

ANTECEDENTS OF KNOWLEDGE SHARING AND EMPLOYEE  
INNOVATIVENESS

OLOGBO ANDREW CHUKWUYEM

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*To God Almighty*

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## ABSTRACT

Previous researchers have acknowledged that the success of a firm's innovation capability depends greatly on knowledge sharing. Numerous studies have examined individual factors affecting knowledge sharing and innovation capability. A review of the literature has unveiled the individual factors focusing on trust, enjoyment in helping others, self-efficacy, reciprocity, pro-sharing norms, self-image and organizational reward. However, other essential variables relating to attitudinal and behavioral factors have been neglected. In order to fill this gap, four factors namely job satisfaction, organizational commitment, organizational citizenship behaviour, and employee engagement are crucial for employees to engage in knowledge sharing to enhance their innovativeness incorporated into the research model. In the attempt to empirically validate this model, data were collected from engineers working with Malaysian manufacturing firms. Data were statistically analyzed by the structural equation modeling (SEM) technique using the *SmartPLS* software. The findings suggest that job satisfaction, organizational citizenship behaviour and employee engagement have significant influence on knowledge sharing. Furthermore, job satisfaction, organizational commitment and organization citizenship behaviour were found to have significant influence on employee innovativeness. Importantly, knowledge sharing mediated the relationship between job satisfaction, organizational citizenship behaviour and employee engagement with employee innovativeness. The implication of this study is that satisfied and engaged employees with good citizenship behaviour would foster knowledge sharing which in turn enhances their innovativeness. Further empirical validation or incorporation of new variables is recommended to extend this current study.

## ABSTRAK

Para penyelidik terdahulu mengakui bahawa kejayaan keupayaan inovasi sesebuah firma sangat bergantung kepada perkongsian pengetahuan. Banyak kajian telah mengkaji faktor-faktor individu yang mempengaruhi perkongsian keupayaan pengetahuan dan inovasi. Sorotan literatur telah mendedahkan bahawa faktor individu difokuskan kepada kepercayaan, keseronokan membantu orang lain, efikasi sendiri, sifat kesalingan, norma pro-perkongsian, imej sendiri dan ganjaran organisasi. Walau bagaimanapun, pemboleh ubah penting lain yang berkaitan dengan faktor-faktor sikap dan tingkah laku telah diabaikan. Dalam usaha untuk menutup jurang ini, empat faktor, iaitu kepuasan bekerja, komitmen organisasi, tingkah laku kewarganegaraan organisasi dan penglibatan pekerja adalah penting bagi pekerja untuk melibatkan diri dalam perkongsian pengetahuan bagi meningkatkan penggabungan inovasi mereka, dimasukkan dalam model kajian. Dalam usaha untuk mengesahkan model kajian ini secara empirikal, data telah dikumpulkan daripada jurutera-jurutera yang bekerja dengan firma-firma pembuatan Malaysia. Data ini telah dianalisis secara statistik dengan teknik pemodelan persamaan berstruktur (SEM) menggunakan perisian *SmartPLS*. Dapatan kajian merumuskan bahawa kepuasan kerja, tingkah laku kewarganegaraan organisasi dan penglibatan pekerja mempunyai pengaruh yang signifikan kepada perkongsian pengetahuan. Selanjutnya, kepuasan kerja, komitmen organisasi dan tingkah laku kewarganegaraan organisasi didapati mempunyai pengaruh yang signifikan terhadap daya inovasi seseorang pekerja. Yang penting, perkongsian pengetahuan mengantara hubungan antara kepuasan kerja, tingkah laku kewarganegaraan organisasi dan penglibatan pekerja dengan daya inovasi pekerja. Implikasi kajian ini adalah pekerja yang berpuas hati dan melibatkan diri dengan tingkah laku kewarganegaraan yang baik akan menggalakkan perkongsian pengetahuan dan seterusnya meningkatkan daya inovatif mereka. Pengesahan empirikal yang lebih lanjut atau penggabungan pemboleh ubah yang baharu amat disyorkan bagi memperluas kajian ini.

