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The effect of knowledge sharing on individual performance

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Dissertation presented as partial requirement for obtaining the
Master's degree in Information Management

NOVA Information Management School
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by

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Dissertation presented as partial requirement for obtaining the Master's degree in Information Management, with a specialization in Knowledge Management and Business Intelligence

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DEDICATION

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ABSTRACT

The main goal of this research was to evaluate the effect of knowledge sharing on individual performance success. To understand the factors stimulating individuals to share knowledge and to provide further insights on the drivers of knowledge sharing and individual performance success. According to methodology, our target population was individuals with high educational and professional level and also with unlimited level of knowledge sharing. Based on the results of pre-quality test we built a six – factor research model that impacted on the individual performance success. After surveying 291 respondents, the derived results using SEM-PLS tool showed that tacit knowledge and intrinsic motivation are the principal factors promoting to the individual performance success. Based on the importance of factors leading to successful performance, top management will be able to set precedence, thus developing knowledge sharing outputs. We also provided suggestions for future research.

Keywords: Individual performance; explicit knowledge; tacit knowledge; extrinsic motivation; enjoyment.

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LIST OF ABBREVIATIONS AND ACRONYMS

- **EN** - Enjoyment
- **TK** - Tacit Knowledge
- **EK** – Explicit Knowledge
- **IM** – Intrinsic Motivation
- **EM** – Extrinsic Motivation
- **IP** – Individual Performance
- **SECI** - Socialization, Externalization, Combination, Internalization.

1. INTRODUCTION

Nowadays knowledge sharing plays an essential role in organization's success. For increasing company's competitiveness, managers and top managers should stimulate employees to share their knowledge with co-workers. Referring to Young Choi et al. (2010), sharing knowledge among individuals enhances organizational productivity and success. Consequently, the lack of knowledge sharing among employees may cause absence of skills, abilities to perform advanced work (Zhang et al., 2013). Numerous researchers argued that the reason of previous studies seemed to be limited because of knowledge type. Knowledge can be divided into tacit and explicit (Nonaka & Takeuchi, 1996). Tacit knowledge is not freely expressed, as it is based on the life experience of the individual, such as abilities (Nonaka & Takeuchi, 1996). In contrast, explicit knowledge is naturally articulated in a form of manuals, procedures (Nonaka & Takeuchi, 1996). Accordingly, it is more difficult to share tacit knowledge with colleagues than explicit knowledge, as sharing tacit knowledge requires significantly more time and effort (Reychav & Weisberg, 2010).

According to past studies, some researchers investigated knowledge management theory in the combination of team creativeness and company's performance development (Centobelli et al., 2017). Dong et al.(2017) offered how to improve the creativeness of employees via individual performance and sharing knowledge with co-workers. For knowledge sharing improvement among employees, the social network provided a possibility such as online fellowships (Aghdam & Navimipour, 2016) where individuals have an opportunity to cooperate and share useful information in a cosy environment (Zhang et al., 2014). Additionally, it is important to point out a significant effect of knowledge sharing on the improvement of customer service quality, new product development (McAdam et al., 2008), and innovation (Lin, 2007), which is connected to our research. However, these studies highlight the significance of knowledge sharing, but the impact of knowledge sharing on individual performance is not well comprehended and explored. This means that previous investigations differently impacted on sharing knowledge, as humans adapt their sharing intentions in accordance with various aspects and needs. Therefore, we determined that there is a research gap in the literature regarding the influence of knowledge sharing on the performance of individuals. Based on this research gap we formulated a research question "Which factors impact on individual performance success?".

The main goals of this study are to evaluate the effect of knowledge sharing on individual performance success, to understand the factors stimulating individuals to share knowledge and to provide further insights on the drivers of knowledge sharing and individual performance success. Previous studies demonstrated a considerable and positive impact of motivation on the amount of knowledge he or she shares (Käser & Miles, 2001; Lam & Lambermont-Ford, 2010; H.-F. Lin, 2007). The factors enjoyment, intrinsic motivation, extrinsic motivation, tacit knowledge, explicit knowledge, were included into a research model and its validity was tested and verified.

Throughout the study, we should find the answers for the research objectives. First, analysing the relationships between dimensions we needed to evaluate knowledge sharing impact on successful individual performance. Second, using SEM-PLS tool we needed to identify and understand the factor, which stimulates individuals to share knowledge. Thirdly, after analysing the derived data, further insights in the drivers of knowledge sharing on individual performance should be provided. Studying the non-monetary motivation and monetary motivation with successful performance among individuals, may interpret humans' convictions. In addition, no investigation has carried out to assess an enjoyment dimension and its effect on knowledge sharing and, hence its impact on successful performance among individuals. In addition, by exploring the impact of mediation on individual performance, we contributed to the literature. By connecting this dimension (tacit knowledge), it evaluates the full effect of enjoyment and its direct and indirect impact on individual performance success.

