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National diversity of workers – an obstacle or an opportunity?

(a qualitative study of leased Eastern European construction workers` safety climate, behavior and culture)

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Preface

This thesis marks the end of the Master`s Degree programme “Societal safety” at the University of Stavanger in Spring, 2013. The research that has been made was a challenging but very interesting process that gave me a chance to apply a great part of knowledge that I got while studying at the programme.

In the present research I explored safety climate, behavior and safety culture among leased Eastern European construction workers. I would like to thank the owner of the recruitment agency who was so kind to give me a chance to take interviews with Eastern Europeans working for the agency and leased by Norwegian building and construction companies. Without her, this research would have been impossible. And of course, my thanks go to the workers who were very open for a dialogue and gave me a lot of interesting and useful information during the interview process.

I express my sincere gratitude to my supervisor, Professor, Dr. Jan Erik Karlsen, who has always been eager to help me with reasonable advice.

I am also very thankful to the University in Stavanger and the whole Norway for giving me this amazing opportunity to be a student here.

Last but not least, I would like to give my special thanks to my husband, Dmitry Kechasov, for his love, patience and support.

Stavanger 17th of June 2013

Summary

Background and research problem: building and construction is a dangerous branch of industry. Norwegian Working Environment authority discovered that leased Eastern European construction workers are injured at work more often than the others. Safety culture is said to be connected to accident occurrence. The quality of safety culture among a certain group of workers can be revealed through the quality of safety climate and safety behavior patterns, determined by perceived management practices. National diversity of workforce can affect safety climate and behavior, and thus the quality of safety culture. In this respect it is the task of management to perform high-quality diversity management. The aim of this study is therefore to research *what impact the way Norwegian management treats leased Eastern European construction workers (as perceived by the latters) has on the quality of safety culture among them.*

Method: the study is designed as a qualitative one, based first of all on 14 in-depth interviews with leased Eastern European construction workers in Norway. Moreover, Fafo report (2007:3) as a tertiary source of data, as well as relevant legal acts are analyzed in order to confirm/refute and explain some findings.

Results: the workers don`t perceive Norwegian management being as committed to safety as to the needs of production: the migrants are sometimes made work in unsafe conditions, under time-pressure. The communication between migrant workers and Norwegian management and colleagues is poorly developed. These practices are strongly associated with national belonging of workers and determine substandard safety climate among migrants: they perceive discrimination, language barrier, separation, level of trust is very low, perception of injustice – high. Such safety climate leads to the low level of organizational commitment and participative behavior, and high amount of silent deviations. As a result safety culture among leased Eastern Europeans cannot be called either informed, or learning, or reporting, or flexible, or just, or balancing production and protection.

Conclusion: the fact that Norwegian management is not perceived to perform high-quality diversity management leads to substandard quality of safety culture among leased migrants. The workers` perceptions are fully consistent with the conclusions made in Fafo report. The management does not seem to acknowledge that diversity can be an opportunity for learning and creativity if appropriately managed. Moreover, legal requirements aggravate the situation, putting a great deal of responsibility for leased migrants on their direct employer, often not competent in HSE issues, instead of making responsible the companies in which the workers risk their lives every day.

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1 Introduction

1.1 Background

The construction industry has a number of specific features influencing the HSE issues:

- The construction industry is mobile in character, and assignments and workplaces vary from one project to the next. All new projects and workplaces present particular problems and unforeseen hazards (Fafo report, 2007).

- The organization of production in the construction industry usually involves a number of sub-contractors because a number of specialized functions are usually required. Coordination and cooperation between a large number of people from different technical backgrounds set stringent demands on communication and planning, while this type of production system may easily lead to dissolution of responsibility for HSE issues (Frøyland et al., 2004).

- The character of work itself has a major bearing on HSE efforts in the construction industry. On a building site, many operations take place simultaneously, often in hazardous locations, such as high above ground. Understanding how a task should be performed and how one's colleagues intend to solve it can be decisive, also in terms of safety. Time pressure leading to accidents is often associated with problems of coordination between the various skill groups on the building site. Planning is often deficient; this leads to waiting periods and subsequent time pressure. Time constraints, poor access and clutter increase the risk of accidents, and require good communication between workers. In addition, the construction industry often makes use of heavy machinery that requires appropriate communication while operations (Fafo report, 2007).

- The construction sector in Norway is characterized by the **large inflow of labor from Eastern Europe,** which has had a specific impact on the health, environment, and safety (HSE) situation within the Norwegian construction industry (Fafo report, 2007).

A lot of research conducted in many countries showed that "*the workers born abroad are exposed to work-related risks 2,13 times more than those born in their home country*" (Arbeidstilsynet, 2012:4). Arbeidstilsynet (Norwegian working environment authority) conducted its own research of this phenomenon and found out that foreign

workers in Norway are injured at work relatively more often than Norwegian ones. According to Arbeidstilsynet ”*the majority (33%) of work-related injuries of foreign workers* (in Norway) *are got within building and construction sector of industry*”, at the same time ”*the biggest group of workers being subject to a lot of serious work-related injuries is coming from Eastern Europe*”, moreover *”there are much more injuries among foreign workers not being employed on a permanent basis (leased ones or working temporary)”* (Arbeidstilsynet, 2012:4).

It is therefore clear that building and construction branch of industry is characterized by high accident rates and a great deal of these accidents involves Eastern European construction workers, moreover leased workers are injured more often that those employed permanently.

Arbeidstilsynet names such possible reasons for high injury rates among Eastern Europeans as language problems and bad safety communication as a consequence, the fact that foreigners work a lot overtime in order to get more money, misunderstanding of Norwegian HSE system etc. (Arbeidstilsynet, 2012) However, these are just suppositions, lying on the surface of the problem. There have not been conducted any deep research of Eastern European construction workers` safety climate and behavior, something that could reveal the quality of safety culture among them, safety culture being deeply connected to accident occurrence. Such research could help to understand what really lies behind the statistics and could give necessary implications to authorities and construction companies, employing (leasing) Eastern Europeans, on what policies to take in order to improve the situation.

1.2 Research problem and questions

It is a commonly recognized fact that internationalization of workforce can provide increased skills and new ideas, cultural exchange and a more varied working environment. On the other hand, it can also entail poorer communication (where language problems are of utter importance) and large cultural discrepancies leading to different patterns of safety behavior and worse safety climate (Frøyland et al. 2004).

A great role in this respect belongs to management. Diversity management, when a company is committed to the diverse composition of the workforce as well as their diverse needs, proved to be a successful leadership strategy when dealing with diversity of workers (Magoshi and Chang, 2009). However, very little research is devoted to the investigation of diversity management in the context of safety, its impact on safety behavior of workers, safety climate and safety culture.

The research problem of the present paper is therefore the following:

What impact does the way Norwegian management treats leased Eastern European construction workers (as perceived by the latters) have on the quality of safety culture among them?

The research will be first of all aimed at exploring safety culture among leased Eastern European workers and companies leasing them accordingly, because this group of workers is proved to be the most vulnerable with regard to work-related injuries in Norway (Arbeidstilsynet, 2012).

Before formulating the research questions which can guide the study, the literature review has been made in order to understand what safety culture actually is and what can reveal its quality. The present research will be based on the assumption that the quality of safety culture can be revealed through safety climate (determined mainly by perceived management practices) and associated behavior patterns (based on the ideas of Reason, 1997; Antonsen, 2009; Cooper, 2000 etc.)

Hence, the following research questions can be formulated:

RQ1: What are the perceived safety-related management practices towards leased Eastern European construction workers and to what extent do they facilitate safety behavior enhancing safety climate?

RQ2: In what way does the management treat national diversity of leased Eastern Europeans as perceived by the latters and in what way does it influence safety climate?

RQ3: What are the main patterns of self-reported safety behavior of leased Eastern European workers and in what way are they shaped by the perceived management practices?

RQ4: What is the quality of safety culture of leased Eastern European construction workers?

The research of safety culture in the context of diversity management has not been made in Norway before, its results can be useful in understanding what is needed in order to improve safety culture and thus to reduce accident occurrence among leased Eastern European construction workers in Norway.

1.3 Research purposes

The purpose of the present study is twofold: ***descriptive* and *explanatory***. The answers to the research questions will help to find out ***what*** the perceived management practices and the patterns of safety behavior of Eastern European workers are, what the quality of safety culture among them is and ***why***. The results of the present research have therefore an empirical value providing necessary implications for the companies employing this category of construction workers and for the authorities.

The unique value of this research is that it gives the possibility to get the first-hand opinions of people who can judge upon their problems (for example, what hinders them from behaving safer) better than managers or authorities, thus making possible to look at the problem not from the ”outside” as it was done before, but from the ”inside”.

1.4 Disposition

In chapter 1 the background of the study is presented and provides for the choice of research problem and questions. The purposes of the thesis are defined afterwards. In chapter 2 the theoretical limitation is made, and different theoretical contributions relevant for the research problem are analyzed and evaluated. On this basis, the research model is constructed in the end of the theoretical part. In chapter 3 the research design and chosen methods of research are described and evaluated against the principles of internal and external validity and reliability. In the end of this chapter, the main concepts are operationalized. Chapter 4 consists of the presentation of empirical findings and their discussion according to the formulated research questions and with the help of relevant theoretical contributions. Fafo report (2007:3) is compared to the data from the interviews, and consistency of research in the chosen field is thus established. The conclusion is made in chapter 5 where the research problem is finally disclosed, and all the findings, discussed in the previous chapters, are presented in a nutshell. The implications are also given in conclusion.

2 Theoretical framework

In this chapter the theoretical contributions relevant for the research problem will be both described and evaluated. Based on the evaluation of theoretical contributions, the research model will be constructed. The model will help to analyze the empirical data afterwards.

2.1 Theoretical limitation

There are different views on how accidents happen and how they can be prevented. This study will be based on the New View on human behavior (Dekker, 2006) and an optimistic view on safety management (ideas of HRO- theory by Weick and Sutcliffe, 2007; Reason, 1997 and Turner and Pidgeon, 1997).

According to Dekker (2006:2), there are basically two ways of looking at human error. The first view could be called "The Bad Apple Theory". “It maintains that:

- complex systems would be fine, were it not for the erratic behavior of some unreliable people (bad apples) in it;
- human errors cause accidents: humans are the dominant contributor to more than two thirds of mishaps;
- human error—by any other name (for example: loss of situation awareness, complacency, negligence)—explains system failures;
- human errors come as unpleasant surprises. They are unexpected and do not belong in the system. Errors are introduced to the system only through the inherent unreliability of people”.

The Bad Apple Theory provides us with a simple explanation of why accidents happen. However Dekker (2006) strongly criticizes this theory and argues that ”underneath every simple, obvious story about error, there is a deeper, more complex story … this story is inevitably an organizational one, a story about the system in which people work” (p. 3). This story is grounded in the New View on human error:

- “safety is never the only goal. Organizations exist to provide goods or services and to make money at it;
- people do their best to reconcile different goals simultaneously (e.g. service or efficiency vs. safety);
- a system isn’t automatically safe: people actually have to create safety through practice at all levels of the organization;
- production pressure influences people’s trade-offs, making normal or

acceptable what previously was irregular or unsafe;
- new tools or technology that people have to work with, change error opportunities and pathways to failure".

Hence, Dekker (2006: 15) concludes that:

- "human error is not a cause of failure. Human error is the effect, or symptom, of deeper trouble.
- human error is not random. It is systematically connected to features of people's tools, task and operating environment.
- human error is not the conclusion of an investigation. It is the starting point".

The main point of the New View is not to see where people went wrong, but why what they did made sense. Dekker (2006) notes that the premise of safe working practice is that *"if you really understand the evolving situation in which people's behavior took place, you will understand the behavior that took place inside of it" (p. 92)* (See figure 1).

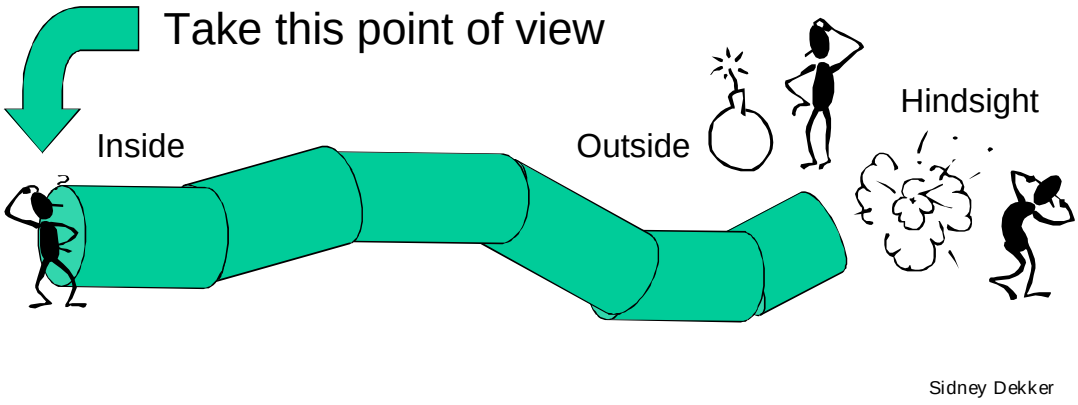

Figure 1 See the unfolding world from the point of view of people inside the situation—not from the outside or from hindsight. Adopted from Dekker (2006:92).

Though Dekker described the views on human errors which are mainly understood as unintentional events, it seems fully possible to apply the same ideas to people`s behavior, which is supposed to be conscious. Thus, based on the ideas of the New View on human error (behavior), the assumption of the present thesis is that understanding what lies behind workers` behavior, understanding why they sometimes choose to behave unsafe or passive or vice versa will help to find the proper areas of intervention aimed at its improvement and thus safety culture improvement as well.

It should also be noted that the present research will be based on the optimistic view on safety management, i.e. it is assumed that safety can be managed and created. Management practices and more importantly their perceptions by the workers represent the key to stronger safety culture and higher level of safety in the organization in general (based on the ideas of Reason, 1997; Antonsen, 2009; Cooper, 2000 etc.)

2.2 Safety climate and the role of management

The concept of work climate in the literature appeared long time ago. Lewin, Lippitt, and White (1939, as cited in Yule, 2003) made the earliest explicit reference to climate in an organizational setting without defining the concept though. Another early recognition of the impact of managers on climate was by McGregor (1960, as cited in Yule, 2003) who emphasized the importance of daily role-modelling behaviors of supervisors in setting the climate. Coyle, Sleeman, and Adams (1995, as cited in Yule, 2003) latterly define organizational climate as employee perceptions of *'the social and organizational circumstances in which employees work'*. Climate influences what work is done, how work is done, and by whom work is done. Climate may operate at the level of individuals and small cohesive groups. According to Coyle et al. (1995, as cited in Yule, 2003), safety climate is a subset of organizational climate and describes the atmosphere of the state of safety in an organization.

Nowadays *safety climate* is most often defined as *the shared perceptions of workers regarding safety in their working environment* (Christian et al., 2009, Neal and Griffin 2006; Zohar and Luria 2005).

According to Yule (2003), the central debate among theorists appears to be whether safety climate should be restricted to workforce perceptions about management and the manner in which management reconciles safety with productivity or whether the role of management is incorporated with other safety issues such as risk perception, worker involvement, personal accountability, perceptions of the physical environment, and job communication, co-workers behavior. This debate has not been resolved, however it can be undoubtedly claimed that perceived *management practices represent one of the main facets for measuring safety climate and their perception by employees determine safety climate quality to a large extent* (based on Yule, 2003).

One of the founders of the theory of safety climate Zohar (1980:98) wrote in this respect that "*safety climate reveals the perceived priority or value of acting safely, as assessed and mutually verified by employees*, ***using leaders` daily actions as main clues".***

This is also an approach taken in this paper.

2.2.1 Safety climate determining management practices

Christian et al. (2009:1106) argued that a safety performance enhancing safety climate has the following characteristics:

- "it is *shared*, in the sense that it leads to a pattern of behavior and practices, rather than isolated events or environmental circumstances;
- it *encourages safe action* through reward or principles of social exchange;
- safety information is *communicated formally* through training and meetings, and *informally* through on-the-job discussions, both among employees as well as by supervisors".

When judging which management practices matter most of all, i.e. which practices can be claimed to have the biggest impact on the quality of safety climate, the thematic analyses of safety climate literature shows that these are perceived *management commitment* to safety and perceived *workforce involvement/communication.* These two issues are described by the most of safety climate researchers as the key characteristics of safety climate (Yule, 2003).

Management commitment to safety

Zohar (1980) argued that management commitment was a prerequisite of successful initiatives aimed at improving the state of safety in industrial organizations. This argument has found considerable empirical support (Mearns and Yule, 2009).

As noted by Mearns and Yule (2009), *perceived management commitment* to safety is argued to influence the quality of safety climate in the following way: employees are informed about the possible consequences of safe or unsafe behaviors by paying attention to overt statements and actions by managers, supervisors regarding safety as well as implicit messages from management about the relative status of safety compared to other organizational goals such as productivity, efficiency, schedule, service, and quality.

According to Hofmann and Stetzer (1998), if the workers might have perceived work pressure for quality performance, they then focus their attention on completing the work in hand and less on the safety of their working procedures. Hence, the management dilemma appears (See figure 2).

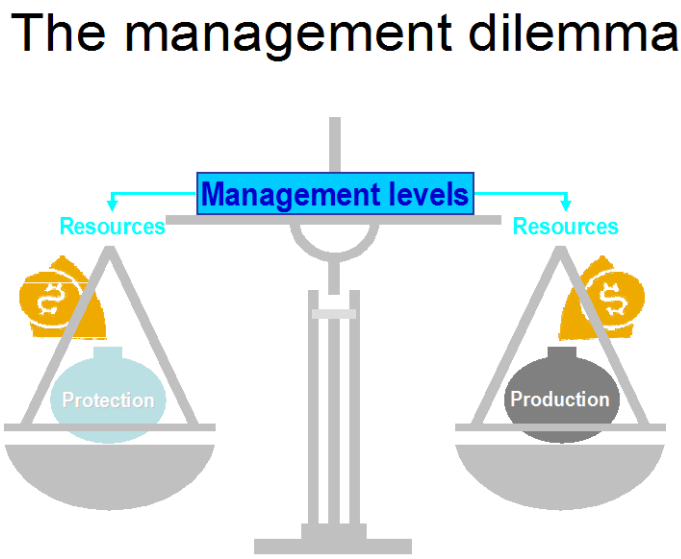

Figure 2 The management dilemma. Adopted from IAA Survey (2011:26).

Figure two depicts that safety is one of the organizational goals, not an obstacle on the way to it, and that the needs of safety and production must be balanced in order to reach the best result in business. What history shows, however, is a tendency for organizations to drift into an unbalance in the allocation of resources because of the perception of competition between production and protection. In cases when such competition develops, protection is usually the loser, with organizations privileging production objectives (IAA Survey, 2011).

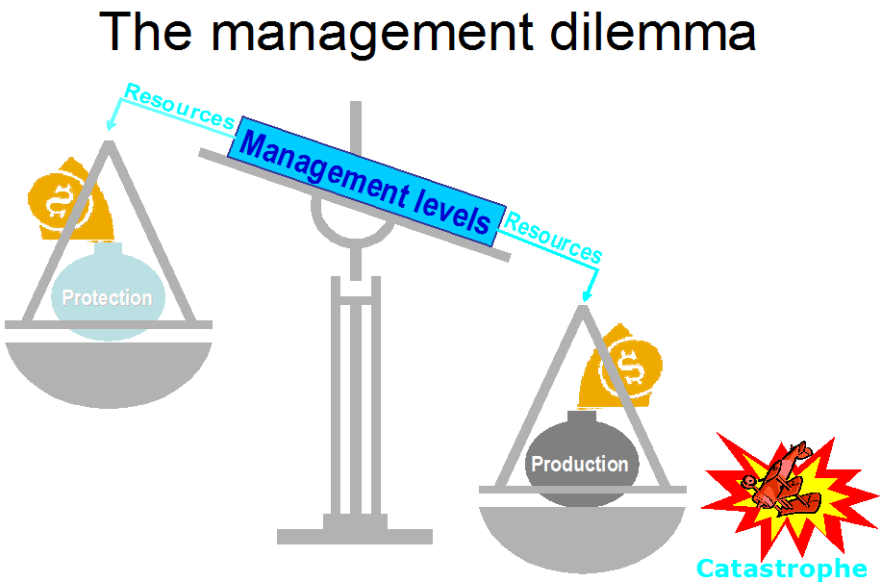

Figure 3 The management dilemma 2. Adopted from IAA Survey (2011:27).

