Factors Affecting the Personal Knowledge Management amongst Sales Officers in Indonesian Leading Automotive Companies

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Abstract

A capable and knowledgeable team is critical to an organization's success, particularly with the transition in economic activity toward a knowledge-based economy. With the growing demand for knowledge workers, it is vital to implement personal knowledge management for each of the individuals. However, effective personal knowledge management is complicated to implement. Therefore, it is critical to understand the factors that could affect successful personal knowledge management practices, especially after the massive deployment of technology during the Industrial 4.0. This study aims to ascertain which factors affect the implementation of effective personal knowledge management, and their relative importance. This study found that leadership significantly affects trust, while trust and extrinsic rewards impact knowledge sharing activities. Technology application was found to affecting learning behaviour, while knowledge sharing and learning behaviour significantly impact one's ability to handle personal knowledge effectively. This study revealed that intrinsic rewards are more amenable to knowledge sharing.

Keywords: personal knowledge management, extrinsic rewards, trust, leadership, technology application, knowledge sharing, learning behavior

1. Introduction

Today's economic activity is shifting toward a knowledge-based economy. A knowledge-based economy can be defined as an environment based on knowledge and technology to enhance its production and service. A knowledge-based economy is one in which economic incentives and entities stimulate the acquisition, formation, dissemination, and application of knowledge to boost growth and prosperity, taking into account the state of education and capabilities, information and communication technology, research and development, and, of course, innovation (Asian Development Bank, 2014). The primary component of a knowledge-based economy is intellectual ability (Ben Hassen, 2020). Three factors are critical in implementing a knowledge-based economy: capable workers, incentives, and innovation (Barkhordari et al., 2019).

According to the World Bank, Indonesia's Human Capital Index scores at 0.54 in the knowledge-based economy. Given the critical role of human capital or skilled labor in a

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knowledge-based economy, Indonesia's human capital index is alarming. The economic world's transition to a knowledge-based economy, which requires skilled workers, encourages knowledge-based activities individually, often refers to Personal Knowledge Management (PKM). PKM is necessary to promote workforce development in preparation for the knowledge-based economy. It aims to hone individual abilities through learning, creating knowledge, and trust-based knowledge sharing (Mittelmann, 2016). Successful PKM depends on how well new information is organized and combined with individual efforts to enrich the information and knowledge acquired (Cheong & Tsui, 2010). Ismail et al. (2015) proposed the GUSC model for implementing successful PKM. Get (G) is defined as a method for an individual to acquire knowledge; Understand (U) refers to the process by which an individual acquires knowledge, and Share (S) is acknowledged as the process by which an individual shares the knowledge they gain with others. Connect (C) is an activity in which an individual interacts with other individuals to generate new knowledge and stimulate discussion.

Several factors are considered enablers of knowledge sharing and learning behavior, encouraging effective personal knowledge management. First, as per the GUSC model and Mittelman's understanding, knowledge sharing is critical for personal knowledge management. Second, knowledge sharing enables an individual to acquire knowledge from others and share the knowledge he already possesses (Ouakouak & Ouedraogo, 2019; Durmusoglu et al., 2014; Nguyen & Malik, 2020).

This study aims to identify and confirm factors affecting effective personal knowledge management implementation and their relative importance. Interviews were held to determine the determinants that affect effective personal knowledge management implementation. The anticipated outcome is developing a model that can facilitate the implementation of effective personal knowledge management.

2. Literature review

2.1 Leadership and Trust

Through every level of the organization, effective leadership is required. Leadership is a quality that leaders possess, such as expertise, attention, and trust, that enables them to encourage or motivate others in the organization, thereby affecting job performance (Koohang et al., 2017). Leadership could also be interpreted as a process of social interaction in which one can support others to reach a common goal (Al Dari et al., 2018). Additionally, leadership is a predictor of knowledge sharing within an organization (Lo & Tian, 2020). It is also found that employees who fully trust their leaders will improve work engagement. This condition could also be followed by improved engagement by knowledge sharing between employees (Hsieh & Wang, 2015). Leaders who are aware of their capabilities act consistently and can unite and accept their subordinates' differences of opinion and viewpoints. Leaders educate and involve their associates in decision-making (Jiang & Luo, 2018).

