Implementation

Project managers and production managers get the information about the new regulations in the district meeting from an engineer working on safety issues. Then more detailed information with the deadlines is published on the intranet, OneSkanska.

The new regulations in safety become a part of the business plan in the regional level, then in the district level and finally these new regulations become the targets of the project plan. As a matter of fact, project managers try to implement these targets in their projects. Ones who work on the construction sites attend an obligatory introduction meeting for safety. Project managers are obliged to have a specific amount of safety rounds where they go to construction sites and check if employees are working under the new regulations. Project and production managers are allowed to charge 1000 SEK each time they see someone working without safety goggles and protective gloves. If the same person does not follow the new regulations several times, then project and production managers are allowed to send him home.

Through safety rounds, project manager and safety worker make a tour around construction site and check the safety issues and try to develop better solutions. Moreover when an accident happens in Skanska Sweden, employees stop working for approximately 20 minutes and discuss that accident and the ways to avoid it in their construction site with their production and project managers. Skanska AB has another safety tradition called "safety week".

It has been mentioned that it is easy to adopt the change with the employees working for Skanska though the hard part is subcontractors. Contracts with the subcontractors include a part that subcontractors have to follow the Skanska rules.

Results of the change

Managers have different perspectives on the result of the change, some of them claim that it was well implemented and some say not. Ones who think that change was well implemented adds that it was hard to reach the subcontractors however it was easy to implement it with Skanska's foreman and employees. Ones who think that change was not well implemented mention the reasons as:

- Inadequate interaction with construction sites
- Other construction companies do not use safety goggles and protective gloves
- Technical problems in the documents
- Extra work load for production manager

Interviewees have mentioned that the usage of safety goggles and protective gloves was planned in the office and ideas of the people from the construction sites were not asked. Since the people on the construction sites were the ones who had to use the safety goggles and protective gloves, they mentioned that they would like to have a word for the process and types of gloves and goggles. Thus inadequate interaction with construction sites was identified as a problem.

Subcontractors were the second problem that has been mentioned by the interviewees. Since subcontractors worked for other Swedish contractor's sites without goggles and gloves, they did not have the equipments when they arrived to Skanska's construction sites. Production manager was responsible to provide these equipments to

subcontractors as well but they mentioned that subcontractors did not follow the regulations.

When the change was implemented, there were some templates such as purchasing template and contracts that have not been updated with the new regulations. As a matter of fact, that has created technical problems to production and project managers and made it hard to understand which way to choose.

Production managers were the ones who have been responsible from the implementation of the change in safety. All of the superiors expected production manager to take care the change issue however production managers did not have extra time for implementing or following this change. It was an extra work load for them which created problems to them.

Interviewees suggested that the organization should interact more with the construction sites, increase the dialogue and develop more options. In terms of subcontractors, when other big companies initiate the change problem can be solved. Because employees from the subcontractors work for other big companies and they do not use safety goggles and protective gloves on their construction sites. Hence when they arrive to Skanska's construction sites, they do not have safety goggles and protective gloves and production managers try to provide these equipments to the employees.

4.2.3 Motivators of the change

Production managers and project managers were motivated for the change, safety goggles and protective gloves due to number of reasons. Major motivator of the change has been stated as feedback where results of the change have been presented after six months to production and project managers and there was a great decrease in the injuries. Similarly some interviewees mentioned that getting personal feedback when the change was well implemented was a motivator for them.

A third motivator of the change was that safety and zero accident policy were goals in the business plans and project plans they worked with. Since they were supposed to follow the plans and achieve goals, they had to follow safety regulations and zero accident policy as well.

People were well informed about the change, they knew the reason behind the change and why it was required. It has been mentioned that the organization has informed the production and project manager adequately for the new change, what is it about, how it will affect to them and how will they follow it which decreased the uncertainty and anxiety.

Some of the interviewees mentioned that they were expecting such a change in the organization and they though that the idea "safety goggles and protective gloves" was good and necessary which was the biggest motivator for them. It has been added that a person should like the change idea otherwise it would be hard to follow if it is only forced by the organization.