Inevitably, as shown in Figure 3, "*such partial organizational decision-making leads to a catastrophe. It is simply a matter of time*" (IAA Survey, 2011:27).

According to Reason (1997), "since production creates the resources that make protection possible, its needs will generally have priority throughout most of an organization's lifetime. This is partly because those who manage the organization possess productive rather than protective skills, and partly because the information relating to production is direct, continuous and readily understood. By contrast, successful protection is indicated by the absence of negative outcomes (…) *it is only after a bad accident or a frightening near-miss that protection comes - for a short period - uppermost in the minds of those who manage an organization*" (p.6).

Perceived employee involvement/communication

The importance of the issue of employee involvement/communication within the organization is also hard to overestimate. Mearns et al. (2003) included communication and feedback as a factor in their surveys, using questionnaire among various category of workers, and revealed that safety performance is influenced by the level of communication in an organization.

The issue of communication, inter alia in the form of story-telling, as a feature of strong safety culture (namely learning culture) is emphasized as well by the proponents of HRO perspective (e.g. Weick and Sutcliffe, 2007)

This study is based on the assumption that the perceived management commitment to safety and employee communication/involvement as organized by management are only some of many other practices that can influence safety climate, but they are the most important ones.

2.2.2 Diverse safety climate and diversity management

Safety climate has important implications for safety participation as well as safety compliance (Christian et al., 2009). As it has already been mentioned, according to Christian et al. (2009:1106) *a safety performance enhancing safety climate* has the following characteristics:

- it is *shared*, in the sense that it leads to a pattern of behavior and practices, rather than isolated events or environmental circumstances;
- it *encourages* safe action through reward or principles of social exchange;
- safety information is *communicated formally* through training and meetings, and *informally* through on-the-job discussions, both among employees as well

as by supervisors.

How is safety climate influenced by diverse national belonging of employees?

Starren et al. (2013) point at the fact that **"**literature has extensively shown that diversity leads to more conflicts and less cohesion in work teams, and is associated with patterns of exclusion and sometimes even with discrimination" (p. 46). The authors also note that "much research shows that differences between people can be problematic: it causes misunderstanding and disagreement and may cause a decrease in commitment with the organization and coworkers" (p. 46).

According to Starren et al. (2013), in diverse work groups, it is more *difficult to attain a shared team climate.* Moreover, separation between employees with different national cultures implies that *less social exchange* occurs between those employees. In addition, *on-the-job discussions*, which also characterize an effective safety climate, *may be limited* to subgroups of similar people, or induce conflicts. All these factors lead to the fact that safety performance is worse in diverse teams.

Moreover, as it is argued by Harrison and Klein (2007), within organizations people feel attracted to similar others and interact less with coworkers that they perceive as different. This situation leads to separation between the workers of different nationalities, as well as between migrant workers and management.

The role of management in this respect is crucial, both on a team and on an organizational level.

When speaking about the team level, Christian et al. (2009) mention the importance of *leader–member exchange*. High quality leader–member relations are revealed through *open and egalitarian communication* with respect to non-routine problems.

At the same time, as it is emphasized by Starren et al. (2013), in a diverse work group setting open communication may be problematic due to cultural and language differences.

On an organizational level, safety performance can be seen connected to the managerial policies with regard to the diverse workforce in a sense that these policies influence the impact diversity has on employee performance within a company. It is relevant to speak about the issue of diversity management in this respect.

Sawyerr, Strauss, and Yan (2005, as cited in Lauring and Selmer, 2012) define *openness to diversity* as "an attitude of awareness and acceptance of both similarities and differences that exist among people" (p. 157). "An organizational climate open to

diversity is an environment in which individuals respect the views of those who are different and where *activities are not organized on the basis of demographic similarities among group members"* (Hobman et al., 2004 as cited in Lauring and Selmer, 2012:157).

As argued by Magoshi and Chang (2009), ***diversity management*** can be defined as "companies' ability to give equal chances to and utilize resources of people from diverse "cultures," where culture could mean nationality, ethnic group, or gender. Diversity management implies a company's commitment to the diverse composition of the workforce as well as their diverse needs" (p.32). Diversity among employees indicates enhanced heterogeneity of human resources. "If effectively managed, it can serve as a competitive weapon" (Magoshi and Chang, 2009:37). *Perceived injustice* is the unavoidable consequence of *weaknesses* in diversity management (Magoshi and Chang, 2009).

A positive diversity climate has also been found to alleviate negative bi-products of demographic heterogeneity such as increased relationship conflict, intentions to quit, decreased productivity, and lower organizational commitment (Lauring and Selmer, 2012)

"Ability to give equal chances" should not be understood as "treating everybody equally", rather on the contrary. Schubert and Dijkstra (2009), describe an incorrect policy of management when working with foreigners. They argue that ''there appears to be a tendency among safety managers to deny cultural differences, to treat everyone equal and not to discriminate…'' (p. 792). The authors emphasize that cultural differences that are ignored, ''do, in fact, exist and *deserve special attention with respect to safety issues*'' (p. 792).

Starren et al. (2013) argue in this respect that "*problems with respect to safety are not faced, when it conflicts with the norms held in the organization*. In this case a moral imperative of equal treatment may backfire with respect to occupational safety" (p. 47).

This observation reflects what American diversity research calls a 'Discrimination and Fairness perspective' (Ely and Thomas, 2001). The central assumption of this perspective is that everybody should be treated equally. Such an approach is ''characterized by a belief in a culturally diverse workforce as a moral imperative to ensure justice and the fair treatment of all members of society'' (Ely and Thomas, 2001:245). As a result, problems are often not addressed.

Starren et al. (2013) offers to solve the problem of diversity treatment with the help of *integration and learning perspective*. Central to the integration and learning perspective

is the belief that ***diversity is a resource for learning, change and renewal***. Managers value and stimulate different approaches to work, as well as different opinions and insight.

Although more research on the relation between diversity and leadership literature is needed, the stimulation of employees to follow and express their opinions seems in line with the strategy of *transformational leadership*, described by Starren et al. (2013). "Transformational leadership is a leadership style that challenges employees to think about old problems in new ways and that gets the group together to work on shared goals" (Podsakoff et al., 1990 as cited Starren et al., 2013:47). As such, transformational leadership has shown to be very effective in increasing cohesion of a diverse team (De Poel, 2011; Dionne et al., 2004; Kearney and Gerbert, 2009 as cited in Starren et al., 2013). Interestingly, "transformational leadership has also been found to enhance safety performance, safety compliance and safety participation" (Inness et al., 2010 as cited in Starren et al., 2013:47).

The conclusion, that can be drawn from all these theoretical contributions, is that in order to facilitate safety behavior enhancing safety climate the management should not only be committed to safety and develop employee involvement/communication, but also have right orientations with regard to migrant workers, i.e. perform high-quality diversity management.

2.3 Safety behavior

As noted by Burke et al. (2002), in contrast to the conceptualization and measurement of safety climate, which focus on workers' perceptions of organizational safety policies and management safety practices, safety behavior focuses on specific actions or behaviors exhibited by workers.

According to Fugas et al. (2012), "typically, organizations view safety behaviors as employee *compliance with behavioral safety routines"* (p. 469) These behaviors comprise safety activities that are part of the formal work role and procedures, such as using personal protective equipment correctly, properly performing lock-out and tag-out procedures, applying appropriate work practices to reduce exposure to potential hazards and injury, and following safety policies and procedures. However, the authors note that some researchers (e.g. Griffin and Neal, 2000) argued, however, that safety performance is more comprehensive and would be better represented by an *expanded model* that also includes workers' safety initiatives, such as making safety-related recommendations about work activities, active position with regard to reporting etc. (Fugas et al., 2012)

“These initiatives are similar to *organizational citizenship behaviors*, except that they are focused on safety, and are called *safety participation”* (Fugas et al., 2012:469). Safety participation has a more voluntary and discretionary nature, than compliance, including practices oriented toward safety that extend beyond normal role requirements (Clarke, 2006 as cited in Fugas et al., 2012). Achieving compliance with safety rules and procedures is important for good safety performance, but organizations also need individuals who proactively participate in safety (Didla et al., 2009 as cited in Fugas et al., 2012).

According to Bowler et al. (2010), “organizational citizenship behavior is one of the most extensively studied topics in applied psychology and organizational behavior” (p. 309). More than four decades ago, Katz (1964 as cited in Bowler et al., 2010) *argued that “organizations cannot succeed by relying strictly on the performance of behaviors delineated in job descriptions”* (p. 309). In his view, organizational effectiveness was contingent on the voluntary efforts of employees to take initiative in helping coworkers, voicing suggestions, and protecting the organization. Organ and colleagues conceptualized these discretionary behaviors as “*acts of citizenship* undertaken to benefit other people or the organization” (Smith, Organ, & Near, 1983 as cited in Bowler et al., 2010:309).

There is much empirical evidence that organizational citizenship behavior (OCB) makes important contributions to individual, group, and organizational effectiveness (Organ, Podsakoff, & MacKenzie, 2006 as cited in Bowler et al., 2010). Organizational citizenship behaviors are particularly important as organizational contexts continue to become more uncertain and interdependent. In such contexts, because it is difficult to formalize roles, organizations are heavily dependent on the efforts of employees to take initiative in displaying OCB (Griffin, Neal, & Parker, 2007 as cited in Bowler et al., 2010). Thus, safety participation can be in other words called safety citizenship behavior (SCB) which can be regarded as a part of organizational citizenship behavior (OSB).

Hence, following contemporary theoretical trends, focus is now made on both proactive (safety participation) and compliance safety behaviors. Griffin and Neal (2000) give the following definitions of the two components of safety behavior:

- **safety compliance** - “the core safety activities that need to be carried out by individuals to maintain workplace safety” (p. 349)
- **safety participation** - “activities that may not directly contribute to workplace safety, but do help to develop an environment that promotes safety” (p. 349)

It has been suggested that “safety compliance refers to behaviors that are required and safety participation refers to behaviors that are voluntary in nature” (Griffin and Neal, 2000: 349).

Habitual noncompliance with safety policies and procedures can increase the probability of failure in the system and can be regarded as a root cause of accident (Reason, 1990).

Achieving compliance with safety rules and procedures is thus important for good safety performance, however organizations also need individuals who proactively participate in safety (Neal and Griffin, 2006).

According to Morrow et al. (2010), “understanding which factors motivate unsafe behavior can provide opportunities for interventions to enforce safety, reduce noncompliance, and protect the work system from vulnerabilities” (p. 1462).

2.3.1 Safety compliance vs. safety procedures

As argued by Antonsen et al. (2008), formal work procedures are central parts of an organization`s safety management system. However, “*there always seem to be some discrepancy between work as prescribed in procedures, and the way work is actually carried out*” (p. 1). Although it is neither possible nor desirable to eliminate this discrepancy completely, too large gap represents a problem for safety management (Antonsen et al., 2008).

The authors note that quite often the workers violating procedures are seen as the culprits causing the accident. This view is based on the assumption that complex systems are basically safe, if not for unreliable actions of humans - “The Bad Apple theory”. Most safety researchers are now moving away from this view of safety (e.g. Dekker, 2006). They argue that safety is created *through* human practice, not *in spite* of it (Antonsen et al., 2008).

Antonsen et al. (2008) agree with this view and it is also the position taken in this paper, however as argued by the authors, “acknowledging the role of human action and creativity in creating safety does not mean that there is no need for formal procedures” (p. 1). In systems characterized by a high degree of complexity where several high risk work processes are performed simultaneously, and where the activity of several organizational units must be coordinated (exactly as it is in the building and construction sector), there still be need for formal procedures (Antonsen et al., 2008). .

Thus, the problem of procedural violations still needs to be addressed (Antonsen et al. 2008). To understand the importance of following the procedures within building and

construction, it is enough to imagine that somebody is smoking near the explosive stuff, causing the fire or that somebody is dismantling the wall and another one stands under the falling materials and is injured. These simple examples show what consequences the ignoring of safety procedures can cause.

Antonsen et al. (2008) offered some fundamental conditions that facilitate compliance: by *keeping procedures few and simple* and, more importantly, by emphasizing *broad and direct worker participation* in the process of implementing the procedures. They discovered in their empirical research that these measures lead to greater level of *commitment and adherence to procedures*, making the gap between "work as imagined" and "work as actually done" smaller (p. 10). Organizational commitment has proved to be an important attitudinal predictor of employee behavior and intentions.

The problem of gap between procedures and practice is also addressed by Reason (1997). According to the author, the reasons underlying safety violations are many and complex. He concentrates on the point that sometimes because of a huge number of procedures, there is too little space for action left and it sometimes becomes impossible to get the job done following all the procedures. The employees begin then to violate the "unnecessary" procedures and it can become habitual. Such type of violations has got its own name - ***"silent deviations"*** (Tinnmannsvik, 2008). These types of deviations suppose developing work practice that deviates somehow from the planned way in order to get the job done, i.e. it supposes that people begin to violate procedures on a continuous basis and it becomes normal practice within certain groups of workers. Such deviations can thus result in a lower level of safety than designed into the system.

The problem of silent deviations is very interesting in the meaning that being destructive in their essence, they can serve as indicators that the procedures themselves are wrong or deficient. According to Tinmannsvik (2008) some these deviations from procedures can be smarter and safer ways of performing work while others may involve short cuts that compromise safety.

It is true that there is nobody except workers themselves knowing best what is needed to perform the job and what are the risks connected to this job. If they break some rules, it is of utter importance for the management to know it and to know the reason for it. It is quite possible that there is time to change or get rid of this or that unnecessary or deficient procedure. However, if there is no communication between management and workers, management will never get to know it. The phenomenon of "silent deviation" proves one more time the importance of employee involvement while adjusting the procedures, emphasized by Antonsen et al. (2008).

Another popular reason for violating the procedures named by researchers is employees` attitudes and commitment. As it has already been mentioned, such attitudes are a part of safety climate, being influenced by management practices and co-worker relations. It seems logical to suppose that if the management practices are deficient, there will be a lot of “silent deviations”.

One more important point to mention with respect to procedures violation is *learning*. The importance of *double-loop learning*, mentioned also by Turner and Pidgeon (1997) is crucial in this respect. In case learning is *instrumental (single-loop)* (Antonsen et al. 2008), organization seeks to improve already existing strategies and processes, the basic assumption and underlying logic of the safety management system is not questioned (this is the reflection of “The Bad apple view” on accidents where humans are held indisputably responsible for mistakes (Dekker, 2006)). In case system is based on single-loop learning, there will always be a lot of violations, but it will happen because the procedures are not improved in such a system.

The ability to reassess current processes, strategies and models of risk is a central part of the concept of resilience (Hollnagel et al. 2006, as cited in Antonsen, 2008). Addressing the gap between procedures and practice can be thus seen as an opportunity to create resilience. It is the only way of making “silent deviations” audible (Tinmannsvik 2008).

Bourrier`s (1998) findings are referred to by Antonsen et al. (2008:3) in this respect. “Borrier found out that there are three crucial ingredients for a successful match between procedures and practice:

- there should be feedback from the lower to the upper tiers of the organization
- the adjustment of procedures should be based on the views of those directly involved, particularly front-line operators,
- the time interval between worker feedback and implementing changes should be as short as possible”.

As a conclusion, Antonsen et al. (2008) offer “*to adapt procedures to practice, instead of trying to change practices to fit procedure”* (p.14).

All the previous reasoning proves the need for a change in the classic bureaucratic approach to safety management, in which there is a fundamental division between planning and performing work. There is a need for a change from instrumental to communicative planning where “the good argument”, not the power wins (Innes, 1998)

This model is argued to be very useful in changing the behavior. In such a process as

communicative planning the information becomes a ”shared knowledge”. The proponents of communicative planning argue that information doesn’t influence until it represents a socially constructed and shared understanding, created in the community of policy actors (Innes, 1988).

2.3.2 National predispositions and safety behavior

In recent years there has been recognition of a relationship between safety and national culture (Helmreich and Merrit, 1998). Indeed Helmreich and Merrit (1998) claim that organizations need to take into account the influence national cultural has on their functioning if safety measures are to be effective and worthwhile.

National culture has been defined as *‘the collective programming of the mind acquired by growing up in a particular country’* (Hofstede, 1991:262). Such collective programming is formed by *values*, ‘*a broad tendency to prefer certain states of affairs over others*’ (Hofstede, 1984:18). Therefore national culture denotes a set of common ”*mental programmes*” that are shared by a group of individuals. Hofstede noted that these ”mental programmes”, which all people carry, are developed in the family in early childhood and reinforced in schools and organizations (Hofstede, 1984).

Hofstede (1991) conducted one of the most influential studies on national and organizational culture based on work conducted between 1967 and 1973 at IBM world-wide. The empirical analysis resulted in a framework of dimensions for differentiating national culture. The five dimensions found to differentiate national culture groups were: *Power Distance, Uncertainty Avoidance, Individualism (Collectivism), Masculinity (Femininity) and Long-term Orientation* (added later). Using these five dimensions, Hofstede explored the differences in thinking and social action that exist between members of more than 40 different nations. Every nation was assigned certain scores on each of the five dimentions and all of nations under research were divided into culture areas.

In recent years there has been some active criticism of Hofstede’s work which was claimed to be too simplistic and leading to too general stereotypes of different nations. McSweeney (2002) is only the most recent contributor to this critique: “*The limited characterisation of culture in Hofstede’s work, its confinement within the territory of states, and its methodological flaws mean that it is a restrictor not an enhancer of understanding particularities”* (McSweeney 2002:28). McSweeney concludes that there is a need for knowing “*more about the richness and diversity of national practices and institutions – rather than merely assuming their ‘uniformity’*” (p.96) as in the case of Hofstede.

Some studies have examined cross-cultural differences but not with the same representation of national cultures and not using Hofstede`s framework. Spangenbergen et al. (2003 as cited in Mearns and Yule, 2009) investigated why Danish workers had approximately 4 times the lost-time injury rate of Swedish workers during a joint-venture to construct the 16 km road/rail link across Øresund (a sound between Denmark and Sweden). According to Mearns and Yule (2009), the important lesson, learnt from this unique study, was that even in countries that might be deemed culturally similar according to Hofstede's model, i.e., Scandinavian countries in general are identified by high Collectivism, low Power Distance and low Masculinity, there are subtle differences in national and company policies and practices that have an influence on work group and individual factors and thereby influence lost-time injury rates. Mearns and Yule (2009) note that "*in many ways, it is an indication that the Hofstede approach may be too simplistic to discriminate the subtle influences of specific practices on safety performance"* (p.782), and conclude that management practices (safety climate) most probably play more important role in determining workers` behavior than national culture.

2.3.3 Safety climate and safety behavior

Although there is no unanimity concerning the facets safety climate can be measured against, there is no doubt in the literature that *safety climate and safety bahavior are connected.*

Brown et al. (2000 as cited in Seo, 2005) in their research of 551 workers from two steel plants located in the southeastern US proved that perceived safety climate affected unsafe work behavior through perceived work pressure and perceived barriers to safety where safety climate was operationalized as management commitment to safety and supervisor safety support.

Rundmo et al. (1998 as cited in Seo, 2005) found in Norwegian offshore oil installation workers that management and employees` commitment and involvement in safety work affected unsafe work behavior. Oliver et al. (2002 as cited in Seo, 2005) conducted a structured interview survey for workers in Spain and found that organizational involvement in safety, operationally defined as indicators of safety management and policy, supervisors` safety support and behavior, and co-workers safety support and behavior, influenced unsafe work behavior.

Hofmann and Stetzer (1998) found that perceived safety climate was significantly associated with unsafe work behavior using a sample of 222 workers in a Midwestern

chemical processing plant. Hofmann and Stetzer (1998) operationalized safety climate as management commitment to safety and employee participation.

As Zohar and Luria (2005) point out, organizational operations demand safety as well as productivity from employees. The formal policies and procedures instated by upper management, together with the actual practices of supervisors and coworkers in carrying out said policies and procedures, inform employees of the relative value of safety in light of other, competing demands (e.g., productivity, efficiency).

Christian et al. (2009) wrote that safety climate has important implications for safety participation as well as safety compliance.

2.3.4 Diverse safety climate and safety behavior

Mearns and Yule (2009) in their research came to conclusion that it is not illogical to suppose that the aspect of nationality plays a certain role in people`s behavior, but the reinforcing words and actions of managers have stronger influence on safety behavior than national aspects.

