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## **The Relation between Knowledge-Sharing Behaviour within a Virtual Community of Practice and Employees' Organisational Commitment**

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4-01-2016

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## ABSTRACT

Because there is a lack of knowledge on the relation between the use of virtual communities of practice (VCoPs) and employees, this study focused on the hypothesized relations between knowledge-sharing behaviour within a VCoP and the perceived autonomy at work, the perceived competence at work, the perceived relatedness at work and the organisational commitment among employees. A total of 78 employees of a well-known Dutch bank, that uses the VCoP Yammer, took the online survey. Results showed that the level of activity within the VCoP does not relate to the employee's affective organisational commitment. The level of activity within a VCoP does however, positively relate to the perceived competence at work. This means that implementation and use of VCoPs could enhance perceived competence at work. This study however, did not reveal any causal relationships. In future research it might be interesting to investigate the directions of the found relations in this study. Also, it could be interesting to see if results of this study differ across different organisations and industries.

## INTRODUCTION

Knowledge has always been a vital organisational asset to gain and maintain a continuous advantage over competitors (Wang & Noe, 2010). With the invention of the Internet a few decades ago, knowledge transfer has changed (Gale & Abraham, 2005). Computer-mediated communication systems have contributed to more dynamic organisational environments across the globe (Koh & Kim, 2004). Employees are now able to access, gain and contribute knowledge on the internet from the workplace. Not only has this changed the organisational culture in the physical workplace, it has also created a new dimension to the workplace. Specifically, the internet has formed an online extension of the organisation (Gale &

Abraham, 2005). This has created the necessity for information technology management and alongside that, online knowledge management.

Though the development of information technology has provoked the need for online knowledge management, it can also be of assistance to knowledge management (Alavi & Leidner, 2001; Lai & Chen, 2014). For example, information technology systems allow organisations to connect people from within the organisation and stimulate them to interact and share knowledge with each other. This way, their gathered knowledge can be shared more easily, which will be beneficial to the organisation (Ardichvili, 2008). This idea has caused an increasing amount of organisations to implement online knowledge-sharing platforms to assist in the process of online knowledge management (Ardichvili, 2008). Most knowledge-sharing platforms take the form of a program or web page that allows its visitors to share online content and communicate with other visitors. When (all) employees within an organisation are granted access to such an online platform, it is categorised as a virtual community of practice (Ardichvili, 2008). Virtual communities of practice (VCoPs) are defined as “online social networks in which people with common interests, goals, or practices interact to share information and knowledge, and engage in social interactions” (Chiu, Hsu & Wang, 2006, p. 1873). VCoPs are mainly implemented to contribute to innovation and efficiency in the organisation (Ardichvili, 2008). Because VCoPs have become increasingly popular within organisations, they have become a research topic of interest.

#### *Scientific and societal relevance*

Previous studies on VCoPs mainly aimed to gain knowledge about how employees can be motivated to use VCoPs after they are implemented in an organisation (e.g. Lai & Chen, 2014; Hsu, Ju & Chen, 2007; Ridings, Gefen & Arinze, 2006). Though a lot of research has been done on what motivates people to share knowledge, the relation between knowledge-sharing behaviour within VCoPs and important work factors for employees (e.g.

organisational commitment, job satisfaction) lack empirical attention. It is however important to investigate these relations, because this might enable organisations to take both intended and unintended results of using VCoPs in the workplace into account. One of these unintended relations might exist between knowledge-sharing and employees' commitment to the organisation. This study in particular focuses on the relation between knowledge-sharing on VCoPs and the level of commitment of the participating employee. By investigating the relation between knowledge-sharing behaviour within VCoPs and the employee's perceived commitment to the organisation, organisations might be able to gain better insight into the relations between important work factors for employees and implementing VCoPs. With this insight, VCoPs can be inserted to achieve specific organisational goals. This knowledge is relevant to multiple research areas, as it contributes to the communicational research field and business studies.

In summary, there is a lack of knowledge on the relation between the use of VCoPs and the employees within the organisation, while this is relevant to organisations and to various scientific research areas. The current study will focus on the relations between knowledge-sharing within a VCoP and the perceived autonomy at work, the perceived competence at work, the perceived relatedness at work and the organisational commitment among employees. The main research question of this research is:

**R1:** To what extent does knowledge-sharing behaviour within a Virtual Community of Practice relate to perceived autonomy, competence and relatedness at work, and the employees' level of commitment to the organisation?

