

The Mediating Effect of Work Engagement on the Relationship Between Person-Organization Fit and Knowledge Sharing

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The Australian study of Gahan, Healy, & Nicholson (2017) presents a discussion of the range of obstacles to the effective implementation of knowledge management strategies in the Australian corporate environment. Our paper provides consistent findings of the obstacles to knowledge management implementation strategies and presents a conceptual model for improvement of both work engagement as well as knowledge sharing amongst IT professionals. We propose that there is a relationship between the level of autonomy, person-organization fit and work engagement and subsequently the level of knowledge sharing of different generations of professionals working in IT service firms.

Keywords: Work Engagement, Person-Organization Fit, Knowledge Sharing

INTRODUCTION

Knowledge and knowledge sharing are of crucial importance to IT organizations in order for them to achieve a competitive advantage in today's knowledge economy (Riege, 2005; Kim, 2012). This is important, because IT organizations greatly depend on the valuable knowledge of their knowledge workers (Stam, 2007; Chang, Hsu, Shia, & Tsai, 2015). However, IT organizations are characterized by a high voluntary turnover of knowledge workers and the associated risk of knowledge loss in a competitive environment (Hartog, 2013; Kim, 2012). This is what prompted the present study, which aims to gain an understanding of knowledge sharing in IT organizations, because there is limited academic literature on this subject. By investigating to what extent autonomy, person-organization fit and work engagement influence the inclination of knowledge workers to share their knowledge in IT organizations, we aim to make a contribution to current academic literature.

Spending on information technology (IT) products and services in Australia is forecast to reach almost A\$93 billion in 2019, an increase of 3.5 percent from 2018, slightly higher than the global average growth rate of 3.2 percent, according to the latest forecast from "Gartner forecasts" (2018). Knowledge sharing is of key importance in order to make optimum use of a knowledge worker's valuable knowledge (Wang & Noe, 2010). Knowledge sharing can be considered an important process within an organization, as it tries to shift the knowledge held by knowledge workers in such a way that it becomes available at the organizational level (Hendriks, 1999). This knowledge only becomes useful at the organizational level if a

knowledge worker is prepared to share his knowledge (Gibbert & Krause, 2002). This appears to be no easy task, because knowledge sharing is unusual, rather than being something that people do naturally (Bock, Zmud, Kim, & Lee, 2005). Therefore, it is important to understand what motivates a knowledge worker to actually share his knowledge in IT organizations. For example, the use of information technology plays an important role in facilitating knowledge sharing within organizations. However, this is no guarantee that knowledge workers will have the intention of sharing knowledge (Connolly & Thorn, 1990; Davenport & Prusak, 1998; Lin, 2007, Jolae et al, 2014). According to Park, Ribi re, and Schulte (2004), employee motivation dictates whether or not knowledge sharing actually occurs. To investigate what factors encourage knowledge sharing, factors were chosen for this study that are present in both organization theory (Person-Organization Fit) and positive occupational and health psychology (work engagement).

THEORY AND HYPOTHESES

Theorized Mechanism for the Knowledge Sharing-Performance Relationship

According to a number of researchers (Hendriks, 1999; Wang & Noe, 2010; Asrar-ul-Haq & Anwar, 2016), sharing knowledge is of crucial importance to knowledge organizations in order for them to achieve a competitive advantage in a competitive environment. Due to the increasing dynamism and high staff turnover rates in IT organizations in particular, knowledge sharing and retaining that knowledge are becoming increasingly important in order to ensure continuity, specifically in these organizations. Knowledge sharing can therefore be considered an important process in an organization, as in this way an effort is made to shift the knowledge held by knowledge workers in such a way that it becomes available at the level of the organization (Hendriks, 1999; Riege, 2005; Chang et al., 2015).

