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Motivational Climate, Attitudes Toward Change and the mediating role of employees Mindset

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Abstract

This study seeks to explore how perceived motivational climate at work may influence employees' attitudes to change, and further, whether employees' mindset mediates this relationship. According to the results, the proposed research model is only partly supported. The study relies on cross-lagged data gathered from 1104 employees working within the financial sector. The results indicated a positive relationship between perceived mastery climate and employees' attitudes to change, while a perceived performance climate was negatively associated with attitudes to change. Further, employees' growth mindset were also found to be positively related to their attitudes to change. However, the study did not reveal any supporting evidence for a mediating role of mindset. Due to the findings, the study suggests organizations to facilitate mastery climate and growth mindset to improve employee's attitudes to change.

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Introduction

We live in a rapidly changing world where employees, like organizations, must adapt to changing demands from their environment in order to succeed.

Organizational changes vary in its depth and may be both intentional and unintentional. However, up to sixty percent of all planned change processes tend to fail (Meany and Wilson, 2009; in Huczynski & Buchanan, 2013). A review article by Choi (2011) argues that employees' attitudes to change may help us understand why some change processes succeed while others fail. Therefore, this study seeks to investigate antecedents of attitudes to change. By grasping how these underlying factors can influence employee's attitudes to change, we may extend our overall understanding of why some change processes are more feasible than others. Even though attitudes are argued to be difficult to change when first developed, some studies indicate that employee's attitudes may be influenced by situational factors (e.g. Bommer et al., 2005; Choi, 2011). Further, research suggests that employee's individual perceptions of the work climate may have an impact on how they adapt to organizational change (Martin et al., 2005).

There are several different perspectives and directions within the field of motivational climate. However, this study focuses mainly on the theoretical approach of the traditional achievement goal theory (AGT; Ames, 1992a, 1992b; Nicholls 1984). AGT is regarded to be quite useful compared to many other motivational theories as it offers a suitable framework to investigate outcomes as a result of the employee-environment relationship (Nerstad et al., 2013a). According to AGT (Nicholls, 1984; Ames, 1992a, 1992b), motivational climate at work refers to employee's perceptions of how success is defined at work, and such a climate may have importance for their individual characteristics (Kuenzi & Schminke, 2009). Primarily, the literature refers to two types of motivational climate; *mastery* - and *performance climate*. While a mastery climate defines success based on effort, self-improvement and cooperation, a performance climate values a more egoistic motivation, where social comparison and results are in focus (Černe et al., 2014). How employees perceive the climate at their workplace has previously shown to influence both their adaptability to organizational change (Martin et al., 2005), and work related attitudes (Parker et al., 2003; Nerstad 2013a).

Further, the motivational climate may also influence one's mindsets (Ommundsen, 2001b). While people with fixed mindset tend to believe that human attributes are more or less fixed traits, holders of a growth mindset seem to be more inclined to believe that all people, no matter what, can change significantly (Dweck, 2012a). As suggested by Ommundsen (2001b), those part of a mastery climate are more inclined to develop a growth mindset. By contrast, those who are part of a performance climate more often develop a fixed mindset. Research also indicates that development of a growth mindset may boost employees' motivation, and achievements during challenging transitions (i.e. change processes) (Levy et al., 1998; Dweck, 2012a).

The purpose of this study, are twofold. First, this study seeks to explore how employees perceived motivational climate at work influences their attitudes to change. Second, it aims to investigate whether employee's mindset mediates the relationship between motivational climate and attitudes to change. By exploring motivational climate and mindset in relation to attitudes to change, this study responds to multiple calls for more research on employee's dispositions in relation to change, and other environmental predictors of change, such as organizational culture or climate (Bray, 1994; LePine, 2003; in Ahearne, 2010).

This research offers important contributions within three different fields of theories. First, it intends to contribute to the change literature by investigating attitudes to it, and how underlying factors such as motivational climate and mindset may influence these attitudes. Secondly, the study aims to extend the climate literature by exploring its influence on attitudes. This relationship is interesting to investigate as previous literature suggests that perceived motivational climate may both influence employees work related attitudes (Parker et al., 2003; Nerstad 2013a) and their ability to adopt to unforeseen changes (LePine, 2005). Lastly, the research has implications to the mindset literature as it offers deeper knowledge of employee's mindsets' relation to perceived motivational climate and attitudes to change. Mindset have previously shown to be related to motivational climate (Ommundsen, 2001b) but until now, most of the research within the field of motivational climates and mindsets, including Ommundsen's (2001b) study, are conducted in a sport- and educational setting. The research conducted in sports and educational settings arguably have transference value to an organizational setting, due to their similarities as for

example learning something new and achieving a goal. However, organizations are often characterized by factors different from sports and education such as higher age and compensation in terms of money, making it useful to investigate the transference of these theories.

Further, this study serves important practical implications to organizations and employees. Both perceived motivational climate and mindset have illustrated their ability to be modified and influenced (Blackwell et al., 2007; Ames, 1992a; Nerstad et al., 2013a), making the results highly applicable and useful for organizations. Through a better understanding of how the perceived motivational climate influences employees' attitudes to change through their mindset, one may facilitate for more positive attitudes to change and reduce resistance. Thus, organizations and employees may adapt more easily to change, and thereby saving both time and money.

Attitudes to Change

When employees first are exposed to some sort of information about a change process, they form certain beliefs about the change (Lines, 2005). These beliefs, or reactions, to organizational change may range from excitement and happiness to more negative attitudes such as anger and fear. The different kinds of reactions are regarded as normal since the change process involves going from known to the unknown (Bovey & Hede, 2001; Vakola et al, 2003).

Attitudes reflect a person's tendency to feel, think or behave in a certain way towards something (Arnold & Randall, 2010). Attitudes to change can be thought of as employee's overall evaluation of the change (Lines, 2005). Previous studies have referred to attitudes to change using various labels and definitions of the construct (i.e. readiness for change, resistance to change, cynicism about organizational change, commitment to change, openness to change, acceptance of change, coping with change or adjustment to change (Bouckenoghe, 2010). The different labels have been used more or less interchangeably and the authors of this study therefore find it appropriate to include the different approaches in a more unifying sense of the term. Thus, this study will be more in line with Lines (2005) positive-negative perspective on attitudes to change, concerned with emotions.

Attitudes to change generally consist of a person's cognitions about change, affective reactions to change, and behavioural tendency toward change (Elizur and Guttman, 1976; Vakola et al., 2003). These dimensions of attitudes to change (cognitive, affective and behavioural) are also supported by Dunham and colleagues (1989). The affective dimension relates to the feelings a person has towards the change, which involves evaluation and emotions. This component is often expressed as like or dislike for the change. The cognitive component of an attitude towards change consists of information a person possesses about the change, which is based upon what a person believes is true. The behavioural tendency is related to how a person intends to behave toward the change process (Dunham et al., 1989; Abdul Rashid et al., 2003).

