Master thesis BA: HRM

How does innovative work behaviour of employees affect their individual job performance?

University of Twente

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When I started with the master of Business Administration my enthusiasm was triggered by the several interactive and educative business courses we had on the University of Twente and especially in the field of HRM this was the case. From that point, and of course with my psychological background it was clear to me I wanted to continue in the field of HR and eventually writing my master thesis for this faculty.

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Summary

Because the business environments are becoming more and more dynamic and demanding it is important for companies to adapt and stay competitive within these changing and dynamic situations (Ramamoorthy, Flood, Slattery & Sardessai, 2005; Yuan & Woodman, 2010). The human capital consisting of employees and managers play an important role in in the contribution of performance, especially when it comes to the alignment of goals such as performance of a company (Bowen and Ostroff, 2004). Creative idea generation is an important part of innovative work behaviour of employees and can also play an important role in problem solving according to Basadur (2004).

Up until this point, it remains unclear whether or not this innovative work behaviour of employees directly leads to better performance of employees. Managers also have a high influence on the performance of their employees and helping their employees being able to deploy innovative work behaviour (De Jong & Den Hartog, 2007).

This research focuses on the relation between innovative work behaviour and individual job performance of employees, as well as the influence of line management behaviour on this relation. This research provides conclusions and implications about how to deal with this and how these constructs are related to each other.

First of all, it can be concluded that IWB of employees is positively linked to their individual job performance. Next to this, there is a negative moderating effect found between innovation supportive management behaviour and performance. This means that the higher the innovation supportive management behaviour experienced by an employee, the lower the correlation between his/her IWB and task performance. Management behaviour seems to be functioning as a compensatory construct between low innovative work behaviour of employees and individual job performance of these employees.

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Introduction

For over the past years, business environments have become more dynamic and for this reason are demanding more from organizations to adapt and stay competitive in these changing and dynamic environments (Ramamoorthy, Flood, Slattery & Sardessai, 2005; Yuan & Woodman, 2010). Employees can be seen as an important source by companies in gaining a sustained competitive advantage (Barney, 1991). The rapidly changing business environments leads to a higher demand and engagement in innovative behaviours of employees in order to stay competitive and succeed in these dynamic business environments (Ramamoorthy et al. 2005; Kanter, 1983; West & Farr, 1989). Many authors agree and stress the importance of innovativeness in employees since it can contribute to overall effectiveness for organizations in dynamic business environments (Van de Ven, 1986; Janssen, Van de Vliert & West 2004; Woodman, Sawyer & Griffin, 1993; Yuan & Woodman, 2010).

Innovative work behaviour (IWB) of employees could contribute to successfully operating in dynamic business environments (Kanter, 1983). According to Scott and Bruce (1994), IWB of employees is the production or adoption of useful ideas and the implementation of these ideas. This begins with the recognition and generation of ideas or solutions. According to Janssen (2000, 2004) IWB can be seen as a multi-stage process in which ideas or solutions are generated first, followed by a stage of promoting/championing this in order to get support for the idea/solution. Interestingly, when employees perceive higher job demands, they will also show higher levels of innovative work behaviour because of the intensified job demands (Bruce & West, 1994; West, 1989). According to this job demands theory, IWB is used by employees as a coping mechanism when they experience heavy workload, in order to perform better. According to Janssen (2000), high job demands will also be triggering higher IWB of employees if they feel they are rewarded by the organization for their efforts to cope with higher job demands and workload. Job demands can be defined as requirements of working fast and hard, having much work to do within little time, or it could be a heavy workload (Fox, Dwyer, & Ganster, 1993; Karasek, 1979). In order to perform well, an employee needs to deal with these job demands. According to Bruce & West (1994), a way to deal with these demands is showing a higher level of innovative work behaviour. From this can be concluded that if employees show higher IWB, their ability to solve problems and find solutions will possibly improve and this could lead to higher individual job performance as well.

Whether or not IWB has an effect on individual job performance remains unclear up until this point. According to Rosenbusch, Brinckmann & Bausch (2011), overall organizational performance can be enhanced by improving the innovativeness of an organization. This is on an organizational level, whereas this paper will focus on researching the performance of employees on an individual level. As stated by De Jong & Den Hartog (2007) one way to become more innovative as an organization is to capitalize on their employees' ability to innovate. So, in this context employees can contribute to better organizational performance through their ability to generate ideas and use these in order to improve products, services and work processes. Several other authors also underline the importance of innovative work behaviour of employees in order to improve organizational performance (Van de Ven, 1986; Amabile, 1988; Axtell et al., 2000; Smith, 2002; Unsworth and Parker, 2003).

Scott and Bruce (1994) argue that because there are many factors that could be related to IWB, the concept needs to be researched in order to get a better understanding of it. Most of the research that has been done focussed on how different factors influence IWB. Some examples of factors that have an effect on IWB are; expected outcomes (Yuan & Woodman, 2010), role conflicts (Leung, Huang, Su & Lu, 2011), coping with change (Battistelli, Montani, Odoardi, Vandenberghe & Picci, 2014), psychological contracts (Chang, Hsu, Liiou and Tsai, 2013) and work engagement (Alfes, Truss, Soane, Rees & Gatenby, 2013). Although many of these studies have shown that IWB can be effected by different factors, the direct effect of IWB on performance of employees has only been researched on an organizational level. In this paper the focus will be on the individual level of employee performance, instead of overall organizational performance. Logically, employee individual performance will have an impact on organizational performance. Employees can differ in the way they carry out their work activities and this seems to be an important individual source of variation in individual job performance (Borman & Motowidlo, 1993; Motowidlo & Van Scotter, 1994). As mentioned by Scott and Bruce (1994), IWB is important for creating novel and useful ideas. These novel and useful ideas can emerge from perceived work-related problems, incongruities, discontinuities and emerging trends (Drucker, 1985). Because employees differ in the way they carry out their work activities, the assumption can be made that IWB of employees can possibly have an effect on individual job performance by coming up with different types of ideas/solutions. Think about finding innovative ways to deal with the before mentioned job demands like; working fast and hard, having much work to do within little time, or dealing with a heavy workload. Another interesting indicator of a possible relation between individual job performance and IWB is that when employees expect improved outcomes from innovative behaviour with regard to their individual job performance, their

innovative work behaviour seems to be significantly higher as well (Yuan & Woodman, 2010). According to Janssen and Van Yperen (2004), the behaviour that influences individual job performance can be defined as follows:

"Actions specified and required by an employee's job description and thus mandated, appraised and rewarded by the employing organization. These sets of rules and procedures make work behaviour predictable so that basic organizational tasks can be coordinated and controlled in order to achieve organizational goals" (Janssen & Van Yperen, 2004, p. 369).

According to Bowen and Ostroff (2004), line managers of an organization play an important role in the contribution of performance, especially when it comes to aligning the goals of the employees with the organizational goals. It has been shown that when there is congruence between the goals of the employee and the organization, this can have important consequences for both attitudes and behaviours, such as IWB, as well as for effective organizational functioning (Bowen & Ostroff, 2004). The relation between managers and employees can be clarified based on the social exchange theory (Blau, 1964). Blau (1964) states that the basis of any exchange relationship can be described in terms of social or economic principles. Gestures of goodwill will be reciprocated at some point in the future. According to Settoon, Bennett & Liden (1996) the two main ways to describe this social exchange has been captured in the management literature as 'global exchange relationship' between employee and organization and a more focused exchange called 'dyadic relationship' between supervisor and and their subordinates (employee's). Janssen (2000) also states that, according to the social exchange theory, levels of IWB of employees vary as they experience different levels of rewards. When employees are fairly rewarded they are willing to reciprocate this with higher levels of innovative behaviour whereas when they perceive their work is under-rewarded, they tend to limit their IWB. Based on the social exchange theory can be concluded that manager behaviour has a high influence on the behaviour of their employees. De Jong (2007) state that employees vary in the way they carry out their work, or show their IWB. Combining the 'dyadic relationship' of the social exchange theory with the different ways of employees to carry out their work, it can be assumed that manager behaviour could have a moderating effect on the relation between IWB in employees and their individual job performance. In line with this reasoning, Basadur (2004) states that leaders can focus on training and modelling employees to be more creative with regards to problem finding, problem solving and solution implementation. As mentioned before, an important part of IWB is creative idea generation and from the statement of Basadur (2004) can be concluded that managers can be important in fostering the right environment for development of this. A problem with innovative ideas/solutions is that they are not part of, or do not fit into, the institutionalized systems of