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**LIST OF ABBREVIATION**

KM	-	Knowledge Management
OCB	-	Organizational Citizenship Behavior
JS	-	Job Satisfaction
OC	-	Organizational Commitment
EE	-	Employee Engagement
EI	-	Employee Innovativeness
SEM	-	Structural Equation Modeling
SET	-	Social Exchange Theory
PLS-SEM	-	SmartPLS Software



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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Introduction**

This thesis is devoted to a study investigating the influence of knowledge sharing on employee innovativeness, and examination on how combination of employee attitudinal and behavioural antecedent variables can influence employee innovativeness directly and indirect through knowledge sharing. This chapter starts with the overview of the background of the study, then a synthesis of previous studies to highlight the research gaps, research motivation and the need for the study before presenting the statement of the research problem. Furthermore, the research questions and research objectives are presented, followed by the significance and scope of the study. For more clarification on the constructs of this study, conceptual and operational definitions of the constructs studied were presented in this chapter. Finally, the chapter concludes with the summary of how the chapters of the study are organized.

#### **1.2 Overview of the Study**

Innovation, knowledge and technology now contributes more to a nation's economic growth and wealth creation than other prior traditional factors such as land, labour and capital. It is a common idea that firms that are innovative are most likely to gain substantial competitive advantage than those with less innovation capability. In fact, it is plausible to assume that the more innovative firms in a country, the more

innovative capability of that country. One of the ways to heighten the organizational innovation is through effective knowledge management (Tan and Nasurdin, 2011). In the case of Malaysia where this study is carried out, Gan (2006) have earlier claimed that there is a lack of knowledge management surveys from Malaysian perspective. Since then, much has been written on knowledge management by Malaysia authors. However, Malaysian authors like Tasmin and Yan (2010) still agrees that much needs to be done by researchers of knowledge management to profess the benefits of knowledge transfer and knowledge sharing in firms. According to the authors, many top executives of Malaysian firms view knowledge management resources as critical for organizational effectiveness yet these firms lack knowledge management strategy.

Furthermore, with the emergence of global knowledge-based economy (Chong *et al.* 2006); the Malaysian knowledge economy and high income economy agenda plus the journey upon a new phase of development towards realizing its aspiration of becoming a developed nation by 2020; it has become pertinent to conduct further studies on knowledge management in the country. With the perpetual changes in global economy, and less than 5 years left to achieve vision 2020, the country may need to aggressively nurture her innovation capabilities. The central thrust of the country's development plan is to transform the economy into knowledge-based and high-income economy via innovation driven enterprises (Pawanchik *et al.*, 2011). No doubt, for innovation to occur, something more than the generation of a creative ideas or insights is essential. Innovation culture is required. Innovation culture must be championed by people to help others utilize their insights into action to make a genuine difference, improve business processes within the organization, and increase overall innovation performance of the country.

Based on the highlighted issues, it would not be wrong to logically deduce that this is why the Malaysian government encourages firm's innovation in order to promote innovation in the country. In this regard, the Malaysian government has formulated a national innovation strategy which main aim is to make the Malaysian workforce to be more innovative and to help organizations build the capability and capacity to innovate in order for the country to be competitive in the global arena

(Pawanchik *et al*, 2011). In 2015, Malaysia has outperformed its middle income peers in all seven pillars of the global innovation index ([www.knowledge.insead.edu](http://www.knowledge.insead.edu)).

Consequentially, the new economic model as well as the 10<sup>th</sup> Malaysia plan has also outlined several policies and plans to further propel and boost innovation in the country. For instance, at the launching of MSC Malaysia Pahang Initiative in August 2009, the Malaysian prime Minister, Datuk Seri Najib Tun Razak expressed that the country is determined to continue to bring changes to the economy by working towards innovation-centered economy through three main features namely: creativity, innovation and high skills ([www.mscpahang.my](http://www.mscpahang.my)). These issues have triggered the researcher's keen interest to carry out a study on employee innovativeness.