The structure of this paper is organized as follows. Firstly, we introduce knowledge sharing concept, and individual performance improvement. Next, we introduce a research model with related hypotheses. In conclusion, we deliberate the derived outcomes, referring theoretical implications along with research limitations and further studies.

2. LITERATURE REVIEW

Being one of the key centred and most discussible topic, knowledge sharing gives opportunities through which individuals are able to interact reciprocally, and develop the competitiveness of an organization (Wang & Noe, 2010). According to Polanyi's concept, SECI model proposed by Nonaka and Takeuchi (1997) explains a role of tacit and explicit in the process of knowledge creation. Knowledge sharing between individuals is very essential

process for learning new techniques, solving problems, initiating new scenarios. As Nonaka (1994) mentioned, knowledge presents in the form of spiral and can be two types: tacit and explicit knowledge. According to Nonaka (1994), SECI model is a combination of tacit and explicit knowledge. The combination of tacit to tacit is called Socialization. Socialization is a process of sharing tacit knowledge through observation, imitation, practice. The combination of tacit to explicit is called Externalization. Externalization is the process of articulating tacit knowledge into explicit concepts. The conversion of explicit to explicit is named Combination. Combination is the process of embodying explicit knowledge into a knowledge system. The combination of explicit to tacit is named Internalization. Internalization is the process of embodying explicit knowledge into tacit knowledge.

2.1 Tacit Knowledge

Being inexpressible kind of knowledge, tacit knowledge sharing is rooted in individual experience (Nonaka & Takeuchi, 1996; Polanyi, 1966). Ikugiro Nonaka (1994) maintained that tacit knowledge is based on actions, thoughts, hence it is hard to convert into readily transferred knowledge type (Alavi & Leidner, 2001). Von Hippel (1994) determined information stickiness term as a consumption to transmit a piece of information to a certain space in a shape utilizable by user. Tacit knowledge by nature requires more time and effort than explicit (von Hippel, 1994). As a result, it is easy for individuals to share knowledge requiring monetary and non-monetary rewards in return.

Furthermore, several researchers have proposed the high economic significance of tacit knowledge than explicit (Reychav & Weisberg, 2010). Tacit knowledge has a higher economic value since knowledge obtains via direct interaction between two individuals. Accordingly, tacit knowledge costs more to share than explicit. Small and Sage (2005) proposed that tacit knowledge is comprised of practical skills and cognitive skills such as private beliefs, attitudes and mindsets. Being highly personal and practice-based, tacit knowledge is hardly expressible and consequently, difficult to interact with others. As mentioned by Holste and Fields (2010), tacit knowledge can be shared only via direct contact and the contributing factors can be employees' enthusiasm and ability to share their knowledge and experience. For instance, IT employees, decide to share tacit knowledge based on personal experience (Bassellier et al., 2001). A cognitive component refers to an individuals' visions such as their beliefs, viewpoints, which in the example of the IT professionals will impact on their professional role and thus

their eagerness to share tacit knowledge. Tacit knowledge is comprehended through concepts of skill and practice (Berman et al., 2002), therefore there is a possibility that employees will not share their valuable knowledge because of fear of losing benefits (Gee Woo Bock et al., 2005). The main factors of knowledge sharing reluctance are the risk of losing promotions and monetary, non-monetary rewards (Choi & Lee, 2003). Hence, non-monetary reward such as enjoyment can contribute tacit knowledge sharing. However, there are some other difficulties which may prevent formal knowledge sharing involve difficulty of expressing tacit knowledge that is connected to cultural and behavioural barriers to share knowledge and personal aspects (Holste & Fields, 2010). Although these obstacles may be overcome by building relationships between co-workers on trust (Koskinen et al., 2003). According to recent studies, several researchers explored the impact of tacit knowledge on innovation management in organizational context. They declared that the leading factors of sharing tacit knowledge are motivation and trust (Holste & Fields, 2010; Kucharska et al., 2017; Ranucci & Souder, 2015). The focus of the study was to test how tacit knowledge will impact on innovation in organizational context. However, the studies how knowledge sharing impacts on individual performance are too limited and require further research.

2.2 Explicit Knowledge

According to Ikujiro Nonaka (1994), explicit knowledge or "codified" knowledge is formal, highly impersonal and systematic. Comprising of facts, rules, policies, explicit knowledge can be easily communicated, articulated and shared (Nonaka & Takeuchi, 1996). Being highly impersonal, explicit knowledge shares among individuals in the form of training, debriefing and documentation.