theories and practices that are currently existing in companies (Janssen, 2005). When employees come up with innovative ideas/solutions, they are most likely challenging and violating the established systems of theories and preferences for habitual actions in an organization (Ford, 1996). On the one hand, if line managers are committed to the existing frameworks of thoughts and actions, innovative ideas/solutions of employees could be facing some resistance of the managers (Dougherty & Heller, 1994; Frost & Egri, 1991; Janssen, 2003; Kanter, 1988). This is the main reason that an employee who generated the idea/solution needs to get support from peers in order to build the necessary power behind it (Galbraith, 1982; Kanter, 1983, 1988). On the other hand, line managers can play an important role in helping their employees being able to deploy innovative work behaviour and by this realizing a continuous flow of innovations (De Jong & Den Hartog, 2007). Knowing this, it can be assumed that line managers play an important role with their management behaviour between the relation of IWB of employees and their individual job performance. De Jong and Den Hartog (2007) identified several behaviours of line managers that could stimulate the generation or application of innovative ideas/solutions by employees. By this they show that line managers can be stimulating their employees with the generation and implementation stage of IWB through their management behaviour. The question how this influences the effect between IWB and individual job performance of employees remains unclear.

Research goal and research question

The goal of this paper is to provide an answer to what extent individual job performance of employees is influenced by innovative work behaviour. After that, conclusions can be drawn with regard to the contribution of IWB in relation to individual job performance. Because the role of the line manager is important due to the 'dyadic relationship' they share with their employees, it is expected that there is an effect of line management behaviour on this relation as well. The goal of this research is to clarify the effect of IWB on individual job performance and a possible effect of management behaviour; therefore, the following research question was formulated:

To what extent does line management behaviour influence the effect of innovative work behaviour on individual job performance of employees?

This is an important topic since managers and employees are supposed to work closely together towards generating and implementing innovation and both try to improve overall organizational performance. It is important for organizations to keep their employees innovative in order to deal with the demands of the dynamic business environments (Yuan & Woodman, 2010).

Theoretical and practical relevance

This thesis will not only provide knowledge about measuring IWB in a reliable and viable way, but also providing knowledge about the effect of IWB on individual job performance. Since many of the scales to measure IWB have been conducted a long time ago, conducting a literature review and structuring the several methods and scales will gather more knowledge on how applicable these scales are in the current business environments. Especially in creating one sufficient way of measuring IWB, the contribution of this paper is of theoretical relevance. Based on this research, more conclusions can be drawn as well on how IWB is affecting individual job performance. Because IWB of employees can also be seen as behaviour to cope with job demands, such as high workload, this research will focus on clarifying performance on an individual level instead of organizational level. Next to this, this research will provide knowledge about the effect of management behaviour on the relation between IWB and individual job performance. According to the social exchange theory, managers and employees share a 'dyadic relation' which is the reason for taking management behaviour into account. Manager and employee need to work closely together towards achieving organizational goals and this research will provide theoretical knowledge on how management behaviour is influencing the effect of IWB of employees on their individual job performance.

Not only with this research provide theoretical knowledge, it will also have practical relevance since it focuses on the effect of innovative line management behaviour. When we know more about the relation between IWB and individual performance of employees, this gives more insight for managers of an organization how to supervise their employees. For example, if more IWB leads to more individual job performance of an employee, a manager could decide to focus on creating a stimulating environment for their employees in which IWB is optimized. Knowing the importance of using your resources at full capacity the understanding of IWB in this higher demanding business environments is highly recommended and therefore needs to be further researched to get a clear overview. When innovative work behaviour can be measured in a reliable way and the effect of this on individual job performance, more conclusions can be drawn on the managerial impact on IWB. By this, managers can focus on the alignment of the employee with the organizational goals to be innovative and stimulate IWB in order to improve individual job performance and thus better deal with the demanding environments.

Literature review

IWB, individual job performance and job demands:

The literature was reviewed with the goal to get a proper overview of all the concepts and find good scales that fit to this research. The aspects that play a role in this research are IWB, individual job performance (employee) and management behaviour. At first, the relation between IWB and individual job performance will be discussed. As mentioned in the introduction, most of the research on IWB focused on what is affecting this behaviour in employees. This paper will focus on how IWB is affecting individual job performance based on the theory of job demands. Regarding job demands, these can be seen as psychological stressors such as requirements of working hard and fast, heavy workload or having much work while having only little time to do this (Fox, Dwyer, & Ganster, 1993; Karasek, 1979). According to Janssen (2000) this will bring employees in an elevated state of arousal. This means that the employee will be activated to cope with these job demands by either adapting or modifying his or her work context. This adapting could involve upgrading his or her skills, and abilities in order to match the heavy job demands. It can also mean that the employee needs to adapt their workplace, which refers to modifying task objectives, working methods, job approaches, job design, allocation and coordination of tasks, interpersonal communication etc. (Janssen, 2000). Idea generation is very important in problem solving and problem solving contributes to higher individual performance of employees (Basadur, 2004). Since job demands theory suggests that employees find ways to deal with psychological stressors, it can be concluded that IWB could play an important role by dealing with job demands. For example, if an employee needs to do a certain task within a certain time frame but this task is very hard to complete within the time frame, the employee will be 'activated' to find a way to make this happen. Bruce and West (1994) and West (1989) demonstrated empirically that employees consider innovative activities as an effective way to deal with job demands such as high workload. That IWB is closely linked to problem solving behaviour is also found in different other studies. Leung, Huang, Su & Lu (2011) have found that role conflicts are also affecting IWB in employees. Role conflicts are emerging when employees have to act or handle in 2 different ways to fulfil 2 tasks and can only effectively fulfil one. In that case employees are faced with a conflict, or problem, they have to solve. When facing such a conflict, their IWB increases, so they are trying to find a creative solution for solving this problem and dealing with the conflict. The same kind of mechanism is found by Battistelli, Montani, Odoardi, Vandenberghe & Picci (2014). They have found that IWB of employees is increased when they have to deal with changing situations. So, IWB will increase because it is used as a coping mechanism to deal with the changes. Chang, Hsu, Liiou and Tsai (2013) found the same mechanism for employees

when they have to deal with a psychological contract, they deal with this by improving their IWB. Janssen (2000) also states that IWB that higher IWB can in fact contribute to dealing with job demands, thereby increasing job performance of employees. They also state that IWB functions as a coping mechanism on individual level to adapt to higher job demands of employees. To underline the importance of innovation in a company in order to improve overall performance of an organization, Rosenbusch, Brinckmann & Bausch (2011) conducted a research in order to clarify the relation between innovation and performance. Empirical evidence was found that innovation can improve performance of a company. As mentioned before, managers and employees are supposed to work closely together towards implementing innovation and both try to improve overall organizational performance. That organizations can indeed benefit from innovative work behaviour is also empirically demonstrated by Campbell, Gasser and Oswald (1996). They also found a positive link between innovation specific behaviour and organizational performance. The empirical evidence found by Rosenbusch et al. (2011) and Campbell et. Al (1996) shows the relevance of researching IWB and job performance on an individual level of employees as being an important part of this process.

In the first place, concluding from all the literature we will assume that IWB has a positive effect on individual job performance of employees. The main reason is that IWB contributes to finding innovative solutions and this could improve their problem solving skills. This could be positive for the job performance of employees. The first hypothesis of this paper will be:

H1: Employee IWB has a positive effect on individual job performance.