The development of attitudes to the change is a crucial part of the change process, because, attitudes can be difficult to change once they are established (Abdul Rashid et al., 2003). Previous research has indicated that positive attitudes to change are vital for organizational change processes to succeed (e.g. Eby et al., 2000; Gilmore & Barnett, 1992; Kotter, 1996). Further, studies suggest that negative attitudes to change may lead to dysfunctional outcomes such as stress, low job satisfaction and reduced job commitment (Schweiger & DeNisi, 1991; Vakola et al., 2003). However, despite Abdul Rashid's (2003) concerns about the possibility to change employee's attitudes to change, there are studies which has shown more promising results. For example, a longitudinal study by Bommer and colleagues (2005) revealed that work environments characterized by transformational leadership behaviour over time might have an impact on employees' attitudes to change.

Even though some research has found employee's personality traits to have a significant relationship to their attitudes to change, most research has emphasized attitudes to change to be more state-like and dependent on situational factors (Choi, 2011). The next sections suggest how different situational factors at work (e.g. motivational climate) can influence employees' attitudes to change.

The role of the Perceived Motivational Climate

When discussing motivational climate it is important to be aware of the difference between *organizational motivational climates* and *psychological motivational climates*. While organizational climate refers to how the unit or group of employees perceive the work environment, psychological climate represents an individual's perception of its environment (Parker et al., 2003; Schulte et al., 2006). The organizational climate is assumed to relate to the psychological climate as a common organizational climate only occurs if individuals within the organization share the same perceptions of the work (Schulte et al., 2006). In this study we measure motivational climate at an individual level where we are interested in employee's individual outcomes. Thus, this study primarily focuses on motivational climates as psychological climates. What we refer to as psychological climate is argued to origin from Kurt Lewin's (1936; in Parker et al., 2003) notion of *life space* in relation to individuals' motivational and affective reactions towards change. How individuals perceive the psychological motivational climate may affect outcomes such as motivation, work-related attitudes, well-being and performance (Parker et al., 2003). Further, a study by Martin and colleagues (2005) indicates that how employees perceive their psychological climate at work may have consequences for how they adapt to organizational change.

As a result of previous research and conceptualizations of motivational climate, mainly through traditional AGT, we may explain it as employees' perceptions of how success and failure are defined on the basis of the policies, practices, and procedures at work (Nerstad et al., 2013a). Thus, the employees' perceptions of its environment and situations at the workplace will affect the motivational climate. The motivational climate at work may affect employees' goal setting, how their achievement is to be evaluated, and further, how employees are expected to relate to work-related tasks and their colleagues (Ames, 1992a, 1992b).

According to AGT, motivational climate can be characterized by two basic dimensions: *a mastery climate* and *a performance climate* (Ames, 1992a, 1992b). Whether the workplace is characterized by a mastery- or performance climate depends on the employee's subjective experience of the environment (Nicholls, 1984; Černe et al., 2014). There may be several factors contributing in the

development of the motivational climate at work. However, previous studies suggest leaders to be among the most important facilitator for what kind of motivational climate to be developed (Ames 1992a; Nerstad et al., 2013a).

Mastery Climate

In a mastery climate, criteria of success are characterized by factors as effort, self-improvement and cooperation. In a typical mastery climate, employees view the work process in light of learning and development, and motivation is gained through mastery (Černe et al., 2014). Previous research has also suggested mastery climate to promote more adaptive behaviour such as increased effort in demanding situations (Ntoumanis & Biddle, 1999). Studies have indicated that mastery climate facilitates for positive outcomes such as engagement, increased performance, intrinsic interest and well-being (e.g., Ntoumanis & Biddle, 1999; Valentini & Rudisill, 2006; Lau & Nie, 2008; Harwood et al., 2015). As mentioned, research also suggests that the psychological motivational climate at work can predict work related attitudes (Parker et al., 2003; Nerstad 2013a). More specifically, a perceived mastery climate can be assumed to promote positive attitudes among employees. Further, as indicated by previous studies, emphasis on mastery and development in work teams may have positive consequences for employees' likeliness of adaptation to unforeseen change (LePine, 2005). In addition, a longitudinal study by Ahearne and colleagues (2010) suggests that employees tending to be more learning oriented are better at adapting to change. The motivational climate at work is thought to be tightly connected to employees' goal orientations and a perceived mastery climate at work is suggested to influence employees in a more mastery-, or learning oriented manner (Ames, 1992a; Nerstad, 2013b). Employees who are characterized as more mastery oriented possess a "can-change" attitude, and are more likely to embrace the challenge of a change without much fear or anxiety (Ahearne et al., 2010). Therefore, we hypothesize:

Hypothesis 1: There is a positive relationship between a perceived mastery climate and attitudes to change.

Performance Climate

In contrast to a mastery climate, a performance climate at work tends to be characterized by a more egoistic motivation, where social comparison is in focus. Further, performance climates has also been reported to contribute in more serious terms as ill-health, stress and burnout among employees (e.g. Reinboth & Duda, 2004; Nerstad et al., 2013b). The presence of a performance climate increases employees' interests in comparing their own achievements with others (Černe et al., 2014). As a result, a typical performance climate may foster undesirable behaviour such as avoiding difficult tasks and searching for shortcuts (Ames, 1992a; Ntoumanis & Biddle, 1999). Such behaviour may be destructive to change processes as change is often viewed as challenging situations with high demands for effort. Unlike mastery climate, a perceived performance climate is assumed to foster more negative attitudes (Ntoumanis & Biddle, 1999; Valentini & Rudisill, 2006; Harwood et al., 2015). As change is often identified as a challenging process, it is likely that employees part of a performance climate will be more reluctant to engage in this kind of activities as they tend to avoid difficult tasks (Ames, 1992a; Ntoumanis & Biddle, 1999).

Given the argumentation presented above, it is reasonable to believe that the relationship between performance climate and attitudes to change are negative. Further, Ahearne and colleagues (2010) has found performance-oriented employees to find it more difficult to adapt to change, indicating that employees working in a typical performance climate may be less inclined to engage in change. Based on this, we hypothesize:

Hypothesis 2: There is a negative relationship between a perceived performance climate and attitudes to change.

The Mediating Role of Mindset

In order to make sense of and cope with one's surroundings, employees often establish theories to explain their environment. Unlike theory based on research, these theories are often implicit, explained by Ross (1989) as knowledge that are schematic structured, and organize how to make sense of something. These schemas are often called mindsets or implicit person theories (IPT), described as people's perceptions of attributes such as intellectual abilities and personality (Heslin & VandeWalle, 2008; Dweck, 2012a).