## THEORETICAL FRAMEWORK

### *Previous research on VCoPs*

Knowledge-sharing behaviour has become a topic of interest over time. Even when an organisation invests in the facilitation of knowledge-sharing at the workplace, it does not guarantee fluent knowledge transfer between employees (Szulanski, 1996). This is supposedly caused by the fact that employees are not always willing to share knowledge with their colleagues (Ciborra & Patriota, 1998). It is commonly known that knowledge ensures a strategic advantage over competitors, so sharing knowledge can cause a person or organisation to lose this competitive advantage (Ardichvili, 2008). Losing competitive advantage has negative consequences for an organisation, so that raises the following question: what drives people to share knowledge? For this reason most researchers who conducted online knowledge-sharing studies, focused on what aspects motivate people to share knowledge on VCoPs (e.g. Chang & Chuang, 2011; Chiu, Hsu & Wang, 2006; Hsu, Ju & Yen, 2007; Hsu & Lin, 2008; Jadin, Gnambs & Batinic, 2013; Phang, Kankanhalli & Sabherwal, 2009; Ridings, Gefen & Arinze, 2006; Wasko & Faraj, 2005; Yoon & Rolland, 2012). These studies showed that both intrinsic and extrinsic motivational aspects affect the willingness to share knowledge and identified what motivational factors affected this. Yoon and Rolland (2012) categorised these motivational factors according to the theories which were used to explain these motivational factors. For example, they classed extrinsic motivational factors such as economic reward, reputation feedback, reciprocity, trust and perceived fairness as social exchange factors, as these derived from the social exchange theory used in previous studies (Yoon & Rolland, 2012).

To conclude, numerous studies have been conducted on motivational factors of knowledge-sharing behaviour within VCoPs. Relations between important work factors for employees and knowledge-sharing on VCoPs, however, lack empirical attention. This study will investigate the relation between knowledge-sharing behaviour within VCoPs and the perceived autonomy at work, the perceived competence at work and the perceived relatedness at work and the employees' level of organisational commitment.

### *Online knowledge-sharing and Self-Determination Theory*

In order to investigate whether online knowledge-sharing behaviour relates to the employees' level of organisational commitment, the self-determination theory will be used. The self-determination theory focuses on three basic psychological human needs that supposedly form the basis of their self-motivation (Deci & Ryan, 1985). These three needs are the need for autonomy, competence and relatedness. The self-determination theory suggests that an individual performs qualitatively at his best at work when these three psychological needs are satisfied (Deci & Ryan, 1985). The need for autonomy implies a desire to experience psychological freedom in behaviour (Deci & Ryan, 2000). By the need for competence a desire of achievement or interaction without unwanted outcomes is meant and the need for relatedness refers to a desire to be connected to others (Deci & Ryan, 2000). According to the self-determination theory, satisfying these needs would have an intrinsically motivating effect and when acted on this self-motivation, an individual would experience a state of self-fulfilment or happiness (Deci & Ryan, 2000).

In order to find out if a relation between participation in knowledge-sharing within a VCoP and organisational commitment exists, it will first be tested whether knowledge-sharing on a VCoP positively relates to employees' feelings of autonomy, competence and relatedness at work. In this study, a relation between the level of activity on the VCoP and the employees' perceived autonomy at work is suggested. This relation is suggested, because participation in a VCoP could supposedly enhance feelings of self-direction. This is expected, because using the VCoP allows employees to direct the content of their messages and their engagement in certain discussions. Employees' feelings of self-direction have on their turn been proven to positively affect perceived autonomy (Deci & Ryan, 2000). It is therefore suggested that a relation between level of activity within the VCoP and perceived autonomy at work exists.

In addition, it might be possible that using the VCoP might decrease the hierarchy within an organisation. This is suggested, because when every employee from any hierarchical level contributes to a discussion or updates a status on the VCoP, it is visible to everyone. This may tone down the organisational hierarchy, which has been proven to strongly relate to employee autonomy (Harley, 1999). These suggestions have led to proposing the following hypothesis:

**H1.** There is a positive relation between the level of activity within the VCoP and the perceived autonomy at work.

The second hypothesis suggests a relation between knowledge-sharing within a VCoP and the employees' perceived competence at work. This relation might exist, as participation enables the employees to interact with one another and learn from each other. VCoPs allow employees to engage in discussions and share content that might be relevant to other employees. Engagement in this online form of information exchange between employees and departments might cause one to feel more competent at work, because one can use the gained knowledge from the virtual platform in daily tasks at work. For example, being more informed on ongoing processes in other departments of the organisations might positively affect one's abilities to adjust one's process better to common organisational goals. The second hypothesis derived from this suggestion:

**H2.** There is a positive relation between the level of activity within the VCoP and the perceived competence at work.

Also, it is suggested that participation in a VCoP positively relates to the employees' perceived relatedness at work. The need for relatedness is fulfilled when one feels connected to others (Deci & Ryan, 2000). The suggestion that participation within VCoPs fulfil this satisfaction is raised, as VCoPs facilitate interaction with colleagues. Because employees can

interact with colleagues from all departments within the organisation and are able to share daily tasks, interesting news and ask each other questions, VCoP participation might positively relate to the feeling of connection with other colleagues (i.e. relatedness at work). Therefore, the following hypothesis was proposed:

**H3.** There is a positive relation between the level of activity within the VCoP and the perceived relatedness at work.

