

# Antecedents of Knowledge Sharing Behaviour

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**Purpose** Knowledge Sharing Behaviour (KSB) is the most important part of knowledge management, which has an influence in an organisation. Knowledge is a critical organisational resource that will provide a sustainable competitive advantage in a dynamic and competitive economy so that knowledge sharing behaviour between individuals has become one of the most important elements of effective knowledge processes. The main focus in this study is to examine and analyse antecedents of knowledge sharing behaviour. **Methods** This study uses a cross-sectional design which is used to collect the data used which is then carried out by mediation analysis. Structural Equation Modelling is used to test the mediation effect based on the Theory of Planned Behaviour (TPB). **Findings** The results show a positive and significant relationship between attitudes, subjective norms, perceived behavioural control and behavioural intentions. So, there is the impact of full mediation of behavioural intentions between attitudes, subjective norms, perceived behavioural control and knowledge sharing behaviour. It can be concluded that this states that behavioural intentions can fully process planned behaviour predictions. **Research limitations / implications** The sample size is limited, in marine, shipping and other maritime industry companies in Java. This study limited supervisor behavioural preferences. This study is a one-time cross-section focusing on a one-off perception. **Practical implications** The supervisor at the Company in the field of sea transportation has a heavy duty responsibility in carrying the trust that has been given and synergises well between the employees below and the manager.

**Key words:** *Knowledge sharing behaviour, planned behaviour, maritime industry companies.*

## Introduction

Quality resources are very influential on the readiness of an organisation to be able to survive facing competition. The clear competition is globalisation; so, individuals are required to have knowledge. Knowledge is a very important resource in all businesses (Ding et al., 2017; Nonaka & Toyama, 2015; Razak et al., 2016). Therefore, knowledge must be more carefully managed by the organisation in order to be able to sustain (Wang & Wang, 2012), the success of knowledge management is the knowledge sharing behaviour amongst employees (Wang & Noe 2010). The practice of effective knowledge sharing behaviour in organisations shows that organisations can create and manage knowledge well (Huber, 2015). According to Davenport (1998) knowledge is a critical organisational resource that will provide sustainable competitive advantage in a dynamic and competitive economy such that knowledge sharing behaviour between individuals has become one of the most important elements of an effective knowledge process (G. W. Bock., 2005).

Some previous studies (Caniels et al., 2017; Ding et al., 2017.; Fullwood & Rowley, 2017; Mafabi et al., 2017;) mention knowledge sharing behaviour researched in design and different contexts. Several studies have succeeded in explaining predictions of intention behaviour and knowledge sharing using existing theories, namely, the theory of planned behaviour (TPB) (Chennamaneni et al 2012, Jolaei et al, 2014, Mafabi et al 2017). The theory of planned behaviour (TPB) model was introduced by Ajzen (1991) which consisted of individual attitude, subjective norm, and perceived behaviour control. These were for the prediction of individual participants activities for a personal (Hsu et al. 2016), but there were also other studies that failed to predict knowledge sharing behaviour by using the theory of planned behaviour (TPB) as an example of research conducted by Mahyarni et al (2012) which stated that perceived behaviour control does not impact on intention to share knowledge. Research conducted by Mafabi et al (2017) and Al Qeisi and Al Zagheer (2015) showed the results for their indirect influence on KSB. Al Qeisi and al zagheer (2015) noted that the subjective norm did not affect intention to knowledge, notice to Ajzen 1991, control of behaviour cannot indirectly predict behaviours of certain fields, such as knowledge sharing behaviour.

Understanding the causes behind the success of how knowledge sharing in the field of sea transportation services is used or why it is important has no understanding for planning knowledge sharing in fact or reality will be a grey area. Empirical studies of the mediating role of intention in knowledge sharing in predicting the act of behaviour on knowledge sharing by supervisors in Indonesia is still lacking. TPB itself has received considerable attention in hypothesising and analysing desirable behaviour, as does the sharing of knowledge (Ajzen, 1991; Chatzoglou & Vraimaki, 2009; Chennamaneni et al., 2012; Mafabi et al., 2017).

## **Literature review and hypotheses**

### ***Sea transportation and knowledge sharing behaviour***

#### ***Sea transportation***

PT Pelindo Marine Service daily called PT PMS is one of the subsidiaries of PT Pelabuhan Indonesia III (Persero) which is one of the biggest state-owned (BUMN) ports service companies in Indonesia.