According to previous studies, it was suggested that explicit knowledge is less expensive, because it is easy to share with others than tacit knowledge (Reychav & Weisberg, 2010). Several researchers argued that non-monetary and monetary motivations are highly significant for both types of knowledge sharing (Osterloh & Frey, 2000). Reychav and Weisberg (2010) stated that individuals who have eagerness to share tacit knowledge are apparently have willingness to share their explicit knowledge to gain financial and non-financial benefits. According to some researchers, it was investigated how trust and guanxi orientation impact on knowledge sharing intentions in companies located in China. The research showed that personal and impersonal knowledge have different level of impact (Huang et al., 2011). As

proposed by Coakes (2006), impersonal knowledge sharing appears more frequent in the organizations than personal knowledge. He also mentioned that formal language, management mechanisms in the form of procedure will facilitate individual's eagerness to share their impersonal knowledge. Recent studies investigated how explicit knowledge impacts on educational sector. Explicit knowledge can be created, written and transferred between school activity units (Lombardi, 2019). In addition, the explicit transfer of knowledge among teachers increases the level of interaction among them and impacts on their performance (Lombardi, 2019).

2.3 Individual Performance

Referring to effectiveness and productivity, performance plays a crucial role not only for company, but also for its employees (Sonnetag & Frese, 2005). According to this research, individual performance will be discussed not from organizational point of view, but at the individual context to express how the efficiency and effectiveness of different types of knowledge will impact on performance between individuals.

The cultural aspect of performance is engaged with the significance and eagerness of employees to gain the targets (Javidan & House, 2001). In communities oriented to high performance there is a growth of emphasis on performance via interact between co-workers (Hofstede, 2001). These communities motivate and stimulate people for engaging to share knowledge for growth of performance outputs (Wollan et al., 2009).

3. RESEARCH MODEL AND HYPOTHESIS

Personal motivations are considered as prominent and leading factors in sharing knowledge. Thus, our conceptual model comprises of 6 theoretically well-grounded variables, as demonstrated in Figure 1. In this research, individual performance was selected as dependent variable. As independent variables, five dimensions that impact on individual performance were defined which are enjoyment, tacit knowledge, explicit knowledge, intrinsic motivation and extrinsic motivation. We tend to suppose that by gathering all five factors in the conceptual model, a consecutive characterization of the individual performance will be proposed.

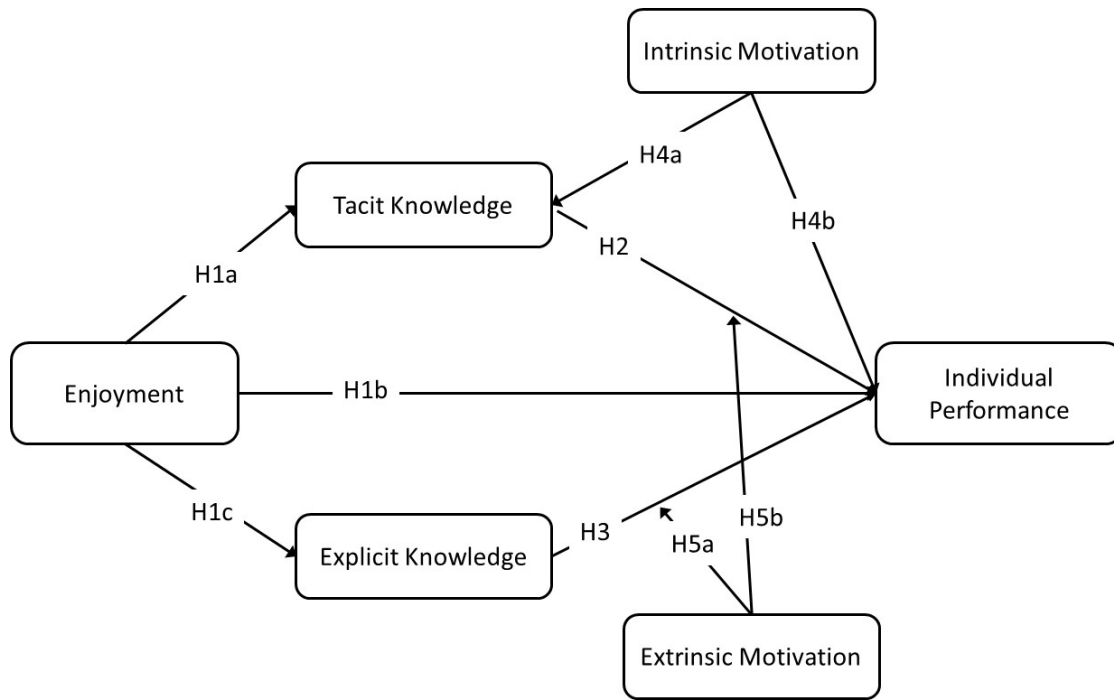


Figure 1 - Research model

3.1 Enjoyment

Enjoyment originates as an incentive based on the relationship between an individual and his or her own self-esteem. Previous studies defined a strong correlation between enjoyment in assisting others and intentions of knowledge sharing (Lin, 2007). According to prior investigations, some researchers reported enjoyment as a factor significantly impacts on knowledge sharing process. In addition, Enjoyment has been declared as a prominent factor in promoting employee knowledge sharing (Lin, 2007). According to Cabrera et al. (2006), individuals with high level of enjoyment are most tend in knowledge sharing process. Moreover, Chennamaneni et al. (2012) found that the high level of enjoyment among individuals will cause the higher impact on knowledge sharing intentions among team and thus, will impact on individual performance. In addition, Chennamaneni et al (2012) tend to think that the reason of sharing knowledge with others is because of enjoying the process assisting others. Accordingly, H1a, H1b and H1c hypotheses are generated:

H1a: Enjoyment positively influences on individuals' tacit knowledge.