Nicholls (1984) suggested two different ways in which ability can be judged. One way is to compare one's abilities to others, the other way is to judge it based on one's previous performance and development of new knowledge. Several scholars have emphasized the importance of these cognitive schemas for one's development of behaviour, and the desire to connect these systems to different events as they arise (Kelly, 1955; Piaget 1928; in Burnette et al., 2013). Based on these theories, it is further suggested that whether one's abilities and attributes are malleable or fixed are influenced both by social perception and self-regulation (Molden & Dweck, 2006).

Dweck and Leggett (1988) introduced the theories of entity- and incremental theory of intelligence, today often referred to as fixed and growth mindset (Dweck, 2012a). The kind of mindset an employee has is likely to influence the beliefs he/she has about his/her ability to learn new things at work (Heslin & VandeWalle, 2008). Thus, employees' mindset may affect one's perception of challenges. As change is often perceived as a challenging situation (Furst & Cable, 2008) it is likely to assume that the employee's mindset can have implications for their attitudes to change.

Studies have indicated that employees through self-persuasion can develop and adopt a relatively sustainable growth mindset (Heslin et al., 2005). Further, leaders holding a growth mindset are more inclined to both recognise, and help employees to change (Heslin & VandeWalle, 2008). As mentioned, leaders are among the most important facilitators for motivational climate at work (Ames 1992a; Nerstad et al., 2013a). As emphasized by Ommundsen (2001b), it has been suggested that motivational climate influences people's mindsets. Research indicates that a focus on results promotes development of fixed- whereas focus on

development promotes a growth mindset (Ames & Archer, 1987; Mueller & Dweck, 1998; in Ommundsen, 2012b).

Growth Mindset

The different IPT heavily influence whether individuals are able to, and believe that they can learn and develop (Dweck & Leggett, 1988; Ommundsen, 2001b). People with a growth mindset (incremental theory) believe that their qualities can be developed through effort and practice (Dweck & Leggett, 1988). Hence, employees with a growth mindset tend to acknowledge the link between hard work and results. Further, people with a growth mindset tend to seek more challenges, and view them as learning opportunities. Holders of a growth mindset look at challenges as a natural part of the learning process. Due to this, those with a growth mindset have shown to be better able to deal with setbacks in an effective way (Dweck, 2012b). For employees, change processes are often characterized by changing the way of working (Erwin & Garman, 2010). Filstad (2010) suggests that learning is closely related to change, as it often requires new ways of doing things. For employees, this means a need for both adoption and learning of new skills to do their work (Ayas, 1999; in Filstad, 2010). As argued, employees with a growth mindset view challenges as an opportunity to learn and develop themselves (Dweck, 2012a). Due to the implications that change is about moving from the known to the unknown (Bovey & Hede, 2001; Vakola et al, 2003), change is often associated with challenging situations. Hence, a growth mindset can be assumed to increase one's inclination to engage in change and have positive attitudes to it.

A study by Ommundsen (2001b) suggests that motivational climate can influence one's mindset. More specifically, a perceived mastery climate may facilitate the development of a growth mindset. A mastery climate is thought to encourage a growth mindset as people in such climates often feel more in control of their learning process (Skinner, 1995; in Ommundsen, 2001b). Task variety and feedback based on progress and effort may increase likeliness of perceiving abilities as something changeable, and thereby make people more capable of mobilising necessary effort in learning situations (Ommundsen, 2001b). Similar to those holding a growth mindset, employees working in a typical mastery climate are more inclined to see the value of effort and development. Due to the findings

of Ommundsen's (2001b) study and the theoretical implications of mindsets role in how people perceive challenging situations, this study suggest that employees mindset may serve a mediator between perceived motivational climate and attitudes to change. More specifically, we hypothesize that:

Hypothesis 3: A growth mindset mediates the positive relationship between a perceived mastery climate and attitudes to change.

Fixed Mindset

Contrarily to a growth mindset, a fixed mindset (entity theory) is characterized by people who believe that how intelligent they are and are able to be, is predestined and not possible to change (Dweck & Leggett, 1988). As a result, holders of a fixed mindset tend not to engage in challenges as much as those with a growth mindset. Blackwell and colleagues (2007) found that one reason for this is their fear of being exposed as unintelligent or lacking ability. This way of coping with challenges often leads to a somehow defensive behaviour, as those with a fixed mindset often perceive failure as proof of their own lack of abilities, and become less motivated (Blackwell et al., 2007). As mentioned, a typical performance climate tends to emphasize comparison of results, and value the result higher than the process (Ames, 1992a, 1992b). When reflecting on the similarities in behavior between people holding a fixed mindset or working in a performance climate, there is reasonable to assume the concepts to be somehow related to each other. This relationship has previously been established in a classroom setting by Ommundsen (2001b). The study revealed that students in a performance climate tend to be more inclined to develop a fixed mindset (Ommundsen, 2001b). In a performance climate, people get less opportunity to maintain control by being enabled to develop a sense of competence based on personal and task criterion reference norms (Skinner, 1995; in Ommundsen, 2001b). A performance climate emphasizes social comparison and elicits expectations for performance that might not be in accordance with one's current capabilities (Ames, 1992a; 1992b). Due to task difficulty and feedback based on normative standards, perceiving a performance climate might lead to the experience of a lack of contingency between one's effort and achievements (Ommundsen, 2001b). Thus, they could

be caught up in the evaluation of abilities as a fixed uncontrollable entity (Dweck & Leggett, 1988; Ommundsen, 2001b).

As mentioned, a fixed mindset can make employees less inclined to engage in challenges. Employees holding a fixed mindset are more likely to develop anxiety and be less satisfied at work (cf., Ommundsen, 2001a). Holding a fixed mindset has also been shown to be detrimental for believing in achievement (Ommundsen, 2001b). Those with a fixed mindset, tend not to believe they will benefit from new challenges and seldom engage in things they don't know whether they can manage or not (Dweck, 2012b). Organizational change is often associated with encountering the unknown (Bovey and Hede, 2001; Vakola et al., 2003) and thereby often demands extra effort from the employees. Based on this, and that employees holding a fixed mindset tend not to engage in challenges, one can assume that employees with a fixed mindset will be more inclined to establish negative attitudes to change. Taken together with mindsets relationship to perceived motivational climate (Ommundsen, 2001b), we hypothesize:

Hypothesis 4: A fixed mindset mediates the negative relationship between a perceived performance climate and attitudes to change.