In the literature, there are different interpretations of the term “knowledge sharing.” Knowledge transfer encompasses both knowledge sharing by the source and knowledge acquisition by the recipient. This distinction is mostly used to refer to the movement of knowledge between different units and divisions of organizations rather than between individuals (Szulanski, Cappetta, & Jensen, 2004). Knowledge exchange is regularly confused with knowledge sharing (Cabrera, Collins, & Salgado, 2006). However, knowledge exchange includes both knowledge sharing and searching for knowledge. Employees provide each other with knowledge and search for knowledge from others (Wang & Noe, 2010). Withholding knowledge can be described as consciously or unconsciously withholding knowledge which could also be shared in the future (Hislop, 2003, Kodden & Hupkes, 2019). Knowledge sharing can be described as “the activities aimed at helping people to cooperate; enabling them to exchange their knowledge; increasing the learning capacity of organizations and the ability to achieve individual and organizational goals” (Dyer & Nobeoka, 2000). Research has shown that knowledge sharing is, for example, positively related to the finalization of product development projects, team achievements, innovation opportunities, and company performance, including turnover growth and income from new products and services (Arthur & Huntley, 2005; Lin, 2007; Cummings, 2004; Collins & Smith, 2006; Hansen, 2002; Mesmer-Magnus & DeChurch, 2009). This study uses the above definition of knowledge sharing, because it is in line with the framework of this study, with knowledge sharing being aimed at improving the competitive position. The following sections will look more closely at work engagement, person-organization fit, and autonomy, and their effect on knowledge sharing.

Work Engagement and Knowledge Sharing

From an academic perspective, it is assumed that successful organizations with many knowledge workers depend to a high degree on the achievements, quality, and commitment of those knowledge workers (Drucker, 1993). The literature shows that motivational factors possibly influence knowledge sharing (Wang & Noe, 2010). However, there has only been limited research as yet on the relationship between work engagement and knowledge sharing (Rautokaura, 2017). Over recent years, though, the academic literature has increasingly focused on the work engagement aspect and the importance of this attitude to work for knowledge workers in particular. Work engagement is defined in the literature as “a

positive, affective-cognitive state of utmost fulfillment, characterized by three dimensions: vitality, dedication and absorption” (Schaufeli, & Bakker, 2004; Kodden, 2014, 2017). Vitality refers to energy, resilience, perseverance, readiness to invest in one’s work, and the ability to carry on working tirelessly. Dedication refers to a strong commitment to work, experiencing the work as meaningful, and enthusiasm. Absorption refers to being enjoyably absorbed in one’s work and finding it difficult to tear oneself away from it (Schaufeli, Salanova, González-Romá, & Bakker, 2002). According to Bakker & Schaufeli (2008), the emergence of work engagement in employees depends on two dimensions: task demands and resources (Van Ruysseveldt, Smulders, & Taverniers, 2008). Bakker (2008) states that task demands encompass all aspects of work requiring long-lasting physical as well as mental exertion that can lead to stress. An example of this can be heavy pressure of work. Resources encompass all aspects that can contribute to achieving personal growth and development, and to achieving work objectives (Bakker & Demerouti, 2007). Such resources can include autonomy, social support, and feedback from a manager (Bakker & Bal, 2010).

According to, among others, Bakker et al. (2008), work engagement is very important for the success of the organization and achieving a competitive advantage. This study, carried out in 65 organizations from various sectors, shows that the 16 organizations that score highest on the work engagement assessment index recorded a better “return on assets” (ROA), more profit, and more than twice the shareholder value than the 16 organizations that scored lowest on the work engagement assessment index. Another study that summarizes the positive consequences of work engagement for organizations shows that engaged employees perform better, are more productive, make fewer mistakes, are less inclined to leave, and are more customer-friendly (Bakker, 2011). Better performance here refers specifically to the personal performance of engaged employees compared with that of non-engaged employees. According to Bakker, Demerouti, and Verbeke (2004), engaged employees receive, for example, higher scores in evaluations for extra-role behavior than those who are not engaged. In this example, the direct positive relationship between work engagement and performance is striking. The direct relationship between work engagement and knowledge sharing, where knowledge sharing can be classed as an indicator of extra-role behavior (Reychav & Sharkie, 2010), has so far only been studied to a limited extent (Vermeulen, Runhaar, & Konerman, 2014; Blomme & Kodden, 2014). Research by Vermeulen et al. in 2014 showed that engaged teachers share more knowledge. Based on the above-mentioned direct relationship, in this study it is expected that engaged knowledge workers in IT organizations will also be prepared to share more knowledge. This leads to the following hypothesis:

Hypothesis 1: Work engagement is positively related to knowledge sharing.

Person-Organization Fit and Work Engagement

The person-organization fit is a complex and multidimensional concept that can be divided into various dimensions. In the literature on the person-organization fit, different kinds of fit can be distinguished which can contribute to desirable behavior in employees. For example, there is the distinction between the supplementary and the complementary fit, which are integrated into the definition used for person-organization fit. The way in which the person-organization fit is ultimately measured also determines its effect on various outcomes.