Innovation is a vital element for the sustainability competitiveness of both nations and organizations alike. Importantly, innovation should not be perceived as a complex venture that stems only from R&D inventions and technological advancement. Rather, it emerges from day-to-day activities in the workplace channeled towards organization's survival and prosperity (Janssen, 2000; De Spiegelaere, 2012). Therefore, the chief concern for many organizations, human resource professionals and scholars is how to organize and stimulate the innovative potential of employees who have a pool of embodied tacit knowledge (Polanyi, 1966) about the production processes, the product designs, and organizational functioning to achieve workplace innovations with high returns on investments (De Spiegelaere, 2012; Getz and Robinson, 2003).

In the context of Malaysia where this study is conducted, the year 2010 was announced as Malaysian year of creativity and innovation (New Straits Times Press, 2010). The Malaysian Government continues to show commitment to the new economic model that is largely based on innovation, creativity and high value-added activities (Abdul Razak, 2010). Innovativeness is an important agenda of the Malaysian economy because the country relies heavily on trade. To continually boost trade, the country maintains a central focus on the manufacturing sector as the key engine of economic growth. Therefore, this study has chosen to examine

innovativeness in the manufacturing sector because of its significant role in Malaysia. There are several reasons that influence the decision to conduct this study with the manufacturing sector. First, the Malaysian manufacturing sector is a strong contributor to her economic growth (Ministry of Science, Technology and Innovation, Malaysia (MOSTI, 2006). Manufacturing exports amounted to RM452.5 billion which accounted for 74.8% of Malaysia's total exports in 2007 (Rafidah, 2008). The manufacturing sector accounts for 20.6% of Malaysia's gross domestic product (GDP) and remains an important driver for economic growth as stipulated in the Tenth Malaysia Plan from 2011 to 2015.

Secondly, the manufacturing sector remains the largest source of employment opportunities accounting for 27% of total employment. Given the importance of the manufacturing sector to Malaysia's economy, it is pertinent to suggest that the employees working in the manufacturing sector are imperative to the Malaysian economic growth. Lastly, there is an inadequate systematic study on employee innovativeness in manufacturing sector. Arguably, it could be suggested that Malaysian manufacturing firms need to exploit all the available resources as a means of sustaining their contribution to economic growth. One of such resources as identified in the literature is the employees of the firms (Himanen, 2007; Parzefall *et al*, 2008). It is widely suggested that the employees in the organizations are the important source of the firms' competitive advantage (Himanen, 2007; Tan and Nasurdin, 2011). Therefore, there is a need to study employee innovativeness in the manufacturing setting because it is the individual employees in particular that possesses the knowledge that sprouts the overall innovation capabilities of the firm (Parzefall *et al*, 2008; Tan and Nasurdin, 2011).

### **1.3 Background of the Study**

In this era of knowledge economy, for organizations to achieve a high level of organizational performance as well as to attain and sustain competitive advantage in the global marketplace, they need to continually manage their organizational knowledge to develop innovative and high-quality products and services (Huttala and

Parzefall, 2007). In order to achieve this mission successfully, nearly every organization relies on their employees. It is the workforce that champions the ideas that can be utilized to innovate products, processes, services, methods and operations. Therefore, at the pivotal of innovation lies creative ideas and it is the employees who can individually or collectively create, promote, share, modify and apply these ideas (Huttala and Parzefall, 2007; Ramamoorthy *et al.*, 2005) through activities such as knowledge sharing in order to achieve organizational goals.

The statement above highlights the importance and influence of human factor and knowledge management on innovation and new idea generation in order to attain competitive advantage. This implies that managing the human factor (otherwise refer to human resource management), knowledge management and innovation management are crucial organizational components that must function in tandem if organizations are to gain high level of organizational performance and outperform its rivalry.