Leadership is composed of three components: leading the organization (capacity to ensure organizational progress), leading people (ability to increase employee productivity), and conducting oneself (capacity to improve one's quality) (Koohang et al., 2017). Having a leader who demonstrates effective leadership can develop a sense of trust among work colleagues. Employees believe that their supervisors could use better efforts to assist their job and care about their well-being and their inputs to the job (Khattak et al., 2020). Thus, the first hypothesis can be developed as follow:

H1: Leadership has a significant positive effect on trust

2.2 Trust, Extrinsic Rewards, and Knowledge sharing

Knowledge is a critical source of an organization's competitive advantage in a knowledge-based economy. As a result, an organization's knowledge management capabilities must be strong (Pangil & Chan, 2014; Mittal & Kumar, 2019). One way to accomplish this is to promote employee knowledge sharing.

Knowledge sharing is the process of exchanging information and knowledge within an organization in the form of ideas, suggestions, and expertise that can be utilized to solve work problems by other employees (Mafabi et al., 2017; Rutten et al., 2016; Seitz & Misra, 2020; Zhang, 2014). Knowledge sharing is influenced by an individual's awareness, trust, and behavior in knowledge-sharing activities (Keshavarz, 2021).

In today's knowledge-based economy, it is critical to instill a sense of trust among employees (Rutten et al., 2016; Oktaviani et al., 2020). Trust can be interpreted broadly as a desire to reduce one's defenses against the actions of others (Ben Sedrine et al., 2020). Without a sense of trust, an organization will not reach its full potential. In knowledge-sharing activities, trust is critical. Knowledge sharing can be coercive without trust, increasing a person's reluctance to share. As a result, top management fosters an atmosphere of trust among employees (Omar & Adruce, 2018). In addition, employees develop a sense of trust in their superiors through their interactions (Jiang & Luo, 2018).

Someone is averse to sharing knowledge because doing so entails the risk of losing personal advantages that other colleagues do not possess (Zhang, 2014). A sense of trust enables an individual to interact more freely with others (Wang et al., 2019). Trust comprises three components: ability (belief in one's ability), integrity (belief in fair and honest behavior), and benevolence (belief in non-egocentric behavior) (Lee et al., 2020; Wang et al., 2019). When someone is in a trusting environment, their actions are more likely to receive positive and beneficial feedback (Pangil & Chan, 2014). Based on the above discussions, the following hypothesis is derived:

H2: Trust has a significant positive effect on knowledge sharing

Even though sharing knowledge would be the fruit of trust, an incentive mechanism is needed to motivate employees to provide better information and knowledge (Bao & Han, 2019). Trust encourages knowledge sharing among employees and encourages the organization through rewards (Wassan & Rasool, 2011). However, knowledge sharing can also be a voluntary activity motivated by personal desires (Chedid et al., 2020). Someone will share knowledge if they anticipate receiving something in return, such as status, praise, or a bonus (Bao & Han, 2019; Rohim & Budhiasa, 2019). Sometimes in a work-related environment, employees are hesitant to share their knowledge from the fear of being used and losing advantages (Ouakouak & Ouedraogo, 2019).

Knowledge-sharing activities can be facilitated and motivated by extrinsic and intrinsic rewards. Extrinsic rewards could be in the form of bonuses, wages, or promotions. At the same time, the intrinsic reward could be in the form of praise, approval, or other forms. Unfortunately, these statements are not followed (Seba et al., 2012b), who state that extrinsic rewards should be re-evaluated before giving them to employees. However, the most frequently used motivation is an extrinsic reward (Pasquire et al., 2011). Therefore, the following hypothesis is formed:

H3: Extrinsic rewards has a significant positive effect on knowledge sharing

2.3 Technology application and Learning behavior

The use of technology is mandatory in the Industrial Revolution 4.0 era. The application of technology is becoming increasingly critical, even more so during the current pandemic. Technology applications such as communication media and the internet have been widely adopted. Additionally, the use of technology facilitates the effective implementation of personal knowledge management. The application of technology helps discover, process, and disseminate information within the organizations (Hortovanyi & Ferincz, 2015; Merlo, 2016).