The supplementary person-organization fit is the concordance between the personal values of employees and the values of an organization (Van Vianen & De Pater, 2012) (Kristof-Brown, Zimmerman, & Johnson, 2005). People feel most attracted to an organization if these values coincide (Kristof, 1996) (Cable & Edwards, 2004). They are also inclined to work for an organization where this fit is most in evidence (Schneider, 1987). This type of person-organization fit can be used above all to clarify to what extent an employee fits in with the organization (Cable & Judge, 1997). The Attraction-Selection-Attrition theory (ASA) underlies the supplementary person-organization fit (Schneider, 1987). According to this theory, a good person-organization fit arises if there is congruence between the standards, values and goals of the organization and those of the employee. Similarities in these standards, values and goals can ensure a certain level of harmony and goal congruence in relation to the

organization's goals (Schneider, 1987). Values are the preferences, interests, motives and goals that an individual has with regard to his own identity (Chatman, 1989). Standards are the behavioral rules that are generally accepted and that play a role in assessing whether behavior is accepted (Cable & Edwards, 2004). People feel the need to belong somewhere socially (Deci & Ryan, 2002). These feelings are strongest in an environment where other people's values are congruent with their own (Brewer & Harasty, 1996; De Cremer, 2004). The supplementary person-organization fit is a strong predictor of job satisfaction and commitment to the organization (Cable & DeRue, 2002; Gabriel, Diefendorff, Chandler, Moran, & Greguras, 2014; Kristof-Brown et al., 2005). This is important in a competitive environment and a tight labor market (Kristof, 1996) (Bowen, Ledford, & Nathan, 1991), such as the IT sector. Furthermore, the supplementary person-organization fit is predictive of prosocial behavior (O'Reilly & Chatman, 1986).

A complementary person-organization fit can arise if the staff and the organization complement each other (Caplan, 1987) (Edwards, 1991). This fit can be divided into the needs-supplies fit (N-S) and the demands-abilities fit (D-A) (Sekiguchi, 2004). The idea behind this type of fit is that the two parties complement each other with respect to specific characteristics. In a work environment, an organization wants tasks to be performed by employees who have sufficient abilities. This is called the demands-abilities fit (Edwards, 1991). From the staff's point of view, the employee expects a particular remuneration and wants satisfactory working conditions. If the organization can meet these needs, the needs-supplies fit is achieved (Sekiguchi, 2004). This operationalization of the needs-supplies fit has been studied less than the supplementary fit (Bretz, Ash, & Dreher, 1989). Aligning the employee's needs and preferences with the work environment creates a good complementary needs-supplies fit (Sekiguchi, 2004). This is based on the needs-press theory. The environment can contribute toward meeting various financial, psychological and physical needs, as well as task-related and interpersonal growth opportunities that are demanded by employees (Murray, 1938) (Sekiguchi, 2004). The level of autonomy can be an environmental characteristic that meets the individual needs of employees (Cable & Edwards, 2004). The definition of "person-organization fit" used in this study relates to both the supplementary and the complementary fit: "Compatibility between people and organizations arises when: (a) at least one entity supplies what the other needs, or (b) the same fundamental characteristics are shared, or (c) both" (Kristof, 1996).

In this study, the person-organization fit is expected to be an important predictor of work engagement. Various studies show that a good person-organization fit leads to positive work outcomes for the organization, including commitment to the organization (Judge & Bretz, 1992; Carless, 2005), job satisfaction, and dedication within the organization (Cable & DeRue, 2002; Kristof-Brown et al., 2005; Kodden & Van Ingen, 2019). The significant relationship between the person-organization fit and work engagement is also shown, for example, in studies by Saks and Gruman (2011), Kodden and Roelofs (2019), Viljevac, Cooper-Thomas, and Saks (2012), and Biswas and Bhatnagar (2013). According to Bakker and Leiter (2010), work engagement flourishes in organizations that create strong links between the values of the organization and the values of employees, based on two possible sides of the person-organization fit. On the one hand, the organization, based on its values, can promote the person-organization fit so strongly that it attracts employees with the same values. In this way, the organization can also encourage staff loyalty (O'Reilly et al., 1991). These organizations have a clear policy relating to their person-organization fit values. On the other hand, organizations respond to the values that employees bring with them. They consider the values of these employees to be an important predictor of dedication to the job (Cable & Judge, 1996). In this way, organizations support employees' work engagement, by making it possible to adjust various different approaches (Bakker & Leiter, 2010; Kodden & Hupkes, 2019).