Returning to the issue of diversity management, there is considerable evidence which suggests that workforce *diversity can contribute to organizational performance* in terms of innovation and problem-solving. Also, “experts argue that *when organizations manage their diverse workforce effectively, employees exhibit desirable behaviors which contribute to the success of the organization.* Conversely, failure to manage diversity can lead to conflict and dysfunctional behavior which can have severe consequences for the organization” (Mamman et al. 2012:285)

Mamman et al. (2012) point out that there is evidence, indicating that some members of a diverse workforce experience real or perceived injustice from the systems or members of their organization. Such experiences (real or perceived) lead to specific behaviors such as absenteeism and turnover. At the same time turnover intentions have shown strong association with organizational commitment of employees. *Organization commitment* can be defined as strength of the feeling of responsibility that an employee has towards the mission of the organization (James et al., 1994 as cited in Mamman et al. 2012)

As it was argued by Antonsen et al. (2008), *organizational commitment has proved to be an important attitudinal predictor of employee behavior and intentions.*

Perceived procedural justice or organization justice is proved to be *created by diversity management.* The research of this issue revealed that “*procedural justice mediates the*

effects of management practices on employees' commitment to organizations" (Magoshi and Chang, 2009:32). It is widely demonstrated theoretically and empirically that organizational justice perception by employees directly affects social exchange relationships between them and the organization and "*those who perceive procedural injustice will fail to engage in organizational citizenship behavior (OCB)".* OCB can be called an expression of organizational commitment (Mamman et al., 2012:287).

2.4 Safety culture – "so much sought, but so little understood"

Cooper (2000) points out that not only theoreticians, but also industries around the world are showing an increasing interest in the concept of *"safety culture"* as a means of reducing the potential for large-scale disasters, and accidents associated with routine tasks. "Publicly stated aims of achieving homogeneous worldwide safety cultures in the offshore, nuclear and shipping industries testify to its growing importance. Although well intentioned, such aims also illustrate the confusion that surrounds the concept" (Cooper, 2000:111).

There is a wealth of information, articles and reports relating to safety culture, yet there is still no universally recognized and respected definition or model. Furthermore Pidgeon (1998, as cited in Cooper, 2000) has criticized past research for being unsystematic, fragmented and in particular under-specific in theoretical terms. It is therefore logical to suggest that the creation of a standardized definition or model safety culture is not clear-cut (Cooper, 2000).

Turner and Pidgeon (1997) defined *safety culture* as the set of beliefs, norms, attitudes, roles, and social and technical practices that are concerned with minimizing the exposure of employees, managers, customers and members of the public to conditions considered dangerous or injurious. According to Uttal (1983, as cited in Cooper, 2000), *safety culture* represents "shared values and beliefs that interact with an organization's structures and control systems to produce behavioral norms" (p. 113).

The HSE's Advisory Committee on the Safety of Nuclear Installations (ACSNI: HSC, 1993) produced a definition of safety culture that has been re-used throughout the safety culture literature. This definition outlines safety culture in the following way:

'The safety culture of an organisation is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's health and safety management' (HSC, 1993).

*'Organisations with a positive safety culture are characterised by communications founded on mutual **trust**, by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures' (HSC, 1993).*

Cooper (200) highlights the lack of a universal consensus regarding the terms *culture* and *climate.* According to the author, in many cases the term safety culture has emerged with a meaning that appears to be very similar to that for climate and the terms are often used interchangeably in many areas of the literature (Cooper, 2000).

Safety climate is most often defined as the shared perceptions of workers regarding safety in their working environment (Christian et al., 2009, Neal and Griffin 2006; Zohar and Luria 2005). According to Cooper (2000), safety climate is being used as "a surrogate measure of safety culture, at the expense of the holistic, multi-faceted nature of the concept of safety culture itself" (p. 125). Cooper (2000) argued that it is necessary to distinguish between three interrelated aspects of safety culture, specifically:

- *Psychological aspects* (refers to '**how people feel**' about safety and safety management systems. This encompasses the beliefs, attitudes, values and perceptions of individuals and groups at all levels of the organisation, which are often referred to as the safety climate of the organization)
- *Behavioural aspects* (are concerned with '**what people do**' within the organisation, which includes the safety-related activities, actions and behaviours exhibited by employees)
- *Situational (or 'corporate') aspects* (describe '**what the organisation has'**. This is reflected in the organisation's policies, operating procedures, management systems, control systems, communication flows and workflow systems).

It is also important to mention, that some authors note that safety culture of the organization is not homogeneous, and can be divided into subcultures. Thus different working teams, for example, can have different safety subcultures. (e.g. Reason, 1997).This is also an approach taken in this paper.

James Reason (1997) describing safety culture wrote that '*few things are so sought after and yet so little understood"* (p.191) and underlined what hard work is to be done to achieve the goal of building a strong safety culture within the organization.

*Having looked at all the definitions of safety culture, it becomes obvious that it can be revealed through **two components**: **perceptional component and behavioral one**. This is also an approach taken in this paper. HSC (1993) definition of safety culture is thus the closest to our understanding. When it comes to situational aspect, included in*

the model of safety culture by Cooper (2000), it will not be seen as a part of safety culture in the present research, being rather a part of structure, than culture. This point of view will be further discussed in section 2.6.

2.4.1 What is strong safety culture?

There are a lot of discussions on what safety culture is (positive theories). However there must be some criteria in order to evaluate its quality (normative theory).

The importance of strong safety culture is underlined by all the proponents of optimistic view on the possibility of managing safety, which is also taken in the present paper (Reason 1997; Turner and Pidgeon 1997; Weick and Sutcliffe, 2007). Based on their theories (mainly on the theoretical contributions of Reason (1997)), the following characteristics of strong safety culture can be named:

1. Informed culture. The informed culture is a central characteristic of strong safety culture according to J. Reason (1997). In an informed culture the organization collects and analyses relevant data, and actively disseminates safety information from incidents and near-misses as well as from regular proactive checks. In most important respects, *an informed culture is a safety culture* (Reason, 1997).

The importance of information flows within the organization is also emphasized by Turner and Pidgeon (1997) and Pidgeon and O'Leary (2000), the proponents of Man-made disasters theory. The Man-made disaster model proposes that accidents or disasters develop through a long chain of events, leading back to root causes like *lack of information flow and misperception among individuals*. Turner labels this chain, or time before a disaster, as *"the incubation period".* This is a developmental process where chains of discrepant events develop and accumulate unnoticed. This, Turner argues, is a *result of a culture where information and interpretations of hazard signals fail.* A typical accident can be traced back to initial beliefs and norms within the organization (Turner and Pidgeon, 1997). See figure 4.

According to the authors *there is always somebody who knows something*, it is only needed to treat the information within the organization in such a way, that it becomes known and gets further dissemination. Thus, wrong attitude towards treatment of safety information or wrong values with regard to safety can lead to the fact that necessary information is either completely unknown, or know but not appreciated, or not correctly assembled or hidden as a result of value conflict. These "irrational" events have to be continuously evaluated by the organization.

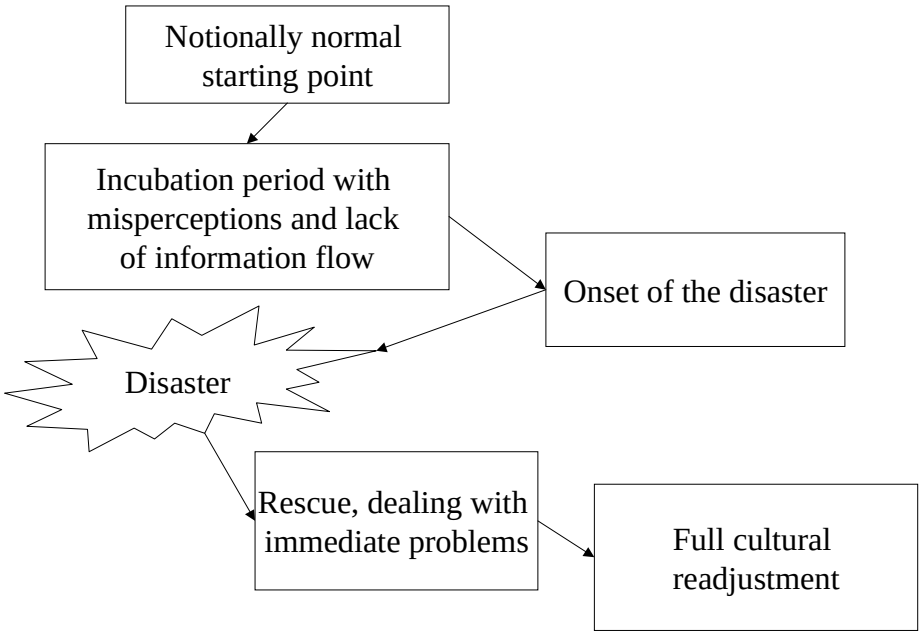

Figure 4 Main stages in the Man Made Disaster model of Turner and Pidgeon (Turner and Pidgeon, 1997).

Describing the issue of information flows, it is relevant to mention the importance of employee involvement, which is a part of informed culture. The importance of employee involvement was among others emphasized by Weick and Sutcliffe (2007), meaning that decisions must be made in the front line and migrate to the persons with experience and expertise to solve the problem. He called such practices “deference to expertise” and regarded it as a feature of “mindful organization”, characterized by processes that focus on failures, simplifications, operations, resiliencies, and expertise.

2. Learning culture. According to J. Reason (1997), a learning culture means the *willingness* and the competence of the organization to *draw the right conclusions from its safety information systems* and the will to implement major reforms when their need is indicated. Turner and Pidgeon (1997:191-195) emphasize the need for so-called *double-loop learning* in the meaning that it is not enough to change behavior in response to feedback. One also needs to improve the procedures for gathering and assessing signals about hazards, and to challenge the theories in use for interpreting the world. The other researchers (e.g. Antonsen et al., 2008) mention double-loop learning in even wider context – as the willingness and competence to reassess and change all inappropriate safety procedures.

To present mistakes as opportunities for enlarged learning and deeper understanding and create an “error friendly” learning culture, by promoting behaviors such as seeking feedback, sharing information, asking for help and talking about errors are the advices

given by Weick and Sutcliffe (2007).

Story-telling is very useful for learning (Hovden m. fl., 2004).

An important aspect of learning is that organization learns not only on its mistakes, but from normal practice as well. Such ability was emphasized by Weick and Sutcliffe (2007) in their theory of "mindful" organization when he noted the importance of *"sensitivity to operations".* According to the author, *normal operations can reveal deficiencies – free lessons could be learned.* This allows early problem detection before problems become too substantial.

3. Reporting culture. Reason (1997) argued that a reporting culture means cultivating an atmosphere where people have confidence to report safety concerns without fear of blame. Employees must know that *confidentiality* will be maintained and that the information they submit will be acted upon, otherwise they will decide that there is no benefit in their reporting. Feedback loops are crucial for reporting.

4. Just culture. In a just culture errors and unsafe acts will not be punished if the error was unintentional. However, those who act recklessly or take deliberate and unjustifiable risks will still be subject to disciplinary action. A just culture is based on the atmosphere of *trust* in which people are encouraged, even rewarded, for providing essential safety-related information (Reason, 1997). *In the context of diverse nationalities, just culture seems to be connected as well to the issue of non-discrimination.*

5. Flexible culture. A flexible culture is one where the organization and the people in it are capable of adapting effectively to changing demands – namely in the situation of emergency. Such adaptability depends crucially on respect – in this case on *respect for the skills, experience and abilities of the workforce*. But respect must be earned, and this requires a major *training* investment (Reason, 1997).

6. Turner and Pidgeon (1997) also emphasized the importance of *general care and concern for safety*, *as well as the balance between the needs of production and protection*. It was also previously discussed in the section, devoted to safety climate. Hence, this criterion can be used as well in order to characterize strong safety culture. It seems relevant to mention here one more characteristic of a mindful organization, named by Weick and Sutcliffe (2007), such as "preoccupation with failure", meaning that the organization tries to look for symptoms of unsafety and encourage preventive work. Such preoccupation is an indicator of general concern for safety, named by Turner and Pidgeon (1997).

2.5 Evaluation of and white spots in theory

- **Safety culture**

As it has already been mentioned previously, the present study is based on the approach, that the quality of safety culture can be revealed through two issues seen in connection: **safety climate and behavior**, both of them determined to a large extent by the perceived management practices. In the present research, there is less interest in the situational aspect, included in the model of safety culture by Cooper (2000). The point is that safety management system in itself is rather a part of structure, than culture, and does not influence workers` behavior as much as their perceptions. For example, organization can have designed a perfect system for reporting, but until the workers perceive they can be punished as a result of reporting, the system will not work. It cannot be, of course, claimed that safety management system (as it is designed) does not play any role in safety culture. It does, the perceptions are in fact created by this system, however they can differ a lot.

This approach is also consistent with the taken theoretical limitation and assumption that safety is created by the workers, and it is by understanding their world from the inside, one can judge upon the quality of safety culture.

It is also important to emphasize that indeed safety climate and safety culture cannot be unified in one concept, safety culture is wider and comprises the behavioral patterns as well. When it comes, for example, to learning, it is important that employees feel free to talk to managers **and** do it – only the combination of these two aspects and their interaction will lead to better learning culture. Moreover the actual behavior (talking to a manager) is the most important issue. It becomes obvious if one imagines the situation when the employees do feel free to talk, but don`t do it because of some other reasons – no learning is facilitated in this case.

All the arguments, stated above, are very consistent with what Antonsen et al. (2008) wrote about the discrepancy between “work as imagined” (by the management) and “work as actually done” (by workers). The main interest of this thesis is work as actually done.

- **Safety climate**

Though many researchers tried to measure safety climate with the help of surveys and statistics (e.g. Zohar, 1980; Mearns, 2003), they developed purely positive theories, indicating what safety climate consists of, but not normative ones, indicating what it

should be. Because of the difficulties in defining safety climate, its research became almost purely empirical (Yule, 2003).

At the same time such measurements of safety climate seem unreasonable. Being an internal, psychological aspect of safety culture, safety climate can rather be understood than measured.

It seems convenient to have some criteria safety climate can be evaluated against. The only attempt in this respect was undertaken by Christian (2009), who defined three criteria of safety behavior enhancing safety climate:

- it is **shared**, in the sense that it leads to a pattern of behavior and practices, rather than isolated events or environmental circumstances;
- it **encourages safe action** through reward or principles of social exchange;
- safety information is **communicated formally** through training and meetings, and **informally** through on-the-job discussions, both among employees as well as by supervisors.

However these three criteria are far from being enough. In this thesis two more characteristics of safety performance enhancing safety climate will be taken into account:

- **based on trust**

The importance of openness and trust has been one of the most central themes in safety culture research, for instance in Reason`s conceptual framework where fostering of a "just culture" (Reason, 1997) is emphasized as a key prerequisite for learning (see also Dekker, 2006). This trust is something the managers of organizations must earn through consistent action over time. Studies of the relationship between organizational properties and level of intra-organizational trust have shown that worker involvement and perceived procedural justice are among the properties that seem to foster trust between workers and management (Antonsen, 2009).

- **just**

When analyzing safety climate among migrant workers, it seems reasonable to include the feature of perceived justice. It is widely demonstrated theoretically and empirically that organizational justice perception by employees has direct influence on organizational commitment and participative behavior (Mamman et al., 2012).

- **The issue of nationality**

As it was described, the most influential research on the national culture and its influence on people's behavior belongs to Hofstede. However, his theory is largely criticized and moreover his research does not describe the Eastern European nations at all, that is why the theory of Hofstede cannot be used in details in this research, it will only serve a departure point in the meaning that the whole present paper is based on the assumption that national culture of workers has a certain influence on the way they behave and on their safety climate.

What's more there is very little research on the influence of national culture on safety climate and safe/unsafe behaviors (Mearns and Yule, 2009) and even less on the connection between diversity management and safety issues.

Whereas it is important to consider safety issues in the context of different cultural backgrounds, safety research has largely neglected this context: ''constructs such as national culture are given little attention in the safety literature" (Burke et al., 2008:134). Although national culture has been put more on the safety research agenda in the last years (e.g. Mearns and Yule, 2009), there is not yet a framework that may guide the understanding of national culture and occupational safety.

It is clear that a lot of factors can influence safety behavior of employees and national belonging is undoubtedly one of them. According to Mearns and Yule (2009), it does not seem unreasonable to anticipate that people's safety behavior will vary according to deeply held values as well as to the fact that a person grew up and worked in a certain country with its own legal system, working traditions and rules etc.

It seems that the major problem is that the concept of culture is very difficult to define in itself and that this concept is so ambiguous, that it is almost impossible to judge upon it definitely. Moreover, it seems almost impossible to prove that "culture" influences safety behavior of a certain person or a group of persons, since there are a lot of other distorting factors. This leads to the fact that the clear relation between national culture of a certain worker and his/her safety performance can never be established.

The only fact that can be taken for granted is that (and this corresponds to the approach taken in this paper), people from different nationalities initially behave in a different way due to their "**national predispositions**", i.e. the fact that they got some special habits and values, while growing up and working (though not necessary) in a certain country. It can only be *supposed* that certain tendencies in the behavior of workers can be traced back to their nationality.

2.6 Summary

The theoretical contributions, which were described and evaluated, form the basis for the analysis of empirical data and provide us with the following assumptions:

Safety climate

- Safety climate within the organization is group-specific
- Perceived management practices represent the main clue while judging upon the quality of safety climate within a certain group of workers
- Management practices, that are the most important when safety behavior enhancing safety climate is to be created, are the following:
  A) practices, revealing management commitment to safety
  B) practices, concerning employee involvement/communication
- Safety climate in diverse working teams is a priori worse than in ones of the same nationality
- Diverse safety climate can be an advantage to business if appropriately managed. High-quality diversity management is a prerequisite of safety behavior enhancing safety climate among migrant workers
- Safety climate influences safety behavior of employees
- Positive safety climate is characterized by being shared, informed, encouraging safe actions, based on trust and just

Safety behavior

- Safety behavior consists of compliance and participation
- Non-compliance can be safer than compliance sometimes – it indicates that procedures must be changed and is revealed through “silent deviations”
- Safety behavior of migrant workers is to some degree influenced by their national predispositions

Diversity management and safety culture

- Management is able to change these predispositions, to make workers behave in another way, first of all by creating safety behavior enhancing safety climate
- High-quality diversity management and the strategy of transformational leadership are the main tools to create safety behavior enhancing safety climate
- If the management lacks the understanding that diversity is an opportunity for learning and creativity, it will most probably not be involved in high-quality diversity management – both safety climate and behavior among migrants will be deficient than

- Safety culture is not homogeneous, it can be divided into subcultures
- In case of deficient diversity management the group of migrant workers will represent safety subculture of worse quality than the others
- The way diversity is treated (as an obstacle or as an opportunity) influences the quality of safety subculture among migrants.