It is important not only research performance on organizational level but as well on individual level. Before an organization can perform at an optimal level, it needs to be clear how this performance was established. It could be that for example from hundred employees only ten are having higher levels of IWB, but the other ninety employees adapt the same methods and therefore copy successful strategies of work behaviour. It could also be that all the hundred employees are at the same level of IWB without copying each other's behaviour. It is important for managers to know how this performance is established and therefore we need to know how it relates on an individual level, not only organizational.

Management behaviour and social exchange theory:

From the literature review can also be concluded that managers can focus on training and modelling their employees to be more creative with regards to problem finding, problem solving and solution implementation (Basadur, 2004). According to the social exchange theory, employees will return their effort and dedication based on the social norm of reciprocity (Blau,

1964). This is also underlined by Cropanza and Mitchell (2005) who state that if employers 'take care of employees', this will have beneficial consequences. They explain it as advantageous and fair transactions between strong relationships, and these relationships will lead to effective work behaviour and positive employee attitudes. Next to this, Settoon et al. (1996) state that social exchange can also lead to that employees will become and feel obliged to perform in ways beyond what is required according to their contract. They also state there is much variance between employees on how they engage in activities that extend beyond their contract based on research done on leader-member exchange. That the social exchange theory is very important to clarify the relation and influence of a manager is underlined by Janssen (2000). He states that employees are willing to reciprocate with innovative behaviour as a result from being fairly rewarded. From these studies can be conclude that management behaviour could have an impact on the relation between IWB and individual job performance of an employee. Because creative idea generation is important for IWB of employees, one can conclude also that managers can be very important in fostering the right environment for development of this. Alagaraja (2013) also state that the managerial paradigm in an organization is of high value because HR policies, practices and systems are designed to enhance individual and also organizational performance. Therefore, the managers and their management behaviour can be seen as an important part of the development of IWB in employees. For this reason, a moderating effect of management behaviour on the relation between IWB and job performance of employees will be tested. The hypothesis is as follows:

H2: High innovation supportive management behaviour positively moderates the relation between employee IWB and individual Job performance.

De Jong and den Hartog (2007) identified several innovative management behaviours in order to support an innovative work environment, therefore increasing IWB in employees. They identified thirteen different types of management behaviour that are supportive for innovative work behaviour of employees. Figure 2 shows all the different management behaviours identified by De Jong and den Hartogh (2007). According to them, line managers can support their employees on 2 different important aspects, idea generation and application behaviour of their employees. The second hypothesis deals with the innovation supportive management behaviour. The higher managers score on this behaviour, the more supportive their leadership behaviour is with regard to innovative work behaviour of their employees.

Figure 1 shows a model which sums up all hypothesis.

Method and structure of the master thesis

Research design

This research has a quantitative research approach towards answering the research question. There was multisource data collected from a case study containing employees as well as managers of a Dutch company. Before data could be acquired, an extensive literature research has been conducted in order to determine which items to use to measure IWB, performance and management behaviour. Because a lot of existing scales were used to measure IWB in the past, the goal of this was to make an overview of what has been researched and how reliable these scales are. Next to this, this research focuses on the influence of management behaviour so it was important to find scales that could be conducted on a managerial level as well as employee level. After the scales have been chosen, a questionnaire has been conducted for employees as well as their managers in order to gather quantitative data (see appendix C for the full questionnaire).

Research group selection:

For this research the service industry has been targeted in order to measure the effect of leadership on employee performance as well as innovativeness in employees. Schuler and Jackson (1987) mention that strategy of a company is not only important for developing products but also for offering services. The service industry is also operating in a rapidly changing business environment and this leads to a higher demand of innovative behaviors of employees in order to stay competitive and succeed in these dynamic business environments (Ramamoorthy et al. 2005; Kanter, 1983; West & Farr, 1989). So, the service industry is relying on a particular level of innovativeness and as mentioned before innovative work behavior (IWB) of employees contributes to successfully operating in dynamic business environments (Kanter, 1983). Because of the importance of innovativeness in employees, the service industry fits perfectly with this research and for this reason it is the selected research group.

Sample:

The case study contained a sample from the service industrial population, consisting of employees and managers from a company called "In Person". Their head office is located in Enschede, the Netherlands. In Person is an employment agency and has 38 locations throughout the Netherlands, as well as one in Poland and one in Slovakia. Their vision is that people are the center of an organization and the combination of people and organization is the foundation for success. The sample that is used consists of 134 employees and 18 managers. The managers are

managing a team of coaches; these coaches are guiding people to acquire a job. Not only is the company an employment agency, it also has a hospitality and detachment department. Because the sample company is offering different kind of services and works with employees supported by different managers, this sample represents the selection group well. It is a Dutch company, so the sample doesn't represent possible cultural differences and is only applicable for other Dutch companies that offer different kind of services and in an innovative culture.

Respondent pool:

This research focused on two groups, managers and employees. The sample consisted of 18 managers and 134 employees. Some of the participated managers and employees did not complete the questionnaire and therefore couldn't be used in this research or there will be bias. The response rate of those who fully completed the questionnaire was 16 out of 18 (89%) managers and 83 out of 134 (62%). The average age of the respondents was 32,5 (SD=8,1) years for the employees and 36,6 (SD=6.3) for the managers. From the employees, 31% was male and 69% was female. From the managers, was 53% male and 47% female. Education levels were also interesting for the general results. 46% of the employees was MBO or lower educated, 49% HBO and only 5% followed a WO education. Only 6% of the managers was MBO or lower educated, 71% was HBO educated and 23% followed a WO education.

Data collection

The data is multisource because the respondent pool consisted of both employees as well as managers. In appendix B is a full overview of the measures based on the questionnaire. In this research the unit of analysis are the employees of in person. The management data was used as a control variable as well as another source to measure management behaviour. The employees will answer questions measuring IWB, individual job performance and innovation supportive management behaviour of their managers. Next to this they will also answer questions about their age, sex, tenure, education level, LMX and innovative climate in order to use these variables as control variables. The managers will answer questions regarding their management behaviour. Next to this the managers also answer control questions about their age, sex, tenure, education level, and innovative climate.

Measurement

Employee IWB:

In this research the level of IWB of employees is measured, meaning the three stages of IWB as defined by Kanter (1988); idea generation, idea promotion, and idea realization. These stages combined will define how innovative an employees work behaviour is. In most of the studies IWB is also measured by different scales so for this research it was important to get a good overview and understanding of the scales that are being used for these studies and which one would fit properly to this research (see Appendix A). Scales on IWB vary on the amount of items, number of dimensions, Cronbach's Alpha's and also the level on which IWB is measured; employee or managerial level. To measure IWB in a reliable and valid way the literature was reviewed on different levels (manager and employee), as well as the CA's of the scales developed. Another aspect was the amount of dimensions used and found by the several authors. From all the scales being available the scale of Janssen (2000) was the most proper scale for this research. Krause (2004), Dorenbosch, VanEngen & Verhagen (2005), & Messman & Mulder (2014) found multiple dimensions of IWB. These questionnaires measured several dimensions of IWB but all the authors state that further research is needed to actually proof these dimensions are really part of the IWB construct. For this reason, the questionnaire used in this paper to measure IWB was one-dimensional because it has also the highest CA of all questionnaires. It was also important on what level the questionnaire was used for, manager, employee or both. For this paper a questionnaire measuring IWB on an employee level was preferred so the questions did not have to be reformulated from manager to employee level. Originally the scale of Janssen (2000) was also chosen because it measured also IWB of employees for managers. The intention was to check any self-report bias of IWB of employees by asking the managers the same questions about their employees but In Person preferred to rely only on self-report scales for employees to keep the research anonymous. For this reason, they refused to ask managers about their employees IWB. The only two one-dimensional scales measuring IWB on an employee level were those of Janssen (2000) & De Jong & Den Hartog (2010). The scales of Kleysen & Street (2001) Messman & Mulder (2012) also measured on an employee level but in these scales there are several dimensions measured of which only one was found. The scale of Janssen (2000) was used to measure IWB for this research because it has a perfect CA score (.96), did not need to be rewrite because it was for the employees and in Dutch already, and it was one-dimensional. Summed up, the four reasons for using the scale of Janssen (2000) were; high reliability (CA=.96), one-dimensional, Dutch scale and originally two-level measurement (employee and manager). The scale consisted of nine items. Drawing on Kanter's (1988) work on the stages of innovation, three items refer to idea generation, three items to idea

promotion, and three items to idea realization. Examples of items are "How often do you generate original solutions to problems?" (idea generation), "How often do you mobilize support for innovative ideas?" (idea promotion) and "How often do you systematically introduce innovative ideas into work practices?" (idea realization). All questions will be rated on 5 point Likert scales ranging from: 1=totally disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=totally agree. Because the scale measured three different stages of innovative work behavior, a test was done in order to measure if it had different factors. The factor analysis is shown in appendix G. There was only one factor found, which is in line with the findings of Janssen (2000). The Cronbach's alpha of the questionnaire tested in this research was high and therefore we can conclude that the questionnaire was reliable ($\alpha = 0.92$).