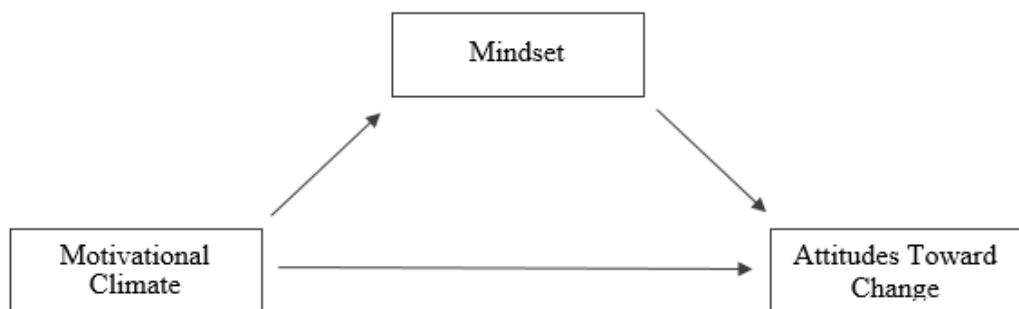


Figure 1.

Research model.

Method

Participants and Procedure

In this study, 2134 employees in one of the largest financial institutions in Norway were invited to participate in a research project investigating the work environment. The employees were asked to contribute by filling out self-assessment questionnaires. To secure anonymity of the participants and ensuring ethical guidelines to be followed, we got an approval from Norwegian Centre for Research Data (NSD; see appendix 1) before the data collection started. Before the employees took part in the study, they were informed about the objectives of this research project, and confirmed that all data would be kept confidential, only accessible to the research group and be only used for research purposes. In order to reduce the influence of possible measurement errors, the questionnaire was two folded and data were gathered at two different times. Motivational climate were measured at time one together with some demographics, while mindset and attitudes to change were assessed three weeks later.

The results indicated that 52 percent of the invited employees (N = 1104) took part in the study, including 590 women and 512 men (see Appendix 2). The participants represented various departments and levels, and the sample was quite evenly distributed by age from 26 years and up, together with various educational backgrounds. About 17% of those who responded reported to have leadership responsibility. Otherwise, it can be noted that most of the participants reported to have worked in the same position for less than seven years, and less than four years under their current leader.

Measures

Following Kahneman's (2011) suggestions, the survey was conducted in Norwegian as participants of a study should be able to answer in their mother tongue in order to increase the reliability of the results. However, based on previous research, translation of measures may influence its quality and should therefore be carefully conducted (Berkanovic, 1980). In order to secure the validity of the measures after translation of the items, translation back-translation method was used (Brislin, 1970; Guillemin et al., 1993).

All measures except from the control variables were scored on a 7-point Likert scale, ranging from 1 = strongly disagree to 7 = strongly agree.

Attitudes to Change. Attitudes to change was measured with, Dunham and colleagues (1989) Attitude Toward Change Instrument (ATCI). The measure includes eighteen statements, including; *“change usually benefits the organization”*, *“I don't like change”* and *“I intend to do whatever possible to support change”*. Originally the ATCI were split into three scales including six items measuring the affective component, six measuring the behavioral component, and six measuring the cognitive component (Dunham et al., 1989; Yousef, 2000). However, in line with Elias (2009), the three components were merged into one single scale in this study. Scale scores were obtained by calculating the average of the eighteen responses. Higher scores indicate a more positive attitude toward organizational change. Reliability analysis revealed an satisfying Cronbach's alpha score of .92.

Perceived Motivational Climate. Perceived motivational climate among employee was measured by The Motivational Climate at Work Questionnaire (MCWQ) by Nerstad and colleagues (2013). The questionnaire includes eight statements measuring performance climate including: *“In my department/work group, there exists a competitive rivalry among the employees”*. Further, the questionnaire also includes six statements assessing mastery climate. An example of a mastery climate statement is: *“In my department/work group, one is encouraged to cooperate and exchange thoughts and ideas mutually”*. The measure has previously obtained considerable psychometric support. The MCWQ Cronbach's alphas has been found to exceed .80, and have been considered to have good internal consistency. In other words, the measure seems to be consistent in measuring perceptions of motivational climate at work (Nerstad et al., 2013a). In this particular study, Cronbach's alpha was found to be .88 for mastery climate and .89 for performance climate.

Mindset. Mindset was assessed using the well-known IPT (Implicit Person Theory) Scale by Levy and colleagues (1998), which consists of eight statements. In the process of developing this measure, five validation studies were done in order to ensure the items to measure what they are supposed to measure (Levy et al., 1998). The questionnaire measures fixed mindset by statements as for example: *“The kind of person someone is is something basic about them, and it can't be changed very much”*. Contrarily, the questionnaire measures growth mindset by statements as for example: *“People can substantially change the kind*

of person they are". In line with previous studies (i.e. Levy et al., 1998; Heslin et al., 2006), responses to the fixed mindset-statements were reverse scored to produce a single scale. A mean score of the eight items were calculated for all the participants were high scores represents growth mindset, while lower scores indicate fixed mindset (Heslin et al., 2006). The reversing of the fixed mindset-scores was based upon previous studies and the substantial evidence of the unitary of such mindsets (i.e. Levy & Dweck, 1997; in Heslin et al., 2005).

The measure has previously shown high reliability scores supported by Cronbach's alpha of .93 (Levy et al., 1998). However, our study reported a Cronbach's alpha of .88. As Cronbach's alphas of .70 or higher indicates good internal consistency, .88 is still to be considered as a satisfying score (Cortina, 1993).

Control variables. To be able to control for sociodemographic differences that may influence the results, the participants filled in information about their demographics. First, they were asked about gender as gender has previously shown to be related to how motivational climate is perceived (Murcia et al., 2008). As previous studies investigating mindset in relation to motivational climate has been conducted in school settings with children (i.e. Ommundsen, 2001b), we included age in order to detect possible variations to grown-ups. Further, years in current position and years with current leader were measured to explore potential variations between seniors and juniors at work. The study also controlled for possible influence of educational level. Lastly, the participants were asked whether or not they have leader responsibility as previous findings suggests leaders to be among the most influential facilitators for motivational climate at work (Ames, 1992a; Nerstad et al., 2013a). To measure age, years in current position and years with current leader, the participants were asked to respond in a scale of clusters. Education was divided into three categories ranging from high school to master's degree. Leader responsibility was questioned on a yes/no scale, and the gender scale consisted of male/female.