H1b: Enjoyment positively influences on individuals' performance.

H1c: Enjoyment positively influences on individuals' explicit knowledge.

3.2 Tacit Knowledge

Being an inexpressible type of knowledge, tacit is rooted in individual experience. Tacit knowledge is comprehended through ability or practice (Gee Woo Bock et al., 2005). In an organizational context, tacit knowledge comprised of practical skills and cognitive abilities, such as private beliefs, attitudes and mindsets (Small & Sage, 2005). The cognitive skill is referred to an individual's mindsets. As a result, it will influence on individual's professional status and individual's eagerness to share personal knowledge and performance itself. Several researchers argued that individuals with a supreme experience contribute to knowledge sharing more than less-successful individuals (Tan & Libby, 1997), and consequently there is a significant correlation between tacit knowledge are performance success (Fang & Zhang, 2014). Hence, this leads to the following hypothesis:

H2: Tacit knowledge positively influences on individuals' performance.

3.3 Explicit Knowledge

Explicit knowledge exists in different variations, including files, databases (Ikugiro Nonaka,1994). According to Alavi and Leidner (2001), explicit knowledge is transmitting through simple communication which makes it easily shared among individuals. Explicit knowledge can be used in the form of interviews, trainings to improve individual performance. Consequently, H3 hypothesis is proposed:

H3: Explicit knowledge has a positive impact on individuals' performance.

3.4 Intrinsic Motivation

Individuals with high level of intrinsic motivation are impacted by delight and interest participating in knowledge sharing process. Past studies demonstrated how non-monetary rewards positively impact on knowledge sharing and on individuals' attitude and behavioural intentions (Wasko & Faraj, 2005). Accordingly, H4a and H4b hypotheses are posit:

H4a: Intrinsic motivation positively influences on tacit knowledge.

H4b: Intrinsic motivation positively influences on individuals' performance.

3.5 Extrinsic Motivation

Stimulating employees to share valuable knowledge, managers motivate them by high performance bonuses, paid vacation days and professional promotions. According to previous studies, employees who focused on extrinsic benefits were tend to perform different level of

work complexity and thus had an eagerness to share knowledge with co-workers (Cabrera et al., 2006). When individuals receive a monetary benefit for their knowledge, they show a willingness in cooperation. Hence, H5a and H5b hypotheses are posit:

H5a: Extrinsic motivation is a moderator between tacit knowledge and individual performance.

H5b: Extrinsic motivation is a moderator between explicit knowledge and individual performance.

3.6 Mediating role of tacit knowledge and explicit knowledge

Knowledge management shows how tacit and explicit knowledge can set a link between enjoyment and individual performance (Wasko & Faraj, 2005). Tacit and explicit knowledge could be defined as mediators. According to Cabrera et al. (2006), the impact of enjoyment, intrinsic motivation to individual performance through knowledge sharing and hence relates to successful performance. Thus, we hypothesize:

H6a: Tacit knowledge is a mediator between enjoyment and individual performance.

H6b: Explicit knowledge is a mediator between enjoyment and individual performance.

H6c: Tacit knowledge is a mediator between intrinsic motivation and individual performance.

4. METHODOLOGY

The measurement items (Appendix A) were adapted from several relevant knowledge management literature. Tacit knowledge (TK) was adapted from (Bock et al., 2005), explicit knowledge (EK) was adapted from (Gee W. Bock & Kim, 2002; Gee Woo Bock et al., 2005), individual performance (IP) was adapted from (Bhattacharjee,2001), extrinsic motivation (EM) and intrinsic motivation (IM) were adapted from (Bock & Kim, 2002; Bock et al., 2005; Lin, 2007), enjoyment (EN) was adapted from (Lin, 2007). The mentioned items were added in Appendix A.

The target population comprised of high-educated and professionally active individuals who were involved in knowledge sharing process at least at a workplace, as a team member or a partner. The required data for this research was collected via online survey. The questionnaire was built in English, and the survey was collected from individuals, who live worldwide. The professional social network LinkedIn was used to search individuals with suitable profiles and invite them to participate in the survey.

All the questions were measured using seven-point Likert scale, anchored from strongly disagree (1) to strongly agree (7). The quality pre-test was distributed among 44 respondents. This pre-test aimed to improve the questions and remove unclear and ambiguous items, making the survey easily comprehend. A total of 620 invitations were delivered on 12 October 2020. The final survey was published online from 12 October 2020 to 21 October 2020, a total of 291 valid and completed replies had been collected, corresponding a 48.4% response rate. As show in Table 1, 51.5% are female, 86.9% attended higher education, and the average age is 34 years old. Considering professional status, most individuals (77.3%) are professionally active.