These three components (i.e. human resource management, knowledge management and innovation management) have attracted much research in management literature, and are normally examined separately. Therefore, attempting to link the elements of these three research components would be the penultimate goal of this study bearing in mind that multidisciplinary research could probably be used to address contemporary organizational issues such as how to promote and support employees' innovativeness (Ramamoorthy *et al.* (2005). These three streams of research are broad and challenging to examine. Therefore, this current study attempts to examine only several elements of these streams of research (see Figure 1.2). Before narrowing down to the study these elements, it is importance to discuss the link between these three streams of research in general; which is presented in three folds as follows: (1) the link between human resource management and innovation, (2) the link between human resource management and knowledge management and (3) the link between knowledge management and innovation (particularly employee innovativeness).

First, in the context of linking human resource management and innovation, some studies (e.g. Edvardsson, 2008; Jorgensen, *et al.*, 2008; Ooi *et al.*, 2009; Jorgensen, *et al.*, 2007) have emphasised the link between human resource management and innovation. However, Becker and Mathew (2008) expressed that human resource management literature has not extensively attempted to bridge the gap between human resource management and innovation management in any significant way or look at human resource management precisely as an integral part of innovation. Argument put forward by Laursen and Foss (2003) opines that from both human resource management perspectives and innovation management perspectives, there is a lack of theoretical and empirical support on how human resource management affect innovation performance.

Argument put forward by Huttala and Parzefall (2007) suggests that human resource management and organizational psychology literatures recognizes the relationship between employee well-being and innovativeness but the innovation literature has not extensively examined this relationship. Most of the existing innovation studies though emanating from industrial relations literature (e.g Ramsey *et al.* 2000, Black *et al.*, 2004; Gallie, 2005) paid much attention to what could be referred to as innovative working practices. A number of studies (e.g. Godard, 2004) have looked at the nexus of innovative working practices and job quality, innovative working practices and job demand (Ramsey *et al.* 2000, Black *et al.*, 2004), innovative working practices and job control (Gallie, 2005, Huhtala and Parzefall, 2007). These practices are described as high commitment, high-involvement or high performance by Barth *et al* (2009). According to Barth *et al* (2009) only a few studies are able to assess the link between workplace innovations and employee well-being due to the lack of necessary information.

Second, in the context of linking human resource management and knowledge management, some scholars (e.g. Storey and Quintas, 2001; Hislop, 2003) presented some interesting argument that the knowledge management literature had reached a consensus that knowledge management essentially depends on people. However, it is precisely the human aspect that had received less attention in the field with most studies essentially focusing on technological issues. From the

literature, though it could be agreed that the technological aspect had received much more attention, yet there is an increasingly recognition of the importance of human dimensions and social factor in knowledge management field.

In the knowledge management domain, the literature has not extensively utilized human resource management frameworks and concepts to develop and theorize people management perspective in the field. Scholars such as Liao (2011) lamented that to date only a few studies have empirically validated the assertions that the people management aspect is inseparably related to KM results. There is an existing weak linkage between human resource management and knowledge management because human resource management scholars have not extensively entered into the debate (Storey and Quintas, 2001; Hislop, 2003). The psychological contract model which is well utilized in human resource management thinking and vocabulary could be utilized to fill this void. In the literature, some studies (e.g. Hislop, 2003; Ramamoorthy *et al*, 2005) have suggested that the fulfillment of mutual contractual obligations as suggested by the psychological contract model may influence the employee workplace behaviours (such as knowledge sharing and innovation work), employee attitudes and behaviour (Pate *et al*. 2003).

Lastly, in the context of linking knowledge management and innovation, it is important to emphasize that there are many extant studies that examined the relationship between knowledge management and innovation (e.g. Darroch and McNaughton, 2002; Dougherty *et al.*, 2002). But most studies examined the influence of knowledge sharing and firm innovation capabilities (Liao *et al*, 2007, Lin, 2007; Saenz *et al*, 2009 and so on). While studies linking knowledge sharing and employee innovativeness are still very scarce, previous studies conducted by Smith *et al.*,(2005), Darroch and McNaughton(2002), Dougherty *et al.*,(2002) and Nonaka and Takeuchi(1995) have supported the importance of knowledge management on innovation. These existing studies have maintained a positive relationship between knowledge management and innovation. For instance, Dougherty's *et al.* (2002) postulation that innovation that accelerates creative solutions depend greatly on the accumulation of new knowledge in an organization is in agreement with the commentary of others scholars (e.g. Storey and Kelly, 2002;



Lin, 2001; Tsai, 2001). Knowledge is the most essential component in innovation. These authors maintain that the operational transfer of knowledge between groups and individuals is required to solve complex problems and crucial in developing innovative ideas for new products and services.