The advancement of technology that enables access to information and knowledge will result in learning behaviors distinct from those observed before technological advancements (Yan & Au, 2019). The use of technology enables a person to be more adaptable and determine the subjects he wishes to study. Not only that, the application of technology allows for greater flexibility in how and when a person obtains and comprehends knowledge (Dhahir, 2020). With the convenience that technology provides, individuals are expected to be more active in their learning. The following hypothesis is developed;

H4: Technology application has a significant positive effect on learning behavior

2.4 Knowledge sharing, Learning behavior, Effective PKM

Personal knowledge management is a subset of knowledge management (Ahmad et al., 2013). Personal knowledge management aims to assist an individual in completing daily tasks without entirely relying on the organization. The primary purpose of PKM is to create a framework on knowledge management at the personal level in managing, combining, and enriching their knowledge in a practical way (Cheong & Tsui, 2010). Personal knowledge management is a personal choice determined by an individual's personality (Värk & Reino, 2020) and organized around four primary structures: acquire, comprehend, share, and connect (Ismail et al., 2015; Jain, 2011). Amongst the four, knowledge-sharing is the critical aspect (Chedid et al., 2020; Dalati & Alchach, 2018; Elianto & Wulansari, 2016).

Knowledge sharing could be projected in these four structures based on four primary structures. First, knowledge sharing could be one medium for employees to get new knowledge in acquiring knowledge and information. Second, there has to be an exchange for information or knowledge, as in knowledge sharing. Third, knowledge sharing could be done in a discussion forum to comprehend and connect structure. Fourth, employees could share and ask about information and knowledge they have not yet understood or expand their understanding about something. Based on the above discussions, the fifth hypothesis is derived:

H5: Knowledge sharing has a significant positive effect on effective PKM

Personal knowledge management can be defined as self-directed learning undertaken by an individual to remain relevant in the workplace. As a form of independent learning, personal knowledge management is inextricably linked to one's learning behavior. One's learning behavior could be pushed by using technology. Technology application is shown to positively affect learning behavior in searching, reading, and browsing through the internet (Ho et al., 2010). Learning behavior could be interpreted as paying attention to getting, finding, and understanding something new. This includes discussing the matters with others (Onputtha & Oupananchai, 2018).

Learning behavior can be classified into four types: planned learning (directed learning), emergent learning (learning from unexpected opportunities), meaning-oriented learning (deep understanding through experience), and instruction-oriented learning (learning under the

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direction of others) (Kusemererwa et al., 2020). A person's learning behavior affects how he seeks, acquires, shares, and integrates the information and knowledge he possesses. Therefore, technology that pushed learning behavior to more critical for the gained information and knowledge would also push their behavior to manage their knowledge effectively. Thus, the following hypothesis is derived:

H6: Learning behavior has a significant positive effect on effective PKM
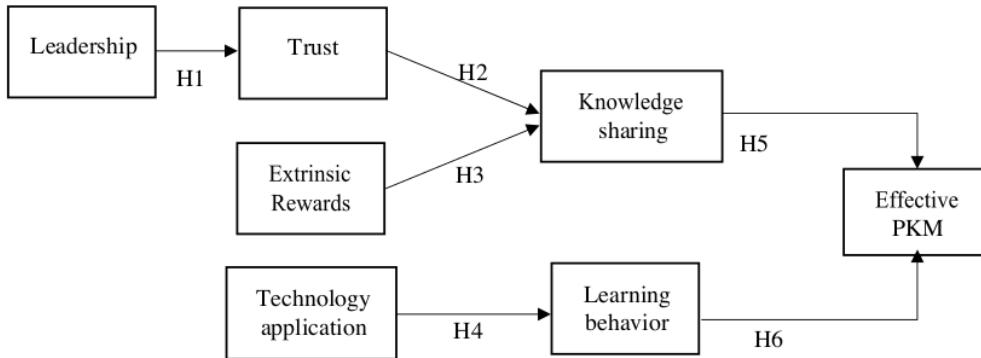
The following research model is constructed:

Figure 1. Theoretical Framework

3. Methods

A survey questionnaire was conducted to collect responses from Sales Officers. A qualitative approach was utilized in the form of semi-structured interviews. As in the purposive sampling approach, the researcher chose the data samples and deliberately selected them (Kothari, 2004). The triangulation phase applied semi-structured interviews involving three experts, business leaders who keep up with knowledge management development, and three respondents.

This study analyzed samples of sales representatives within Java Island. The questionnaire was distributed to 300 Sales Officers and returned by 128 individuals (See Table 1). Each sales officer had at least one year of sales experience. PLS-SEM was used to evaluate the research model. PLS-SEM was chosen due to the small sample size (Kante et al., 2018). In addition, Pearson's Product-Moment and Cronbach's alpha were used to examine the instrument's validity and reliability.