Organizations that are able to meet employees' values and needs can bring about greater commitment to the organization as well as better performance and more effort on the part of employees (Lauver & Kristof-Brown, 2001). This can enable organizations to create a situation called person-organization fit, in which stronger feelings and commitment are shown and a certain amount of energy can be released. This

energy can be explained as a certain degree of work engagement. Based on the above, the following hypothesis can be formulated:

Hypothesis 2: Person-Organization fit is positively related to work engagement

Level of Autonomy, Person-Organization Fit and Work Engagement

According to the self-determination theory (SDT), motivation can arise if three basic psychological needs are met: relatedness, competence and autonomy (Deci & Ryan, 2002). One of the objectives of this study is to acquire knowledge and insight relating to knowledge sharing. Another objective is to determine to what extent autonomy has an influence on the intention among knowledge workers in the IT sector to share their knowledge. This is studied by testing to what extent autonomy influences work engagement and thus has an indirect effect on knowledge sharing. An important scientific contribution made by this study is that the SDT has not yet been used to explain the relationship between autonomy and knowledge sharing, with work engagement as a mediating effect. The concept of “having a need” has a long history in the psychology of motivation (Deci & Ryan, 2000) and also in occupational and health psychology (Latham & Budworth, 2006). It is also an important predictor of behavior, such as knowledge sharing (Gagné, 2009). An example of this is need theory, in which people’s behavior depends on the satisfying of some 22 needs, such as achievements, autonomy, solidarity, and power (Murray, 1938). Another example with a more limited number of needs is the needs pyramid, which contains innate needs such as self-actualization and social recognition (Maslow, 1943). This study focuses specifically on the need for autonomy. Increasing knowledge work in IT organizations and the agile working that it involves (Highsmith & Fowler, 2001) raise knowledge workers’ awareness of the importance of autonomy (Reinhardt, Schmidt, Sloep, & Drachsler, 2011). Autonomy is considered an important characteristic of knowledge workers, according to Dove (1998), and it can be seen as an important need within IT organizations. Within a number of theories, there are minor differences with respect to the definition of the term “autonomy.” In the *job characteristics* model, a high level of autonomy stands for employees who experience greater freedom in the way a specific task has to be performed, as well as for employees who have more responsibility for the work results. Here, autonomy is described in terms of personal freedom and independence (Hackman & Oldham, 1976). The job demand control model takes a different view of autonomy. According to this theory, there is no direct link between time pressure and motivation or stress. Instead, these factors depend on the amount of control (autonomy) that an employee enjoys (Karasek Jr, 1979). Autonomy is described here in terms of discretion in making decisions and opportunities for control. The SDT underlines that autonomy, in addition to the importance of being able to organize tasks oneself, is the possibility of working without pressure. The importance of working without pressure outweighs the possibility of actually being able to make one’s own decisions. According to the SDT, this is called “psychological freedom” (Deci & Ryan, 1985). The definition of “autonomy” differs here from that of the job characteristics model and the job demand control model. According to the SDT, the need for autonomy is only satisfied if employees themselves really support the behavior or the reason for the behavior. It does not matter whether the employees initiated the behavior, for example in the case of a choice, or whether they were prompted by their environment (Deci & Ryan, 2002). Furthermore, the empirical usability of Oldham and Hackman’s job characteristics model is shown to be limited in comparison with the SDT (Broeck De Witte, Vansteenkiste, Lens, & Andriessen, 2009). The SDT appears to offer a reliable theoretical framework for positive occupational and health psychology in the context of work (Gagné & Deci, 1995; Vansteenkiste, Lens, De Witte, De Witte, & Deci, 2004). It has been empirically demonstrated to be usable (Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008). The definition of “autonomy” used in this study is as follows: “Autonomy is the need of people to experience full ownership of their behavior and to act with a feeling that they are doing so of their own free will.” This definition of “autonomy” is chosen because it aligns well with the objective of this study. The SDT states that behavior (knowledge sharing) is only demonstrated if the knowledge worker supports the behavior, which meets the need for autonomy. This study tries to find out whether knowledge workers

are prepared to share their knowledge and whether they do this of their own free will, without it being imposed on them. Therefore, hypotheses 3, 4 and 5 are:

Hypothesis 3: *The level of autonomy is positively related to work engagement.*

Hypothesis 4: *The positive relation of the level of autonomy and knowledge sharing is fully mediated by work engagement.*

Hypothesis 5: *The positive relation of Person-Organization fit and the level of knowledge sharing is fully mediated by work engagement.*

