EMPLOYEE ENGAGEMENT AND ITS POTENTIAL INFLUENCE ON SELECTED PERFORMANCE METRICS

A case study

Master’s Thesis
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Abstract
The current thesis has been written as an answer to two developments: recent rise in popularity of the concept of ‘employee engagement’, and lack of agreement, among academics, on its very nature or even existence. It attempts to examine employee engagement’s essence, antecedents, and consequences. Accordingly, it is constructed in a somewhat hierarchical manner. It includes extensive literature review, qualitative study, and quantitative research.

Literature review consists of two parts. First part introduces central assumptions of employee engagement and the job demands–resources (JD-R) model. The second part addresses employee engagement’s potential positive consequences. It explores such outcomes as financial results, turnover, safety, proactive behavior, task performance, organizational citizenship behavior (OCB), and absenteeism. Qualitative research examines how employee engagement is perceived ‘in practice’, and attempts to justify the very application of absence rates in the following quantitative study. Finally, quantitative part tests the extent to what employee engagement may affect the absences.

The thesis uses triangulation as a methodological approach, ergo both qualitative and quantitative methods. In the qualitative part, information was gathered through extensive individual interviews and focus groups, at the case company. In the quantitative part, regression and statistical equation model (SEM) were employed to calculate the relationship between the total amount of sick time and the results of the employee engagement index, at the case company.

As a result, based on the available literature, the thesis introduces a discrete employee engagement definition and compares it against own qualitative data. It corroborates the job demands–resources (JD-R) framework, as a useful model to study employee engagement antecedents. It finds a negative association between employee engagement index and absence rates. It also confirms a conditional suitability of absence rates and safety outcomes as performance metrics with relation to employee engagement, at the case company.

Employee engagement key features appear to be largely applicable in the case company. However, due to company’s specific features (e.g. safety needs) some of the construct’s elements may not be transferable into other working environments. Hence, the current thesis advocates that while it is advisable for an organization to take into account available academic and commercial employee engagement interpretations, it may also be worthwhile to look for an ‘own’ version of the concept.

Keywords employee engagement, job demands-resources model (JD-R), absence rates, safety outcomes, business performance
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1 Introduction

1.1 Context
As a response to globalization and technological development, the nature of contemporary work has changed dramatically. There is much less demand for physical work, job roles consist of more responsibilities, and employees are required to be flexible and ready for constant change. Such models as jobs and employees ‘for life’ are becoming ‘a thing of the past’. A committed employee does not equal a desired employee, and a satisfying workplace is not perceived as a desired workplace. It has become obvious that material remuneration in exchange for work well done is not a sufficient foundation for an employee-employer relationship. The increase and change in job demands necessitates an increase and change in job resources. In order to ‘take advantage’ of capable employees, organizations need to respond to their needs and allow them to truly express themselves at work. When an employee, who is already preoccupied with broad responsibilities, is asked to deliver more, and is exposed to a torrent of new information, requires a complex approach.

At the same time, even in the globalized world, countries, organizations, and employees differ largely with respect to socio-economic contexts, goals, needs, or behaviors. Consequently, there is no silver bullet or an ultimate set of HR guidelines that could be implemented in all organizations. In order to make sure that employees engage with their jobs, organizations need to identify their very own demands and resources. Moreover, they need to recognize how to generate a balanced work environment, where such resources as the level of autonomy, competency, social support, development opportunities, material and non-material rewarding match with all the physical, cognitive, and emotional demands of the work.

The above-mentioned changes have ‘coincided’ with the rise of the new academic construct of employee engagement, which aspires to embrace cognitive, emotional, and physical dimensions of a modern job and a modern employee. Furthermore, technological development and a retreat of purely physical jobs have made it possible for the concept to be applied to a wider group of employees, especially blue-collar workers. Finally, the fledgling field of employee engagement
studies, which appeared in research only in the early ‘90s, has already gained an unprecedented popularity among large corporations and consultancy companies. Especially, prospective influence of employee engagement on business performance is of a great interest for many organizations. At the same time, consultancy firms’ research on the topic is not transparent enough and short in quality (Bailey et al. 2015, Truss et al. 2013). Concurrently, academics have conducted a number of studies (214 peer reviewed studies until 2015) that have largely been concentrated on the definition, drivers and outcomes of employee engagement (Bailey et al. 2015). These have been, however, mostly cross-sectional and self-reported data research.

It appears that the field particularly lacks qualitative and longitudinal studies. Interestingly, even though the very construct of engagement was brought into prominence as a result of qualitative studies (i.e. Kahn 1990), this method has been almost entirely neglected in the field. The few qualitative studies, such as those of Schaufeli et al. (2001), Bakker and Demerouti (2007), Engelbrecht (2006), and Jenkins and Delbridge (2013) are exceptions, and are certainly not sufficient for exploring the phenomenon. Furthermore, only a limited number of quantitative research looked specifically into employee engagement impact on absence rates (e.g. Sagie 1998, Bakker et al 2003, Darr and Johns 2008, Schaufeli et al 2009, Hoxsey 2010, Soane et al 2013, Merrill et al 2013). Consequently, no clear conclusions can be drawn on the given relationship.

Accordingly, employee engagement studies have not produced so far any broadly supported definition of employee engagement; hence, measurement tools and interpretations of the results may largely vary between studies. Attempts to find a rare common terminological ground (such as Mason 2010) and shared key features of employee engagement are still scarce.

Consequently, the current thesis aims at contributing to the field the following ways: by proposing a definition of employee engagement, by expanding qualitative knowledge on the constructs itself, its antecedents and consequences, and by calculating quantitative relationship between employee engagement and absence rates.
1.2 Thesis rationale and structure
The current thesis has been written as a response to the above context, namely the occurrence of the ‘new kind of’ employee, rapid changes in the nature of work, and a high demand for qualitative and longitudinal academic studies on the construct of employee engagement.

Consequently, the thesis approaches employee engagement in its entirety including its antecedents (demands and resources), essence (cognitive, emotional, and behavioral), and potential consequences (selected business metrics).

To achieve this, the thesis will attempt to clarify the very meaning of employee engagement and, based on the available literature, introduce a discrete definition. Furthermore, it will provide key examples of research that have identified and measured direct connection between a level of employee engagement and a variety of business outcomes. Finally, it will investigate the construct of employee engagement, with its antecedents and consequences, in the company X.

The thesis will use three sources of information: current academic literature, qualitative research on case company employees, and quantitative investigation on case company absence data. This will help to better understand the phenomenon and to fill in the methodological gap in the existing studies. Consequently, the thesis will use triangulation as a methodological approach, where knowledge gained from one source is applied to explore information from the other (Fig. 1). In other words, the author will analyze what has been learned on the topic of employee engagement, and later confront this knowledge with employees themselves, and with relevant employee numerical data. Accordingly, the thesis is constructed in the following way: literature review on the concept of engagement, literature review on employee engagement potential impact on business outcomes, methodology, qualitative and quantitative findings, and discussion and conclusions.
The purpose of the first part of the literature review is to introduce fundamental assumptions of the employee engagement that reoccur in the academic studies and to discriminate the concept from other similar academic notions. Therefore, following the classification by Mason (2010), nature, variability and the target of employee engagement will be explained. Furthermore, employee engagement will be compared with such terms as job satisfaction, organizational commitment, and job involvement. Employee engagement will also be approached from three different perspectives, which include psychological conditions, Job Demands – Resources (JD-R) model, and employee engagement as energy. Finally, based on the discussed theoretical framework, a thesis model and definition will be formulated.

Whereas the first part deals with the antecedents and the essence of employee engagement, the second part of the literature review will address its potential positive consequences. It will attempt to critically evaluate the state and significance of current business and academic research regarding the relationship between employee engagement and representative business metrics. In separate subchapters, it will deal with such outcomes as financial results, turnover, safety, proactive behavior, task performance, organizational citizenship behavior (OCB), and Absenteeism.

Methodology chapter will endeavor to clarify and justify theoretical underpinnings, ethical challenges, and practical solutions to the research method of the thesis. Therefore, it will explain
the significance and concrete implications of triangulation as a research approach. It will describe the subject of the research, ergo the company X employees. It will illustrate criteria for trustworthiness for both qualitative and quantitative methods. Finally, it will describe in detail components and the application of the methods in the case study.

Qualitative segment of the findings chapter will attempt to find out how employee engagement is perceived ‘in practice’ at the company X, and to justify the very application of absence rates in the quantitative study. Qualitative findings will be divided into the following three themes: concept of employee engagement, absence and safety metrics, and job demands-resources (JD-R).

Quantitative segment will aim at testing whether employee engagement has an effect on absence data, at the company X. Consequently, with the use of regression model and Statistical Equation Model (SEM), it will investigate whether there is an association between the total amount of sick time and the results of the employee engagement index.

Finally, the discussion and conclusion chapter has two main objectives; it will summarize the key components of the thesis and connect the three corners of the triangulation approach, i.e. literature review, qualitative and quantitative research. Additionally, it will discuss the practical and theoretical implications of the thesis, as well as recommendations for future studies.

1.3 Research Questions
Contrary to common thinking, “employee engagement“ is a rather new concept that has been continuously developed in recent years. Due to the concept’s enormous and growing popularity, especially in large organizations, both commercial and academic studies have produced a large number of frequently dissimilar explanations. Finding a definition that could be accepted by a substantial number of researchers would be to a great benefit when developing measurement tools and repeating similar studies. At the same, it is important to investigate the extent to which ‘we’ may universalize the concept of employee engagements. It is in fact plausible that employee engagement characteristics are highly dependent on a given working environment. Moreover, different groups of employees (e.g. blue and white collar workers) may have different perception of what employee engagement is.
In addition, there is no comprehensive publication about employee engagement which would raise an issue of its uniqueness. Namely, is employee engagement indeed a new and a unique construct, or rather a quality that has already existed in such notions as job satisfaction, job involvement, and organizational commitment?

Therefore the first research question of the thesis is:

*To what extent employee engagement is a unique and a universal construct? Hence, what it may consist of?*

In the literature, there is a number of business metrics described as being directly affected by employee engagement. One of the often-repeated claims states that lower absenteeism and safety outcomes occur as a consequence of employee engagement. Unfortunately, there are just few academic studies that focus on the actual direct relationship between the variables. Furthermore, in the case company of this research the total number of absences and safety information were recognized by the HR management as performance metrics that are suitable and equivalent across departments and functions.

Consequently, the second research question of the thesis is:

*Are absence rates and safety outcomes suitable performance metrics in relation to employee engagement, at the case company?*

**1.4 Author’s objective**

People potentially spend at work 1/3 of their lifetime, which has an enormous impact on the overall quality of their life. Moreover, boundaries between private and work spheres overlap habitually to such extent that a saying “people live their work” should possibly change its meaning.

Plenty of current research and popular literature focus on the negative consequences of work, such as stress or burnout. There is, however, a growing body of positive psychology studies, including employee engagement that perceives working environment as a potential incubator for employee well-being. The author hopes that this thesis will contribute to a better understanding and further development of the philosophy of positive psychology at work.
2 Employee engagement concept

2.1 Employee engagement – history, meaning and position

The notion of “employee engagement” was introduced by William Kahn, in his groundbreaking article “Psychological Conditions of Personal Engagement and Disengagement at Work” in 1990. Kahn is also considered a precursor of ‘three-dimensional’ engagement conceptualization that embraces cognitive, emotional, and physical elements. The actual interest in the phenomenon, however, had not occurred until the beginning of the 21st century. In 2001, Maslach et al. identified employee engagement as a direct opposite to burnout (claim that is however not pursued in this paper). In 2002, Harter et al. published the first largely recognized study that linked employee engagement to profitability. This research is also considered as the first to be conducted at the business-unit level (as opposed to individual). In the same year, Schaufeli et al. presented the renowned UWES scale, proposing absorption, dedication, and vigor, as its key measurements. Importantly, even though the scale resembles and relates to the initial three dimensions, it represents a unique approach. In 2006, Saks clarified the ‘three-dimension approach’, as well as produced a first large research into antecedents and consequences of employee engagement. In 2008, Macey and Schneider proposed that engagement could be recognized as a trait, state or behavior. Finally, in 2010, Schaufeli and Bakker identified engagement as a critical mediator between job/personal resources and organizational outcomes.

The above mentioned studies are only some of the carefully, nonetheless, subjectively selected key developments in the field. In reality, recently there has been an enormous number of very different descriptions and explanations. As can be seen in the table 1, both academic and business publications have dramatically increased in the previous years. In December 2016, Google Scholar produced 42,800, and Google 9 640 000 results, when the term “employee engagement” was inserted.
As a result, to date, there is no, universally supported conceptualization. When definitions differ and/or overlap with other existing concepts (e.g. involvement, commitment, satisfaction), it is challenging to develop valid and reliable measurement tools (e.g. surveys, interviews, experiments, meta-analyses). Yet, there have been some attempts to find a certain common ground, as well as to establish key features of employee engagement, that are, somewhat universal across the academic literature.

A unique attempt to compare different approaches, as well as to locate the ‘core’ construct was undertaken by Christopher P. Mason. In his dissertation, he presents main sources of confusion that could also be perceived as actual engagement dimensions. These are: nature, variability, target, and level of the engagement construct (Mason, 2010).
2.2 Nature of employee engagement

Nature can be understood as a very essence of, or a leading rationale behind the construct. It refers to such approaches as engagement as cognition, engagement as affect, engagement as behavior, or some combination of them. (Mason, 2010). It could be stated that most of the key publications are inclined to include all of the three components (e.g. Kahn 1990, Schaufeli et al., 2006, Macey et al. 2011). Naturally, cognition as a very broad term relates to a variety of constructs and appears under different names. For example, Kahn (1990) contributes with a concept of full presence; Rothbard (2001) refers to absorption and attention; whereas Macey et al. (2011) and Schaufeli (2006) include a notion of energy. Among the three, affect is perhaps the most regularly incorporated approach (Mason 2010). Typical examples of ‘affection’ would include organizational commitment, job satisfaction, or even affective components of absorption (Mason 2010). Finally, the behavioral element may cause most of the debate, especially in the academic research. Firstly, it is promoted as a best predictor of employee performance, and predominantly used in the applied domain. Therefore, it could be interpreted as accommodating to business expectations (Newman & Harrison, 2008). Secondly, many constructs that are comparable to engagement (e.g. job satisfaction) are considered as job attitudes and antecedents of behavior, therefore including the behavioral element in the construct may seem unusual.
2.3 Variability of employee engagement

Variability can be defined as the length or stability of engagement. In the literature there are three dominating perspectives: trait, state, and mood. The first one describes disposition, second longer-term attitude, whereas the last one employee recent feelings. In the literature, there is a rather ubiquitous agreement that engagement is a relatively stable and long-term construct that can be influenced. Consequently, employee engagement should be rather referred to as a state (Schaufeli 2006, Macey et al. 2011, Mason 2010).

Depending on a given author, the proposed stretch of state of engagement may vary from several weeks to several years (Mason, 2010). Nevertheless, in the literature, its durability is a relatively established claim - half a year - two years (Macey and Schneider, 2008). A great example of a state-like construct could be organizational commitment. It is largely influenced by external factors, such as working conditions and occurs within longer periods of time (Meyer et al., 2002).

A trait approach was brought by Macey and Schneider (2008), who connected it with personality traits, especially conscientiousness. They claim that engagement is a result of both situational and dispositional factors. In other words, beside external influence (e.g. working conditions or leadership) people’s own traits, such as positive affectivity, proactive personality, autotelic personality, or conscientiousness may also play an important role in becoming engaged. Vitally, according to Mason (2010), the lack of interest in studying this approach may be somewhat connected to the fact that organizations are more attentive to a possibility of influencing employees, and therefore, making them perform better.

Finally, engagement as a short–term mood explains a large share of engagement by “proximal environmental factors” (Mason, 2010). In other words, it relates to, temporary (i.e. minute, hour,
day, week) and nearby environment (e.g. people, tasks, conditions). This approach is mainly represented by Schaufeli et al. (2002, 2006), and their construct of absorption (Mason, 2010). However, also the concept of energy by Macey et al. (2011) should be, to some extent, understood as a mood approach.

2.4 Target of employee engagement

![Figure 5. Target of employee engagement](image)

Source: Based on the thesis employee engagement definition

Target of engagement simply explains who or what an employee is engaged with (Mason, 2010), and it is especially important when designing an engagement survey. Several different perspectives are available in the literature, such as task, work, job, role, organization, customer, or career engagement (Mason, 2010). To add to the confusion, they may also appear under such names as personal engagement (Kahn, 1990) purposeful engagement (Ward 2005), or simply engagement (Towers Perrin 2003). It is the ‘job’ construct (often alternately used with work), however, that is often considered as a most useful term. This is due to the fact that a job is usually clearly defined to the employees, and also because engagement surveys are generally conducted at half a year - two years’ intervals. Moreover, according to Mason (2010), job is the most common referent that is used in both literature and practice.

However, in order to understand the meaning and the extent of ‘job’ as a target of engagement, it is useful to compare it with some other related constructs. Task engagement would for example relate to such a survey statement as ‘I create a customer’s profile, according to the manual’. In this case, engagement would be clearly connected to the activity of completing the
task. This, in turn, could be included in one of the categories represented by the ‘Schaufeli mood variability’. Role engagement, on the other hand, should be understood as a construct that includes many tasks. At the same time, an employee with one job may perform many roles, related or unrelated to his or her job (Mason, 2010). This may, however, be a good approach to measure the so-called ‘extra-role behaviors’. Vitally, organization per se is rarely understood as a target of employee engagement.

However, (somewhat contrary to Mason 2010, and Macey and Schneider 2008) this paper assumes that references aim at measuring organizational commitment. For example “I am proud of my company” should be understood as targeting the whole organization or its smaller units, depending on the type of employee and his or her role in the company. For example, headquarters’ employees may establish emotional connection to the organization as a whole, and consider its failure or success as their own. At the same time, employees of a recently acquired local unit may have strong attachment to the local unit, over the organization.

2.5 Terminological confusion

![Diagram](engagement-diagram.png)

**Figure 6.** Employee engagement vs. satisfaction, organizational commitment, and job involvement

Source: Based on Macey and Schneider, 2008 (own interpretation)

In order to analyze, and apply a theoretical construct it is useful to clarify its relationships and possible overlaps with similar or pseudo-similar constructs. In the literature, there is plenty of discussion on whether engagement is a unique concept or just a repackaging of the existing ones. Misunderstanding can be even larger when the term engagement is used alternately as a psychological state of engagement, certain antecedents (drivers), or even outcomes (behavioral engagement). Both, in business and academic literature, three further constructs are often cited:
job satisfaction, job Involvement, and organizational commitment. They are seen as clearly intersecting with engagement, hence often generating terminological confusion. (Mason 2009, Schaufeli et al. 2002, 2006, Macey and Schneider 2008).

2.5.1 Job satisfaction
Job satisfaction is based on employee evaluation of his or her job and job experiences, and can be defined as a “pleasurable or positive emotional state”, in a job context (Macey et al., 2011, after Locke, 1976). In essence, it relates to the fulfillment of employee needs, which is in turn assumed to motivate employees to perform better. Even though satisfaction and employee engagement correlate (Bailey et al., 2015), it can be assumed that in certain circumstances even a dissatisfied employee may be engaged and perform well. Furthermore, satisfaction is conceptually closer to maintaining a status quo, whereas engagement is more comparable to a change effort (Macey et al., 2011). As Macey et al. put it, when we are engaged the “question of whether we are satisfied at these moments doesn’t simply arise because our attention isn’t on being satisfied, it’s focused on the task at hand” (Macey et al., 2011, p. 4). Consequently, it is not a surprise that engagement is expected to be more strongly related to performance than other job-related constructs (including job satisfaction) (Schaufeli 2002). This has been proven by a number of research (e.g. Christian et al. 2011, Rich, Lepine and Crawford, 2010), which confirm that, in performance predictions, the explanatory power of engagement is stronger. Importantly, many academic and business job satisfaction measures (e.g. Harter, Schmitt, & Keyes, 2003) consists of similar or even same questions. However, the mere fact that it is possible to infer the state of engagement from such measurements does not make both concepts equivalent (Macey and Schneider 2008.). Hence, it can be stated that only when measured as feelings of energy, enthusiasm, and similarly positive affective states, opposed to satiation, job satisfaction becomes a part of state of engagement.

2.5.2 Organizational commitment
Organizational commitment is often defined as employee’s “psychological state of attachment” (Macey and Schneider, after O’Reilly&Chatman, 1986). Meyer and Allen, in their renowned publication (1991, p.67) distinguish its three important constituents: "the employee's emotional attachment to, identification with, and involvement in the organization". Similarly, according to
Macey and Schneider (p.8, 2008) it relates mainly to such concepts as belonging, pride and effort. There has been plentiful of research that corroborate a positive relationship between organizational commitment and employee engagement (e.g. Richardsen et al., 2006; Llorens et al., 2006; Hakanen et al., 2006; Saks, 2006; Demerouti et al., 2001; Maslach et al., 2001; Brown and Leigh, 1996). Still, organizational commitment should be rather understood as a component of a larger dimension of employee engagement (e.g. Blizzard, 2004; Macey & Schneider, 2008; Mason, 2010; Towers Perrin, 2003; Ward, 2005).