Employee individual job performance:

In this research individual job performance was measured by measuring task performance. Bos-Nehles and Meijerink (2014) state that employee performance can be formulated as multidimensional and therefore only the 'in-role' dimension was chosen to be measured in this research. The reason for this is that focus in this research is on how the employee him or herself is performing, apart from their 'extra-role' performance. To measure task performance, the scale of Kluemper et al. (2013) was used. Bos-Nehles and Meijerink (2014) also used this scale and translated it into a Dutch scale with a good reliability ($\alpha = .84$). This makes it acceptable to use and because it is already formulated in Dutch, this makes the chance on bias less likely because the scales don't have to be translated. The task performance scale consisted of five items, an example of one of the items is "Adequately complete assigned duties assigned". All questions will be rated on five point Likert scales ranging from: 1=totally disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=totally agree. In this research the Cronbach's alpha of the scale was high ($\alpha = 0.92$).

Innovation supportive management behaviour:

Innovation supportive management behaviour is the behaviour of a manager towards supporting innovative work behaviour of employees in an organization. The higher a manager scores on this scale, the more supportive his or her behaviour is with regard to IWB. Innovation supportive manager behaviour was measured on two levels, the employee as well as the manager were asked about the management behaviours. In order to measure the effect of different types of management behaviours the scales developed by de Jong (2007) were used in order to form a scale to measure different type of styles. According to de Jong and den Hartog (2007) there are thirteen different management behaviours to support innovative work behaviour within an organization. Because the management behaviours have four to five

questions per behaviour, it was not possible to measure every type of possible behaviour within the company. From all thirteen behaviours, seven behaviours do meet the requirements of supporting the 'idea generation' stage as well as the 'application' stage. In order to measure the different behaviours; providing vision, delegating, monitoring, role modelling, consulting, support for innovation and recognition, the Dutch questionnaire developed by de Jong (2007) was used.

The line managers' behaviours were measured by using self-report scales to which extent they feel they are fostering innovativeness for their employees, based on the findings of De Jong and Den Hartog (2007). The employees filled in the same questions based on the Dutch scale developed by de Jong (2007). The questionnaire consisted of 27 items and an example of an item is "My leader reacts enthusiastically to my creative thoughts.". All questions will be rated on five point Likert scales ranging from: 1=totally disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=totally agree. Because the scale consisted of seven different behaviours, a factor analysis was done in order to measure how many factors this questionnaire has. An oblique rotation method was used because it can be assumed that the seven behaviours are correlated. The method that has been used was the oblimin rotation. The factor analysis is shown in appendix G. The Cronbach's alphas were high for the manager scale ($\alpha = 0.74$) as well as the employee scale ($\alpha = 0.97$). In this

Control variables

Because it was important for in person to keep this research anonymous, there have been some extra variables added to at least make some correlational analysis in order to estimate to some extend how valid the questionnaire is. The control variables were age, sex, tenure, education, province and LMX. To provide extra data in order to estimate the correlation between manager and employee answers, innovative climate was also included in both the questionnaires of the employees as well as the managers. LMX was measured by the LMX-7 scale developed by Graen and Uhl-Bien (1995). One item example is "Do you know where you stand with your leader and do you usually know how satisfied your leader is with what you do?". The Cronbach's alpha for this scale was high ($\alpha = 0.91$). To provide extra correlational data, innovative climate will also be measured. This will be done by the 11 item scale as used by De Jong (2007), based on the development of West's (1990) innovative climate scale. An example of an item is "People in my company feel at ease with each other". Cronbach's alpha for the manager scale ($\alpha = 0.67$) as well as the employee scale ($\alpha = 0.93$) were high. All questions from LMX and innovation climate will be rated on five point Likert scales ranging from: 1=totally disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=totally agree.

Data Analysis

After these questionnaires have been completed the results of the innovation supportive management behaviour and innovative climate scales of the employee and manager will be compared in order to estimate the bias of the scales. This will be done with an independent sample T-test of both scales. When this has been done the results will be analyzed with regard to moderating effects of management behaviour on employee job performance. Based on the IWB score of employees the effect on employee job performance will be measured. If there is an effect, there will be analyzed if management behaviour is positively related to this effect. If management behaviour functions as a moderator between IWB and employee performance will be researched. The data analysis will be done in SPSS with a multivariate multiple linear regression analysis because there are two independent variables.

Results

Correlation analysis

Before the hypothesis will be tested, a correlation analysis has been done. The results of this correlation analysis are shown in the table below. Task performance and Innovative work behaviour of employees is positively correlated, r = 0,559. Innovative climate is positively correlated with innovation supportive management behaviour, r = 0,552. Leader-Member exchange is correlated with both innovation supportive management behaviour (r = 0,712) as well as innovative climate (r = 0,640).

Table 1
Correlation analysis between employee variables

Variable	1	2	3	4	5	6	7	8	9	SD	Mean
1 IWB	-									,57	3,74
2 Taskperf.	,559**	-								,79	3,96
3 LSS	,014	,175	-							,62	3,67
4 IC	,066	,070	,552**	-						,58	3,70
5 LMX	-.164	-,006	,712**	,640**	-					,80	3,55
6 Tenure	,107	,176	,145	,178	,117	-				4,73	5,86
7 Age	,159	,055	-,077	-,093	,047	,608**	-			8,18	32,53

8 EduLvl.	-,121	,009	-,013	-,057	,045	,104	-,173	-		,61	2,58
9 Sex	,091	,183	-,021	,107	,045	,179	,025	,179	-	,46	1,69

** p < .01

Although there was no data from the line managers to compare with the employee self-report IWB and task performance scales, there were two scales filled in by both employees as well as line managers. Innovative climate and innovation supportive management behaviour were filled in by both employees and managers, therefore the results were analysed with an independent samples T-test of both. The results are shown below in table 2 and table 3. See Appendix F for both SPSS outputs of the T-tests.

Table 2
Results of t-test and descriptive statistics for innovation supportive management behaviour (ISMB) sorted by level

	Level						95% CI for Mean Difference		
	Employee			Manager					
	M	SD	n	M	SD	n		t	df
ISMB	3.59	0.64	75	4.05	0.22	16	-0.79, -0.14	-2.85*	89

* p < .05.

Table 3
Results of t-test and descriptive statistics for innovative climate (IC) sorted by level

	Level						95% CI for Mean Difference		
	Employee			Manager					
	M	SD	n	M	SD	n		t	df
IC	3.70	0.63	70	3.70	0.30	16	-0.32, -0.33	0.023*	84

* p < .05.

The first independent sample T-test showed that the samples were significantly different (t = -2.85). This showed that the score of the employees on their managers' innovation supportive behaviour was significantly lower than the self-report score of the managers. This means that the managers have scored themselves higher than their employees did and probably are biased. The second sample T-test showed that the scores on the innovative climate score were significant similar (t = 0.023).