#### ***Knowledge Sharing behaviour***

Knowledge sharing is a major issue in knowledge management. According to (J. Cummings, 2003), knowledge sharing behaviour is the main concept of knowledge management and becomes the most important focus in knowledge management because knowledge is seen as the most strategic resource owned by an organisation, the main source for value creation (Nonaka & Takeuchi, 1995). In the era of industrial globalisation 4.0, knowledge is an important resource for organisations that provide sustainable competitive advantage (Wang & Noe, 2010). According to Wang and Noe (2010), many firms or organisations have arguments that effective behaviour of knowledge sharing practices are a criticised way of utilising competencies of core and competitive advantage of gaining (Lin and Lee, 2004).

#### ***Theory planned behaviour***

TPB or the Theory of Planned Behaviour (Ajzen, 1985) explains that the antecedent behaviour of humans or people, the essence lies in knowledge intention (Azwar, 2013). The theory in here explains the factors as determinants in the intention of knowledge (Ajzen, 1991; Ajzen, 2005;). TPB is the growth and modification of theory before, the theory of reasoned action (TRA). In this TRA, Ajzen and Fishbein (1980) explain that a person's intention of knowledge to do or not do a behaviour is based of the action itself. On the one hand, one's intention for knowledge behaviour is a function of two determining variables. The determining factors are attitudes and subjective norm towards an action. Attitude (self) is a no negative or no positive analysis of a person's actions (Ajzen & Fishbein, 1980; Ajzen, 1985).

#### ***Intention to share knowledge***

Behaviour intention as a mediator of the relationship between predictors in the TPB are attitude, subjective norm and perceived behaviour control with real work behaviour (Ajzen, 1991). The effect of this construction on intention might influence the effect on the performance of the behaviour. This implies that the intention as a mediator to connect individual behaviour control and ability is considered knowledge sharing behaviour (Mafabi et.al, 2017). In general, intention towards behaviour is determined by three different conceptual constructs of social cognition namely attitude, subjective norm and perceived

behaviour control (Duerden and Witt, 2010). And then, core variables for prediction to action in TPB as "a people intention to perform a pick action" (Ajzen, 1991). This intention is explained as "a description of internal motivational factors that effect action" (Ajzen, 2005). An action or behaviour comes if an individual has a strong want or need to perform an action. This research, the intention of knowledge-sharing based on a strong want of an employee to try and fight an outcome of knowledge-sharing (Ajzen, 1991; Ajzen, 2005; Chatzoglou & Vraimaki, 2009). Some studies have explained that intention of knowledge-sharing on negative influences behaviour of knowledge sharing (Al Qeisi & Al Zagheer, 2015; Mafabi et al., 2017). The no low but strong want of an employee (people) to fight for knowledge sharing tends to lead to act behaviour of knowledge-sharing. A weak will for sharing of knowledge is likely to result in an individual or employee not performing a behaviour of knowledge-sharing. Thus, determinant on the above that discussion, this research investigates the following hypothesis:

H1: Intention of knowledge-sharing have positively effects knowledge-sharing behaviour.

### *Attitude Towards Knowledge*

Attitude as interpreted by Ajzen (1991) is the extent to which a person has a favourable or unfavourable evaluation of the behaviour displayed. Meanwhile, attitude in the view of Armitage and Conner (2001) is an overall evaluation of either positive or negative behaviours. Someone's attitude towards a certain behaviour reflects the overall positive or negative opinion of someone doing certain behaviours. Generally, it is more beneficial for people who have an attitude towards behaviour that they must be with a strong intention to do so (Chennamaneni, 2006). Favourable or unfavourable feelings about certain behaviours are also determined by personal behavioural beliefs about the possible outcomes of the behaviour. Based on the current study at TPB, attitudes toward certain behaviours consist of two components: affective attitude and cognitive attitude. There are no negative responses of employees toward behaviour of knowledge-sharing based intention of the employee to knowledge-sharing for performance. An employee's no positive response to behaviour of knowledge-sharing leads to employees' reluctance to knowledge share (Chennamaneni et al., 2012; Jolaee et al., 2014 Laturmas & Indarti, 2016; Tsai et al., 2012; Mafabi et al., 2017;). This research also investigated the following hypothesis determined on the above discussion:

H2: Attitude toward knowledge-sharing to have no negative impact on intention of knowledge-sharing.