2.5.3 Job involvement
Job involvement strongly depends on perception of a given job’s potential to satisfy employee needs, and can be identified as a “*degree to which the job situation is central to the person and his [or her] identity*” (May et al. 2004 p.12, after Lawler & Hall, 1970). In the literature, there is a fair agreement that job involvement should be understood as an essential component of a larger construct of employee engagement (Mason 2010, Kahn, 1990; Macey & Schneider, 2008; Maslach & Leiter, 1997). Noticeably, already the referents used in both terms may reveal a clear difference. Involvement refers to a job as its object, whereas employee engagement may have much broader application. Importantly, studies (e.g. Mathieu & Zajac 1990, Brown 1996) also show that job involvement is often positioned as a driver for organizational commitment, whereas there is no support for premise that organizational commitment is an antecedent of job involvement (Macey and Schneider, 2008).

Numerous research (e.g. Christian et al. 2011, Rich et al. 2010) show that after controlling for job satisfaction, job involvement, and organizational commitment, employee engagement predicts performance. Furthermore, it can be stated that in the literature there is a relative agreement that organizational commitment and job involvement are understood as components of engagement. At the same time, job satisfaction may only conditionally be referred to as a part of larger construct of employee engagement (Macey and Schneider, 2008).

2.6 William Kahn and the birth of the engagement concept
2.6.1 Key premises
It can be stated that there is no ‘serious’ publication about employee engagement that does not somewhat refer to William Kahn’s renowned ethnographic work. Many consider his article
“Psychological conditions of personal engagement and disengagement at work” (1990) as the beginning of the new academic and professional approach. The paper is based on two qualitative studies as well as existing psychological concepts. Its purpose, however, is to create a novel theoretical framework. (p.692).

It is essential to mention that Kahn also published another article on employee engagement “To be fully there: Psychological presence at work” (1992), where he presents four dimensions of psychological presence: attentiveness, connection, integration, and focus. In there, he assumes that psychological presence can be manifested in the form of “personally engaged behaviors” (p.2). It is, however, the study from 1990 that is largely considered to be the basis for further research on employee engagement.

Kahn uses a term “personal engagement”, and defines it as “the harnessing of organization members’ selves to their work roles” (p.694). In other words, he claims that an employee ‘reaches’ engagement, when he or she is able, at the same time, to employ and express a “preferred self” (p.700). Thus, it is the ‘agreement’ between the self and the role that should be understood as a leading thought behind the Kahn’s engagement model. Furthermore, the state of engagement during a role performance may happen at physical, cognitive, and emotional level.

One should also remember that Kahn (1990) posits employee engagement among a bigger contractual model. Borrowing from previous research (e.g. Hackman & Oldham, 1980, Alderfer, 1985a, Hochschild, 1983), he assumes that employee psychological state and behavior are concurrently determined by a variety of factors such as job, role, individual, interpersonal, group, intergroup, and organizational features and relations (p.694). Hence, after defining the ‘key’ to engagement, Kahn’s prime contribution to the subject is constructing a framework of key psychological conditions that should precede the very state of employee engagement.

This paper does not primarily focus on explaining antecedents of employee engagement. Still, the author strongly believes that in order to fully understand Kahn’s position on the phenomenon, it is inevitable to present such conditions.
Kahn clusters them into three groups of incentives, guarantees, and distractions. Following previous works (e.g. Hackman & Oldham, 1980), he designates the conditions as psychological meaningfulness, psychological safety, and psychological availability.

Psychological meaningfulness refers to a feeling of reciprocity between investment and return that may occur at physical, cognitive, and/or emotional level. Its fulfillment is contingent on three elements: task characteristics, role characteristics, and work interactions. Firstly, the task dimension is evidently based on the prominent Job Characteristics Model (Hackman & Oldham, 1980). ‘Engaging’ task can be labeled by such descriptives as “challenging, clearly delineated, varied, creative, and somewhat autonomous” (Kahn 1990, p.704). Ideally, it should also incorporate both routine, which brings a sense of competence, and novelty, which inflicts a sense of growth and learning. Secondly, the role dimension appears to carry the very essence of engagement. According to May et al. (2004, p.14), it relates to a “fit’ between an individual’s self-concept and his/her role”, hence it replicates Kahn’s definitional claims. Importantly, Kahn (1990) points to identity status and influence as key role constituents. Moreover, he underlines that since many people often feel “powerless in the world as a whole”; it is natural for employees to look for means to perceive themselves as essential and having a sense of shaping their working environment. Finally, work interactions with other employees, as well as customers should satisfy a need for ‘relatedness’. It should bring an opportunity to share experiences that are positioned on the verge of professional and personal boundaries (p.707).

Psychological safety relates to a sense of assurance, so that a person may employ and express one’s self, without a fear of undesirable consequences to a role, status, or even self-image. Reaching it, in a work environment, should depend on four factors: interpersonal relationships, group and intergroup dynamics, management style and process, and organizational norms. First, interpersonal relationships should be supportive and trusting (Kahn, 1990). As May et al (2011) explain, ‘supportive’ refers to reliability and dependability, therefore it is a cognitive-based trust. Whereas, ‘trusting’ concerns emotional relationships, hence it is an affective trust. Second, group and intergroup dynamics may be well described as a “mentality beyond the mentalities of individual members” which ties them into unconscious groups and alignments (p.16). Third, ultimate management style and process should be supportive (however not controlling),
clarifying, consistent, and characterized by open communication (Kahn 1990). May et al. (2004) particularly point to two behavioral aspects: behavioral consistency and behavioral integrity. The former indicates constant behavior across the time and context, whereas the latter points to the lack of discrepancy between words and deeds. Fourth, organizational norms represent explicit or implicit expectations about people’s behavior. Vitally, positioning oneself within norms’ boundaries should be especially important for an employee with a sense of low status and influence (Kahn 1990).

Psychological availability refers to a sense of having sufficient physical, cognitive, and emotional resources to engage in a role-related task. The dimension measures engagement, from a perspective of possible distractions that may weaken employee’s readiness. Therefore, becoming psychologically available is reliant on four types of factors: depletion of physical energy, depletion of emotional energy, individual insecurity, and outside lives (Kahn, 1990). Firstly, physical exhaustion concerns mostly traditional physical labor (e.g. injuries); however, it may also affect ‘office’ workers (e.g. sedentary jobs and massive stress on the back). Secondly, emotional depletion may be caused by emotional dissonance, as well as emotional display’s frequency, duration, or intensity (May et al, 2004). Thirdly, individual insecurity points to employee sense of how much his or her work and status are secure. It is rooted in three dimensions of self-confidence, heightened self-consciousness, as well as ambivalence about own suitability to organization and its purposes. Finally, employee private lives may also preoccupy employee resources and distort his or her performance. (Kahn, 1990).
**Figure 7.** Psychological conditions for personal engagement  
Source: Based on Kahn (1990 and 1992) (own interpretation)

### 2.6.2 Criticism and revision

Kahn’s model (1990) may seem unclear with regard to some of the components used to describe engagement preconditions. For example, “Job characteristics” and “Management Style and Process”, as well as “Work interactions” and “Interpersonal relationships” overlap each other. Those constructs, however, are ‘fixed’ by May et al. The authors, based on their quantitative study (as opposite to qualitative by Kahn), revise and transform Kahn’s dimensions / measures, without changing its main assumptions (i.e. they create new dimensions of “Coworker relations” and “Supervisor relations”).

Consequently, those authors confirm the main claim, while revising some of relations inside and between the conditions. Firstly, results of their research indicate that “Coworker relations” may have more explanatory power for “Psychological safety” than “Psychological meaningfulness”. Secondly, “Insecurity” (Kahn’s model) / “Self-consciousness” (revised model) seems to be far more related to “Psychological safety” than “Psychological availability” (May et al. 2004).
2.6.3 Thesis application
From the point of view of the thesis, there are two premises of Kahn’s work that are critical. Firstly, engagement is likely to happen when there is an ‘agreement’ between the self and the role. Secondly, the state of engagement, refers to the role performance, and may happen at physical, cognitive, and emotional level. Moreover, the above two approaches (Kahn 1990, May et al. 2004) are good examples of the significance of using different measurement methods. They were also an inspiration for this thesis to apply both the quantitative and qualitative methods.

2.7 Antecedents of employee engagement
2.7.1 JD-R model
There is a significant number of research (e.g. Bakker et al. 2007, 2008, 2011, 2012) supporting a claim that job resources have a clear positive impact on work engagement. JD-R (Job Resources–Demands) model predicts that job and personal resources are main factors affecting work engagement (Bakker & Demerouti. 2008). Moreover, it asserts that in the context of high job demands (e.g. work pressure, emotional / mental / physical demands), the significance of job resources (especially its motivational power) increases. Importantly, the authors of the model refer to work engagement as proposed in the UWES (Utrecht Work Engagement Scale, Table 1). This scale proposes three cognitive-affective dimensions of absorption, dedication, and vigor. Accordingly, absorption can be described as “being fully concentrated and happily engrossed in one’s work, whereby time passes quickly, and one has difficulties with detaching oneself from the present moment.”
work”. Dedication relates to “being strongly involved in one’s work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge”. Finally, vigor refers to “high levels of energy and mental resilience while working, the willingness to invest effort in one’s work, and persistence even in the face of difficulties”. (Schaufeli et al. 2006, p. 702).

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<tr>
<td>1.</td>
<td>At my work, I feel bursting with energy. (Vigor)</td>
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<td>2.</td>
<td>At my job, I feel strong and vigorous. (Vigor)</td>
</tr>
<tr>
<td>3.</td>
<td>I am enthusiastic about my job. (Dedication)</td>
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<td>4.</td>
<td>My job inspires me. (Dedication)</td>
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<td>5.</td>
<td>When I get up in the morning, I feel like going to work. (Vigor)</td>
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<td>6.</td>
<td>I feel happy when I am working intensely. (Absorption)</td>
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<td>7.</td>
<td>I am proud of the work that I do. (Dedication)</td>
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<tr>
<td>8.</td>
<td>I am immersed in my work. (Absorption)</td>
</tr>
<tr>
<td>9.</td>
<td>I get carried away when I am working. (Absorption)</td>
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**Table 1. Shortened version (Utrecht Work Engagement Scale–9 [UWES-9])**

Source: Schaufeli et al. (2006)

The scale is, to a large extent, in concert with the three-dimensional (cognitive, affective, behavioral) approach to engagement, presented by Kahn, and advocated in this thesis. Moreover, it brings an important notion of energy, which is further explained in the “Modern approach to engagement” part of this chapter. Vitally, some of the questions from the scale are used in the qualitative research part of this thesis.

According to the JDC model, job resources should, in principle, consist of social support (from both managers and coworkers), performance feedback, skill variety, autonomy, as well as learning opportunities. This does not however exhaust all the possibilities. The authors leave the category open and use a more general designation. They define them as “physical, social, or organizational aspects of the job” that should moderate job demands, help in achieving work-related goals, as well as activate “personal growth, learning, and development”. Consequently, they underline that job resources do not only balance the job demands, but also they are themselves of high significance. (Bakker & Demerouti. 2008, p.211).

Personal resources are denoted as “positive self-evaluations”, especially with reference to ability to control and influence the working environment. As examples of such resources, the authors include optimism, self-efficacy, self-esteem, resilience, as well as active coping style (p.214).
2.7.2 JD-R refined model

While the JD-R model predicts that resources lead to engagement, and that job demands may result in burnout, it stays unclear on the relationship between job demands and engagement. Consequently, according to Crawford et al., demands as engagement predictors are frequently being neglected in the research. (Crawford et al., 2010).

These authors contributed with a meta-analytic research, and extended the theoretical background. They were successful in filling the above mentioned conceptual gap, by ‘dismantling’ and including job demands. Using as a basis the research conducted by Lazarus & Folkman (1984) and Cavanaugh et al. (2000), they divided demands into two separate categories: challenge and hindrance stressors. Challenge stressors may be found in such demands as high workload, time pressure, or high levels of job responsibility. The model states that in order to have a positive impact on engagement, the challenge stressors should be perceived as opportunities to grow and achieve, resulting in the sense of meaningfulness (analogical to psychological meaningfulness in the Kahn’s model). Clearly, employees should also have a belief that increasing their effort will lead to meeting the job demands. In this case, the challenge stressors may stimulate positive emotions (e.g. enthusiasm and willingness) and a problem-solving style of coping (e.g. vigor in UWES).
Hindrance stressors can be exemplified by such demands as a role conflict, role ambiguity, red tape, or other unreasonable processes and practices. In essence, they are perceived as constraints to employee growth or goal achievement (Crawford et al., 2010).

Figure 10. Modified JD-R
Source: Crawford et al. (2010)

2.7.3 Thesis application
J-DR model and its revised version are the currently leading conceptualizations that explain ‘the logic’ behind employee engagement. Its critical contribution inheres in its simplicity, flexibility, and openness. It does not considerably restrict the number or/and the quality of the resources and demands; hence it may be applied in very different industries, groups of employees, or work environments. Vitally, the assumption that ‘good’ demands are a prerequisite of employee engagement is a critical premise of this thesis.

Critically, J-DR model and its revised version are at the center of the theoretical framework of the thesis. Importantly, whenever the author refers to JD-R model, it means both the original and revised versions.
2.8 Engagement as Energy – a modern approach

2.8.1. Model’s key characteristics

Engagement as energy is an important approach, not because it brings a ‘revolutionary’ way of thinking about employee engagement, but rather because it is characterized by a language of practice. Its main contribution relates to its logical (almost common sense) construction and frequent references to day-to-day work experiences. As a consequence, it presents itself in a manner that can be easily embraced both by employers and employees, activating their imagination (Macey et al., 2011).

Moreover, similarly to J-DR model, it is general and inclusive enough to be adaptable in different circumstances. Additionally, it is worth to emphasize that its key authors - Macey and Schneider also produced a very complex academic paper “The meaning of employee engagement” (2008). This one, however, in my opinion, is not suited for ‘practitioners’.

Macey et al. (2011, p.7) define employee engagement as a “sense of purpose and focused energy”. They emphasize that the concept includes both ‘psychic’ and behavioral dimension. Hence, referring to Kahn’s description, the authors relate to both experiencing and applying the definitional energy. They also accentuate the concept’s clear distinction from job satisfaction. Whereas the former is understood in terms of satiation or content, the latter infers “going after, seeking, and striving”. Importantly, this approach also recognizes that employees ‘engage’ with their jobs at different strengths. Hence, being, for example, in the state of ‘flow’ or ‘in the zone’ is considered as an extreme end of the engagement spectrum (p.4).

‘The modern’ approach consists of three key elements: “principles of engagement”, “feel of engagement”, and “engagement behavior”. In other words, these are engagement antecedents, the cognitive-affective engagement construct, and the actual ‘engaged’ behavior (Macey et al., 2011).

2.8.2 Principles of engagement (antecedents)

Engagement principles refer to well-established antecedents, grouped into four very clear and logically constructed dimensions. Thus, employees become engaged when they have “capacity to engage”, “reason or the motivation to engage”, “freedom to engage”, and they “know how to engage” (sense of direction) (p.10). Firstly, employee has capacity to engage, if he or she feels...
competent and self-sufficient at work. This should come from such factors as employee - job skills match, adequate feedback and learning opportunities, as well as balance between work and personal life. Secondly, employee has a good enough reason to engage, if he or she is intrinsically motivated. This should be based on intrinsically stimulating job (e.g. challenging, meaningful, with autonomy), alignment between organizational and employee values, as well as such treatment by a supervisor that would reinforce reciprocity (e.g. fair and with respect). Thirdly, employee has freedom to engage if he or she can take action, without a fear of ensuing repercussions. (Macey et al, 2011) This could be achieved, for example, in a work environment that is characterized by fairness, trust, and a certain degree of autonomy. Finally, employees have a sense of direction if they feel that there is “direct connection between what they (should) do” (p.13) and their organizational strategy.

2.8.3 Feel of engagement
Feel of engagement relates to an aggregate of four psychological constructs that together ‘produce’ the energized feeling. These are: urgency, focus, intensity, and enthusiasm. First, urgency can be defined as a combination of two elements: determination and goal-directed energy. Macey et al. also refer to it as vigor (similar to UWES), and as examples provide such self-talk statements as “I have to do this” or “I am not going to be stopped” (p.20). Second, focus denotes “attention and cognitive capacity tuned into ‘the doing’ of an activity”. It is also referred to as absorption (similar to UWES) or ‘lost sense of time’ feeling. When compared to Kahn’s framework, it clearly resembles the “psychological availability” dimension and its interconnected “psychological distractions”. Third, intensity explains how deep employee concentration is. Conceptually it is close to Kahn’s level of “psychological presence”, and is highly dependent on the degree of skill-demands match. In case of a perfect match, an employee can fully direct his or her attention and energy to a task at hand. Finally, enthusiasm can be understood as a “sense of happiness and energy” (p. 22). In practice it is often described as passion and feeling of being alive. Importantly, the authors underline that enthusiasm is not a derivative of energy and focus, but rather a unique and essential component of engagement (ibid.).

Beside the feelings of engagement, Macey et al. (2011) include ‘external’ factors that may determine the actual engagement behavior. These are employee personality and competence,
supervisor’s personality and leadership style, and national culture (similar to personal resources in JD-R model).

2.8.4 Engagement behavior
According to Macey et al. (2011), engaged employees should display four behavioral traits that they denote as ‘engagement behavior’. Accordingly, an engaged employee should be proactive (especially regarding challenges and dangers), be ready to expand his or her role, persist in unfavorable circumstances, and be able to adapt to changes. First, proactive employee should anticipate, recognize, and take action when necessary. As an evident example authors refer to customer-oriented behavior. For instance, he or she should attempt to foresee customer requests, provide justifications for decisions, or even offer emotional support, if needed. There should, however, be made a differentiation between jobs that by description require an amplified sense of awareness and alertness (e.g. operators of dangerous machines), and those in which engagement may become an important factor in stimulating such behaviors. Second, expanding role, in essence, means that employees do not perceive their tasks as being restricted to job descriptions, but rather concentrate on achieving overall goals. Hence, they should be ready to expand their roles, as well as pursue desirable professional development. Third, persistence corresponds to a concept of effort, while also implying an extended amount of time. Vitally, it relates to self-efficacy and capability to bounce back from failures. Lastly, adaptability refers to such behaviors as creative problem solving, coping with unpredictability, learning (e.g. new work tasks, practices and processes, and technologies), displaying interpersonal adaptability, and suggesting changes.
2.8.5 Thesis Application
From the point of view of this thesis, the ‘modern approach’ offers a clear and intuitive description of employee engagement. It portrays it as a powerful, unique, and practical concept. In my opinion, it embraces, rather than competes with other above-mentioned models. It posits engagement as largely differing from job satisfaction, and as a construct that potentially occurs at different strengths.

In this thesis, this approach will be used in formulating the employee engagement definition, designing interview questions, and interpreting findings.

2.9 Thesis definition and model of employee engagement
The above mentioned definitions and models do not cover the entire spectrum of existing literature on employee engagement. They, however, include concepts by the leading authors and reflect the thesis author’s subjective understating of the phenomenon. Consequently, the thesis model and its definition are based on Bakker and Demerouti (2008), Crawford et al.
Employee engagement is a cognitive and affective state that activates, in an individual, distinctive job-related behaviors. It is characterized by unique emotions and cognitions such as: sense of presence, urgency, focused energy, sense of purpose, and enthusiasm. It encompasses other work-related attitudes, i.e. organizational commitment and job involvement, as well as partially job satisfaction. It results in observable conducts such as proactive behavior, role expansion, persistence, and adaptability. It is driven by balance between resources (job and personal), and job demands (hindrances and challenges).
3 Employee engagement impact on business performance

3.1 Business view
Potential impact of employee engagement on business performance is of a great interest for many organizations. Hence, providing ‘evidence’ for a direct relationship between those variables has become a valuable business itself. Understandably, many consultancy companies put a lot of effort to convince employers to invest in ‘engagement’ services, such as surveys, trainings, or business literature. Consequently, we can find, in many popular articles and consultancy firms’ reports, plenty of confident statements on employee engagement and employee performance. Unfortunately, a vast majority of such documents lack details and transparency. Information about the size, quality, and method of the research is almost non-existent. Furthermore, very few of those companies refer to established academic literature. (Bailey et al. 2015, Truss et al. 2013)

One of the largest performance-management consulting companies in the world – Gallup, in its key report, claims that “companies with highly engaged workforces outperform their peers by 147% in earnings per share”. Moreover, these companies should experience 41% fewer quality defects, 48% fewer safety incidents, 28% less shrinkage, 65% less turnover for low-turnover organizations, 25% less turnover for high-turnover organizations, and 37% less absenteeism. Similar ‘findings’ can be found in the reports by Towers Watson, Kenexa, Hay, Aon Hewitt, and many others. Unfortunately, most of the time, further evidential details are not provided.

The ‘overoptimistic’ approach by consultancies has been criticized by a large number of key authors. Bailey et al. (2015, p.6) explained their approach towards such sources by saying that - “most of the scales within the perspective of engagement ‘as composite’ were developed by survey houses and consultancies and were excluded on quality grounds”. Macey and Schneider admitted that “relationships among potential antecedents and consequences of engagement as well as the components of engagement have not been rigorously conceptualized, much less studied. Indeed, many HR consultants avoid defining the term, instead referring only to its presumed positive consequences” (2008, p.3-4). Whereas Shuck (2011, cited in Briner 2014, p.4) posed a very strong rhetorical question: “How can a concept so underdeveloped and still emerging in scholarly research have so little agreed-upon definition and have so few validated
measures yet so widely accepted in application and practice as to be named the keystone to business success?"

Vitally, to be fair, Gallup, as one of the exemptions, published some of its research in a renowned Journal of Applied Psychology. Their article “Business-Unit-Level Relationship Between Employee Satisfaction, Employee Engagement, and Business Outcomes: A Meta-Analysis” is itself an important contribution to an ongoing academic engagement-performance investigation. Results of the study are indeed encouraging. However, conclusions made in the paper are modest, and do not justify company’s unequivocal convictions. Authors of the article claim that employee engagement is “related to meaningful business outcomes at a magnitude that is important to many organizations and that these correlations generalize across companies”. At the same time, they emphasize that “findings of causal direction are unresolved” (p. 268).