2.7 Research model

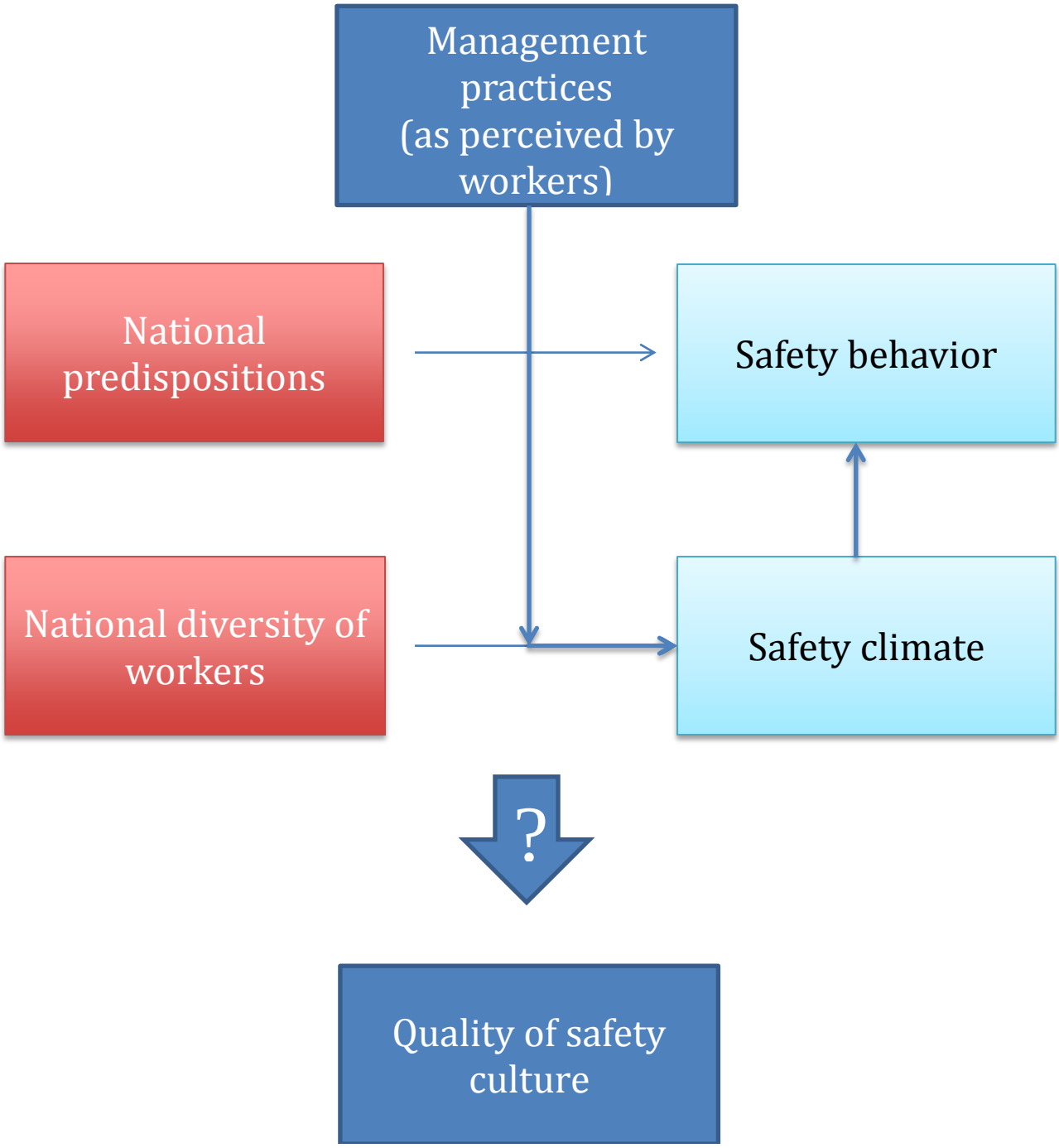

Figure 5 Research model

Explanation of the model

The model demonstrates that national predispositions of workers are supposed to have a certain influence on the way they behave. Diverse composition of work teams has a priori negative impact on safety climate. At the same time safety behavior is influenced by safety climate, which is determined to a large extent by the way employees perceive certain management practices.

Two arrows in the figure are thicker than the others. It means that safety climate (determined by perceived management practices) has in fact bigger influence on behavior than the factor of nationality, i.e. the negative influence of national aspect both on safety behavior and climate can be mitigated and corrected by the management through the creation of safety behavior enhancing safety climate (the supposition is made based on Mearns and Yule, 2009), which is possible with the help of high-quality diversity management.

Hence, the main assumption of the present research is that *depending on how management treats national diversity of workers (as perceived by the latters), certain safety climate is created and certain patterns of behavior appear. The way these relations look like can reveal the quality of safety culture among migrants.*

This assumption can be in short represented in the following way:

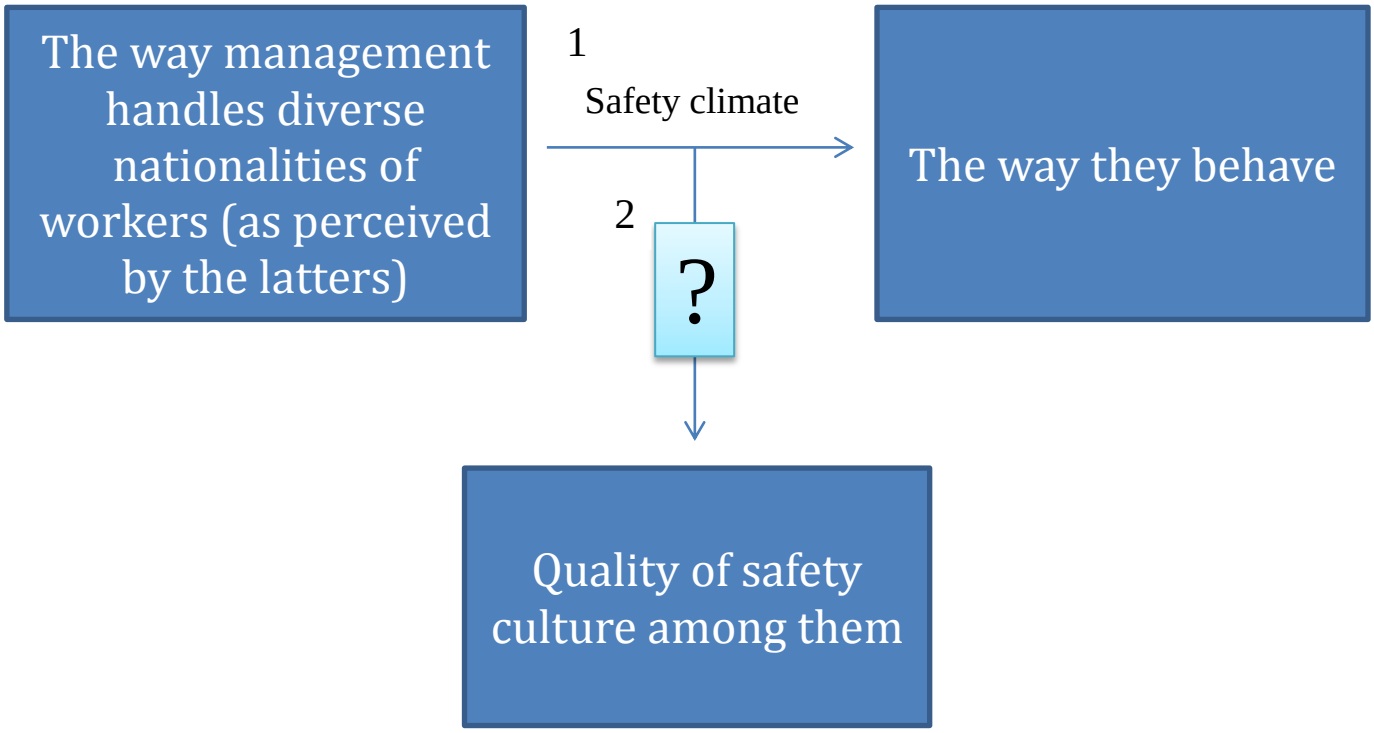

Figure 6 Research model in short

3 Design and methods

3.1 Research design

“A research design is a logical plan for getting from here to there, where here may be defined as the initial set of questions to be answered, and there is some set of conclusions (answers) about these questions. Between here and there may be a number of major steps, including the collection and analysis of relevant data” (Yin, 2003: 20).

The research design of the present paper relies upon Blaikie’s (2010) approach to research design. As advised by Blaikie (2010), the present research design represents a combination of logically connected and consistent decisions (see figure 7) made upon the possible alternatives in order to create a holistic picture of the research problem and give comprehensive answers to research questions. The research design represents, according to Blaikie (2010) a cyclical process. The explanation of the made decisions are given in the following chapters.

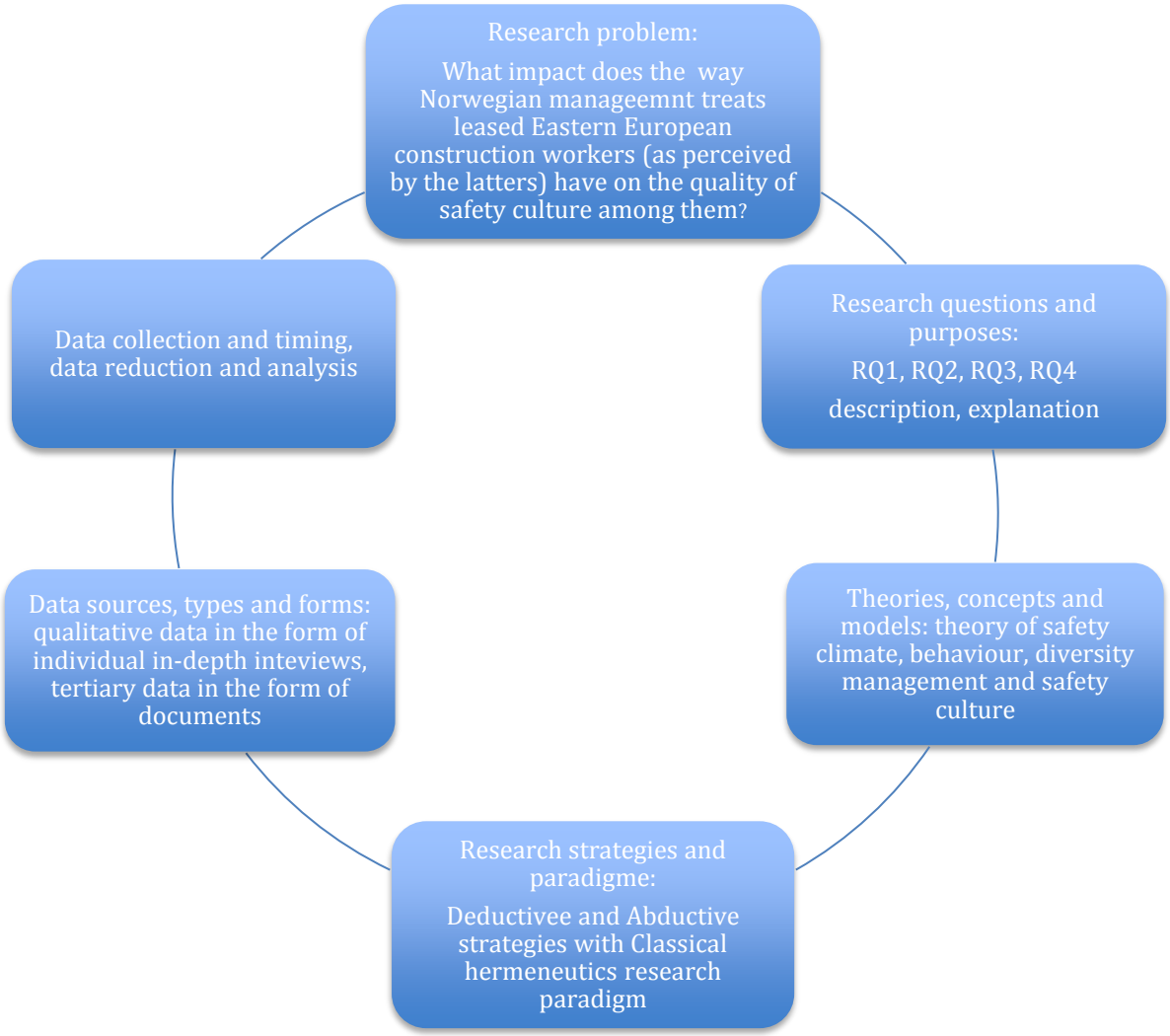

Figure 7 Model of research design

3.1.1 Research strategies and paradigm

The best way to answer research questions is to choose appropriate research strategies. Different authors describe different research strategies in a different way. However, as the departure point for the research design of this thesis was taken from Blaikie (2010), the research strategies for answering research questions were chosen from four alternatives, offered by the same author in order to gain consistency. These four strategies are Inductive, Deductive, Abductive and Retroductive. A short description of the strategies in the understanding of Blaikie (2010) is given in the Table 1.

	Inductive	Deductive	Retroductive	Abductive
Aim	To establish descriptions of characteristics and patterns	To test theories, to eliminate false ones and corroborate the survivor	to discover underlying mechanisms that, in particular context, explain observed regularities	to describe and understand social life in terms of social actors' meanings and motives
Start	Collect data on characteristics and/or patterns Produce descriptions	Identify a regularity that needs to be explained Construct a theory and deduce hypotheses	Document and model a regularity Describe the context and possible mechanisms	Discover everyday lay concepts, meanings and motives Produce a technical account from lay accounts
Finish	Relate these to the research questions	Test hypotheses by matching them with data collection	Establish which mechanisms provide the best explanation in that context	Develop a theory and elaborate it iteratively

Table 1 The logic of four research strategies (Blaikie, 2010: 84).

The present research is based on two research strategies: *Deductive and Abductive*.

The *Deductive research strategy* is used in order to test the theory concerning the relation between diversity management and safety culture, through safety climate and and safety behavior.

The main research strategy of the present research is the *Abductive research strategy.* The starting point of research within the Abductive research strategy is the social world

of the social actors being investigated: their construction of reality, their way of conceptualizing and giving meaning to their social world, their tacit knowledge.

The reality of people, the way they have constructed and interpreted their activities together, is embedded in their language. Hence, according to Blaikie (2010), the researcher has to enter their world in order to discover the motives and meanings that accompany social activities. The task will be then to redescribe these motives and meanings, and the situations in which they occur, in the technical language of social scientific discourse. Thus individual motives and actions will be abstracted into typical motives for typical actions in typical situations. These social scientific typifications will provide an understanding of the activities, and may then become ingredients in more systematic explanatory accounts (Blaikie, 2010).

The Abductive strategy can answer both ”what” and ”why” questions and adopts a ”bottom up” rather than a ”top down” approach representing descriptions and understanding that reflect the social actors’ point of view rather than adopting the researchers’ point of view. Such an approach seems to be the best tool for understanding the perception of reality of a particular group of people – in our case of leased Eastern European construction workers - what corresponds to the formulated research problem and research questions.

Each research strategy has connections with particular philosophical and theoretical traditions, i.e. research paradigms. These traditions provide social researchers with an intellectual context in which to conduct their research (Blaikie, 2010). While fulfilling this research I will be committed to the paradigm of *Classical hermeneutics* which is logically connected to the choice of the Abductive research strategy as the main one.

Since it derives from the adoption of the Abductive research strategy that the social world ***is*** the world perceived and experience by its members, from the ”inside” and the researchers’ task is to discover and describe this ”inside” view, the question of understanding is of utter importance. The Classical hermeneutics research paradigm supposes that an interpreter’s prejudices inevitably distort his/her understanding. The point is that there is no understanding outside of social context and history and human beings cannot step outside their social world or the historical context in which they live. Therefore, “social world should be understood on its own terms in the same manner as its participants do, from the inside as it were, not from some outside position occupied by an expert” (Blaikie, 2010:99). These postulates of the classical hermeneutics research paradigm are very much consistent with ones of the abductive research strategy and with the chosen research problem and questions.

One more important point of Classical hermeneutics is that this is not only impossible, but also undesirable to establish the path to pure consciousness, and hence to pure truth. This point is of utter importance while judging on the validity and reliability of the present research.

3.2 Choice of method

As it has already been mentioned, within the Abductive research strategy, the reality of the social actors under research, the way they have constructed and interpreted their activities together, is supposed to be embedded in their language. The researcher has therefore to enter their world in order to discover the motives and meanings that accompany social activities. Thus, the quantitative method seems to be not appropriate for the present research, taking into account the chosen research strategy.

It was therefore decided to a make a qualitative research based on the in-depth individual interviews with leased Eastern European construction workers, working for a number of different construction companies in Stavanger. The analysis of tertiary data in the form of Fafo report (2007) is also used as a part of method in the present research as well as the analysis of legal acts. The three lines of enquiry: individual in-depth interviews, tertiary sources and legal acts exploring, allow for the depth of analysis as well as provide for *the methodological triangulation* (Ellefsen, 1998).

The advantage of the taken approach is that it does not represent the case-study, but aims at presenting a holistic picture of the situation with leased eastern European workers in Norwegian building and construction branch of industry, gathering data from people working in different organizations. This fact provides for the breadth of the present research.

The chosen method for answering the research question is connected to the fact that these are the workers themselves who daily perform the dangerous job and it is them who know like nobody else why they choose to behave in a certain way. Only having understood the underlying reasons for Eastern Europeans` safety behavior and the features of safety climate, it will be possible to correct them and thus to improve the quality of safety culture among migrants. To improve the workers behavior is the primary aim of the existence of safety management. It is they who are injured at work, not the managers. All the safety measures taken within the company are aimed at workers. However, unreasonably, most of the relevant research in Norway has been made with the help of surveys among the managers of the companies employing migrants (Fafo report, Arbeidstilsynet report). At the same time, only the workers

themselves can provide us with real knowledge of the situation, especially if the workers are interviewed not representing a certain company, but in absolutely anonymous manner, in an informal atmosphere. All the above reasoning leads to the choice of the method of qualitative in-depth interviews for the present research.

An important precondition for the choice of the informants was the language they speak (they should speak Russian language same as the interviewer). Language plays an important role in people's perception of reality and in understanding. Moreover, when people speak the same native language, it helps to establish special relations of confidence and the atmosphere of trust that provides for the trustworthiness of given information (to the degree it is possible within the Abductive research strategy and Classical hermeneutics paradigm).

3.2.1 Data gathering

According to Blaikie (2010: 201), "all social research must adopt a position with regard to the timing of data collection". This research represents a cross-sectional study, which captures a picture of social life in the present moment.

Empirical data is collected through three sources of information: in-depth conversational interviews, tertiary data taken from Fafo report (2007) and relevant legal acts.

3.2.1.1. Qualitative interviews

(A) Choice of informants

The informants are 14 leased Eastern European workers, working for a recruitment agency, consisting of three persons, coming from Eastern Europe as well, and leased by Norwegian building and construction companies.

The workers have long-term contracts with Norwegian companies they work in. Some of them, having long experience of work in Norway, have already worked in several companies. The information given by them will concern their perceptions in general, not binded to a concrete company.

It is important to note that all informants work in large building and construction companies, employing more than 100 people. Hence, it is presumed that all the companies the informants work in have separate safety management departments. Some of the informants work in one of the largest companies in the Rogaland region as they told themselves, and some of them have worked in this company before.

Generally speaking, all companies the informants work in now or have worked in before are well-known large building and construction companies of Stavanger. That is why the problem of small companies which are known to have higher accident rates (Arbeidstilsynet, 2012) is not touched in this thesis.

It is important to mention that all the informants speak Russian language as their second native language.

Nr.	Age	Number of years of working experience in Norway	Number of years working experience within construction	External work experience	Size of the company (nr. of employees)	Working area
1	49	1,5	15	no	>100	floor
2	46	1	7	no	>100	floor
3	51	O,5	35	UK	>100	brickwork
4	33	5	11	UK	>100	painter
5	36	1	10	no	>100	painter
6	41	2	17	UK	>100	painter
7	32	3	10	UK	>100	painter
8	29	5	8	no	>100	painter
9	52	1	40	no	>100	painter
10	42	2	20	no	>100	painter
11	33	1	10	no	>100	painter
12	46	3	20	UK	>100	painter
13	34	2,5	10	UK	>100	painter
14	44	2	20	no	>100	floor

Table 2 Overview of informants

(A) Interview process

The interviews were held in Russian language, in an informal atmosphere, at the workers` homes and were gathered over a period of two months. Each interview took about 1,5 hours. Subject to the agreement of the respondent, all interviews, including citations, were noted by hand. Each respondent completed a bio-data sheet. The interviews were held only with the workers, not with the management of companies or authorities.

The interviews were mainly held in the form of “conversational interviews”. During such interviews open questions were asked, however the initiative was taken in order to direct the interview to the necessary field (as advised by Andersen, 2006). Some yes/no questions were also asked in order to get some precise information.

The structure of the interview was based on the interview guide, which was divided into several topics. A lot of supplementary questions, not included in the guide, were asked as well, they were dependent on the answers given by the workers to the questions from the guide. These additional questions were mainly “Why” questions, or “If…” questions aiming at revealing the motivation of workers, their attitude towards certain practices of management, towards colleagues, their emotions.

According to Guldvik (2002), the ideal is that interpreting of information takes place during the interview itself so that the interviewer tries to verify his/her interpretation together with interviewee. Following this advice, the interviews during the present research were held in the same manner.

The chosen form of interview-taking gave the chance to get much more interesting and relevant information, than it was initially expected. To all given information, I tried to ask “Why” in order to reveal feelings and attitudes of the informants. This was not every time successful, though in some cases it was very useful. I got very emotional answers which helped to make conclusions concerning safety climate among the workers and relate their safety behavior to it. Moreover some extra information beyond the scope of research, but very useful to know in order to define the need for a new research in the same field, was gathered, for example the information concerning the comparison of safety-related management practices in Norway and UK.

After the completion of each interview, the notes were analyzed. This gave an inclination on what accent to make during the next interview. This process was supposed to have a circular character.

3.2.1.2. Tertiary sources

The analysis of Fafo report (2007) does not serve as a separate source of information, but is rather analyzed to confirm some findings. This source is based on statistics.