### ***Subjective Norms***

Subjective norms for certain behaviours reflect a person's perception of social pressure from those around them to do or not do certain behaviours. Most people intend to conduct behaviour when they evaluate positively and when they believe that people who are important to them think they should do it (Ajzen, 1985). The existence of subjective norms in analysing human behaviour suggests that there may be some situations where the behaviour is not only under the control of the attitudes of individuals, rather, the expectations of others around them may be a major influence in the performance of the main actions. In this research, the subjective norm on knowledge-sharing based on social pressure (encouraging or discourage) from institutions, managers, and employee perceived by employees in a firms ability to engage in or perform behaviour of knowledge-sharing (Ajzen, 1991; Ajzen , 2005; Chatzoglou & Vraimaki, 2009). Studies have descriptions for subjective norms about knowledge-sharing and no negative influence on the intention of knowledge-sharing (Lee & Hong, 2014; Lin & Lee, 2004; Mafabi et al., 2017). This research analyses the following hypothesis:

H3: Subjective norms on knowledge-sharing with no negative affect knowledge-sharing intention.

### ***Perceived Behaviour Control***

Perceived Behaviour Control (PBC) refers to people's perceptions of the ease or difficulty of performing certain behaviours. Community behaviour is strongly influenced by their belief and their ability to do that. PBC construction is held to influence both intention and behaviour to perform certain actions (Armitage and Conner, 2001). There are two PBC assumptions, the first assumption is that it has an indirect effect on behaviour through behavioural intention. For example, someone might have a positive attitude towards behaviour and feel that other people will support them to more passionately behave. PBC can directly influence behaviour to the extent that PBC accurately reflects actual control and ability to take action (Ajzen, 1991). In this study, perceived behavioural control to knowledge-sharing is based on the past experience felt by an employee regarding the ease or difficulty of performing knowledge-sharing (Ajzen, 1991; Azwar, 2013;). Several studies have revealed that perceived behavioural control in knowledge-sharing positively affects knowledge-sharing intention (Al Qeisi & Al Zagheer, 2015; Razak et al., 2015). An employee's experience on the difficulties of doing knowledge-sharing based on the employee's desire to do knowledge-sharing for performance. Perceived experience about the no easy in doing knowledge-sharing leads to employee reluctance to perform knowledge-sharing. Then a determinant on the above discussion, this research analysed the following hypothesis:

H4: Perceived behavioural control knowledge-sharing positively affects knowledge-sharing intention.

In TPB, Ajzen (1991) explained that in addition to intention, behaviour control could also directly predict knowledge-sharing behaviour. Several studies have revealed that perceived behavioural control to knowledge-sharing has a positive effect on knowledge-sharing behaviour (Chatzoglou & Vraimaki, 2009; Lee & Hong, 2014). Perceived experience by an employee regarding the ease of doing knowledge-sharing tends to directly cause the employee to perform a knowledge-sharing behaviour. Perceived negative experiences (such as the difficulties in sharing knowledge) tend to prevent employee information engaging in knowledge-sharing behaviour. Thus, based on the above discussion, this study investigates the following hypothesis:

H5: Perceived behavioural control to knowledge-sharing no negative influence behaviour of knowledge-sharing or knowledge sharing behaviour.

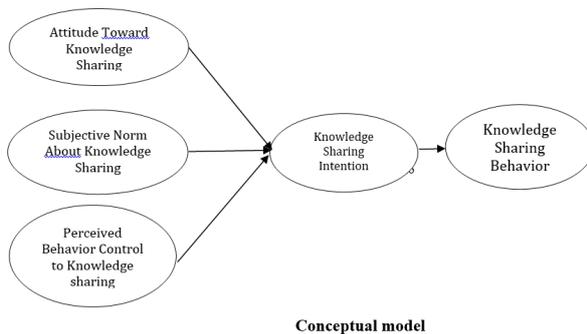
#### ***Mediation role of intention of knowledge-sharing***

TPB has a determinant in the intention of behaviour through links of one's attitude to a specific behaviour (Ajzen, 1991). It claims that intention of behaviour becomes a critical factor in predicting a certain behaviour. Intention to behave plays a critical role in linking attitude, subjective norm, and perceived behavioural control (Ajzen, 1991; Mafabi et al., 2017). Few studies have comprehensively investigated the mediation role of knowledge-sharing intention. Mafabi et al. (2017) explained that only one study has positively revealed the effects of attitude, subjective norms and perceived behavioural control in the mediation of intention for knowledge sharing. Respondents having a positive response toward knowledge sharing, a firm so pressure employee to do knowledge sharing, and perceived employee experience have relations to the knowledge sharing determinant to influence in doing knowledge-sharing. So, high levels of intention of knowledge-sharing to behaviour. Thus, determinant on above discussion, this research analysis the following hypothesis:

H6: Attitude toward knowledge-sharing connect or indirect impact to behaviour of knowledge-sharing and intention to share knowledge as mediation

H7: Subjective norm about knowledge-sharing connect or indirectly impact to behaviour of knowledge-sharing and intention to share knowledge as mediation

H8: Perceived behavioural control to knowledge-sharing connection or indirectly impact on behaviour of knowledge-sharing and intention to share knowledge as mediation .