3.2 Academic view
Since the breakthrough article by Kahn in 1990, there has been 214 studies that were broadly focused on the definition, drivers and outcomes of employee engagement (source paper from 2015, Bailey et al. 2015). These articles were published in the peer-reviewed scientific journals. 38 of them were theoretical, 172 empirical, and 4 were meta-analyses. Vitally for this part of the thesis, 89 articles investigated the actual impact of engagement on performance. There were overall 6 key engagement conceptualizations (38% of them were based on the previously explained JD-R model) conducted in 35 countries (including 25 in the Netherlands, 18 in USA, and 13 in Finland) (Bailey et al. 2015).

There is a clear shortage of longitudinal and qualitative research. The vast majority of studies are based on cross-sectional and self-reported data. This is critical because cross-sectional studies usually do not provide sufficient evidence for either direction or causality of a given relationship. They also generally assume that engagement has an instantaneous effect on behavior (resulting in overall performance), rather than it is a gradually cumulative and a long-term phenomenon (view advocated in this paper) (Mason 2010, Briner, 2014, Bailey et al. 2015).
3.3 Outcomes of employee engagement

There is no agreement, either in academic or popular literature on what engagement is. There is, however, a relative consensus on which employee behaviors are considered as most representative of the phenomenon. Accordingly, many researches focus on comparable metrics that are considered as outcomes of those behaviors.

Based on academic and popular literature, as well as own professional experience, I propose to divide these metrics into two categories: countable and uncountable. The former includes outcomes that are largely independent from human perception. These are for example: financial or production results, turnover rate, absence rate, accident frequency, or customer loyalty. The latter consists of measures that reflect perceived feelings, cognitions, and behaviors. These may refer, for instance, to perception of well-being, organizational commitment, job involvement, job satisfaction, customer-rated employee performance, task performance, extra-role performance, counterproductive performance, organizational citizenship behavior (OCB), adaptability, or innovative work behavior.

Another classification can be made based on the level of analysis. Almost all available studies investigate the relationship at an individual employee level, and later accumulate the results.
This is understandable, taking into account (as supported in this paper) that the construct of employee engagement is mostly relevant to a psychological mechanism ‘inside’ an individual. Nevertheless, these are the unit-level results that are generally reported and compared with business outcomes. Moreover, such approach gives an opportunity to investigate a ‘cultural’ aspect of a given unit. Such methodology, however, may cause a number of quality of data problems. Hence, due to often limited number of applicable units (they need to meet certain standards – comparable in quality and size), and a need for constancy over researched period (for longitudinal studies), such studies remain exceptional.

As exemplified above, there is a large number of different performance metrics that are used in the academic literature and business reports, along with engagement level results. Some of those metrics or clusters of metrics appear much more frequently. Some are evidently connected with the actual engagement dimensions, whereas others depend on business needs and data obtainability. This of the literature review part will present significant and typical instances of such metrics. Furthermore, most of them will be used as a background for designing questions, and analyzing both quantitative and qualitative data in the research part of the thesis. These are: financial results, task performance, organizational citizenship behavior (OCB), safety, turnover, and absenteeism.

3.4 Financial results
Since detailed financial information is often confidential and might be a matter of competitive advantage, access to it is largely limited for academic research. Therefore, it is not a surprise that most of the claims regarding a variety of financial metrics are published by consultancy companies. As already mentioned, the level of their validity and reliability is to a large extent unknown. Nonetheless, such companies’ assertions are very wide-ranging, and reappear frequently in the popular literature. For example, Gallup (2004) went as far as to claim that yearly US economy loses 300 billion a year, due to unengaged workers. Towers Watson connects ‘sustainable engagement’ (over a one-year period time) with a clear improved financial performance regarding earnings, gross profit, and company’s total assets. Others report that employee engagement has direct impact on such measures as annual income, sales, operating margins, or even shareholder returns (Rayton et al., 2012). Even Macey et al., in their well-
regarded book, which could be positioned on the verge of academic and popular literature, do not abstain from making similar references. They state, for instance, that top 25% companies on an engagement index had a greater return on assets (ROA), profitability, and more than double the shareholder value, than the bottom 25%.

In the already mentioned academic meta-analysis (by Harter et al., 2009), engagement is considered as a potential predictor of sales and profits. The authors argue that the relationship occurs due to engagement’s direct impact on such metrics as customer perception, turnover, and quality, which in turn predict the sales. In another rare academic research on financial outcomes, a merely partial mediating effect in predicting financial performance was observed (Xanthopoulou et al., 2009). Vitally, contrary to this paper, both of these academic studies focused on employee engagement, perceived as a mood rather than a state (explained in the definitional part /chapter). In other words, engagement was measured as a daily-basis volatile factor that has immediate impact on behavior (instead of gradual, long-term, stable effect).

3.5 Turnover
There are plenty of reasons that may encourage employees to stay or leave their company. These may be remuneration, external economical dynamics, or other factors beyond supervisor’s control. Undesirable turnover is often a major, expensive, and long-term loss for a company. Consequently, finding a critical demotivator is of high interest for the broad HR field.

Gallup reports that companies with top engagement results realize between 65% (low-turnover organizations), and 25% (high-turnover organizations) lower turnover rates. CLC claims that “highly engaged organizations have the potential to reduce staff turnover by 87%; “. At the same time, Hay, states that “companies with high levels of engagement show turnover rates 40% lower than companies with low levels of engagement”. (Rayton et al. 2012, p.5). Importantly, as already mentioned, such numbers are difficult to verify and are often disqualified as credible academic sources. In the academic literature, there is, however, a relatively high number of studies that link employee engagement to lower turnover rates. For example, according to a systematic review by Bailey et al. (2015), among the existing and published in the peer-to-peer scientific journals 24 studies found engagement to be negatively associated with turnover intentions.
In order, however, to have a realistic perspective on the current state of research, it is critical to understand how in practice turnover intentions, as a performance metric, are measured. All of the mentioned studies were based on self-reported surveys. Therefore, they should rather be referred to as investigating employee current intention to quit, than the actual turnover probabilities. There is a huge difference between employee attitude towards staying or leaving, on a given day, and the actual future employee fluctuations in and out of the company. Furthermore, only one of the researches used a cross-lagged design, whereas the rest relied on cross-sectional data. (Bailey et al., 2015, in the supporting information). Interestingly, almost all of the studies were conducted with the use of 9 or 17-item UWES scale (explained in the previous part) and most of them referred to the JD-R model (advocated in this thesis) (ibid.)

Fortunately, our premise has been also supported by some ‘hard’ evidence. In an exceptional, very complex, and longitudinal (16-month lag) study, De Lange et al. (2008) provide a substantial evidence on a positive association between employee engagement and the actual personnel turnover. It also confirms the key assumptions and significance of the J-DR model. It predicts that ample number of job resources, with high levels of engagement may predict that employees to remain in the same job (or getting a promotion) within the same organization. Additionally, it is worth to emphasize that, as already mentioned, meta-analysis by Harter et al. (2002) supports the evidence with their business unit level studies and predict its high generalizability across companies.

3.6 Safety
As explained in the previous part, JD-R model provides a valuable and relatively ‘generic’ explanation for the relationships between three elements: a diversity of job demands and resources, employee engagement, and performance outcomes. The model predicts that in different working environments, employees may be exposed to different job demands, and consequently they may necessitate different job resources. There are some industries or working environments that involve such job demands as exposure to hazardous materials, cognitively challenging work, or physically demanding work. In turn, these demands may be a reason for an increase in workplace accidents, injuries, even deaths. From a practical point of view, studies
using this model may provide information on how to adjust job descriptions, trainings, and other factors to improve workplace safety.

What is, however, the extent to which ‘engagement’ actually affects safety outcomes? According to a unique meta-analysis of 203 studies, with more than 18 thousand observations, by Nahrgang et al., (2011), such extent is relatively large. In the context of JD-R, the authors consider employee engagement as “the extent of involvement, participation, and communication in safety-related activities and compliance, or the extent to which employees conform or submit to safety expectations, rules, and procedures”. (p.74). They postulate that engaged employees are expected to have better control over working situations, to better employ their mental and physical capacities, to extend their effort, and therefore to reduce the number of accidents, injuries, and adverse events. Yet, the results confirmed that engagement is negatively and significantly related to adverse events (-0.32) and unsafe behavior (-0.28). At the same time, the results did not suffice to confirm the significance of relationship with accidents and injuries. Vitally, safety outcomes were understood as “accident and injury rates and injury severity”, adverse events as “near misses, safety events, and errors”, whereas unsafe behaviors as “unsafe behaviors, absence of safety citizenship behaviors, and negative health and safety”. (p.77).

Additionally, the research found evidence that knowledge, autonomy, and a supportive environment are the job resources that are most positively related to employee engagement, with the last one being the most consistent explanatory variable across all the industries.

On a smaller scale, 3 studies used in the meta-analysis by Harter at al. (2002, p.271) bring correspondingly negative results (-0.30). In this case, safety outcomes were represented by “a lost workday/time incident rate, or percentage of workdays lost because of incidents”. This is also in concert with Fogarty (2005) and Siu et al., (2004), (cited in Nahrgang et al 2011, p.76) that found that psychological strain is a suitable mediator between safety climate and safety outcomes.

Finally, it is worth to mention that a number of business reports make, as anticipated, rather strong claims. For example, Gallup states that highly ‘engaged companies’ suffer from 41% fewer quality defects and 48 % fewer safety incidents.
3.7 Proactive behavior
The author identifies (after Crant, 2000) proactive behaviors (PB) as relating to both in- and extra-role activities. In the first instance, they realize agreed-upon job requirements, whereas in the second, they go beyond job description, or even redefine employee’s role in the organization. In other words, proactive behavior can be found in both ‘task performance’ and extra-role performance, especially organizational citizenship behavior (OCB). Such dimensions, in fact, and by definition, represent behavioral characteristics of employee engagement (explained in the previous part).

This claim is supported, among others, by Salanova & Schaufeli (2008) in their cross-national research on relationship between job resources, engagement, and proactive behavior (using JD-R model). They managed to confirm two critical premises: positive association between PB and employee engagement, as well as full mediating role of the latter. In other words, they predict that an increase in job resources is positively related to employee engagement, whereas they find no proof for direct linkage between job resources and proactive behavior. Consequently, it is the role of the engagement construct that is critical in the overall mechanism. Correspondingly, Christian et al. (2011), in their meta-analytical study, found evidence of a positive association between engagement and two performance dimensions of task performance and contextual performance (in this paper, referred to as OCB). Similarly, as above, they confirmed the mediating role of employee engagement between job resources and job performance.

Importantly, both in the academic and popular literature, the most common way to examine such activities is to have task performance and organizational citizenship behavior (OCB) measured separately.

3.8 Task performance
Task performance, according to a widely recognized definition by Borman & Motowidlo (1997, p.100) refers to “the effectiveness with which job incumbents perform activities that contribute to the organization’s technical core either directly by implementing a part of its technological process, or indirectly by providing it with needed materials or services”. Essentially, the authors emphasize the difference between task and contextual performance. The latter, they state,
supports organizational effectiveness, by shaping “the organizational, social, and psychological context that serves as the catalyst for task activities and processes”.

According to Bailey et al. (2015), there has been so far 24 studies that attempted to measure employee engagement impact on task performance. They all confirmed a positive relationship between variables. Crucially, half of them used third-party performance rating, which strengthens their validity. Perceptibly, one of the most reliable third-party sources for performance information are customers. Hence, a study by Salanova et al. (2005) is especially worth paying attention to. Uniquely, results are based on employee self-reported claims, customers’ perception of their performance, as well as customer loyalty information. Further, responses from all the sources were aggregated at the unit level. Analysis of results indicated that employee engagement entirely mediates the linkage between resources and service climate. Interestingly the latter was measured by a probability of clients returning for further service, as well as an amount of positive word-of-mouth.

Similar results were found in the study by Rich et al. (2010). In this case, however, conclusions were based on reports coming from employees and their supervisors. They reiterate that employee engagement is positively related to task performance and OCB. What’s more, it fully mediates the relationship between personal and organizational resources and employee performance. Additionally, it is worth to mention that the study is a rare example in which authors not only refer to, but actually exploit the Kahn’s three-dimensional model (explained in the previous part).

3.9 Organizational Citizenship Behavior (OCB)
The leading definition of organizational citizenship behavior (OCB) was presented by Organ in 1988 (cited in Organ 1997. p 4). He defined it as “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization”. ‘Discretionally’, it is understood as “not an enforceable requirement of the role”, followed by no action of retribution, if omitted (ibid, p. 4). The most important reason for OCB being a significant engagement metric, is the fact that it
aims at grasping ‘the other’ behaviors. Hence, we can have a fuller understanding of the actual contribution of engagement to organizations (Organ, 1997).

In the literature, there is much inconsistency regarding OCB key dimensions. Nevertheless, it is Oregon’s definition and 5-dimensional model that has been followed by the largest number of empirical research (Babcock-Roberson & Strickland, 2008). Proposed dimensions include altruism, courtesy, sportsmanship, conscientiousness, and civic virtue. Altruism can be described as a discretionary behavior of an employee that is willing to volunteer to do extra work, in order to help others (e.g. in tasks, skills, problems). Courtesy overlaps with such notions as empathy, consideration, or politeness. It may be demonstrated by an employee showing interest in the other employee’s personal matters. Sportsmanship refers to tolerating less than ideal situations, when an employee contains him or herself from complaining or exhibiting negative reactions. Conscientiousness encompasses such constructs as self-control, discipline, dutifulness, or obeying rules. It may be observed when an employee plans his or her work well ahead, so that others’ tasks are not in danger of being delayed or obstructed. Finally, civic virtue relates to how well an employee participates in the life of, supports, and represents his or her company. One of the emblematic examples maybe the so-called ‘employee advocacy’. (Organ 1988, Podsakoff et al. 1990. Van Dyne et al. 1994).

It is broadly asserted that ‘engaged’ employees exhibit more OCB behaviors than ‘non-engaged’ ones. When appearing over longer time, such behaviors should strengthen organizational effectiveness by “lubricating the social machinery and constructing the psychological fabric of the organization, reducing friction, and/or increasing efficiency”. Vitally, the ubiquitousness of such conducts not only improves general atmosphere in the organization, but also strengthens supervisor’s efficacy, by decreasing his or her time spent on irrelevant matters (Kataria et al. 2012, p.108).

Importantly, current academic literature provides us with a comparably sufficient number of empirical research. For example, positive association between employee engagement and OCB has been confirmed by an extensive literature reviews conducted by Ahmed et al. (2012), Bailey et al. (2015) (using nine separate studies), as well as by Truss et al. (2013).
3.10 Absenteeism

When experiencing improved physical/cognitive/affective responses (e.g. urgency, focus, intensity, enthusiasm, commitment, involvement) workers are assumed to employ, among others, such ‘engaged’ behaviors as strong perseverance, creative problem solving, and better dealing with unpredictability. Consequently, they should deal better with increased job demands and are less prone to being absent from work (at least regarding job demands –affected health issues).

The question that arises is, however, whether we are able to find an actual direct connection, and whether engagement could be used as a suitable predictor of absenteeism. Even though, in the literature lower absenteeism often occurs as a consequence of engagement, there are just few academic studies that concentrate on the actual direct relationship between these two variables.

In his large study (around 9000 observations) on Canadian civil servants (2010), Hoxsey attempted to find effects of employee engagement on absenteeism. He used engagement survey results as a predictor and Short-Term Illness and Injury Plan (STIIP) as a trustworthy account of the outcome. Even though only 4.7 per cent of the variation was explained by the independent, which is indicative of a weak relationship, the results are statistically significant (p.563) and should be considered as a signal for further studies on engagement – absenteeism connection.

Soane et al. (2013), using JD-C and Kahn’s models (explained in the previous part) as a theoretical framework, brought to the subject a stronger evidence. Their research was, however, conducted on a much smaller group of observations (n=625). Authors used engagement as a mediator between meaningfulness (one of the most significant elements of the engagement construct, explained in the previous part) and absences. The results of the study are an indicator of moderate negative association between levels of engagement and absenteeism (-0.17).

Importantly, from the practical point of view, the authors suggest that one of the key responsibilities for management and leadership is to make sure that employees fully understand how their job “fits with the broader purpose of the organization” (p.10). This should lead to
increased employee perception of work meaningfulness, hence higher engagement, finally resulting in lower level of absenteeism.

Schaufeli et al. (2009), on the other hand, made a clear distinction between frequency and duration of the absences. As a theoretical basis they invoke JD-R model that states that job demands are a source of strain or health impairment process, whereas job resources encourage motivational process (p. 894). Accordingly, results of their studies indicate that engagement (vigor T2=-0.28, dedication T2=-0.27, explained in the previous part) is negatively related to absenteeism, but only in terms of absence frequency, not absence duration; which in turn is best predicted by the burnout records (exhaustion T2=0.16, cynicism T2=0.25). This can be explained by considering frequency of absences (‘voluntary’ absenteeism) as indicator of “a coping mechanism to deal with stressful job demands”, whereas the total duration of absences as indicator of “inability to perform work tasks” (‘involuntary’ absenteeism) (p.896). However, although Schaufeli et al. (2009) present burnout as a psychological construct that is clearly opposite to engagement, other authors are less confident about engagement – burnout relationship. Moreover, burnout, its relation to, and consequences of engagement, are not a subject of this thesis. Importantly, such distinction does not receive a full support in the literature. In their meta-analysis Darr and Johns (2008, p. 305) find “no difference in the degree of effects of work strain for frequency and duration measures”. They, however, did not investigate employee engagement per se.

Finally, a 3-year long study by Merrill et al. gives a broader view on the matter. They investigated more than 20 thousand of employee self-reports on engagement, health behaviors, and physical health. Among others, participants answered to such a question as “In the past 4 weeks (28 days), how many days did you miss an entire work day because of problems with your physical or mental health?”. Results showed that employee engagement, in concert with employee health, are positively associated with lower absenteeism and better job performance (Merrill et al. 2013, p. 9). Importantly, they concluded that, in order to succeed, organizations should take a holistic approach towards both engagement and health strategies and practices.
3.11 Conclusion
Among a diversity of researches on employee engagement impact on business performance, there are 2 (already mentioned) publications that are well-positioned to give an overall view of the current state of the field. According to the only available systematic review – “The meaning, antecedents and outcomes of employee engagement: A narrative synthesis”, based on 214 studies, the strongest association has been observed between employee engagement and turnover intentions (−0.38), in-role (0.36) and extra-role (0.36) behaviors, as well as counter-productive (−0.32) performance. Moreover, association with general health (0.28) and life satisfaction (0.22) was conspicuous, however, somewhat weaker (Bailey et al., 2015).

Results of Gallup’s “Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis based on 7,939 business units in 36 companies, are also both affirmative about the relationship, however moderate in conclusions. The most positive association was found with customer loyalty metrics (0.33), safety (0.32), and employee turnover (0.30). They were followed by productivity (0.25), and profitability (0.17). (Harter et al., 2002).

The current condition of employee engagement research is also well described by Christian et al. (2011, p. 90): (...) “although researchers have argued that engagement, as a motivational variable, should lead to high levels of job performance (e.g., Kahn, 1990; Rich et al., 2010; Schaufeli et al., 2002), we know little about engagement’s uniqueness as a predictor of job performance”.

On the whole, based on available academic and popular literature, it can be stated that there is a moderate, although limited, evidence on positive association between employee engagement and a variety of business outcomes.
Figure 14. Thesis Model
Source: Based on Job Demands-Resources Model
4 Data and Methods

Overall information about the case company and research

Due to an agreement with the company x (case company), only very limited information about its background can be disclosed. It is a Nordic organization that consists of a number of different business groups. It has units in more than 50, and production plants in more than 15 countries. It employees over 15 000 employees.

The research was conducted at the premises of the case company, between May and October 2016. Qualitative research was done partially through skype, and partially at the company’s three different units. Quantitative data was provided by the company itself (absence data), and external survey provider (employee engagement survey results), and referred to years 2014 and 2015. More detailed information is available in the Thesis Audit Trail (Fig. 16), and in the qualitative and quantitative research subchapters.

4.1 Triangulation

4.1.1 Theory

Triangulation was chosen as an overall approach to the thesis. Triangulation is essentially a premise of using two familiar points to discover a position of a third unfamiliar one, therefore constructing a triangle.

In a more philosophical sense, triangulation combines three schools of research, i.e. constructionism, empiricism, and realism. Constructionists perceive the world and its elements as a social construction of ‘our own’ perspectives. Empiricists see the world as an amalgamation of facts that ‘speak for themselves’. Whereas, realists integrate somewhat those views, and investigate objects as both socially constructed and as real and separate beings (Olsen 2014).

In the current thesis, the constructionist approach could be found in the analysis and interpretation of both interviews and engagement survey results. In contrast, use of such data as absence rates, country of origin, or gender clearly indicates the empiricist standpoint. Finally, understanding of reasons behind those numbers, based on literature and interviews, could be qualified as a realist direction.
In practice, triangulation aims at surpassing weaknesses of different methodologies, by creating a complementary approach that should provide a researcher with a broader perspective (Olsen 2014). The author believes that, since there is no agreement on employee engagement definition, furthermore it is a qualitative construct (though approached to be quantified), triangulation may bring a more complete understanding.