Table 1 - Demographic data of responses

Gender	N	%	Age	N	%
Male	141	48.5	18-25	43	14.8
Female	150	51.5	26-32	87	29.9
			33-48	141	48.5
			49 and over	20	6.9
Professional status	N	%	Academic Degree	N	%
Employee	225	77.3	Elementary High school	4	1.4
Self-Employed	29	10.0	High school	34	11.7
Student	21	7.2	Bachelor's Degree	144	49.5
Unemployed	12	4.1	Master's Degree	101	34.7
Retired	4	1.4	Doctoral Degree	8	2.7

5. RESULTS

The analytical part of this study was controlled by using structural equation modelling (SEM), a technique which consists of a combination between one descriptive technique and one explanatory technique, which allow contemporaneously analyse the measurement and the structural part of the model that allow us to estimate the latent variables. As proposed by (Chin et al., 2003), partial least squares (PLS) is a method commonly used in information system research, so it was used to test our model hypotheses, to ensure that the result of the structural relationships established is received from a set of measurement tools with psychometric attributes.

5.1 Measurement model

To assure the suitability of the measurement model, we have assessed the (i) internal consistency, (ii) convergent validity, and (iii) discriminant validity (Hair Jr et al., 2016). The internal consistency (i) is measured by composite reliability (CR) and Cronbach's alfa (CA). Table 3 shows the CR and CA, since all constructs scored above 0.8, has good internal consistency (Straub, 1989). The convergent validity (ii) was tested through the average variance extracted (AVE) should be higher than 0.5 showing that the latent variables explain more than half of the variance of their indicators (Henseler et al., 2009; Sarstedt et al., 2014). The AVE value as can see in Table 3 is above of threshold of 0.5 for each construct, which assure convergence. The outcomes derived a guarantee that the measures used in this research are valid and reliable. The discriminant validity (iii) test was also performed and according to Churchill (1979) and Henseler et al.(2009), loadings should be greater than 0.7, and every loading below 0.4 should be erased from the model. Table 2 shows loadings are greater than 0.7, and loading should be greater cross-loadings. To ensure discriminant validity, square root of means (diagonal values in bold) should be greater than the correlation between each pair of constructs (off-diagonal values) (Fornell & Larcker, 1981).

Table 2 - PLS loadings and cross-loading

Constructs		EN	TK	EK	IM	EM	IP
Enjoyment (EN)	EN1	.898	.631	.527	.514	.134	.546
	EN2	.913	.639	.496	.455	.013	.460
	EN3	.941	.660	.559	.518	.101	.513
Tacit knowledge (TK)	TK1	.577	.802	.528	.312	-.002	.394
	TK2	.583	.820	.423	.338	.045	.370
	TK3	.438	.700	.340	.297	.056	.315
	TK4	.581	.802	.540	.436	.120	.477
Explicit knowledge (EK)	EK1	.309	.324	.760	.280	.189	.292
	EK2	.471	.509	.857	.389	.116	.411
	EK3	.573	.585	.753	.457	.149	.464
	EK4	.418	.410	.834	.324	.175	.362
Intrinsic motivation (IM)	IM1	.341	.307	.250	.823	.314	.459
	IM2	.490	.388	.434	.882	.305	.567
	IM3	.465	.352	.442	.861	.320	.561
	IM4	.533	.464	.452	.867	.277	.606
Extrinsic motivation (EM)	EM1	.018	.033	.142	.209	.812	.143
	EM2	-.048	-.020	.115	.184	.790	.116
	EM3	.171	.128	.199	.348	.776	.307
	EM4	.024	.003	.103	.284	.829	.170
Individual performance (IP)	IP1	.582	.498	.471	.602	.236	.936
	IP2	.533	.461	.471	.614	.233	.943

IP3	.470	.441	.448	.582	.241	.936
IP4	.482	.482	.451	.614	.292	.928

Table 3 - Means, standard deviations, correlations, and reliability and validity measures (CR, CA, and AVE) of latent variables

Constructs	Mean	SD	CR	CA	EN	TK	EK	IM	EM	IP
Enjoyment (EN)	6.078	1.090	.941	.906	.917					
Tacit knowledge (TK)	6.147	.912	.863	.789	.702	.782				
Explicit knowledge (EK)	5.305	1.289	.878	.819	.576	.594	.802			
Intrinsic motivation (IM)	5.718	1.100	.918	.881	.541	.446	.468	.858		
Extrinsic motivation (EM)	4.691	1.549	.878	.842	.092	.072	.192	.352	.802	
Individual performance (IP)	5.935	1.188	.966	.953	.553	.503	.492	.644	.268	.936

Finally, the Heterotrait-Monotrait ratio (HTMT) claims that all values should be below the threshold of 0.85 (Henseler et al., 2015). Table 4 show all the values satisfy the criteria.