#### *Online knowledge sharing and organisational commitment*

In literature, commitment is defined as “an employee’s level of attachment to some aspect of work” (Muthuveloo & Rose, 2005, p. 1078). This definition however, is rather imprecise. For this reason many researchers have distinguished various types of employee commitment (Muthuveloo & Rose, 2005). A covering typology was developed by Meyer and Herscovitch (2001) to simplify categorisation of more specific forms of employee commitment. Their three types of employee commitment are commitment to a job, commitment to a career and commitment to an organisation (Meyer & Herscovitch, 2001). Career commitment represents an individual’s identification with the career path one follows, rather than the organisation one works for (Muthuveloo & Rose, 2005). Job commitment refers to an individual’s attachment to employment, rather than a career or organisation (Muthuveloo & Rose, 2005). The third form of commitment, organisational commitment, is defined as an employee’s identification with and attachment to the organisation one works for (Muthuveloo & Rose, 2005).

In this study, the specific form affective employee commitment will be addressed. This type of commitment is categorised under Meyer and Herscovitch’s (2001) third commitment-type: organisational commitment. Affective organisational commitment is defined as the employee’s “emotional attachment to, identification with, and involvement in, the



organisation” (Muthuveloo & Rose, 2005, p. 1080). This type of commitment derives from positive feelings that one experiences towards the organisation, which is an intrinsic and emotional process.

There are two other types of organisational commitment: continuance commitment, which refers to the employee’s commitment based on the consequences of leaving the organisation, and normative commitment, which derives from the feeling that one is acquired to be part of the organisation (Muthuveloo & Rose, 2005). Because these two types of commitment are influenced by external factors, such as wages, age and dependability (Muthuveloo & Rose, 2005), it is not expected that knowledge-sharing will relate to these types of commitment. Affective organisational commitment however, derives from emotional and internal factors, which suggests a more probable relation between knowledge-sharing behaviour within a VCoP. The self-determination theory will be used to investigate this relation and since this theory focuses on three basic psychological needs, it would be logical to focus on the type of commitment that derives from emotions. For this reason, affective organisational commitment is chosen for this research. Affective organisational commitment has also been explained using the self-determination theory before. Greguras and Diefendorff (2009) used the self-determination theory to test whether satisfaction of the basic psychological needs (competence, autonomy and relatedness) has a mediating role in the relations between different types of person-environment fits (e.g. how well does the participant suit the job role and organisation) and employee attitudes (affective organisational commitment, job satisfaction) and overall job performance. Their results showed that when the participant experienced satisfaction of competence, autonomy or relatedness, the employee attitudes would increase at the same time (Greguras & Diefendorff, 2009). Concluding, they found a relation between the basic psychological needs from the self-determination theory and organisational commitment.

If knowledge-sharing within a VCoP positively relates to feelings of autonomy, competence and relatedness, it could be argued that participation in a VCoP also positively relates to more organisational commitment. Research has shown that satisfaction of the psychological needs for autonomy, competence and relatedness at the work place, leads to more work engagement and better psychological well-being (Deci, Ryan, Gagné, Leone, Usunov and Kornazheva, 2001). In addition, Gagné and Deci (2005) showed in their research that satisfaction of basic psychological needs significantly relates to positive outcomes in behaviour that derives from these needs, meaning that when people experience strong feelings of competence, autonomy and relatedness, they perform better.

Because previous studies have shown positive consequences of satisfaction of autonomy, competence and relatedness at work, such as increased work-engagement (Deci et al., 2001), it is also expected that an increased experience of autonomy, competence and relatedness at work will be related to a higher perceived affective organisational commitment. The following hypotheses have derived from this theory:

**H4.** There is a positive relation between perceived autonomy at work and the perceived affective organisational commitment.

**H5.** There is a positive relation between perceived competence at work and the perceived affective organisational commitment.

**H6.** There is a positive relation between perceived relatedness at work and the perceived affective organisational commitment.

Because a positive relation is expected between the level of activity on a VCoP and autonomy, competence and relatedness at work, and because a positive relation between these

three needs and affective organisational commitment is expected, it is also expected that a positive relation between the level of activity on a VCoP and organisational commitment exists. Therefore, a final hypothesis is formed.

**H7.** There is a positive relation between the level of activity within the VCoP and the perceived affective organisational commitment.

## METHODOLOGY

### *Instruments*

The theory was tested with data that were retrieved using a survey among virtual community members of Rabobank Rijk van Nijmegen. Rabobank uses the VCoP Yammer. Yammer is currently used by over 200,000 companies and describes itself as a professional social networking site that enhances the effectivity of collaborations among employees (Yammer, 2015). Yammer allows employees to build and join (sub)communities with their personal profiles to enhance discussions and knowledge-sharing across different departments, establishments, geographical areas and more. Yammer aims to do so, by offering various social (interactive) functions, such as ‘chat’, ‘sharing’, ‘liking statuses’ and ‘inviting colleagues for events and groups’.