On other hand, some other interviewees mentioned that adaptation to the change in safety was a part of their job and that was the motivator for them. In this sense it is important to understand that these people showed a higher commitment to the organization and strong ties between the organization and the employee motivates

employee to follow the new regulations such as changes in safety. It has been observed that these people were happy to work in Skanska.

Some of the interviewees claimed that they have a personal interest on safety issues and that was the motivator for them. Therefore whenever a new regulation comes about safety, they spend more time on following and understanding these new regulations since it is about safety. Motivators can be summarized as:

- The idea "safety goggles and protective glasses" was good and necessary
- Getting information about the change and process
- It was a part of the job description, so it had to be implemented
- Zero accident policy and safety are parts of business plan and project plan
- Seeing the decrease in injuries after six months in the statistics
- Getting personal feedback when the change was well implemented
- Personal interest on safety issues
- Commitment

4.3 Rewards and reward systems in Skanska

Production managers and project managers of the case district are controlled in various ways. A limited amount of these drivers are presented in this chapter under two main sections, reward systems and rewards.

One should be aware of the fact that reward schemes and parameters change regularly in Skanska. Hence safety can be a parameter for production managers this year though it might be a parameter for project managers next year.

4.3.1 Reward systems

The Pathfinder

"The Pathfinder" is a tool that creates the basis for measurement in Skanska Sweden and includes four major parts that are employees, way of working, client and finance. In order to reach the main goal, profitability, one should be successful in the finance part and that is achieved through success in other parts of the pathfinder which are good leadership, employee commitment, quality and affectivity, and then client satisfaction, see Figure 4.2 (Skanska's intranet, 2011a)

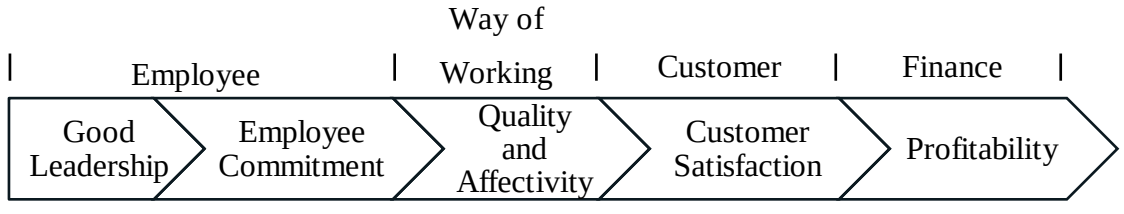

Figure 4.2. The Pathfinder

Each part of the Pathfinder is measured regularly. Hence good leadership and employee commitment are measured with employee satisfaction survey, value

creating organization, attendance and accident frequency. Then quality and affectivity are measured by purchase order agreements and experienced quality. Next step is the client satisfaction and it is measured every six months through client satisfaction surveys. Profitability is the final step of the way which is determined through a couple of financial measures (Skanska's intranet, 2011a).

The Pathfinder serves results in both regional and district level that is why a project manager can see the district's result but not his / her own project's results. Moreover a production manager can not see pathfinder anyway. Through pathfinder, districts are measured up to all districts in Sweden and since it is a very transparent tool, it shows the place of the case district compared to others.

The Pathfinder is a tool that measures the units widely since it includes different parts. Hence one can see the similarity between the chapters that the pathfinder measures and the chapters of business plans.

First part of the Pathfinder is about employees and it includes the measurement of accidents and absence days due to accidents which are all about safety. Thus pathfinder can have a positive influence on safety issues.

Business Plans

Business plan is made first in Skanska AB level and then it gets more specified in Skanska Nordic, Skanska Sweden and then three major areas; asphalt and concrete, house, and infrastructure. Business plans are then specified to the regional level by gathering people from all categories of the region. In the district's business plan, goals are specified to the subject district and important points from the regional business plan are taken. Financial goals are more detailed and specified in the project manager's level in district's business plan though other parts are mostly similar to the region's plan.