Table 4 - Heterotrait-Monotrait Ratio of correlations (HTMT)

Constructs	EN	TK	EK	IM	EM	IP
Enjoyment (EN)						
Tacit knowledge (TK)	.824					
Explicit knowledge (EK)	.638	.695				
Intrinsic motivation (IM)	.595	.523	.519			
Extrinsic motivation (EM)	.112	.105	.215	.366		
Individual performance (IP)	.593	.573	.537	.696	.249	

5.2 Structural model

After determining that the measurement model and the results meet all conditions, was evaluated the level of significance of the path coefficients in the structural model. We evaluated multicollinearity issues, based on variance inflator factor (VIF) we conclude that all VIF values are lower than 5 (Hair et al., 2017), this means that research model does not present multicollinearity. As seen in Figure 2, this research's dependent variable "individual performance" scored an R² of 53.9%.

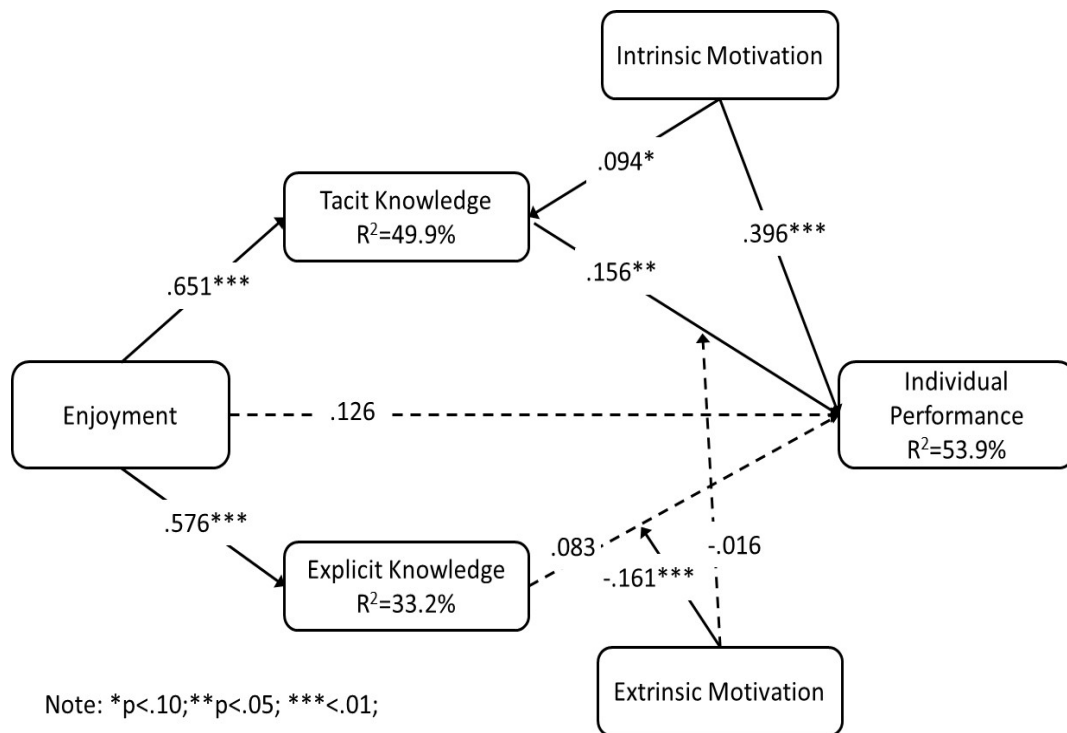


Figure 2 - Research model with results

The model explains 49.9% of the variation in tacit knowledge. Enjoyment ($\hat{\beta} = 0.651$, $p < .01$) and intrinsic motivation ($\hat{\beta} = 0.094$, $p < .10$) are statistically important in explaining tacit knowledge, thus confirming hypothesis H1a and H4a. The model explains 33.2% of the variation in explicit knowledge. Enjoyment ($\hat{\beta} = 0.576$, $p < .01$) is statistically significant in explaining explicit knowledge, thus confirming hypothesis H1c. The model explains 53.9% of the variation in individual performance, having as statistically crucial variables, tacit knowledge ($\hat{\beta} = 0.156$, $p < .05$) and intrinsic motivation ($\hat{\beta} = 0.396$, $p < .01$), which confirms H2 and H4b. The enjoyment and explicit knowledge are not vital in explaining individual performance, and thus H1b and H3 is not confirmed.

Extrinsic motivation was evaluated as a moderator in the relationship between explicit knowledge and individual performance (hypothesis H5a), and between tacit knowledge and individual performance (hypothesis h5b). The results demonstrate that of the two hypotheses, only H5a is confirmed ($\hat{\beta} = -0.161$, $p < .01$), and the path is negative.