**Figure 15. Triangulation**
Source: Based on Olsen (2014)

The current thesis applies triangulation in two dimensions. Firstly, data triangulation incorporates heterogeneous data sources: current research, individual and focus group interviews, as well as engagement survey results, and absence rates. Secondly, triangulation as methodology involves the use of both qualitative and quantitative methods.

4.1.2 Application in Case Study
There are no precise requirements that could guide a case study (Meyer 2001). Nevertheless, there are three main conditions under which, a case study should be considered a preferable form of research. First, the research questions deal with ‘how’ and ‘why’; second, the “researcher has little or no control over behavioral events” (p.4); third, the subject relates to a contemporary phenomenon (Yin, 2014).

The author believes that the current thesis meets the above-mentioned conditions. Firstly, it does not only attempt to apprehend the very phenomenon of employee engagement, but also
its antecedents and effects. Secondly, data collection was conducted with minimum possible interference with interviewees. Finally, employee engagement as an academic construct came to prominence only in the 1990s.

Accordingly, if there is a desire to investigate a phenomenon in a ‘holistic way’, a case study research gives a clear advantage. According to Gummesson (1988, p. 76), “the case study method enables us to study many different aspects, examine them in relation to each other, view the process within its total environment, and also use the researchers’ capacity for ‘verstehen’.”

Importantly, the current thesis bears traits of descriptive, explanatory, and exploratory case studies. That is, it initially attempts to describe and explain the very phenomenon of employee engagement. Later, it investigates the presumed casual links between employee engagement and business metrics, in the specific working environment. Finally, it aspires to identify potential research questions and procedures to be applied in subsequent studies (Yin, 2014).
Thesis Audit Trail 1

**Preparation**
- Literature review
- Formulation of research questions
- Adaptation and familiarization with the case organization
- Apprehending concept of engagement at the case organization
- Selection of business performance indicators
  - Through official documents, online search, formal and informal discussion with employees
  - Through Employee Engagement Survey reports, theoretical background from the external survey provider, discussions with HR specialists at the case organization
  - In close cooperation with HR specialists and management at the case organization

**Quantitative research**
- Quantitative data pre-analysis
- Mapping of the data – EES vs Absence rate units
- Quantitative data calculation, analysis, and interpretation
  - Of the survey results - provided by the survey external supplier, absence rates – by the case organization
  - In cooperation with an HR specialist
  - By SPSS and AMOS software

**Qualitative research**
- Qualitative research design
- Data collection – individual interviews and focus groups
  - 19 participants: 5 experts, 6 employees (2 individual interviews, 1 focus group), 7 managers (4 individual interviews, 1 focus group)
- Transcription and translation
- Analysis and interpretation of the qualitative data
  - Partially with the help of an HR specialist from the case organization
- Conclusions

*Figure 16. Thesis Audit Trail 1*
4.2 Qualitative approach

4.2.1 Theory behind the questions

Interview and focus group questions relate to antecedents, the very construct, and consequences of employee engagement. Primarily, they are based on William Kahn’s framework, JD-R model, UWES, and Macey et al. They were constructed by the author in cooperation with HR department of the company X. Background and purpose of each question is available in the appendix.

4.2.2 Overall information about the interviews

Individual and focus group interviews were conducted with total of nineteen employees of the case company. Interviews with the ‘experts’ were conducted in English; whereas both individual and focus group interviews with the remaining participants were carried out in Finnish. Some responses in Finnish may not have been fully translatable into English. Hence, in order to fully capture interviewees’ intentions, they are also quoted in their original version. Generally, participators seemed comfortable and relatively curious about the research. Importantly, they did not appear to be afraid of answering questions. Before the meetings, they were assured of full confidentiality of both the course and the content of the interviews. They were informed that any records or interpretations of the interviews would be used in a manner that would not reveal their own, their units’, and their organization’s identities. What’s more, they were guaranteed that organization’s employees (beside the interviews’ assistant) would not have the right to access or use of such information.

4.2.3 Data gathering

Interviewees were divided into three groups: experts, employees, and managers. The first group included two occupational health doctors and three senior HR managers. Members of this group either worked for or had a profound knowledge about the researched units. The second one consisted of six blue-collar workers (four in the focus group and two in the individual interviews), in the researched units. Whereas, the third comprised of seven people managers (three in the focus group and four in the individual interviews), in the same units. Participation in the interviews and focus groups was voluntarily, however encouraged by HR managers in the
researched units. The choice to conduct both individual and focus groups was inspired by a possibility to enrich the very conceptualization of employee engagement, better identify individual and circumstantial contexts, and enhance trustworthiness by extracting information under and without peer group influence (Lambert & Loiselle, 2008).

Vitally, previous qualitative research on employee engagement in general (Schaufeli et al. (2001), Bakker and Demerouti (2007), Engelbrecht (2006), and Jenkins and Delbridge (2013) used only two perspectives, that is managers and employees. The current thesis expands the pool of the sources, by adding the ‘expert’ responses.

4.2.4 Coding
Interviews were transcribed and translated into English (if necessary), by the author. Later all the material was combined and analyzed qualitatively with Excel. Similarly to the ‘six step framework’ by Auerbach et al. (2003), transcripts were examined step by step, and gradually transformed into a theoretical narrative.

Initially the author read the entire text and excluded irrelevant fragments. Repeating ideas were grouped into as many initial categories as possible. Those categories were, within time, reduced and/or changed into broader categories, and then included in six themes (according to the thesis research questions and the theoretical framework). A final stage of the reduction process can be seen in the thesis audit trail (Figure 18). The audit trail also describes the extent to which the categories affect and interrelate with each other. For example, according to the interviewees a category of ‘Job as a challenge’ appeared to directly relate with the theoretical construct of ‘locus of control’, while simultaneously affect ‘development’. Consecutively, the ‘locus of control’ was considered mainly as associated with ‘hindrances’ to employee engagement (theme), and moderately with challenges (theme).

Both the outcomes (responses classified into specific categories and themes) and the coding process itself allowed the author to produce findings in the form of a narrative. Namely, relevant (to the research questions) categories are presented as a coherent story, based on interviewees’ subjective experiences, and told with their own words. This in turn is further analyzed, and interconnected with the thesis theoretical framework and previous studies.
4.2.5 Quantitative Analysis

The thesis presents selected responses that should essentially represent opinions and attitudes of the interviewees. The analysis is constructed in a hierarchical manner. Firstly, the author presents claims that were introduced by the expert group (OH doctors and HR managers), and then corresponding responses by the employees and the managers. Actual interviews were held in nearly the same exact order.

The leading thought behind such structure was that experts’ input would have a twofold application. On the one hand, having an in-depth theoretical and practical knowledge, they would contribute to academic and professional context, and on the other, they would address the very issues undertaken in this thesis. Employees and managers, however, would address only the latter aspect. They would also ‘speak’ from two different perspectives. Employees would give responses based on their own experiences, whereas the managers would focus on employee’s attitudes and experiences, from ‘supervisor’ point of view.

In the analysis and conclusions, all of the interviewees’ responses were taken into account. However, as a rule, comments that were not directly determined by the content of questions were considered as somewhat more significant. For example, comments regarding accidents as potential engagement metrics that came as responses to a question e.g. ‘What do you think employee engagement is?’ were weighed up, by the author, as more credible than answers to a question ‘What are the main reasons for accidents at...?’ Since no significant differences in attitude and behavior between participants in focus groups and individual interviews were found, responses of both groups were treated in the analysis as equivalent.
Figure 17. Qualitative research methods
Figure 18. Thesis Audit Trail 2
4.2.6 Trustworthiness

To ensure credibility of the qualitative part of the thesis, the author exercised ‘Guba’s four criteria for trustworthiness’: credibility, transferability, dependability, and confirmability (Shenton, 2004). Correspondingly, in order to minimize bias in the quantitative part, criteria of internal and external validity, reliability, and objectivity were applied (Trochim, 2017).

![Figure 19: Four criteria for trustworthiness](source)

Establishing research credibility can be simply defined as making sure that results reflect the actual viewpoint of the participants. (Trochim, 2017). To assure credibility the author got familiar with the case organization’s culture and structure, and previous relevant research findings were scrupulously described in the literature review.

Transferability is based on the premise that results can be generalized to other environments or contexts (Trochim, 2017). To enhance transferability the author described in detail both the context and assumptions of the thesis (Shenton, 2004).

Dependability refers to the “need for the researcher to account for the ever-changing context within which research occurs” (Trochim, 2017). In order to meet the criterion, the author applied overlapping quantitative and qualitative methods. The author also provided a detailed description of the processes, including the audit trail. The latter is especially important if similar study should be repeated in the future. (Shenton, 2004).
Confirmability refers to “the degree to which the results could be confirmed or corroborated by others” (Trochim, 2017). It is directly related to the researcher’s individual perspective, experience, and goals. In order to support confirmability and reduce own bias the author presented own beliefs and assumptions, as well as potential shortcomings in the thesis’s methods. (Shenton, 2004).

4.3 Quantitative approach

4.3.1 Hypothesis

Based on a limited number of relevant quantitative researches, (i.e. Sagie 1998, Bakker et al. 2003, Darr and Johns 2008, Schaufeli et al. 2009, Hoxsey 2010, Soane et al. 2013, Merrill 2013), as well as common reference to such connection in the popular literature, the following hypothesis is made:

Hypothesis: There is an inverse negative association between employee engagement and a total of absences, at the company X. rate declines.

4.3.2 Absences and employee engagement

Absenteeism should be considered both as an indicator of and as a factor. In other words, it can be assumed (as proposed in this thesis) that absence rates are somewhat determined by the level of engagement. At the same time, it should be recognized that absences themselves affect organizational performance and financial results. (Kocakulah et al., 2016).

Notably, methods used to estimate financial losses vary across countries. Usually, they may be divided into direct and indirect costs. The former includes “the salary of the absent employee (or statutory sick pay), replacement costs and overtime costs”. Whereas the latter consists of “effects on productivity, administration, quality of service, social security contributions and the hiring of replacement workers” (Edwards and Greasley 2010, p.12). Consequently, it is challenging to make cross-country comparisons.

Nevertheless, existing statistics clearly show that absences create high costs for both employers and states. For example, according to a report by European foundation for the improvement of living and working conditions, one day of absence costs on the average €300 (Edwards and Greasley, 2010). A study by Chartered Institute of Personnel & Development (CIPD) indicates
that cost of absence, on the average, per employee per year, stands at £659 (Cooper et al. 2009). Finally, European Agency for Safety and Health at Work reports that due to absenteeism EU member states may lose annually between 2.6% to 3.8% of their GDP (EIU report, 2014).

4.3.3 Measures

Absences – dependent variable

Total of ‘Absence illness’ (AT) per unit was used as a dependent variable (Equation 1).

\[
AT = AI + AA
\]

\[
AI = \frac{I+FTA+CA}{TWA}
\]

\[
AA = \frac{LTA+OD}{TWA}
\]

<table>
<thead>
<tr>
<th>AT – Absence Total</th>
<th>LTA – Lost time accident related absence</th>
<th>I – Illness related absence</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI – Absence Illness</td>
<td>TWA – Theoretical working hours</td>
<td>FTA – Free time accident related absence</td>
</tr>
<tr>
<td>AA – Absence Accident</td>
<td>OD – Occupational diseases</td>
<td>CA – Commuting accidents related absence</td>
</tr>
</tbody>
</table>

Equation 1. Absence illness

Two distinct measures are regularly used as absence indicators: absence duration and absence frequency. The former can be understood as “the total length of time an individual has been absent over a specified period regardless of the number of absence spells” (Bakker et al. 2003, p.342). This measure is often referred to as an indicator of ‘involuntary absenteeism’, thus inability to come to work, for example due to illness. The latter can be defined as “the number of spells or times an individual has been absent during a particular period, regardless of the length of each of those spells”. It is often perceived as an indicator of ‘voluntary absenteeism’, so unwillingness to come to work (ibidem).

This dichotomy has found support in some theory and researches (e.g. Bakker et al. 2003). However, there is still a need for more studies and such separation should not be considered as undisputable (Steel, 2003). In particular, it ought to be taken into account that both measures influence each other; hence, only applying both of those, in prospective statistical constellations, may provide valid results.

Vitally, at the time of the conduct of the research, the frequency data was not available at the company X.
Employee Engagement – independent variable

Employee engagement was measured by applying a set of four questions - ‘Engagement index’. It aimed at reflecting the current level of employee engagement. The measure was selected and validated by the external consultancy, which had a long-time experience in the field. The company X had used the measure for several years prior to this study, as a core part of annual engagement surveys. Responses were collected with the use of a five-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (5).

Engagement Index

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overall, I am extremely satisfied with X as a place to work.</td>
</tr>
<tr>
<td>2</td>
<td>I would gladly refer a good friend or family member to X for employment.</td>
</tr>
<tr>
<td>3</td>
<td>I rarely think about looking for a new job outside X.</td>
</tr>
<tr>
<td>4</td>
<td>I am proud to say I work for X.</td>
</tr>
</tbody>
</table>

Table 2. Employee Engagement Index

In the thesis employee engagement is understood as a cognitive and affective state that activates, in an individual, distinctive job-related behaviors. It is characterized by unique emotions and cognitions such as: sense of presence, urgency, focused energy, sense of purpose, and enthusiasm. It encompasses other work-related attitudes, i.e. organizational commitment and job involvement, as well as partially job satisfaction. It results in observable conducts such as proactive behavior, role expansion, persistence, and adaptability. It is driven by balance between resources (job and personal), and job demands (hindrances and challenges).

Control variables

Control variables are not of particular interest in this thesis. By applying them, the author aims at removing their potential effects from the regression equation. Three control variables were selected for the regression analysis. These are white vs. blue-collar workers, gender, and country. Additionally, experience variance was considered as a fourth control variable, however, excluded for technical reasons.
They were chosen based on two premises: availability of data, and previous research and literature. Data collection was limited by privacy policies and the geographical and functional structure of the company x.

White – blue collar workers

Variable was generated by calculating the percentage of white-collar workers per unit. According to Schaufeli & Bakker (2004) blue-collar workers might benefit less than white-collar workers from job resources. This, by definition, should negatively affect their engagement results. Such claim has found support in some research (e.g. Schaufeli et al. 2006). This author, however, believes that despite differences in work characteristics, the level of engagement should not differ significantly between those two categories. At the same time, there is, beyond question, a difference in quality of absences. For example, ill health caused by accidents or physical strain is almost exclusive to blue-collar workers, whereas illness induced by mental strain primarily seems to be a domain of white-collar workers.

Country

Variable was created by assigning a different number to country of origin of the unit. Many studies clearly show that national culture may substantially affect employee cognition, affection, and behavior (e.g. Hofstede 2001). As stated by Conboy and Yoon, with reference to ‘Hofstede dimensions’ (2016, p. 4) “different values based on the different cultural dimensions can account for a lot of the variance in employee engagement if there is a misalignment between the two”. On the other hand, research by Schaufeli et al. (2006, p.711) found no “factorial invariance across samples from the various countries”.

Still, national cultural and legal differences may have an effect on how often or how long employees are absent from work. Such differences, however, should be minimized by unified rules and strong culture within the organization.

Gender

Variable was formulated by calculating the percentage of female employees per unit. A number of studies indicate differences in the average level of engagement between genders (e.g.
Schaufeli et al. 2006, Dyer 2013, Garg 2014, Bendová, & Koralov 2015). Additionally, despite cultural and legal changes woman are hitherto main guardians of children; hence women’s absences may often correlate with children’s sick leaves.

Business-unit-level studies
Employee responses in the engagement surveys were anonymous, therefore only aggregated data, at the unit level, could have been adopted. Size of the units varied from as few as 10 up to couple of hundreds. The vast majority of the units had comparable amount of employees. Response rates within the researched units were over 50 %. Due to confidentiality issues, more accurate data could not be revealed.

Data collection and mapping
Two different sets of raw numerical data were received from the company X. The first one consisted of employee engagement survey results and demographics. The second included a variety of absence metrics (as in the equation 1). All data were at the individual level and referred to years 2014 and 2015. Since, in a small number of cases, units in one set of data did not fully correspond with the other, a thorough analysis of the data structure was conducted. In some cases, data from units were combined, whereas in others entirely excluded. The priority at this stage was making sure that ‘employees’ in one set matched with the others as adequately as possible. Consequently, a number of observations (units) in the study decreased to 89.

Statistical methods
The model was tested with two statistical methods: linear regression (Model 1) and statistical equation modeling (Model 2). Both were conducted with SPSS software. Additionally, SEM was designed with the use of AMOS program. Since in the distribution of the dependent variable (absences) was slightly skewed, log transformation was applied. After transformation 83 observations remained.
4.3.4 Validity and reliability

Internal validity relates to establishing causal relationship between researched variables. It can be described as a degree of confidence to which an independent variable is accountable for the variation in the dependent one (Bryman & Bell 2015). Similarly, construct validity is based on the assumption that the theoretical model corresponds to observations (Meyer, 2001).

In case of employee engagement there is no accepted academic definition, or common operationalization of its measurement. In the current thesis the measure was constructed by an external organization, to be applied at the company X. In order to confirm the underlying structure and engagement dimensions, the author additionally performed an exploratory factor analysis.

External validity (generalization) establishes that a “measured effect is not sample-specific and could be applied to other contexts” (Kauppila & Riikkinen, 2016). Correlation, regression, and statistical equation model (SEM) were used to corroborate statistical generalization of the hypothesis. Importantly, successful generalization also depends on exploration of theoretical constructs and previous empirical research (Riege, 2003). The current thesis provides a detailed reference to existing studies.

Reliability criteria can be met when a measure produces consistent results i.e. “the variance in scores is not attributed to random errors” (Kauppila & Riikkinen, 2016). Cronbach alpha test was used to assure reliability of the measures.

In essence, meeting the previous criteria creates good foundations for objective quantitative studies. Hence, the ‘objective truth’ is based on application of maximally objective and transparent research methods.
5 Findings and results

5.1 Introduction
In this chapter, the qualitative and quantitative findings are presented in their own segments. Through the qualitative segment the author attempts to bring a reader closer to understanding how employee engagement is perceived ‘in practice’ (by HR senior managers, employees, and their supervisors). This part is also expected to justify the very application of absence rates in the quantitative study.

Quantitative segment is a continuation of the literature review and the qualitative approach. Its objective is to test whether employee engagement has an effect on absenteeism. Specifically, the author looks at whether there is an association between the total amount of sick time and the results of the employee engagement index. The author proposes that there is an inverse negative association; hence, as employee engagement rises, absence rates decline.

5.2 Findings: Qualitative research
The entire qualitative segment is divided into 4 major parts: Concept of employee engagement, Absences, Safety and health, and job demands-resources (JD-R).

Each part is written in a way that analysis is preceded by a narrative that includes quotations and comments. The narrative is always presented in the following order: experts (Occupational Health Doctors (Dr), Senior HR Managers (HR), blue-collar workers (BC), and managers (Mgr)). For the purpose of simplicity and readability, the author only cites fragments of few very carefully selected responses (even if there were many similar ones). Nonetheless, designated citations represent the view of either a particular group, or even a majority of the interviewees. In addition, where it seems appropriate, the author includes suitable and/or interesting individual replies.

5.2.1 Concept of employee engagement – narrative
The expert group perceived employee engagement in terms of focus, absorption or even flow. Emotional and cognitive aspects dominated over behavioral traits.

Dr 2: (...)“When you do your work and for example you don’t know how the time is going.”(...)
Dr 2: “That is very important that you are very deep in your job, and it motivates you to do your job very well, because you know how the process goes on, and making is not a very easy process.”

HR 1: (...)“People work in a flow once they are really engaged.” (...)

HR 3: “People who are engaged, (...) are interested in what they do, interested in what kind of results they get at work. So they keep focused more.”

Moreover, they referred to it as an overall good feeling towards work and working environment,

Dr 2: (...) "If you almost own your work, feel good about the work" (...) if it is nice to go to work (...)

HR 3: (...) "Are we happy after work, going home (...) perception of belonging,

Dr 2: (...) “If you feel that your company is like X, is something I have a good feeling to work for” (...) 

HR 1: (...)"when you feel that you belong than you want to perform (...) as well as feeling of competence and helpfulness towards coworkers.

HR 3: (...) "it (engagement) kind of defines how well, we do our job, how well, we feel our job, in which way we treat our colleagues. (...) For example (...) when a new shift comes, I can see a correlation, there are a lot of people who want to stay to fix a problem.

On the other hand HR managers associated the concept with willingness to cooperate and avoiding unnecessary complaints. Both attitudes/behaviors were considered as typical dimensions of Organizational Citizenship Behaviour OCB (explained in the literature review)

HR 3: (...) “how well you work together with your manager and colleagues, (...) it (lack of engagement) can be seen in the person that does not want to make contact with a supervisor, has negative feelings towards development discussion, or training, or whatever the manger is suggesting. “

Remarkably, some interviewees indicated future and changes as employee engagement. Such connotation is emblematic for contemporary engagement literature (as opposite to satisfaction that is closer to status quo). More on the topic in the literature review.
HR 3: “If you are engaged you can be much more open to changes that are happening there. In general attitude itself (…)

It was also a clear among the expert group that engagement has an impact on business performance.

HR 2: (…) “There is interdependence (…) I have seen for example in X, success of the business was not that good, that was the time, let’s say 5 years ago, when the engagement was also low.(…)

HR 3: “It is the results. I think it really reflects how well we do.”

Blue-collar workers associated employee engagement rather with ordinary activities than abstract terms. They referred to such behaviors as performing their job well, following the rules, keeping their word, and working safely (which is both obeying rules as well as taking care of own well-being).

BC 1: (…) “Following established rules, delivering on agreed matters, and working safely.”

BC 3:” Doing my best, and what is expected from me.”