A business plan includes various chapters and describes the strategies, objectives and measures but it does not align responsibilities. Chapters of the business plan show similarity to the parts of the Pathfinder which are employees, customers, finance and way of working. Moreover safety as a part of employee and green thinking as a part of quality and affectivity are important chapters in the business plans (Skanska's intranet, 2011b)

Employees are aware of the fact that safety is an important issue in Skanska since it is a chapter in the business plans and they are measured from it as well.

Project Plan

Project plan is created by specifying the goals of district plan to the subject project. In the project plan, responsibilities are aligned and actions are described in project level. Hence projects are measured through the goals that are set in the project plan.

Dual Career

Through dual career, when someone is more experienced, he/she gets more bonus and salary according to his/ her level. Hence dual career is a tool that differentiates project

and production managers by giving them numbers in accordance to their level such as "project manager 1" or "project manager 3".

Dual career is an opportunity for the ones who likes to stay in the same position and likes to be promoted. Thus a production manager does not have to be a project manager to earn more salary or bonus; he/she can work as a production manager and become a production manager 3 instead. Therefore dual career is a useful tool to retain the people in the same position who are successful. However it has been mentioned that it is unfortunate that people working below production manager are not graded through dual career.

It is clear that people are measured of various points to be promoted in the same position and safety is one of these parameters once again. Hence it is important to show that one cares about the safety issues as well as many others to benefit from dual career.

Other reward systems

Reward systems vary between production managers and production managers; however some of the reward systems are same for both positions although influences of them vary. Other reward systems for both positions are economy, customer satisfaction index, employee surveys, safety, project plan, working according to Skanska's way of working, environmental goals, working environment, the Pathfinder, dual career and business plan, see Table 4.1.

4.3.2 Rewards and incentives

Bonus

In the case district, there are bonuses for both production managers and project managers. Bonus is based on various parameters such as economy and safety and one has to fulfil the minimum requirements to get the bonus. Success of the project and district influence a lot to the bonus however in production manager's level, there is a reduction factor such as level of accidents in the district while there is an adding factor as work preparations in project manager's level. Moreover bonus parameters change every year.

Interviewees have different opinions about bonus. Some claimed that bonus works well since it is an incentive and bonus is also like a feedback. Therefore goals are set and when one reaches the goals, he/she gets the bonus. On the other hand, some claimed that bonus system does not work well and number of reasons has been expressed such as everyone do not have bonus, bonus is based on many parameters and they can not influence (too variable) to some of the parameters, bonus means lower salary and moral reasons.

Fairness of bonus system is another issue that rises in the case district. Some interviewees mentioned that bonus system is fair since there is a system called "dual career" which separates people in their positions such as project manager 1, project manager 2 and project manager 3 according to their experience and highest position gets the biggest bonus. However some stated that bonus is not fair because a great effort can be made in a loss making project and in such a case, a production or project manager would not get the bonus.

Reward Systems	Project Manager	Production Manager
Economy	X	X
Customer satisfaction index	X	X
Employee survey	X	X
Safety	X	X
Environmental goals	X	X
Project plan	X	X
Working environment	X	X
Dual career	X	X
The Pathfinder	X	
Business plan	X	

Table 4.1 Comparison of reward systems

Opinions of the interviewees about bonuses varied in terms of motivation as well. Ones who claimed that they make a better job because of bonuses think that bonus is like a feedback that they are measured and that motivates them to make a better job. People who shared the idea that bonus system does not motivate them have complained about the parameters and stated that it is a moral issue and it has been expressed that they prefer a higher salary instead of bonuses.

Salary

Salaries for the production and project managers depend on the level they have through dual career such as production manager 1 or 2. Moreover performance review is another factor that has an influence to the salary decisions. Interviewees mentioned that salary is an important criterion that retains them.

Safety is a parameter that influence to dual career and presented in performance reviews. Therefore one can claim an indirect influence of safety to the salary as well.

Promotion

In the case district, it is vital to declare your goals and ambition to promote in performance reviews in order be promoted. It has been observed that while some people like to state their ambition to promote, some others prefer their managers to observe the performance and promote them. Some other issues such as relations play a great role in promotion decisions according to interviewees. It has also been observed that not being promoted influence the employees negatively. Moreover promotion means change to some of the interviewees and it has been mentioned that a

having better payment or a different role is vital in order to change, otherwise it is useless.