Statistical Analyses

SPSS 24 and STATA 14 were applied in order to conduct statistical analyses and to test the hypotheses. Although the measures used in this study already have obtained substantial psychometric support, we conducted factor analysis in order to secure acceptable levels of convergent and discriminant validity. First, we conducted an exploratory factor analysis (EFA) with principal axis factoring and promax rotation method to determine the item retention. As suggested by (Tabachnick & Fidell, 2007), perhaps the best way to decide whether to use orthogonal or oblique rotation, is to start with Oblique rotation (i.e Promax). Tabachnick and Fidell (2007) further suggests that one should look for correlations that exceeds .32. If they do, it is at least 10% overlap in the variance between factors, which is enough to recommend oblique rotation in most cases. As this was the case, and the fact that promax rotation are considered both fast and to create high correlations among the factors, promax rotation was used (Gorsuch, 1983; Yong & Pearce, 2013). Principal axis factoring was chosen due to the data's lack of multivariate normality (Osborne & Costello, 2009). Items with a strong loading of .40 or higher were retained.

As scholars has addressed concerns and disagreements regarding the use of the ATCI and its number of scales, we applied an confirmatory factor analysis (CFA) to assess the different model fit when using three or one scales. In order to evaluate the model fit, a series of indicators were assessed including chi-square (χ^2), the root mean square error of approximation (RMSEA), the comparative fit index (CFI) and the standard root mean square residual (SRMR) (Schreiber et al., 2006). The χ^2 statistic is often reported, but other indicators are commonly applied to determine how well the model fits (Byrne, 2013). According to Hu and Bentler (1999), the model fits well when RMSEA < .06, CFI > .95, SRMR < .08.

As mentioned previously, all fixed mindset items were reversed before the factor analysis in order to create a single mindset scale (i.e. Levy et al., 1998; Heslin et al., 2006). Further, mean scores for each scale were calculated and reliability tests were conducted in order to test the internal consistency of the measures.

Further, we followed Myers and colleagues (2006) recommendations and examined the Pearson correlations among the variables in the analysis in order to detect possible multicollinearity conditions.

To test the mediation hypotheses, we followed Preacher and Hayes (2004, 2008), MacKinnon and colleagues (2002), Williams and MacKinnon's (2008) recommendations, using bootstrapping estimation method/ process analysis. Process analysis is argued to be a more suitable approach to mediation analysis compared to the more traditional regression technique presented by Baron and Kenny (1986), because it does not impose the assumption of normal distributed data, it facilitates higher power and it provides better control for type 1 errors (Preacher & Hayes, 2004). This analysis calculates the influence of the independent variable (IV) on the dependent variable (DV) through the mediating variable (MV) (Preacher & Hayes, 2008). As this process is repeated many times, the process analysis construct an empirical sample for the distribution between the IV and MV and MV DV. These distributions are then used to calculate confidence intervals for the indirect effect of IV on DV, through MV. Interpretation of the output are concerned with whether or not zero is present within the 95% confidence intervals, which indicates non-significant results. However, when zero is not within the confidence intervals, there may be support for mediation (Preacher & Hayes, 2004).

Results

Factor Analysis

The EFA confirmed previous defined factor structures for both the MCWQ and IPT-scale (see Appendix 3). All items had factor loadings between .58 and .83, which is considered as good (Comrey & Lee, 1992; in Tabachnick & Fidell, 2007). However, the ATCI were splitted into only two scales when removing items with factor loadings below .40, which is not in accordance with the original study of Dunham and colleagues (1989) who identified three scales. Due to different approaches to the ATCI, a CFA was conducted in order to test the best model fit using one scale or three. The model including three factors for attitudes to change reported $\chi^2(851) = 3217.12$, $\chi^2/df = 3.78$, $p = .001$, RMSEA = .07, CFI = .84, SRMR = .06. The model including one single factor for attitudes to change reported $\chi^2(851) = 3511.57$, $\chi^2/df = 4.13$, $p = .001$, RMSEA = .07, CFI = .83, SRMR = .06. Both models, independent of using one or three factors, revealed poor results from the Likelihood Ratio-test. However, this may be explained by the size of our dataset. As our dataset was quite large, the dataset will be more

sensitive to multivariate normality, which could affect the Likelihood Ratio-test (Anderson & Gerbing, 1988; Nerstad et al., 2013a). The CFA reported marginal differences in the use of one or three scales. Interestingly, Dunham and colleagues (1989) addressed their concerns to whether the original three-dimensional structure should be maintained or whether a simpler model should be adopted. Therefore, in line with Elias (2009), scale scores were obtained by calculating the average of the eighteen responses. Higher scores indicate a more positive attitude toward organizational change. All over, due to the varying results of the CFA, the model fit is considered as moderately satisfying.

Descriptive Analysis

Table 1 reports descriptive statistics, correlations and measures of reliability. None of the correlations exceeds .70, which is the critical value, indicating that multicollinearity is not a problem (Myers et al., 2006). Further, all Cronbach's alpha coefficients are between .88 and .92, indicating good internal consistency of all measures (Gliem & Gliem, 2003).

As illustrated in Table 1, mastery climate correlates positively with attitudes to change. A negative relationship is found for performance climate and attitudes to change. Further, growth mindset has a positive correlation with attitudes to change. Growth mindset is found to have weak, non-significant, correlations with both mastery- and performance climate. The relationship between mastery- and performance climate and mindset appears to be low and nonsignificant.

However, the correlation matrix only gives an indication of relationships in the dataset. To test the proposed hypotheses, regression analysis is needed. Hence, Preacher and Hayes (2004) bootstrapping estimation method, or process analysis, was applied to test the mediation hypotheses.

Table 1*Descriptives Statistics, Correlations and Reliability Estimates*

<i>Variable</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1 Gender	1.46	0.50	-									
2 Age	3.62	1.06	-0.02	-								
3 Education	2.89	0.70	0.18**	-0.40**	-							
4 Years in current position	3.18	2.26	-0.09	0.51**	-0.36**	-						
5 Years with current leader	1.38	1.03	0.01	0.21**	-0.03	0.25**	-					
6 Leader responsibility	1.17	0.38	0.10**	0.05	0.21**	-0.16**	0.06*	-				
7 Mastery climate	5.36	0.97	-0.05	0.01	0.00	-0.02	0.04	0.23**	(0.88)			
8 Performance climate	3.81	1.30	-0.01	-0.09**	0.00	0.02	-0.10**	0.04	0.001	(0.89)		
9 Growth mindset	4.01	0.97	-0.01	0.05	0.00	0.03	0.02	0.00	-0.003	0.045	(0.88)	
10 Attitudes toward change	5.32	0.68	-0.01	-0.05	0.18**	-0.20**	0.01	0.32**	0.25**	-0.09**	0.15**	(0.92)

N=1104. Cronbachs' Alpha coefficients are displayed on the diagonal and shown in parantheses.

** $P < .05$. ** $P < .01$.*

Process Analysis

All tests are conducted with an 95% confidence interval.