## Methodology

### *Participants and data collection*

This research used a survey questionnaire design to collect data. The PT Pelindo Marine Service daily called PT PMS one of the subsidiary PT Pelabuhan Indonesia III (Persero) which is one of the biggest state-owned (BUMN) ports service companies in Indonesia was chosen as a sample. Surabaya is one of the regions with an increasing share of transportation sea. An invitation was sent to the human resource departments in PT.PMS Surabaya, Indonesia. There were 520 respondents who were sent directly (google form) to departments with a convenient sampling design. Collecting data in Indonesia is a challenge. The reluctance of respondents to answer and complete surveys are among the several problems faced by the researcher (Anita, 2015). From all of the questionnaires sent to the PT. PMS, only 311 respondents (59.80 %) came back. However, a total of 300 (57.69%) respondents were used in this research due to the complicated status of some of the surveys.

**Table 1:** Demographics

Variable		Frequency	
		n (quantity = 300)	(%) (quantity= 100%)
Gender	Male	254	84.66
	Female	46	15.33
Age	Under 30 years	90	30.00
	30 to 39 years	184	61.33
	Over to 40 years	26	8.67
Education	Postgraduate studies	30	10.00
	Undergraduate studies	210	70.00
	High school or below	60	20.00
Designation	Manager	25	8.33
	Deputy manager	15	5.0
	Head of the department	20	6.7

	Deputy head of Department	60	20.0
	Employee/clerk	180	60.0
<i>Work experiences</i>	<i>Under 5 years</i>	20	6.7
	5 to 10 years	230	76.7
	Over to 10 years	50	16.7

Table 1 shows the sample for the demographics described, where more than 80.0 percent of the respondents have an undergraduate and postgraduate education, and 91.3 percent respondents are < 40 years of age. Furthermore, > 93.4 percent of respondents have working experiences > 5 years. In addition to that, respondents have positions in organisations such as manager (8.3 percent), deputy manager (5.0 percent), middle manager (6.7 percent), supervisor (20.0 percent), and employee/clerk (60.0 percent).

## **Variables and measurement**

### ***Attitude toward knowledge sharing***

*Attitude toward knowledge-sharing* was measured based using the five (5) items explained by Lin and Lee (2004) and Chatzoglou and Vraimaki (2009). And then an alternative to answer the items was rated on a Likert scale using a five-point notice from 1 as strongly disagree (low) to 5 as strongly agree (high)

### ***Subjective norm about knowledge-sharing***

Subjective norm about knowledge-sharing was based measured by used the six items explained by Lin and Lee (2004) and Chatzoglou and Vraimaki (2009).

### ***Perceived behavioural control to knowledge-sharing***

*Perceived behavioural control to knowledge-sharing* was based on measurements using the four (4) items explained by Lin and Lee (2004). Alternative answers item were rated Likert scale of five point that range from 1 as strongly disagree (low) to 5 as strongly agree (high).

*The knowledge-sharing intention* was base on measurements using five (5) items, which were explained from Chatzoglou and Vraimaki (2009). Alternative answers on the Likert scale of five point from 1 as strongly disagree (low) to 5 as strongly agree (high).

### ***Knowledge-sharing behaviour***

*Knowledge-sharing behaviour* was based on a measure using the four (4) items explained by

Lin and Lee (2004). Alternative answers items were Likert scale of five point with 1 as strongly disagree (low) to 5 as strongly agree (high).

### ***PLS Analysis***

In this hypothesis using partial least square in the equation model (PLS-SEM). SEM itself is a multivariate analysis in social science (Solikin and Ratmono, 2013). PLS is a variance-based SEM that can also simultaneously evaluate models from measurements and structural models (Abdillah et al 2016) PLS-SEM analysis is used because this study has unobservable variables (Latan & Ghozali, 2012; Solihin & Ratmono, 2013). On the other hand for PLS-SEM analysis can analyse from large or complex models simultaneously (Ghozali, 2014; Solihin & Ratmono, 2013). So that it can also be called a very strong analytical method and is usually called a soft modeling because it can test or analyse from a small sample (Hair et al., 2014). PLS-SEM has two steps in this regard (Hair et al., 2014). First, to test or analyse PLS-SEM must be centered on the reliability and validity of the steps that will be used as representatives of the variables (Chin, 2010). Second, after these steps are taken and then actions represent each of the variables, the theoretical model is assessed to explain whether the hypothesis is supported statistically or not (Abdillah et al., 2016; Hair et al., 2014).