Since district manager is the one who is responsible of personnel, he/she makes the assessment for promotion through performance reviews.

Feedback

In Skanska's handbook for Skanska leaders, providing regular feedback is suggested in order to develop the staff. Feedback can both maximize strengths and develop new skills according to the handbook and it is vital to give feedback regularly which makes timing very important (Skanska's intranet, 2011c). Similarly interviewees from the case district have stated that feedback is a reward that motivates them though it does not happen so often.

It has been observed that feedback in the case district can be classified under two groups which are formal – performance reviews – and informal discussions. Furthermore one can accept employee surveys, customer satisfaction index and similar tools as part of feedback. Employees are measured in safety through various tools therefore they get feedbacks in terms of their safety performance as well.

Performance reviews

Performance review can be called as a tool for formal feedback which is divided to three pieces, project manager discusses past and present and district manager discusses the future with production managers and helps them to set their own goals for development. Since it is a part of formal feedback, performance review is a big motivator for both production and project managers. Results of the number of measurements are presented in performance reviews and safety is one of these.

Other rewards

Some other rewards that have been mentioned in the interviews were education, setting goals and reaching them, opportunity to get good and interesting projects, authority, responsibility, praise, good colleagues, opportunity to work at home, variety of job, meeting various people, having good relations, working according to Skanska's rules and values, opportunity to change the role and the city, personal growth and development, personal challenge and job security.

5 Discussion

Number of authors claim that rewards, incentives and reward systems effect to the change process positively (Parish et al., 2008; Singh and Shoura, 1999). Some of them explains that relation through motivation and claims that rewards effect to employee motivation and motivated employees commit more to the change (Danish and Usman, 2010; Parish et al., 2008). On the other hand Teo et al., (2005a) proves a direct relation between rewards, incentives and reward systems and safe work behaviour in construction sites.

Commitment

According to Parish et al., (2008) and Singh and Shoura (1999) commitment is really important for the change process which consists of three components; affective, normative and continuous commitment (Parish et al., 2008). It has been proved by Parish et al., (2008) that affective commitment has the biggest influence on the change process, thus one can claim that increased affective commitment will influence to the change process positively.

Fit with the vision, quality of relationship with manager, job motivation and role autonomy influence to the affective commitment (Parish et al., 2008). Similarly in the case, it has been observed that the production managers and the project managers who believed that change in safety was necessary showed good commitment and so affected to the change positively. Interviewees mentioned the importance of quality of relationship with the manager especially in case of promotion though none of the interviewees related that reward with the change. Quality of relationship with managers increases the commitment of the employees to the organization and so to the changes. Although interviewees could not relate the quality of relationship with manager to the change, they mentioned that they have good relations both with their managers and colleagues and they also have positive views about their company. Thus some of them mentioned that they implemented the change in safety goggles and protective gloves because they were working for Skanska and it was part of their job. Interviewees added that this change was good for both themselves and the organization. Therefore quality of relationship with manager increases the commitment to the change indirectly in the case. Moreover employees with high job motivation show a higher commitment to the organization and to the change (Parish et al., 2008). The case supported that theory since interviewees who were motivated mentioned that they like Skanska and that was one of the reasons to implement the change. Role autonomy was another reward that has been mentioned by the interviewees though it has not been related to the change or commitment. Increasing autonomy and giving employees freedom to make their own decisions, improve the commitment to the change (Parish, et al. 2008). In the case, change decision was made in the office and a day was set to implement the change in safety. Thus production and project managers were obliged to use the safety goggles and protective gloves and also make the other people on construction sites use them. It can be said that autonomy was not given to production and project managers in decision making for the change in safety. As a matter of fact, having freedom to make their own decisions was not a motivator for the change in safety in the case.