To sum up the arguments of the link between these three streams of research, the researcher realizes that the role of people who engage in knowledge management processes that sprout innovation in the organization is very important and hence there is need to pay greater attention to it in research and in practice. Based on these arguments, the researcher believes that the focus of knowledge management and innovation should be placed on the human aspects thus the importance of human agency in knowledge management and innovation should be given greater attention. In the literature, aspects of human resource management examined in relation to knowledge management is essentially focus on recruitment and selection, training, performance appraisal, reward and compensation (e.g. Yahya and Goh, 2002; Edvardsson, 2008; Ooi *et al*, 2009).

A study incorporating the attitudinal and behavioural consequences of these human resource management practices as suggested by Guest and Conway's (1997, 2002) psychological contract model is needed. This idea is well supported by scholars (e.g. Hislop, 2003; Aggarwal and Bhargava, 2009) who suggested a link between human resource outcomes with knowledge sharing. Therefore, drawing on the psychological contract literature, knowledge management (particularly knowledge sharing) literature and innovation literature, a conceptual model can be developed to link and advance the theoretical understanding of the relationship among employee attitudinal and behavioral factors, knowledge sharing and employee innovativeness.

## 1.4 Research Opportunities

Studies on the relationship between knowledge management and innovation are many in the literature. However, according to Kamasak and Bulutlar's (2009) and Mathuramaytha's (2012) claim, there are not a large number of academic literature on knowledge sharing and innovation. This claim is evident in the results of the researcher's online databases search (Emerald, Scopus, Science Direct, Web of Science and Google scholar). In all these databases, only 31 articles are directly related to the keywords search "knowledge sharing and innovation capabilities" from year 2000 to September, 2013. This makes the field an interesting area of research. Table 1.1 shows the summary of the literature search result. A review of these articles shows some evidence that this area of research is considerably new and interesting.

**Table 1.1:** Summary of Literature Search

<b>Databases</b>	<b>Search results</b>	<b>Closely related</b>
Emerald	-	8
Scopus	25	7
ScienceDirect	43	2
Web of Science	22	4
Google scholar	-	10
Total	>150	31

The researcher had employed both a meta-analysis and descriptive analysis style to review mainly the current literature in the field of knowledge sharing and innovation capabilities. Also, a systematic review of all the research frameworks, methodology and findings on the area was carried out to identify the research gap and opportunities. The strategy employed to make some significant contributions lays emphasis essentially on synthesising what have been done so far in the literature in order to find a niche for this current study.

Previous studies on the relationship between knowledge sharing and innovation (Liao *et al.*, 2007; Song *et al.*, 2008; Kumar and Rose, 2012; Hitam *et al.*, 2012) stress a positive relationship between knowledge sharing and innovation capability. As a matter of fact, all the scholars agree that this relationship is significantly positive. Basically, a review of this area of research shows that three major streams can be deduced and they are:

- Research on the antecedents of knowledge sharing and innovation capabilities
- Research on the outcomes of knowledge sharing and innovation capabilities
- Research on the mediators and moderators of knowledge sharing and innovation capabilities.

