Internal and External Knowledge Sharing within the Norwegian Police Organization

The Effect of Competing Values Topics and Perceived Organizational Support

Sofie Johnsen

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Abstract
A number of studies have demonstrated the significance of knowledge sharing behavior in organizations. However, limited research has examined knowledge sharing from a within-unit (i.e., internal) versus across unit (i.e., external) perspective, moreover the factors that facilitate internal and external knowledge sharing. The following study investigates human relations climate, internal process climate and perceived organizational support as potential facilitators for internal and external knowledge sharing within the Norwegian police organization. The study was a part of a long-time collaborative research project between the research department at Work and Organizational Psychology at the University of Oslo, and the research department at the Norwegian Police University College. The data material was collected through self-report surveys, prior to the current thesis. The survey was distributed to 1730 police employees in three different districts (i.e., Øst), 1007 participants returned the questionnaire. After the removal of blanks and missing values, the sample consisted of 847 participants. The present study tests 12 hypotheses regarding the relationship between these variables through structural equation modelling. Overall, the results indicate that there is a difference between internal and external knowledge sharing, and that the different climate types support and facilitates the different forms of sharing. The findings furthermore, suggest perceived organizational support as a potential mediator between climate and knowledge sharing. In order to facilitate knowledge sharing, the police organization should focus on the whole and complexity of organizational climate, as opposed to focus on one climate dimension, as knowledge sharing is dependent upon several climate types. Implications and a number of suggestions for future research are discussed.

Keywords: Climate, perceived organizational support, knowledge sharing, police
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Introduction

The police organization have been in the media's spotlight, and received enormous attention, especially since the terror attack in Norway the 22 of July 2011. In the aftermath of the attack, the Norwegian police received massive critique for their handling of the crisis. Several evaluation committees (DIFI, 2013; NOU 2012:14, 2012; NOU 2013:09, 2013) concluded that the police failed in their work, and that many of the problems could be attributed to internal factors of the police organization, in particular, poor leadership, organization culture and interaction within the police. Gjørvrapporten (NOU 2012:14, 2012) do not differentiate between the terms culture and climate. Several of the events described in the report, addresses challenges related to the organizational climate of the Norwegian police, for instance coordination and communication. Accordingly, the current thesis will focus on aspects related to the organizational climate of the Norwegian police.

Questions regarding the police efficiency and structure have been a long-lasting debate and over the past, few years there have been calls for changes in the internal structures and climate of the Norwegian police (NOU, 2012:14). The police are facing a large organizational change, as a result of the new police reform (“Nærpolitireformen”). Put briefly, the police were previously organized into 27 district, but from January 1 2016, the number was reduced to 12, with the aim of establishing more specialized environments and more cooperation and coordination between the police districts (Prop.61 LS (2014-2015).

According to the evaluation committees, the police do not have adequate systems for knowledge sharing, which again leads to variation in competence and quality in the various units, as well as limited sharing of knowledge and experiences (NOU 2013:09, 2013). The police organization comprise multiple groups (e.g., teams, units, professions), and research has established that perceptions of group categories can give rise to different barriers to knowledge sharing and cooperation (Dovidio & Banfield, 2015). Previous studies indicate that people generally share and cooperate more with members of their own work group (work groups) compared to out-groups members (Balliet, Wu, & De Dreu, 2014). Little systematic research exists that examines knowledge sharing from a within-unit versus across unit perspective (Zhu, 2016). Moreover, the factors that facilitate within-unit and across unit sharing. Thus, an important topic for research is what can facilitate sharing and cooperation between groups (i.e., internal) and between units (i.e., external) within the police organization.

This study investigates human relations climate (HR), internal process climate (IP) and perceived organizational support (POS) as potential facilitators for internal and external knowledge sharing and cooperation. Previous research has established a positive relationship
between climate and knowledge sharing. However, most studies of organizational climate in police work have typically included dimensions that could be categorized as HR climate (Lone et al., 2017). Hence, an interesting question concerns whether HR and IP differ in the way in which they facilitate the different forms of knowledge sharing (internal and external). Furthermore, several studies have alluded the importance of POS for encouraging knowledge sharing behavior (Cabrera & Cabrera, 2005; Hislop, 2003; McDermott & O’Dell, 2001; Oldham, 2003). However, to the author’s knowledge, no study has investigated the effect of the combination of these variables on both internal and external knowledge sharing.

The aim of this study is therefore to investigate the relationship between HR, IP, POS and knowledge sharing at two structural levels within the police organization: 1) among groups within the same unit (i.e., internal), and 2) among separate units within the district (i.e., external). Specifically, this thesis addresses the following questions: can HR and IP positively predict internal and external knowledge sharing? Do these climate dimensions differ in the extent to which they affect the different forms of knowledge sharing? Moreover, is there an indirect effect of these climate dimensions on knowledge sharing, through POS?

The thesis will first address the concept of knowledge sharing, before looking deeper into organizational climate and the Competing Values Framework (CVF). Followed by how these constructs are related to each other. Next, the thesis will address the concept of POS and how POS is related to the other constructs. Then, the methods will be presented, followed by the presentation and discussions of the results. Finally, theoretical and practical implications, limitations and recommendations for future research will be addressed.

**Knowledge Sharing**

The concept of knowledge in organizations has become increasingly popular, following the fact that knowledge is being recognized as the most important resource of organizations competitive advantage (Bartol & Srivastava, 2002; Bock, Zmud, Kim, & Lee, 2005; Chen & Huang, 2007; Ipe, 2003; Llopis & Foss, 2016). Wang, Noe and Wang (2014) defines knowledge as “information processed by individuals, including ideas, facts, expertise, and judgments relevant for individual, team, and organizational performance” (p.949). The ability to manage knowledge and to build human capital is crucial for success in almost any organization, yet the knowledge held by individuals must also be shared throughout an organization in order for its value to be appropriately leveraged (Cabrera & Cabrera, 2005; Chen & Huang, 2007; Law & Ngai, 2008; Van den Hooff & Huysman, 2009).
Definition and Conceptualization

Knowledge sharing involves the exchange of employee knowledge, experiences, and skills through the department or the whole organization (Lin, 2007b). Wang and Noe (2010) define knowledge sharing as the “provision of task information and know-how to help others and to collaborate with others to solve problems, develop new ideas, or implement policies or procedures” (p.117). Know-how, corresponds to the more commonly used term competency, which is the knowledge, skills, and abilities that enable people to perform a task successfully (Soderquist, Papalexandris, Ioannou, & Prastacos, 2010).

One common assumption is that knowledge sharing behavior shares similarities with several other voluntary behaviors (Gagné, 2009). First, researchers have argued that knowledge sharing is central among cooperative behaviors (e.g., Connelly & Kelloway, 2003; Gagné, 2009; Lin, 2007a). Cooperation can generally be defined as two or more parties working together towards a common goal, which will benefit the parties involved (Dovidio & Banfield, 2015; Lømo, 2017). Knowledge sharing has further been compared to organizational citizenship behavior (OCB), or prosocial organizational behavior, which includes helping, sharing, cooperating and volunteering (Cabrera & Cabrera, 2005; Connelly & Kelloway, 2003; Gagné, 2009). One of the dimensions of OCBs is interpersonal helping behavior, thus a parallel may be drawn between knowledge sharing and OCBs if one considers knowledge sharing as a kind of interpersonal helping behavior (Cabrera & Cabrera, 2005).

Knowledge sharing occurs at multiple levels within an organization, for instance at the individual, team, and organizational level (Ipe, 2003; Law & Ngai, 2008; Lin, 2007b). At the individual level, knowledge sharing involves helping colleagues to get something done more quickly, more efficiently or better (Lin, 2007b). At the organizational level, however, knowledge sharing is capturing, organizing, reusing, and transferring experience-based knowledge and making that knowledge available to others in the organization (Lin, 2007b). According to Ipe (2003), the sharing of individual knowledge is crucial to the creation, communication and management of knowledge at the other levels within an organization. Thus, an organizations’ ability to take advantage of its knowledge is notably dependent on its people, who create, use and share knowledge (Ipe, 2003).

Barriers to Knowledge Sharing

Knowledge sharing across groups and across units is important for several reasons. First of all, within a multiunit organization, units can learn from each other and benefit from new knowledge developed by other units, thus reducing duplication of efforts, and the risk of
repeating past mistakes (Tsai, 2001; Zhu, 2016). Second, knowledge sharing across units provides opportunities for mutual learning and internal cooperation that stimulate the creation of new knowledge (Tsai, 2002; Zhu, 2016).

Although organizations acknowledges the remarkable benefits of knowledge sharing across units, successful sharing can be difficult to achieve (Argote, Ingram, Levine, & Moreland, 2000; Zhu, 2016). The process of sharing is clearly a complex process (Ipe, 2003). Compared to private organizations, knowledge sharing within the police organization may be more difficult. Studies have demonstrated that knowledge sharing in government contexts represent unique challenges because governments organizations are typically hierarchical and bureaucratic, which makes knowledge sharing even more problematic (Kumari & Takahashi, 2014). Knowledge sharing is obstructed by functional and divisional boundaries, so what one group or unit learns is typically not shared with other groups or units in the organization (Dovidio & Banfield, 2015; Jarvenpaa & Staples, 2001; Zhu, 2016). Poor communication, strong social identities and in-group favoritism may hinder knowledge sharing across groups and units in organizations (Argote, et al., 2000).

**Ingroup versus outgroup perceptions.**

In a study investigating police investigation performance, the participants described that the units focused mainly on achieving their own goals, occasionally on the expense of helping other units and emphasizing the overall goals of the police district (Lone et al., 2017). These descriptions are in line with previous research, suggesting that there is a difference in the amount of sharing and cooperation among employees who are members of the same work group, compared to employees who are not (e.g., Balliet et al., 2014; Grice, Gallois, Jones, Paulsen, & Callan, 2006; Zhu, 2016). People are far more likely to share with members in their own work group than with other teams in the organization, a phenomenon referred to as *knowledge sharing disparity* (Zhu, 2016). In order to understand this phenomenon, researchers have focused on the process of *social categorization* (Dovidio & Banfield, 2015; Tajfel & Turner, 1979; Van Knippenberg, De Dreu, & Homan, 2004).

Social categorization represent the process of perceiving people, oneself and others, in terms of group membership, in particular as members of either ingroup or outgroup, rather than individual qualities (Dovidio & Banfield, 2015). Activating and applying social category information simplifies our social world by invoking cognitive schemas and stereotypes (Hugenberg & Sacco, 2008; Lømo, 2017). However, the processes triggered by social categorization typically create barriers to intergroup cooperation and sharing, and give rise to different biases (Dovidio & Banfield, 2015). People display an *in-group bias*, which is the
systematic tendency to evaluate one’s in-group more favorable and a preference to trust, cooperate and share with ingroup members rather than out-group members (Balliet et al., 2014; Dovidio & Banfield, 2015; Lømo, 2017; Van Knippenberg et al., 2004; Van Knippenberg & Schippers, 2007; Zhu, 2016). Studies have found that in-group is strongly favored in knowledge sharing and that external knowledge may be perceived as invalid and unreliable (Zhu, 2016).

When categorizing people into different groups, people have a tendency to exaggerate differences between groups, whereas the differences within the group become minimized, so that members of the same group tend to be perceived as more similar to each other (Dovidio & Banfield, 2015; Gaertner et al., 2000; Moskowitz, 2005). This is especially the case when it comes to outgroup members, a termed called outgroup homogeneity effect (Moskowitz, 2005). This effect has also been related to a disposition to perceive outgroups more negatively (Gaertner & Dovidio, 2000; Lømo, 2017).

Furthermore, people are found to be more competitive and less cooperative when interacting as group-members rather than individuals. Consequently, relations between groups tend to be more competitive and less cooperative than those between individuals. This difference is identified as the interindividual-intergroup discontinuity effect (Dovidio & Banfield, 2015; Wildschut & Insko, 2007). In sum, these biases are all examples of intergroup biases, rooted in social categorization that can serve as barriers to intergroup cooperation and sharing (Dovidio & Banfield, 2015). Communication and cooperation across groups is often less effective than within groups, because people often are biased in their misperceptions (Dovidio & Banfield, 2015).

In order to decrease intergroup bias and to enable cooperation between members of different groups, research has focused on changing the ways people perceive group membership (Dovidio & Banfield, 2015). Much of the work on intergroup cooperation stresses the value of creating a sense of common ingroup identity between members of the different groups (Dovidio & Banfield, 2015; Gaertner et al., 2000). The common ingroup identity model emphasizes the process of recategorization, by which members of different groups are encouraged to perceive themselves as a single, inclusive superordinate group, rather than separate groups (Dovidio & Banfield, 2015). Drawing on the theoretical foundations of social identity theory (Tajfel & Turner, 1979), the common ingroup identity model suggest that high identification with a superordinate group, for instance the organization, should positively influence the level of sharing and cooperation among groups included in this category, such as work groups and units (Lømo, 2017). This is supported by
Zhu (2016) who found that organizational identification reduces knowledge sharing disparity and team-level ingroup bias.