Importantly, one of the interviewees emphasized his or her emotional attachment and dedication to the organization.

BC 2: "I've dedicated my own soul and body."

Understandably, having a very different perspective, as well as broader knowledge, managers pointed to a larger, than in case of blue-collar workers, variety of both abstract and concrete characterizations.

Employee engagement was perceived as a general positive attitude towards work and working environment, or simply as equal to motivation.

Mgr 6: (…)” Engagement and motivation are largely the same thing. If there is no engagement, there is no motivation (…) If a person is engaged he or she can see in a positive way, if he or she is not engaged, he or she sees all things, to some degree, in a negative way.”(…)

Many also invoked proactive or extra-role behaviors. They specified such aspects as being curious, ‘going the extra mile’, or reaching beyond own responsibilities.

Mgr 5: (…) “It is easier to work with engaged employees. In a way it does not always have to be pointed out why the work needs to be done; it is already there, in their own thoughts.” (…)
Mgr 7: "It is observable when we look at who takes initiatives, who makes incident notifications and safety observations." (...)
Mgr 7: "Interested in things, does not think that this is my sandbox."
Mgr 6: “Own initiative is a strong sign as well as having courage to take up a role and having own initiative," (...)
They closely connected employee engagement with understanding of and working towards a common goal:
Mgr 7: "They know what to do, why it is done and what are the goals there"
Mgr 6: "It is the ability to work in groups and to work towards common goals’, it is a clear sign that there are no lonely fighters. (...) Disengaged (employees) (...) are sort of ‘free spirits’”
Mgr 2: “(...) there's like a ‘together mindset’ “(...)”
They considered engaged employees as being more cooperative and helpful towards each other.
Mgr 1: They help each other. (...) they know that if you do not help, a colleague is in trouble". As with the employees, they indicated consciousness and obedience of rules as important engagement ‘ingredients’.
Mgr 3: “An engaged person is probably the one who is meticulous and does the job accurately and probably also the one that makes calls and always answers the phone, careful.” (...) 
Mgr 5: (...) “understands that at work are certain rules, and work is being done according to certain standards, and he or she behaves well.” (...)
Still, only one of the managers referred to perseverance as a key element of employee engagement.
Mgr 3: (...)” Whenever you're at the factory and something happens, often it is so busy that it is difficult to get the plant and the department to run properly, but then you realize that they are engaged in such a manner that they want to try again and again.”
Importantly, there was an understanding, among managers that engagement differs from the ‘old-fashioned’ exchange money for work. They perceived it as something beyond that.
Mgr 6: (...)" Personal motivation must be found in the background; otherwise he or she will not work at full working capacity”
They also clearly recognized the importance of employee engagement and its impact on business performance.

Mgr 2: (...) It is, in my opinion, certainly one of the most important matters, for every successful organization, sort of precondition.” (...) 

Mgr 3: “Yes, it directly affects (performance). If you are engaged then yes, you are also doing a good job.” 

Mgr 4: "If the group is not engaged, it affects the quality, the completeness of work, etc. (...) it is ultimately visible to the customer.” (...) 

5.2.2 Concept of employee engagement – analysis

According to the thesis definition, employee engagement is understood as a cognitive and affective state that activates, in an individual, distinctive job-related behaviors. It is characterized by unique emotions and cognitions such as: sense of presence, urgency, focused energy, sense of purpose, and enthusiasm. It encompasses other work-related attitudes, i.e. organizational
commitment and job involvement, as well as partially job satisfaction. It results in observable conducts such as proactive behavior, role expansion, persistence, and adaptability.

Almost all of the interviewees, through direct or indirect comments, indicated that the construct of employee engagement (in a form advocated in the thesis) is valid.

Although engagement should be viewed rather in terms of variety of degrees (as proposed in this thesis) than a unitary construct, employees and managers seem to clearly distinguish between those that are and are not engaged.

Both experts and managers (employees were not asked this question) clearly believe that employee engagement has a direct impact on business performance.

All groups referred to organizational citizenship behavior (OCB) and adjacent concepts e.g. helpfulness, cooperative attitude, and conscientiousness, as characteristic features of engaged employees.

Both managers and employees considered ‘following rules’ as an engaged behavior. This, in turn, might be somewhat related to linguistic differences between Finnish and English. ‘Engagement’ in the Finnish language (‘sitoutuneisuus’) means the same, or almost the same as ‘commitment’ (difference between commitment and engagement in the literature review).

As anticipated, the expert group primarily pointed to abstract cognitive and affective elements. They essentially characterized employee engagement as a state of focus and absorption, as well as sense of competence, and a feeling of belonging.

Employees most frequently illustrated engagement by bringing examples of their and their colleagues’ concrete behaviors. However, among a variety of their comments it was possible to distinguish all the three employee engagement ‘dimensions’: e.g. emotional -employee commitment to the organization, cognitive - following rules and keeping word, and behavioral - working safely (Figure 20). Importantly, in agreement with the job demands-resources model (JD-R), in different working environments employee engagement (in terms of its broader understanding, with its determinants and outcomes) may refer to somewhat different components. Therefore, for blue-collar workers, such aspects as work ethic, mutual trust, and
being safe, seem to be natural ingredients that constitute the very essence of employee engagement. At the same time, in other environments (professions, job types, organizations, etc.), employee engagement may be represented by somewhat different attributes.

Managers perceive engaged employees as simply more motivated and ‘easier to work with’. Accordingly, the employees, by being more receptive (e.g. understand better work expectations) and having more initiative, appeared to better comprehend the ‘modern concept of work’.

5.3.1 Absences – narrative

Within the expert group, there was a clear agreement that the level of absences was an adequate and reliable employee engagement metric.

Dr 1: "Absences is a measurement that is used the most often."

Dr 2: (…)"We can see it in sick leave rates.” (…)

HR 1: "There should be a clear link between engagement and sort of how easily you will stay home.”

HR 2: (…)"There is a correlation between your mental health and your physical health."(…)

HR 3: “You cannot, of course, look at one or two months’ rate (…), but if you look at the big picture, and development of sickness rate, you can understand a little bit more what is behind it. (…)”

Importantly, however, the interviewees pointed out that the frequency rather than the length of absences should be more relevant. Still, especially due to the impact of potential chronic diseases, both figures were suggested to be taken into consideration.

Dr 1: "If they are unhappy at work, they often seek short sick leaves." 

Dr 2: (…)” That is not so simple (…) because there are that kind of illnesses sometimes that you really have different, very short, sick leave periods. Migraine is the most common reason for that, or so inflammatory stomach diseases. Than you cannot really go to work, even if you are very engaged. (…) but in most of the cases, if a person has many different sick leaves, for example every month (…) a two-day sick leave, than your boss should have a discussion, what is the real reason.”(…)

HR 3: (…)"We should really kind of follow how many times people are off. I think it is more about how easily you decide to stay on a sick leave."
Experts’ explanation of the mechanisms behind the absence occurrences seems to be in agreement with the job demands-resources (JDC) model. An imbalance between demands – hindrances (e.g. poor working conditions) and resources (e.g. lack of career possibilities) may add up to a sense of indifference, therefore lower engagement. This creates a basis for lower morale and ensuing unconscientious behaviors, such as taking excessive sick leaves.

Dr 1: (...)“They are not feeling comfortable at work. (...) Gradually they lose their moral and they moral concept is something that if I am not feeling 100% good, then I have a reason for a sick leave. (...) If you have a slight backache or a headache or a light flu, you are not feeling 100% good, (...) come to ask for a sick leave.”(…)

Dr 2: (...) “I have sometimes said in my profession, as a doctor, you should find a new job, go away, leave this company, and take a new possibility. (...) That has not happened many times in the company X, but when I had patients from smaller companies, and for example the working climate is very bad, than I said, if you want to save your health, leave the job.”

The above mechanism was well illustrated by one of the occupational health doctors. Vitally, he or she emphasized the importance of proper communication and understanding of the causes that are behind employee’s lack of engagement.

Dc 2: “I have had, in doctor’s office that kind of discussions, and sometimes could stop those frequent sick leaves only by asking ‘what is the real reason behind it, because you are not really sick?’ (...) You have to understand the situation, and you should know quite well the patient, otherwise you can actually insult (him or her). (...) If you (for example) say, I feel as a doctor that you are not sick, but you are on the sick leave. That is sometimes a very good question, because than we start a right discussion, for example that I have violence at home (...). Than we can raise the right discussion, what we really should do. (...) For example, a patient claims that he or she has a diarrhea every month, so I could easily arrange an endoscopy for you, and then in that case the diarrhea stops immediately. (...) If you have a diarrhea every month, you should really have endoscopy because there is some inflammatory disease. But in that case, that was the treatment.”

Moreover, when analyzing the sources and the level of absences one has to take into account a broader context, for examples employment alternatives in the given area or the age structure of
the studied employees. The latter appeared to be a potential control variable in a quantitative analysis.

HR 3: "I think one comes from our age structure, it is not a direct correlation that if you are getting older, you have more sick leaves. In a way compared to organizations where the average age is quite high, more often there can have high absence rate."(...)

Employees were asked how much effort they would have to make to receive a sick leave. They were also enquired whether there was any pressure coming from supervisors in order to make them cut short or not to take the sick leave at all. If such pressure was commonly applied, the quality of absences, as an actual engagement indicator would be weakened. According to employees, however, it was reasonably easy to obtain, especially in case of the so-called *self-certified sick leaves.

*Self-certified sick leaves can be taken for up to 3 days, and do not require doctor’s approval.

BC 6: "There is no problem; (...) the group is so rarely absent, so if someone is on sick leave then everyone understands this person is actually sick"

As with the expert group, employees perceived the existence of connection between indifference and lack of engagement with unconscientious behaviors. They recognized that lack of engagement, among some employees, might be related to a higher level of absences. As a general rule, however, they implied that a high work ethic and limited resources (i.e. small number of employees) restrained people from taking unnecessary sick leaves.

BC 2: "If a person is sick, then he or she is sick, it is the real reason. However, we have a group of a few, about 5-10 people, who every year are 10 times on self-declared sick leaves. (...) It is probably lack of motivation, or taking advantage of the system."

Consequently, certain pressure - to not to needlessly extend sick leaves appeared from within a team of employees, rather than from a supervisor. The group also noticed that there was a small minority of employees who in fact may have 'abused' the system. Such employees were referred to as clear examples of the lack of engagement.

BC 5: "(...) It is difficult to be sick when you know that somebody else will have to do it all, there won’t be anybody to fill in. There is a high threshold to go on a sick leave, because this (job) can’t be done tomorrow."
During our discussions, employees also pointed to *transitional jobs (korvaava työ) as an interesting and potentially efficient way of handling partially sick employees. Expectedly, people who requested such alternative were highly engaged employees. This option, however, has been largely perceived as exceptional rather than standard practice.

BC 2: (...)“Even if my hand is in a plaster cast, I will come to work.” (...)

* “A transitional job is a way for your employee to return to work when restrictions preclude him/her from performing the job held when the injury occurred” (L&I 2016).

As with the employee group, managers emphasized that it was not difficult to acquire a three-day sick leave. At the same time, they acknowledged that nowadays doctors pay more attention than before to the reasons behind the long-term requests.

Mgr 3: "Yeah (...) if I have a fever, I have a possibility to be three days off. My understanding is that it used to be easier to get a sick leave, nowadays doctors are more rigorous."

Correspondingly, they believed that the actual ‘pressure’ comes rather from within a team than the managers themselves. They perceived it as an effect of at least three factors: change in the work character, decreasing number of employees, and an overall high work ethic.

Mgr 2: (...) "I know that my team is not needlessly absent because, above all, they are really engaged with their work, and moreover they know, that if they are absent, it will be a burden to others.” (...)

Vitally, they all agreed that, under certain conditions, the level of absences should be a suitable indicator of employee engagement.

Mgr 2: (...) “It can be easily observed (...) the reason for being absent, in opinion, it is more whether you enjoy being at work or not. (...) If they enjoy coming to work, if they have a good atmosphere at work, and they like the work, so that’s the threshold for being absent (...) but when the work feels as a *must-to-do, not a choice, so then when you are slightly sick, it is easier to stay on a sick leave. (...) if they enjoy they can come to work even ‘by limping.’ “(...)

Then again, the managerial group members, more than the other interviewees, underlined the significance of other factors. They reckoned that only if such ‘control variables’ as age, certain diseases, or having small children are, in some way, taken into consideration, the metric would reflect the level of engagement.
Mgr 4: "We need to know the background, the age structure, (...) that we have recruited on the average rather young (...) healthy people, so it is not, in my opinion, straightforward. (...) If you have 50 employees, salaried employees, then come the long-term illness cases and other, (...) we need to know what is there in the background, then come cancer cases or such, and that changes that percentage."(…)

Mgr 7. "By far, the biggest cause for absences are musculoskeletal disorders. (...) There has been improvement, but it is still a key reason. (...)"

Mgr 2: (…)"We have individual cases where people use them (1-3-day self-certified sick leaves) a lot, they usually have small children. (…) A cancer case (...) does not say anything about the engagement. (…)“

Moreover, the absence percentage in smaller units, at times, may not reflect the reality.

Mgr 5: "Of course, in small units, some serious illnesses or injuries raise the absence rate for a relatively long time, and to a high level, which gives a distorted picture."

Finally, as in case of the employees, managers brought attention to transitional jobs as a potential engagement indicator. They pointed out, however, that it was an underused practice and that employees should be made more aware of such alternatives.

Mgr 7: (…) “An employee needs to bring these issues to the attention of a manager. Now, (…) they ask ‘could I do something, maybe temporarily something lighter?’ The supervisor ought to show interest, listen to them, and prepare suitable measures (…)"

5.3.2 Absences – analysis

‘Engaged’ workers are supposed to deal better with increased job demands and consequently be less prone to being absent from work (at least regarding job demands –affected health issues). In other words, a committed employee who find his or her job meaningful and have enough resources is expected to cognitively, emotionally, and physically experience a need to be absent from work. Still it is uncertain whether engagement is a suitable predictor of absenteeism. Even though, in the literature, lower absenteeism occurs often as a consequence of engagement, there are just few academic studies that concentrate on the actual direct relationship between these two variables. Importantly, some researchers propose that frequency rather than duration of the absences is a suitable for engagement performance metric. They explain that the
frequency indicates how employees cope with stressful job demands, whereas the duration relates to inability to perform work tasks. Such distinction, however, does not receive support from all the relevant studies.

There was a general recognition, across the groups, that employee engagement is stimulating lower level of absences. That is, potentially the more engaged the employee, the less he or she is absent at work.

Moreover, there was a clear, but distinctly conditional agreement that the level of absences is a suitable indicator for employee engagement. Interviewees emphasized that finding and interpreting useful absence cases requires profound background knowledge. Therefore, they proposed that an accurate study should also pay attention to such variables as age structure, size of a unit, employment alternatives, having small children, and chronic diseases.

Vitally, both employees and managers claimed that there was no pressure coming from supervisors to refrain from taking sick leaves. This reinforces validity of absence as a performance measure. Interestingly, both groups confirmed the existence of other kind of pressure that was coming from within a group of employees. According to the managers it may have resulted from such factors as limited resources, more interdependent positions, and a high work ethic.

Both managers and experts (employees were not asked this question) agreed that, even though the frequency measure was more reflective of targeted absence cases, the ‘total length’ measure should also be taken into account.

Both employees and managers reported on the practice of taking transitional jobs (e.g. employee that is temporarily unable to perform certain physical tasks is offered other responsibilities). Such conduct was considered as being potentially associated with employee engagement.

Results of the quantitative analysis, correspondingly to the analogues studies (e.g. Bakker et al. 2003, Schaufeli et al. 2009, Soane et al. 2013, Merrill et al. 2013), indicated the negative association between employee engagement and the absence rates, hence they confirm the
paper’s hypothesis. Regarding the assumption that the frequency of absences is a more suitable measure, the current studies somewhat demonstrate that the length may also be exploited as a suitable measurement metric.

5.4.1 Safety - narrative
Members of the expert group, through direct and indirect comments indicated that a causation effect between employee engagement and a number of accidents seemed to be authentic. They also generally agreed that such metrics as *near misses, safety observations, and accidents could be applied as employee engagement indicators.

*Near miss “a potentially damaging sequence of events and conditions, but without harm” (Bridges 2012, p.1).

As was the case with absences, experts explained the mechanism behind accidents in line with the job demands-resources (JDC) model. Imbalance between demands (hindrances) and resources may add up to a sense of indifference, therefore lower engagement. This, in turn, creates a basis for employee’s deficient focus and potential accidents.

HR 1: (...) "If you love your job than you think how you do it, and in the best way possible, and that should lead to fewer accidents.”

Dr. 1: (...)“ The mental state is often an important factor when accidents happen, or they (employees) make mistakes at work. When they are not (there), with the whole body ... then accidents and mistakes happen. (...)

HR 2: ""Human factor (...) even though we talk about technical issues, (...) it is always, (...) behind accidents; that ok I don’t have time to think, I don’t think before acting, and then something peculiar happens. So always think first and act afterwards".

Interestingly one of the HR managers pointed to the fact that ‘observations’, namely notifications of risks and hazards in the X sites, predicted accidents. This should be considered as an exemplification of engagement core dimensions - commitment and attentiveness.

HR 3: "We have studied that (...) people who make those notifications more actively, accidents actually never happen to them, and there are people who never make those notifications, those are under more risk."
Additionally, one of the experts referred to over-routinization as one of the ‘other’ typical causes that were behind accidents.

Dr 1: (...) “You have too much routine, and you have made the same process hundreds of times before. One day it happens (...) and making the process routine and then something goes wrong and there is an accident.” (...) 

Employees corroborated the premise that the lack of engagement lead to less careful behavior, and consequently to accidents. At the same time, they pointed to a variety of other aspects that may have a significant impact on the very occurrence of accidents.

BC 5: ”Negligence, indifference, nothing more. (...) There are lots of situations when they just don’t give a damn, they are not engaged.” (...) 

They indicated such aspects as fatigue and hastiness that come from work overload.

BC 6: (...) ”Hastiness is a huge factor, fatigue probably. Those are two key reasons, surely, people are tired, and some people do two shifts (...). If you are in a hurry, then, at some point, you stop using safety harness or something else” (...) 

They were also aware of detrimental effects of over-routinization.

BC 1 "Habituation is always the worst. When a routine occurs, then at least for me, it is a problem, because I move at work, and sometimes I think about other things while doing something else. Sometimes I wonder ‘have I already done it?’ (...). Attention is not so high, and thoughts are wandering. " 

Interestingly, whereas some employees recognized disruptions as potential reasons behind accidents, others believed that it was the way they handled them was decisive.

BC 2: "We end up panicking, (...) and we run around there, looking for colleagues, so what are we going to do, and stuff." 

By recognizing positive changes in the work practices, in the recent years, employees implied that a cleaner and safer working environment was a significant safety factor. At the same time, they expressed their dissatisfaction with overregulation that made some of the tasks rather strenuous.
BC 2: "Within last 10 years a lot of things have gone forward, safety is here top-notch, so top-notch that it is hard sometimes to do the work, because it interferes with the tasks. (...) Three people press (the same) button; sometimes it seems that there is no sense in it. (...)"

Managers identified a clear link between the level of employee engagement and occurrence of accidents. However, whereas in case of absences, employee indifference seemed to directly translate into higher absence rates, accidents were connected through such constructs as detachment and negligence.

Mgr 7: “We can observe who takes initiatives, who makes incident notifications and safety findings"

Mgr 6: (...) “With attitude certain risks may occur.”

Mgr 2: “99.9% of all (accidents) come from human endeavors; they just are not focused on what is being done.” (…)

As with employees, they also recognized a number of other variables that may have amplified risks of accidents. These were routines, hastiness, disruptions, and the lack of preparedness.

Mgr 7:” Defective equipment, haste, attitude, no training, or perception that there is no training."

Interestingly one of the managers argued that hastiness could be illusory. Specifically, it could be connected to, the already mentioned by employees, unreadiness to handle disruptions.

Mgr 7: "One of the factors is hurry or assumed hurry." (...) In this case the issue is that somebody thinks that there is a need to hurry.” (...) they think it is busy (...). It is self-inflicted.”

Mgr 6: "If a disruption occurs then usually pace accelerates. We quickly try to do ‘that’, and it means that, at this point, we should contain the pace, calmly dismantle problems, and calmly continue the execution. (...) We cannot ever get 100% without an interruption. Some disruptions will occur, and we must be able to handle them safely.” (…)

Routines were, by and large, the most discussed factor. Importantly, in case of disruptions it was the lack of competence, and the ensuing lack of confidence that posed a problem. At the same time, over-routinization appeared to make employees overconfident, hence prone to lose their full attention.

Mgr 6: "Certain attitudinal issues that occurs excessive self-confidence, too daring actions" (…)

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Mgr 4: (...) "This kind of excessive routine, so that those tasks are day after day, year after year (...) they become slaves of habits, then we follow the routines and stop paying enough attention to the environment." (...) 

Vitally, managers understood that routines were a necessary ‘devil’. Therefore, finding a way to keep employees alert, despite routines, may deter accidents. One such way is deliberately breaking routines, by introducing a combination of tasks.

Mgr 4: (...) “When they perform a task, for example in a certain department, so that they work a couple of hours, and then they change, two hours and change to different tasks, which breaks the routine" (...)

Analogous to employees, managers accentuated that changes that had been introduced into the company’s policies and culture had a detrimental effect on the number of accidents. Both employees and manager recognized that.

Mgr 1: 'Yes ‘Safety First’ (...) before if I had had 20 men at the construction department, in the morning when I had gone to work I would have almost had to be afraid to see whether all (the employees) had been alive. (...) It is easier when things are in shape, and that they think in advance, about what they would do. It is a (new) culture, it's like a night and day.