## **1.5 Statement of the Research Problem**

The creative ideas of people are the core of all innovation activities. It is individual employees who can single-handedly or in groups, explore, generate, champion and implement these ideas (Huhtala and Parzefall, 2007). Employees' innovativeness remains a crucial factor that helps organizations to continuously develop innovative and high-quality products and services in order to remain competitive in the global market. It is therefore not surprising that innovative employees are the key assets for many contemporary organizations (Huhtala and Parzefall, 2007). Thus, the question on how to enhance employees' innovativeness presents a key puzzle for both the managers in the industry and academic researchers to ponder. Many researchers and practitioners endorse the premise that individual innovation helps to attain organizational success (Axtell *et al.*, 2000; Smith, 2002; Unsworth and Parker, 2003). This means that firms that strive to become more innovative must first capitalize on their employee's ability to innovate (De Jong and Den Hartog, 2007). Despite the importance of employees' innovativeness to the firms, ways to support innovative individuals to enhance their innovativeness remains an issue to tackle.

Studies on innovativeness in Malaysia are still under researched as compared to the developed nations particularly in the United States of America and European countries (Ismail, 2005; Tan and Nasurdin, 2011). Similarly, studies on employee innovativeness are limited. Malaysia has emphasized on the importance of innovation in all sectors of its economy in its efforts to become a knowledge-based economy (Ministry of Science, Technology and Innovation, Malaysia (MOSTI, 2006). Innovation research has extensively shed light on the antecedent factors supporting or inhibiting employees' innovativeness. These factors are commonly divided into four broad categories such as individual, job, team and organizational factors (Parzefall *et al*, 2008). Although the knowledge base of the factors that influence employee innovativeness is advancing, the review shows that the factors influencing or inhibiting employee innovativeness (i.e. studies at the individual level) is still not extensively examined (particularly in Malaysia). In other parts of the world, there is increasing emphasis placed on the individual's creative abilities and their use in organizations (Himanen, 2007). In Finland for instance, the innovativeness of individual employees are emphasised as a crucial factor that has contributed to their economic success (Parzefall *et al*, 2008). Consequently, this study argues that examining the factors that influence employee innovativeness in Malaysia is now due in order understand how the innovative efforts of the Malaysian workforce can be supported to foster their innovativeness. This reason has prompted the need for this study.

In the literature, knowledge sharing has been identified as an important influencer of employee innovativeness. The fact that knowledge sharing would enable employees to contribute to the overall firm innovation capabilities has been highlighted by several researchers (Lin 2007; Rehab *et al*. 2011; Kumar and Rose 2012; Hitam *et al* 2012) in this research area. However, the role played by knowledge sharing and its antecedents in influencing individual innovativeness that sums up to the overall firm innovation has not received much attention in this area. First and foremost, in the knowledge sharing and innovation capability domain, a review of the literature unveils three major research streams. The first streams focuses on antecedent factors with a sub-theme on individual factors. In this sub-theme, previous studies on individual factors mainly focused on trust, enjoyment in

helping others, self-efficacy, reciprocity, pro-sharing norms and self-image (Lin 2007; Rehab et al. 2011; Kumar and Rose 2012; Hitam et al 2012) neglecting essential variables relating to employee attitudinal and behavioural factors. These individual factors studied namely trust, enjoyment in helping others, self-efficacy, reciprocity, pro-sharing norms and self-image (Lin 2007; Rehab et al. 2011; Kumar and Rose 2012; Hitam et al 2012) are essentially intrinsic motivational factors. The studies in this domain on extrinsic motivational factors of knowledge sharing which is related to external feeling, judgment and benefits that employee receive from their organization or their job roles have not received much attention in the literature as compared to the intrinsic motivational factors. Therefore, there is a need to also examine the extrinsic motivational factors because they are related to the employee's external satisfaction or feeling derived from what their organizations offers them and could use these external feelings as a factor to share their knowledge.