Resistance

Oreg (2006) proposes an opposite perspective for the change and claims that employees who fear of losing their jobs show affective resistance, employees who fear of losing power and prestige show cognitive resistance and finally employees who fear of having less interesting, less autonomous and less challenging works show both affective and cognitive resistance. Interviewees mentioned that job security is one of the rewards for them and they chose Skanska because it is a big company that ensures their job security. Power and prestige has been mentioned as rewards as well. Similarly having interesting, challenging works and autonomy have been stated as important rewards by the interviewees and some claimed that having interesting projects is the reason that they stay in the organization. Hence a change that threats such important rewards might face a great resistance from the employees. However in the case resistance to the change in safety was not observed since the change "safety goggles and protective gloves" was not something that threat their job security, power and prestige, autonomy and opportunity to get interesting and challenging works.

Communication

Communication is important for successful change according to Azzone and Palermo (2011). Interviewees mentioned number of reasons for their motivation to the change in safety and "getting information about the change and process" was one of these reasons. Information decreases the uncertainty according to literature and thus it aids to the change process (Oakland and Tanner, 2007; Price and Chahal, 2006). As a matter of fact the case is a good proof of the literature since the information as a reward motivated them to implement the change in safety.

Participation

Participation (involvement) is another major point that is important for successful change (Henderson and Ruikar, 2010). Interviewees who claimed that the change in safety was not well implemented added a couple of reasons and inadequate interaction with construction sites was one of them. They have been suggesting that the organization should involve the people from construction sites to change process from the beginning and increase participation. Obviously participation was one of the reasons that decreased their commitment to the change in safety and even resist to it. So the case supports the theory that participation is an important reward for the change process.

Goal setting

Goal setting is an important incentive that influences to the safety performance in construction sites (Duff et al., 1994). Through goal setting, employees can see how their safety performance is and how can it be developed to achieve better results. In the case study, business plans and project plans include a safety chapter where the goals are set to achieve better results. Most of the interviewees mentioned that safety is a parameter that they are measured and they were aware that safety was an important issue in the project and business plans they work with. Thus setting goals in terms of safety seemed to improve their awareness of the change and facilitated it which is compatible with theory.

Feedback

Number of authors claims that feedback as a reward influence the safety performance positively (Duff et al., 1994; Mattila et al., 1993; Austin, 1996). Employees have expressed that "getting personal feedback when the change was well implemented" and "seeing the decrease in injuries in the statistics six months after the change in safety" were two important motivators for the change in safety. Moreover most of the employees mentioned that feedback is one of the rewards that they like. In the case, employees are measured in terms of safety through business plans, project plan and as a parameter of bonus and once again employees see the results of their safety performance. Thus feedback is found to be a very important reward that influences to the safety performance.

Personal interest

According to Sawacha et al., (1999), ones who care about their personal safety and believe that company also cares about their personal safety show a better safety performance. Similarly, interviewees stated that they were motivated to the change since they had a personal interest on safety issues. Moreover interviewees added that change in safety is something that is good for them since it is a way to decrease the injuries which might cause mortal damages to them. Thus personal interest to the safety and the idea that company care about employees' personal safety are rewards that improve the safety performance.

Close and strict supervision

Close and strict supervision which is a negative reinforcement is proved to be the one of the most effective ways to foster safe work behaviour in construction sites (Teo et al., 2005a). Close and strict supervision might involve the actions such as constant nagging or criticism from the supervisors or threat of losing job. In the case it has been observed that most of the interviewees deny nagging to their subordinates and close and strict supervision does not seem to be welcomed either. However according to the new business plans, managers are supposed to make visits to the construction sites where there is a limited amount and they check the safety issues and report them. Some of the interviewees mentioned that so called "safety rounds" does not work well since managers check the recent safety issues only and others feel like they are being investigated strictly. Close and strict supervision was not mentioned as a motivator by the interviewees and they also mentioned that they do not like when someone is watching them all the time. But still employees were aware that project managers would come and check if they were using safety goggles and protective gloves. That is why close and strict supervision can both improve and not improve the safety performance.