Table 1. Respondents' Demography

	n	%
Workplace		
AI	54	42.19
S	15	41.41
H	53	11.72
W	2	1.56
N	2	1.56
M	2	1.56

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Time working at the current place
< 1 year

1 year	15	11.72

Time working at the current place
< 1 year
1 year
2 years
3 years
4 years
5 years
> 5 years

15	11.72
13	10.16
30	23.44
14	10.94
15	11.72
15	11.72
26	20.31

Time working at other places
< 1 year
1 year
2 years
3 years
4 years
5 years
> 5 years

8	6.25
14	10.94
32	25.00
22	17.19
13	10.16
12	9.38
27	21.09

3.1 Data processing

The validity test used Pearson's product-moment with r value > 0.146 and sig < 0.10. The findings indicate that each instrument used in this study is valid—Cronbach's alpha reliability test results with a cut-off value of 0.7. Table 2 summarizes the validity and reliability test results. The findings suggest that each instrument used in this study is reliable. As in PLS-SEM criteria are AVE score > 0.5 and composite reality score > 0.7.

Table 2. *Validity and Reliability Test Results SPSS – PLS-SEM*

Indicator	SPSS					PLS-SEM		
	r value	sig. (2 tailed)	Validity	Cronbach's Alpha	Reliability	Loading factor	Composite Reality	AVE
pkm1	0.576	0.000	Valid		Reliable	0.509		
pkm2	0.746	0.000	Valid		Reliable	0.729		
pkm3	0.759	0.000	Valid		Reliable	0.747		
pkm4	0.771	0.000	Valid	0.866	Reliable	0.801	0.898	0.598
pkm5	0.747	0.000	Valid		Reliable	0.730		
pkm6	0.753	0.000	Valid		Reliable	0.796		
pkm7	0.773	0.000	Valid		Reliable	0.790		
pkm8	0.665	0.000	Valid		Reliable	0.668		
ldr1	0.715	0.000	Valid		Reliable	0.705		
ldr2	0.744	0.000	Valid		Reliable	0.731		
ldr3	0.677	0.000	Valid		Reliable	0.684		
ldr4	0.584	0.000	Valid		Reliable	0.568		
ldr5	0.678	0.000	Valid	0.938	Reliable	0.679	0.948	0.549
ldr6	0.748	0.000	Valid		Reliable	0.723		
ldr7	0.749	0.000	Valid		Reliable	0.728		
ldr8	0.750	0.000	Valid		Reliable	0.739		
ldr9	0.795	0.000	Valid		Reliable	0.804		
ldr10	0.816	0.000	Valid		Reliable	0.828		

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ldr11	0.624	0.000	Valid		Reliable	0.645		
ldr12	0.807	0.000	Valid		Reliable	0.824		
ldr13	0.734	0.000	Valid		Reliable	0.738		
ldr14	0.836	0.000	Valid		Reliable	0.853		
ldr15	0.799	0.000	Valid		Reliable	0.809		
trust1	0.731	0.000	Valid		Reliable	0.781		
trust2	0.662	0.000	Valid		Reliable	0.672		
trust3	0.665	0.000	Valid		Reliable	0.719		
trust4	0.789	0.000	Valid		Reliable	0.811		
trust5	0.804	0.000	Valid	0.906	Reliable	0.831	0.929	0.571
trust6	0.831	0.000	Valid		Reliable	0.819		
trust7	0.828	0.000	Valid		Reliable	0.798		
trust8	0.805	0.000	Valid		Reliable	0.787		
trust9	0.817	0.000	Valid		Reliable	0.807		
trust10	0.562	0.000	Valid		Reliable	0.454		
rew1	0.869	0.000	Valid		Reliable	0.851		
rew2	0.830	0.000	Valid		Reliable	0.833		
rew3	0.569	0.000	Valid		Reliable	0.669		
rew4	0.794	0.000	Valid		Reliable	0.76		
rew5	0.803	0.000	Valid	0.892	Reliable	0.769	0.922	0.598
rew6	0.787	0.000	Valid		Reliable	0.743		
rew7	0.170	0.055	Valid		Reliable	Not Valid		
rew8	0.795	0.000	Valid		Reliable	0.793		
rew9	0.756	0.000	Valid		Reliable	0.754		
ks1	0.570	0.000	Valid		Reliable	0.701		
ks2	0.529	0.000	Valid		Reliable	Not Valid		
ks3	0.617	0.000	Valid		Reliable	0.700		
ks4	0.692	0.000	Valid		Reliable	0.775		
ks5	0.695	0.000	Valid		Reliable	0.826		
ks6	0.668	0.000	Valid	0.805	Reliable	0.661	0.880	0.515
ks7	0.710	0.000	Valid		Reliable	0.753		
ks8	0.573	0.000	Valid		Reliable	Not Valid		
ks9	0.533	0.000	Valid		Reliable	Not Valid		
ks10	0.647	0.000	Valid		Reliable	0.577		
pt1	0.868	0.000	Valid		Reliable	0.931		
pt2	0.822	0.000	Valid	0.786	Reliable	0.863	0.887	0.726
pt3	0.859	0.000	Valid		Reliable	0.752		
LB1	0.641	0.000	Valid		Reliable	0.638		
LB2	0.733	0.000	Valid		Reliable	0.761		
LB3	0.704	0.000	Valid		Reliable	0.734		
LB4	0.776	0.000	Valid		Reliable	0.773		
LB5	0.678	0.000	Valid		Reliable	0.647		
LB6	0.766	0.000	Valid	0.904	Reliable	0.760	0.923	0.546
LB7	0.824	0.000	Valid		Reliable	0.826		
LB8	0.843	0.000	Valid		Reliable	0.855		
LB9	0.758	0.000	Valid		Reliable	0.742		
LB10	0.650	0.000	Valid		Reliable	0.617		