METHOD

Sample and Procedure

The data was collected via an online questionnaire that was distributed via mail, containing an anonymous link, and by means of convenience and snowball sampling. Our sample consisted of professionals working in IT around the world in a variety of jobs and organizations. The data was collected in the period July 30, 2018 through October 1, 2018. A total of 438 knowledge workers began the study and 343 knowledge workers filled in the online survey completely. This represents a completion rate of 78.31%. Two of the 343 respondents, who belonged to the protest generation (1940-1955), were removed, because this group turned out not to be large enough for relevant results to be obtained in relation to it. Outliers are respondents who can give a strongly distorted picture of reality. A respondent is an outlier if they have a Z-score that is greater than 3 or smaller than -3. On this basis, 1 respondent was an outlier for both knowledge sharing and work engagement. It was decided to exclude this respondent from the further analysis, leaving a total of 340 respondents. More than three-quarters of the respondents were men (76.0%). The division according to the various generations was as follows: 53 respondents belonged to generation X (1955-1970) (15.5%), 164 respondents belonged to the pragmatic generation (1970-1985) (48.1%) and 124 respondents to generation Y (1985-2000) (36.4%). Out of the total, 78.9% of the respondents were highly educated. As regards the length of the employment relationship, 56.9% had been in service longer than three years. Of all the respondents, 63.3% worked for an organization with more than 250 employees. Their current roles within the organization were as follows: 69 managers (20.2%), 127 specialists (37.3%), 58 consultants/advisers (17.0%), and 87 knowledge workers with a supporting role (25.5%).

Measures

Knowledge Sharing

By using the questions from the study by Lin (2007), a variation on the study by Taylor and Todd (1995), respondents were asked about their inclination to share knowledge. Four items from the Firm Innovation Scan (FIS) by Lin (2007) were used to measure knowledge sharing. These items were measured using a 7-point Likert-scale, ranging from “Totally disagree (1)” to “Totally agree (7).” The factor analysis showed that all questions were strongly connected and loaded on one factor. See also Appendix B. The reliability of the construct is guaranteed by the Cronbach’s alpha coefficient of 0.81.

Work Engagement

Schaufeli and Bakker (2004) created a valid questionnaire for the applied definition of work engagement: *a positive state of mind of overwhelming satisfaction which is characterized by vitality, dedication and absorption*, which questionnaire is used in this research (the UBES-15). With the help of another 7-point Likert scale (always/daily = 6, never = 0), five questions for the three items were used to measure the level of vitality, dedication and absorption. Answers to questions such as “At work I feel fit and strong” should then indicate the level of vitality, while questions such as “My work inspires me” and

“Time flies when I am working” indicated respectively the level of dedication and absorption. The internal consistency of this scale (Alpha= .93) was also found to be high.

P-O Fit

In total, 6 questions were asked in order to demonstrate the level of supplementary fit (3 questions) and needs-supplies fit (3 questions) based on a 7-point Likert scale (7 = totally agree, 1 = totally disagree). These questions are from a study by Cable and DeRue (2002). They refer to questionnaires used in which the definition of “person-organization fit” corresponds to the definition in this study (Kristof, 1996) (Lauver & Kristof-Brown, 2001). The factor analysis shows that both clusters load on one factor (Appendix B). All six questions are included as a construct in further analyses. The reliability of the whole construct is guaranteed by a Cronbach’s alpha coefficient of 0.92.

Autonomy

To determine the level of autonomy, a questionnaire based on NOVA-WEBA was used (Netherlands Organisation for Applied Scientific Research (TNO) Work Research Questionnaire Work Content – Welfare At Work) (Kraan, Dhondt, Houtman, Nelemans, & De Vroome, 2000). This is a construct consisting of 9 questions based on a 7-point Likert scale (7 = totally agree, 1 = totally disagree) and with the level of autonomy experienced from the point of view of the knowledge worker. The construct is in line with the chosen definition of “autonomy” within the SDT (Deci & Ryan, 2000). According to the SDT, every individual has a need for autonomy. For the purposes of this study, the more autonomy is experienced, the better the need is met. The factor analysis showed that all questions had a strong connection and loaded on one factor (Appendix B). The reliability of the whole construct was guaranteed by a Cronbach’s alpha coefficient of 0.90.