Monetary rewards and bonus

Positive reinforcements in forms of monetary rewards and bonuses are some factors that influence to the safe work behaviour positively (Teo et al., 2005a). In the case, there was not a specific bonus for the successful safety performance however there were various parameters for one bonus and safety was one of these parameters. None of the interviewees mentioned that bonus was a motivator for them to follow the new

safety regulation, safety goggles and protective gloves though most of them were aware of the fact that safety was a parameter that they were measured. Therefore it is not possible to say that bonus influenced to the change in safety according to their view though one can claim a relation since they were all aware that safety was a parameter that they were measured. Similarly Langford et al., (2000) claimed that safety bonuses make employees to work in a safer manner. However bonuses which are linked to productivity force people to work faster and influences to safety in a negative way. It was clear in the case that bonus included several parameters such as safety and economy and some others related to productivity. Hence it is possible to say that bonus was not so affective in the case since there were some other parameters related to productivity.

Imposing fines and suspension from work

Imposing fines and suspension from work are proved to be one of the most effective ways to foster safe work behaviour (Teo et al., 2005a). In the case, production managers and project managers are allowed to charge 1000 SEK penalty if the people on construction sites do not wear safety goggles and protective gloves. Moreover if the same person keeps violating the safety regulations, it is allowed to send him to home though such a choice decrease the production. There are no fines or suspension for production and project managers in the case district. Since there are problems attached to the implementation of imposing fines and suspension from work such as decreased production, managers mentioned that they do not apply these methods. As imposing fines and suspension from work were not used actively in the construction sites, it is difficult to observe the influence on the change in safety. On the other hand, organization allowed production and project managers to impose fines and suspend people from work which means that organization probably considered that method as an effective way to implement the change in safety.

Table 5.1 shows the summary of the discussion. Rewards and reward systems covered in literature were compared with the ones in the case and also with the ones that has been mentioned for the change in safety. All of the rewards and reward systems from the literature have been found in the organization as well, except close and strict supervision. Some of these rewards and reward systems covered in literature have been observed to influence the change in safety goggles and protective gloves. However, quality of relationship with manager, autonomy, participation, close and strict supervision and monetary rewards either have not been mentioned at all or have not perceived as motivators for the change.

Aspects Covered in Literature	*In Reward*	*In Change*
Fit with the vision	X	X
Quality of relationship with manager	X	
Job motivation	X	X
Autonomy	X	
Information	X	X
Participation	X	
Goal setting	X	X
Feedback	X	X
Personal interest	X	X
Close and strict supervision		
Monetary Rewards	X	
Imposiong fines and suspension	X	X

Table 5.1 Comparison of the aspects covered in literature with the case.

6 Conclusion and recommendations

Organizational changes create number of barriers. There are different ways suggested to get over these barriers and improve the commitment to the change. In this study, rewards, reward systems and incentives are investigated as an alternative way to motivate the employees and improve their commitment to both the organization and the organizational change. Skanska, one of the largest Swedish contractors initiated number of new regulations in terms of safety called "global safety standards" and one of these standards, usage of safety goggles and protective gloves is investigated from the change perspective together with the effects of rewards, reward systems and incentives. It is important to understand the fact that change in safety has a different nature than others such as implementation of new technologies and usage of safety goggles and protective gloves might not seem like a difficult change to adapt. However number of problems has been identified in that specific change and this amount might increase in different types of changes.

The findings have been gathered by interviewing the different positions such as production managers, project managers and other managers that have influenced and been influenced by the usage of safety goggles and protective gloves. Twelve of the thirteen interviewees were all from the same district of the organization and one of them works in the region for business development. The purpose of this study is to investigate the effect of rewards and reward systems on the changes in safety. Therefore following research question have been addressed:

- How do rewards and reward systems influence the changes in safety?
- How can rewards and reward system be developed facilitate the changes in safety?

6.1 Conclusions

The study shows that different types of rewards and reward systems influence to the change in safety in various ways. Rewards and reward systems can either improve commitment to the change or create resistance. Conclusions can be summarized as:

- Fit with the vision, job motivation, information, goal setting, feedback and personal interest are the rewards and reward systems that influence to the changes in safety positively.
- Quality of relationship with managers is a reward that improves the commitment to the organization and the change. Although interviewees were not aware, quality of relationship with their manager influenced their behavior and way of thinking in a positive way since some of them implemented the change because it was good for their company.