In comparison, PLS-SEM (Figure 2) indicated that one extrinsic reward instrument (rew7) and three knowledge-sharing instruments (ks2, ks8, ks9) were invalid and will not be included in the subsequent analysis. Six automobile manufacturers responded to the questionnaire in this study. Table 3 summarizes the hypothesis test results.
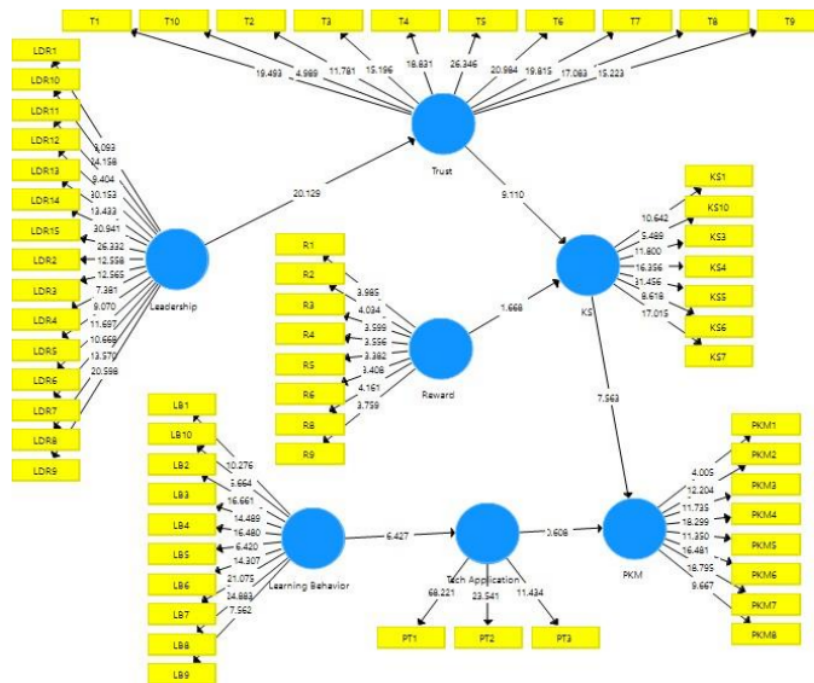

Figure 2. PLS-SEM Analysis

Table 3. *Data Processing Results*

	Hypotheses	t table	t count	P-value	Effect size	Result
H1	Leadership has a significant positive effect on trust	1.65	19.371	0.000	1.192	Accepted
H2	Trust has a significant positive effect on knowledge sharing	1.65	9.473	0.000	0.711	Accepted
H3	Extrinsic rewards have a significant positive effect on knowledge sharing	1.65	1.715	0.087	0.036	Accepted
H4	Technology application has a significant positive effect on learning behavior	1.65	5.606	0.000	0.324	Accepted
H5	Knowledge sharing has a significant positive effect on personal knowledge management	1.65	1.812	0.071	0.038	Accepted
H6	Learning behavior has a significant positive effect on personal knowledge management	1.65	4.024	0.000	0.241	Accepted