The second reason emanates from the findings of the review of the available literature. Previous researchers (Liao et al, 2007; Lin, 2007; Song et al, 2008; Saenz et al, 2009; Xiang et al, 2009; Carmeloz-Ordaz et al, 2011; Kumar and Rose, 2012) have acknowledged that the success of a firm's innovation capability depends greatly on knowledge sharing but did not look at innovation at the perspective of employee innovativeness. Previous studies essentially focused their discussion on innovation capability at the firm level. To the knowledge of the researcher, no particular study on the relationship between knowledge sharing and individual employee innovativeness currently exists in the literature. Therefore, there is a need to study individual innovativeness because it is the individual employees in particular that possesses the knowledge that sprouts the overall firm innovation capabilities (De Jong and Hartog, 2007). Another reason that prompted the researcher's keen interest to conduct this study is related to the contextual issue. Malaysia is one of the post-industrial societies has continually shown commitment to innovativeness in order to ensure that manufacturing firms strive to transform itself from labour-intensive to knowledge-intensive. To achieve this goal, Malaysia has launched economy models which aims in transforming the manufacturing sector from the product based towards the knowledge based (Tan and Nasurdin, 2011). Aligned with this move, understanding the necessary antecedents influencing the individuals in the

manufacturing firms to innovate new ideas, practices and products is the third reason for conducting this study. Bearing in mind that it is the individual employees that have this ability to innovate products in the organization, it is important to examine what motivates the employees or the work behaviours among employees, which consecutively lead to organizational innovation in general.

To address these issues, several research agenda are been proffered by this current study. First, the researcher has mentioned that there is a need to incorporate other essentially attitudinal and behavioural variables that could influence knowledge sharing. Second, the researcher has pointed out earlier on the need for extrinsic motivational factors. Arguably, these extrinsic factors could enable employees to decide whether to pay back their organization in form of participating in discretionary activities such as knowledge sharing. Therefore, this current study incorporates some attitudinal and behavioural variables which are also extrinsic factors into a research model by borrowing psychological contracts constructs such as job satisfaction and organizational commitment (supported by De Vries et al 2006; and Cameloz-Ordaz et al 2011), organizational citizenship behaviour (supported by Al-zu'bi, 2011; Ramasamy and Thamaraiselvan, 2011; Aliei et al., 2011) and introduced one new additional constructs employee engagement derived from the social exchange theory, as antecedents variables to study the influence of knowledge sharing on employee innovativeness.

Finally, the necessity of incorporating these variables is based on the argument that employees who are more satisfied with the job, committed to the organization, possess citizenship behaviour for their organization and engaged with their job and organization are likely to participate in organizational activities such as knowledge sharing which consequently enhances their innovativeness. Therefore, it is important to gain better insights and understanding on how knowledge sharing influences the individual employee innovativeness which sums up to the overall firm innovation capability in general. Thus, this current study will examine innovation at the individual level as employee innovativeness because understanding employee dimension, employee well-being in relation to knowledge sharing and innovativeness is essential for organizations to learn how innovative employees and knowledge

workers could be supported in carrying out their innovative work. Hence, the theoretical and empirical explanation which this study tends to proffer is needed. In summary, this study would investigate the influence of job satisfaction, organizational commitment, organizational citizenship behaviour, and employee engagement as antecedent variables influencing knowledge sharing and employee innovativeness and also the mediating role of knowledge sharing in order to provide detailed insights to the subject matter and contribute new knowledge to this field of study.

## **1.6 Research Questions**

In line with the issues discussed above and what this study tends to investigate, the following research questions are proposed to be answered by this study:

1. What are the attitudinal factors influencing knowledge sharing? Would job satisfaction and organization commitment influence knowledge sharing?
2. What are the behavioral factors influencing knowledge sharing? Is it possible that organization citizenship behaviour and employee engagement would influence knowledge sharing?
3. Does knowledge sharing influence employee innovativeness?
4. What are the attitudinal factors influencing employee innovativeness? Do job satisfaction and organization commitment influence employee innovativeness?
5. What are the behavioral factors influencing employee innovativeness? Do organizational citizenship behaviour and employee engagement influence employee innovativeness?
6. Does knowledge sharing mediate the relationship among job satisfaction, organization commitment, organization citizenship behaviour, employee engagement, and employee innovativeness?