Hypothesis testing:

The **H1** hypothesis was that IWB has a positive effect on individual job performance of employees. To analyse this, a linear regression analysis was done (See appendix D). The results were significant (b = .465, t (40) = 3.433, p < .001, R^2 = .495, F (7, 40) = 4,628, p < .001). Age was used as a control variable. The results of can also be found in table 4.

Table 4
Linear regression analysis of innovative work behaviour (IWB) on individual job performance.

Variable	Individual Job Performance
Innovative work behaviour	0.465**
Age	-0.275
Education level	0.035
Tenure	0.238
Province	0.248
Innovative Climate	0.090
Sex	0.308
R^2	*0.704*
F(7,40)	*4.628*

*** p < .01*

The **H2** hypothesis stated that the relation between IWB and task performance would be positively moderated by innovation supportive management behaviour. Before the moderating effect is being analysed, all the coefficients were centred in order to remove as much bias as possible. After that a linear regression was done with individual job performance as a dependant variable (see appendix E). The results showed a significant negative moderating effect (p = .017, b = -.277) of innovation supportive management behaviour on the relation between IWB and task performance (see table 5).

Table 5

Linear regression analysis of innovative work behaviour (IWB) on individual job performance with innovation supportive management behaviour (ISMB) as moderator.

Variable	B	95% BI (β)
IWB	0.349**	[0.177, 0.828]
ISMB	0.177	[-0.020, 0.453]
IWB*ISMB	-0.277*	[-0.745, -0.075]

** p < .05, ** p < .01*

$F(3,74) = 11.521$, $R^2=0.327$

Extra analysis:

Based on the results of the interaction effect, there was done another analysis because it was a surprising result. The moderating effect that was found was with all seven management behaviours. Two of the seven management behaviours were specifically oriented towards innovative work behaviour (innovative role modelling & support for innovation) and therefore two extra interaction effects were tested but without significant effects. One with only these two behaviours and one interaction analysis with the other five (providing vision, delegating, monitoring, consulting and recognition). The goal of this extra analysis was to estimate if the effect would be different with or without the IWB oriented management behaviours. There were no significant results found (see appendix H).

Discussion

From the results we can conclude that employees indeed perform better when they show a higher level of IWB. As shown in the literature, many authors suggest that IWB works as a coping mechanism in order to deal with higher job demands. In this case it seems as if the same effect is applied on employees. This has important theoretical implications, since it shows that IWB can make employees perform better and therefore is important to improve overall organizational performance. This research is an important piece of knowledge about an important outcome of innovative work behaviour; individual job performance. From this research cannot be concluded in which way IWB contributes to performance but it is important to conclude it is contributing to individual job performance of employees. This also has important practical implications since management of companies are usually interested in how to improve overall performance of their companies. According to Ramamoorthy et al. (2005), Kanter (1983) and West & Farr (1989) the rapidly changing business environments leads to a

higher demand and engagement in innovative behaviours of employees in order to stay competitive and therefore we can confirm that innovative work behaviour of employees is indeed contributing to their individual job performance. It has been found that the employee individual performance increases when their IWB is increased as well, one of the reasons could be that this IWB functions as an important factor in problem solving behaviour of employees as described by Basadur (2004). When this is the case, managers and organizations should be aware of the fact that stimulating IWB of employees can improve the individual job performance of their employees as well.

The second hypothesis deals with how line management behaviour has an effect on the relation between IWB and individual job performance. This relation was also important to test in order to get a good understanding of the concept as well as an answer to the research question. There is a negative moderation effect found in the results of management behaviour on the relation between IWB and individual job performance. This means that the higher the innovative management behaviour experienced by an employee, the lower the correlation between his/her IWB and task performance. Meaning, the higher the experienced innovative management behaviour, the less important it is how high his/her IWB is in order to score higher at task performance. At first this would seem a little strange but it has probably to do with a certain 'level' of innovativeness for an employee in order to do his job properly. It seems that job performance is being enhanced by at least the level of IWB from this employee but once he is supported and stimulated he/she doesn't need high levels of IWB anymore in order to perform properly. This implies important theoretical evidence that innovativeness is indeed very important for employees in order to perform better. Whether or not this is their own behaviour or the stimulation from their managers, this does not seem to matter according to the results of this research. Based on this, we can also conclude that managers have to be aware of their employees' innovative work behaviour. When the employee already has a high IWB, a manager should not focus on stimulating him/her, whereas an employee who is lacking innovative work behaviour could use it to be stimulated in order to perform better. As mentioned by Basadur (2004), managers can help to provide the right environment for employees in order to be as innovative as possible. It seems to all come down to that 'problem solving' behaviour as mentioned by Basadur (2004). From this research it can be concluded that it does not matter if this innovativeness comes from the employee or the manager, as long as it is present it will improve individual job performance of employees.

This research also has a couple of limitations and suggestions for further research. The first limitation of this research is that this research only focuses on the service sector and therefore is less generalizable. It is advisable to conduct research in multiple different sectors in order to say

something about how IWB relates in other sectors. Another shortcoming is that the results could be biased because of self-report scales. When employees have to report their own individual job performance, a self-report bias could occur (Donaldson & Grant-Vallone, 2002). The difference in scores between managers and employees on the managerial behaviour score also indicates that this self-report bias is definitely the case. Therefore, we must be cautious on drawing conclusions of the self-report scales from IWB. In this case the company didn't allow to conduct employee specific scales filled in by their managers so it is a weak point of this research. For further research it is advisable to ask managers to fill in performance scales of their employees in order to avoid as much bias as possible.

Conclusion

Before discussing the hypothesis, it is important to get back to the research question which was:

To what extent does line management behaviour influence the effect of innovative work behaviour on individual job performance of employees?

The main goal of this research was to provide insights in the effect of IWB on individual job performance and relate management behaviour to this relation as well. From the results we can conclude that in fact there is a positive effect of IWB on individual job performance, which underlines the importance of IWB in employees. This means that the first hypothesis was adopted. The second hypothesis stated that the relation between IWB and individual job performance will be enhanced when managers show high innovation supportive behaviours. In fact, it was a negative moderating effect on employee performance, so the second hypothesis can be rejected. The most important conclusion drawn from this research is that IWB in employees benefits their performance. When a manager can improve the IWB of his employees he can make them perform better. When coming back to the research question, we can conclude that line management behaviour can have an influence on the employees that do not show high innovative work behaviour yet. This can improve their performance and therefore it should be a priority for managers to estimate the level of innovative work behaviour of their employees. High levels of innovation supportive behaviour will have a negative effect on employees showing a high level IWB. Providing and fostering the right environment for employees with low innovative work behaviour seems to be compensating for the effect on individual job performance in comparison to the employees that do have a high innovative work behaviour already.