Notably, one of the managers referred to a similar team pressure mechanism as with the sick leaves. In this case, however, it was very much reinforced by the organizational policies and culture.

Mgr 1: (...) "Now you notice when the newcomers come here, if they notice that they do not do things in the right way, they will be likely challenged by the employees. (....) When the team notices that someone does something wrong they say "not this way."

5.4.2 Safety – analysis

Safety as a business performance metric is relevant only in certain industries or working environments, and may include such job demands as exposure to hazardous materials, challenging working spaces, or cognitively / physically demanding work. These demands may be a reason for an increase in workplace accidents, injuries, even deaths. It is postulated that engaged employees have more control over working situations and are able to better employ
their mental and physical capacities and extend their effort. Consequently, they are expected to be generally less involved in accidents, injuries, and other adverse events.

Interviewees largely agreed that higher employee engagement tends to prevent accidents at work. More specifically, experts believed that such metrics as near misses, safety notifications, and accidents were relevant employee engagement indicators. At the same time, managers had no clear statement on the issue, and employees were not asked the question.

Members of all the groups pointed also to numerous, other than employee engagement, factors that may have had a significant effect on safety. They especially accentuated two factors: routines that were usually followed by overconfidence and insufficient attention, and incompetence that was often associated with the lack of confidence, fatigue, hastiness, and work disruptions.

Interestingly, one of the experts reported on statistically negative relationship between safety notifications and accidents. In other words, an ‘employee’ who reports more often on hazards in his or her working place, is less prone to partake in an accident. Hence, an ‘engaged’ employees can be understood as a one who pays attention to, and cares more about safety in his or her working environment. Such connection may suitably reflect two important employee engagement components: commitment and attentiveness.

5.5.1 Job Demands-Resources – narrative

Job characteristics vary largely across industries, professions, or types of employment. It is therefore self-evident that configurations, qualities, and strengths of demands and resources may also vary widely. Interviewees, in direct and indirect comments, referred to a number of subjects that could be understood as challenges, hindrances, or resources. Vitally, the same components, in different work environments may fit more appropriately into another group. For example, ‘learning’ in different contexts might be considered a challenge, resource, or even a hindrance.

This part is divided into seven topics: Challenge as employee engagement precondition, Development opportunities, Leadership and recognition, Influence and autonomy, Social support
and atmosphere at work, Common goals, and Routines and rotation. The topics are described and analyzed in the exact same way as previous parts of the qualitative segment.

Significantly, job demands-resources (JD-R) was not planned to be included in the findings chapter of the thesis. Nonetheless, a substantial amount of information collected through the interviews allowed the author to expand the range and analyze the remaining elements of the model. As a result, it was possible to distinguish job demands and resources characteristic to the case organization.

**Challenge as employee engagement precondition**

The ‘rise’ of the construct of employee engagement appears to be directly related to the changes in the working environment. Automatization, computerification, and a retreat of purely physical jobs made it possible for the concept to be applied to a wider group of employees, especially blue-collar workers. Experts clearly identified such changes in the case company.

Dr 2: “(...) the processes are more and more automated, you have to understand those better, (...) not so much handmade work, you have to follow the processes via computers and so it’s more demanding, that’s good. “

HR 3: “going into direction of being multi-task, working in many more areas, doing maintenance work, production work. It in the old days those were small and narrow areas. (...) (Now) expecting (...) more. (...) the jobs are changing, they are getting new challenges, (and) they can develop professionally. For most of the people, it is kind of good. “ (...)

HR 3: “We have in our x department very demanding tasks, for blue- and white-collar workers. If you are skilled. You want to learn, have positive approach; there are chances to in hierarchy in a way. (...)

Members of the expert group recognized the fundamentality of the challenge as an engagement ingredient.

Dr 2: (...) “If your job in X is not very demanding, you should not be engaged.”(...) “The worst job is that kind of job where there is no (proper) work and (real) responsibilities. (...)”

The lack of balance between challenges and individual capabilities may have clear negative consequences on engagement. Therefore, initially proper recruitment and later adequate
Development opportunities are critical in sustaining the JD-R (job demands-resources) equilibrium. Occupational health doctors observed such incongruity and its consequences.

Dr 2: (...) “If you work in our X, your work can be very simple, and some people, could say that it is frustrating to do that kind of work, but when it is suitable for you can be very engaged”.

Clear and long-term mismatch may even cause severe psychological damage. In the studied organization, the mismatch happened in both direction.

Dr 1: “It happens sometimes that you are too highly educated to the job where you are (...). Sometimes, you don’t have enough skills to your job and this creates much anxiety and unhappiness. (...)

In cases of prolonged discrepancy between overeducated employees and their (monotonous) tasks, employees may become disinterested in their jobs and look for ways to vent their frustrations. One of the experts described even a case where some decided to ‘play pranks’ on the others.

Dr 2: (...) when the salaries in X department were very high, sometimes in the shop floor there were too clever guys, so they had that kind of a feeling that their job had no demands for them, so that it is so easy. In some cases, they were frustrated, and making more harm, for example making quite heavy jokes/pranks to others, because it was not a challenge for them to their work. They were so clever that potentially they could do even the job of a mill manager, and they were on this shop floor level. It is very important that when you recruit people a guy to the X department, to a very simple work, he should be that kind of person who likes that kind of jobs”.

Blue-collar workers characterized their jobs as fairly challenging. They seemed to realize that compared to the past, current jobs consisted of a larger number and a greater variety of tasks. Many of the interviewees appeared to find the very opportunity to conquer the challenges as an intrinsically satisfying. Moreover, some even considered a following dose of stress as indispensable.

BC 1: (...) "In a way I like challenges" (...) I like the fact that there are many things going on at the same time, all the time"(...) 

BC 5: "(...) “Success, every case when I succeed, it feels good."
Similarly, to experts, they realized that the lack of demanding tasks might cause dissatisfaction and force employees to find other ways to vent their frustration.

BC 2: (...) “So I ended up doing all sorts of things: drawing, painting those deck sheets, because it (lack of challenges) brought so much frustration.”(...) As one of the employees pointed out, it is very important that there is a proper balance between demands and resources.

BC 2: (...)”It pisses me off when there is too much work, but it also pisses me off when there is too little.”

Another employee referred to job-person fit as a prerequisite for engagement.

BC 6: (In order) "To motivate, it (the job) has to be so that it takes advantage of your strengths, it is probably the most important factor." (...) Not all of the interviewees though shared those opinions. Some, especially older employees, were somewhat dissatisfied with the changes and challenges.

BC 4 “I at least avoid all such stuff (...) I’m that kind of person (...) that does not want any kind of challenges, I’ve had enough of them in my life”.

As was in the case with experts and employees, managers emphasized that in the recent decades blue-collar jobs have changed dramatically. Specifically, requirement for physical skills has been to a certain degree replaced by a need for cognitive-monitoring skills.

Mgr 2: (...) (Work) “has changed a lot, compared to what we had before (...) so-called ‘dumb’ work (...) that you take a plank from place A to place B. It is no longer like that (...) the challenge level has risen, automation has been added and there is a lot more computer work.” (...) Mgr 4: (...) “there are now more monitoring tasks that require following at the same time multiple screens and surveillance cameras, they can be quite mentally exhaustive. (...)” Managers clearly recognized that jobs have become much more demanding than in the past.

Mgr 4: (...) “We are demanding from the employees more and more, and there come such requests that it is necessary to think more and change behaviors (...) The speed of production (...), the demands, the production outputs have multiplied in the last few decades. (...) The man himself can (now) influence the work. (...) The one needs to be alert and handle many different systems, information systems (...); it requires more focus and caution. “(..."
Jobs were characterized by less physical, however more mental strain.

Mgr 4: “As related to health, they are less physically demanding, but then the mental burden has grown.”

Many older employees had difficulty to adjust and preferred to retire earlier. There were individual cases of successful retraining, though they were rare.

Mgr 2: “We cannot put them (older employees) into any work station (...) if they have a chance to go on early retirement, they are the first ones to raise a hand (...) If my 60-year old colleague had to study some computer science or something, or new programs, than it sometimes can work out, but it rarely does.”

Importantly, along with the increase in demands, working conditions have also visibly improved.

Mgr 2: (...) “Working conditions have improved considerably and everybody likes automatization. We have had plenty of cold places, where during the wintertime we did many things, now they have warmer spaces and much less physical work, so it is clearly visible that many people are more willing to learn.”

Development opportunities

Learning on the one hand, and career path on the other, are critical ways to close the ‘challenge gap’ between skills and tasks. Hence, experts underlined the necessity of creating development opportunities and expanding current job responsibilities. According to one of the interviewees, an exemplification for such development could be a role of a deputy (varamies), shop steward (luottamusmies), or a machine operative (koneenhoitaja).

Dr 2: “There are, after a few years they can be konenhoitaja, like the highest in that x machinery who takes care of the x machine. That is a quite a demanding job. (...) also, that kind of possibilities that have had many responsibility areas, where they could work, like we call in Finnish varamies, who can do many jobs, if a supervisor, for example is on a sick leave, than this varamies can do that job.”

It was clear that the case company, in terms of local units, had limited choice of career opportunities. By and large, however, blue-collar workers seemed to understand and accept the status quo. They were aware that both vertical and horizontal career movement were in their case highly unlikely.
BC 2: "One person made it to the x office x; nobody else has been able to get anything."
On the other hand, they realized that this could cause a motivational problem for their better-educated coworkers.
BC 1: "It's a challenge to keep those young engineers that they have enough prospects, training, logistics, and an opportunity to study, so that they keep the fire burning."
Regarding learning opportunities, employees belonging to the older generation were not enthusiastic about furthering their education or attending non-compulsory trainings.
BC 2: "Old men like us, we no longer want to do any kind of training, the people want to stay where they are. They do not want to learn anymore, it's a safety desire."
Importantly, trainings as such appeared to be available if needed.
BC 6: "There is a lot of training going on, the work is not so simple anymore, and there is also plenty of computer trainings and more"
However, they were mainly related to one’s current job.
BC 2: "I do not think we have quality training, there some that are clearly related to own work"
According to managers, employees varied largely regarding their attitudes towards learning and career opportunities. Some were content with 'stable' challenges, whereas others desired to grow on the constant basis.
Mgr 6: "Yes, there are people with different attitudes and backgrounds, there are some that are here precisely because when they leave the doors behind they do not have to think about work anymore, and they live as if from weekend to weekend, or from a holiday to a day off ... (...).
There are (also) some very smart people here, doing simple jobs, and it can be a problem if their enthusiasm is not enough.” (...) Managers pointed to a great diversity of educational backgrounds, especially among blue-collar workers. Since the tasks were often very industry related, and many positions required on the job training.
Mgr 7: "If we think about education, (people) do not come here through any particular school; there is a huge diversity of people. Those, in those X jobs, they might have primary school education, or a masters’ degrees"
Job market appeared to be a strong factor affecting employees’ job applications.
Mgr 6: "Now if we consider the labor market situation, the situation is so that the entrants are highly educated, in other time it could be very different."

Managers, contrary to occupational health doctors believed that even the overeducated employees brought an advantage to the company.

Mgr 6: (...)"it only enriches this work community... (...) if we get here a master of philosophy, than we should not expect him/her to be here for the next 10 years, but he/she is here for some time, so that he/she will leave his/her mark here (...)"

Moreover, according to one interviewee, having overeducated personnel may have even raised a status of a given position.

Mgr 7: "Yes there can be an employee (...) who has formulated a negative image of a certain work, so that an engineering graduate or a master of philosophy who does the same job, he or she can at the same time raise the status of this work" Mgr 6: "psychological status!"

Additionally, some better-educated employees realized that having a 'blue-collar experience' added a certain value to their resume and their future career opportunities.

Mgr. 7: "Usually When we ask ‘why have you applied for this job with that education?’, (the answer is that) he or she usually did not find the job that corresponds with his/her own education, and wants to stay in working life, and the other (explanation) is that he or she does not have experience in such a job. (...)"

Mgr 5: "I do not consider it as a bad thing for young people who had been studying to become engineers. It is not a bad thing to do a little blue-collar work, because then if they look for supervisors’ or senior positions, it is really helps."

According to the managers, those overeducated employees did not display, for the most part, motivational problems. It was, nevertheless, vital to be forthcoming about the job content during the recruitment/selection process.

Mgr 5: (...)"They have been already gone through this conversation in their own heads, so when they make the application they no longer question the job responsibilities. (...)"

Mgr 7: "Already during the interview we try to make as clear as possible, ‘have you thought it well through?’, then we do a factory tour, and go through the details again, so now that you have seen the place, are you ready to come?”
Similarly, to occupation health doctors members of the managerial group noticed that it was a rather common practice for the overeducated employees to find some other ways to expand their responsibilities (e.g., through a role of a shop steward).

Mgr 5: “Those who are interested and active, they usually look for some positions of responsibility or join some groups (...)”.

Managers indicated that, even though, some of the blue-collar workers expressed a moderate interest in additional training, only few ever applied. According to one interviewee, if an employee is determined, the organization would nevertheless provide all kinds of education possibilities.

Mgr 2: (...) training is available to those who want; it is just a question of willingness (...) especially if you are ready to move away (...). However presently, they are not ready to leave”.

**Leadership and recognition**

Experts strongly emphasized the key role of leadership and leadership culture in the organization. They recognized that a fair, open, and trusting relationship between an employee and an immediate supervisor plays a critical role in building engagement susceptible environment.

HR 1: Definitely, the most important factor is leadership. (...) how your immediate manager leads you. Although there is a higher level too... but I think that first manager has the biggest impact.”

HR 3: (...) “also the leadership culture (...). It is not just frontline supervisors. (...)”

Interestingly, experts indicated that successful supervisors were expected to be fairly social and ‘inquisitive’. They were desired to try to understand employees’ backgrounds, or even to carry out ‘small talk’.

HR 2: (...)“it is highly recommended that bosses are talkative; they have good relationships with their subordinates. That is a number one thing. Also, how you feel, (...). Is your boss interested in your well-being. Not only physically but also mental-well-being.”

**Experts also highlighted fairness and justice as necessary managerial traits.**

HR 1: (...) “People have to feel they are treated fairly, they are in the sense equal, (...), no favorites that get better treatment.” (...)
Moreover, the expert group put emphasis on non-material recognition. Accordingly, the lack of acknowledgement on the side of the immediate supervisor was considered as a clear demotivator.

Dr 2: “If the manager does not care. That is the most terrible situation. If somebody feels, it is all the same what I do for my manger. (...) I think it is easy to demotivate people, much easier than to motivate them.”

Safety, which is a well-embedded company’s value, was being continuously evoked as a potential recognition area. Importantly, small rewards were considered essential engagement ‘sustainers’.

HR 2: “(...) We could increase recognition, also smaller rewards for working safely, (...) some lunch vouchers or whatever, when we have had one year without any accident (...)

Salary was presented, by employees as a necessary but not the most significant engagement motivator.

BC 6: "It is not the salary that is a motivating factor, (...) I am old enough that I have learned that money alone will not make you happy" (...) Minor prizes, as well as nonmaterial recognition were brought up by the employees as encouraging rewards.

BC 1: (...) "We get the ‘tyky*’ vouchers and then the money during the spring, yes they reward us, and sometimes when there is quarterly info, they say it has gone well. (...)"Maybe a daily feedback, (...) It could be just something small."

Obviously, non-material recognition was perceived as closely dependent to the quality of relationship between the employee and the immediate supervisor.

BC 1: “There is a great significance in what is the boss’s attitude, or how he/she greets (employees) at the beginning of the day, how the shift is organized, it's a big deal!”

As with the occupational health doctors, managers were very much aware that their leadership had a tremendous impact on employee motivation.

Mgr 1: “(Leadership) is one of those bloody important things. There are no magic tricks. Nowadays, it’s certainly the job of a boss to use all the all means, to get the team running on the right track.” (...)
They emphasized the importance of creating the ‘we feeling’ and removing unnecessary power distance. They recognized that participating in mundane tasks and being present on the site would certainly get them closer to their employees. Hence, regular Individual feedback on employee performance was understood as an important. At the same time, such practice was perceived as very time consuming and difficult to maintain on the frequent basis.

Mgr 2: “(...) I count myself as a member of the team (not just a manager). We have that kind of atmosphere that if someone is off, then the others take over without saying. (...) I try to lead by example. I take on any role if there is a need. I do not want to manage (as if) from an airport traffic control tower” (...) I know that it’s a tough one ... the calendar is usually full, but still there should be some time found to see the people and have a talk”

Part of the members of the managerial group underlined a high value of frequent positive reinforcement.

Mgr 2: (...) ... it is vital to remember to (...) say that they have done a good job during such a strenuous period (...)

There was, however, no agreement on how much effort should be made on giving a purely positive feedback. Some of the interviewees would have instead advocated for direct, honest and clear communication.

Mgr 6: "Regarding negative issues or issues that are not comfortable to hear about, (a manager) needs to be upfront. If we want to be more effective, (...) it has to be said directly, we can’t beat around the bushes, and speak only about positive things. That would be wrong and there is no sincerity in it"

Correspondingly to employees, managers realized the importance of less significant rewards. They were, however, dissatisfied with the limited freedom they had in awarding exceptional employees with more substantial prizes. In their opinion, rigidness of the current rewarding system prevented them from stimulating exemplary behaviors and future accomplishments.

Mgr 4: Well, there can be, for example, some small cash prizes, monetary acknowledgments and others (...) but when it comes to good performance, there has to be something that is more significant (...) that the managers would have some sort of power to use and give (more
substantial rewards). (...) If we talk about something more important ... (it should be allowed) without dealing with rigid payroll bureaucracy, long negotiations, etc.” (...)

There was an understanding among the group members that engagement differs from an ‘old-fashioned’ exchange - money for work, and that monetary remuneration was not a key motivator.

Mgr 1: “It’s not the money, it has small impact, (...) it’s sort of a chain of things that brings the aggregate.” (...)

Managers pointed to the company x events and informal meetings as another important element of employee recognition. One of such examples were ‘Tyky-päiviä’:

Mgr 5: “Of course, these all ‘Tyky’ activities are of great importance, in addition to other things. (...) We are surely the only factory at X that has common Christmas party for everyone. Than there have been the ‘Tyky’ days spent outdoors, ergo the whole plant was shut down.”

**Influence and autonomy**

Experts believed that releasing to the employees some degree of control over their working environment was another significant prerequisite of engagement.

HR 1: “It is all about empowerment I think so. (...) how much I can impact on what happens around me, is my opinion is something people are interested about.” (...)

One of the interviewees suggested that working with flawed machinery, and ensuing frustration was an exemplification of not having enough influence.

Dr 2: (...) “If the equipment at work does not work properly, as we have some problems with computers, but they have problems with some tools, for example paper machine or a saw. That demotivates them. “(...)”

Experts emphasized that a basic need to both make an impact and have a certain autonomy referred as much to blue- as to white-collar workers.

Dr 2: (...) “Perhaps the worst thing, If I think I am a blue-collar worker is that if we as a bc worker see clearly this job, or this process, should be changed some way or some level, or we need some new tools to get the job easier and nothing happens. So, nobody cares, then it is very frustrating.”
Importantly, experts agreed that there was a variety of means by which blue-collar workers could have a meaningful impact on their work.

HR 2 “Yes, of course, it depends in what processes you are working, and you cannot do whatever you like, but anyhow you can make process improvements, you can suggest process improvements, suggest another way of doing something, and that way your autonomy is quite big.” (…)

In a similar manner, members of the managerial group acknowledged that having their employees involved in a decision-making process was a significant motivator.

Mgr 7: "Involving people and letting them express their opinions and being present during the discussions. Instead of having all the things imposed from top-down, that we do it this way, period, “

Risk assessment meetings, planning work safety activities, as well as holiday scheduling were mentioned as examples of such employee involvement.

Mgr 7: "For example in security-related tasks we involve people in making potential risks assessments ... (...) when somebody is there from the beginning, then they already have knowledge that there is always some reason behind it, and it is easier to adapt and to act. "

Mgr 6: (...) For example when we plan annual holidays (...) people get to suggest themselves when would they want it (...) It is of great importance when you can influence the holiday week, it affects one’s personal life. We organize it together, we think about X factory shutdowns, how to be most cost-effective and share annual holidays, and so (…)

Social support and atmosphere at work

Members of the expert group identified peer group acceptance and general work atmosphere as important employee engagement factors.

Dr 2: “(...) it is a good luck if they have a good shift that they trust each other (that) they have good jokes, good feeling, (and) good atmosphere.” (…)

It appeared, during the interviews, that for many blue-collar workers it was not the job itself but rather their coworkers to have the greatest motivational effect. The reason for that were obviously personal relationships and general work atmosphere. For example:

BC 5: “(...) good fellows around and money. (...)”
The importance of the group was also clearly visible in the way employees treated the so-called ‘freeloaders’. People who did not contribute enough were ‘cold-shouldered’ and openly disapproved.

BC 2: (...) "If there is someone who is just a burden, who does not fully participate in work, just hangs out there, and whom after it needs to be cleaned, then it fucking smells ". (...) "Then we need to constantly keep an eye on that person, which is time consuming”.

Managers highlighted transparency and honesty as pillars of a good atmosphere at work.

Mgr 2: (...) “It is a matter of an open atmosphere and communication, it is very important, and it generates engagement, the fact that we speak up openly and look for solutions together”.

Mgr 1: (...) Often they (employees) care more about their colleagues than the company itself. That is why they go an extra mile, because they know that if they don’t help their coworker, he or she is in trouble”.