Control Variables

In addition to common individual level (e.g., gender, age group, contract status, job experience and length of labor contract) and organizational level control factors (e.g., size and type of organization), we used possible contingency factors (e.g., environmental uncertainty) as additional control variables in this study. Following recommendations made by Podsakoff and colleagues (2003), several steps were taken to minimize the effects of common method bias in this study. First, we carefully constructed the items. By defining unfamiliar terms, avoiding vague concepts, and keeping questions simple, specific and concise, we reduced item ambiguity. Second, we separated the variables of interest in the questionnaire to create the appearance that the measure for autonomy was not related either to the mediating variables or to the dependent variables of work engagement and knowledge sharing. This helps reduce biases in the response by making a prior response less salient, available or relevant. Third, respondents were assured of complete confidentiality and encouraged to answer the questions as honestly as possible. This was done to help reduce any evaluation apprehension and make them less likely to provide socially desirable responses. Fourth, Harman’s Single Factor Test was performed.

Although the chances of socially desirable responses cannot be excluded, this factor does not appear to be a serious threat in this study, as the results are in fact in line with studies on work engagement and its effects on organizational results (Schaufeli & Bakker, 2003; Bakker et al., 2004; Notenbomer, Roelen, Groothoff, van Rhenen, & Bultmann, 2018). With the potential for social desirability and same-source bias, given the procedural steps taken to reduce the threat of bias, the results of Harman’s Single Factor Test appear to indicate that common method variance is not a serious threat in this study.

RESULTS

Table 1 displays descriptive statistics, correlations, and coefficient alphas for all factors extracted from the survey data.

TABLE 1
DESCRIPTIVE STATISTICS AND INTERCORRELATIONS BETWEEN
VARIABLES IN THE STUDY

		Mean	SD	1	2	3	4
1.	Knowledge sharing	6.0949	.83548	(.81)			
2.	Work engagement	4.4799	.91009	.314***	(.93)		
3.	P-O fit	4.9515	1.17448	.186**	.560***	(.92)	
4.	Autonomy	5.3474	1.01120	.175***	.306***	.294**	(.90)

***: $p < .001$; **: $p < .01$; *: $p < .05$

Knowledge sharing correlates positively with all the variables from the conceptual model: work engagement ($r = .314$, $p < .001$), person-organization fit ($r = .186$, $p = .001$) and autonomy ($r = .175$, $p = .001$). Additionally, work engagement is shown to be positively correlated with the person-organization fit ($r = .560$, $p < .001$) and autonomy ($r = .306$, $p < .001$). Autonomy is positively correlated with the person-organization fit ($r = .294$, $p < .001$). This indicates that a higher score for person-organization fit coincides with a higher score for autonomy. By performing a hierarchical Ordinary Least Squares regression analysis (OLS), which was used on the basis of three models, it is possible to show clearly the specific connection between the variables (Table 2). In model 1, work engagement is the dependent variable, and knowledge sharing is not included. In model 2, knowledge sharing is added and knowledge sharing becomes the dependent variable, but the mediating factors are not yet included. In model 3, the mediating factors are also included.

The regression analyses show that the assumed relationships in the conceptual model are significant for model 1, ($F = 36.2$, $p < .001$), model 2 ($F = 3.71$, $p < .010$) and model 3 ($F = 6.94$, $p < .001$). It can be seen that one can ultimately explain 9.5% of knowledge sharing on the basis of the adjusted R-square, while one can explain 34.1% of work engagement. The explanatory power of the model is therefore higher for work engagement. This means that other explanations can also be given for knowledge sharing.

Various direct significant relationships can be distinguished in the regression analyses (Table 2). In terms of variables of the conceptual model, person-organization fit and autonomy both have a significant effect on work engagement, with the effect of person-organization fit ($\beta = .519$, $p < .001$) being stronger than that of autonomy ($\beta = .138$, $p = .003$). Based on the standardized beta coefficients, it is to be concluded that the effect of person-organization fit is 3.8 times stronger than that of autonomy. Hypotheses H2 and H3 can be confirmed on this basis. No significant effects can be observed on the basis of the control variables. In model 2, it is shown that the direct effect on knowledge sharing of person-organization fit on the one hand and autonomy on the other hand is positive and significant ($\beta = .147$, $p = .009$) ($\beta = .139$, $p = .014$). The standardized beta coefficients are approximately the same for both effects (factor 1.1). In model 3 it can be observed that the direct effect of work engagement on knowledge sharing ($\beta = .301$, $p < .001$) is positive and significant. Hypothesis H1 can be confirmed on this basis. It can also be seen that the effects of person-organization fit ($\beta = -.009$, $p = .888$) and autonomy ($\beta = .097$, $p = .080$) disappear. This points to mediating effects, which will be explained in more detail in the next section.