5.3 Results of the mediating role of tacit and explicit knowledge

The mediation effect (i.e., indirect effect or mediation) happens when a third mediator construct plays an intermediary role in the relationship between two constructs (Carrión et al., 2017). This research has tested the mediating effect of tacit knowledge and explicit

knowledge over the relation between enjoyment and intrinsic motivation to individual performance. Table 5 shows the outcomes, which fulfil the essential condition to perform the mediator assessment. The results demonstrate that tacit knowledge can fully mediate the relationship of enjoyment to individual performance. In contrast, H6b hypothesis shows that explicit knowledge has not a mediating effect on the relationship of enjoyment to individual performance. In addition, hypothesis H6c shows that tacit knowledge has not a mediating effect on the relationship of intrinsic motivation to individual performance, but only a direct effect between intrinsic motivation and individual performance. Therefore, only hypothesis H6a is confirmed.

Table 5 - Mediation analysis

	Beta	SD	t-Test	p-value
H6a - Indirect-only (full mediation)				
(P1*P2) Enjoyment > Tacit knowledge > Individual perform.	.102	.051	1.990	<.05
(P3) Enjoyment > Individual performance	.126	.099	1.278	NS
H6b - No effect (no mediation)				
(P1*P2) Enjoyment > Explicit knowledge > Individual perform.	.048	.039	1.217	NS
(P3) Enjoyment > Individual performance	.126	.099	1.278	NS
H6c - Direct-only (no mediation)				
(P1*P2) Intrinsic motivation > Tacit knowledge > Ind. perform.	.015	.013	1.147	NS
(P3) Intrinsic motivation > Individual performance	.396	.073	5.427	<.01

6. DISCUSSION

6.1 Theoretical implications

The theoretical model presented in combination of several factors to explain individual performance. After performing the statistical analysis, we have conditions to answer briefly to the research question. According to the derived outcomes majority of hypotheses are supported, except H1b, H3 and H5b. A new conception was tested how enjoyment and intrinsic motivation impact on individual performance. According to mediation analysis, it was confirmed the significant relationship between enjoyment and individual performance through a tacit knowledge. Our conceptual model maintains the relationship between enjoyment and tacit knowledge. According to the indicators, the research model confirmed the significance of tacit knowledge, which is accounted for 49.9%. Concretely, the findings

show how crucial it is to strengthen enjoyment, and the impact of this on tacit knowledge. In addition, enjoyment explains the importance of explicit knowledge in our conceptual model, which is 33.2%. The hypotheses obtained from enjoyment to explain explicit knowledge is supported.

In addition, a conceptual model confirmed the importance of individual performance, which is 53.9%. Based on the outcome, we tend to think that tacit knowledge and intrinsic motivation are leading factors to individual performance success. Our results also demonstrate that non-monetary motivation has a greater influence on individual performance than tacit knowledge. In brief, to increase the chances of performance among individuals, intrinsic motivation should be in priority and followed by personal knowledge. Our finding is consistent with previous research (Chennamaneni et al., 2012; Hung et al., 2011; Jeon et al., 2011; Wasko & Faraj, 2005) that identified altruism as an important factor in knowledge sharing intentions. Our researched showed that the management tend to motivate employees with financial and non-financial rewards to gain the success (Hung et al., 2011; Wang & Hou, 2015).

Our findings also show the importance of investigating mediation and moderation effects in a wide perspective. For instance, the results indicate that enjoyment does impact directly on individual performance. In contrast, by studying the mediation, we demonstrated enjoyment through tacit knowledge mediator indirectly impacts on the success of individual performance. Our indicators showed that tacit knowledge is focused on contributing to the successful performance among individuals.

According to Figure 3, the derived results demonstrated that the extrinsic motivation is statistically important in relationship between explicit knowledge and individual performance. By reason of the negative indicators for individuals with high extrinsic motivation tendency, the effects of explicit knowledge and individual performance will be weaker than for individuals with low extrinsic tendency. The extrinsic motivation moderator proposes a main influence of high explicit knowledge on individual performance when the individual has low extrinsic motivation.