In this survey the variables level of activity within the VCoP, perceived autonomy at work, perceived competence at work, perceived relatedness at work and affective organisational commitment were measured. The variable level of activity was measured using a scale developed by Lin, Hung and Chen (2009). The scale consisted of four items that took the form of statements which were anchored by seven-point Likert scales in which 1 represented ‘strongly disagree’ and 7 represented ‘strongly agree’. An example of a statement would be:

‘When I visit Yammer I usually actively share my knowledge with others’. The reliability of ‘level of activity’ comprising four items was good:  $\alpha = .89$ .

The variables perceived autonomy at work, perceived competence at work and perceived relatedness at work were measured using the Basic Psychological Needs at Work Scale, developed by Deci and Ryan (2001). Perceived autonomy at work was measured using eight items anchored by seven-point Likert scales in which 1 represented ‘strongly disagree’ and 7 represented ‘strongly agree’. An example would be ‘At work, I feel a sense of choice and freedom in the things I do’ followed by a seven-point Likert scale. The reliability of ‘perceived autonomy at work’ comprising eight items was acceptable:  $\alpha = .67$ .

Perceived competence at work was measured using eight items, also anchored by seven-point Likert scales. An example of this would be the statement “At work, I feel capable at what I do” followed by a seven-point Likert scale. In order to increase the reliability of the scale, the item ‘I do not feel very competent when I am at work’ was deleted. After deleting this item, the reliability of ‘perceived competence at work’ was acceptable:  $\alpha = .70$ .

Perceived relatedness at work was also measured using eight items that were anchored by seven-point Likert scales in which 1 represented ‘strongly disagree’ and 7 represented ‘strongly agree’. An example statement would be “I feel that the people I care about at work also care about me”. In order to increase the reliability of the scale, the item ‘I pretty much keep to myself when I am at work’ was deleted. After deleting this item, the reliability of ‘perceived relatedness at work’ was acceptable:  $\alpha = .66$ .

Affective organisational commitment was measured using a scale developed by Mowday, Steers and Porter (1979). This scale consisted of 15 items anchored by seven-point Likert scales in which 1 represented ‘strongly disagree’ and 7 represented ‘strongly agree’. An

example of such an item is “I am willing to put in a great deal of effort beyond that normally expected in order to help this organisation be successful” followed by a seven-point Likert scale. The reliability of ‘affective organisational commitment’ comprising 15 items was good:  $\alpha = .80$ .

Also, the level of use of the functions that Yammer offers were measured to discover if there might be different reasons for employees to consult the platform. These functions were measured using nine-point time scales in which 1 presented ‘never’ and 9 represented ‘multiple times a day’. The functions measured were Yammer chat, consulting newsfeed, sharing knowledge within one or multiple groups, gaining knowledge from one or multiple groups, building groups, inviting colleagues to join groups and accepting invitations to join groups. These functions were selected as a result from a discussion with the internal communications manager of Rabobank Rijk van Nijmegen. According to the internal communications manager, these functions were most popular among employees (personal communication, 21 November 2015).

#### *Procedure and respondents*

An online survey was sent to Rabobank Rijk van Nijmegen to collect data for this study. The link to the online questionnaire was sent to all employees who have access to the VCoP. The link directed the participant directly to the questionnaire, which started with an introductory text explaining the topic of research. Filling out the questionnaire lasted approximately 10 to 15 minutes.

The link was sent out to all employees of Rabobank Rijk van Nijmegen who had access to the VCoP at the time of the distribution of the survey. This was a total of 270 employees. A total of 102 participants took the survey, however, only 78 participants completed the survey. Therefore the definitive sample consisted of 78 participants, of whom 35 were male, 41 were

female and 2 participants did not reveal their gender. The youngest participant was 21 years old and the oldest participant was 65 years old. The average age of the participants was 42 years old. All participants were Dutch. The level of education of the participants varied from high school HAVO to university degree. The most frequent level of education measured was HBO.

Two days after the launch of the survey, Rabobank broadcasted the news that 9.000 positions are going to be made redundant in 2016. This may possibly have affected the response rate and the results.

#### *Statistical treatment*

The hypotheses will be tested using two-tailed correlation analyses.

## RESULTS

The descriptive statistics of the measured variables are presented in table 1.

Table 1. Means (*M*) and Standard Deviations (*SD*) of variables (*N* = 78). (1 = very low, 7 = very high)

Variable	<i>M</i>	<i>SD</i>
Level of activity within VCoP	3.32	1.60
Autonomy at work	5.39	.73
Competence at work	5.98	.70
Relatedness at work	5.65	.63
Organisational commitment	5.55	.62

Results showed that the level of activity within is rather low ( $M = 3.32$ ,  $SD = 1.60$ ) which indicates that employees within Rabobank Rijk van Nijmegen do not use Yammer very often.