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Appendix A: IWB questionnaires

Author	Cronbachs Alpha	Level	Number of items	Dimension
Scott & Bruce (1994)	CA .89	Manager	6	1
Scott & Bruce (1998)	CA .84	Manager	4	1
Janssen (2000)	CA .95 & CA.96	Manager + Employee	9 (threestages)	1
Krause(2004)	CA .78 &CA.81	Manager	5 (.78,Generation+testing) + 3 (.81,Implementation)	2
Basu& Green (1997)	CA .93	Manager	4	1
Zhou& George (2001)	CA.96	Manager	3 (S&B,1994) + 10 (creativity)	1
De Jong & Den Hartog (2010)	CA 0.70	Manager + Employee	10	1
Kleysen& Street (2001)	CA .95	Employee	14	1(2)
Messman& Mulder (2012)	CA .76- CA .86	Employee	24	1(5)
Dorenbosch, VanEngen& Verhagen (2005)	CA .90 & CA .88	Employee	10 (.90Creativity) + 6 (.88Implementation)	2
Messman& Mulder (2014)	CA .72 + CA .82 CA .88 + CA .75	Employee	4 (.72oppertunityexploration)+ 6 (.82 Ideageneration) + 7 (.88 Idea promotion) + 3 (.75reflection)	4

Appendix B: Measures

Employees:

	Number of items	Source	Cronbach's Alpha
IWB	9	Janssen (2000)	$\alpha = 0.92$
ISMB	27	de Jong (2007)	$\alpha = 0.97$
TP	5	Kluemper et al. (2013)	$\alpha = 0.92$
LMX	7	Graen and Uhl-Bien (1995)	$\alpha = 0.91$
IC	11	West (1990)	$\alpha = 0.93$

Managers:

	Number of items	Source	Cronbach's Alpha
ISMB	27	de Jong (2007)	$\alpha = 0.74$
IC	11	West (1990)	$\alpha = 0.67$

Appendix C: Questionnaires

Questionnaire employees:

Innovative work behaviour:

Geef aan in hoeverre jij..	Zeer mee oneens	Mee oneens	Neutraal	Mee eens	Zeer mee eens
… nieuwe werkwijzen, technieken of instrumenten voorstelt.	☐	☐	☐	☐	☐
... originele oplossingen bedenkt.	☐	☐	☐	☐	☐
... met ideeën komt?	☐	☐	☐	☐	☐
... steun mobiliseert voor vernieuwingen?	☐	☐	☐	☐	☐
... bijval oogst voor vernieuwende ideeën?	☐	☐	☐	☐	☐
... sleutelfiguren enthousiast maakt voor vernieuwingen?	☐	☐	☐	☐	☐
... ideeën uitwerkt tot concrete resultaten?	☐	☐	☐	☐	☐
... vernieuwingen planmatig invoert?	☐	☐	☐	☐	☐
... een bijdrage levert aan de invoering van vernieuwingen?	☐	☐	☐	☐	☐

Innovation supportive management behaviour:

Mijn leidinggevende..	Zeer mee oneens	Mee oneens	Neutraal	Mee eens	Zeer mee eens
... vraagt zich openlijk af hoe dingen beter zouden kunnen.	☐	☐	☐	☐	☐
... experimenteert met nieuwe manieren om dingen te doen.	☐	☐	☐	☐	☐
... stelt nieuwe werkwijzen, technieken of instrumenten voor	☐	☐	☐	☐	☐
... overtuigt anderen van de toegevoegde waarde van een vernieuwend idee.	☐	☐	☐	☐	☐
... vraagt naar mijn mening.	☐	☐	☐	☐	☐
... raadpleegt mij bij belangrijke veranderingen.	☐	☐	☐	☐	☐
... laat mij meepraten over langetermijnplannen.	☐	☐	☐	☐	☐
... houdt rekening met mijn suggesties.	☐	☐	☐	☐	☐
... toont interesse als ik met een idee kom.	☐	☐	☐	☐	☐
... vindt het leuk als ik vernieuwende ideeën heb.	☐	☐	☐	☐	☐
... geeft mij de steun die nodig is om zaken te kunnen verbeteren.	☐	☐	☐	☐	☐
... is iemand waar je op kunt rekenen, ook als je iets onderneemt dat minder succesvol is.	☐	☐	☐	☐	☐
... waardeert het openlijk als ik bijdraag aan innovatie.	☐	☐	☐	☐	☐
... prijst mij voor vernieuwende inspanningen.	☐	☐	☐	☐	☐
... herkent mijn bijdrage aan innovatie in het bedrijf.	☐	☐	☐	☐	☐
... geeft medewerkers de credits voor vernieuwende ideeën.	☐	☐	☐	☐	☐
... draagt een visie uit over de waarde van innovatie in mijn bedrijf.	☐	☐	☐	☐	☐
... schetst een opwindend beeld van wat vernieuwing ons kan brengen.	☐	☐	☐	☐	☐
... maakt duidelijk waar wij als bedrijf naartoe zouden moeten.	☐	☐	☐	☐	☐

... schenkt expliciete aandacht aan innovatie en de rol daarvan voor de toekomst.	☐	☐	☐	☐	☐
... zorgt dat verschillende mensen kunnen meepraten over een vernieuwend idee.	☐	☐	☐	☐	☐
... laat medewerkers discussiëren over vernieuwende ideeën.	☐	☐	☐	☐	☐
... vergroot het draagvlak voor vernieuwingen door mensen te laten meebeslissen.	☐	☐	☐	☐	☐
... controleert regelmatig de voortgang en de kwaliteit van mijn werk.	☐	☐	☐	☐	☐
... let goed op of mijn doelstellingen wel gehaald worden.	☐	☐	☐	☐	☐
... let op of mijn prestaties goed genoeg zijn.	☐	☐	☐	☐	☐

Task performance:

	Zeer mee oneens	Mee oneens	Neutraal	Mee eens	Zeer mee eens
Alle aan mij toegewezen taken voer ik adequaat uit.	☐	☐	☐	☐	☐
Ik voldoe aan alle verantwoordelijkheden die in mijn taakomschrijving staan.	☐	☐	☐	☐	☐
Ik voer alle taken uit die van mij verwacht worden.	☐	☐	☐	☐	☐
Ik voldoe aan alle prestatie-eisen die bij mijn werk horen.	☐	☐	☐	☐	☐
Ik voer activiteiten uit die mijn prestatiebeoordeling direct beïnvloeden.	☐	☐	☐	☐	☐

Innovative climate:

	Zeer mee oneens	Mee oneens	Neutraal	Mee eens	Zeer mee eens
Mijn collega's voelen zich door elkaar begrepen en geaccepteerd.	☐	☐	☐	☐	☐
Mijn collega’s voelen zich bij elkaar op hun gemak.	☐	☐	☐	☐	☐
Iedere collega kan zijn mening kwijt, zelfs als hij/zij een minderheidsstandpunt heeft.	☐	☐	☐	☐	☐
Een afwijkende mening wordt door mijn collega’s geaccepteerd.	☐	☐	☐	☐	☐
Wij doen elkaar suggesties om beter te presteren.	☐	☐	☐	☐	☐
Wij kijken naar elkaars werk om verbeterpunten te vinden.	☐	☐	☐	☐	☐
Wij pikken elkaars ideeën op om betere uitkomsten te behalen.	☐	☐	☐	☐	☐
Mijn collega's zoeken naar nieuwe methoden en inzichten.	☐	☐	☐	☐	☐
Mijn collega's werken samen om nieuwe ideeën te ontwikkelen.	☐	☐	☐	☐	☐
Mijn collega's zorgen voor middelen om ideeën te kunnen uitvoeren.	☐	☐	☐	☐	☐
Mijn collega's geven elkaar praktische steun voor nieuwe ideeën en de uitvoering daarvan.	☐	☐	☐	☐	☐

Leader member-exchange:

	Totaal niet	Een beetje	Redelijk	Behoorlijk	Totaal wel
Weet u hoe tevreden uw leidinggevende is met wat u doet?	☐	☐	☐	☐	☐
Hoe goed begrijpt uw leidinggevende uw problemen en behoeftes?	☐	☐	☐	☐	☐
Hoe goed herkent uw leidinggevende uw capaciteiten?	☐	☐	☐	☐	☐
Ongeacht hoeveel formele autoriteit hij/zij heeft opgebouwd in zijn/haar positie, wat zijn de kansen dat uw leidinggevende zijn/haar macht zal gebruiken met het oplossen van uw problemen op het werk?	☐	☐	☐	☐	☐
Wederom, ongeacht hoeveel formele autoriteit uw leidinggevende heeft, wat zijn de kansen dat hij/zij u zou helpen *ten koste van zichzelf?*	☐	☐	☐	☐	☐
Ik heb genoeg vertrouwen in mijn leidinggevende dat ik zijn/haar beslissingen zou verdedigen en rechtvaardigen als hij/zij niet aanwezig zou zijn.	☐	☐	☐	☐	☐
Hoe zou u uw werkrelatie met uw leidinggevende beschrijven? (1 = zeer ineffectief, 5 = zeer effectief)	☐	☐	☐	☐	☐
Mijn collega's zoeken naar nieuwe methoden en inzichten.	☐	☐	☐	☐	☐