The results indicate that mastery climate is positively associated with attitudes to change. The process analysis reported a direct influence of mastery climate on attitudes to change (see Table 2), which indicates support for hypothesis 1: *“There is a positive relationship between a perceived mastery climate and attitudes to change”*. Further, performance climate appears to be negatively associated with attitudes to change (see Table 2), indicating support for hypothesis 2: *“There is a negative relationship between a perceived performance climate and attitudes to change”*.

Regarding hypothesis 3: *“A growth mindset mediates the positive relationship between a perceived mastery climate and attitudes to change”*, and hypothesis 4: *“A fixed mindset mediates the negative relationship between a perceived performance climate and attitudes to change”*, the process analysis revealed an indirect influence of mindset between the motivational climates and attitudes to change (see Table 2). However, the 95% confidence intervals in both cases range from negative to positive, indicating no significant mediation between motivational climate and attitudes to change through mindset (Hayes, 2013). Thus, hypothesis 3 and 4 were not supported.

Table 2*Influence of Motivational Climate on Attitudes Toward Change through Mindset*

						95% CI				
Independent variable (IV)	Mediating variable (M)	Dependent variable (DV)	Influence of IV on M (a)	Influence of M on DV (b)	Total influence (c)	Direct influence (c')	Point estimate/indirect influence (a x b)	SE	Lower	Upper
1. MC →	Mindset	ATC	.0043	.1031	.0004	.1813**	.0004	.0039	-.0075	.0080
2. PC →	Mindset	ATC	.0318	.1067**	.0034	-.0512**	.0034	.0031	-.0021	.0111

5000 bootstrap samples; MC= Mastery Climate; PC; Performance Climate; ATC=Attitudes Toward Change

*p<.05 **p<.01 ***p<.001

Discussion

We have explored whether perceived motivational climate at work influences employees attitudes to change, and further, whether employees mindset mediate this relationship. Attitudes to change shows to be positively related to a mastery climate, and negatively related to a performance climate. However, this study found no support for the mediation analysis, indicating that mindset does not mediate the relationship between employees perceived motivational climate and their attitudes to change. Despite lack of evidence to our mediation hypotheses, the study serve important theoretical contributions.

First and foremost, the study extends the literature on motivational climate by establishing the relationship between perceived motivational climate and attitudes to change. Further, as attitudes to change has been found to be a significant success factor for change processes (e.g. Eby et al., 2000; Gilmore & Barnett, 1992; Kotter, 1996), this relationship also serve important theoretical implications to the change literature. A perceived mastery climate has previously been suggested to increase employees effort in demanding situations (Ntoumanis & Biddle, 1999), and employees likeliness of adaptation to unforeseen change (LePine, 2005). Therefore, this study hypothesized perceived mastery climate at work to be positively related to attitudes to change. As suggested, the result of this study indicates a positive relationship between perceived mastery climate and employees attitudes to change. Further, theory indicates that employees in a mastery climate often are more mastery oriented and possess a “can-change” attitude, which make them more likely to adapt to change (Ames, 1992a; LePine, 2005; Ahearne et al., 2010). In contrast, also in line with our hypothesis, a perceived performance climate was found to be negatively related to employees attitudes to change. In light of previous research, this could mean that employees who perceive a performance climate may be more likely to develop negative attitudes to change, while those who perceive a mastery climate may be more likely to have more positive attitudes to change. This interpretation of the results is in line with previous research suggesting that employees in a performance climate tend to avoid challenges and be more likely to seek easy solutions, or “quick fixes” (Ntoumanis & Biddle, 1999; Černe et al., 2014; Valentini & Rudisill, 2006; Harwood et al., 2015). It is likely to assume that such behavior

patterns are likely to trigger resistance and negative attitudes to change, as change is often viewed as challenging and time consuming.

This study also intended to contribute the mindset literature by exploring whether mindset mediated the relationship between perceived motivational climate and attitudes to change. However, the mediation hypothesis was not supported, as we could not find any statistical evidence for a mediating influence. Still, the results implied that mindset is positively related to attitudes to change. Due to the reversal of the fixed mindset scale, this indicates that a growth mindset makes people more positive towards change. This is in accordance with previous theory, suggesting that people with growth mindset are more inclined to engage in challenging situations such as change (Dweck 2012a), whereas those with a fixed mindset rather perceive challenges as something negative (Blackwell et al. 2007). However, the results indicate the relationship between motivational climate and mindset to be weak and non-significant, which is in contrast to previous studies suggesting that motivational climate influence people's mindset (Ommundsen, 2001b). Further, our results are not in accordance with existing theory of motivational climate and mindset. Holders of a growth mindset believe that their qualities can be developed through effort and practice (Dweck & Leggett, 1988). Thus, employees with a growth mindset tend to acknowledge the link between hard work and results. This is in line with theory of motivational climate arguing that mastery climate is characterized by learning and focus on the process rather than results (Nerstad et al., 2013a). On the other hand, performance climate is thought to foster more of a competitive environment where results are higher valued than the process and comparison of results is in focus (Ames, 1992a, 1992b). Similarly, employees with a fixed mindset behave more defensive in challenging situations, and perceive failure as a proof of their lack of abilities (Blackwell et al., 2007).

One explanation of these conflicting results may be linked to the age aspect as the research by Ommundsen (2001b) was conducted in an physical education setting among ninth graders whereas this study examines employees in the financial sector, ranging from the age of 26 and upwards. The theory of situational strength emphasizes the strength of environmental factors to influence how you act, and have the ability to restrict your behavior (Meyer et al., 2010). As environmental factors are crucial for employees actions, it is reasonable to believe

that employees part of a strong mastery climate will feel more obligated to answer in line with a growth mindset, as the behaviour linked to such mindset is thought to be acknowledged in mastery climates. However, previous research have indicated that young people are more inclined to be affected by their surroundings (Ruder, 2008). Thus, the sample of Ommundsen (2001b) might be more inclined to change their mindset based on the motivational climate surrounding them.

Another explanation of these findings may be due to the scale used to measure mindset, which may be described as quite general in its approach. Items such as *“The kind of person someone is is something basic about them, and it can’t be changed very much”* are not specifically related to a job setting and the respondent can perceive the statement to be quite vague. However, the mindset scale used by Ommundsen (2001b) were modified in order to suit the context of physical education. Thus, as our study use the original IPT Scale by Levy and colleagues (1998), the results might suffer from lack of context specificity. Yet, previous studies (i.e., Heslin & VandeWalle, 2011) have used the original IPT-scale in organizational settings, indicating that the scale also may be relevant in a work context.