The perceived autonomy ( $M = 5.39$ ,  $SD = .73$ ), competence ( $M = 5.98$ ,  $SD = .70$ ) and relatedness ( $M = 5.65$ ,  $SD = .63$ ) at work were found to be quite high, which indicates that the basic needs of satisfaction are close to being fulfilled according to the employees from Rabobank Rijk van Nijmegen. Also, the affective organisational commitment was found to be quite high among employees ( $M = 5.55$ ,  $SD = .62$ ).

In order to test the hypotheses in this study, correlation tests were carried out. The results are presented in correlation matrix table 2, which is presented below.

Table 2. Correlations ( $r$ ) between level of activity on the VCoP, autonomy at work, competence at work, relatedness at work and affective organisational commitment ( $N = 78$ )

Variable	Level of activity	Autonomy at work	Competence at work	Relatedness at work
Level of activity				
Autonomy at work	.08			
Competence at work	.30**	.58**		
Relatedness at work	.05	.40**	.43**	
Organisational commitment	.18	.63**	.50**	.29**

\* significant at the .05 level, \*\* significant at the 0.01 level

No significant correlations were found between the level of activity within the VCoP and perceived autonomy at work ( $p > .05$ ) and between the level of activity within the VCoP and the perceived relatedness at work ( $p > .05$ ). This indicates that there is no relation between the amount of use one makes of the online knowledge-sharing platform and the perceived autonomy and relatedness one has at work. This means that hypotheses 1 and 3 are rejected. A significant positive correlation was found between the level of activity within the VCoP and perceived competence at work ( $r(78) = .30$ ,  $p = .005$ ). This indicates that if one uses the

online knowledge-sharing platform, one also feels more affective commitment towards the organisation. This means that hypothesis 2 is supported.

A significant positive correlation was found between the autonomy at work and affective organisational commitment ( $r(78) = .63, p < .001$ ). This suggests that the more autonomous one feels at work, the more affective commitment one feels towards the organisation. This means that hypothesis 4 is supported.

A significant positive correlation was found between the competence at work and affective organisational commitment ( $r(78) = .50, p = .002$ ), which means that hypothesis 5 is supported. This result indicates that one feels more affective organisational commitment when one feels more competent at work.

A significant positive correlation was found between the relatedness at work and affective organisational commitment ( $r(78) = .29, p < .001$ ). This suggests that if one feels more affective commitment towards the organisation, one also feels more related to colleagues at work. This means that hypothesis 6 is supported.

No significant correlation was found between the level of activity on the VCoP and affective organisational commitment ( $p > .05$ ), which means that hypothesis 7 is rejected.

Also, the amount of use of the functions on Yammer were measured. The results are shown in table 3 which is presented below.

Table 3. Means ( $M$ ) and Standard Deviations ( $SD$ ) of use of Yammer functions ( $N = 78$ ). (1 = never, 9 = multiple times a day)

Function	$M$	$SD$
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Yammer chat	1.92	1.61
Consulting newsfeed	4.22	2.42
Sharing knowledge	3.26	1.83
Gaining knowledge	4.62	1.95
Building groups	1.54	.86
Inviting colleagues	1.53	.85
Accepting invitations	2.54	1.26

All measured functions are used less than once a week (5 on the scale). The most frequently used function were measured to be ‘gaining knowledge from one or multiple groups’ ( $M = 4.62$ ,  $SD = 1.95$ ) and the least used function was found to be ‘inviting colleagues to join groups’ ( $M = 1.53$ ,  $SD = .85$ ). Overall, interactive functions such as ‘Yammer chat’ ( $M = 1.92$ ,  $SD = 1.61$ ), ‘building groups’ ( $M = 1.54$ ,  $SD = .86$ ) and ‘inviting colleagues to join groups’ ( $M = 1.53$ ,  $SD = .85$ ) were found to be used a few times per year or less. Yammer appears to be mostly used as a knowledge consulting tool, as ‘gaining knowledge from one or multiple groups’ ( $M = 4.62$ ,  $SD = 1.95$ ) and ‘consulting the newsfeed’ ( $M = 4.22$ ,  $SD = 2.42$ ) were found to be used most often of all measured functions, on average between a few times per month and once per week. In between, the function ‘accepting invitations to join groups’ ( $M = 2.54$ ,  $SD = 1.26$ ) was found to be used between a few times per year and once a month on average and ‘sharing knowledge within one or more groups’ ( $M = 3.26$ ,  $SD = 1.83$ ) was found to be used between once per month and a few times per month.