In summary, sharing and cooperation across groups and units is essential for the effective functioning of organizations (Dovidio & Banfield., 2015; Tsai, 2001; Zhu, 2016). Yet, successful sharing and cooperation is difficult to achieve and sustain. Considering the fact that sharing and cooperation between different units may be more difficult to achieve than sharing and cooperation between individuals, moreover the fact that people are generally more inclined to share, trust and cooperate with members of their own in-group, there is reason to believe that internal and external knowledge sharing are dependent upon different sets of facilitators.

**Facilitators**

The recognition of knowledge as the key resource of today’s organizations, confirms the need for the processes related to the sharing of knowledge (Ipe, 2003; Llopis & Foss, 2016). Organizations are facing challenges in finding ways to encourage employees to share knowledge with one another (Cabrera, Collins, & Salgado, 2006). Knowledge management scholars have devoted massive attention to the antecedents of knowledge-sharing behavior, often in the form of combination of environmental factors and individual characteristics (Llopis & Foss, 2016). Cabrera and Cabrera (2005) identified people management practices that may facilitate and encourage knowledge sharing. They used the *theory of reasoned action* and theories from the sociological perspective: *social capital theory*, *social dilemma theory* and *social exchange theory*, in order to understand the dynamics of knowledge sharing. Together, these theories suggest multiple factors that may facilitate and encourage knowledge sharing among employees such as; positive norms and attitudes towards knowledge sharing, social ties or frequency of social interaction with other employees, a shared language, trust and group identification, perceived cost and rewards and expectations of reciprocity (Cabrera & Cabrera, 2005; Lone et al., 2014).

The literature recognizes that there are different influences on employees’ knowledge sharing activities, such as individual, psychological and organizational factors (Cabrera et al., 2006; Cabrera & Cabrera, 2005; Connelly & Kelloway, 2003; Lin, 2007b). First, most authors agree that knowledge sharing depends on individual characteristics, such as, experience, values, motivation and beliefs. Second, previous research suggests that psychological variables such as self-efficacy, organizational commitment, perceived instrumentality and personality may have an impact on knowledge sharing behaviors (Cabrera et al, 2006; Cabrera & Cabrera, 2005). Third, research has investigated several organizational variables
that may influence knowledge sharing, including job autonomy, reward-systems and culture (Cabrera et al., 2006; Cabrera & Cabrera, 2005; Lin, 2007b). Additionally, referring to the organizational dimension, several authors and studies have alluded the importance of organizational climate and perceived organizational support for encouraging knowledge sharing behavior (Cabrera & Cabrera, 2005; Llopis & Foss, 2016; Wang & Noe, 2010).

This study applies a climate approach to investigate employees’ perception of internal and external knowledge sharing in the Norwegian police. Several authors have applied and argued for the usefulness of a climate approach to the study of knowledge sharing (e.g., Cabrera & Cabrera, 2005; Collins & Smith, 2006; Koritzinsky, 2015; Llopis & Foss, 2016; Patterson et al., 2005). In their climate measure, Patterson et al (2005) measured climates relating to knowledge sharing, by introducing a climate dimension called integration. They define integration as “the extent of interdepartmental trust and cooperation” within an organization (p.386). Building on Patterson et al. (2005) Organizational Climate Measure, Koritzinsky (2015) proposed that an integral part of a cooperative climate is in addition to trust, sharing of information and competence among work groups and across units. Based on this, a climate for knowledge sharing and cooperation is here defined as the degree of interdepartmental trust, cooperation, competence sharing and information sharing among different work groups (internal) and units (external) within an organization.

Organizational Climate

As a conceptual framework for understanding the way people perceive, experience and act in their work settings, organizational climate has gained popularity (Kuenzi, 2008; Kuenzi & Schminke, 2009; Schneider, Ehrhart & Mackey, 2013). Research has suggested that climate perceptions are associated with various important outcomes at the individual, group, and organizational levels (Parker et al., 2003; Patterson et al., 2005). These include effectiveness, employee satisfaction, commitment, organizational performance, and citizenship behaviors (Li, Zhu, & Luo, 2010; Patterson et al., 2005). Based on the strong explanatory ability of organizational climate in the aspects of organizational effectiveness, employee satisfaction and citizenship behavior, a growing number of scholars have introduced organizational climate into knowledge sharing research (Li et al., 2010).

The climate literature is characterized by little theoretical consensus regarding the conceptualization and operationalization of the concept. Most of these debates are too extensive to address in this thesis, (for a more thorough review, see Kuenzi and Schminke, 2009) yet some distinctions should be addressed. First, within the organizational literature, a central discussion has focused on the distinction between organizational climate and culture.
Organizational climate and organizational culture concern the way in which people conceptualize experiences and describe their work settings (Schneider et al., 2013). The constructs are often used interchangeably, yet organizational climate and organizational culture represent two distinct constructs (Schneider et al., 2013).

Climate can be described as a manifestation of the organization’s culture, where observed organizational behavior is viewed as a product of the underlying culture (Schein, 2010). Organizational climate may be defined as “the shared perceptions of and the meaning attached to the policies, practices, and procedures employees experience and the behaviors they observe getting rewarded and that are supported and expected” (Schneider et al., 2013, p. 362). Whereas, organizational culture in comparison, is defined as “… a pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration” (Schein, 2010, p. 18). Hence, culture exist at a higher level of abstraction than climate, while climate concerns more surface-level manifestations or “how things are done around here” (Kuenzi, 2008; Kuenzi & Schminke, 2009).

Second, researchers have questioned whether climate should be considered as an individual-level (i.e., psychological climate) or as an organizational-level construct (i.e., organizational climate) (Kuenzi, 2008). Psychological climate denotes an individual’s perception of the psychological impact of the work environment on the individual’s wellbeing (James & James, 1989; Kuenzi, 2008), whereas organizational climate refers to shared perceptions among units or organizations, of the work environment (Kuenzi, 2008; Kuenzi & Schminke, 2009). Thus, when employees in a specific unit or organization agree on their perceptions of their work environment (i.e., psychological climate), these shared perceptions can be aggregated and are referred to as organizational climate (Kuenzi, 2008; Parker et al., 2003).

Finally, a central discussion has focused on the distinction between global climate and facet-specific climate approaches (Kuenzi & Schminke, 2009; Lone et al., 2017). Initially climate was developed as a broad concept for studying organizational climate in general, called global/molar climate (Kuenzi & Schminke, 2009). However, Schneider (1975) amongst others, have argued that the focus of climate depends on the criterion of interest, and that climate should be conceptualized as a domain-specific “climate for something “(p.472), such as for service and safety. Thus, as opposed to global climates, facet-specific climates are related to a particular aspect of the organizational context. This created a shift of focus in the climate research, from global to specific climates (Kuenzi & Schminke, 2009). Facet-specific
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climates has increased our understanding of the influence of work climate on focused outcomes, there are however some limitations with this narrow focus.

**Measuring Climate**

In an attempt to address these weaknesses in the climate research, Patterson et al. (2005) developed a global climate measure. Patterson et al (2005) used the Competing Values Framework (CVF) as a theoretical basis for their Organizational Climate Measure (OCM). The OCM is a multidimensional measure of organizational climate and the instrument consist of 17 climate dimensions organized across the four CVF quadrants (Koritzinsky, 2015; Patterson et al, 2005). The OCM has been given preliminary support as a reliable and valid instrument in the Norwegian context, and has been used to investigate the climate in the police investigation work in Norway (e.g., Lone et al., 2017). However, the OCM is a comprehensive global measure.

A recent development in the climate research has been the calling for an integration of global and facet-specific climate studies (Kuenzi & Schminke, 2009), and the study of climate across multiple levels of analysis (Koritzinsky, 2015; Zohar & Luria, 2005). This offers the opportunity to conceptualize and study climate at multiple levels of analysis across groups in an organization, thus the investigation of cross-level relationships (e.g., between group-level and organizational-level climate) (Koritzinsky, 2015; Zohar & Luria, 2005). There are indeed studies that have demonstrated that climate can exist at different levels in an organization, moreover, that climate differs across subunits within and organization (Zohar & Luria, 2005). As previously mentioned, the police analysis (NOU 2013:09, 2013) concluded that there are problems with coordination across the different levels of the police organization, as well as climate differences between the districts. The multiple level of analysis of climate enables the investigation of climate differences across units in the police organization (Koritzinsky, 2015).

Kuenzi (Kuenzi, 2008; Kuenzi & Schminke, 2009) proposed an integrated model for measuring both specific and general climate, drawn on the CVF as a theoretical foundation. According to Kuenzi (2008), the molar/global climate of an organization represents the general focus and structure of a social system, not just a combination of different focused climates. Thus, in contrast to the OCM, Kuenzi’s global assessment does not consist of many different climate dimensions, but four climate types that parallels the four CVF quadrants.

The CVF has been widely applied in studies of global culture and climate, and has more recently been shown to be a suitable framework for facet-specific climates. Koritzinsky (2015) used the CVF as a theoretical framework for measuring police climate. Overall, her
results give support for the possibility of measuring global climate in the police with the CVF. Based on this, this study applied the CVF as a measure of organizational climate and explored how dimensions of the CVF are related to knowledge sharing. The framework will now be addressed.

**Competing Values Framework.**

The CVF was originally developed by Quinn and Rohrbaugh (1981, 1983), as a framework of organizational effectiveness. The CVF focuses on opposing values that exist within organizations and how different combinations of these values affect outcomes (Kuenzi, 2008). The framework consists of three value dimensions, organizational focus, organizational structure, and means-ends (Quinn & Rohrbaugh, 1983). Together, these value dimensions form a multidimensional framework for understanding and organizing climate dimensions (Koritzinsky, 2015; Quinn & Rohrbaugh, 1983). First, organizational focus, ranges from an internal focus on people to an external focus on the organization itself (Kuenzi, 2008; Quinn & Rohrbaugh, 1983). Organizations with an internal focus emphasize the wellbeing of employees, the development of employees and employee relations, whereas an organization with an external focus, emphasis the wellbeing of the organization and its development (Kuenzi, 2008).

The second value dimension, organizational structure, ranges from an emphasis on stability to an emphasis on flexibility (Kuenzi, 2008; Quinn & Rohrbaugh, 1983). This dimension represent how an organization is able to balance meeting external challenges, such as competition and growth, and at the same time maintain control and stability in their internal structures (Kuenzi, 2008). Quinn and Rohrbaugh (1983) interpreted the means-ends dimension as “reflecting the degree of closeness to desired organizational outcomes” (p.367), and represent the contrast between a concern for ends (nearer and larger) and a concern for means (further away and smaller) (Quinn & Rohrbaugh, 1983). As demonstrated in figure 1, the means relates to processes (e.g., cohesion or morale) while ends relates to the outcomes (e.g., human resource development).

Taken together, these value dimensions represent four quadrants, reflecting four different climate orientations; human relations, internal process, open-system, and rational goal (Kuenzi, 2008; Quinn & Rohrbaugh, 1983). The human relations climate (HR) emphasizes flexibility and has an internal organizational focus. Cohesion and morale are considered as important means to achieve human resource development (Cameron & Quinn, 2011; Kuenzi, 2008; Quinn & Rohrbaugh, 1983). The internal process climate (IP) highlights the importance of control and internal focus. Information management and communication
are seen as important means to achieve stability and control (Quinn & Rohrbaugh, 1983). Formal rules and procedures are seen as what holds the organization together (Cameron & Quinn, 2011; Koritzinsky, 2015). The open system climate (OS) emphasizes flexibility and external organizational focus. Flexibility and readiness are perceived as important ways to achieve growth and resource acquisition (Kuenzi, 2008; Quinn & Rohrbaugh, 1983). Finally, the rational goal climate (RG) places emphasis on control and external organizational focus, where planning and goals are seen as important means to achieve productivity and efficiency (Quinn & Rohrbaugh, 1983).

\[ \text{Figure 1. The Competing Values Framework, based on Quinn & Rohrbaugh (1983).} \]

**Competing versus complimentary climates.**

According to the CVF, climates with similar organizational focus and organizational structure would be positively stronger correlated than the climates on the opposite off-diagonal. Similarly, the climates that are in contrast to each other would be weakly or negatively correlated (Cameron & Quinn, 2011; Koritzinsky, 2015). A fundamental assumption in the CVF is that these values are competing, and thus represent dilemmas that employees encounter in organizations (Quinn and Rohrbaugh, 1983). While traditionally understood as competing, Quinn (1988) pointed out that all four climate types can exist simultaneously in an organization, although some values are likely to be more dominant, or given more weight than others (Jones, Jimmieson, & Griffiths, 2005; Quinn, 1988). Thus, a focus on one value gives less weight to the corresponding value on that dimension (e.g., focus on control and less focus on flexibility).
There are mixed support for the competing structure of the CVF within the climate literature (Hartnell, Ou & Kinicki, 2011). Some studies have found strong and moderate inter-correlations between the four climates (e.g., Dietz, Pugh, & Wiley, 2004), indicating that the climate types may not possess mutually independent competing values (Hartnell et al., 2011). Hartnell et al. (2011), proposed an alternative theoretical approach to the CVF; instead of considering the climate types as competing, he argued that an organization could exist of multiple climates and competing demands. That is, organizational climates include unique aspects from multiple climate types, and identification of a dominant climate type may be unfortunate because they do not fully cover the organizational climate’s bandwidth (Hartnell et al., 2011).