Questionnaire managers:

Innovation supportive management behaviour:

Ik...	Zeer mee oneens	Mee oneens	Neutraal	Mee eens	Zeer mee eens
... vraag me openlijk af hoe dingen beter zouden kunnen.	☐	☐	☐	☐	☐
... experimenteer met nieuwe manieren om dingen te doen.	☐	☐	☐	☐	☐
... stel nieuwe werkwijzen, technieken of instrumenten voor	☐	☐	☐	☐	☐
... overtuig anderen van de toegevoegde waarde van een vernieuwend idee.	☐	☐	☐	☐	☐
... vraag naar de mening van mijn werknemers.	☐	☐	☐	☐	☐
... raadpleeg mijn werknemers bij belangrijke veranderingen.	☐	☐	☐	☐	☐
... laat werknemers meepraten over langetermijnplannen.	☐	☐	☐	☐	☐
... houdt rekening met suggesties van mijn werknemers.	☐	☐	☐	☐	☐
... toont interesse als een werknemers met een idee komt.	☐	☐	☐	☐	☐
... vindt het leuk als een werknemer een vernieuwend idee heeft.	☐	☐	☐	☐	☐
... geef de werknemers de steun die nodig is om zaken te kunnen verbeteren.	☐	☐	☐	☐	☐
... ben iemand waar je op kunt rekenen, ook als een werknemer iets onderneemt dat minder succesvol is.	☐	☐	☐	☐	☐
... waardeer het openlijk als een werknemer bijdraagt aan innovatie.	☐	☐	☐	☐	☐
... prijs de werknemers voor vernieuwende inspanningen.	☐	☐	☐	☐	☐
... herken de bijdrage van de werknemers aan innovatie in het bedrijf.	☐	☐	☐	☐	☐
... geef werknemers de credits voor vernieuwende ideeën.	☐	☐	☐	☐	☐
... draag een visie uit over de waarde van innovatie in mijn bedrijf.	☐	☐	☐	☐	☐
... maak duidelijk waar wij als bedrijf naartoe zouden moeten.	☐	☐	☐	☐	☐

... schenk expliciete aandacht aan innovatie en de rol daarvan voor de toekomst.	☐	☐	☐	☐	☐
... zorg dat verschillende mensen kunnen meepraten over een vernieuwend idee.	☐	☐	☐	☐	☐
... laat medewerkers discussiëren over vernieuwende ideeën.	☐	☐	☐	☐	☐
... vergroot het draagvlak voor vernieuwingen door mensen te laten meebeslissen.	☐	☐	☐	☐	☐
... controleer regelmatig de voortgang en de kwaliteit van mijn werknemers.	☐	☐	☐	☐	☐
... let goed op of de doelstellingen van mijn werknemers wel gehaald worden.	☐	☐	☐	☐	☐
... vestig de aandacht op fouten die mijn werknemers maken.	☐	☐	☐	☐	☐
... let op of de prestaties van mijn werknemers goed genoeg zijn.	☐	☐	☐	☐	☐

Innovative climate:

	Zeer mee oneens	Mee oneens	Neutraal	Mee eens	Zeer mee eens
Mijn collega's voelen zich door elkaar begrepen en geaccepteerd.	☐	☐	☐	☐	☐
Mijn collega's voelen zich bij elkaar op hun gemak.	☐	☐	☐	☐	☐
Iedere collega kan zijn mening kwijt, zelfs als hij/zij een minderheidsstandpunt heeft.	☐	☐	☐	☐	☐
Een afwijkende mening wordt door mijn collega's geaccepteerd.	☐	☐	☐	☐	☐
Wij doen elkaar suggesties om beter te presteren.	☐	☐	☐	☐	☐
Wij kijken naar elkaars werk om verbeterpunten te vinden.	☐	☐	☐	☐	☐
Wij pikken elkaars ideeën op om betere uitkomsten te behalen.	☐	☐	☐	☐	☐
Mijn collega's zoeken naar nieuwe methoden en inzichten.	☐	☐	☐	☐	☐
Mijn collega's werken samen om nieuwe ideeën te ontwikkelen.	☐	☐	☐	☐	☐
Mijn collega's zorgen voor middelen om ideeën te kunnen uitvoeren.	☐	☐	☐	☐	☐
Mijn collega's geven elkaar praktische steun voor nieuwe ideeën en de uitvoering daarvan.	☐	☐	☐	☐	☐

Appendix D: SPSS output
Linear regression analysis: innovative work behaviour on individual job performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,704[a]	,495	,388	,74213

a. Predictors: (Constant), IWBtotgem, Opleidingsniveau, Geslacht, ICtotgem, jarenwerkzaam, provincie, Leeftijd

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17,843	7	2,549	4,628	,001[b]
	Residual	18,175	33	,551		
	Total	36,018	40			

a. Dependent Variable: TaskPerfgem

b. Predictors: (Constant), IWBtotgem, Opleidingsniveau, Geslacht, ICtotgem, jarenwerkzaam, provincie, Leeftijd

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,979	1,278		-,766	,449
	Leeftijd	-,037	,022	-,275	-1,666	,105
	Geslacht	,441	,267	,208	1,653	,108
	Opleidingsniveau	,047	,178	,035	,264	,793
	jarenwerkzaam	,054	,031	,283	1,722	,094
	provincie	,131	,074	,248	1,770	,086
	ICtotgem	,148	,212	,090	,696	,491
	IWBtotgem	,755	,220	,465	3,433	,002

a. Dependent Variable: TaskPerfgem

Appendix E: SPSS output
Interaction linear regression: Innovative work behaviour, innovation supportive management behaviour and individual job performance.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,572[a]	,327	,299	,65519

a. Predictors: (Constant), IWBISMB, ISMBtotalCENTR, IWBtotCENTR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14,837	3	4,946	11,521	,000[b]
	Residual	30,478	71	,429		
	Total	45,315	74			

a. Dependent Variable: TaskPerfgem

b. Predictors: (Constant), IWBISMB, ISMBtotalCENTR, IWBtotCENTR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,003	,077		52,199	,000
	IWBtotCENTR	,502	,163	,349	3,079	,003
	ISMBtotalCENTR	,216	,119	,177	1,822	,073
	IWBISMB	-,410	,168	-,277	-2,442	,017

a. Dependent Variable: TaskPerfgem

Appendix F:
T-tests:

Innovative Climate:

Group Statistics

	Respondent	N	Mean	Std. Deviation	Std. Error Mean
ICtotgem	Employee	70	3,7026	,63437	,07582
	Manager	16	3,6989	,29639	,07410

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
ICtotgem	Equal variances assumed	6,914	,010	,023	84	,982	,00373	,16306	-,32052	,32799
	Equal variances not assumed			,035	50,761	,972	,00373	,10602	-,20912	,21659

IS Management Behaviour:

Group Statistics

	Respondent	N	Mean	Std. Deviation	Std. Error Mean
ISMBtotalgem	Employee	75	3,5873	,64249	,07419
	Manager	16	4,0521	,22020	,05505

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
ISMBtotalgem	Equal variances assumed	8,869	,004	-2,847	89	,005	-,46478	,16324	-,78914	-,1404
	Equal variances not assumed			-5,031	71,296	,000	-,46478	,09238	-,64897	-,2805

Appendix G:
Factor analysis Innovative work behaviour:

Component Matrix[a]

	Component
	1
IWBgen1	,754
IWBgen2	,809
IWBgen3	,791
IWBprom1	,841
IWBprom2	,876
IWBprom3	,811
IWBreal1	,648
IWBreal2	,810
IWBreal3	,723

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,577	61,971	61,971	5,577	61,971	61,971
2	,928	10,312	72,284			
3	,610	6,780	79,064			
4	,511	5,677	84,741			
5	,379	4,212	88,952			
6	,336	3,735	92,688			
7	,287	3,185	95,872			
8	,196	2,173	98,045			
9	,176	1,955	100,000			

Extraction Method: Principal Component Analysis.