- Role autonomy by mostly giving the freedom to make decisions was not a reward that influenced the change at all. The organization set the day for implementation of the change and employees followed that. Since it has been kind of forced by the organization, one can expect resistance to the change. However, none of the interviewees mentioned that autonomy was a factor made them resist to the change.

- Influence of the participation (involvement) on the change was clear. However literature proves a positive influence. In this study, it has been found that people on the construction sites have not been involved to the change from the beginning. That is why some of the interviewees mentioned that as a problem. It is obvious that when people are not involved in the change process, they do not commit to it either.

- Since interviewees mentioned that they did not like to nag or criticize constantly, close and strict supervision was not used in the case. However the organization's policy forced project managers to make number of visits to the construction sites and check the recent safety issues. Thus one can claim that close and strict supervision was partly used though interviewees mentioned that it was not welcomed and it was not motivating them to commit to the change more in contradiction to the theory.

- Monetary rewards such as bonus did not motivate the employees more to commit to the change in safety. In theory, a bonus for the sites which are successful in terms of safety is proved to be motivating more. Similarly theory proved that bonuses with productivity related parameters decrease the safety performance. In the case there was only one big bonus with number of parameters such as productivity related ones and safety. Thus interviewees mentioned that bonus did not motivate them to commit to the change. Nevertheless it should be considered that having safety as a parameter, being measured and getting feedback were motivating interviewees.

- Imposing fines and suspension from the construction sites were other methods that were not used actively on the case since suspension decreased the productivity. However, their organization had a policy to impose fines and suspend the ones who does not follow the new safety regulations from the sites which means that organization considered these methods as effective ones to improve the safety performance. Since they were not used actively, it is difficult to make a conclusion if they increase the commitment or not.

In order to adapt the changes, commitment is vital. Thus one should focus on increasing commitment to the change and to the organization. Motivating employees is one of the ways to increase commitment. In this paper, rewards and reward systems that motivate the employees have been investigated one by one to observe their effects on the change and some of them found to be effective in implementation of the change.

6.2 Recommendations to the industry

It is clear that rewards and reward systems influence the change process. Hence organizations should focus on the ones that increase commitment and motivates the employees. Moreover rest of the rewards, reward systems and incentives that have been found in the literature can be improved since they might increase the commitment. Detailed recommendations are given to the ones planning changes in safety in construction industry below:

- Employees show higher commitment to the change when they like the idea or in other words when the change fits with their own vision.

- Employees with high job motivation show higher commitment to the organization and then to the change.

- Being well informed about the change decreases the uncertainty and worries about the change process. Thus information plays a big role in the change process.

- Setting safety goals in project and business plans or having safety as a parameter influence to the change process positively.

- Getting personal feedback in accordance to successful safety performance and seeing the statistics after the change process are two important motivators for the employees.

- Employees who have personal interest on change and safety show better performance in terms of changes in safety.

- Employees with good relations with their managers commit more to the organization and the change.

- It is important to involve the employees from the beginning of the change process. If employees feel that they are not involved to the change process, they might resist to it.

6.3 Further research

Usage of safety goggles and protective gloves has been chosen as the change in this study. It has been observed that interviewees had different reasons for motivation since the change was about safety. Therefore changes in different areas such as implementation of a new technological tool to a construction company can be chosen as change and effects of rewards and reward systems can be observed.

This study was limited to a district within Skanska Sweden. Thirteen interviews were made and all of the interviewees were managers. Since other types of workers from the construction sites were being influenced by the change in safety, further research can include interviews with those people and ways to increase their commitment to the changes. Similarly, rewards and reward systems to increase commitment to the change can differ for different positions such as production managers, project managers or various types of construction workers. Therefore effects of rewards and reward systems on the change can be observed for one type of work group as well.

In terms of monetary rewards, literature offers various ideas. It has been observed that culture plays a big role in perception of rewards especially in terms of monetary ones such as bonuses. Rewards and reward systems can be researched from the cultural aspect and the influence of culture to the rewards and reward systems can be an interesting subject.

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