TABLE 2
HIERARCHICAL OLS REGRESSION MODEL

Variables	Model 1			Model 2			Model 3		
	B	SE	P	B	SE	P	B	SE	P
P-O fit	0.042	0.036	<.001	0.105	0.040	0.009	-0.006	0.045	0.888
Autonomy	0.124	0.042	0.003	0.115	0.047	0.014	0.080	0.046	0.080
Pragm. Gen. (1970-1985)	-0.009	0.118	0.939	0.017	0.131	0.897	0.020	0.127	0.878
Gen. Y (1986-2000)	-0.233	0.124	0.060	0.056	0.137	0.684	0.120	0.134	0.370
Organizational Size	-0.054	0.085	0.522	0.061	0.094	0.521	0.076	0.091	0.409
Work engagement							0.276	0.059	<.001
R^2		0.351			0.053			0.111	
$Adj.R^2$		0.341			0.038			0.095	
F -value		36.2***			3.71**			6.94***	

***: $p < .001$; **: $p < .01$; *: $p < .05$

Based on the earlier hierarchical regression analysis, it cannot yet be established with certainty that there is significant mediation. However, it was noted in model 3 that the effects of person-organization fit and autonomy disappear when the mediator work engagement ($\beta = .301, p < .001$) is added. This points to mediation. In order to link a significance to the mediating effects, model 4 of the Process module is used as an additional analysis. A significant mediating effect exists if it is observed that the value between the BootLLCI and BootULCI passes through the 0 value (Field, 2016). The results of this can be found in Table 3.

TABLE 3

MEDIATION ANALYSIS Mediator	Effect	BootSE	BootLLCI	BootULCI
Autonomy > Work engagement > Knowledge Sharing (H4)	0.0342	0.0157	0.0088	0.0695
P-O fit > Work engagement > Knowledge Sharing (H5)	0.1109	0.0277	0.0583	0.1687

The mediation analysis shows that the effect of autonomy on knowledge sharing is significantly mediated by work engagement ($p < .050$). The size of the effect here is .0342. Because autonomy does not continue to have a significant direct effect on knowledge sharing when the mediator is added, there is full mediation. As a result, hypothesis H4 can be confirmed. The effect of the person-organization fit on knowledge sharing is significantly mediated by work engagement ($p < .050$). The size of the effect is .1109. The direct effect of person-organization fit disappears together with the mediator in the model, so that there is full mediation. As a result, hypothesis H5 can be confirmed.

DISCUSSION

The theoretical framework has shown that autonomy, person-organization fit, and work engagement can encourage knowledge sharing among IT knowledge workers. The results of this study are compared with the relevant theories. The possible causes of differences and similarities are explained.

First, the results seem to indicate that there is an effect linking work engagement and knowledge sharing. This finding is in line with the theory that work engagement can encourage knowledge sharing (Vermeulen et al., 2014). Although the study by Vermeulen et al. (2014) was conducted among knowledge workers, specifically teachers, the target group is too limited to conclude that this effect also exists in IT organizations. However, this study does show that this effect can also be observed in knowledge workers in IT organizations. We can conclude that work engagement in IT organizations has a positive effect on knowledge sharing, which is an addition to the existing literature.

Second, the study shows that person-organization fit possibly has a positive effect on work engagement. In previous studies, Saks and Gruman (2011), Biswas and Bhatnagar (2013), and Viljevac et al. (2012) demonstrated the relationship between person-organization fit and work engagement. On this basis, hypothesis H2A was drawn up for this study. This hypothesis can be confirmed based on the results of this study. Bakker and Leiter (2010) assume that employees are more attracted to an organization if its values correspond to their own, or if it responds to the values that an employee brings to the organization. This person-organization fit might then lead to work engagement. This study shows that there is a positive direct relationship between person-organization fit and knowledge sharing. These findings are in line with the academic literature, which shows that the person-organization fit has a positive effect on knowledge sharing, because employees increasingly see knowledge sharing as an important value of an organization. As a result, the probability of knowledge sharing increases when there is a good person-organization fit (Kang, Morris, & Snell, 2003). The probability of knowledge sharing can increase, because employees are more likely to include each other in their social networks when there is a robust person-organization

fit (Cabrera & Cabrera, 2005). In that case, employees are more willing to share knowledge, according to these researchers.