They pointed to the need of creating suitable physical space and adequate job organization. So that, for example, all the employees had a chance to interact with each other. It looked as if certain workstations excluded employees from social life, whereas other were more ‘social-centered’. It appeared to be important, for managers, to take those issues into account when planning an allocation of employees and organization of their shifts.

Mgr 5: (...) "We have a wide range of workstations, (some of them) are so that people cannot leave them the whole day cannot socialize (with others). Then, there are such workstations that are freer, where there is more social interaction with other people. In the others (the former) you are so attached to your job that you are not able to form any kind of relationship with your colleagues during the working day "(...)

Mgr 7: (...) "Those who are stuck in one and same control room, and do their jobs all alone; they begin to create their own perceptions of reality. Slowly, they start taking them as a truth."

Personal (i.e. at home) and ‘social’ (i.e. at work, between employees) issues were noticed to be a powerful demotivator. Hence, it seemed essential, for a manager, to pay ample attention to employees and even intervene if necessary.

Mgr 5: "I think the major distraction are human personal affairs, if there are really difficult issues, then a person cannot concentrate on anything, (...)

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Events, such as Christmas parties or ‘TYKY-päivät’ were perceived as elements sustaining an overall good atmosphere.

Mgr 7: During this ‘Tyky’ day we are somewhere else than at the factory. We were at X in X's National Park. There were more informal joint activities, different fun-happenings, these were quite nice days and they improved the ‘We – spirit’.

*Common goals*

According to experts, understanding of higher-level goals and the entirety of the production process was necessary for the employees to fully comprehend their own impact on the organization.

Dr 2: (...)“That is very important that you (...) know how the process goes on. (...) If they don’t have clear targets (...) (and don’t know) what is the purpose of the job. (...) It is very important, that you know the x machine, how long it is. It is a half kilometer, there is an x end and y end. If the guys in the x end don’t know what they are doing and how it affects the y end, then that’s not a good situation, because they are so (inter) dependent.” (...) Importantly, experts also revealed that employees identified their own units rather than the organization, as their actual employer and ‘home’ organization.

Dr 1: “Most often they don’t think outside the local unit. They think (about) the factory, how it is going in the x department. They don’t think about x or x or x. Own unit is (means) in their mind the company”.

Members of the managerial group accentuated the significance of explaining to the employees their roles and aligning them to common goals. It appeared that the lack of understanding of the bigger picture and ‘why we do it’ may have prevented employees from engaging.

Mgr 2: (...) “It is said that ignorance is a bliss (directly translated from Finnish - knowledge increases pain). (...) When people know what they aim at, what they strive for, (...) they are motivated and committed to their work. (...) The message must go up to the point that "now boys we do that because" (...) “It (lack of awareness) reduces motivation, (employee) repeats it, but if (he or she) does not know why something is being done” (...)“
Keeping employees aware of the ‘whole’ was exemplified info sessions on work incentives. Managers attempted to bring together all the relevant issues and present them to employees in a simple and clear manner.

Mgr 4: (...) “When it comes to incentive-related issues, we attempt to make it clear to everyone that they are just like everyday things. (...) There is (for example) some ‘key ratio that has an impact on production, production efficiency, accidents, and other things. (...) that there is always a benefit for those who are familiar with them.” (...) Not all of the interviewees agreed, however, that the Info meetings met the projected standards/goals. As with the entire JD-R (job demands-resources) model, balance and realism are the key to success.

Mgr 2: (...) We have sort of a tendency to set very high goals (...) in a way the battle is already lost there (...) the goal must be in a way realistic to achieve (...) this is just one of the challenges of leadership (...)

Moreover, the lack of transparent and long-term objectives apparently caused distress among employees.

Mgr 5: (...) “I see it already in their behavior there suddenly comes pressure that now we live day by day. When they cannot see the goals, when there is no understanding what is the reason why the money is not applied here but there” (...)

Managers recognized that when in an opaque and chaotic environment machine disruptions happen anxiety raises. This was explained by employees’ difficulty to understand the ‘wholeness’.

Mgr 2: (...) “I think stress is self-inflicted. (...)It comes mostly when the machines do not work, then there is a lot of unnecessary running.” (...)

They underlined that it was vital to make sure that employees understand processes and goals. Hence, they could react with more composure and in more organized manner in stressful contexts.

Mgr 7: (...)” Some understand that it’s quite natural that sometimes something gets broken or is not fully functional, it’s part of a normal working day. Others, due to some technical problems,
might become very stressed, so they end up doing some extra work. Their day is ruined. The others, however, just casually take care of it and leave for home.” (…)

Mgr 6: “With this technology, we never get 100% without disruptions. Disruptions happen in any case, and we just have to be able to know how to handle them safely. (…)"

Routines and rotation

As previously mentioned (in the “Safety and Health” part) over-routinization was considered as one of the causes of accidents. According to experts, excess in routines should be also perceived in a larger context of job organization (including job rotation) as a potential employee engagement impediment.

HR 2 “(…) if they do the same things always without job rotation or without learning new skills that is not motivating. (…) Most people want some variety in their work, they want to learn new things. (…) I have noticed that when asking are you willing to rotate, go to job rotation, go to another saw mill for example, so then most of the people say that ok.” (…)"

According to the employee group such factors as shift rhythm, working hours, and type of the machines had a strong impact on the degree of their engagement. Vitally, a 4-day shift system and job rotation were recognized as apparent job resources.

BC 4: (...) "I am very pleased with this 12 hours (system), these four days just fly.

BC 5: (...) "the fact that jobs rotate (…) it is a positive change"

On the other hand, the lack of versatility and routinization were perceived as obvious demotivators.

BC 2: (...) "The job that I do is alright, but sometimes I could try something else, it's sometimes a bit tiresome" (…). "When I work on such a machine where I seat like a raccoon dog in some mink herd ... fuck, I about to go crazy" (…)

The problem of too many routines was also brought up by managers. They advocated a frequent employee interchange between workstations, to break routines and their negative consequences.

Mgr 4: (...) "This excessive routine that the same tasks come day after day, year after year, month after month. (…) They become slaves of their habits, people perform their tasks out routine, but they do not pay attention to the surroundings. (…) They do a couple of hours (in one
workstation) and then switch, two hours and switch to a different job, this prevents from routinization 

Managers pointed out that beside differences in responsibilities, difficulty level, and degree of monotony, there was also a social aspect of the work stations. The lack of interaction was linked creating a skewed picture about one’s own work or and the organization as a whole. On the other hand, switching between different work shifts was potentially problematic for some employees who were attached to their current group.

Mgr 6: (...) “The job rotation system means that people move from one workstation to another taking up a variety of assignments that broaden one’s mind. If one does the same job for 10 years, then the whole factory loses. (...) When you go to do other jobs, you understand what it looks like from the perspective of your colleagues. (...) If you have been long in the same workstation, motivation disappears. (...) It is said that the grass is greener other side of the fence, it seems that all the problems accumulate at your workplace. This job rotation has been a quite good system.”

Managers concluded that rotation and learning opportunities were, to a certain degree” an ‘answer’ to over- routinization.

Mgr 4: (...) “They are also motivated if they feel that they have ability to learn new things but if they do the same things always without job rotation or without learning new skills that is not motivating”.
5.5.2 Job Demands-Resources – analysis

**Figure 21.** Selected components of JD-R model based on the qualitative research

JR-D model (and its refined version version) predicts that employee engagement is driven by a balance between resources (job and personal), and job demands (hindrances and challenges). Job resources may consist of social support (both from managers and from coworkers), performance feedback, skill variety, autonomy, as well as learning opportunities. Job demands are divided into two separate categories: challenge and hindrance stressors. Challenge stressors may be found in such demands as high workload, time pressure, or high levels of job responsibility. The model states that in order to have a positive impact on engagement, they should be perceived as opportunities to grow and achieve, resulting in the sense of meaningfulness. Clearly, employees should also have a belief that increasing their effort will lead to meeting the job demands. Hence, the challenge stressors may stimulate positive emotions. Hindrance stressors can be exemplified by such demands as a role conflict, role ambiguity, red tape, or other ‘unreasonable’ processes and practices. In essence, they are perceived as constraints to employee growth or goal achievement (Crawford et al. 2010). Vitally, the model
does not considerably restrict the number or and quality of the resources and demands, therefore it may be applied in variety of contexts, industries, groups of employees, or work environments.

Interviewees across the groups raised an issue of the critical change that has been taking place in the working environment. Namely, a vast majority of purely physical jobs have been replaced with ‘monitoring’ positions. This has brought a number of positive consequences regarding employee physical well-being. Potentially, it has also been a factor that has made possible for the very construct of employee engagement to be applied to a wider group of employees, particularly blue-collar workers. At the same time, it has triggered new challenges. In their new positions, employees have been exposed to more mental strain, and respectively suffered from routinization.

Positive challenge has been portrayed, by experts and managers, as a critical element of employee engagement. At the same time, responses to this issue among the employees were divided. Especially older personnel did not perceive the challenge as indispensable. This could, however, be at least partially interpreted as a generational difference.

Nonetheless, the need for balance between challenges and individual capabilities was clear in comments made by representatives of all the groups. Especially strong statements came from experts, who believed that prolonged mismatch might possibly even cause severe psychological damage.

Overall, comments indicated that experts and managers had a common understanding that ‘job-person fit’ should be adjusted, where needed, by the means of learning and career development. At the same time, they pointed to a number of, sometimes insurmountable, obstacles for such modification. That is, due to its structure and locations, the case organization had limited possibilities of career development for the blue-collar workers. Taking up a different career path by a blue-collar worker, inside of the organization, would often require moving to a new, distant location. Moreover, trainings were mostly customized to the factory/unit needs, rather than potential long-term employee educational growth.
As for the ‘suitably’ educated/skilled employees, they appeared to understand and accept the status quo. On the other hand, interviewees across the groups raised an issue of possible negative consequences for the ‘mismatched’ workers.

Interestingly, however, members of the managerial group believed that the overeducated employees brought a unique value to the company. They claimed that the ‘blue-collar’ experience would be both beneficial for their own career and concurrently would raise a status of such position in the eyes of other employees. What is more, interviewees confirmed that when motivated, overeducated employees sought to realize their development needs through a variety of less formal roles such as a position of a shop steward.

In the context of leadership qualities, understandably employee opinions should be a foundation for any conclusions. Unfortunately, their comments were rather narrow and ambiguous, hence insufficient for interpretation. On the other hand, experts and managers characterized the desired leader’s traits in a rather similar fashion. An engaging leader was described as fair, open, egalitarian, and available for employees. Importantly, both groups put the strongest emphasis on communication and regular feedback.

This, in turn, interconnects leadership with non-material recognition. In this case, there was a clear consensus, across the three groups, that salary/wage is not a key motivator. Moreover, it appeared that positive feedback, on the job well done, is in fact a powerful tool in supporting employee engagement. Interviewees also recognized a value of smaller awards such as vouchers or common non-work activities. Crucially, managers expressed their discontent with the current rigid rewarding policy and wished to have a possibility to assign substantial rewards to exceptional employees.

Both experts and managers brought a locus of control and a certain degree of autonomy as important building blocks of employee engagement. Significantly, interviewees believed that this dimension is equally important to blue- and white-collar employees. However, in case of ‘white-collars autonomy was understood as making independent decisions, whereas for blue-collars associated it with having less supervision. Moreover, both groups noticed that the sense of influence can be strengthened by participating in a variety of ‘side-activities’ (that are not part of
a job description), such as planning work safety activities or scheduling holidays. Answers by blue-collar workers did not appear to be sufficient for making conclusions.

Even though interviewees pointed to social support as a key ingredient for engagement, in practice this dimension was perceived as difficult to influence. According to some managers, there were groups that were characterized by excellent atmosphere and would like to ‘stick to the same squad’. On the other hand, in some teams were conflicts that needed to be solved by moving people from one shift to another.

Interviewees, across the groups, considered social support as a critical employee engagement underpinning. Interestingly, for some blue-collars, it was their coworkers rather than the job itself that had the central motivational effect. Furthermore, throughout the groups, it became clear that ‘social support’ had both sympathetic and corrective aspects. The latter one was especially evident in the context of employees that did not contribute enough (‘freeloaders’) and therefore were openly criticized.

Managers, however, directed most of their attention to their own role as social support creators. They emphasized however that even though social support was a key ingredient for employee engagement, in practice this dimension was difficult to influence. As examples of their contribution, they made reference to such activities as Christmas parties or ‘TYKY-päivät’, interventions, as well as selecting suitable personnel for different shifts. Interestingly, they also pointed to ‘sociability’ of different workstations. It appeared that some workspaces were more ‘social-centered’, whereas other by default excluded employees from social interactions.

Experts and managers agreed that making employees understand their own impact on the ‘bigger picture’ was another engagement antecedent. As examples managers mentioned regular info-sessions, where among others, they educated employees about incentives. In addition, they strongly associated the lack of employee awareness of long-term work plans / objectives with more distress. They claimed that in case of irregular situations, such as machinery disruptions, ‘informed’ employees reacted in a more organized and composed manner.
It seemed that blue-collar workers were fairly aware of their own impact on production and higher-level objectives. Answers were, however, narrow and rather ambiguous, hence unsuitable for analysis.

Responses throughout the groups indicated that one of the conspicuous engagement impediments was over-routinization. An employee that was regularly ‘trapped’ in a routine was described (and described him/herself) as significantly less internally motivated. Importantly, representatives of all the groups acknowledged that job rotation was, to a certain extent, a counterbalance to disinterest and the lack of attention that resulted from over-routinization.

In addition, managers emphasized (as in the social support part) the social constituent of job rotation. They claimed that the lack of interaction may actually lead to creating a skewed picture about own and colleague’s work. Hence, rotation would also help with comprehending higher-level objectives and the ‘wholeness’ of organizational processes.

5.6 Quantitative research – results
5.6.1 General information
This part of the chapter is interdependent with the qualitative segment in the sense that interviews qualitatively validated a plausible causal relationship between employee engagement and absence rates. Hence, the author proposes the following hypothesis:

There is an inverse negative association between employee engagement and a total of absences, at the company X, hence, as employee engagement rises, absence rates decline.

The hypothesis was tested with two statistical methods: linear regression (Model 1) and statistical equation modeling (Model 2). Both were conducted with SPSS software. Additionally, SEM was designed with the use of AMOS program. Since in the distribution of the dependent variable (absences) was slightly skewed, log transformation was applied. After transformation 83 observations remained.
5.6.2 Linear regression results

The Cronbach's alpha coefficient for the five items is $\alpha = .836$, suggesting that the items have relatively high internal consistency. Sig = 0.000 and $\beta = -0.31$ indicates correctness of the assumed hypothesis. There is a moderate and negative association between employee engagement and absence rates.

**Table 3. Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized</th>
<th>Standardized</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficients</td>
<td>Coefficients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 (Constant)</td>
<td>-1.347</td>
<td>0.099</td>
<td>-13.622</td>
<td>.000</td>
</tr>
<tr>
<td>Zscore(Eng ind)</td>
<td>-0.153</td>
<td>0.046</td>
<td>-3.347</td>
<td>.001</td>
</tr>
<tr>
<td>Country</td>
<td>-0.007</td>
<td>0.003</td>
<td>-2.193</td>
<td>.031</td>
</tr>
<tr>
<td>Female</td>
<td>0.443</td>
<td>0.263</td>
<td>1.684</td>
<td>.096</td>
</tr>
<tr>
<td>WhiteCollar</td>
<td>-0.569</td>
<td>0.202</td>
<td>-2.825</td>
<td>.006</td>
</tr>
</tbody>
</table>

a. Dependent Variable: lg10 Absence
Table 4. Inter-Item Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Absence</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Country</th>
<th>WhiteCollar</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absence</td>
<td></td>
<td>-0.371</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1</td>
<td>-0.371</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td>-0.458</td>
<td>0.789</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>-0.137</td>
<td>0.731</td>
<td>0.572</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td>-0.619</td>
<td>0.814</td>
<td>0.794</td>
<td>0.534</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>-0.366</td>
<td>0.240</td>
<td>0.317</td>
<td>0.130</td>
<td>0.282</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WhiteCollar</td>
<td>-0.378</td>
<td>0.259</td>
<td>0.216</td>
<td>0.059</td>
<td>0.438</td>
<td>0.211</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-0.126</td>
<td>0.252</td>
<td>0.176</td>
<td>0.056</td>
<td>0.278</td>
<td>0.153</td>
<td>0.774</td>
<td></td>
</tr>
</tbody>
</table>

Figure 23. Scatterplot

5.6.3 Statistical equation modeling (SEM) results

The probability of getting a critical ratio as large as 1.830 in absolute value is $P=0.067$. The regression weight for Eng2014 in the prediction of Absence2015 is on the verge of being
significantly different from zero at the 0.05 level (two-tailed). Therefore, these statements are approximately correct for large samples under suitable assumptions. Standardized Regression Weight (Eng2014 --> Absence2015) α = -0.172, indicates a moderate and negative association between employee engagement and absence rates.

Maximum likelihood estimation method was applied and the input for the analysis was the covariance matrix of the items. The goodness-of-fit of the model was evaluated using Root mean square error of approximation which was RMSEA= 0.155, with degree of freedom Df = 28.

The RMSEA shows how well the model would fit the population covariance matrix with unknown but optimally chosen parameter values (Byrne 1998, cited in Hooper et al. 2008), if it was available. Ideally below 0.05. However, after Kenny et al. (2015), in case of models with small degree of freedom (Df) and small sample size, the RMSEA may often falsely indicate a poor fitting model.

In conclusion, based on the above it can be stated that SEM shows a moderate and negative association between employee engagement and absence rates. The goodness-of-fit results do not allow, however, to claim a causation effect.
### Table 5. RMSEA

<table>
<thead>
<tr>
<th>RMSEA</th>
<th>LO 90</th>
<th>HI 90</th>
<th>PCLOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default model</td>
<td>0.155</td>
<td>0.118</td>
<td>0.193</td>
</tr>
<tr>
<td>Independence model</td>
<td>0.499</td>
<td>0.473</td>
<td>0.527</td>
</tr>
</tbody>
</table>

#### 5.6.4 Quantitative analysis

Results of the quantitative analysis, correspondingly to the analogous studies (e.g. Bakker et al. 2003, Schaufeli et al. 2009, Soane et al. 2013, Merrill et al. 2013), indicated the negative association between employee engagement and the absence rates, hence they confirm the paper’s hypothesis. Regarding the assumption that the frequency of absences is a more suitable
measure, the current studies somewhat demonstrate that the length may also be exploited as a suitable measurement metric.
6 Discussion and conclusions
6.1 Context and thesis objectives
The current thesis has been written as a response to rise of the new academic concept of employee engagement and its ever stronger presence in large corporations and consultancy companies. This in turn is, no doubt, directly connected with employee engagement prospective influence on business performance. Unfortunately, relevant and convincing academic and commercial studies are scarce. It appears that the field particularly lacks qualitative and longitudinal research (Bailey et al. 2015, Truss et al. 2013). Moreover, employee engagement studies have not yet produced any broadly supported definition of the very construct (Mason, 2010).

Hence, this thesis is contributing to the field of employee engagement in three major aspects. Based on the selected literature, it proposes a definition of employee engagement. Through information from extensive individual interviews and focus groups, at the case company, it expands qualitative knowledge of the construct itself, as well as its antecedents and consequences. Finally, with the use of case company’s data on absences and employee engagement survey results, it looks into a quantitative relationship between employee engagement and absence rates.

6.2 Concept of employee engagement
When the author was approaching the research part of the thesis, he held somewhat skeptical view on the legitimacy of the very construct of employee engagement. Hitherto, in the literature, there is no universally supported conceptualization of the phenomenon. The existing definitions vary largely and often overlap with other similar concepts such as job involvement, commitment, or satisfaction. As a result, there are many dissimilar quantitative and qualitative measures.
In order to answer those concerns, the author analyzed available research and formulated a
definition that would represent some of the current approaches and also reflect his subjective
understating of employee engagement.

Consequently, in the current thesis, employee engagement was defined as a cognitive and
affective state that activates, in an individual, distinctive job-related behaviors (e.g. Kahn 1990,
Macey et al. 2011, Schaufeli et al. 2006.). It is characterized by unique emotions and cognitions
such as: sense of presence, urgency, focused energy, sense of purpose, and enthusiasm (Macey
et al., 2011). It encompasses other work-related attitudes, i.e. organizational commitment and
job involvement, as well as partially job satisfaction (Macey and Schneider, 2008). It results in
such observable conducts as proactive behavior, role expansion, persistence, and adaptability
(Macey et al., 2011). It is driven by balance between resources (job and personal), and job
demands (hindrances and challenges) (Bakker and Demerouti 2008, Crawford et al. 2010).

![Concept of Employee Engagement](image)

**Figure 25.** Concept of Employee Engagement

Interviewees, in their own words, were capable to describe qualities of employee engagement
that are representative to major theories and presented in the literature review.

Specifically, interviewees pointed to its cognitive, affective, and behavioral elements. They
indicated such emotions and cognitions as:

- focus, absorption, curiosity, being receptive, sense of competence, sense of confidence, feeling
  of belonging, and commitment as characteristic to their engagement.

Correspondingly, such observable conducts as:
organizational citizenship behavior (OCB), proactive behavior, conscientious behavior, and working safely were considered as representative of an engaged employee. Importantly, similarly to Nahrgang et al.’s (2001, p.74) definition of employee engagement - “the extent to which employees conform or submit to safety expectations, rules, and procedures” employees emphasized obeying work-related rules as their typical ‘engaged behavior’.