3.2.1.3. Legal acts

Three main legal acts regulating safety issues within building and construction sector are analyzed and help to explain some findings, especially when it comes to

management practices. These are The Norwegian Working Environment Act, The Regulation on “Safety, Health and Working Environment on Construction sites” (Construction Client Regulation) and the Regulation on ”Organization, management and cooperation”.

3.2.2. Ethical aspects

In order not to break ethical rules, the names of the companies the interviewees work in were not asked as well as the names of the countries the interviewees are coming from. All the interviewees were informed that the information they gave would not be used against them and that all the data would be held anonymous.

3.2.3. Validity and reliability

The aim of the present research is to establish neither the truth nor the objectivity. It is rather to understand the social world and behavior of a particular group of people in a particular context – safety behavior and perceived management practices among Eastern European workers within the construction industry outside their home country, and based on this understanding make conclusions concerning the quality of safety culture among them.

Validity and reliability issues must be therefore looked at in this context.

Validity. External validity of research is related to the problem of *generalization/transferability*. According to Yin (2003, p.34), this is “the domain to which a study’s findings can be generalized”. The first point to be mentioned here is that the present research is conducted within the specific group of people in a particular context – leased Eastern-European workers within the construction industry in Norway. Second point is that the aim of this research is to understand their social world, namely safety climate (through perceived management practices), and behavior, namely safety behavior. The results cannot be generalized to all the foreign construction workers, because the group of Eastern-European workers has its own mentality, safety understanding and habits, language as well as the specific safety climate. The results cannot be generalized to the Eastern-European construction workers in another foreign countries – as working in Norway is not the same as working somewhere else, it has its specific type of management, safety system, culture etc. The results can neither be generalized to all the Eastern-European construction workers in Norway, as only the leased workers as a specific group of Eastern European workers represent the object of the present research. Hence, the transferability of the results of the present research

is quite limited outside its object – leased Eastern European construction workers in Norway.

Internal validity refers to the confidence with which researchers can make causal inferences from the results of a particular empirical study. In this study I will try to establish causal relationship between safety behavior and perceived management practices. My conclusions will be mainly based on the explanations given by the interviewees themselves, however if the explanations could not be got – on the laws of formal logics. Thus, the established relationship between the phenomena is mainly subjective, but this is consistent with the chosen research paradigm of Classical hermeneutics.

Reliability. Reliability refers to the probability that the repetition of the same procedures by another investigator will produce the same results. The goal of reliability is to minimize the errors and biases in a study (Yin, 2003). The issues of *confirmability, dependability and credibility* are important in this context.

The present research is based on methodological triangulation that guarantees a large degree of credibility of its results.

The research is not conducted within the certain companies, the names of the companies the workers are working in or have worked in remained unknown, what provides for its objectivity and independence. The dependability of the results is therefore very low.

When it comes to the question of confirmability of the results of the present research, it can be disclosed with the help of the simple question: ”If another investigator will undertake the same research, is it very possible that he/she will come to the same results?” (Yin, 2003: 131) The answer is more difficult than it seems to be.

The point is that the aim of this research is not to discover the ”objective” truth, since it is impossible according to the taken research paradigm of Classical hermeneutics. It is rather to understand the world of social actors from the ”inside”. The data for the research is gathered from the in-depth individual interviews with 14 people as well as from tertiary source of information in the form of report as well as on the analysis of legal acts. The anonymity was guaranteed and even the names of the companies the interviewees work in remained unknown. Moreover the interviewer and interviewees speak the same language what makes the level of trust and understanding higher.

That is why the question of ”another researcher” is quite ambiguous. It can be argued that if a Norwegian researcher undertakes the same study, he/she would come to different results, so would the researcher coming from the company an interviewee works in. Both would not be able to understand the social world of the actors under research from the inside, as the interviewees would not trust them. The results thus would not be confirmed by them. However, this fact rather proves the strength of the chosen design rather than its weakness.

However, to make the degree of confirmability higher all the steps undertaken during the research were recorded and are described here, as advised by Yin (2003). One more meaning of reliability is offered by Briggs (1986:23), according to whom, “reliability refers as well to the probability that the repetition of the same procedures by the same researcher will produce the same results”. For increasing such a probability standardization is a crucial device. Standardization leads interviewers to attempt to present each question in exactly the same manner to each respondent. It is even suggested that “the interviewer’s inflection and intonation should be the same for each respondent” (Briggs, 1986: 24). This advice was followed to the extent it was possible during the conversational interviews.

3.2.4. Data analysis challenges

The interview guide was prepared in such a form that it was possible to note all the relevant information in it at once. Much free space was left in it for writing down the information which was given by the interviewees in free form, when the conversations took the form of discussions and free dialogue. This method made it easy to analyze the data and systematize it according to the two topics, under which it will be presented in the next chapter.

The information was gathered in Russian language and translated into English afterwards, that is why it is important to note that the presented in the next chapter citations represent the translation, however I made it as close to the original as possible, not trying to change it into grammatically correct sentences. It seems to be important because normal language, the way phrases are built, can also contain very important information, that can reveal some emotions and attitudes – and this is very relevant for the present research aiming first of all at understanding and revelation of perceptions.

3.2.5. Operationalizing concepts

Management practices determining the quality of safety climate:

What concrete sorts of management practices revealing management commitment and quality of employee involvement/communication should be investigated can be found out based on the criteria for safety behavior enhancing safety climate and strong safety culture:

a) Practices revealing management commitment to safety

- *giving general HSE learning course and training to employees* (are the necessary sources of safety knowledge and thus, informed culture as well as the precondition of flexible culture)
- *practices revealing general concern for safety*, such as safety requirements concerning PPE etc, continuous surveillance over the safety of equipment, often safety rounds etc. (are supposed to influence compliance and perception of management commitment to safety in general)
- *practices revealing relation production/protection* (emphasized by the researchers of safety climate and culture (e.g. Reason, 1997; Turner and Pidgeon, 1997), balance between production and protection being one of the characteristics of strong safety culture).
- *treatment of safety information by the management* (is supposed to encourage safety action through feedback, influence reporting and learning)
- *practices concerning accident reporting and punishment* (are relevant for judging upon reporting culture and safety behavior)

b) Practices concerning employee involvement/communication

- *involvement in safety rounds and discussions during the meetings* (is supposed to influence the occurrence silent deviations and organizational commitment)
- *communication of written information* (important for safety knowledge and thus, informed culture)
- *favorization of informal communication with co-workers and management* (influences the level of trust, creates informal atmosphere, emphasized by Weick and Sutcliffe (2007) and Turner and Pidgeon (1997) as a necessary precondition of informed culture)

Safety behavior

a) safety compliance

- *use of personal protective equipment* (is supposed to be the most evident indicator of compliance and silent deviations),
- *complying with other safety requirements/procedures*
- *complying with the requirements of management* (is supposed to be connected to participative behavior and the quality of safety climate, namely trust and perceived justice)

b) safety participation. The main facets for exploring safety participation are taken from Hofmann, Morgeson, and Gerras (2003), who developed a measure of safety citizenship behaviors or ***safety participation***, based on theoretical and empirical work done by Van Dyne et al. (1994, 1995), Van Dyne and LePine (1998), Podsakoff et al. (1990) and Morrison and Phelps (1999). Their measure had ***six dimensions***:

- *helping* (e.g. volunteering for safety committees and helping to teach safety procedures to new employees),
- *voice* (i.e. making safety-related recommendations and speaking up and encouraging others to get involved),
- *stewardship* (protecting fellow crew members from safety hazards and going out of one's way to look out for the safety of other crew members),
- *whistle-blowing* (telling other crew members to follow safe working procedures and reporting crew members who violate safety procedures),
- *maintaining up-to-date knowledge of safety issues* (attending non-mandatory safety-related meetings),
- *initiating safety-related workplace change* (trying to improve safety procedures and making suggestions to improve the safety of a mission).

Here, we will also use the seventh facet – ***reporting*** – as a type of safety participation. Reporting is normally treated as a type of compliance. However, reporting involves taking initiative – filling in the form, delivering it etc., that is why it will be regarded in this paper as a type of safety participation.

4 Empirical findings and analysis

4.1 Introduction

The departure point of the present research is the fact that the accident rates among leased Eastern European construction workers are higher than among the Norwegians and those employed permanently. The quality of safety culture among the leased Eastern European workers could explain these high accident rates to some extent. In genersl, the quality of safety culture can be revealed through two issues seen in connection: workers` perceptions of management practices and their behavior. When it comes to migrants, the quality of safety culture is assumed being determined by the way national diversity of workers is treated by the management and is reflected in their behavior (See Figures 5 and 6).

Hence, revealing relevant perceived management practices and the patterns of self-reported safety behavior, it will be possible to judge upon the quality of safety climate and to see whether the diversity is treated in such a way that safety behavior is encouraged among leased Eastern European workers. This will give an opportunity to evaluate the quality of safety culture among them.

The presentation and discussion of empirical data, gathered through interviews, will take the biggest part of the following sections. The comparison of data with relevant theoretical contributions and afterwards with information from the Fafo-report (2007:3) will help to confirm/refute the findings and thus stengthen the conclusions. Legal provisions concerning safety of workers will help to explain some findings. The three sources of information seen together: interviews, tertiary source data and legal provisions will help to get the holistic picture of the research problem.

4.2 Presentation of results

4.2.1 Results from the interviews

In this chapter the main findings from the interviews will be presented without discussion. The relevant theoretical points will be shortly presented in corresponding sections in order to show the importance of this or that empirical information, citation, their relevance to the research problem.

The results will be presented divided into two main topics:

1. Management practices
2. Safety behavior

The two topics will be divided into several sub-topics corresponding to the way the concepts were operationalized in section 3.2.5.

The quality of safety climate and the role which the national aspect plays in it and in safety behavior (national predispositions) will not be presented under separate sub-topic, being rather theoretical than empirical variables. These issues will be disclosed in the discussion. The issues of perceived discrimination/separation and perceived differences in behavior between Norwegians and migrants will be presented in the end of the first and the second topics correspondingly.

I. Management practices

1. Management commitment

There appears to be consensus amongst both climate and culture researchers that at least one of the factors characterizing safe operations relates to *management* (Mearns and Yule, 2009). Employees' perceptions of management practices are supposed to influence their safety behavior through safety climate (See Figure 5).

a) giving general HSE learning course and training to employees

HSE learning and training represent a necessary source of safety knowledge, important for informed climate and thus, culture (Reason, 1997; Turner and Pidgeon, 1997). Training is also a prerequisite of flexible culture.

According to the interviewees, almost none of them got a general HSE learning course either in the recruitment agency as their direct employer, or in the companies they work. The only learning they were able to name is the safety instructions got before a certain project. In fact the workers even did not understand, which course they are asked about. On the question whether they got general learning course concerning HSE, the answers were the following:

"Yes, before new object they sometimes give us some paper to sign"

"Yes, they give instructions before you start a new project"

When they were asked to remember if they got a GENERAL HSE learning course, not before the certain object, but when they started working in the company, most of them said "No". Several of them said:

"Yeah…there was something like this long time ago, I think it was what you mean, not

sure…"

The workers claim not to get learning before each project either. Sometimes, they just come to a new project and start working. On the question: *"How often do you get project-specific learning?"*, they answer *"Sometimes".*

Nobody of interviewees confirmed to have got HSE training.

One of the informants described the case when he was working for a large company and there was an accident when a worker died due to landslide in the trench. Only after this there was a large meeting and everybody got necessary learning course. This case exemplifies the deficiency in mindfulness, namely "sensitivity to operations" offering a possibility to learn before the failure occurs Weick and Sutcliffe (2007), which is also a characteristic of learning organization.

b) practices revealing general concern for safety

Another important clue of a mindful organization is "preoccupation with failure", meaning that the organization tries to look for symptoms of unsafety and encourage preventive work Weick and Sutcliffe (2007). According to Turner and Pidgeon (1997), a good safety culture is promoted by shared care and concern for hazards and their impact upon people.

Absolutely all the informants mean that safety issues get much more attention from the management side in Norway in comparison to their home countries. They react very positively to the measures taken with regard to safety by Norwegian management and are conscious about the fact that in Norway much less accidents happen because of more serious approach to safety.

They feel safer, working here in Norway, than at home.

"Of course, here is better than at home, here they have very strict rules, if you don't wear helmet, you get a fine"

"Here they take safety issues much more seriously than at home, always you see somebody coming and checking how everything's going, they are taking pictures if they see something wrong"

"In our home-country nobody cares about your health, they only use you as much as they can in order to make you do your job as fast as possible, here they care more"

"You know, in our home country in small companies people sometimes work in slippers…, so what are you talking about…"

At the same time, those workers who have had experience of work in the UK were all unanimous in the opinion that the way safety is treated in the UK is much better than in Norway. The comparison of safety-related management practices in Norway and UK is beyond the scope of the research, but it seems important to mention that on the question *"What is better in UK then?"* the most popular answer was *"Everything".*

c) practices, revealing relation safety vs. production needs

Being generally preoccupied with safety is not an absolute value, it is also important to look how it is related to the needs of production.

The needs of safety and production must be balanced in order to reach the best result in business (IAA Survey, 2011). According to Hofmann and Stetzer (1998), if the workers might have perceive work pressure for quality performance, they then focus their attention on completing the work in hand and less on the safety of their working procedures.

The interviews revealed that the needs of production often get higher priority than the needs of safety during their work. For example, as some of the workers said, the managers give a concrete number of hours to perform a certain task, and very often this amount of hours is not enough. However, the workers do their best to do the job on time, even if it is not safe sometimes.

"They give you a certain amount of hours and you must be on time to perform the job within these hours, and if you don't, they cut your hours, of course you try to be on time then, even if something is not safe…i don't want my hours to be cut!!!"

"Sometimes it is not possible to complete the task in such a short period!"

"We (foreign workers) are always in a hurry, we are used to it – that the work should be done quickly, often it is so that one must do the same job again because the quality is bad – everything is because of time pressure"

The above examples show that time-pressure often becomes a reason for breaking safety precautions and this time-pressure is often created by management as perceived by the migrants. The last citation demonstrates as well that time-pressure can threat not only safety, but also lead to economic losses – when because of being

in a hurry, the workers perform the job of bad quality and have to do it again afterwards.

The last citation can be as well looked at as one pointing at some connection between national predispositions (“are used to work fast”) and safety behavior (“we are always in a hurry”).

d) treatment of safety information by the management

One of the characteristics of safety culture is *informed culture,* meaning the organization collects and analyses relevant data, and actively disseminates safety information from incidents and near-misses as well as from regular proactive checks, this is also important for learning (Reason, 1997).

Lack of information flow and misperception among individuals can be root cause of accidents (Turner and Pidgeon, 1997) *There is actually always somebody who knows something* and it just depends on the management whether this information will be processed and will become a source of learning or will be lost, becoming thus the part of incubation period (Turner and Pidgeon, 1997).

According to the informants, safety information is not always treated in a necessary way by the management. One interviewee gave the following example:

”One time i was supposed to paint the walls and had to use the scaffold. I saw that the scaffold was absolutely not safe and was about to fall. I told the foreman about it, but he just shrugged his shoulders. So, I began to work risking my life. In order not to fall down, i had to work sitting and i worked for more than two hours in spite of the fact that this job could be done within 20 minutes, if the scaffold was ok. After several days the scaffold fell down. It was just a matter of luck that nobody worked on it at this moment”.

The above example demonstrates how available safety information, a source of learning, is lost because of wrong attitude/values of the foreman (Turner and Pidgeon, 1997). It exemplifies the point of Turner and Pidgeon (1997) that there is actually always somebody who knows something and it depends on management whether this information will serve to prevent accidents and to learn or will be just buried and become a part of incubation period.

It also exemplifies how the ignorance of safety precautions leads to the loss of time and “time is money”. This is consistent to the point that safety must be regarded as *one of the* organizational goals, not an obstacle on the way to them, and that the needs of

safety and production must be balanced in order to reach the best result in business (IAA Survey, 2011).

What`s more, the described situation resulted in the fact that the worker was disappointed that no reaction followed his words. That is why the same worker on the question: "*Do you tell the manager if you observe the unsafe conditions at the work-place or see the things that could be better/safer?*" answered "*If nobody listens to me, why would I say anything*". This example shows how the absence of feedback can influence safety climate and thus safety behavior.

e) practices concerning accident reporting and punishment

A reporting culture means cultivating an atmosphere where people have confidence to report safety concerns without fear of blame. Employees must know that *confidentiality* will be maintained and that the information they submit will be acted upon (Reason, 1997).

The interviews revealed that leased Eastern Europeans don`t even know that there is special form for reporting and managers have never highlighted the need to use any form. They mainly offer to call them if something happens. No confidentiality is guaranteed.

When it comes to the rules of punishment, all the workers perceive that they are very strict.

"They have very strict rules, big fines…"

"Here when it comes to safety requirements, everything is strict, if you don`t wear PPE, you get a big fine"

"They always go around, take pictures, afterwards if you were without helmet, for example, you can get fine"

2. Employee involvement/communication

Mearns et al. (2003) included communication and feedback as a factor in their surveys using questionnaire among various category of workers and showed that safety performance is influenced by the level of communication in an organization.

a) involvement in safety rounds and in discussions during the meetings

Broad and direct *participation* in the process of implementing the procedures is offered by Antonsen et al. (2008) as a condition facilitating compliance. High level of involvement is also decisive for obtaining trust (Antonsen, 2009) and well-functioning information-flows (Turner and Pidgeon, 1997).

According to the informants they are involved neither in safety rounds, nor in the discussions during the meetings. Even if they are present, the discussions are held only between the Norwegians. And the migrants are just sitting quietly. The role of language barrier is large in this respect, as all the discussions are held in Norwegian.

"Yes, there are some meetings, but I don't understand anything there, it is only in Norwegian"

"Norwegians actively participate in meetings, discuss a lot, but not migrants, we are just sitting quitely and waiting for the end"

"I don't know the language, how can I discuss anything. Let's make discussion in my native language, then i will have a lot to say".

The citations demonstrate how language barrier (the fact that management holds all the discussions in Norwegian and the workers don`t have anybody to translate the information) hinders information flows and normal communication within the organization. At the same time the proponents of communicative planning argue that information doesn't influence until it represents a socially constructed and shared understanding which is impossible without discussions of a problem with those involved (Innes, 1988).

Schubert and Dijkstra (2009) argued that cultural differences that are ignored do, in fact, exist and *deserve special attention with respect to safety issues.* It concerns, for example, language. The above citations demonstrate that language issues when it comes to oral discussions are not addressed in the companies the informants work in.

b) communication of written safety information

According to The Construction Client Regulation, safety information given to workers must be understandable. This is a legal requirement. Proper communication of written information is important for safety knowledge.

According to the informants, written safety information is given to them before a worker starts at some new object (though not always). According to some of the informants,

they sometimes get information only in Norwegian and then don't understand a single word:

"Do you understand what instructions say?" – "How can I understand anything? It is in Norwegian!"

Nevertheless, the absolute majority of informants said that it is possible to get written instructions in English and often in their native languages.

At the same time, almost all of the respondents on the question: *"Do you read carefully the papers given by the management before signing?"*, answered either: *"No" or "What's the sense of reading if i don't know the language"*. The strategy that they often take when signing is the following:

"If I see that everybody signed, I sign as well"

The informants agree that the presentation of information with the help of pictures helps them a lot to understand it.

c) encouraging informal communication between co-workers and with management

Deficient information flows are the root cause of disasters (Turner and Pidgeon, 1997). Rich communication channels are the source of learning (Reason, 1997).

Weick and Sutcliffe (2007) argued that rich communication, for instance face-to-face discussion, is in general more powerful in promoting reliability in a complex system than sparse communication such as formal written messages.

Christian et al. (2009) mention the importance of leader–member exchange. High quality leader–member relations are generally associated with more open and egalitarian communication with respect to non-routine problems.

Some of the informants, especially those who are over 40 years old claimed that language barrier hinders normal communication within the company.

"It does not influence my job – i know exactly what to do – but when i am at office and need to speak, it is a stress"

However, some of them, even not speaking either Norwegian or English, think that language barrier is not important:

”I know how to work and I don’t need language at all in order to get my job done”

Harrison and Klein (2007) noted that within organizations people feel attracted to similar others and interact less with coworkers that they perceive as different. The same can concern the management. Such separation has some implications for learning, being based on the exchange of information and experience not only between the management and workers, but also between the co-workers. Story-telling is very useful for learning (Hovden m. fl., 2004).