## **Emperical Results and Discussion**

### ***Empirical Results***

#### ***Measurement model analysis***

Based on the statistical test results to test validity and reliability (Hair et al., 2014).

**Table 2:** Convergent validity test

Variable	Items	Convergent validity	
		Factor loading	AVE
Knowledge-sharing behaviour (KSB)	4	0.688 – 0.709	0.554
Knowledge-sharing intention (KSI)	4	0.665 – 0.701	0.544
Attitude toward knowledge-sharing (A)	5	0.638 – 0.653	0.505
Subjective norm about knowledge-sharing (SN)	6	0.662 – 0.688	0.510
Perceived behavioural control to knowledge-sharing (PBC)	4	0.755 – 0.707	0.612

Table 2 also depicts the value of average variance extracted (AVE). The AVE values for each construct achieve the minimum threshold value of 0.50, indicating that the items loaded with respect to variables explains more than 50 percent of the variance of the variable (Hair, et al., 2014)

**Table 3:** PLS analysis result

	A	SN	PBC	KSI
<b>Direct effect</b>				
KSI	0.158*	0.346**	0.101*	
KSB	0.141**	0.082ns	0.127*	0.489**
<b>Indirect effect</b>				
KSI				
KSB	0.062*	0.233**	0.102*	
<b>Total effect</b>				
KSI	0.127*	0.457**	0.208*	
KSB	0.203**	0.305**	0.294**	0.489**

\*\*  $p < 0.01$

\*  $p < 0.05$

ns (not significant)

So a full mediation role of knowledge-sharing intention in the effect of subjective norm on knowledge sharing behaviour.

## Discussion

In this study positive attitude has an influence on the intention to share knowledge. So it can be said that H1 has or results that attitude has a positive effect on the intention of sharing knowledge. The results of this study are in accordance with previous studies of Luturmas & Indarti (2016).

The second hypothesis shows that subjective norms of knowledge sharing positively influence knowledge sharing. "So in this case H2 evokes that subjective norms of knowledge sharing have a positing influence on knowledge sharing intentions". So it can be said that these results are in accordance with previous studies (Mafabi et al., 2017). The social environment support from managers, institutions, and colleagues in the organisation plays an important role to carry out the intention or desire of employees to share knowledge. All three hypotheses claim that "the perception of knowledge control positively sharing behaviour has an influence on the intention to share knowledge". So that in this case H3 results state that that the perception of behavioural control to share knowledge has a positive influence on the intention to share knowledge. The results are in accordance with previous research (Mafabi et al., 2017). The fourth hypothesis states that "the intention to share knowledge has a positive influence on knowledge sharing behaviour". It can be said that H4 claims that the intention to share knowledge has a positive influence on knowledge sharing behaviour. So the results of this hypothesis are in accordance with previous research (Mafabi et al., 2017). The fifth

hypothesis states that "behavioural control has a positive influence on knowledge sharing". So H5 results state that behavioural control has a positive effect on knowledge sharing, this is in accordance with previous research (Chennamaneni et al., 2012), the sixth hypothesis states that "attitudes toward sharing knowledge have an indirect effect on the behaviour of sharing knowledge through the intention of sharing knowledge". So, it can be said that Results H6 mentioned that the intention to share knowledge is able to mediate the influence of attitude and behaviour control. The seventh hypothesis claims that "subjective norms about knowledge sharing have an indirect effect. So it can be said that Result H7 states that intention to share knowledge 100 percent is capable of being the influence of subjective norms about knowledge sharing on knowledge sharing. So this result is in accordance with previous research (Mafabi et al., 2017). The eighth hypothesis states that perceived behavioural control for sharing knowledge has an indirect effect on knowledge sharing behaviour with intention as mediation. It can be said that H8 results claim that the intention to share knowledge is able to mediate some of the effects of perceived behaviour control in knowledge sharing behaviour.

## **Conclusion**

In the research conducted this is able to make an extraordinary contribution to support and explain the importance of the theory of planned behaviour (Ajzen, 1991) in the scope of knowledge management. This can explain and understand what the factors are that drive a person's behaviour in sharing knowledge in sea transportation of employees, with the intention of sharing knowledge as a mediating variable. In addition to theoretical contributions, the research conducted can provide practical implications for employees in marine transportation about the importance of understanding models in encouraging knowledge sharing behaviour. From this hypothesis and analysis, it was found that by providing insight into the important role of attitudes, subjective norms, and perceived behavioural control for encouraging knowledge sharing behaviour through high intention to share knowledge.

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