Indeed, there is a growing body of empirical evidence to suggest that multiple climates may exist simultaneously in an organization (Jones et al., 2005), also within the context of police. Koritzinsky (2015) findings indicate that there is not one dominant climate in the police, but that there exist several sub-climates, or that the climate is categorized by conflicting demands. In other words, that all the climate types coexist and work together, with some values given more weight than others (Koritzinsky, 2015). Most climate research using the CVF, have included all the four quadrants, this study takes a different approach by only examining HR and IP in relation to internal and external knowledge sharing.

**Human Relations and Knowledge Sharing**

Research across different types of police work suggest that an organizational climate characterized by HR dimensions is positively related to outcomes such as job satisfaction, commitment, well-being, work engagement and performance (Lone et al., 2017). Several studies have also demonstrated that a cooperative organizational climate encourages knowledge sharing behavior (e.g., Collins & Smith, 2006; Koritzinsky, 2015; Llopis & Foss, 2016; Lone et al., 2017; Patterson et al., 2005). According to the theoretical and empirical basis of knowledge sharing (i.e., integration), knowledge sharing is expected to be a part of the HR climate (Koritzinsky, 2015; Lone et al., 2017; Patterson et al., 2005; Quinn & Rohrbaugh, 1983).

In the OCM, Patterson et al. (2005) found that integration was part of the HR quadrant. This is also supported by Koritzinsky (2015), who found that internal knowledge sharing is positively related to HR climate. Such that, a focus on flexibility and cohesion seems to increase knowledge sharing across groups of that organizational unit. Lone et al. (2017) suggest that this finding can be explained by the fact that HR climate stimulates cooperation and knowledge sharing, so that groups work closer together (Lone et al., 2017).
The fact that aspects of HR stimulate knowledge sharing is supported by several studies. For instance in a study of police investigator’s work environment, Glomseth, Gottschalk, and Solli-Sæther (2007) found that knowledge sharing was influenced by cooperation and trust in team climate. Furthermore, Collins and Smith (2006) argue that a cooperative climate limits competition between employees and increases their willingness to share information with others. In their study, Collins and Smith (2006) demonstrated that commitment based human resource practices were positively related to a social climate characterized by trust, cooperation and shared codes and language, which in turn was positively related to knowledge exchange. Finally, Lone et al. (2017) suggest that HR climate stimulates cooperation and coordination of resources both between units within the district and between police districts, which again contribute to increased performance (Lone et al., 2017). Accordingly, this study expects that HR climate will have a positive effect on both internal and external knowledge sharing, the effect is though expected to be greater on internal knowledge sharing.

**H1:** Human relations climate will have a positive direct effect on both internal (H1\(_a\)) and external (H1\(_b\)) knowledge sharing. The effect will though be greater on the employees’ perception of internal knowledge sharing.

**Internal Process and Knowledge Sharing**

Previous studies of organizational climate in police work have typically included dimensions that could be categorized as HR climate (Lone et al., 2017). Lone et al. (2017) extended this by including rational goal climate (RG). Koritzinsky (2015) however, investigated the associations between all the four quadrants and internal and external knowledge sharing.

As mentioned, previous studies indicate that knowledge sharing is expected to be part of HR climate. However, the structural adjustment to knowledge sharing seems to measure another aspect of knowledge sharing that is externally focused (between units in the police). Koritzinsky (2015) found that when external knowledge sharing is considered in relation to different climate types, external knowledge sharing is primarily associated with open system climate (OS). Accordingly, her results indicate that internal knowledge sharing is related to HR climate, whereas external knowledge sharing is associated with OS climate. HR and OS both have flexibility in common, and Koritzinsky (2015) argue that flexibility is perceived as a stronger, salient feature of the police climate, than the other competing values.

In order to investigate whether different climate types facilitate different forms of knowledge sharing and to explore whether flexibility is perceived as a more salient trait in the
police climate, it would be appropriate to investigate the impact of a climate dimension that does not focus on flexibility, such as internal process climate (IP). IP contradicts to OS, by emphasizing control and internal focus, rather than flexibility and external focus (Quinn & Rohrbaugh, 1983).

Limited research has focused on the predictive power of IP climate on knowledge sharing. To the authors knowledge, no studies besides Koritzinsky (2015), have investigated the impact of IP on knowledge sharing behavior within the context of police. Lone et al. (2017) investigated the impact of aspects of the RG climate on investigation performance. Out of all the possible combinations of the four climates, the two that are most similar are IP and RG (Quinn & Rohrbaugh, 1983). These two models are not as differentiated on the internal-external dimension as HR and OS. IP climate has a more internal focus, whereas RG has a more external focus, however they are conceptually close to one another (Quinn & Rohrbaugh, 1983). Considering the fact that RG climate seems to have an positive influence on police work (e.g., Lone et al., 2017), it would be both interesting and informative to investigate the impact of IP on knowledge sharing behavior.

IP climate stress the importance of information management, communication, stability and control, factors that are emphasized by, or can characterize the police organization. The IP climate recommend an organized and structured work situation, with sufficient coordination and distribution of information in order to provide the employees with a psychological sense of continuity and security (Quinn & Rohrbaugh, 1983). Even though IP tends to have lower levels of cohesion and morale among employees than HR (Jones et al., 2005), aspects such as communication and information management should nevertheless have an impact on employees knowledge sharing behaviors (Cabrera & Cabrera, 2005). Based on this, this study hypothesize that IP will have an positive effect on both internal and external knowledge sharing, the effect is though expected to be greater on external knowledge sharing.

**H2:** Internal process climate will have a positive direct effect on both internal (H2a) and external (H2b) knowledge sharing. The effect will though be greater on the employees’ perception of external knowledge sharing.

**Perceived Organizational Support**

In the context of knowledge sharing, the different aspects of organizational climate are critical drivers of knowledge sharing, such as perceived support (Cabrera & Cabrera, 2005; Lin, 2007b). A variable that is expected to affect knowledge sharing by helping to build an open and trusting climate is perceived organizational support (Cabrera & Cabrera, 2005). Eisenberger, Huntington, Hutchison, & Sowa (1986) coined the term *Perceived*
organizational support (POS) to describe employees’ “global beliefs concerning the extent to which the organization values their contributions and cares about their well-being” (p. 501). POS is regarded as an important exploratory framework for understanding the relationship between employees and the workplace (Shen et al., 2014). Some researchers furthermore consider POS as central in understanding job-related attitudes and behaviors of employees (Shen et al., 2014).

**POS and Climate**

POS is very similar to a HR climate, emphasizing the well-being and development of employees (Lone et al., 2017). Even though both climate and POS concerns work environmental issues, conceptually the constructs are distinct (Wayne, Shore, & Liden, 1997). Regarding the development of POS, research has shown that several types of antecedents are related to POS, including human resource practices (e.g., Allen, Shore, & Griffeth, 2003; Kurtessis et al., 2017; Rhoades & Eisenberger, 2002; Shore & Shore, 1995; Wayne et al., 1997). Studies have demonstrated that the employees’ perception of supportive organizational HR-practices, that signal investment in employees and recognition of their contributions are positively related to development of POS (e.g., Allen et al., 2003; Shore & Shore, 1995).

IP climate, tend to have lower levels of cohesion and morale among employees, than HR climate (Jones et al., 2005). Moreover, researchers have argued that employees who work in large organizations with highly formalized procedures and policies feel less valued. Formal rules may reduce flexibility for meeting the needs for individual employees, which again could reduce POS (e.g., Dekker & Barling, 1995; Rhoades & Eisenberger, 2002). Nevertheless, a climate characterized by IP dimensions is expected to have an impact on the employees’ level of POS. Based on this, this study expects that both HR and IP will have a positive influence on POS.

**H3:** There is a positive direct effect of both human relations (H3a) and internal process (H3b) climate on the employees’ perception of perceived organizational support.

**POS and Knowledge Sharing**

There is considerable empirical support for the notion that POS is related to outcomes favorable to employees and their organization (Kurtessis et al., 2017; Shen et al., 2014). Within the context of police work, Armeli, Eisenberger, Fasolo, & Lynch (1998) found a positive relationship between POS and work performance. Other studies have demonstrated that perceptions of POS are positively related to commitment to the organization (Allen et al., 2003; Kurtessis et al., 2017; Shen et al., 2014). Several articles have further pointed to the importance of organizational, supervisor and peer-support for encouraging knowledge sharing
behaviors (Cabrera & Cabrera, 2005; Hislop, 2003; Lin, 2007b). The sharing of knowledge is a complex process, and involves, among other things, the extent to which individuals perceive themselves as being valued by their organization (Ipe, 2003). Humphrey, Nahrganng, & Morgeson (2007) argue that support provides employees the opportunity to learn from each other, through the transfer of implicit and explicit knowledge. Moreover, Lin (2006) showed that organizational support is positively associated with interpersonal trust, which in turn is positively related to intention to facilitate knowledge sharing.

**Social exchange and norm of reciprocity.**

The relationship between POS and outcomes has primarily been explained in terms of social exchange theory and the norm of reciprocity (Allen et al., 2003; Lee & Peccei, 2007; Shen et al., 2014). Based on social exchange theory (Blau, 1964) and norm of reciprocity (Gouldner, 1960), greater perceived organizational support is expected to result in greater attachment and feelings of obligation to the organization (Allen et al., 2003). The employee may also incorporate organizational membership into self-identity and thereby develop an emotional bound to the organization (Eisenberger et al., 1986).

Drawing on the parallel between OCBs and knowledge sharing, social exchange theory assumes that employees who experience high levels of POS tend to reciprocate by demonstrating better work performance, and engage in more OCBs, than those who report lower levels of POS (Shen et al., 2014). A growing number of studies have demonstrated that POS is positively related to OCBs (Cabrera & Cabrera, 2005). For instance, Podsakoff, MacKenzie, Paine, and Bachrach (2000) who found a significant positive relationship between POS and helping behaviors. As well as, Rhoades and Eisenberger (2002) who found a significant relationship between POS and in-role and extra-role behaviors (Rhoades & Eisenberger., 2002; Shen et al., 2014). Additionally, Kaufman, Stamper, and Tesluk (2001) found that POS is related to OCBs that both are interpersonally focused and aimed at assisting others (i.e., OCBI) and, OCBs that are more organizationally focused, and are more directed at accomplishing organizational goals (i.e., OCBO).

Moreover, empirical evidence suggests that reciprocity, or the mutual give-and-take of knowledge can facilitate knowledge sharing (e.g., Hall, 2001; Ipe, 2003; Schulz, 2001). Chiu, Hsu, and Wang (2006) found that reciprocity norms increased individuals’ quantity of knowledge sharing behavior in a virtual community of practice. Furthermore, studies indicate that receiving knowledge from others stimulates a reciprocal flow of knowledge in the direction of the sender both horizontally and vertically in organizations (Ipe, 2003; Schulz, 2001). Based on this, the present study hypothesizes the following:
**H4:** There is a positive direct effect of perceived organizational support on both internal (H4a) and external (H4b) knowledge sharing.

**Indirect Effect through POS**

POS is expected to affect knowledge sharing, by helping to build an open and trusting climate. This study assumes that, employees who work in environments, characterized by trust, respect and caring, and where the organization recognizes their contribution should naturally be more willing to share and cooperate (Cabrera & Cabrera, 2005). As previously argued, research has established a positive relationship between HR and knowledge sharing, especially internal knowledge sharing. The relationship between HR and external knowledge sharing is not as clear. Considering the fact that people are less willing to cooperate, trust, and share with employees who does not belong to their own work group, there is reason to believe that other factors, such as support, should be present in order for this to happen. This study propose that by stimulating POS, HR will influence knowledge sharing both internally and externally.