Emotional attachment, feeling of belonging, pride of working for the organization / unit / group of employees were those aspects that appeared to require from the interviewees extended time for internalization. In the literature there are three dominating perspectives regarding length or stability of engagement, specifically trait, state, and mood. Most of the sources and this thesis consider engagement as a stable and long-term construct (Mason 2010). Such ‘engaged’ cognitions as enthusiasm, sense of competence, need for development or challenge were described, by the interviewees, as relatively long-term. At the same time, engagement in the form of absorption (short-term mood) that relates to almost immediate reactions (i.e. minute, hour, day, week) appeared to be also an important dimension. This was clear especially in the context of monotonous work and potential negligent behaviors by disengaged employees.

Furthermore, two characteristic engaged behaviors stood out during the interviews. These were organizational citizenship behavior (OCB) referred by interviewees as helpfulness, cooperative attitude, and conscientiousness, and secondly working safely. Interestingly, there were noticeable differences between different groups of interviewees. The expert group primarily pointed to abstract cognitive and affective elements. Employees, on the other hand, illustrated engagement by bringing examples of their and their colleagues’ concrete behaviors. Finally, managers described their engaged subordinates as more motivated, proactive, and receptive.

Moreover, this thesis proposes that employee engagement should be observed in terms of variety of degrees (in other words you can be more or less engaged) than a unitary construct (Macey et al., 2011). During the interviews, however, employees and managers appeared to clearly distinguish between those that are and are not engaged.

In the quantitative segment of the thesis employee engagement was represented by the case company 4-question ‘Engagement Index’ (table 6). The measure was selected and validated by
the external consultancy. Importantly, the last three questions appear to be strongly related with the affective dimension, especially commitment to the case organization.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overall, I am extremely satisfied with X as a place to work.</td>
</tr>
<tr>
<td>2</td>
<td>I would gladly refer a good friend or family member to X for employment.</td>
</tr>
<tr>
<td>3</td>
<td>I rarely think about looking for a new job outside X.</td>
</tr>
<tr>
<td>4</td>
<td>I am proud to say I work for X.</td>
</tr>
</tbody>
</table>

**Table 6. Engagement Index**

The author believes, however, that putting too much emphasis on particular aspects of employee engagement (in this case commitment), hence overlooking other dimensions may be detrimental to measuring the actual level of employee engagement. At the same time, the very reason for a large variety of employee engagement descriptions, in the literature and practice, may originate from differences between organizations.

Therefore, the author proposes that especially larger organizations should formulate their own definition and model of employee engagement. In order to better understand potential dimensions, it is suggested to conduct both quantitative and qualitative research inside the organization.

**6.3. Job Demands-Resources (JD-R) model**

Literature supports J-DR model (and its revised version) as a prominent conceptualization that explains ‘the logic’ behind employee engagement (Bailey et al. 2015). Critically, the model does not considerably restrict the number or / and quality of the resources and demands, and it may be applied in very different industries, groups of employees, or work environments. Importantly,
one of the initial thesis key assumptions was that ‘good’ demands (challenges) are a prerequisite of employee engagement (Crawford et al., 2010).

**Figure 26.** Job demands-resources (JD-R) model

Interviews corroborated the rationale behind the job demands-resources (JD-R) model, and suggested that it is a suitable framework for explaining antecedents of employee engagement. Importantly, however, model’s key ingredient – challenge received full support from experts and managers, whereas responses within the employee group varied. Specifically, older personnel did not perceive the challenge as indispensable. Additionally, interviewees acknowledged that due to the change in the nature of ‘blue-collar’ jobs into more ‘monitoring’ responsibilities, such employees have been exposed to both positive aspects of engagement and more mental strain.

Nevertheless, the need for balance between challenges and individual capabilities was present in comments across the interviewee groups. Notably and correspondingly to original JD-R model (Bakker & Demerouti, 2008), experts were convinced that a prolonged mismatch between demands and resources might potentially cause severe psychological damage.

According to Bakker & Demerouti (2008), the initial authors of the model, job resources should be composed of social support (from both managers and coworkers), performance feedback, skill variety, autonomy, as well as learning opportunities. Importantly however, the model leaves the category of job resources rather open and use a general definition of “physical, social, or
organizational aspects of the job” that should moderate job demands, help in achieving work-related goals, as well as activate “personal growth, learning, and development” (p.211).

Depending on the context however, many categories may play a role of either demands or resources. Consistently, the following themes, based on the thesis qualitative study may, depending on the circumstances, fit either component of the JD-R model. Consequently, analysis of the interviews allowed to distinguish such dimensions as supervisor – employee relationship, social support, recognition, common goals, development opportunities, ‘influence / autonomy’, as well as over-routinization and job-rotation.

Relationship between an employee and his or her immediate supervisor was a central motivator or demotivator. ‘Social support’ could be recognized as a key counterbalance to job demands, especially hindrances. ‘Recognition’ was acknowledged as an important component of successful leadership. It seemed however that a figurative ‘pat on the back’ and extra feedback, rather than salary, was perceived as a critical feature of employee recognition. Having employees understand their own impact on their units brought to them a sense of belonging and meaningfulness. Moreover, in the instances of stressful disruptions, awareness of the long-term work plans and the entirety of the process inflicted necessary confidence in employees and helped them to manage difficulties.

It can be stated that long-term mismatch between skills and job requirements is highly detrimental to employee engagement (e.g. Maslach et al., 2001). Following the ‘theory of work adjustment’, it is however not enough that one’s abilities correspond with responsibilities. In order for an employee to stay satisfied, such symmetry needs to be continuously adjusted, both through training and employee expectations (Dawes, 1994). That is to say, employees at the case company provided varied responses on the importance of development opportunities (such as training and career). Opportunities to learn and to ‘move up a career ladder’ were especially relevant to certain groups of blue-collar workers: “consistently pro-active and often overeducated”. Furthermore, having overeducated employees appeared to actually benefit their units in particular ways. On the one hand, the ‘blue-collar’ experience was considered as a
valuable component in a future ‘CV’, and on the other a presence of such employees, in a given unit, raised a status of the position in the eyes of other employees.

People often feel “powerless in the world as a whole”; consequently, especially in the working environment, they try to find opportunities to compensate for this feeling (Kahn 1990, p. 707). Hence, they wish for ways to perceive themselves as desired and instrumental in achieving organizational goals (ibid.). Correspondingly, in the case company, it was essential for employees to feel that their work was meaningful, and that their colleagues and managers recognized their input. In addition, having an adequate understanding of how their job contributes to ‘the whole’ was an important motivator.

According to one of the most extensively studied models of occupational stress decision-making, freedom is considered as an indispensable counterbalance to job demands (Karasek, 1979). Likewise, case company’s employees voiced the significance of autonomy at work. Interestingly however, ‘autonomy’ was interpreted differently among different groups of interviewees. ‘White-collars’ understood autonomy as an opportunity to make independent decisions, whereas blue-collar employees perceived it rather as working independently or with little external supervision. Furthermore, such behaviors as being proactive, making suggestions, and contributing to work improvements were generally considered as important examples of influencing working environment.

An ‘Engaging’ task can be described as “challenging, clearly delineated, varied, creative, and somewhat autonomous” (Kahn 1990, p.704). If possible, it should however integrate both routine that brings a sense of competence, and novelty that brings a sense of growth and learning (ibid.). Interviewees referred to over-routinization as a distinctive engagement impediment. It reduced their internal motivation and attention level. On the other hand, job rotation appeared to be a counterbalance to over-routinization and positively affected employees in terms of both their cognitive skills and their social interactions. Additionally, job rotation gave employees opportunities to have an insight into other roles and a better understanding of the ‘wholeness’ of organizational processes.
6.4 Employee engagement impact on business performance

In the current literature, there is a moderate, although limited, proof of positive association between employee engagement and a variety of business outcomes. There is however, so far, no academic research that would bring research near to a cause-effect relationship (Christian et al. 2011). The most advanced studies indicate an association between employee engagement and such metrics as turnover intentions, in-role and extra-role behaviors, counter-productive, performance general health, customer loyalty metrics, safety and productivity (Harter et al. 2002, Bailey et al. 2015).

In the thesis, interviewees, both experts and managers (employees were not asked this question) clearly believed that employee engagement had a direct impact on business performance. As examples, they indicated such aspects as productivity, organizational citizenship behavior, safety, and absence rates (especially frequency). Yet, they admitted that although they were convinced about the relationship between engagement and the company X’s outcomes, it would be potentially challenging to measure it quantitatively.

6.5 Safety and absence rates

Safety and absence rates were initially chosen (in cooperation with the company X HR leadership) as suitable performance metrics for both quantitative and qualitative research. Due to the lack of statistically significant number of cases, the safety metrics were dismissed from the quantitative segment. They were, however, discussed extensively during the interviews.

Safety measures are understandably relevant in working environments where job demands are associated with hazardous materials, cognitively challenging work, or physically demanding work. Consequently, such demands, if not balanced, may cause an increase in workplace accidents, injuries, even deaths. Engagement studies assume that engaged employees are characterized as having more control over working situations and being able to better employ their mental and physical capacities and extend their effort and hence employ ‘safer’ ‘engaged’ behaviors (Nahrgang et al. 2011).
Similarly, they are expected to deal better with increased job demands and be less susceptible to being absent from work (at least regarding job demands – affected health issues) (Soane et al. 2013).

Vitally, even though in the literature lower absenteeism and higher safety occur often as a consequence of engagement, there is a limited number of academic studies that concentrate on the actual direct relationship between the two variables (the few existing ones are described in the lit. rev.). Hence, more especially longitudinal studies are needed to verify the relationship.

Recent literature largely comes to an agreement that organizational commitment is central to a larger dimension of employee engagement (e.g. Blizzard, 2004; Macey & Schneider, 2008; Mason 2010; Towers Perrin, 2003; Ward, 2005). In fact, the interviews conducted for the thesis indicated that it was the commitment component that played a key mediator role. Namely, ‘commitment’ largely accounted for the relation between employee engagement and both safety and absence metrics. In other words, employees who felt committed to the company X, its unit, or own team were projected to employ certain engaged behaviors. Committed employees were described as paying more attention to, and caring more about safety in the working environment. Simultaneously they were expected to be less prone to exploit short or overstay long sick leaves, and more eager to take upon transitional jobs (e.g. employee that is temporarily unable to perform certain physical tasks is offered other responsibilities).

Furthermore, in the interviews both absence and safety rates were perceived as appropriate measures to be connected with the level of employee engagement. Regarding the former, correspondingly to Schaufeli et al. (2009), the frequency of absences was considered as more indicative than its total length. Concerning the latter, it was proposed that there should be a positive relationship between engagement and safety notifications, whereas a negative relationship between engagement and near misses and accidents. Vitally, it was suggested that both absence and safety rates were only applicable if a variety of background information (control variables), such as gender, age, experience, chronic diseases, and occupation, was taken into account.
Therefore, the qualitative segment established a credible basis for the quantitative approach. Subsequently, two statistical methods: linear regression and statistical equation modeling were applied to validate a plausible causal relationship between employee engagement and absence rates. As a result, a moderate and negative association between employee engagement and absence rates was confirmed. Such outcome strengthens a proposition that engaged employees tend to have, in total, less absences at work. Importantly, however, results do not allow to claim a causation effect and more studies need to be conducted.

6.6 Answers to research questions
The research questions constituted the very core of the thesis, and were both an inspiration and a guideline for the author. Collected information allowed answering both of the questions:

To what extent employee engagement is a unique and a universal construct? Hence, what it may consist of?

Prior academic research differ in how they define and describe employee engagement. Therefore, the thesis definition attempted to reflect both certain common elements from the literature, as well as author’s subjective understanding of the phenomenon. Theoretical assumptions were subsequently matched with the information from the interviews. The knowledge gained from the qualitative segment played a twofold role: it determined the extent to which a thesis definition applied to employee engagement ‘in practice’, and provided a unique characterization of how employee engagement were perceived at the company X.

Qualitative research largely supported the two fundamental assumptions of the thesis definition. Firstly, employee engagement appeared to be both a cognitive and affective state that activates, in an individual, distinctive job-related behaviors. Secondly, it seemed is driven by balance between resources (job and personal), and job demands (hindrances and challenges).

Findings somewhat depart from the thesis definition with number, descriptions, and naming conventions of cognitions, emotions, and behaviors. Yet, the core assumptions were largely confirmed by the interviewees. The thesis postulated such emotions and cognitions as: sense of presence, urgency, focused energy, sense of purpose, and enthusiasm. Whereas interviewees pointed to focus, absorption, curiosity, being receptive, sense of competence, sense of
confidence, feeling of belonging, and commitment. Accordingly, the thesis proposed that engagement results in such observable conducts as proactive behavior, role expansion, persistence, and adaptability. Whereas the interviewees spoke of organizational citizenship behavior (OCB), proactive behavior, conscientious behavior, and working safely. Inclusions of ‘working safely’ was obviously related to specificity of the researched company. In addition, a role of personal resources was not sufficiently covered during the interviews; hence, it could not be evaluated.

Thus, it can be stated that employee engagement at company X appeared to be a unique construct, ergo it was characterized as distinctive to other existing concepts, for example job satisfaction, job involvement, or organizational commitment. Furthermore, the fact that interviewees referred to the key theoretical components, assumed in the definition and the model of thesis, may indicate the universality of the concept. At the same time, the study was limited to the case company, therefore the conclusion cannot be simply extrapolated to other organizations. That is to say, the results were encouraging and will potentially contribute to a better understanding and defining phenomenon of employee engagement.

*Are absence rates and safety outcomes suitable performance metrics in relation to employee engagement, at the case company?*

Qualitative and quantitative research (only for absence rates) at the company X indicated that both safety outcomes and absence rates are, in context of employee engagement, suitable performance metrics. This was, however, clearly conditional on the inclusion of numerous background factors. Finally, results of the quantitative analysis corroborated the negative association between employee engagement and the absence rates (total length). However, congruently with the former research question, since the study was narrowed down to the case company, those claims cannot be generalized to other organizations. They should though expand the current academic comprehension of the validity of the measures, and their relationship with employee engagement.
6.7 Future research suggestions

The author proposes a few recommendations that could bring prospective studies closer to a better understanding of the phenomenon and substantiating the potential causation effect between employee engagement and performance metrics. Firstly, the triangulation approach including quantitative and qualitative studies may give a unique perspective, exclusive information, and opportunity to strengthen the validity of the construct. Hence, when possible a ‘combined effort’ should be applied. Secondly, even though it is plausible that the key features of employee engagement are generalizable across industries and organization, it appears to be worthwhile for an organization to look for an ‘own’ version of the concept, with distinctive antecedents and consequences. For example, qualitative analysis at the company x related to both absences and accidents led to an assumption (advocated in this paper) that commitment is an underpinning of employee engagement. Furthermore, both the content and the language of the interviews suggested that such statements as ‘I care about my job’, ‘I care about my work colleagues’, or ‘I care about my unit’ seemed suitable for an employee engagement survey. Such questions were not part of the engagement index, used by the company. Since companies differ largely in their culture, type of employees, or a working environment, the nature and or perception of employee engagement may vary to a certain extent. Finally, regarding quantitative methodology, business-unit level research should be conducted in an organization that is large enough to identify a satisfying number of suitable observations (units), preferably over 200. A meta-analysis of similar companies or individual level inquiries could also be a valuable alternative. Vitally, studies should be longitudinal and control for a number of variables, for example: gender, age, experience, chronic diseases, and occupation.
References

Academic Sources


Conboy, K., & Yoon, J. (2016). What are Some Cultural Variances that Explain Differences in Employee Engagement, and What are the Implications of those Differences?


Dawes, R. (1994). The theory of work adjustment as convergent theory.


Riege, A.M., (2003). Validity and reliability tests in case study research: a literature review with “hands-on” applications for each research phase. Qualitative market research: An international journal, 6(2), 75-86.


Reports


Lectures
## Appendix 1 Questions according to the theoretical background

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<thead>
<tr>
<th>Nr</th>
<th>Question</th>
<th>Key Dimension</th>
<th>Supplementary Dimensions</th>
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<tr>
<td>1</td>
<td>Could you describe your job and role here?</td>
<td>General</td>
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</tr>
<tr>
<td>2</td>
<td>What do you think employee engagement is?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>What motivates, and what demotivates you at work?</td>
<td>Person-job fit</td>
<td></td>
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<tr>
<td>4</td>
<td>Do you feel that your job is challenging?</td>
<td>Job demands – resources</td>
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<tr>
<td></td>
<td>Could you describe your job role here?</td>
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<td></td>
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<td>5</td>
<td>Do you have enough time and resources to perform your job effectively?</td>
<td>Psychological availability</td>
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<td>6</td>
<td>Does your knowledge or skill match the job requirements?</td>
<td>Person-job fit</td>
<td>Self-efficacy</td>
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<tr>
<td></td>
<td></td>
<td>Psychological meaningfulness</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Do you have talents or abilities you would like to use in your job, but that you rarely get a chance to use?</td>
<td>Person-job fit</td>
<td>Development</td>
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<tr>
<td>8</td>
<td>Are you satisfied with the current training opportunities?</td>
<td>Psychological meaningfulness</td>
<td>Self-efficacy</td>
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<tr>
<td></td>
<td>Are you satisfied with the current career opportunities?</td>
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<td></td>
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<td>9</td>
<td>How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own and how much depends on others?</td>
<td>Autonomy</td>
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<tr>
<td>10</td>
<td>Do you find your job stressful or does it pose a risk to your health? What is the reason?</td>
<td>Person-job fit</td>
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<td></td>
<td>Psychological Safety</td>
<td>Organizational Citizenship Behavior (OCB)</td>
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<tr>
<td>11</td>
<td>Do you feel you can fully trust the people you work with?</td>
<td></td>
<td>Trust</td>
</tr>
<tr>
<td>12</td>
<td>Do you feel that, in difficult situations, you can count on people you work with?</td>
<td></td>
<td>Transformational Leadership</td>
</tr>
<tr>
<td>13</td>
<td>Do you feel you can give honest feedback to you manager? Would you recall such situation?</td>
<td></td>
<td>Communication Transformational Leadership</td>
</tr>
<tr>
<td>14</td>
<td>Do you receive enough information and feedback from my manager so that you can do your job effectively?</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Question</td>
<td>Themes</td>
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<tr>
<td>---</td>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td></td>
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<tr>
<td>15</td>
<td>Do you feel that the work you do is valuable for the unit and for yourself? Do you think others recognize that?</td>
<td>Recognition, Fairness, Psychological meaningfulness</td>
<td></td>
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<tr>
<td>16</td>
<td>Can you see a clear link between your work and your unit’s objectives?</td>
<td>Psychological meaningfulness, Dedication/Commitment</td>
<td></td>
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<tr>
<td>17</td>
<td>Would you say that when you get up in the morning, you feel like going to work?</td>
<td>Energy / Vigor</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Would you say you always persevere, even when things do not go well at work?</td>
<td>Perseverance, Dedication / Commitment</td>
<td></td>
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<tr>
<td>19</td>
<td>Drawing on your experience, can you recall any situation at work, when you wanted to give up but you didn’t?</td>
<td>Psychological meaningfulness, Dedication / Commitment</td>
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<tr>
<td>20</td>
<td>Do you find it easy to stay focused on your tasks?</td>
<td>Focus</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>How often do you feel that time flies when you are working?</td>
<td>Absorption</td>
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<tr>
<td>22</td>
<td>Would you gladly refer a good friend or a family member to the company X for employment?</td>
<td>Dedication / Commitment, Intention to quit / Turnover, Engagement Index, Consequences / KPIs</td>
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<tr>
<td>23</td>
<td>Do you sometimes think about looking for a new job outside the company X?</td>
<td>Dedication / Commitment</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>How would you react if new methods of work were introduced?</td>
<td>Adaptability to change</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Do people at your unit help each other, even if it is not part of their job?</td>
<td>Role Expansion, Organizational Citizenship Behavior (OCB)</td>
<td></td>
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<tr>
<td>26</td>
<td>What are the main reasons for errors at work? What are the main reasons for accidents at work?</td>
<td>Focus, Consequences / KPIs</td>
<td></td>
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</table>

Table 7. Interview questions for all participants
What is, or are in your opinion key drivers behind employee engagement?

How to increase engagement?

What is an impact of employee engagement on performance, or is there any?

In what behaviors we can actually observe engagement?

What is the best way to measure such an impact?

Is level of absences an appropriate metric for measuring such impact?

What is more relevant frequency or duration of the absence?

Table 8. Additional questions for experts and managers
Appendix 2 Quantitative research additional data

### Descriptive Statistics (before log trans.)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
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### Descriptive Statistics (after log trans.)

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Table 9. Descriptive Statistics (before log trans.)

Table 10. Descriptive Statistics (after log trans.)
Table 11. Standardized Regression Weights

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Table 12. Model Summary

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<td>R Square Change</td>
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a. Predictors: (Constant), Zscore(Eng_Ind)
b. Predictors: (Constant), Zscore(Eng_Ind), Country
c. Predictors: (Constant), Zscore(Eng_Ind), Country, Female
d. Predictors: (Constant), Zscore(Eng_Ind), Country, Female, WhiteCollar
e. Dependent Variable: Lg10Absence
### ANOVA

<table>
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<th>Model</th>
<th>Sum of Squares</th>
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<th>F</th>
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a. Dependent Variable: Lg10Absence
b. Predictors: (Constant), Zscore(Eng_Ind)
c. Predictors: (Constant), Zscore(Eng_Ind), Country
d. Predictors: (Constant), Zscore(Eng_Ind), Country, Female
e. Predictors: (Constant), Zscore(Eng_Ind), Country, Female, WhiteCollar

Table 13. Anova
## Table 14. Unstandardized and Standardized Coefficients

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a. Dependent Variable: Lg10Absence