Interviews revealed that the informants feel free to contact their direct employer, which is of the same nationality as themselves. They have very trustworthy relations and tell their direct management about everything, they are like best friends, and have nothing to hide.

”Do you feel free to talk to your Norwegian management in an informal manner? – Why should I talk to them, I have my employer and I say everything to him”

”We say everything to our employer, we are one team and share all the problems”

”The employer takes care of us, if i have some problem, I call him at once, I call him sometimes even too often, but he always helps and never says ”no””

”We have nothing to hide from our employer, my problems are his problems”

These examples prove the argument of Harrison and Klein (2007).

Perceived discrimination/separation

Evidence shows that perceived injustice lead to specific behaviors such as absenteeism and turnover (James et al., 1994 as cited in Mamman et al. 2012) and those who perceive procedural injustice will fail to engage in OCB (safety participation) (Mamman et al., 2012).

At the same time literature has extensively shown that diversity leads to more conflicts and less cohesion in work teams, and is associated with patterns of exclusion and sometimes even with discrimination (Starren et al., 2013)

According to absolutely all the informants, they perceive being discriminated by Norwegian management. The following examples demonstrate it:

”Every migrant knows the common phrase of the Norwegian management: “If you don’t like anything – you know the way home”.

“If three workers are asked to perform one task and two of them are migrants and one –Norwegian, the latter will not work as hard as the formers”

“If the Norwegian workers make safety recommendations, manager is listening, he is afraid that a worker can complain to the Workers Union and a company will have problems”

“I have never heard that the hours of Norwegian workers are cut, only migrants suffer from this problem”

“It is obvious that we are in bigger time-pressure than Norwegians, they take it easy, the management does not press them like us”

According to the informants, almost always Norwegians and non-Norwegians work separately, almost never mixed.

”If you come to a building place and see one Polish worker and five people working with him, you can be sure, those five are also Polish, I mean that Polish work with Polish, Latvian with Latvian etc.”

”We are always working with ones who speak the same language. I don’t know, it is like this – we almost never work with Norwegians”

When it comes to the communication between the co-workers, almost all the informants say that they don’t communicate with Norwegian colleagues at all or do it very seldom, only when they have to work together, what happens very seldom:

”He is not my friend, I am not his friend – we don’t have any common topics to discuss”

An organizational climate open to diversity, which usefulness for organizational performance is emphasized by many authors (Magoshi and Chang, 2009) is an environment in which individuals respect the views of those who are different and where *activities are not organized on the basis of demographic similarities among group members* (Hobman et al., 2004 as cited in Lauring and Selmer, 2012).

Two of the interviewees said that when some meetings are organized, the managers tell them that they do not need to be present and discussed the problem with them afterwards – separately from the others.

Respondents claim that sometimes management organizes special meetings for the migrants.

The practice when the migrants don`t participate in common meetings does not correspond to the principle of diversity management, mentioned above.

II. Safety behavior

In general it is obvious from the interviews that the workers show strong motivation to behave safe:

"*If YOU don't take care of yourself, nobody will do it"*

1. Compliance

Habitual noncompliance with safety policies and procedures, like other pre-existing conditions, may be considered a root cause of accidents because it can make the entire work system more vulnerable to failure (Reason, 1990).

It is important to take into account in this respect that the procedures or rules themselves can be wrong, noncompliance in this case can lead to better safety (Reason, 1997; Antonsen, 2009). On the other hand, sometimes noncompliance can be caused by the fact that it is impossible to perform a certain task without breaking the rule (Reason, 1997), this can concern inter alia time-pressure.

a) use of personal protective equipment

100% of informants claimed that they almost always follow requirements concerning PPE. However, all of them mean that sometimes these requirements are stupid and prevent them from working comfortable. For example, those who are fixing the floor are irritated by the requirement to wear helmet when fixing the floor.

"It is very uncomfortable to wear helmet when making the floor and when nobody sees, I take it off"

"Is it a joke, that I must wear helmet in the ready built building when I only fix the floor? What`s the sense of it?"

The others also complained that helmets are very uncomfortable and they take them off if it is not dangerous.

"I sometimes take the helmet off, if there is no control and if I know there is no danger. These helmets are so uncomfortable, i am sweltering, my forehead is itching, it is impossible to work!"

The above citations exemplify the occurrence of “silent deviations” among migrants (Tinmannsvik, 2008; Antonsen et al., 2008). As the authors argue, the popular reason for silent deviations is deficient employee involvement and communication.

According to Morrow et al. (2010), understanding which factors motivate unsafe behavior can provide opportunities for interventions to enforce safety, reduce noncompliance, and protect the work system from vulnerabilities.

b) complying with other safety requirements/procedures

Antonsen et al., 2008 argued that one should make difference between “visible” compliance and high degree of consciousness of compliance based on organizational commitment, the latter being reached through employee involvement and leading to lower degree of silent deviations. The interviews revealed that the main reason for compliance with all the requirements, even those the workers see as unnecessary, is “big fines” rather than high degree of commitment (consciousness).

”Do you follow all safety requirements?” – ”Of course! They have such big fines!”

That was the most popular answer.

However, workers claimed to HAVE to violate safety requirements/procedures because of the time-pressure.

“I know that the ladder must be secured by somebody standing down and holding it while I am climbing, but we often break this rule, because of lack of time”

“Yes, I often climb the ladder without anybody securing it, we have so limited time, cannot afford two people doing the same”

“I fell down from the ladder twice, one time I was brought to a hospital, you see I have injured my leg (showing the injured leg)” – “But why did you climb alone, why did not you call anybody to secure you?” – “Are you kidding? We are working in such a time-pressure”.

These examples show how time-pressure can cause unsafe behavior and prove the argument of Hofmann and Stetzer (1998) saying that if the workers might have perceive work pressure for quality performance, they then focus their attention on completing the work in hand and less on the safety of their working procedures.

Climbing the ladder without securement in order to get the job done on time represents one more example of “silent deviation” (Tinmannsvik, 2008) that is most probably not known by the management but was revealed to be very popular among leased migrants.

b) compliying with management requirements

It seems from the interviews that in general Eastern European workers have very high level of “blind” compliance to the orders.

”If the manager says, I do, and I do fast, because I know, if i don’t do it on time, they will cut my hours”.

”*There is a common phrase here in the branch when it comes to Eastern Europeans: ”If you don’t like anything – go home! You are from European Union. Of course, we then work without asking anything”*

It seems relevant to mention here the information given by one of the workers, claiming that he had to work on an unstable scaffold, when the foreman did not listen to him saying that the scaffold is about to fall down. This example shows how “blind” compliance can cause unsafe behavior and possibly lead to injury.

2. Safety participation

Hofmann, Morgeson, and Gerras (2003) developed a measure of safety citizenship behaviors or *safety participation* consisting of 6 dimensions, based on theoretical and empirical work done by Van Dyne et al. (1994, 1995), Van Dyne and LePine (1998), Podsakoff et al. (1990) and Morrison and Phelps (1999). The empirical data concerning safety participation is presented according to these six dimensions.

More than four decades ago, Katz (1964 as cited in Bowler et al., 2010) argued that organizations cannot succeed by relying strictly on the performance of behaviors delineated in job descriptions. In his view, organizational effectiveness was contingent on the voluntary efforts of employees to take initiative in helping coworkers, voicing suggestions, and protecting the organization.

Participative behavior reveal high degree of organizational commitment and makes important contributions to individual, group, and organizational effectiveness, safety inter alia (Bowler et al., 2010)

In the organization where the workers take a proactive position with regard to safety,

the possibilities for learning are growing a lot, which is its turn leads to higher quality of safety culture.

a) helping (e.g. volunteering for safety committees and helping to teach safety procedures to new employees),

According to the interviewees, they are not involved in helping.

b) voice (i.e. making safety-related recommendations and speaking up and encouraging others to get involved),

100% of informants claim that they are very preoccupied with safety and always say if they observe obviously unsafe condition at the work-place. However, their comments in this respect do not always get a proper reaction from the foremen, as it has already been mentioned. Moreover, it they mean that it is not obviously dangerous, they prefer to be silent (for example, they climb the ladder without securement continuously without telling the manager that they don`t have enough time to be able to involve the partner in securing the ladder).

On the question: ”*Why you don’t say you will not work on such unsafe conditions or that you don`t have enough time to follow all safety precautions (as, for example, with ladder)*”, they often answered: *”I don’t want to miss the job”* and mentioned the known practice of the management to dismiss migrants, the discrimination, that nobody listens to their opinion etc.

This situation proves that the perception of how management treats migrants, mentioned before, namely that they think managers can dismiss them at any moment, can influence the behavior – workers as a result are not engaged in “voice”. Employee involvement also plays its role here, if a worker is not involved in safety rounds, discussions etc., he does not have chance to express his opinion, to make safety recommendation. According to Antonsen (2009), worker involvement and perceived procedural justice are among the properties that seem to foster *trust* between workers and management (Antonsen, 2009), trust being an important precondition of *just culture* (Reason, 1997).

c) stewardship (protecting fellow crew members from safety hazards and going out of one’s way to look out for the safety of other crew members),

No examples of stewardship were detected. Situations like this have never occurred.

d) whistle-blowing (telling other crew members to follow safe working

procedures and reporting crew members who violate safety procedures),

Reason (1997) argued that a *reporting culture* means cultivating an atmosphere where people have confidence to report safety concerns without fear of blame. Employees must know that confidentiality will be maintained and that the information they submit will be acted upon, otherwise they will decide that there is no benefit in their reporting.

Answering the question, concerning reporting of dangerous behavior of co-workers, 100% of informants said absolutely the same phrase:

"I am not a "whistle blower". It is important to mention that "whistle blower" has a negative connotation in the Russian language, coming from the Soviet Union times, when whistle blowers were condemned to death. This fact points at some connection between the reluctance to be a whistle-blower and national predispositions of workers.

The informants think that it is ok to tell it to the colleague face to face, but not to the manager:

"Why to make enemies" was a popular remark.

At the same time all of the interviewees are very eager to tell their friends (of the same nationality) if the latters don't behave safe. 100% of interviewees answering the question if they would tell their friends to take necessary safety precautions in case they don't do it, said they would. For example:

"Of course I will tell him: hey, what are you doing, man? Fed up with living?"

At the same time answering the same question, concerning Norwegian colleagues, not being their friends", the popular answer to this question was: "*I don't care, it's his problem".*

The above citations exemplify the theory that within organizations people feel attracted to similar others and interact less with coworkers that they perceive as different (Harrison and Klein, 2007). That is why in order to facilitate social exchange, which is claimed to enhance safety action (Christian et al., 2009) high-quality diversity management should not be based on the organization of the activities on the basis of demographic similarities among group members (Hobman et al., 2004 as cited in Lauring and Selmer, 2012).

e) maintaining up-to-date knowledge of safety issues (attending non-mandatory safety-related meetings),

Most of the informants claimed not to attend non-mandatory safety-related meetings. Moreover some of them could not even remember that such meetings were organized at all. That's why the question about attending voluntary safety meetings was reformulated into a hypothetical one. Then, the most popular answer to the question of whether one would go to such a meeting was "No".

Another workers claimed that mangers themselves told them that they don`t need to be present at these meetings. This example shows how management actions can influence safety participation.

f) initiating safety-related workplace change (trying to improve safety procedures and making suggestions to improve the safety of a mission).

The motivation to improve the procedures is connected to the issue of organizational commitment which can be reached through employee involvement in decision-making (Antonsen et al., 2008) and high-quality diversity management.

As it comes from the interviews, such proactive behavior is in general encouraged by the management, for example, those who write their wishes with regard to safety, get presents afterwards. However the informants claimed not to make any suggestions with regard to safety. One of the reasons is language barrier:

"How will I write my wishes, I don't know the language?!"

"If I could write on my native language, I would write the poem"

"May be if I write something in a bad language, they will think I am a fool"

Other reasons were difficult to establish, but it seems to be connected to the law degree of organizational commitment, the importance of which has been mentioned several times in this section.

g) reporting of accidents

A reporting culture is an important part of safety culture and important source of learning. Confidentiality is an important precondition of reporting (Reason, 1997).

Most of informants don't even know that there is a special form for reporting. According to them all the questions are dealt with in the following way:

"Just call me if something happens – chief says"

Moreover, two of the informants claimed to have fallen from the ladder several times. One of them fell from 1-1,5 meter and claimed not to tell anybody about that because it was not serious. Another one fell from a 5 meter high ladder and hurt himself quite seriously, so that he had to be brought to the hospital. However, he did not report the incident either, claiming that he was asked not to do it by his boss.

These examples reveal the absence of confidentiality ("just call me if something happens" – does not ensure any confidentiality), and wrong practices of the direct employer of the workers, being apparently afraid of punishment following the accident (the direct employer is responsible for everything that happens to a leased worker according to the Norwegian law).

Perceived behavior of Norwegian workers

The perception of migrants concerning the behavior of their Norwegian colleagues can prove to some extent the difference between Norwegian management practices towards migrants and Norwegians and points at the way diversity is treated by the management.

The informants claim to notice that Norwegians feel more free to take part in discussions, they explain it first of all by the absence of language barrier, however it is possible that this is not the only reason:

"Norwegians are always writing something, I know that they get some presents for that"

"Oh, these suggestions…yes, Norwegians like to write something, not me"

Moreover, migrants observe themselves and admit, that Norwegian workers are involved in whistle-blowing often and are eager to report everything:

"Yes, there are some Norwegian "whistle-blowers" (with negative intonation)*, I am not like this"*

"Yes, there were organized some special weeks, those who wrote as many observed deviations as possible got rewards…"

"Norwegians like whistle-blowing (with negative intonation)*"*

The informants themselves see that the migrants have higher level of compliance to the orders, inter alia those that are not correct, than Norwegians:

"If the manager says, we do without asking. This is not the case with Norwegians. If they don't like anything, they will say. Of course, they feel more sure than we".

As it was claimed by one of the informants:

"A Norwegian will say – I don't have a ladder and will not work – but "WE" cannot afford the behavior like this. Moreover, when something is commented by a Norwegian worker – management listens – they know that a Norwegian will go to the "Workers Union", will complain and employer will get problems afterwards. This is not the case with migrants, they are less protected in this respect".

Fear to miss the job makes them accept dangerous working conditions which would never be accepted by Normen, as they themselves claim. This is consistent with theoretical evidence that those who perceive procedural injustice will fail to engage in OCB (safety participation) (Mamman et al., 2012).

As it was claimed by several interviewees – *"If three people are performing a certain task – one of them is Norwegian and the two others are eastern Europeans, only the latters are working".*

This example has something to do with perceived injustice as well.

Summary of results from the interviews

1. Practices revealing management commitment

In general workers perceive management concern for safety: everybody must follow the rules, they are checking that everything is safe at the working place, give safety instructions to be signed etc. However leased migrants don`t get general HSE learning course and training, workers are sometimes made perform their job in unsafe conditions (unstable scaffold) or in time-pressure, safety information is not always treated properly (no feedback is perceived sometimes). When it comes to learning course, there was an example when learning was given to everybody, it happened just after the serious accident that lead to a worker`s death.

2. Practices concerning employee involvement/communication

Informal communication is underdeveloped both between the co-workers and between migrant workers and management. Migrants don`t perceive being involved in discussions, which are held in Norwegian, they don`t perceive that informal communication between the co-workers is encouraged by the management. At the

same time they appreciate the translation of written documentation and use of presentations, though it is not always done.

3. Perceived discrimination/separation

The informants perceive being discriminated, this is associated with the way management treats the recommendations coming from migrants, the way work is organized (workers of different nationalities are made work separately), with more perceived time-pressure for migrants, perception of more positive treatment of Norwegians in general – for example, as perceived by migrants, the hours of a Norwegian worker are never cut.

4. Safety compliance

The level of compliance is high, the workers are afraid to be fined or to miss the job. However, when nobody sees, they often break the rules. They claim to comply with all the orders. Sometimes, they even perform the job in unsafe conditions as a result (unstable scaffold). It happens that they break the rules because of time-pressure (climbing the ladder without securement)

5. Safety participation

The workers don`t report accidents, don`t help the co-workers, make safety-related recommendations seldom, don`t go out of one's way to look out for the safety of other crew members, attend non-mandatory safety-related meetings seldom, don`t initiate safety-related workplace change, are not involved in whistle-blowing at all. Some connections between the level of participation and management practices/safety climate. are detected.

6. Perceived behavior of Norwegian workers

As perceived by the informants, Norwegians often make recommendations, proposals, get some rewards for it, they discuss a lot during the meetings, they will never climb the ladder if nobody secures them, they would never work on an unstable scaffold. As the migrants themselves explain this difference – it is because they are more protected, they are the members of Workers Union and management knows it, thus they don`t afraid of expressing their opinion, of rejecting to work in unsafe conditions etc. It is also important that they speak their own language.

4.2.2 Data from tertiary sources (Fafo report, 2007:3)

4.2.2.1 The flow of migrant construction workers to Norway and its impact on HSE

The Norwegian building sector has a long tradition of using foreign labour during periods of boom.

Since the enlargement of the EU and EEA on 1 May 2004, a relatively large number of Eastern European workers have arrived to Norway, compared to the other Nordic countries. The most important explanation is the high demand for labour, particularly in the construction industry. Fafo's survey[1] among leaders in 1 244 construction enterprises shows that around 20 per cent of the enterprises are now using labour from the new EU member states, or have done so during the past year. The majority of these – around 60 per cent – used East European labour hired from manpower suppliers or employed by sub-contracting firms. A key issue in this context is that *Norwegian regulations do not set down requirements as to who may operate a manpower supply firm or an employment agency*. Few conclusions can thereby be drawn on the quality assurance routines these firms follow with respect to their employees, for example in terms of training (Fafo report, 2007).

In the survey, enterprise leaders were asked whether the use of East European labour could give rise to hazardous situations. The results show that one in three believes that the use of East European labour may create hazardous situations, and almost one of five reports that this has in fact occurred. The regional safety deputies and the labour inspection authorities confirm this impression (Fafo report, 2007).

The question which arises in this aspect is whether the increased publicity has spurred enterprise leaders to *«believe that this is so, without quite knowing".* On the whole, enterprises that do not use or have not used Eastern European labour take a more negative view of the HES challenges than enterprises that have direct experience. This

1 The survey represents a more in-depth study of the results of an enterprise survey undertaken by Fafo in January-April 2006, in which a total of 5,104 enterprises from four Norwegian industries (construction, manufacturing, hotel/catering and cleaning) were questioned about their use of East European labour (Dølvik et al. 2006), commissioned by the Norwegian Research Council. The survey in the construction sector was commissioned by the Board of the Fund for the Regional Safety Deputies. A number of other organisations and public authorities have provided financial support for the project: The Labour Inspection Authority, The Federation of Norwegian Construction Industries, the Norwegian United Federation of Trade Unions, The Norwegian Union of General Workers and the Norwegian Directorate of Customs and Excise.

scepticism may easily infect the entire industry, in particular because of the many media reports on hazardous situations caused by foreign workers (Fafo report, 2007).

It is important not to forget that the industry has faced major challenges over the years with regard to HES, irrespective of labour migration. In spite of all the rules and regulations, many workers in the construction industry observe that, even though the formal HES requirements are usually in place, practices may leave something to be desired. The risk of injuries and accidents is high, and the safety efforts are complicated, due to the prevailing focus on project progress and completion. In general, the main challenges seem to be related to improvement in communication and coordination routines (Fafo report, 2007).

4.2.2.2 Norwegian companies addressing the problem

According to international literature, companies seem to realize that a workforce with different cultural backgrounds can lead to difficulties, but Bukman et al. (2010) conclude that these backgrounds are hardly considered when examining occupational safety policies. In their study on best practices, they found that only a few companies that work with migrants had specific safety measures, and that almost all measures were focused on language issues. (Starren et al., 2013)

As for Norwegian companies, according to Fafo, enterprise leaders who use East European labour report that the need for training is comprehensive and that the safety risk increases when such labour is used, irrespective of its form of affiliation. It would be therefore reasonable to assume that enterprises provide training in order to prevent deterioration in workplace standards, even if a single employer is formally responsible for this (Fafo report, 2007).

But despite the needs of enterprises, the survey shows that 23 per cent of the leaders rely on East European workers and firms familiarising themselves with Norwegian HES regulations. A total of 16 per cent of enterprises reported that training takes place at home – i.e. before the workers arrive at the Norwegian workplace. A full 15 per cent of enterprise leaders reported that they have no knowledge of how East Europeans receive information on Norwegian regulations. Consequently, many Norwegian enterprises have no control over whether workers have been trained or the kind of training they have received (Fafo report, 2007).