The relationship between IP and knowledge sharing, is not demonstrated in previous studies, however a climate characterized by an emphasis on communication and information management should have an influence on both internal and external knowledge sharing. IP tend to have lower levels of cohesion and morale among employees, compared to HR. Thus by stimulating POS, the effect of IP should in turn increase knowledge sharing both internally and externally. This study expects that creating a climate characterized by both HR and IP, facilitates a concern for employees, which in turn encourages employees to engage in cooperative and knowledge sharing behavior (Chuang & Liao, 2010). Accordingly, in addition to direct effects, this study hypothesizes that HR and IP will have an indirect effect on internal and external knowledge sharing, through POS. The following hypotheses are proposed:

**H5:** There is a positive indirect effect of human relations climate on the perception of internal knowledge sharing (H5a) and external knowledge sharing (H5b) through perceived organizational support.

**H6:** There is a positive indirect effect of internal process climate on the perception of internal knowledge sharing (H6a) and external knowledge sharing (H6b) through perceived organizational support.
In sum, the current thesis proposes 12 hypotheses, which are displayed in figure 2.

Figure 2. Graphical representation of the hypothesized relations among the variables. 

Note: Hypothesis 5a, 5b, 6a and 6b are not displayed in this figure, but concern the path from HR→ POS → internal knowledge sharing, HR → POS → external knowledge sharing, and IP→ POS → internal knowledge sharing, IP → POS → external knowledge sharing.

Method

The Research Project

This study is a part of a long-time collaborative research project between the research department at the Norwegian Police University College, represented by Trond Myklebust, and the department at Work and Organizational Psychology at the University of Oslo. The aim of the overall project is to investigate the organizational climate in the Norwegian police. This is investigated among police employees with different area of expertise, from different groups, units and districts in the police organization. The current thesis focuses on the relationship between human relations climate, internal process climate, perceived organizational support and internal and external knowledge sharing. Questions regarding how the different climate
types and perceived organizational support facilitate internal and external knowledge sharing will be addressed.

**Data Collection**

The data was collected through a survey distributed to three different police districts; Follo, Romerike, and Østfold, now referred to as district “Øst”. The period of the data collection was from December 2015, through January 2016, thus the data was gathered prior to the current thesis. During this period, the participants had been informed about the new reform, however there had not been any changes at the time of the collection. In advance of the collection, the employees received a letter of information from the police inspector, where they got information about the project (purpose of the study, their contribution, practical and ethical information). The police inspector made sure that the operational leaders provided internal distribution, as well as the collection of the surveys. The participants conducted the survey by hand.

**Sample**

1007 participants out of 1730 potential candidates returned the questionnaire, yielding a response rate of 58.21%. After the removal of blanks, the total response rate was 54.34% (N=940). The participants differed in gender, age, area of expertise and job tenure. 451 women and 481 men completed the questionnaire. The age groups ranges from 23 years or younger to 64 years or older, where the majority of the participants were 24-27 years old (16%). Further, the majority of the participants worked as civils (27.8%), criminal investigators (25.5%) and as operatives (20.4%).

As expected with pen-and-paper questionnaires, there were some missing values, however the percent of missing values for each question was low (less than 5%). According to Kline (2011), a few missing values, such as less than 5% on a single variable in a large sample may be of little concern (p.55). It was decided to remove missing values, which led to a sample of 847 participants.

**Measures**

The survey began with instructions, explanations and demographic information. The participants were encouraged to give their answers based on their own experiences and evaluations, and that there was no right or wrong answers. Moreover, the participants were requested to answer all the questions. The survey is divided into nine parts, and applies different scales aimed at measuring the organizational climate in the Norwegian police. The constructs of interest in this thesis, internal knowledge sharing, external knowledge sharing, human relations climate, internal process climate and perceived organizational support,
applies scales that have been used in previous studies. A table of all the measures with its
associated items in Norwegian is displayed in Appendix 1. All negatively worded items have
been reversed coded for the analysis. The measures’ degree of internal consistency was
investigated by calculating their respective Cronbach’s alpha, where a value of $\alpha \geq .70$
denotes acceptable reliability (Hair, Black, Babin, & Anderson, 2014).

**Knowledge sharing.**

The items measuring internal and external knowledge sharing stems from
Koritzinsky’s (2015) extension of Patterson et al’s (2005) Organizational Climate Measure
(OCM). Koritzinsky (2015) made two adjustment to the original integration scale. The first
adjustment involved the separation between internal and external integration, and the second
adjustment involved the content of integration. She argue that an important salient feature of
police integration includes the degree of information and competence sharing, in addition to
trust and cooperation, hence a broader factor and not a sub dimension of integration. The scale
is divided in two, with 12 items each. The content of the items is overlapping, except for the
reference to either knowledge sharing “between work groups in your unit” (internal) or
“between units in the district” (external). The scales use a 5-point Likert scale response
format, ranging from *completely wrong* (1) to *completely right* (5). Item example “people are
willing to share information between the groups at this unit” (internal) and “the cooperation
between the units in the district is very effective” (external).

**Human relations and internal process climate.**

The items measuring human relations and internal process approach, two of the
quadrants in the CVF, stems from Koritzinsky (2015) “*Measuring Police Climate -The
development and evaluation of an instrument measuring police organizational climate*”. In
her master thesis, Koritzinsky (2015) developed and evaluated a new instrument for
measuring police climate. This instrument was based on Kuenzi’s (2008) “four-component
model of molar work climate”, which draws upon the CVF (Quinn & Rohrbaugh, 1983). The
scale consist of 29 items, where the four quadrants represent seven items each (eight for
human relations). The scale apply a 5-point Likert scale response format, ranging from
*completely wrong* (1) to *completely right* (5). Item example: “we develop supportive and
positive working conditions on the unit” (HR), “the rules and guidelines are clearly
communicated to us on the unit” (IP).

**Perceived organizational support.**

Perceived Organizational Support” (SPOS) was used on the items measuring perceived
organizational support. Lynch et al. (1999) used Eisenberger, Cummings, Armeli and Lynch’s (1997) short version of the SPOS to assess to what extent the employees perceived that the organization valued their contribution and cared about their well-being. Both the original 36-item version and shorter versions of the SPOS, has shown high internal reliability and unidimensionality (Rhoades & Eisenberger, 2002). The majority of studies on POS use a short version developed from the 17 highest loading items in the SPOS. Many studies use however fewer items. Due to the fact that the original scale is unidimensional and has high internal reliability, the use of shorter versions does not appear problematic (Rhoades & Eisenberger, 2002). This version of the SPOS contains eight of the 36 items that loaded highly on the POS-factor. The original scale applies a 7-point Likert scale, however this study applies a 5-point Likert scale response format, ranging from *completely wrong*(1) to *completely right*(5). Item example: “this organization really cares about the well-being of the employees”.

**Analysis**

**Interrater reliability.**

Before performing any preliminary analysis, interrater reliability was examined. Measurement of the degree of agreement among raters, more specifically the extent to which the data collectors allocate the same score to the same variable is termed interrater reliability (McHugh, 2012; Schneider et al., 2013). Rater reliability is important due to the fact that it represent the extent to which the data collected in the study are correct representations of the variables measured (McHugh, 2012). There is a potential source of error when people are transferring data from paper surveys to computer files, and interrater reliability was used to get a measure of this potential error source. Five students (including the author) assessed the interrater reliability of 100 (out of 940) randomly chosen surveys. Three different students coded each survey.

The interrater reliability was calculated for the survey in total, and for each variable. There are a number of statistics that have been used, including Cohen’s kappa, Fleiss kappa and Krippendorff’s alpha however, Krippendorff’s alpha is useful when there are multiple raters and multiple possible ratings (McHugh, 2012). The total Krippendorff’s alpha was .991, with values ranging from .981 to .996 between the different variables. The Krippendorff’s alpha values for knowledge sharing, CVF and POS were, .993, .992 and .996, respectively, suggesting excellent agreement beyond chance (Banerjee, Capozzoli, McSweeney, & Sinha, 1999).
**Data screening and preliminary analysis.**

Data screening, preliminary and descriptive analyses were conducted with the software SPSS 25.0. Data screening and preliminary analysis are elaborated further below, whilst descriptive analysis is presented in the results.

A common problem in SEM is missing data (McDonald & Ho, 2002), as previously mentioned, the dataset had some missing values that was removed, prior to the analysis of normality. In accordance with Kline’s (2016) recommendations, the data was evaluated for normality. There were no items that displayed skewness or kurtosis values larger than the guiding values of severe skewness ($|>3$, $0|$) and problematic kurtosis ($|>10$, $0|$) (Kline, 2016). The largest skewness value was $-1.269$, and the largest kurtosis value was $2.227$. Linearity was investigated by examining the scatter plots between each construct, and was found to be satisfactory. Collinearity was investigated by inspecting, the variance inflation factor (VIF), and by calculating the explained variance ($R^2$) between each variable (Kline, 2011). None of the variables displayed VIF values ($|>10.0$), and the explained variance were less than .90. Accordingly, collinearity was found to be satisfactory. Based on this it was decided that the data was suitable for further analysis.

Despite the fact that the measures applied in this study have been used in previous studies, some of them are relatively new. For that reason, it was decided to perform a preliminary exploratory factor analysis (EFA), before testing the hypotheses through a structural equation modelling (SEM)-analysis. The EFA is a useful tool in order to get an initial picture of the dimensionality of the different measures, as well as convergent and discriminant validity. The reason for choosing EFA was to get a better understanding of the data. Thus, investigate which items who loaded strongest on each factor, whether some items loaded on several factors and identify items for elimination in later scale refinements (Koritzinsky, 2015).

Further, a paired sample t-test was conducted in order to investigate whether the mean scores of human relations climate and internal process climate was statistically significant from each other. Likewise, if the mean score of internal and external knowledge sharing was statistically significant form each other.

**Structural equation modelling.**

The hypotheses were examined using structural equation modelling (SEM). SEM-analysis can be considered as a combination of different statistical techniques, for instance factor analysis and multiple regression analysis (Hair et al., 2014). SEM has several advantages over the regression approach to mediational analysis (Joe, Sarstedt, Hopkins & Kuppelwieser, 2014). First, SEM provides a better statistical tool to investigate latent
variables with multiple indicators (Cheung, & Lau, 2008; Joe et al., 2014; Kline, 2016).

Second, measurement errors in the model can be controlled for when relationships among variables are examined, hence avoiding complications from measurement errors and the underestimation of mediation effects (Cheung, & Lau, 2008). Third, with the use of SEM it is possible to investigate a model with more than one mediator and dependent variable simultaneously accordingly, the SEM approach allows for the analysis of a more complicated model (Cheung, & Lau, 2008). Finally, it is possible to achieve better estimates of the effect sizes between constructs, this is because one controls for the unique variance in indicators, not attributable to their common latent factor (Kline, 2016).

There are several variations of SEM, however, most often it includes specifying and testing a measurement model and a structural model, which together comprise the theoretical model one wishes to investigate. The first step is to specify the measurement model, this involves to ascribe the relationship between the different indicators and the latent factors (i.e., which indicators load on which factors). This is also known as confirmatory factor analysis. Second, if the measurement model fits the observed data well, one continues to specify the structural model, which involves determining the relation between the latent variables, more precisely how the various factors are related to one another (i.e., the hypotheses). The SEM-analysis was conducted with the software AMOS 25.0, with maximum likelihood estimation and bootstrapping of the estimates to obtain the 95% confidence interval of the indirect effects.

**Bootstrap method.**

Bootstrapping, a nonparametric resampling procedure, is a recommended method for testing mediation, which does not impose the assumption of normality of the sampling distribution, as opposed to the Sobel test (Bollen & Stine, 1990; Cheung & Lau, 2008; Preacher & Hayes, 2008). The sampling distribution of the indirect effects is rarely normal; effect A and effect B can be normally distributed, but the product of A x B is rarely not (Preacher & Hayes, 2008). The bootstrap is an approach to estimating properties of estimators based on samples drawn from the original observations (Bollen & Stine, 1990). Bootstrapping involves repeatedly sampling from the data set and estimating the indirect effect in each resampled data set. By repeating this process thousands of times, an empirical approximation of the sampling distribution (of ab) is built, and used to create confidence intervals for the indirect effect (Preacher & Hayes, 2008).