4. Discussion

4.1 Leadership and Trust

Indeed, leadership has a significant positive effect on establishing and fostering trust among sales officers, with an effect size of 1.192. This result is consistent with Jiang & Luo (2018) and Koohang et al. (2017). This finding demonstrates that sales officers identifying a leader at work aided in establishing a trusting environment among colleagues. This condition also implies that leaders in automotive companies promote a culture of knowledge sharing aimed at the company's success. Good leaders who can motivate, listen to others' perspectives, and communicate effectively with their subordinates can foster employee trust.

According to one of the sales officers interviewed, "*My boss always creates opportunities for everyone to meet one another so that we can develop trust.*" Another sales representative stated, "*My manager encourages us to be united and trust one another by acting fairly. As a result, we can work honestly and without attempting to harm one another because we have mutual trust.*"

4.2 Trust, Extrinsic Rewards, and Knowledge sharing

According to the interviews, leaders who act pretty and encourage teamwork can help build trust among a company's members. Sales representatives believe they will not harm their coworkers when they have mutual trust. Indeed, faith significantly positively affects knowledge sharing between sales officers. Trust itself has an effect size of 0.711. This finding is consistent with those of Ng (2020), Pangil & Chan (2014), and Wang et al. (2019). This finding implies that sales representatives have developed trust in one another. Therefore, sales representatives believe in their coworkers' abilities and that their coworkers will not harm them.

Additionally, one of the sales officers interviewed stated that "*the strategy for becoming a good salesperson is to observe, copy, and modify. Therefore, even though we shared our knowledge, the other person must modify the process and input their outputs, which may differ from ours.*" Another sales officer stated, "*I do not feel attacked if I share my knowledge with my coworkers; after all, it is for the company's success.*" This means that if sales officers trust one another, they will not hesitate to share their knowledge with their coworkers.

Extrinsic rewards also positively affect knowledge sharing, with an effect size of 0.036. This finding is consistent with Rohim & Budhiasa's (2019) and Wassan & Rasool's (2019). (2011). This finding demonstrates that extrinsic rewards (i.e., promotion, bonus) encourage knowledge sharing among sales officers. However, a sales officer interviewed stated, "*I am not looking for financial gain by sharing my knowledge. If my knowledge benefits others, it is sufficient for my gratification.*" Additionally, another sales officer stated, "*I am not looking for extrinsic rewards, but I will not refuse to accept one if offered. Sharing my knowledge gives me a sense of fulfillment.*" The contradictive finding supported previous findings by Chedid et al. (2020), Tohidinia & Mosakhani (2010). This contradiction may account for the small effect size observed in statistical tests. Some sales officers discovered that they would share knowledge for extrinsic material rewards, while others discovered intrinsic rewards (personal satisfaction, self-pleasure) are more valuable than extrinsic ones.

4.3 Technology application and Learning behavior

The application of technology is found to positively affect sales officers' learning behavior, with an effect size of 0.324. This finding is consistent with Dhahir (2020) and Hortovanyi & Ferincz (2015). Many automotive companies applied and adopted technology in their daily operations. As an integral part of the company, sales officers have embraced technology to aid

in their daily operations, from acquiring to maintaining relationships with a large number of customers.

According to one of the sales officers, "*We must be adaptable to the development and new trends in technology. By being adaptable, we can leverage the new trend to our advantage.*" While another sales officer stated, "*Technology forces me to stay current on new trends and developments. Technology aids my education by making tasks easier and more efficient.*"

As per interviews, technology applications assist sales officers in learning new trends and remaining relevant in their jobs. Additionally, it assists them in performing their duties during this pandemic era. Technology application is coercive to learn for sales officers.

4.4 Knowledge sharing, Learning behavior, Effective PKM

With an effect size of 0.038, knowledge sharing is positively significant for effective personal knowledge management. Given that knowledge sharing is a critical and significant aspect, this finding supports the previous statements by Chedid et al., 2020; Dalati & Alchach, 2018; and Elianto & Wulansari, 2016. By fostering knowledge sharing among sales officers, each sales officer can acquire new knowledge, comprehend it, and connect it to existing knowledge through discussion.