Among enterprises that do offer training or other measures, the most common forms are HES training (40 per cent) and bilingual supervisors (38 per cent). Furthermore, a total of 31 per cent of enterprises provide skills training, 21 per cent offer language

courses and 17 per cent have made use of interpreters. The difference in offers for workers who are directly employed and workers who are leased or employed by sub-contractors is reported by Fafo. With regard to training there are also significant differences between small and large enterprises. Nearly half of the smallest enterprises, having from one to nine employees, have enacted none of the measures described above. On the other hand, some of the enterprises have enacted several measures in parallel, and some of these have certainly provided training without being the responsible employer. But in light of the pronounced need for training reported, the authors of Fafo report conclude that *enterprises are not very well prepared to take on foreign labour in a proper manner* – irrespective of whether they are responsible for training or not (Fafo report, 2007).

As it will be mentioned further, the regulations state that all concerned workers are entitled to information that is comprehensible. As it is concluded by Fafo, *there are only few examples of information material, such as safety rules and plans, being translated into relevant languages. The main rule is that workplaces do not offer such material (*Fafo report, 2007).

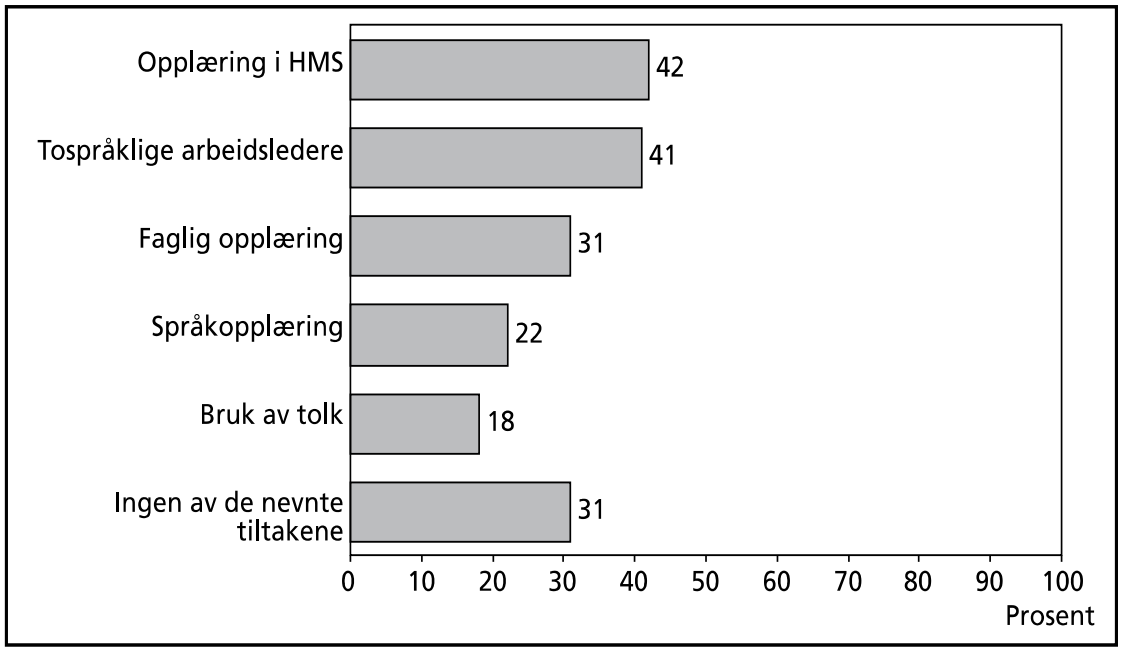

Figure 8 Percentage of enterprises providing different forms of training/other measures to Eastern Europen workers. Adopted from Fafo report (2007:61).

4.2.3 Legal requirements (Norwegian authorities addressing the problem)

Norwegian authorities are addressing the problem of safety within building and construction with the help of HSE regulations and policies.

The Norwegian Working Environment Act (2005) obliges the employer to ensure a fully satisfactory working environment, including safe and secure working conditions. All Norwegian enterprises must address health, environment, and safety (HES) issues in a systematic manner according to law. In 1992, a regulation was introduced with the purpose of ensuring that enterprises established internal control systems for systematic surveillance over the quality of HSE efforts.

For building and construction projects involving more than one employer, a written agreement must be reached, that will regulate the responsibility for coordination of safety issues during the fulfillment of the project. The Regulation of Safety, Health and Working Environment on Construction sites (Construction Client Regulation)[2], was adopted in 1995, implementing EU requirements in this field. The new version of The Regulation was adopted on the 1th of January 2010. The Regulation stipulates that clients are responsible to make a OHS-plan on their construction sites and to appoint a coordinators for OHS issues. The objective is to ensure that OHS issues are addressed during construction design and are followed up systematically during the construction phase. The employer is responsible for familiarizing workers with the OHS plans for the site. According to the Construction Client Regulation, information must be **comprehensible** to the workers concerned.

Either in the Norwegian Working Environment Law, or in the Construction Client Regulation, no special attention is devoted to the problem of leased construction workers, in spite of the fact that they are subject to work-related injuries much more often than the others. Both legal acts oblige the employer to provide training and learning for the workers, even if the employer is a recruitment agency. At the same time there is no statutory obligation for recruitment agencies to have special competence in the sphere of HSE.

The only place where the problem of leased workers is mentioned somehow is the Regulation on ”Organization, management and cooperation” from 06.12.2011. It stipulates the following requirement: ”The owner of the organization which does not employ workers and which through use of equipment and fulfillment of job can expose workers to a danger, must **make sure** that workers have got necessary learning and qualifications. Learning must be repeated if it is necessary. Learning should be given in the language workers understand” (Chapter 8, p. 8.1). The regulation stipulates as well in several places that all the information given to workers must be ”understandable”.

2 Client: Any natural or legal person for whom a construction project is carried out

The above requirement stipulates in fact that the company where the workers directly perform their job must “make sure” they got learning, it does not mean that the company **must** provide this learning. How it should ”make sure” is, however, unclear. It is also stipulated that learning must be repeated if necessary, but it is not clear who decides whether it is necessary or not. Apparently, it is the management of the leasing company again.

4.3 Discussion of results

In this part of the paper all the empirical findings presented in the previous section will be sistematized according to research questions and connected to relevant theoretical contributions as well as between each other. In such a way all the findings will be explained and the relationship between the components of the research model will be revealed (See figure 5). The main aim here will not consist in proving or refuting the theories, but rather in explaining the findings and revealed interrelations between them with the help of these theories. This is consistent with the main research strategy – abductive one and research purposes. However, some confirmations or refutations will unavoidably be made as well, though this is not the main purpose.

4.3.1 What are the perceived safety-related management practices towards leased Eastern European construction workers and to what extent do they facilitate safety behavior enhancing safety climate?

Safety-related management practices represent the central issue of interest when revealing safety climate particularities. Zohar (1980) wrote that safety climate reveals the perceived priority or value of acting safely, as assessed and mutually verified by employees, *using leaders` daily actions as main clues.* This is also demonstrated in figure 5.

Two types of management practices that can influence the quality of safety climate among the workers were previously defined and explored. These are ***a.*** practices revealing management commitment to safety and ***b.*** practices concerning employee involvement and communication. They will now be discussed and the conclusion will be drawn on whether they facilitate safety behavior enhancing safety climate, which is characterized by the following features:

- *Shared*
- *Encouraging safe action* through social exchange, the absence of time pressure and feedback

- *Informed,* in the meaning that workers get big amounts of necessary safety information through both formal and informal communication
- *Based on trust*
- *Just,* in the meaning that the workers don`t perceive being discriminated in any sense

Three first characteristics are taken from Christian et al. (2009), two last are added to them, based on the analysis of relevant literature.

a. When speaking about the *first type of management practices*, the analysis of leased Eastern European workers` perceptions revealed first of all that they don`t perceive Norwegian management being committed to safety as strong as to the needs of production: the workers don`t get general HSE learning course and training, they are often in time-pressure and sometimes are made work in unsafe conditions. Such perceptions create safety climate where the *unsafe* behavior is in fact facilitated by the management. If safety climate is a perceived priority or value of acting safely (Zohar, 1980), then this value is quite law among the foreigners. This climate does not meet the criterion of safety behavior enhancing safety climate offered by Christian et al. (2009), namely such as "encouraging safety action". The brightest example in this respect was one when the worker whose safety remarks were mistreated lost motivation to make any safety remarks in future. Moreover the absence of safety learning and training does not make it possible to speak about the "informed" climate.

Such position of management with regard to the balance between production and protection seems to be connected to the lack of understanding that HSE is economically profitable and must be seen as one of the organizational goals, not an obstacle on the way to them (IAA Survey, 2011). Several examples of how being committed to safety can bring economic gains were got during the interviews: 1.when the informants indicated that being in a hurry they perform the job of such a bad quality that it must be redone afterwards, 2. when a worker was performing a job on an unstable scaffold and it took him two hours instead of 20 minutes as normally.

When it comes to the absence of general HSE learning course, this practice seems to be directly connected to the legal provisions. The point is that both Norwegian Working Environment Law and Construction Client Regulation oblige the **employer** to provide training and learning for the workers, even if the employer is a recruitment agency.It is however stipulated in the Regulation on "Organization, management and cooperation" from 06.12.2011 that "the owner of the organization which does not employ workers and which through use of equipment and fulfillment of job can expose workers to a

danger, must **make sure** that workers have got necessary learning and qualifications. Learning must be repeated if it is necessary" (Chapter 8, p. 8.1).

Thus, whether the leased workers will get learning course within the company they perform their job or not is left for the owner of the company to decide and, as it comes from the interviews, many of them decide not give the course to the leased workers. Recruitment agency in its turn does not have any resources to provide HSE training and learning either. This is not required by law, that the recruitment agencies must have competence in the field of HSE. As a result of such regulation, most of the leased workers don't get any HSE training and learning at all (it is also mentioned in the Fafo report (2007)). Hence, it becomes evident that there is a **white spot** in the regulation which causes the observed phenomenon of the absence of general HSE learning and training for the leased workers.

b. Analysis of perceptions of *practices concerning employee communication and involvement* revealed that leased Eastern Europeans don`t perceive being involved in any sort of decision-making, they don`t take part in the discussions during the meetings, most of them don`t have any sort of informal communication either with co-workers or with management, Norwegians and non-Norwegians are made work separately and no informal discussion is encouraged by the management. Moreover, as perceived by the migrants, it is a common practice within Norwegian management to dismiss the migrants who express dissatisfaction or make critical remarks.

The leader-member exchange, emphasized by Christian et al. (2009) as one of the characteristics of safety climate, is not developed enough according to the perceptions of migrants. Christian et al. (2009) argued that leader-member exchange must be based on egalitarian communication with respect to non-routine problems, however as it comes from the interviews, the workers don't feel free to talk to their Norwegian managers about everything that bothers them, they don't complain and management apparently supposes that they are satisfied with everything, however this is not necessarily the case. They are just afraid to be dismissed. At the same time they feel free to talk to their direct employer – which is of the same nationality as them. This observation corresponds to the argument of Harrison and Klein (2007) that people of one nationality feel closer to the similar others.

The underdeveloped level of communication, especially informal one, between migrants and Norwegian management and between migrants and Norwegian co-workers leads to the fact that safety climate among them cannot be called either informed, or shared, or being based on trust, because trust is based on openness which is absent in this case.

4.3.2 In what way does the management treat national diversity of leased Eastern Europeans as perceived by the latters and in what way does it influence safety climate?

Safety climate among migrants is initially subject to negative influence of national diversity within the workers (See figure 5). That was emphasized, for example, by Starren et al. (2013). Harrison and Klein (2007) argued in this respect that within organizations people feel attracted to similar others and interact less with coworkers that they perceive as different. As a result separation occurs that hinders social exchange, lower level of trust, worse information flows and safety climate cannot be called “shared”.

However, it is in management`s power to change this situation (it is also demonstrated in figure 5) and theory names a tool for it – *diversity management*. But can the way management takes into account national diversity of leased Eastern Europeans be called diversity management, based on their perceptions? The answer is rather “No” than “Yes”.

Diversity management is defined as companies’ ability to give *equal chances* to and *utilize resources of people from diverse “cultures”,* where culture could mean nationality, ethnic group, or gender. Diversity management implies a company's *commitment to* the diverse composition of the workforce as well as their *diverse needs* (Magoshi and Chang, 2009).

An organizational climate open to diversity is an environment in which individuals respect the views of those who are different and where *activities are not organized on the basis of demographic similarities among group members* (Hobman et al., 2004 as cited in Lauring and Selmer, 2012).

High-quality diversity management is based on the belief that *diversity is a resource for learning, change and renewal* (Ely and Thomas, 2001).

Four characteristics of high-quality diversity management can be thus defined:

1. Gives equal chances to the workers of different nationalities – management of equal opportunities
2. Takes into account diverse needs of the workers of different nationalities
3. Does not separate work-forces of different nationalities
4. Making use of diversity, rather than seeing it as an obstacle

It is difficult to judge whether these or those management practices are special towards leased Eastern Europeans, or they are the same towards everybody, i.e. whether practices towards Norwegians and non-Norwegians are the same. It is not known, for example, whether Norwegians are involved in decision making, whether they are in the same time-pressure or not etc. The conclusions can only be based on what the informants claimed and perceive.

However as it is proved the perceptions DO in fact matter a lot in this respect (See section 2.5), because the perceptions guide the behavior and create climate. It is widely demonstrated theoretically and empirically that organizational justice perception by employees directly affects social exchange relationships between employees and the organization and those who perceive procedural injustice will fail to engage in organizational citizenship behavior (safety participation being its part) (Mamman et al., 2012). Moreover studies of the relationship between organizational properties and level of intra-organizational trust have shown that worker involvement and perceived procedural justice are among the properties that seem to foster *trust* between workers and management (Antonsen, 2009), thus having impact on safety climate.

The analysis of empirical data revealed that leased Eastern Europeans DO perceive being discriminated. They feel that Norwegian management treats them differently from Norwegian workers, for example, they have never heard that the hours of Norwegian workers are cut; they perceive that management treats safety recommendations of Norwegians more seriously, they observe that Norwegians are working much more slowly and are not put in the strict time constraints. They can see that Norwegian management listens to the opinion of Norwegian workers more than to theirs, that Norwegians are involved in discussions much more than them. Thus, according to the workers` perceptions, the management cannot be called giving equal opportunities (see the first criterion of high-.quality diversity management above)

Language barrier is very poorly addressed by the management, all oral discussions are held in Norwegian, this increases the feeling of separation, less informed safety climate. The fact that language barrier is poorly addressed points at deficient diversity management (see the second criterion of high-.quality diversity management above).

Moreover, the migrants claim that they are afraid to tell something against management orders because they perceive they can be easily dismissed in comparison to Norwegian workers who are protected by permanent contract and membership in Workers Union. Level of trust towards Norwegian management, emphasized by Antonsen (2009), is thus quite low among migrants.

As it has already been mentioned the workers of different nationalities are made working separately. This practice does not encourage social exchange and informed climate and does not correspond to the third criterion of diversity management, indicated above.

Hence, safety climate among leased Eastern Europeans cannot be called either just, or being based on trust, or shared.

As a result of all these perceived practices, it becomes obvious that none of four criteria of diversity management is met. The managers don`t seem to understand that diversity can be the source of learning, of creativity and changes for the best. It rather represents an obstacle, but the management does not seem to be coping with this obstacle (does not make translations every time, does not give extra learning etc.)

4.3.3 What are the main patterns of self-reported safety behavior of leased Eastern European workers and to what extent are they shaped by the perceived management practices?

On the first sight, the main patterns of safety behavior of Eastern Europeans are characterized by rather high level of compliance, but very law level of participation. Interestingly, high compliance seems to be connected to poor safety climate. The workers don`t feel free to tell anything against management orders or criticize the procedures being afraid to be dismissed, not trusting the management. This “blind” compliance to management orders can be destructive and even lead to injuries. This can happen if the management is not committed to safety and ignores safety precautions. An example of such ignorance was given by one of the informants who had to work on an unstable scaffold. In this case obedience (he agreed to work in unsafe conditions) could lead to injury, and it was just the matter of luck that it did not.

Another interesting point to discuss is “silent deviations” (Tinmannsvik, 2008). The interviews revealed that such deviations are quite popular among leased Eastern – Europeans. They often violate rules when they are not controlled. In such a case they ignore the requirements which they see as unnecessary or uncomfortable (like taking off the helmet when fixing the floor), or ones hindering them from performing the job on time (climbing the ladder without anybody securing). Such sort of deviations seems to happen because of the law degree of employee involvement by the management and law quality of safety climate. The importance of employee involvement was among the others emphasized by Weick and Sutcliffe (2007), meaning that decisions must be made in the front line and migrate to the persons with experience and expertise to solve the problem. Antonsen et al. (2008) proved that employee involvement leads to

the absence of silent deviations, reducing the gap “work as imagined” and “work as actually done”. However, the interviews revealed that this destructive gap is large when it comes to leased Eastern European workers.

The theory of employee involvement claims that workers know better what risks they run at the workplace, so they can certainly judge whether it is still safe to work violating some “unnecessary procedures”. However the dangerous thing about such violations is exactly that they are “silent”. Let`s look at the example of taking the helmet off when fixing the floor. It can be supposed that it is not so dangerous to take it off in such a situation, the biggest concern is that it is made ”when nobody sees”. The point is that the others, including management, are sure that the helmet is on and is protecting the workers. May be if they knew that the helmet is not on, they could introduce some extra barriers instead of helmet. It seems not so dangerous to take the helmet off when fixing the floor inside the room, but if a “silent deviation” happens with helmet, it is quite possible that there are other examples of such silent deviations among migrants.

The same situation is with ladder. According to the workers, they often go up without anybody securing them. As they claim, this happens because of the lack of time. If they told the management about that, the management (committed to safety) could take some measures, for example, give more hours to certain tasks supposing the use of ladder etc. But because of deficient communication between workers and management, the workers continue to risk their lives, climbing unsecured ladder.

According to Morrow et al. (2010), understanding which factors motivate unsafe behavior can provide opportunities for interventions to enforce safety, reduce noncompliance, and protect the work system from vulnerabilities. So, it is now known that wearing helmet fixing the floor is uncomfortable – why not to let the workers fix it without helmet then, having evaluated possible risks, of course? Workers go up the insecure ladder because of the lack of time – why not to give a little bit more time for them in order to reduce time-pressure?

Therefore, silent deviations can also indicate that the procedures are not appropriate and need changing, because the workers don’t break rules without reasons (Antonsen et al. 2008), however the managers will never know that the procedures are deficient if they don`t have dialogue and egalitarian communication with employees (emphasized among others by Christian et al., 2009). This is exactly the case with leased Eastern Europeans. Already named absence of informal dialogue with Norwegian management, revealed through interviews, explains the fact that the migrants are involved in silent deviations.

Thus, the high compliance of leased Eastern European workers is rather “visible”, based rather on fear, than on the high organizational commitment and consciousness. Due to the perceived law management commitment to safety and employee communication/involvement together with perceived discrimination resulting in law quality of safety climate of migrants, revealed in the above sections, the amount of silent deviations is high among them.

There were only two simple examples of ”silent deviations” revealed during the interviews, but there are certainly more of them and may be they are more serious. The fact that they were revealed during a simple conversation emphasizes the fact that all such non-conformities can be revealed by the management in case it has the relations of trust with the employees and open dialogue is practiced. However according to the interviewees, this is not the case. The workers don’t trust their Norwegian management and don`t have any dialogue with it.

Speaking about safety participation, it can be claimed that its level is very law according to all seven parameters, defined previously (See section 3.2.5). The workers don`t report accidents, don`t help the co-workers, make safety-related recommendations seldom, do not go out of one’s way to look out for the safety of other crew members, rarely attend non-mandatory safety-related meetings, don`t initiate safety-related workplace change, are not involved in whistle-blowing. Law level of participation seems to be influenced by the management practices/safety climate as well.

Such reluctance to take proactive position with regard to safety can be explained by the law degree of organizational commitment resulting from the perception of injustice, revealed through the interviews. It is widely demonstrated that procedural justice mediates the effects of management practices on employees’ commitment to organizations (Magoshi and Chang, 2009) and those who perceive procedural injustice will fail to engage in citizenship behavior (Mamman et al., 2012). Thus, perceived injustice leads to law level of commitment and to law level of participative behavior. The interviews revealed high degree of perceived procedural injustice among leased Eastern Europeans.