There are four methods that are commonly used to define confidence intervals based on bootstrapping, the percentile method, the bootstrap-t method, the BC (bias-corrected)
method, and the bias-corrected and accelerated (BC₃a) method (Cheung & Lau, 2008). According to Preacher and Hayes. (2008), bootstrapping provides the most powerful and reasonable method of obtaining confidence intervals for indirect effects, and particularly the bias-corrected bootstrapping. Compared to percentile, the bias-corrected confidence intervals are considered to yield more accurate values (Preacher & Hayes, 2008). Thus, in accordance with previous recommendations bias-corrected bootstrapping were used in order to obtain the 95% confidence interval of the indirect effect.

**Global and local fit.**

To assess how well the theorized model (i.e., the measurement and structural model) represent the observed data, researchers evaluate different estimates produced by the SEM-analysis. In particular, one evaluates the global fit of the overall model, this is done by examining a range of goodness-of-fit (GOF) indices. As well the local fit, by examining the residuals, modification indices, and the size and significance of parameter estimates (e.g., factor loading and regression coefficients) (Brown, 2015; Hair et al., 2014; Kline, 2016; Lømo, 2017). Based on an overall evaluation of global and local fit, one decides to retain, modify or reject the model.

Goodness-of-fit (GOF) indices are estimates of global fit, indicating how well the specified model is able to reproduce the observed covariance matrix among the items (Hair et al., 2014). In this study, the following indices will be applied: Chi-square, CFI, RMSEA and SRMR as recommended by Brown (2015) and Kline (2016).

Chi-square (χ²) is the most common method of evaluating goodness-of-fit, and is used to assess actual and predicted matrices (Hoe, 2008). A non-significant chi-square (p>.05) indicates good fit. A limitation with χ² is its sensitivity to large sample sizes and large number of indicators, where both of them can inflate the χ² and make it more difficult to achieve good model fit (i.e., non-significant result) (Hair et al., 2014). As follows, the model may fit the data reasonably well, but the chi-square test may reject the model because of large sample size (Lei & Wu, 2007). Based on their simulation studies, Hair et al. (2014) claims that for models containing more than 30 indicators and N<250, it is expected a significant p-value for χ², which is the case in this study.

The Comparative Fit Index (CFI) compares how well the specified model fits the data relative to a null model where all indicators are uncorrelated. The CFI-values ranges from zero to one, where values closer to one indicate better fit (Brown, 2015). According to Hair et al. (2014) a CFI above .92 suggest good model fit, other researchers apply stricter values,
such as Hu and Bentler (1999) who suggest that CFI values close to .95 or greater indicates good fit.

Both the Root Mean Square Error of Approximation (RMSEA) and the Standardized Root Mean Residual (SRMR) are absolute fit indices that are scaled as badness-of-fit statistics, where higher values denote poor fit, and values close to zero indicate better fit (Hair et al., 2014; Lei & Wu, 2007; Lømo, 2017). RMSEA values between .08 and .10 suggest “mediocre” model fit, whereas RMSEA values less than .05 suggest good model fit (Brown, 2015). Usually, the RMSEA is reported with 90% confidence interval, where the upper limit should be below these cutoff values (e.g., 0.10) (Brown, 2015). The SRMR uses the residuals to calculate the average standardized residual, as a measure of how well the overall model fits the data. SRMR should be below .08 to indicate good fit (Hu & Bentler, 1999).

In addition to global fit, it is also important to investigate the local fit, this is because the global fit indices do not expose whether some part of the model has poor fit. The standardized covariance residuals are differences between observed and predicted covariances (Kline, 2016) and is a useful statistic to discover local poor fit. In large samples, the standardized covariance residual approximates a standardized normal distribution; thus, less than 5 % of the residuals should fall outside the range of -2 to +2 (Kline, 2016). A residual with a value above four raises concerns (Hair et al., 2014). By inspecting the standardized residuals, it is possible to detect if specific indicators are problematic. Further, one should examine the estimated parameters of the model. In the measurement model, the factor loadings should be statistically significant, in the predicted direction and of a considerable size. That is, factor loadings should be above .50, and preferably .70 or higher (Hair et al., 2014; Lømo, 2017).

Finally, an additional form of local fit assessment is modification indices (Thoemmes, Rosseel, & Textor, 2018). Modification indices are single-degree of freedom $\chi^2$ tests that show what would happen to the overall global $\chi^2$ if an additional arrow would be added to the model (Thoemmes et al., 2018). It is possible that indicators share something that is unique to them, such as a particular method of measurement, this would be represented by allowing a pair of measurement errors to covary (Kline 2011; Kline, 2016). The greater the value of a modification index, the better the predicted improvement in overall fit, if that path were added to the model (Kline, 2011; Kline, 2016).
Reliability and validity.

Internal consistency is estimated by calculating the scales composite reliability (CR), which is the ratio of explained variance over total variance (Kline, 2016). CR values of .70 and higher are considered as acceptable reliability (Hair et al., 2014; Lin, 2007b).

CR is also a measure of a scale’s convergent validity. To support construct validity, the items aimed at measuring a particular construct should share a substantial amount of variance (i.e., convergent validity). Moreover, the construct should be distinct from other constructs (i.e., discriminant validity). In order to achieve discriminant validity the constructs should not be highly correlated (e.g., >.85) (Kline, 2005). Fornell and Larcker (1981) argue that discriminant validity is established if a latent variable accounts for more variance in its associated indicator variables than it shares with other constructs in the same model (Fornell & Larcker, 1981; Henseler, Ringle, & Sarstedt, 2015). In order to satisfy this need, each construct’s squared average variance extracted (AVE) must be higher than the correlation between the respective construct (Ahmad, Zulkurnain & Khairushalimi, 2016). The AVE represents the average amount of variance that a construct explains in its indicator variables relative to the overall variance of its indicators (Henseler et al., 2015).

Sample size.

There are different opinions regarding suitable sample size for performing exploratory factor analysis (EFA). The EFA can be regarded as a “large-sample” procedure (Costello & Osborne, 2005). Some researchers recommend absolute thresholds, whereas others suggest ratios of 5, 10 or 20 times as many observations as variables. A minimum of 5:1 is recommended, however a bigger ratio is preferable, which is the case in this study (Hair et al., 2014), thus a sample size of N= 847 can be considered as satisfactory for conducting EFA.

Required sample size is also a discussed topic within SEM-analysis. One of the strengths of SEM is its flexibility, which permits use of various types of data, comparison across models and examination of complex associations. However, these qualities of SEM also make it difficult to develop generalized guidelines regarding sample size requirements (Wolf, Harrington, Clark, & Miller, 2013). Similar to the EFA, different thresholds (most often N>200) and ratios (5 or 10 observations per estimated parameter) and cases (10 cases per variable) have been suggested (Lei & Wu, 2007; Wolf et al., 2013). However, such rules are problematic as they are not model-specific, and may lead to underestimation of sample size requirements. Simulation studies have shown that required sample size is sensitive to, the degree of normality, missing data, estimation method, model complexity (i.e., number of indicators, factors and parameters estimated), magnitude of factor loadings, and path
coefficients (Hair et al., 2014; Wolf et al., 2013). Based on the screening of data there are some missing data, yet, no indication of non-normality. Consequently, a sufficient to large set of indicators per latent variable, large factor loadings, and N > 200, indicates that a, N= 847 can be regarded as a highly adequate sample size to apply SEM-analysis in this study.

**Ethical Considerations**

The research project was approved by the Norwegian Centre for Research Data (NSD), the data protection official for research for all the Norwegian universities. Before participation, all participants were informed about the study and the purpose behind the study. The participation was voluntary, and it was possible to withdraw at any time during the survey. Furthermore, the participants’ anonymity was ensured. No personal information was collected in the survey, and the data was stored in accordance with established safety routines for sensitive data at the Department of Psychology.

**Results**

**Results of the Descriptive and Preliminary Analysis**

The means, standard deviations, Cronbach’s alpha and inter-correlations between the mean scores of every construct are presented in Table 1. The results displayed moderate to large correlations among all the constructs. Human relations climate had the largest mean, while perceived organizational support displayed the lowest of the five constructs.

Table 1

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<th>Mean (M), standard deviation (SD), Cronbach’s alpha (α) and zero-order correlations for all constructs</th>
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Note. N= 847. **. Correlation is significant at .01 level

Before performing the factor analysis, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO= .95) and the Bartlett’s Test of Sphericity (which was significant) were calculated, both of which supported the suitability of conducting a factor analysis on the data. The exploratory factor analysis was conducted with maximum likelihood as extraction method and with oblique rotation, promax. This analysis revealed eight underlying factors, which is three more factors than expected. The pattern matrix is shown in table 2.
Two of the items in the HR scale, HR_7 and HR_29 loaded on a separate factor. The content of these items concerns development, whereas the rest of the items in the scale concerns cohesion and morale. All the items on IP loaded on one single factor. Further, several of the items on internal and external knowledge sharing, in particular the reversed items (IKS_3_R, IKS_5_R, IKS_8_R, EKS_3_R, EKS_5_R, EKS_8_R) loaded on separate factors. Additionally, IKS_2 and EKS_2 did load on the same factor as the reversed items in their respective scales. The content of these items concerns conflict, disrespect and mistrust, opposite of trust and cooperation. The reversed items (and EKS_2) on the external scale loaded on one single factor, whereas the reversed items (and IKS_2) on the internal scale loaded on several factors, some did also cross-load. As shown in the pattern matrix, two of the reversed items on the internal scale did in addition to IKS_2, load on factor 4, the same as the items on the human relations scale. Whereas, IKS_8_R loaded on factor 6, the same as the reversed items and EKS_2 on the external scale.

HR and internal knowledge sharing are to some extent overlapping, thus it is not surprising that IKS_2 (“there is very little conflict between the groups on this unit”), IKS_3_R (“people are suspicious of other groups on this unit”) and IKS_5_R (“there is little respect between some of the groups on this unit”) loads on the same factor as HR-items. The items concerns cohesion and trust between the employees at the same unit, rather than cooperation and knowledge sharing. Nevertheless, the remaining items in the internal scale concerns topics that does not overlap with HR.

Additionally, three of the items on POS (POS_5, POS_6, POS_7) cross-loaded on an eight factor. Overall, however, most items loaded on a single factor and together with other items aimed at measuring the same construct.

The paired sample t-test showed that, on average, the participants reported higher levels of human relations climate (M=4.03, SE=0.02) than internal process climate (M=3.89, SE=0.02). The difference in means (M= 0.14, 95% CI [0.11, 0.17]) was statistically significant (t(846) = 8.13, p<.01).

Further, the participants reported higher levels of internal knowledge sharing (M=3.91, SE=0.02), than external knowledge sharing (M= 3.43, SE=0.02). The mean difference in internal and external knowledge sharing (M=0.48, 95 % CI [0.43, 0.52]) was statistically significant (t(846) = 22.73, p<.01).
Table 2

*Exploratory factor analysis: Pattern matrix*

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*Note.* Extraction Method: Maximum Likelihood. Rotation Method: Promax with Kaiser Normalization. Factor loadings below .30 are not displayed.
Hypothesis-testing - structural equation model

Measurement model.

The first confirmatory factor analysis comprising all the items specified to their respective latent factors (model 1), did not meet all the criteria set for good model fit, as displayed in table 3. A path diagram of the initial measurement model can be found in Appendix 2. As expected, due to sample size and number of indicators, the Chi-square was significant. Both RMSEA and SRMR were acceptable. However, the CFI was too low.

A number of respecifications were made in order to achieve good model fit for the measurement model. These were done step by step, to check improvement in the Chi-square. Several items in each scale were excluded, due to low factor loadings, high standardized covariance residuals and poor model fit. First, two of the items in the human relations scale, HR_7 and HR_29, displayed several high standardized covariance residuals (absolute value above 3) and the topic of both concerned development. Following Quinn and Rohrbaugh (1983) development represent “ends”, accordingly the content of HR_7 and HR_29 represent “ends” whereas the rest of the items act as “means”. Together with the result from the EFA, where the two items loaded on one single separate factor, it was decided to exclude HR_7 and HR_29 from the measurement model.

Second, three of the items in the internal process scale (IP_5, IP_6, and IP_7) were also excluded. These items displayed several high standardized covariance residuals. The content of these items concerns efficiency. Following Quinn & Rohrbaugh (1983), efficiency represent “ends” in the rational goal quadrant, whereas the rest of the items act as “means” in the internal process quadrant. Quinn and Rohrbaugh (1983) suggests that output quality may not fit into one particular quadrant and its underlying value structure, and as a consequence these items may represent “ends” in more than one quadrants. These results imply that these five items are possibly aimed at measuring another construct/constructs (i.e., development and efficiency) than the rest of the items in their respective scales. Therefore, it was decided to not create new latent variables, reflecting these items.