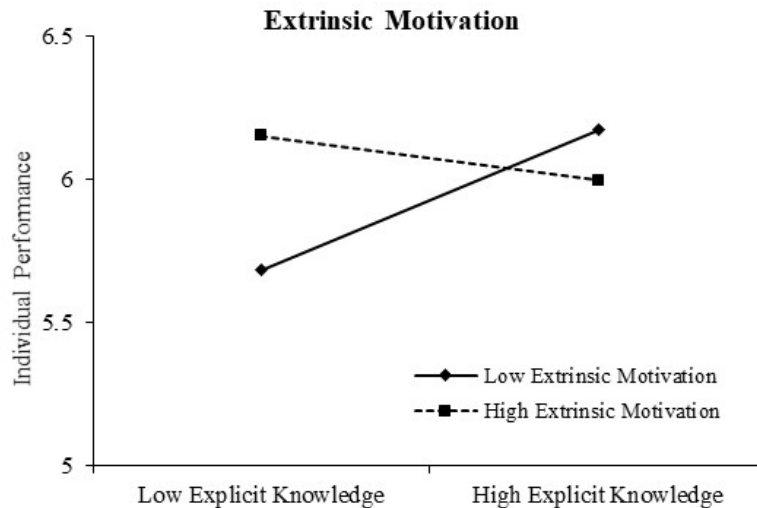


Figure 3 - Moderator effects

6.2 Managerial implications

After presenting the factors impacting on individual performance, some practical implications will be discovered helping managers make correct decisions. The determination of factors, which stimulate employees for cooperation can help managers to find a proper approach for the whole team. According to our findings, employees should always be a key part of the project and have face to face interactions with colleagues and managers. The research identified enjoyment as a motivational driver for cooperation among team members. Moreover, managers should always motivate employees to share their ideas, concerns and discuss during the meetings. Managers can help in removing barriers, influencing on the culture of the entire organization and building a cooperative relationship between colleagues (Hung et al., 2011).

6.3 Limitations and future work

Several limitations of our research should be admitted. Firstly, we declare that our research model could have more dimensions, but we decided to focus on quality of the factors, not on quantity. We tend to think that there are other items that we could use to describe and test each knowledge sharing dimension or even performance success among individuals superiorly. Future study should focus on measuring up our research model, looking additional factors to measure aspects such as “organizations’ potential to share knowledge”, which was not involved in this research, but plays a vital role in knowledge sharing success. Second, the research data was collected worldwide. Future studies should gather data from a single

country, but different multinational individuals and organizations, combining various perspectives. In addition, it would be interesting to compare various nationalities, and also different continents, for example, Middle East and Europe.

Our target was to investigate and test the factors impacting on successful performance and cooperation among individuals. It is important to note that the results derived via online survey cannot be presented in the organizational context of individual performance techniques.

Our survey comprised of professional individuals who share their knowledge on a daily basis and use it their current work. The target for future studies should be testing managers with experience in knowledge sharing for years. In our research we used only collecting data via online survey. Further studies can organize collecting data via face-to-face interviews along with online surveying to comprehend the individual performance success better. Since our study only researched the performance success in individual context, further studies can test the factors impacting on performance success in organizational context when constructing conceptual models.

7. CONCLUSIONS

Previous studies have proved that performance is highly correlated with human capital. In our study main focus was to determine the factors contribution to the success. After reviewing previous studies, we constructed a research model with dimensions that justified the impacting factors on individual performance success. Future researchers are invited to validate and construct upon our work, making the model more reliable and detailed. 291 respondents were surveyed from various professional areas and countries. The outcomes derived using PLS-SEM show that tacit knowledge and intrinsic motivation can explain the variance in individual performance success. This study suggests a valuable contribution to professionals who share or will share their knowledge with other individuals in future, be involved in the survey.

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APPENDIX A

Constructs	Items	Adapted from
Tacit Knowledge	TK1 - I like to share my knowledge with my co-workers. TK2 - I like to share my knowledge based on my experience with colleagues. TK3 - I always try to share my expertise at the request of my colleagues. TK4 - I try to share my tips at work with my colleagues.	(Bock et al., 2005)
Explicit Knowledge	EK1 - I like to share my reports and official documents with my co-workers. EK2 - I always share my research with my colleagues. EK3 - I am frequently encouraged by knowledge sharing. EK4 - I always share reports, official documents, trainings prepared by myself with my colleagues.	(Gee W. Bock & Kim, 2002; Bock et al., 2005)
Individual Performance	IP1 - Knowledge sharing with my colleagues improves my performance in managing job. IP2 - Knowledge sharing with my colleagues improves my productivity in managing job. IP3 - Knowledge sharing with my colleagues improves my effectiveness in managing job. IP4 - Knowledge sharing with my colleagues is useful in managing job.	(Bhattacharjee, 2001)
Extrinsic Motivation	EM1 - I assume to be rewarded with a higher salary for sharing knowledge with my colleagues. EM2 - I assume to receive monetary rewards (additional bonus) for sharing knowledge with my colleagues. EM3 - I assume to have opportunities to learn from others for sharing knowledge with my colleagues. EM4 - I assume to be rewarded with an increased job security for sharing knowledge with my colleagues.	(Gee W. Bock & Kim, 2002; Gee Woo Bock et al., 2005; Hsiu-Fen, 2007)
Intrinsic Motivation	IM1 - Knowledge sharing would give me opportunity to make more friends at work. IM2 - Knowledge sharing would provide a smooth cooperation from my co-workers. IM3 - Knowledge sharing would expand the scope of my associations with other members in my company. IM4 - Knowledge sharing would strengthen the tie between me and my colleagues.	(Gee W. Bock & Kim, 2002; Gee Woo Bock et al., 2005; Hsiu-Fen, 2007)
Enjoyment	EN1 - I tend to enjoy sharing my knowledge with my colleagues. EN2 - I enjoy helping my co-workers through my knowledge. EN3 - I feel enjoyable to share my knowledge with my colleagues.	(Hsiu-Fen, 2007)