Law organizational commitment is also resulting from deficient diversity management. Experts argue that when organizations manage their diverse workforce effectively, employees exhibit desirable behaviors which contribute to the success of the organization. Conversely, failure to manage diversity can lead to conflict and disfunctional behavior which can have severe consequences for the organization (Mamman et al. 2012). Judging by the law level of participative behavior, Norwegian

management fails to manage the diverse workforce effectively.

This failure is demonstrated by deficient practices, such as:

- *making the workers of different nationalities are made work separately* (named by Hobman et al., 2004 as cited in Lauring and Selmer, 2012), which is exactly the case with leased Eastern Europeans

- *devoting very little special attention to migrants with respect to safety issues* (emphasized by Schubert and Dijkstra (2009): meetings are held in Norwegian, no extra learning course is offered to the leased migrants,

- *discriminative treatment* (when safety recommendations of migrants are mistreated and the worker loses the motivation to make them again, cutting hours increasing time-pressure etc.).

Interestingly, the informants themselves see the difference in their own behavior and the behavior of Norwegians: Norwegians often make recommendations, proposals, get some rewards for it, they discuss a lot during the meetings, they would never climb the ladder if nobody secures them, they would never work on an unstable scaffold. As the migrants themselves explain – it is because Norwegians are more protected, they are the members of Workers Union and management knows it. Moreover they are permanently employed and are not afraid to be dismissed, that is why they are not afraid of expressing their opinion, of rejecting to work in unsafe conditions etc. It is also important that they speak their own language. Language barrier as national aspect influences behavior a lot.

It is thus clear that the way management treats the diversity of workers influence both safety compliance and participation. Of course, it is possible to suggest that some national predispositions influence the employees` behavior as well, for example, it is very possible in case of the reluctance to be a whistle-blower which was revealed to be characteristics of absolutely all the informants. Such unanimity in the answers to the question about whistle-blowing can imply that this is a sort of national feature, coming probably form USSR times, when whistle-blowers were condemned to death. However, management IS able to change workers` behavior. In case management chooses appropriate policies with regard to migrants, this reluctance to be a whistle-blower could be corrected. The fact that the named reluctance is still present in the behavior of absolutely all the informants indicates the fact that management did not introduce any policies in this respect.

One more pattern that can be traced back to the national predispositions of Eastern

Europeans is being in a hurry to perform the job (which can lead to silent deviations). As they claimed themselves, they are used to work fast. However, this is just a supposition. Anyway, even if it is so, it is also obvious that if the workers were not put under the time-pressure, their behavior in this case could be corrected. This argument demonstrates that management practices (reflected in safety climate) matter much more than national predispositions when it comes to safety behavior. This is also consistent with the point of view of Mearns and Yule (2009).

What is needed in this respect is that management changes its approach to diversity and follows the strategy of transformational leadership, which has been proved to increase cohesion of a diverse team, as well as to enhance safety performance, safety compliance and safety participation (See Starren et al., 2013).

4.3.4 What is the quality of safety culture of leased Eastern European construction workers?

As it was previously discussed and reflected in the research model (see figures 5 and 6), both safety behavior and safety climate, being determined to a large extent by the perceived management practices, should be explored in connection in order to reveal the quality of safety culture among a certain group of workers, and when it comes to migrants, the way management treats their diverse national belonging is of importance. In the previous sections it was shown what sorts of practices are perceived and what sorts of behavior are realized by the migrants based on these perceptions. Hence, it is now possible to judge upon the quality of safety culture among leased Eastern European construction workers in Norway.

It seems most convenient to present the conclusions concerning the quality of safety culture in correspondence with defined criteria. See section 2.4.1.

1. In an *informed culture* the organization collects and analyses relevant data, and actively disseminates safety information (Reason, 1997). The safety culture among leased Eastern European workers cannot be called “informed”. There is no informal communication beyond the colleagues of the same nationality; the workers rarely have informal dialogue with management. They are sometimes afraid to make safety-related recommendations, sometimes language barrier prevents them from doing so, sometimes they don`t do it because of the feeling that nobody listens to them. As a result a part of necessary safety information is lost. Hence, the flows of information are neither enhanced by management, nor they are supported by the workers. Moreover the injury data don’t always get proper dissemination – when a worker have got a work-related injury having fallen from the ladder, the incident was not reported, necessary

information for learning was lost.

2. A *reporting culture* means cultivating an atmosphere where people have confidence to report safety concerns without fear of blame (Reason, 1997). Such an atmosphere is absent among leased Eastern European workers, the principle of confidentiality is violated as the workers are asked to call to the manager instead of filling out an anonymous form, the workers even don`t know that such form exists. Moreover, the fear of blame is very strong among the leased migrants, they are afraid to lose their job because of the perceived practice of dismissal of migrant workers. Thus, no reporting is enhanced and no reporting happens within leased Eastern European workers.

3. In a *just culture* errors and unsafe acts will not be punished if the error was unintentional. A just culture is based on the atmosphere of trust (Reason, 1997). When it comes to migrant workers just culture is also supposed to be non-discriminative, as the perception of injustice was proven to affect participative behavior and organizational commitment of workers in general. When the workers perceive being discriminated, the culture cannot be called just. Leased Eastern Europeans do perceive this discrimination. Moreover the level of trust towards Norwegian management is low among migrants; this fact does not make it possible to speak about the just culture among leased Eastern Europeans.

4. A *flexible culture* is based on respect for the skills, experience and abilities of the workforce (Reason, 1997). The importance of employee involvement was among others emphasized by Weick and Sutcliffe (2007), meaning that decisions must be made in the front line and migrate to the persons with experience and expertise to solve the problem. Reason (1997) also argued that respect must be earned, and this requires a major training investment. It seems that there is no respect to leased Eastern European workers` skills and abilities, they are not involved in any decision-making, they don`t perceive that their opinion counts, they don`t get general learning course and training. Hence, their culture cannot be called flexible.

5. A *learning culture* means the willingness and the competence of the organization to draw the right conclusions from its safety information systems and the will to implement major reforms when their need is indicated (Reason, 1997). The information does not get proper dissemination as it is perceived by the migrants, hence, there cannot be effective learning. The workers signals, safety recommendations sometimes don’t lead to any consequences from their on-site managers. They don’t get feedback and this fact in its turn prevents further information flows.

Moreover, it is clear that double-loop learning, highlighted by Turner and Pidgeon

(1997) and Antonsen et al. (2008) is also poorly developed when it comes to leased Eastern Europeans. They are not involved in any discussions and this fact prevents revealing deficient procedures existing within the organization. The willingness and competence to reassess and change safety procedures is a feature of double-loupe learning.

Learning also means that an organization is able to learn not only from its mistakes but from normal practice as well and make changes, as it is argued by Weick and Sutcliffe (2007). The interviews revealed that it is not always like this. The example was given that only when a serious accident happened, the learning was provided for everybody. This example showed that the companies understand the importance of learning, however only an accident made them provide it for everybody. This fact points at the absence of ”sensitivity to operations” (Weick and Sutcliffe, 2007).

6.*Balance between production and protection* is broken, needs of production often get higher priority as perceived by migrant workers and because of time-pressure they often have to ignore safety precautions or to break safety rules.

4.4 Consistency with previous research

The results of the present research are fully consistent with the information given in the Fafo report (2007:3) and in theory.

As it has been mentioned, according to international literature, companies seem to realize that a workforce with different cultural backgrounds can lead to difficulties, but Bukman et al. (2010) conclude that these backgrounds are hardly considered when examining occupational safety policies. In their study on best practices, they found that only a few companies that work with migrants had specific safety measures, and that almost all measures were focused on language issues. (Starren et al., 2013)

The information got during the interviews confirms that very little specific measures concerning leased migrants are introduced by managers and indeed almost all of them are focused on language issues. No more measures which could have positive impact on workers` behavior and safety culture in general, except translations of instructions and visualization of some information, have been detected.

As it is concluded by the authors of Fafo report, there are only a few examples of information material, such as safety rules and plans, being translated into relevant languages. The main rule is that workplaces do not offer such material. At the same time the regulations state that all concerned workers are entitled to information that is

comprehensible. The interviews taken for the present research did not reveal any more examples of translations except translation of instructions. As the practice shows, sometimes SJA (Safety Job analysis) are translated as well.

According to Fafo report, one of three enterprise leaders believes that the use of East European labour may create hazardous situations, and almost one of five reports that this has in fact occurred, at the same time enterprises that do not use or have not used Eastern European labour take a more negative view of the HES challenges than enterprises that have direct experience - the increased publicity has spurred enterprise leaders to «believe that this is so, without quite knowing".

This information confirms that managers a priori look at Eastern Europeans as a threat to safety, not as a source of learning etc., this is consistent with the conclusions that were drawn from the taken interviews. As it is mentioned by the authors of report, it is important not to forget that the industry has faced major challenges over the years with regard to HES, irrespective of labour migration. In spite of all the rules and regulations, many workers in the construction industry observe that, even though the formal HES requirements are usually in place, practices may leave something to be desired.

It is also argued in the report that the risk of injuries and accidents is high, and the safety efforts are complicated, due to the prevailing focus on project progress and completion. This is fully consistent with the perceptions of migrants that the needs of production often get higher priority than the needs of safety. Moreover, as it is indicated in the report, in general, the main challenges seem to be related to improvement in communication and coordination routines – this is exactly what the interviews revealed – communication is very poorly developed among migrants and non-migrants, as well as between migrants and management.

Fafo report reveals that many Norwegian enterprises have no control over whether workers have been trained or the kind of training they have received but some of these have certainly provided training without being the responsible employer. The informants of the present research claimed not to have received any HSE training and this is consistent with what Fafo report reveals.

The authors of Fafo report conclude that enterprises are not very well prepared to take on foreign labour in a proper manner. The conclusion of the present study will be absolutely the same. See the next chapter.

5 Conclusion and implications

In line with the main assumption depicted in figure 6, the research problem of the present thesis reads like this:

What impact does the way Norwegian management treats leased Eastern European construction workers (as perceived by the latters) have on the quality of safety culture among them?

Summarizing all the empirical and theoretical information, analyzed in the present research, the conclusion that can be drawn is that Norwegian management does not treat leased Eastern European workers according to the principles of diversity management, affecting the quality of safety culture among them in this way.

This conclusion is based on the fact that the migrants perceive procedural injustice (discrimination), often ignorance of language barrier from the management side and separation of workforce according to nationality. Moreover, they are always in fear to be dismissed. Safety climate among the migrants reflects these perceptions and results in unsafe behavior (both in the meaning of compliance and participation). The revealed quality of safety climate and patterns of safety behavior of leased Eastern European workers point at substandard safety culture among them, which does not meet any of defined criteria. This conclusion is consistent with one of the authors of Fafo report (2007), claiming that Norwegian enterprises are not very well prepared to take on foreign labor in a proper manner.

Taking into account the low quality of safety culture among leased Eastern European workers in Norway, it is not surprising that they have higher accident occurrence than the others, as indicated in the survey made by Norwegian Working Environment authority being the departure point of this research.

The main implication of the present thesis is that the managers should change their approach to diversity and acknowledge that it is not an obstacle, but rather an asset. However, in order to make it an asset, high-quality diversity management is needed, based on the strategy of transformational leadership.

Hence, it is the task of management to create such safety climate that will encourage safety behavior, to lead such practices that will encourage safety participation and will result in the reduction of the number of silent deviations. It is its task to handle the diversity of workers in such a way that it leads to cultural exchange and use the knowledge of people in order to learn, facilitates social exchange instead of separating

workers of different nationalities. It is its task to translate all the documentation and find solution in order that everybody can take part in discussions.

Moreover, the management approach to safety in general has to be corrected. Safety should be looked at as one of the organizational goals, as a prerequisite of successful business and economic gains, something that was demonstrated in the present thesis. The management should also acknowledge its own role in the creation of strong safety culture among all the workers and the importance of such culture.

The managers are, however, not the only ones to be addressed to in this respect. The point is that Norwegian authorities encourage inappropriate management policies with regard to leased migrants, making the recruitment agencies (their direct employer) responsible for them, including responsibility for learning, training and work-related accidents etc. The companies leasing migrants are in fact made free from many obligations, concerning safety of leased workers. This seems to be an absolutely wrong approach: the workers risk their lives not within the recruitment agency and safety culture is to be strengthened not within the recruitment agency either. The workers daily perform dangerous job for Norwegian companies leasing them and these companies must take the full responsibility for everything concerning safety of these workers.

5.1 Limitations and possibilities for a future research

The present research was limited by the theoretical assumption, based on “The New View” on people`s behavior, according to which systems are initially *unsafe* and workers create safety through daily practice. Thus, only by understanding the workers` unsafe behavior being a symptom of the deeper trouble within the organization, it is possible to find strategies to improve safety culture. The assumption was also that management is supposed to find the right strategies in this respect and to guide workers` behavior.

Arguably if another theoretical perspective on how and why accidents happen and how to prevent them was taken, different conclusions could have been made. For example, if one looked at the problem from the point of “The Bad Apple Theory”, according to which human errors represent the main cause of accidents and the systems are initially safe, until the “bad apples” (humans) spoil it (See Dekker, 2006), one would apparently conclude that leased Eastern European workers are the ones to blame in the substandard safety culture among them and if not for their erroneous perceptions and behavior, everything could be fine. However, as it was mentioned, the modern

researchers are now moving away from this view of safety, which points rather at the consequence of the problem than at its real cause.

When it comes to the method, the qualitative in-depth interviews allowed for the depth of research, but less for its breadth. However, taking into account that the informants are working in several companies, it was possible to evaluate the problem in connection to the building and construction sector as a whole, not being limited by only one or several companies. Moreover, the chosen method gave the possibility to look at the social world of the informants from the inside, something that has not been made before in the Norwegian context. This gives the opportunity to understand the motivation of workers to behave in this or that way, their problems and difficulties, the nuances of safety climate within the companies they work – something that could have never been revealed through quantitative survey. The survey could though provide for the breadth of research, increasing its external and internal validity.

One more limitation is that the research problem was explored only from one side – from the side of leased Eastern European workers, their points of view were not compared to those of Norwegian workers and those of Eastern European workers that work permanently. The opinions of management could also be useful. In the present paper, the choice of informants was absolutely consistent with the way research problem was formulated and with the taken research paradigm of classical hermeneutics. Moreover, management`s opinions were partly revealed through tertiary data.

Nevertheless, the qualitative research comparing the perceptions of migrants and Norwegians could increase the reliability of the findings. This provides for the opportunity for a future research in the same field.

The research revealed that the workers appreciate a lot the way safety management is organized in the United Kingdom (6 of 14 informants have had experience of work in the UK). As the question of organization of safety management in other countries, except Norway and Eastern Europe, is outside of the scope of the present research, this information is just additional. However it indicates that it could have been useful to make a research devoted to the investigation of safety practices in the UK with the accent on migrant workers. According to the interviewees, Norway has something to learn from the UK in this respect.

5.2 From head to tail

The departure point of this research was that Arbeidstilsynet found out that leased Eastern European construction workers are involved in work-related injuries relatively

more often that those employed permanently and all of them are injured more often than Norwegian workers.

The decision was made to explore the reason for this statistics with the help of looking at the problem of safety behavior and safety climate of leased Eastern European workers (being to a large extent determined by perceived management practices) from the inside and to reveal the quality of safety culture among them in this way.

The theoretical limitation was made - the approach to accidents happening, based on the idea that the systems where people work are initially unsafe, workers create safety through daily practice and management is able to correct this practice and improve safety culture in this way.

Safety climate of diverse work teams is a priori worse than of the teams of one nationality, because of cultural differences, language barrier etc. In its turn safety behavior is proved to be dependent on safety climate, but also on the national predispositions of workers. On the other hand, management can cope with all these challenges if managing diversity of workers in a proper way and creating thus a safety behavior enhancing safety climate among migrants.

Hence, it comes that the way management treats the diversity of nationalities within working teams, and more importantly the way workers perceive it, influences both safety climate and behavior and thus safety culture quality, as depicted in figures 5 and 6.

As the aim of the research was to understand the workers` world from the inside, the abductive research strategy was taken as the main one and empirical data was mainly gathered through in-depth interviews. The interviews revealed a lot of relevant information and based on this data it became possible to judge upon how the workers perceive management practices, what safety climate is created among them, how they perceive the management treating their diverse national belonging, why they choose this or that sort of behavior in particular situations.

As a result the conclusion was made that because of low quality of safety climate among migrants, determined to a large extent by the fact that migrants perceive discrimination and injustice from the managers` side, prevent them from behaving safe and safety culture among them is substandard as a result.

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7 Interview guide

Introduction

First of all, let met thank you that you agreed to give an interview. The interview will take approximately 1,5 hour and all the information will remain anonymous to any third parties.

The interview will concern your perceptions of the practices of Norwegian management and your behavior at work. Our conversation will be mainly related to the issue of safety at work and the problem of migrant workers in this respect. The statistics says that leased Eastern European workers in Norway are injured at work more often than the others and my aim is to find out why.

The interview is supposed to be taken in the form of free conversation, but I will ask the questions which will guide the process.

You are free to say anything you want, any information is useful for me. You are as well free not to answer the questions which you don`t want to answer without explanation. If you have any questions yourself, feel free to ask them anytime.

If you don`t mind, I will write down all the information I consider relevant for my research, including citations.

Is everything fine? If yes, let us start.

Basic information about interviewee

Number of years of working experience in Norway	
Number of years of working experience within construction	
Size of the company	
Age	

Part 1. Group of questions aimed at finding out workers' perceptions of differences between Norwegian and their home country construction work site safety practices

1) Will you say that there is a big difference in the way work is organized in Norway and in your country with regard to safety? What positive and negative sides of work in Norway can you name?
2) Do you feel YOU work in a different way than at home with regard to safety? What is the difference?

3) What is it difficult to get used to, working here (in Norway)?

Part 2. Group of questions aimed at exploring safety climate within foreign workers and their safety behaviour.

Safety climate in Norway

Management commitment to safety

4) Have you got the general HSE learning course, when you began to work in the company? What about training?
5) Do you perceive that Norwegian management has high concern for safety?
6) How often does your manager put attention to the necessity of reporting, of taking safety precautions?
7) Do you sometimes have to work in an unsafe manner?
8) In which cases?
9) Can you say that you get sometimes too short time to perform some job, so that you really must be in a hurry to make it done on time?
10) Have you ever tried to influence the HSE-conditions at your workplace by talking to managers? Did you get feedback?

Employee involvement/communication

11) Do your management encourage communication between colleagues? How often do you communicate with Norwegian co-workers? On what occasions?
12) Do you feel being involved, do you feel that your opinion counts? (participation in safety meetings, participation in safety rounds, feedback etc.)
13) Do your managers organize open discussions between all the employees? Or there are separate meetings for migrants?
14) How often do you get project-specific learning in the form of instructions etc.? Do you understand what instructions say?
15) Do you sometimes talk to your Norwegian management in an informal atmosphere?

Safety behaviour

Compliance safety behaviour

16) What is the main reason you take safety precautions, follow safety rules?
17) Do you sometimes ignore to take on PPE in designated areas? Why?
18) Do you try to follow all safety requirements?
19) Do you sometimes violate safety rules? Why?
20) Do you always obey to what your management says?

Proactive safety behaviour

21) What is the main reason you actively/passively participate in influencing HSE conditions at your work-place?
22) Have you ever stopped working if you perceive that it is not safe for you or the others?
23) Have you ever asked your colleagues to stop work when you think the task in question is being carried out in a risky manner?
24) Have you ever reported work-related accidents with the help of the special form?
25) Have you ever called reported unsafe behaviour of the colleagues to the manager? Why?
26) If you are required to work in a manner that you perceive unsafe, do you tell the manager about it? If no, why?
27) Do you sometimes make safety-related recommendations?
28) Have you ever been involved in helping new co-workers?
29) Do you attend safety meetings when they are voluntary?
30) Do you sometimes go out of your way to look out for the safety of other crew members?
31) Do you tell the manager if you observe the unsafe conditions at the work-place or see the things that could be better/safe?
32) Do you read carefully the papers given by the management before signing?"

Part 3. Group of questions aimed at exploring workers` perceptions concerning diversity management

33) Do you feel, you are treated in another way than Norwegians? Do you feel being discriminated?
34) Does your company have some special measures, concerning you, as a migrant worker?
35) Do you always understand what your manager is saying to you or what the instructions and rules say? Do you get instructions at your native language, or just English and Norwegian?
36) If you don't understand, do you tell the manager about it? For example, "I did not understand the instruction – give me the translation". If no, why?