Three of the items in the internal knowledge sharing scale (IKS_2, IKS_3_R and IKS_5_R) and four of the items in the external knowledge sharing scale (EKS_2, EKS_3_R, EKS_5_R, EKS_8_R) were excluded. These items displayed several high standardized covariance residuals and had lower factor loadings compared to the other items. Some of these items were negatively worded, redundant and/or conflicting, such as IKS_2 “there is very little conflict between the groups on this unit” and IKS_8_R “there is much conflict about the sharing of competence between the groups on this unit”. IKS_8_R was included in the
measurement model, whereas EKS_8_R was excluded, because there was no statistical reason for excluding IKS_8_R. The EFA did also show that IKS_8_R loaded stronger on the same factor as the rest of the items on internal knowledge sharing.

Furthermore, two of the items in the POS scale, POS_3_R and POS_5, were dropped. POS_3_R are negatively worded and the content of POS_5 “this organization is willing to help the employees if they need a special service” and POS_6 “help is available from this organization when employees have a problem” are somewhat overlapping or difficult to differentiate. These items did also display several high standardized covariance residuals.

Finally, the modification indices were inspected. In order to improve the fit of the measurement model, some of error terms of meaningfully related indicators were allowed to covary, because it was possible that they shared some unique variance. The items had similarly worded phrases and/or where in consecutive order, such as IKS_11 “there is a great deal of cooperation between the groups at this unit” and IKS_12 “people are willing to collaborate across the groups at this unit”.

Table 3

<table>
<thead>
<tr>
<th>Measurement model Goodness of Fit statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

Note. CI=90 % confidence interval, ** Chi square significant at the .01 level

A path diagram of the respecified measurement model (model 2) is shown in Appendix 3 and the model’s respective communalities are presented in Appendix 4. Table 3 presents the GOF-indices for the respecified measurement model, where the values of CFI, RMSEA and SRMR indicate good fit. It was possible to continue modifying the model to get an even better overall fit, yet new modification can make the result become more specific to the sample rather than representing theoretical assumptions.

**Reliability and validity.**

Composite reliability (CR) was above .70 for all constructs: Human relations CR= .86, internal process CR= .79, Internal knowledge sharing CR = .91, external knowledge sharing CR= .91, and for perceived organizational support CR= .87. Thus, reliability and convergent validity were satisfactory for all scales.
Both the correlations between the constructs (less than 0.85) and the value of AVE indicate that discriminant validity was achieved. The bold values in Table 4 are the square root of AVE for the construct, while the other values are the correlation between the respective constructs. Discriminant validity is attained when the diagonal value in bold is higher than the values on the off-diagonal. As shown in Table 4, all the diagonal values in bold are higher than the values on the off-diagonal, and as a result the discriminant validity was achieved (Ahmad, et al., 2016). In sum, the model demonstrated adequate reliability, convergent and discriminant validity.

Table 4

<table>
<thead>
<tr>
<th></th>
<th>HR</th>
<th>IP</th>
<th>IKS</th>
<th>EKS</th>
<th>POS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP</td>
<td>.55</td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IKS</td>
<td>.56</td>
<td>.40</td>
<td>.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EKS</td>
<td>.39</td>
<td>.44</td>
<td>.50</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>POS</td>
<td>.46</td>
<td>.40</td>
<td>.41</td>
<td>.48</td>
<td>.72</td>
</tr>
</tbody>
</table>

Note. Diagonal elements (in bold) are the square root of the average variance extracted (AVE). Off-diagonal elements are the correlations among constructs, HR = human relations, IP = internal process, IKS = internal knowledge sharing, EKS = external knowledge sharing, POS = perceived organizational support.

Structural model.

After demonstrating acceptable fit for the measurement model, the next step in SEM is to specify the structural model. That involves introducing the paths among the latent variables as specified in the hypotheses. The complete theorized model, with its measurement and structural elements, is displayed in Figure 3. The estimates between the latent variables are interpreted as standardized regression coefficients (β), the estimates between the latent variables and the indicators are factor loadings and the estimates connected to the double-headed arrows are correlations. The structural model had the same amount of paths between the latent variables as the specified measurement model (model 2), consequently the models are “equivalent” and the GOF-indices are identical, as presented in Table 5. The overall model fit the observed data well and was therefore retained.

Table 5

<table>
<thead>
<tr>
<th>Model</th>
<th>$X^2$</th>
<th>df</th>
<th>$X^2$/df</th>
<th>CFI</th>
<th>RMSEA (CI)</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1210.593***</td>
<td>478</td>
<td>2.53</td>
<td>.955</td>
<td>[.043, .046]</td>
<td>.038</td>
</tr>
</tbody>
</table>

Note. CI=90 % confidence interval, ** Chi square significant at the .01 level
Figure 3. Structural model path diagram

Note: Estimation method: Maximum Likelihood. Displaying standardized coefficients. Circles represent latent variables (factors), while rectangles represent observed variables (indicators). Circles with e** denotes error variance, and circles with d* denotes disturbance terms. Disturbances are other variables which affect the latent variables, but which are not accounted for in the model.

Table 6 displays the direct, total and indirect effects, between the latent variables. Most of the effects were found significant (p<.01) and in the predicted direction, as a result 10 out of 12 hypotheses were supported.

The analysis showed a significant positive direct effect of human relations climate on internal knowledge sharing (H1a: β = .53). The effect on external knowledge sharing (H1b: β = .05), effect was though not significant. Consequently, hypothesis H1b was rejected. Ergo, the effect of human relations climate was greater on internal knowledge sharing than external knowledge sharing.
The effect of internal process climate on internal knowledge sharing (H2a: $\beta = .06$), was not significant, consequently hypothesis H2a was not supported. However, the analyses showed a significant positive direct effect on external knowledge sharing (H2b: $\beta = .32$). These results support that internal process climate has a greater effect on the employees’ perception of external knowledge sharing, than internal knowledge sharing.

There was a significant positive direct effect of human relations on POS (H3a: $\beta = .36$), as well as significant positive direct effect of internal process climate on POS (H3b: $\beta = .25$). Moreover, POS had a significant positive direct effect on both internal (H4a: $\beta = .14$) and external (H4b: $\beta = .35$) knowledge sharing.

Additionally, there was a significant positive indirect effect of human relations climate, through POS, on internal (H5a: $\beta = .05$, 95% CI= [.02, .09]) and on external (H5b: $\beta = .13$, 95% CI= [.08, .19]) knowledge sharing. Finally, as suggested, there was a significant positive indirect effect of internal process climate, through POS, on internal (H6a: $\beta = .03$, 95% CI= [.01, .07]), and on external (H6b: $\beta = .09$, 95% CI= [.04, .14]) knowledge sharing.

The variation in HR, IP and POS explained together 43% of the variation in internal knowledge sharing and 38% of the variation in external knowledge sharing.

Table 6

*Estimates of direct, total and indirect effects between the latent variables.*

<table>
<thead>
<tr>
<th>Relationships</th>
<th>Standardized</th>
<th>Unstandardized</th>
<th>Total effects</th>
<th>Total effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>SE</td>
<td>95% CI</td>
<td></td>
</tr>
<tr>
<td>Direct effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR$\rightarrow$ IKS</td>
<td>.53**</td>
<td>.06</td>
<td>[.41, .64]</td>
<td>.58**</td>
</tr>
<tr>
<td>HR$\rightarrow$ EKS</td>
<td>.05</td>
<td>.05</td>
<td>[-.06, .15]</td>
<td>.17**</td>
</tr>
<tr>
<td>HR$\rightarrow$ POS</td>
<td>.36**</td>
<td>.06</td>
<td>[.24, .48]</td>
<td>-</td>
</tr>
<tr>
<td>IP$\rightarrow$ IKS</td>
<td>.06</td>
<td>.06</td>
<td>[-.05, .19]</td>
<td>.10</td>
</tr>
<tr>
<td>IP$\rightarrow$ EKS</td>
<td>.32**</td>
<td>.06</td>
<td>[.21, .43]</td>
<td>.41**</td>
</tr>
<tr>
<td>IP$\rightarrow$ POS</td>
<td>.25**</td>
<td>.07</td>
<td>[.12, .37]</td>
<td>-</td>
</tr>
<tr>
<td>POS$\rightarrow$ IKS</td>
<td>.14**</td>
<td>.05</td>
<td>[.04, .23]</td>
<td>-</td>
</tr>
<tr>
<td>POS$\rightarrow$ EKS</td>
<td>.35**</td>
<td>.04</td>
<td>[.27, .44]</td>
<td>-</td>
</tr>
<tr>
<td>Indirect effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR$\rightarrow$ POS$\rightarrow$ IKS</td>
<td>.05**</td>
<td>.02</td>
<td>[.02, .09]</td>
<td>-</td>
</tr>
<tr>
<td>HR$\rightarrow$ POS$\rightarrow$ EKS</td>
<td>.13**</td>
<td>.03</td>
<td>[.08, .19]</td>
<td>-</td>
</tr>
<tr>
<td>IP$\rightarrow$ POS$\rightarrow$ IKS</td>
<td>.03**</td>
<td>.02</td>
<td>[.01, .07]</td>
<td>-</td>
</tr>
<tr>
<td>IP$\rightarrow$ POS$\rightarrow$ EKS</td>
<td>.09**</td>
<td>.03</td>
<td>[.04, .14]</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. N = 847, HR= Human relations, IP = Internal process, IKS= internal knowledge sharing, EKS = External knowledge sharing, POS= perceived organizational support, CI= Confidence interval based on 10,000 bootstraps. ** Coefficient is significant at the 0.01 level.
Discussion

The purpose of the present study was to explore HR, IP and POS as potential facilitators for internal and external knowledge sharing in the Norwegian police. The thesis investigated whether the different climate types facilitate the different forms of knowledge sharing, and the potential mediating role of POS. More specifically, whether HR and IP could predict internal and external knowledge sharing directly and if there was an indirect effect through POS on both internal and external knowledge sharing. Twelve hypotheses were derived and presented in a structural equation model.

The first two hypotheses concerned HR’s relationship to internal and external knowledge sharing. Hypothesis 1a stated that HR had a positive direct effect on employees’ perception of internal knowledge sharing, while hypothesis 1b suggested the same for external knowledge sharing. The analysis revealed a positive significant effect between HR and internal knowledge sharing, yet the effect with external knowledge sharing was not significant. Consequently, only hypothesis 1a was supported. This suggests that people who perceive high levels of HR also regard internal knowledge sharing as high.

The second two hypotheses concerned IP’s relationship to internal and external knowledge sharing. Hypothesis 2a suggested that IP had a positive direct effect on internal knowledge sharing, while hypothesis 2b implied the same for external knowledge sharing. The analysis did only produce a positive and significant regression coefficient between IP and external knowledge sharing, thus only hypothesis 2b was supported. This finding indicates that employees who perceive high levels of IP also perceive external knowledge sharing as high. As anticipated, HR had a greater effect on internal knowledge sharing, whereas IP had a greater effect on external knowledge sharing. This indicates that there is a difference between knowledge sharing internally and externally and that the different forms of sharing are facilitated by different climate types.

Further, HR and IP had a positive direct effect on employees’ perception of POS. Which was asserted in hypotheses 3a and 3b respectively. Additionally, the analysis revealed a positive direct effect of POS on both internal and external knowledge sharing, ergo hypothesis 4a and 4b were retained. Interestingly, the effect of POS was found to be considerable greater on external than internal knowledge sharing, a further support for the fact that internal and external knowledge sharing is facilitated by different factors and to a different degree.

Moreover, the fifth hypotheses, suggested that HR would positively predict internal knowledge sharing (5a) and external knowledge sharing (5b) through its effect on POS. The
confidence internals of the indirect effects displayed a small variation in the estimates produced by the bootstrap procedure. The lower bound estimate of the indirect effect of HR on internal knowledge sharing tended to zero, yet both hypotheses were retained due to significant effect sizes in the predicted direction.

Finally, hypotheses six suggested that IP would positively predict internal knowledge sharing (6a) and external knowledge sharing (6b) through its effect on POS. The confidence internals of the indirect effects displayed a small variation in the estimates, and the lower bound estimate of the indirect effect of IP on internal knowledge sharing tended to zero. However, the results revealed that IP also had a significant positive effect on both internal and external knowledge sharing, through POS, leading to the retention of the hypotheses. Taken together, these results indicate that in addition to a direct effect, HR and IP appears to facilitate knowledge sharing indirectly, because these climates seem to increase employees POS, which in turn affects knowledge sharing positively. The direct effect of HR on external knowledge sharing was found to be not significant, likewise the effect of IP on internal knowledge sharing, yet HR and IP are related to both internal and external knowledge sharing when including POS. In other words, these findings suggest POS as a potential mediator in the relationship between HR and knowledge sharing as well as between IP and knowledge sharing. In total, HR, IP and POS explained a substantial proportion of the variance in both internal and external knowledge sharing.