## DISCUSSION AND CONCLUSION

This study focused on the relations between knowledge-sharing behaviour within a VCoP and perceived autonomy at work, perceived competence at work, perceived relatedness at work

and affective organisational commitment. The research question was: to what extent does knowledge-sharing behaviour within a Virtual Community of Practice relate to perceived autonomy, competence and relatedness at work, and the employees' level of commitment to the organisation? In order to answer this research question, several hypotheses were proposed and tested. The implications of the results are discussed below after which follows a conclusion. It should be mentioned that two days after the launch of the survey, Rabobank broadcasted the news that 9.000 positions are going to be made redundant in 2016. Though this does not seem to be the case, this may possibly have affected the response rate and the results.

Results showed that the level of activity does positively relate to the perceived competence at work (H2). This finding was in line with the expectation that online knowledge-sharing enhances people's knowledge and may therefore positively affect their perceived competence at work. Most participants were found to consult the VCoP in order to gain knowledge, rather than share knowledge. This finding suggests that most employees tend to use the VCoP as an information source, which allows them to gain more information. This growth of knowledge is expected to relate to the perceived competence of the participants. Knowing that this relation exists, employers can use the VCoP as an informative competence builder, as well as a professional social platform.

No relation was found between the level of activity within a VCoP and the perceived autonomy at work (H1). A possible explanation for this might be that the level of online knowledge-sharing activity does not affect the hierarchic position of an employee within an organisation, which appears to relate strongly to employee autonomy (Harley, 1999). Although knowledge-sharing was expected to raise feelings of control and autonomy, the organisational hierarchy might determine the content of the online posts and the people with whom knowledge is shared. Using a VCoP does not change the hierarchic position of the

employee, so therefore an employee might not dare to break the hierarchic borders by getting involved in a discussion with colleagues from a different hierarchic level. This however, has not been studied in this research, but might be interesting to study in future research.

Also, no relation between the level of activity within a VCoP and the perceived relatedness at work was found (H3). This finding could be explained by the fact that most participants consult the VCoP in order to gain knowledge, rather than use interactive functions, such as 'chat' and 'group invitations'. Such interactive functions were expected to raise feelings of relatedness, but these appeared to be rarely used. If use of these functions would be increased, a relation might be found.

Satisfaction of the three basic needs of the self-determination theory (autonomy, competence and relatedness at work) has been found to positively relate to affective organisational commitment (H4, H5 and H6). This finding is consistent with previous research, which showed that satisfying the psychological needs for autonomy, competence and relatedness show positive outcomes, such as improved employee performance (Gagné & Deci, 2005) and more work engagement and psychological well-being (Deci, Ryan, Gagné, Leone, Usunov and Kornazheva, 2001). Because the three basic needs were found to relate to improved work engagement in previous studies, it was expected that the three basic needs would also relate to affective organisational commitment. This knowledge allows employers to facilitate satisfaction of these three basic needs at work, for example by giving employees space to make their own decisions in order to fulfil the need for autonomy (Deci & Ryan, 2000), allowing employees to learn in order to feel more competent and organising team-building activities in order to fulfil the need for relatedness.

This study also showed that the level of activity within the VCoP does not relate to the employee's affective organisational commitment (H7). A relation between knowledge-sharing

behaviour within a VCoP and affective organisational commitment was expected as a logic result from expected relations between the level of activity within the VCoP and satisfaction of the three basic needs of the self-determination theory, e.g. perceived autonomy, competence and relatedness at work and expected relations between these three needs and affective organisational commitment. Results showed however, that the level of activity within the VCoP only related to the perceived competence at work, but not to perceived relatedness at work and perceived autonomy at work. Because these relations do not exist, the absence of a relation between the level of activity within the VCoP and organisational commitment could be explained. This finding means that implementation and use of a VCoP in the workplace does not appear to have implications for the employees' affective organisational commitment. Therefore, organisations do not have to take the use of VCoPs into consideration when focusing on organisational commitment.

To conclude, the relation between knowledge-sharing behaviour within VCoPs and employees lack empirical attention to date. This study was a first attempt to find relations between online knowledge-sharing behaviour and important work factors for employees such as perceived autonomy, competence and relatedness at work and affective organisational commitment. Results showed that the level of activity within the VCoP does not relate to the employee's affective organisational commitment. The level of activity within a VCoP does however, positively relate to the perceived competence at work. This information is valuable for future research, as it provides an insight into possible consequences of using VCoPs, in this particular study: it might enhance perceived competence at work. However, causal relations need to be tested in future research. Nevertheless, these relations are worth considering when conducting further research on virtual communities of practice, but also when implementing a knowledge-sharing platform at work.

This study also found evidence for the expected positive relations between perceived autonomy, competence and relatedness at work and affective organisational commitment. This knowledge could contribute to further research on affective organisational commitment. An example could be to investigate whether satisfaction of the three basic needs at work does have a conjunctive function between affective organisational commitment and other work-related factors.

In terms of practical implications, the organisation has learnt that employees appear to feel more competent at work if they participate more in activities within the VCoP. In order to make more employees feel competent, it could be helpful to promote the VCoP. The organisation also learnt that the VCoP is used quite little by the employees. This finding could be a motivation to investigate the employees' needs in terms of a VCoP.