According to the interviews, sales officers can easily acquire new information and knowledge through knowledge sharing. By acquiring new knowledge, sales teams can grow and improve their value. Furthermore, as knowledge sharing can be applied to numerous steps of personal knowledge management, we could say that multiple steps of personal knowledge management can be accomplished effectively during a single knowledge-sharing session.

With an effect size of 0.241, learning behavior is positively significant in affecting effective personal knowledge management. As previously stated, personal knowledge management is one method of self-education. Therefore, this finding supports the notion that sales officers' learning behaviors affect their ability to manage their knowledge effectively.

According to one of the sales officers, "*My learning style is to learn through everyday activities and work. By adopting a flexible attitude, I find that this learning method is more effective for me than learning to achieve the target.*" Another sales officer stated, "*I need a goal to pursue. Therefore, my learning style is planned learning, in which I set objectives and goals and work toward achieving them. Additionally, this job as a sales officer pushed me to continue learning and improving myself.*"

The interviews indicated that learning behavior would affect how effectively sales officers manage their knowledge. Some will engage in planned learning, while others will engage in emergent learning. Having a target in mind is a sound strategy, as it helps sales officers prioritize which aspects and skills to develop.

Throughout the semi-structured interview phase with experts, the respondents stated that leadership is critical for developing personal knowledge behaviors. In addition, leaders serve as the link between organizations and employees to achieve success through the efforts of their employees. Finally, according to experts, a great leader would motivate their subordinates to improve and grow.

Additionally, the experts stated that extrinsic rewards are not a good stimulant for knowledge sharing. Extrinsic rewards, according to experts, are only effective for higher-level employees, such as supervisors. Since supervisors are responsible for developing and enhancing their subordinates' performance through teaching and sharing their knowledge, the experts agreed

that trust could be the primary motivator for knowledge sharing, as trust fosters a sense of belonging among sales officers.

Experts also agree that personal behavior, for example, learning behavior is one of the crucial stimulants in encouraging effective personal knowledge management. They stated that every sales officer needs to be aware of the importance of being relevant and keep upgrading their value. If sales officers do not want to learn, they will not be relevant anymore and might be replaced with someone else.

5. Conclusion

The research's findings and analysis indicate that leadership has a significant positive effect on trust. Trust and extrinsic rewards both have a significant positive effect on knowledge sharing. Technology application has a significant positive effect on learning behavior, and both knowledge sharing and learning behavior have a significant positive effect on practical personal knowledge. Good leadership fosters trust among sales officers. By fostering mutual trust among coworkers, sales representatives will freely share their knowledge without fear of reprisal. Extrinsic incentives may also encourage knowledge sharing between sales officers, but intrinsic incentives are likely to have a more significant impact than extrinsic incentives. Learning is made more accessible and more efficient through the use of technology. Indeed, knowledge sharing is a critical component of personal knowledge management. Sales officers' learning behaviors will also affect their ability to manage their personal knowledge effectively.

As a result of this study, automotive companies are encouraged to invest in knowledge sharing and technology applications. Since it was identified that knowledge sharing is a critical component of personal knowledge management and can be integrated into all stages of personal knowledge management, it can be implemented throughout. By investing in knowledge sharing, it is possible to improve the efficiency and effectiveness of personal knowledge management. Additionally, investing in technology, such as an e-learning portal or learning management system, will assist sales officers in searching for, acquiring, sharing, and investing their knowledge even more efficiently. Investment in technology should be accompanied by education and training in applying that technology. Automotive companies could also cultivate a learning culture to instill a habit of independent learning. This learning culture could be defined as a coercive act of personal knowledge management, such as regulations or sales targets, but not as a burden.

According to prior research, no study has conducted an empirical examination of the effect of various factors on effective personal knowledge management in automotive companies. Furthermore, no other studies attempt to investigate and explain the factors that may contribute to effective personal knowledge management. As a result, this study proposes a better understanding of the factors that encourage sales officers in the automotive industry to manage their personal knowledge effectively.

Additionally, this study includes recommendations for future research: First, it is necessary to assess the effect of personal knowledge management on performance or productivity. Second, future research could examine and investigate the effects of personal behavior on personal knowledge management. Third, numerous variables and other factors could be investigated to determine what motivates individuals to manage their personal knowledge effectively.

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