In summary, the structural adjustment to knowledge sharing demonstrates that different climates fosters or hinder knowledge sharing in the police. The findings indicate that HR is primarily related to internal knowledge sharing, whereas IP is mainly associated with external knowledge sharing. There is additionally a positive indirect effect of HR and IP on internal and external knowledge sharing, through POS. This led to the retention of ten out of twelve hypotheses. The examination of global and local fit supports the retention of the theorized model. The effect sizes ($\beta$ and $R^2$) indicate that there is a strong relationship between the variables. This is particularly the case for HR’s direct effect on internal knowledge sharing and POS, and IP’s and POS’s direct effect on external knowledge sharing. These findings have interesting theoretical and practical implications.

Implications

**Theoretical implications.**

Studies have demonstrated that knowledge sharing might be different in private versus public organizations (Kumari & Takahashi, 2014). This study contributes to psychological research by increasing our knowledge of what can facilitate internal and external knowledge...
sharing within the Norwegian Police. Previous studies of organizational climate in police work have generally focused on HR climate, and considerably less attention has been devoted to the predictive power of IP. This study thereby contributes to research by demonstrating that IP might have a significant impact on knowledge sharing in the police. The findings imply that internal and external knowledge sharing is influenced by various factors, and to a different degree. The results furthermore broaden our theoretical, conceptual and operational understanding of knowledge sharing, HR, IP and POS, which will be addressed accordingly.

**Internal and external knowledge sharing.**

This study found that the structural adjustment to knowledge sharing is an important police specific modification. The results support that there is a difference in the perception of internal and external knowledge sharing, both conceptually and in degree. The t-test indicates that employees perceive significantly more sharing internally than externally. In order words, the findings suggest that the employees tend to share, trust and cooperate more with other work groups in their unit, than with other units in the police district. The exploratory factor analysis and test for discriminant validity support that the constructs are conceptually different yet correlated. However, the analysis detected some problems with several of the items in both scales, especially the reversed items, which resulted in the exclusion of seven items in the SEM-analysis. These items were negatively worded and/or concerned topics such as conflict, mistrust and disrespect. Additionally, as shown in the EFA, the reversed items on internal knowledge sharing loaded on the same factor as HR-items, indicating that the constructs may be somewhat overlapping. The removal of these items has nevertheless implications for how one should interpret the findings.

A central question concerns whether these items represent a separate construct, or is a methodological artefact (i.e., a product of how the items are articulated). In an attempt to reduce the potential effects of response pattern biases, researchers have tried to incorporate negatively worded or reverse-coded items on their questionnaires. Reversed-coded items can be thought of as cognitive “speed bumps”, which require respondents to engage in more controlled cognitive processing (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). There are some advantages to including reversed items in questionnaires, such that reversed items implicitly correct for agreement bias (Weijters & Baumgartner, 2012). However, research has demonstrated that reverse-coded items can produce artificial response factors consisting completely of negatively worded items (Podsakoff et al., 2003). Thus, the inclusion of reverse-coded items can have undesirable consequences, which has led researched to argue against the use of reversed items in measurement scales.
It is not possible to conclude whether the findings regarding these items are a result of the way in which the items is articulated, or if they represent another construct concerning conflict/mistrust/disrespect. The findings indicate that further research into the construct is needed, potentially by investigating if the same results and factor solution is reproduced if one rewrites the items to a positive wording.

**Human relations and internal process climate.**

In the development of the hypotheses for this study, it was expected that HR climate would be integral in enhancing knowledge sharing. According to the empirical and theoretical basis of knowledge sharing (integration), knowledge sharing is expected to be a part of HR climate. In fact, several studies in various organizational settings, including the police organization, have demonstrated that HR has a significant impact on knowledge sharing behaviors. The findings demonstrate however, that HR is related to internal knowledge sharing, but not to external knowledge sharing.

Koritzinsky (2015) suggested that different climates support and foster different forms of knowledge sharing. By comparing internal and external knowledge sharing with the four CVF climates, Koritzinsky (2015) found that internal knowledge sharing is related to HR climate, whereas external knowledge sharing is related to OS climate. Considering that both HR and OS have flexibility in common, Koritzinsky (2015) suggested that flexibility might be perceived as a more salient feature of the police climate. The findings in this study challenge this proposal. The result confirms Koritzinsky (2015) findings that different climates support different forms of knowledge sharing and that internal knowledge sharing is related to HR climate. However, when external knowledge sharing is considered in relation to HR and IP, external knowledge sharing is related to IP climate. Indicating that a focus on internal control, rather than flexibility, supports the sharing of knowledge externally in the organization. Thus, these findings indicate that flexibility is not perceived as a more salient feature than the other competing values, as Koritzinsky (2015) suggested.

The findings in this study furthermore fail to support the common assumption of a competing structure. The results indicate that HR and IP are not competing, but that they are positively inter-correlated. The findings might suggest that there exist multiple climates or sub-climates in the police organization, or that the police organization is categorized by conflicting demands (Hartnell et al., 2011; Koritzinsky, 2015). The finding of complimentary climates is not new. First, several studies have demonstrated mixed support of the competing structure of CVF (e.g., Dietz et al., 2004; Hartnell et al., 2011; Koritzinsky, 2015). Moreover, argued that organizations are rarely characterized by a single climate type, as they adapt and
respond to the challenges, changes and demands in the surrounding environment (e.g., Harnell et al., 2011; Wiewiora, Trigunarsyah, Murphy, & Coffey, 2013). Second, climate studies using the CVF have found strong to moderate intercorrelations between the four competing values (e.g., Hartnell et al., 2011). Colley, Lincolne and Neal (2013) furthermore suggests that the competing structure have been difficult to assess using Likert scales format, as the CVF mainly have been assessed with ipsative measures (Jung et al., 2009; Koritzinsky, 2015).

Further, as the climates are inter-correlated and as HR has only a little higher mean value than IP, the assumption of a more dominant climate is not supported. In summary, the findings indicate that the climate types coexist and work together, that some climate values encourage and others impede internal and external knowledge sharing, but that they are both considered to be important for knowledge sharing within the police organization. Nevertheless, the obtained results should be interpreted with caution, as this study does not take all four CVF climates into account, but only examines the impact of HR and IP.

Finally, even though the scales displayed good reliability, the analysis discovered problems with some of the items in both scales, which lead to the exclusion of five items. The content of two of the items on HR seems to be aimed at measuring another construct (i.e., development) than the rest of the items in the HR scale. Likewise, three of the items on IP appear to be aimed at measuring another construct (i.e., efficiency) than the rest of the items in the respective scale. According to Quinn and Rohrbaugh (1983), development and efficiency represents “ends”, thus these five items may represent “ends” whereas the rest of the items concerns “means” (see figure 1). However, contemporary versions of the CVF do not include the means-ends dimensions, and questions the utility of including these dimensions in the scales. Future studies are needed in order to investigate whether the same results and factorial solution is reproduced if one includes all the items, in addition to the whole framework.

Perceived organizational support.

The findings suggest POS as a potential mediator in the relationship between HR and internal and external knowledge sharing, as well as between IP and internal and external knowledge sharing. Creating a climate characterized by both HR and IP seems to facilitate POS, which again leads to increased internal and external knowledge sharing. The findings furthermore demonstrate that POS affects internal and external knowledge sharing directly. In fact, POS had a greater effect on external knowledge sharing than both HR and IP.

A direct effect of POS on both internal and external knowledge sharing was anticipated. Employees, who perceive that their organization values their contributions and
KNOWLEDGE SHARING IN THE POLICE

cares about their wellbeing tend to reciprocate by performing better, cooperate more and share more knowledge. However, the fact that the effect of POS is considerable greater on external than internal knowledge sharing, was rather unexpected. Yet, it is reasonable to believe that POS will have a greater impact on external than internal knowledge sharing, bearing in mind that people are generally more inclined to share, cooperate and trust people who belong to their own work-group (work-groups), than with people who belongs to “out-groups”.

Studies on POS and OCB have shown that POS appears to encourage certain types of citizenship behaviors more than others (Kaufman et al., 2001). Following social exchange and norm of reciprocity, Kaufman et al. (2001) argue that POS should to a greater extent be connected to employee behaviors that are specifically directed toward the organization (i.e., OCBO) than those directed toward assisting co-workers (i.e., OCB). Based on the fact that POS refers to employee’s perception of how an organization treats employees. Thus, drawing again on the parallel between OCB and knowledge sharing, this might indicate that POS should to a greater extent be connected to external knowledge sharing, than internal knowledge sharing.

In summary, the process of knowledge sharing between units is definitely a complex process, and depends on the extent to which the employees perceive themselves as being valued by their organization. Together these findings provide a further support for the fact that internal and external knowledge sharing is facilitated by different factors, and to a different degree. The measurement of POS was adopted form Lynch, Eisenberger and Arneli’s (1999) “Survey of Perceived Organizational Support”. The scale displayed good reliability, however in the CFA two of the items were excluded. The original scale is unidimensional, and researchers have argued that the use of shorter versions does not appear problematic (Rhoades & Eisenberger, 2002). Nevertheless, future research into the construct is recommended, potentially by investigating if the same results are achieved if one rewrites the items to a positive wording and by ensuring that the content is not overlapping.

Practical implications.

As pointed out in Gjørvrapporten and in the police analysis (NOU 2012:14, 2012; NOU 2013:09, 2013) coordination and collaboration within the police organization has been too week. The aim of the police reform is to establish more specialized environments and more knowledge sharing and cooperation between the districts. The fact that the police have reduced the number of districts makes knowledge sharing within groups and across units even more prominent. In accordance with previous studies, the findings imply that the police employees tend to share and cooperate more with their in- groups, as opposed to members of
out-groups. Given the fact that unit and organizational knowledge sharing, is influenced by the extent to which knowledge sharing occurs between employees (Wang & Noe, 2010), employees will probably share more across the units, if there also is a high degree of internal sharing. Therefore, it is necessary that the police organization do not underestimate the importance of internal knowledge sharing.

Furthermore, the findings in the present study indicates that there is a difference between knowledge sharing at the unit level and across units, and that different climates support and foster the different forms of knowledge sharing. This indicates that centralization of the police district will not alone increase integration, as this is dependent on conflicting demands and climate types. Accordingly, this study has a clear implication for practice. The police should focus on the whole and complexity of the organizational climate, as opposed to focusing on one factor or dimension of climate. HR supports and facilitates internal knowledge sharing, whereas IP supports and facilitates external knowledge sharing. Therefore, where internal focus on flexibility is emphasized, higher levels of internal knowledge sharing will be valued and promoted. Likewise, when an internal focus on control is emphasized, higher levels of external knowledge sharing will be promoted in the organization.

Moreover, seeing that the process of sharing partly relies on the extent to which the employees perceived that their contributions are being valued, one can question how the police organization handles POS. In thread with the structural changes to the police organization, perceived support from the organization will be an important factor. Previous studies indicate that employees who perceive that they have a supportive supervisor or supportive leader-member exchanges are more likely to report POS, assuming that in most cases one’s supervisor is considered to represent the organization (Cabrera & Cabrera, 2005). For that reason, managers at all levels in the organization should put an emphasis on providing the employees with support.

Limitations

There are several methodical and theoretical limitations of this study that needs to be acknowledged. Some of the most central limitations are presented, in the next section.

**Cross-sectional study.** This study provides evidence of a positive association between HR, IP, POS and internal and external knowledge sharing. Yet, this study was cross-sectional, where all the variables are measured at the same time, and provides only a snapshot of the phenomena of interest. This being so, it is impossible to draw causal inferences regarding the
relationship among the variables. The positive associations obtained in this study can be explained by other factors that cross-sectional studies do not provide an explanation for.

**Self-report measures.** The survey methodology has several familiar limitations, including common method variance (CMV). CMV refers to “variance that is attributable to the measurement method, rather than to the constructs the measures represent” (Podsakoff et al., 2003, p.879). Self-report measures display an increased risk of CMV, because the same person responds to questions regarding both the predictor and criterion variable (Podsakoff et al., 2003; Spector, 2006). This can either inflate or deflate the observed relationships between the constructs (Podsakoff et al., 2003; Spector, 2006). Some sources of common method biases are a result from the fact that the predictor and criterion variables are gathered from the same respondent, whereas others are produced by the measurement items themselves (Podsakoff et al., 2003).