Third, as emphasized by Dweck (2012b) personal characteristics such as mindset is identified as a more stable characteristic than motivational climate. However, previous studies by Blackwell and colleagues (2007) have illustrated mindsets ability to be changed through the use of for example workshops. Motivational climate may vary in its strength and scope. As indicated by previous studies (i.e., Pensgaard & Roberts, 2000; Nerstad et al., 2013a), people's dispositions may differ from the norm of the environment as it is possible to be for example performance oriented in a mastery climate. In other words, the perceived motivational climate does not determine every aspect of employee’s behavior. Based on these arguments it is likely that whether mindset works as a mediator or not, may depend on the strength and scope of the motivational climate perceived by the employees. When a motivational climate is deeply rooted among the employees, individual differences in terms of mindset may be less important, whereas an employee’s mindset may become more weighty in weak motivational climates.

Limitations and Directions for Future Research

Even though this study has important theoretical implications, the study is not free of limitations, which needs to be taken into consideration when interpreting the results. Based on the research method applied, the results of this study do not say anything about causality (Bryman & Bell, 2015). In other words, we cannot conclude on the direction of the relationships. Thus, there might be that employee's attitude to change influence the motivational climate, and not the other way around. In order to extend the findings of this study, and determine causal directions, appropriate methods is needed in future research. For example, a intervention study could be conducted. Through facilitating a mastery climate within a specific group of people and see how this influences the participants' attitude toward change, one is able to track the changes, and thereby be able to detect causal relationships. Another concern is to be addressed as the study relies on cross-lagged data. Ideally, a longitudinal study including all study variables should have been conducted at three or more points in time in order to reduce potential impact of method biases (Podsakoff et al., 2003).

This study solely relies on employee self-reports, which is likely to cause common method variance (CMV) (Podsakoff et al., 2003). This may facilitate concerns for the validity of our findings (Podsakoff et al., 2003). However, in line with NSD and to reduce CMV, all respondents were informed that their personal confidentiality was assured. Further, the respondents were encouraged to answer as honestly as possible and that there were no right or wrong answers.

Another concern regarding the data gathering may be the presence of social desirability bias, which should be considered. Social desirability bias assumes that people want to be perceived in a socially favorable way. The bias can be present through either exaggeration of the good things or understating the bad (Bryman & Bell, 2015). However, as emphasized by Saunders (2011), this bias is unlikely to be present when using self-completed questionnaires. Yet, participants with leadership responsibility might be tempted to make their team or work environment appear to be more learning- and mastery oriented in order to be perceived more socially favorable.

The data in this study was all collected from the same financial institution. As this group of people can be seen as quite homogeneous due to the same occupational background, it represents a threat for external validity, and makes us

unable to generalize our results to other business sectors (Bryman & Bell, 2015). However, our study sample includes respondents from various positions, management levels, and departments within the company and may have beneficial implications for similar organizations with similar structure.

Due to conflicting results to previous research (i.e. Ommundsen, 2001b), the relationship between mindset and motivational climate should be further investigated in order to gain a deeper understanding of the mindset theory and its relation to motivational climate. For example, it could be useful to use a more job specific mindset scale in order to get more accurate results.

Lastly, regarding the lack of support for the mediation analysis, it should be taken into consideration that mastery- and performance climates are zero-correlated (see Table 1), indicating they are orthogonal variables (Rodgers et al., 1984). As orthogonal variables are zero-correlated, a person can score high on both variables at the same time. In other words, both mastery- and performance climate can be present at the same time. Based on this assumption, it may be assumed that the motivational climate may rather interact with mindset in predicting attitudes to change. Future studies could investigate such a triple interaction.

Practical Implications

Despite the limitations of this study, the findings have important implications for organizations, leaders and their subordinates involved in change. Our findings support previous studies arguing a mastery climate to be the more desirable work climate. Based on previous research and the results of this study, organizations who wants to make their employees more engaged and positive towards change, could benefit from facilitating a mastery climate. As change is viewed as a constant process and has somehow become the norm (Huczynski & Buchanan, 2013), a mastery climate may possibly be an important success factor in organizations. Ahearne et al (2010) emphasizes goal orientation as a predictor for employees ability to adopt to change, and suggest that organizations should employ those with a mastery goal orientation. However, this study indicates a perceived mastery climate to be beneficial for developing positive attitudes to change regardless of being mastery- or performance oriented. Hence, organizations may put focus on developing a mastery climate rather than targeting

mastery goal oriented employees.

Further, this study implies that growth mindset may positively influence attitudes to change. As mentioned, previous studies indicates that mindset may be changed, or developed, through the use of workshops or interventions (Blackwell et al., 2007). Additionally, studies suggest that mindset may be determined by perceived motivational climate (Ommundsen, 2001b). Thus, by facilitating a mastery climate at work, employees may be more inclined to develop growth mindset and thereby developing more positive attitudes to change.

By rewarding and facilitating for behaviour such as learning, self-improvement and cooperation, organizations can contribute to the development of mastery climates, and make their employees better suited for change processes (Černe et al., 2014; Ntoumanis & Biddle, 1999). Leaders are identified among the most important facilitators of the motivational climate, as well as having a central role in change processes (Kotter, 1996; Ames 1992a; Nerstad et al., 2013a). When employees perceive their leaders to value their contribution, care about their well-being and be generally supportive, they perceive a mastery climate at work (Stornes et al., 2008; Dragoni & Kuenzi, 2012). Thus, this study should be of interest to all leaders as they may benefit from developing a mastery climate, facilitating growth mindset, and thereby be better suited to lead their employees more effectively through change processes.

Conclusion

This study contributes to the organizational change - and motivational climate literatures by establishing the relationship between perceived motivational climate and attitudes to change. Further, our research extends the mindset literature by identifying a positive link between employee mindset and attitudes to change. The study strengthens the arguments for the development of mastery climate at work and it clarifies underlying factors of attitudes to change, which is essential to achieve successful change processes. Based on the results in this study, organizations could facilitate for mastery climates and growth mindset in order to gain more positive attitudes to change and development among its employees.

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Appendix

Appendix 1 Approval from NSD

Norsk samfunnsvitenskapelig datatjeneste AS
NORWEGIAN SOCIAL SCIENCE DATA SERVICES



Harald Hårlagres gate 29
N-5007 Bergen
Norske
Tel: +47 55 58 21 17
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nsd@nsd.uib.no
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Christina Nerstad
Institutt for ledelse og organisasjon Handelshøyskolen BI
Nydalsveien 42
0442 OSLO

Vår dato: 14.03.2016

Vår ref: 47819 / 3 / AMS

Deres dato:

Deres ref:

TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 08.03.2016. Meldingen gjelder prosjektet:

47819	<i>Ledelse, motivasjon og prestasjon</i>
<i>Behandlingsansvarlig</i>	<i>Handelshøyskolen BI, ved institusjonens øverste leder</i>
<i>Daglig ansvarlig</i>	<i>Christina Nerstad</i>

Personvernombudet har vurdert prosjektet og finner at behandlingen av personopplysninger er meldepliktig i henhold til personopplysningsloven § 31. Behandlingen tilfredsstiller kravene i personopplysningsloven.