Appendix H:
Factor analysis innovation supportive management behaviour:

Component Matrix[a]

	Component			
	1	2	3	4
ISMBrolemodel1	,819	,040	-,299	-,051
ISMBrolemodel2	,715	-,252	-,119	-,300
ISMBrolemodel3	,785	-,261	-,138	-,306
ISMBrolemodel4	,874	-,228	-,072	,011
ISMBconsult1	,659	,486	,331	-,136
ISMBconsult2	,603	,480	,345	,021
ISMBconsult3	,646	,357	,396	-,079
ISMBconsult4	,538	,640	,234	,110
ISMBsuppinn1	,681	,530	-,098	,179
ISMBsuppinn2	,669	,412	-,156	,231
ISMBsuppinn3	,873	-,047	-,088	-,089
ISMBsuppinn4	,837	,026	-,032	,032
ISMBrecogn1	,887	,126	-,124	,161
ISMBrecogn2	,799	,008	-,297	,309
ISMBrecogn3	,793	,036	-,235	,354
ISMBrecogn4	,831	,019	-,185	,090
ISMBprowis1	,848	-,115	,153	-,052
ISMBprowis2	,789	-,193	,107	-,225
ISMBprowis3	,800	-,087	,091	-,237
ISMBprowis4	,796	-,168	,070	-,355
ISMBorgfeed1	,794	,004	-,085	-,082
ISMBorgfeed2	,680	-,021	,013	-,225
ISMBorgfeed3	,794	,002	-,025	-,185
ISMBmonitor1	,708	-,380	,192	,298
ISMBmonitor2	,638	-,491	,120	,286
ISMBmonitor3	,149	-,425	,712	,210
ISMBmonitor4	,649	-,470	,112	,340

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

Structure Matrix

	Component			
	1	2	3	4
ISMBrolemodel1	,783	,436	,108	,729
ISMBrolemodel2	,813	,237	,274	,435
ISMBrolemodel3	,882	,268	,293	,493
ISMBrolemodel4	,854	,373	,451	,681
ISMBconsult1	,543	,870	,135	,303
ISMBconsult2	,442	,837	,174	,329
ISMBconsult3	,535	,798	,265	,283
ISMBconsult4	,328	,863	,011	,381
ISMBsuppinn1	,478	,757	-,047	,668
ISMBsuppinn2	,475	,647	,000	,704
ISMBsuppinn3	,851	,489	,299	,650
ISMBsuppinn4	,763	,538	,313	,659
ISMBrecogn1	,754	,604	,258	,805
ISMBrecogn2	,656	,404	,233	,882
ISMBrecogn3	,629	,442	,267	,872
ISMBrecogn4	,747	,472	,240	,751
ISMBprowis1	,818	,517	,490	,534
ISMBprowis2	,835	,409	,430	,426
ISMBprowis3	,829	,481	,358	,441
ISMBprowis4	,880	,416	,355	,387
ISMBorgfeed1	,766	,475	,241	,595
ISMBorgfeed2	,705	,422	,225	,396
ISMBorgfeed3	,796	,495	,247	,519
ISMBmonitor1	,626	,263	,726	,563
ISMBmonitor2	,590	,117	,717	,532
ISMBmonitor3	,117	,070	,819	-,139
ISMBmonitor4	,579	,136	,720	,570

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

Appendix I:

Extra analyses:

2 factors: innovative role modelling & support for innovation:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,524[a]	,275	,242	,69785

a. Predictors: (Constant), IWB2varISMB, ISMB2vargemcentr, IWBtotCENTR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12,178	3	4,059	8,336	,000[b]
	Residual	32,142	66	,487		
	Total	44,320	69			

a. Dependent Variable: TaskPerfgem

b. Predictors: (Constant), IWB2varISMB, ISMB2vargemcentr, IWBtotCENTR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,970	,092		42,930	,000
	IWBtotCENTR	,705	,166	,461	4,237	,000
	ISMB2vargemcentr	,206	,120	,182	1,713	,091
	IWB2varISMB	,067	,163	,045	,414	,680

a. Dependent Variable: TaskPerfgem

5 factors:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,514[a]	,265	,231	,70272

a. Predictors: (Constant), IWB5varISMB, ISMB5vargemcentr, IWBtotCENTR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11,728	3	3,909	7,917	,000[b]
	Residual	32,592	66	,494		
	Total	44,320	69			

a. Dependent Variable: TaskPerfgem

b. Predictors: (Constant), IWB5varISMB, ISMB5vargemcentr, IWBtotCENTR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,985	,094		42,198	,000
	IWBtotCENTR	,731	,166	,478	4,397	,000
	ISMB5vargemcentr	,189	,133	,151	1,418	,161
	IWB5varISMB	,000	,186	,000	-,002	,999

a. Dependent Variable: TaskPerfgem

Figure 1

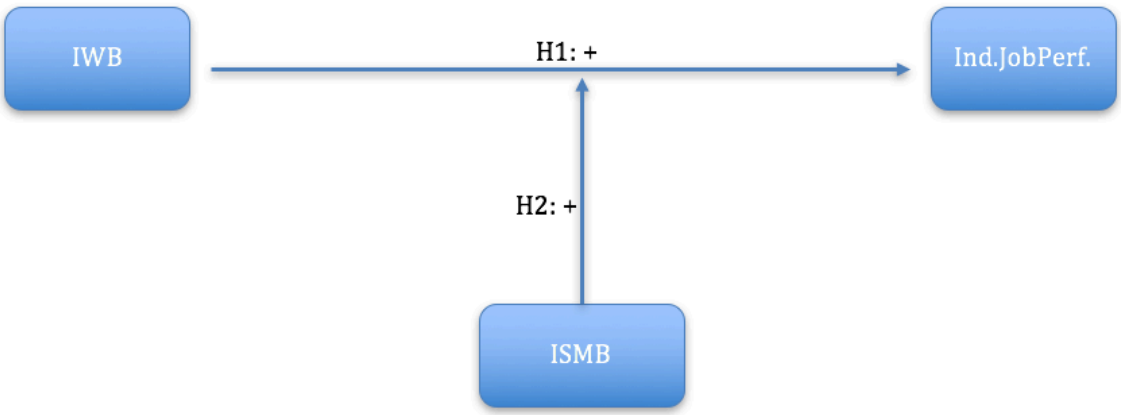

Figure 2

Behaviour		Consists of	Relates to Idea generation	Relates to Application
1	Innovative role-modelling	Being an example of innovative behaviour, exploring opportunities, generating ideas, championing and putting efforts in development	✔	✔
2	Intellectual stimulation	Teasing subordinates directly to come up with ideas and to evaluate current practices	✔	
3	Stimulating knowledge diffusion	Stimulating open and transparent communication, introducing supportive communication structures like informal work meetings	✔	
4	Providing vision	Communicating an explicit vision on the role and preferred types of innovation, providing directions for future activities	✔	✔
5	Consulting	Checking with people before initiating changes that may affect them, incorporating their ideas and suggestions in decisions	✔	✔
6	Delegating	Giving subordinates sufficient autonomy to determine relatively independently how to do a job	✔	✔
7	Support for innovation	Acting friendly to innovative employees, being patient and helpful, listening, looking out for someone's interests if problems arise	✔	✔
8	Organizing feedback	Ensuring feedback on concepts and first trials, providing feedback to employees, asking customers for their opinion		✔
9	Recognition	Showing appreciation for innovative performances	✔	✔
10	Rewards	Providing financial/material rewards for innovative performances		✔
11	Providing resources	Providing time and money to implement ideas		✔
12	Monitoring	Ensuring effectiveness and efficiency, checking-up on people, stressing tried and tested routines (negative relationship)	✔	✔
13	Task assignment	Providing employees with challenging tasks, make allowance for employees' commitment when assigning tasks	✔	