#### *Limitations and future research*

This study is a cross-sectional study, which means it revealed relations, but lacks the ability of discovering causal relations. In order to investigate causal relations, a longitudinal research has to be carried out.

Besides that, a rather small sample was used for this study. Also, the study has been carried out among employees of one establishment of one banking organisation. Therefore both geographical and professional factors may limit the external validity of this research. It might be interesting to replicate this study within different work environments in future research.

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## APPENDIX A

### Survey (translated version from Dutch to English)

Welcome! This study focuses on the use of Yammer within Rabobank and is carried out by the Radboud University Nijmegen. The purpose of this study is to investigate the effectivity of an online knowledge-sharing platform like Yammer. We would therefore like to find out what the use of Yammer means for you as an employee and as a user of the platform. Even if you are not very active within the platform, we still ask you to participate in this study.

The questionnaire starts with a few statements about Yammer, followed by questions about feelings you might experience towards (your job within) Rabobank. There are very few statements required to measure your activity within Yammer, which means this forms a small part of the questionnaire. This could make the online activity on Yammer seem like a detail, rather than the main topic. Also, because we're investigating the relations between your activity within Yammer and four different important work factors (identification, commitment, job satisfaction and the communication climate within Rabobank) this may seem even more. Yammer is, however, the central topic in our study.

Filling out the survey will approximately last 10 minutes. On the progress bar at the top of your screen you can monitor your progression.

You voluntarily participate in this study and are able to quit your participation at anytime in the process. The data that will be collected in this study will possibly be used for articles and presentations. By clicking 'I agree' you assent that your answers will be processed anonymously in the bachelor's thesis about the effect of Yammer on its users.

By doing so, you also agree that you are well informed about the study. You can, also after your participation, get in contact with Renske Jacobs ([lem.jacobs@student.ru.nl](mailto:lem.jacobs@student.ru.nl)) with queries about the study.

We kindly thank you for your participation.

Please insert your choice

By clicking the button 'I agree' you declare that:

- you read all of the information presented above
- you voluntarily participate in this study
- you are a minimum of 18 years old

If you do not want to participate in the study, you can click the button 'I disagree'.

☐ I agree

☐ I disagree

----- page break -----

Now a few statements about the level of activity on Yammer will follow. You can indicate to what extent the statement applies to your own situation, by clicking the most representative option.

	Strongly disagree	Disagree	Disagree somewhat	Neither agree, nor disagree	Agree somewhat	Agree	Strongly agree
I regularly participate in knowledge-sharing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

activities on Yammer.

When I visit Yammer I usually actively share my knowledge with others.

When complicated issues are discussed on Yammer, I am often involved in the discussion.

On Yammer, I am usually involved in the discussion about various topics, rather than only discussions about one specific topic.

☐ ☐ ☐ ☐ ☐ ☐ ☐

☐ ☐ ☐ ☐ ☐ ☐ ☐

☐ ☐ ☐ ☐ ☐ ☐ ☐

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When I use Yammer, I use the following functions:

	Never	Once per year or less	Once per month or less	A few times per month	Once per week	A few times per week	Once per day	A few times per day	Often per day
Yammer chat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
I feel pressured at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am free to express my ideas and opinions on the job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am at work, I have to do what I am told.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

My feelings are taken into consideration at work.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

I feel like I can pretty much be myself at work.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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There is not much opportunity for me to decide for myself how to go about my work.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Below, a few statements about feelings regarding **autonomy** you might experience at work are presented. You can indicate to what extent the statement applies to your own situation, by clicking the most representative option. The study is fully anonymous, so this information will not be shared with your supervisor.

	Strongly disagree	Disagree	Disagree somewhat	Neither agree, nor disagree	Agree somewhat	Agree	Strongly agree
I feel like I can make a lot of inputs to deciding how my job gets done.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel pressured at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am free to express my ideas and opinions on the job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am at work, I have to do what I am told.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My feelings are taken	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

into consideration at work.

I feel like I can pretty much be myself at work.

There is not much opportunity for me to decide for myself how to go about my work.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Below, a few statements about feelings regarding **relatedness** you might experience at work are presented. You can indicate to what extent the statement applies to your own situation, by clicking the most representative option. The study is fully anonymous, so this information will not be shared with your supervisor.

	Strongly disagree	Disagree	Disagree somewhat	Neither agree, nor disagree	Agree somewhat	Agree	Strongly agree
I really like the people I work with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I get along with people at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I pretty much keep to myself when I am at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I consider the people I work with to be my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People at work care about me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are not many people at work that I am close to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The people I work with do not seem to like me much.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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People at work are pretty friendly towards me

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Below, a few statements about feelings regarding **competence** you might experience at work are presented. You can indicate to what extent the statement applies to your own situation, by clicking the most representative option. The study is fully anonymous, so this information will not be shared with your supervisor.