Personvernombudets vurdering forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, ombudets kommentarer samt personopplysningsloven og helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, <http://www.nsd.uib.no/personvern/meldeplikt/skjema.html>. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://pvo.nsd.no/prosjekt>.

Personvernombudet vil ved prosjektets avslutning, 01.07.2017, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Katrine Utaaker Segadal

Anne-Mette Somy

Kontaktperson: Anne-Mette Somy tlf: 55 58 24 10

Vedlegg: Prosjektvurdering

Dokumentet er elektronisk produsert og godkjent ved NSDs rutiner for elektronisk godkjenning.

Avdelingskontorer / District Offices:

OSLO NSD, Universitetet i Oslo, Postboks 1055 Blindern, 0316 Oslo. Tel: +47 22 85 52 11. md@ua.no
TROMSØ NSD, Norges teknisk-naturvitenskapelige universitet, 7491 Trondheim. Tel: +47 73 59 19 07. kym.svar@svt.ntnu.no
TROMSØ NSD, SVT, Universitetet i Tromsø, 9017 Tromsø. Tel: +47 77 64 43 36. md@ua.no

Personvernombudet for forskning



Prosjektvurdering - Kommentar

Prosjektnr: 47819

REKRUTTERING

1500 ansatte vil inviteres til å delta i undersøkelsen som er et samarbeid med ██████████ Handelshøgskolen BI får utlevert kontaktinformasjon til de ansatte fra ██████████. Vi legger til grunn at taushetsplikten eller andre bestemmelser ikke er til hinder for dette.

INFORMASJON OG SAMTYKKE

Utvalget informeres skriftlig om prosjektet og samtykker til deltakelse. Informasjonsskrivet er noe mangelfullt utformet.

- Dersom det er aktuelt å lagre datamaterialet og kontaktinformasjon for nye undersøkelser må tidspunkt for sletting av e-postadresser korrigeres. I henhold til meldeskjemaet skal datamaterialet og e-postadresser lagres til 01.07.18.

- I informasjonsskrivet må det også tilføyes at datamaterialet skal anonymiseres, fordi sletting av e-postadresser og koblingsnøkkel ikke er likelydende med anonymisering. For at datamaterialet skal være anonymt må også bakgrunnsvariabler som alder, kjønn, utdanning, stilling etc. slettes eller kategoriseres.

- Det må gis informasjon om at Tord Mortensen, Handelshøgskolen BI og Eivind Østre, Handelshøgskolen BI (studentassistent) også skal bearbeide datamaterialet i tillegg til daglig ansvarlig (Christina Nerstad).

Revidert informasjonsskriv skal sendes til personvernombudet@nsd.no for utvalget kontaktes.

INFORMASJONSSIKKERHET

Personvernombudet legger til grunn at forsker etterfølger Handelshøgskolen BI sine interne rutiner for datasikkerhet. Dersom personopplysninger skal sendes elektronisk eller lagres på mobile enheter, bør opplysningene krypteres tilstrekkelig.

Qualtrics er databehandler for prosjektet. Handelshøgskolen BI skal inngå skriftlig avtale med Qualtrics om hvordan personopplysninger skal behandles, jf. personopplysningsloven § 15. For råd om hva databehandleravtalen bør inneholde, se Datatilsynets veileder: <http://www.datatilsynet.no/Sikkerhet-internkontroll/Databehandlersavtale/>.

PROSJEKTSLUTT OG ANONYMISERING

Forventet prosjektslutt er 01.07.2017. Ifølge prosjektmeldingen skal innsamlede opplysninger da oppbevares med personidentifikasjon til 01.07.2018 for oppfølgingsstudier/videre forskning.

Appendix 2*Description of the study population based on control variables*

<i>Control variable</i>		<i>Number</i>	<i>Percent</i>
Gender	Male	512	46.50%
	Female	590	53.50%
Age	26-35	204	18.70%
	36-45	284	26%
	46-55	327	29.90%
	56+	278	25.40%
	Education	High school	332
	Bachelor's degree	547	50%
	Master's degree	215	19.70%
Years in current position	1-3 years	293	26.80%
	4-6 years	260	23.80%
	7-9 years	193	17.60%
	10-13 years	113	10.30%
	14-16 years	52	4.80%
	17-19 years	31	2.80%
	20-22 years	23	2.10%
	23 + years	129	11.80%
	Years with current leader	Less than 1 year	181
1-3 years		511	46.50%
4-6 years		283	25.70%
7-9 years		84	7.60%
10-13 years		19	1.70%
14 years or more		22	2.00%
Leader responsibility		No	909
	Yes	191	17.40%

Appendix 3
Exploratory Factor Analysis

	1	2	3	4	5	6
Attitude toward change 1	0.411					
Attitude toward change 2	0.686					
Attitude toward change 3	0.657					
Attitude toward change 5	0.665					
Attitude toward change 7	0.658					
Attitude toward change 8	0.614					
Attitude toward change 9	0.617					
Attitude toward change 10	0.420					
Attitude toward change 11	0.566					
Attitude toward change 13	0.671					
Attitude toward change 14	0.632					
Attitude toward change 15	0.802					
Performance climate 1		0.724				
Performance climate 2		0.655				
Performance climate 3		0.707				
Performance climate 4		0.719				
Performance climate 5		0.677				
Performance climate 6		0.597				
Performance climate 7		0.820				
Performance climate 8		0.776				
Growth mindset 1			0.669			
Growth mindset 2			0.797			
Growth mindset 3			0.722			
Growth mindset 4			0.753			
Fixed mindset 1			-0.775			
Fixed mindset 2			-0.679			
Fixed mindset 3			-0.628			
Fixed mindset 4			-0.588			
Mastery climate 1				0.805		
Mastery climate 2				0.744		
Mastery climate 3				0.828		
Mastery climate 4				0.629		
Mastery climate 5				0.738		
Mastery climate 6				0.596		
Attitude toward change 4					0.584	
Attitude toward change 6					0.554	
Attitude toward change 12	0.407				0.425	
Attitude toward change 16					0.651	
Attitude toward change 17					0.811	
Attitude toward change 18					0.743	
Eigenvalues	8.312	4.318	3.822	3.023	1.112	0.588
% of variance	20.779	10.794	9.556	7.558	2.779	1.469