Third, the results indicate that all direct effects of autonomy on person-organization fit, work engagement, and knowledge sharing are positively present. The effect of autonomy on knowledge sharing has already been described in the literature. Autonomy is the need of people to experience full ownership of their behavior and to act with a feeling that they are doing so of their own free will. The presence of autonomy leads to needs being met. As a result, the knowledge worker is more inclined to share knowledge of his own free will (Gagné, 2009). The positive effect of autonomy on work engagement is in line with the findings of the theoretical framework. The SDT assumes that meeting the need for autonomy activates a particular level of motivation. This results in employees feeling engaged (Van Ruysseveldt et al, 2008). The results also show that autonomy, as described in the theoretical framework, may indeed lead to work engagement. The results of this study also show that the direct effect of autonomy on the person-organization fit is positively present. In the theory it is assumed that a better person-organization fit can be created through autonomy. This is because autonomy can be a fundamental characteristic of the environment which can meet the individual needs of knowledge workers. This leads to a better person-organization fit (Cable & Edwards, 2004).

CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Australia is typifying the growth and spending patterns of a country shifting quickly to digital business (“Gartner forecasts,” 2018). In line with the expectation arising from the theoretical framework, this study has produced indications that the effect of person-organization fit on knowledge sharing is mediated by work engagement in IT organizations. This is an important contribution by this study to the academic literature, because, as far as is known, this effect has not yet been empirically substantiated in the academic literature. However, a similar study has shown that work engagement has a mediating effect on the relationship between person-organization fit and several positive work outcomes, such as commitment to the organization and job satisfaction (Biswas & Bhatnagar, 2013). This study showed that knowledge workers have the intention of sharing knowledge because their standards, values, and needs correspond to those of the organization. This makes the knowledge workers more engaged with their work, which can ultimately increase their willingness to share knowledge. The results show that work engagement may have a mediating effect on the relationship between autonomy and knowledge sharing. Previous research has shown that work engagement has a mediating effect on the relationship between autonomy and innovative behavior (Shalley, Zhou, & Oldham, 2004; De Spiegelare, Van Gyes, De Witte, Niesen, & Van Hootegem, 2014). Knowledge sharing is an important condition for the emergence of innovative behavior (Lin, 2007). Based on the results of this study, it can be established that the relationship between autonomy and knowledge sharing can be explained by the mediating effect of work engagement. When a knowledge worker’s need for autonomy is met, his work engagement is strengthened. In consequence, the knowledge worker may be more prepared to share his knowledge in IT organizations.

Finally, the link between autonomy and work engagement could be explained by a mediating effect of the person-organization fit. This is a partial mediation, because the direct effect of autonomy on work engagement remains present. When the need for autonomy is met, a better person-organization fit is created (Edwards, 1991; Sekiguchi, 2004). This gives employees more energy, which is expressed in an increase in work engagement. The partial nature of this mediation can perhaps be explained by the fact that autonomy is an important resource in the work engagement model. This may be why the direct relationship between autonomy and work engagement continues to exist (Bakker et al, 2004).

The control variables “organization size” and “generations” are also important for this study’s conclusion. The correlation analysis in the ANOVA test showed that the level of work engagement is significantly different from one generation to another. The t-test showed that employees of large organizations (with more than 250 employees) experience less autonomy than those working in small organizations. However, the regression analysis of knowledge sharing showed that neither control

variable adds additional explanatory power to the model. On this basis, it can be concluded that there are no significant differences between different generations and organization size. This also applies to the effect of these factors on knowledge sharing.

Finally, the most important implications of this study are presented. Section 1 explained that the study tries to make a contribution both at the scientific and social level. As far as the researcher knows, previous studies have not shown the mediating effects of person-organization fit and work engagement on knowledge sharing at a scientific level. This study indicates that the person-organization fit and work engagement do indeed have mediating effects on knowledge sharing. This outcome can therefore be seen as an important qualitative addition to the academic literature. Additionally, the whole study can be considered an important addition to the literature, because it focuses specifically on IT organizations.

Although quantitative research is a good method to prove whether relationships between constructs exist, it proved to be very difficult to gather a large sample within the Dutch IT sector. This probably has to do with the fact that the preselected group of potential respondents was narrow. Another limitation of this research was that the data was only gathered among IT professionals. This raises the question whether the results found in this study would differ if the population included other professionals, for example lawyers or controllers. Another recommendation for further research is to use a different technique in obtaining the data. Interviewing IT professionals or their managers would have made it possible to anticipate more regarding the answers given and to obtain more detailed information about the reasons behind the conceptual constructs, and subsequently to give more insight into the “why” of the relationships between the different constructs.

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