	Strongly disagree	Disagree	Disagree somewhat	Neither agree, nor disagree	Agree somewhat	Agree	Strongly agree
I do not feel very competent when I am at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People at work tell me I am good at what I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have been able to learn interesting new skills on my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most days I feel a sense of accomplishment from working.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On my job I do not get much of a chance to show how capable I am.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am working I often do not feel very capable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Below, a few statements regarding **the extent to which you feel committed to Rabobank** are presented. You can indicate to what extent the statement applies to your own situation, by clicking the most representative option. The study is fully anonymous, so this information will not be shared with your supervisor.

**Commitment - page 1 of 2**

	Strongly disagree	Disagree	Disagree somewha t	Neither agree, nor disagree	Agree somewha t	Agree	Strongly agree
I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talk up this organization to my friends as a great organization to work for.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel very little loyalty to this organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would accept almost any type of job assignment in order to keep working for this organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find that my values and the organization's values are very similar.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am proud to tell others that I am part of this organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I could just as well be working for a different organization as long as the type of work was similar

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Below, a few statements regarding **the extent to which you feel committed to Rabobank** are presented. You can indicate to what extent the statement applies to your own situation, by clicking the most representative option. The study is fully anonymous, so this information will not be shared with your supervisor.

**Commitment - page 2 of 2**

	Strongly disagree	Disagree	Disagree somewhat	Neither agree, nor disagree	Agree somewhat	Agree	Strongly agree
This organization really inspires the very best in me in the way of job performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It would take very little change in my present circumstances to cause me to leave this organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There's not too much to be gained by sticking with this organization indefinitely.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Often. I find it difficult to agree with this organization's policies on important matters relating to its employees.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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I really care about the fate of this organization.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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For me this is the best of all possible organizations for which to work.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Deciding to work for this organization was a definite mistake on my part.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Finally, a few general questions are presented below. You can fill out these questions anonymously, this information will only be used for this study.

What is your gender?

☐ Male

☐ Female

What is your age?

[       ]

What is your highest finished level of education?

- ☐ Primary school
- ☐ LTS
- ☐ MTS
- ☐ HTS
- ☐ High school VMBO
- ☐ High school HAVO
- ☐ High school VWO
- ☐ MBO (college)
- ☐ HBO (higher college)
- ☐ University degree

What is your function within Rabobank?

- ☐ Administration officer/Assistant/Support
- ☐ Receptionist
- ☐ Financial advisor
- ☐ Legal advisor
- ☐ Accountmanager
- ☐ ICT specialist
- ☐ Marketing/Communications/PR officer
- ☐ HR specialist
- ☐ Operations officer
- ☐ Intern/Apprentice/Trainee

O Management

O Other

----- page break -----

There is a possibility that a follow-up study on the use of Yammer within Rabobank will be carried out. We would therefore like to ask you if you would want to fill out another questionnaire in the future.

If you are open to follow-up research, would you please fill out your e-mail address below? Your identity will remain anonymous at all times, your e-mail address will only be used to send you a follow-up questionnaire. By filling out your e-mail address you do not sign up to anything, you can always choose to not participate at the time of the follow-up study.

E-mail address:

[ ]

Do you have any remarks or suggestions you would like to share with us? Please write them down below:

[ ]

----- page break -----

Thank you very much for your participation. Your response has been recorded.

----- end of survey -----

## APPENDIX B

### Plagiarism form

Ondergetekende

.....

Bachelorstudent Communicatie- en Informatiewetenschappen aan de Letterenfaculteit van de Radboud Universiteit Nijmegen, verklaart met ondertekening van dit formulier het volgende:

- a. Ik verklaar hiermee dat ik kennis heb genomen van de facultaire handleiding ([www.ru.nl/stip/regels-richtlijnen/fraude-plagiat](http://www.ru.nl/stip/regels-richtlijnen/fraude-plagiat)), en van artikel 16 “Fraude en plagiaat” in de Onderwijs- en Examenregeling voor de BA-opleiding Communicatie- en Informatiewetenschappen.
- b. Ik verklaar tevens dat ik alleen teksten heb ingeleverd die ik in eigen woorden geschreven heb en dat ik daarin de regels heb toegepast van het citeren, parafraseren en verwijzen volgens het Vademecum Rapporteren.
- c. Ik verklaar hiermee ook dat ik geen teksten heb ingeleverd die ik reeds ingeleverd heb in het kader van de tentaminering van een ander examenonderdeel van deze of een andere opleiding zonder uitdrukkelijke toestemming van mijn scriptiebegeleider.
- d. Ik verklaar dat ik de onderzoeksdata, of mijn onderdeel daarvan, die zijn beschreven in het BA-werkstuk daadwerkelijk empirisch heb verkregen en op een wetenschappelijk verantwoordelijke manier heb verwerkt.

Plaats + datum .....

Handtekening .....