Consistency bias, social desirability and negatively worded (i.e., reversed) items might have been a problem in this study. Yet, in accordance with Podsakoff et al. (2003), several procedures were followed in order to control for CMV, such as ensuring the participants anonymity, ensuring the participants that there are no right or wrong answers and that they should answer as honest as possible. These procedures should make people less likely to correct their responses to be more socially desirable, and consistent with how they think the researcher wants them to respond (Podsakoff et al., 2003).

**Competing Values Framework.** The findings in this study indicate that different climate types facilitate different forms of knowledge sharing. However, by not including all the four quadrants, it is not possible to conclude whether IP has a stronger association to external knowledge sharing, than for example OS climate. It is further difficult draw inferences about the competing structure and whether there is a dominant climate, without taking all the climates into consideration. On the other hand, other studies have also used only two quadrants of the CVF in order to facilitate the appropriate use of multivariate statistical techniques (e.g., Jones et al., 2005). Furthermore, failed to support the competing structure of the CVF (e.g., Hartnell et al., 2011; Koritzinsky, 2015). The findings clearly demonstrates that there is a difference between knowledge sharing at the unit level and across units, and that knowledge sharing is dependent on several climate types.

**Generalizability.** Finally, the generalizability of the findings needs to be addressed. There are several characteristics of the sample that indicate its representativeness (e.g., gender, age, area of expertise). The results obtained in this study are based on a large sample size, and yield an average response rate of 58.21%. However, there might be some elements
that questions whether the results can be generalized to other samples in the organization. For instance, it is possible that those who participated, shared some characteristics, compared to those who chose not to participate. According to Witherspoon, Bergner, Cockrell, and Stone (2013), the knowledge sharing literature might suffer from cooperation bias, which is that those who choose to respond to questionnaires might be specially cooperative and willing to share knowledge. Consequently, it is possible that those who participated in this study are generally more cooperative or prosocial people, which in turn might have influenced the way in which they responded to the questionnaire. This creates a potential threat to the study’s generalizability. Moreover, the sample covered only three districts (i.e., Øst), thus it is questionable whether the sample represent the police organization as a whole. Future studies should include the remaining districts, and investigate whether the findings can be confirmed in other samples as well.

**Future research**

Based on the findings and limitations, this study opens for several recommendations for future research. Some of these have already been proposed, such as the operationalization and further investigation into the constructs, rewrite the negatively worded items and to ensure that the content of the items are not overlapping. A further recommendation directed to the questionnaire is to make it digital, as this will save both time and resources, provide opportunity for larger distribution as well as reducing the risk of punching-error.

In order to assess the causal relationship between the variables and the potential mediating effect of POS, future studies should investigate these variables longitudinally. Longitudinal studies are further suggested to reduce problems associated with cross-sectional studies, in particular the treatment of third variables. It would also be beneficial to include measures of the actual degree of knowledge sharing internally and externally, in order to assess whether actual and perceived knowledge sharing positively reinforces one another. For instance, by assessment or observation of the frequency of knowledge sharing behavior in internal communication channels. Yet, this might require that the researcher focus on limited number of districts, as this is dependent on substantial resources.

The findings in this study indicate that IP have a positive effect on external knowledge sharing, future studies should look deeper into the mechanisms producing this effect. Furthermore, in order to draw inferences about which of the climate types that has the strongest association to internal and external knowledge sharing, future studies should include all the CVF climates. Additionally, all the CVF climates should be included in order examine
the competing structure and to draw conclusions of whether there is a dominant climate type in the police, or if they as demonstrated in this study are inter-correlated and coexisting.

Furthermore, even though this study support previous findings that POS is related to knowledge sharing behavior, less attention has been given to the mechanisms presumed to underlie this positive relationship (Chen, Aryee & Lee, 2005). Accordingly, this study recommends future studies to explore the mechanisms underlying the relationship between POS and knowledge sharing. It would further be interesting to explore which POS initiatives that facilitate internal and external knowledge sharing. Several researchers have pointed to the role of organizational identification, and the association between POS and organizational identification (e.g., Shen et al., 2014). Studies have demonstrated that POS is related to organizational identification, and in combination, they can have an impact on organizational outcomes (e.g., OCBs) (Shen et al., 2014). As previously mentioned, organizational identification is also an important aspect of knowledge sharing, as identification with the organization helps to reduce knowledge sharing disparity and team-level ingroup bias. Organizational identification is therefore an interesting focus area.

Conclusion

The fact that police work by its very nature is dynamic, complex and stressful highlights the need for police officers to be proficient knowledge workers, furthermore being able to use and share knowledge. The police reform acknowledges the importance of knowledge sharing within the police organization. To provide more knowledge on how sharing and cooperation can be facilitated among work groups and units, this study aimed to investigate the predictive power of different climate types and POS. The results provide new insight into the relationship between these variables, by demonstrating that there is a difference between internal and external knowledge sharing, and that different climates support and facilitates these forms of sharing. Previous studies of organizational climate in police work have dedicated little attention to IP, this study thereby contributes to research my demonstrating that IP may have a significant impact on employees’ level of external knowledge sharing.

This study provides further insight into the relationship between POS and knowledge sharing, by demonstrating that the effect of POS on internal and external knowledge sharing appears to be different. Seeing that need for external knowledge sharing may be more prominent, the organization should focus on providing the employees with support, in addition to create a climate characterized by internal process dimensions. Yet, this study stress
the importance of not focusing on one dimensions of climate, as internal and external knowledge sharing are dependent upon different climates and conflicting demands.

This thesis will hopefully, inspire researchers to further explore the relationships discovered in this study. Future studies would benefit from investigating the potential mediating effect of POS, and other variables, in a longitudinal design to further understand the strong association between HR and internal knowledge sharing and between IP and external knowledge sharing.
References


Facilitation. *International Business Research, 7*(12), 29 - 43. doi:10.5539/ibr.v7n12p29


APPENDIX 1: Measures in Norwegian

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Item statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal knowledge sharing / Intern kunnskapsdeling</td>
<td>IKS_1</td>
<td>Folk er innstilt på å dele informasjon på tvers av gruppene her på enheten</td>
</tr>
<tr>
<td></td>
<td>IKS_2</td>
<td>Det er svært lite konflikt mellom gruppene her på enheten</td>
</tr>
<tr>
<td></td>
<td>IKS_3_R</td>
<td>Folk er mistenksomme overfor andre grupper her på enheten</td>
</tr>
<tr>
<td></td>
<td>IKS_4</td>
<td>Det er svært effektivt samarbeid mellom gruppene her på enheten</td>
</tr>
<tr>
<td></td>
<td>IKS_5_R</td>
<td>Det er lite respekt mellom noen av gruppene her på enheten</td>
</tr>
<tr>
<td></td>
<td>IKS_6</td>
<td>Folk er svært innstilt på å dele på kompetanse mellom gruppene her på enheten</td>
</tr>
<tr>
<td></td>
<td>IKS_7</td>
<td>Folk er svært innstilte på å dele på personer med fagkompetanse / kompetansepersoner mellom gruppene her på enheten</td>
</tr>
<tr>
<td></td>
<td>IKS_8_R</td>
<td>Det er mye konflikt om deling av kompetanse mellom gruppene på denne enheten</td>
</tr>
<tr>
<td></td>
<td>IKS_9</td>
<td>Det er effektiv deling av informasjon på tvers av gruppene her på enheten</td>
</tr>
<tr>
<td></td>
<td>IKS_10</td>
<td>Her deler vi mye informasjon på tvers av gruppene på enheten</td>
</tr>
<tr>
<td></td>
<td>IKS_11</td>
<td>Det er stor grad av samarbeid mellom gruppene her på enheten</td>
</tr>
<tr>
<td></td>
<td>IKS_12</td>
<td>Folk er innstilte på å samarbeide på tvers av gruppene her på enheten</td>
</tr>
<tr>
<td>External knowledge sharing/ Ekstern kunnskapsdeling</td>
<td>EKS_1</td>
<td>Folk er innstilt på å dele informasjon på tvers av enhetene her i distriktet</td>
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<td></td>
<td>EKS_2</td>
<td>Det er svært lite konflikt mellom enhetene her i distriktet</td>
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<td>EKS_3_R</td>
<td>Folk er mistenksomme overfor andre enheter her i distriktet</td>
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<td>EKS_4</td>
<td>Det er svært effektivt samarbeid mellom enhetene her i distriktet</td>
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<td>Det er lite respekt mellom noen av enhetene her i distriktet</td>
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<td>EKS_6</td>
<td>Folk er svært innstilte på å dele på kompetanse mellom enhetene her i distriktet</td>
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<td></td>
<td>EKS_7</td>
<td>Folk er svært innstilte på å dele på personer med fagkompetanse/ kompetansepersoner mellom enhetene her i distriktet</td>
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<td>EKS_9</td>
<td>Det er effektiv deling av informasjon på tvers av enhetene her i distriktet</td>
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<tr>
<td></td>
<td>EKS_10</td>
<td>Her deler vi mye informasjon på tvers av enhetene i distriktet</td>
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### KNOWLEDGE SHARING IN THE POLICE

<table>
<thead>
<tr>
<th>EKS_11</th>
<th>Det er stor grad av samarbeid mellom enhetene her i distriktet</th>
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<tr>
<td>EKS_12</td>
<td>Folk er innstilte på å samarbeide på tvers av enhetene her i distriktet</td>
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</table>

#### Human relations climate / Human relations climate

<table>
<thead>
<tr>
<th>HR_1</th>
<th>Vi utvikler støttende, positive arbeidsforhold her på enheten</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR_2</td>
<td>Arbeidsmiljøet er sann åat vi på enheten kommer godt overens med hverandre</td>
</tr>
<tr>
<td>HR_3</td>
<td>Vi har lite konflikt mellom oss på enheten</td>
</tr>
<tr>
<td>HR_4</td>
<td>Vi er forpliktet til hverandre her på enheten</td>
</tr>
<tr>
<td>HR_5</td>
<td>Det er høy moral blant ansatte på enheten</td>
</tr>
<tr>
<td>HR_6</td>
<td>På min enhet hjelper vi ansatte hverandre når det trengs</td>
</tr>
<tr>
<td>HR_7</td>
<td>Hver ansatt har muligheter for utvikling her på enheten</td>
</tr>
<tr>
<td>HR_29</td>
<td>Hver ansatt har muligheter for faglig utvikling her på enheten</td>
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#### Internal process climate/ Internal process climate

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<th>Regler og retningslinjer er tydelig kommunisert til oss her på enheten</th>
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<td>IP_2</td>
<td>Etablerte prosedyrer og retningslinjer styrer generelt hvordan vi løser våre arbeidsoppgaver her på enheten</td>
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<tr>
<td>IP_3</td>
<td>Vi på enheten blir oppfordret til å følge vår stillingsinstruks/ stillingsbeskrivelse</td>
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<tr>
<td>IP_4</td>
<td>Vi på enheten passer på at arbeidsoppgaver er organisert og forutsigbare</td>
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<td>IP_5</td>
<td>Vi er kjent for å gjøre jobben vår effektivt her på enheten</td>
</tr>
<tr>
<td>IP_6</td>
<td>Vi utfører arbeid som alltid er av høy standard her på enheten</td>
</tr>
<tr>
<td>IP_7</td>
<td>Vi jobber for å oppnå maks effektivitet her på enheten</td>
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#### Perceived organizational support / Opplevd organisatorisk støtte

<table>
<thead>
<tr>
<th>POS_1</th>
<th>Denne organisasjonen bryr seg virkelig om de ansattes velvære</th>
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<tr>
<td>POS_2</td>
<td>Denne organisasjonen tar i stor grad hensyn til de ansattes målsettinger og verdier</td>
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<tr>
<td>POS_3_R</td>
<td>Denne organisasjonen viser lite omsorg for de ansatte</td>
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<td>POS_4</td>
<td>Denne organisasjonen bryr seg om hva de ansatte mener</td>
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<td>POS_5</td>
<td>Denne organisasjonen er villig til å hjelpe de ansatte om de har behov for en spesiell tjeneste</td>
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<tr>
<td>POS_6</td>
<td>Hjelp er tilgjengelig fra denne organisasjonen når de ansatte har et problem</td>
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<tr>
<td>POS_7</td>
<td>Denne organisasjonen ville tilgi de ansatte om de gjorde en ærlig feil</td>
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<tr>
<td>POS_8_R</td>
<td>Gitt muligheten, ville denne organisasjonen utnyttet de ansatte</td>
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APPENDIX 2: Measurement model 1 – Path diagram
APPENDIX 3: Measurement model 2 – Path diagram
APPENDIX 4: Measurement model 2 – Communalities

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