## 1.7 Research Objectives

The aim of this study is to examine and empirically investigate the influence of job satisfaction, organizational commitment, organizational citizenship behaviour, and employee engagement on knowledge sharing and employee innovativeness. Based on this aim and the stated research questions, the following research objectives are stated as follows:

1. To examine the influence of job satisfaction on knowledge sharing.
2. To examine the influence of organization commitment on knowledge sharing.
3. To investigate the influence of organizational citizenship behaviour on knowledge sharing
4. To investigate the influence of employee engagement on knowledge sharing
5. To examine the influence of knowledge sharing on employee innovativeness.
6. To investigate the influence of job satisfaction on employee innovativeness.
7. To investigate the influence of organization commitment on employee innovativeness.
8. To examine the influence of organizational citizenship behaviour on employee innovativeness.
9. To examine the influence of employee engagement on employee innovativeness.
10. To investigate whether knowledge sharing could mediate the relationship among job satisfaction, organization commitment, organization citizenship behaviour, employee engagement and employee innovativeness.



## **1.8 Scope of the Study**

This study employed the quantitative approach to examine whether the attitudinal and behavioural conditions of employees are related to and influence knowledge sharing and employee innovativeness. The study focuses essentially on individual unit of analysis. This study utilized the survey method to gather data from engineers classified as knowledge workers working in manufacturing firms in Malaysia. There are 2476 manufacturing firms listed by FMM (2013) directory.

## **1.9 Significance of the Study**

This study has a justifiable significance to theory in academic research and organizational practice. It contributes to the understanding of the influence of employee's attitudinal factors (job satisfaction and organizational commitment) and employee's behavioural factors (organizational citizenship behaviour and employee engagement) on the knowledge sharing which in turn influences the employee innovativeness. This study posits that although knowledge sharing may yield to employee's innovativeness, yet the attitudinal and behavioural conditions of the employees who engage in this knowledge sharing in order to improve their personal innovativeness is worth investigating. This is because the seeds of new knowledge that form the basis of innovation are gotten from individuals who engage in the knowledge sharing process. Based on the literature, there is abundance of literature on technological and organizational antecedents of innovation, yet the soft aspect of the people dimension relating to psychological supposition and extrinsic motivational factors that could influence knowledge sharing and human innovativeness has not received extensive attention in the literature.

The significance to practice is simple and clear. People are the core of innovation activities in every organization. It is important for organizations, human resource professionals and managers, knowledge management scholars as well as social scientist to consider benefits and processes that could boost the level of their employee's satisfaction and commitment. A high level of satisfied, committed and

engaged employees with good citizenship behaviour would likely lead to an increase positive behaviour which employees display at the workplace. This would help boost employee's attitude and behaviour to participate in discretionary activities such knowledge sharing in the workplace. Thus, this study provides a framework that would help organizations to see the importance of paying attention to their human capital by devising means to boost their employee's satisfaction, commitment, engagement and citizenship behaviour which in turn would enhance their individual innovativeness in particular and the firm innovation capability in general.

In sum, this study has some significance by its position on the notion that there is need to understand attitudinal and behavioural factors of knowledge sharing and employee innovativeness because it is the innovative individuals that engage in knowledge sharing process which in turn drives both their personal, teams and organizational innovativeness and creativity. Also, this study has some contributions for extending the theoretical status quo of knowledge sharing and innovation capabilities relationship research as one of the few studies that considers the influence of attitudinal and behaviour antecedents on knowledge sharing and employee innovativeness directly, as well as the influence of attitudinal and behaviour antecedents on employee innovativeness indirectly through knowledge sharing.

### **1.10 Definition of Key Terms**

This section provides brief conceptual and operational definitions of the six constructs investigated in this study. A detailed review of definitions of these variables from previous studies is presented in Chapter 2 (literature review) of this thesis.

### **1.10.1 Employee Innovativeness**

The conceptual and operational definitions of employee innovativeness are presented as:

#### **Conceptual Definition**

Employee innovativeness is conceptualised as individual innovative behaviours, which includes behaviours related to the innovation process comprising of idea generation, idea promotion and idea realization, with the aim of producing innovations (Parzefall *et al.*, 2008).

#### **Operational Definition**

In this study, employee innovativeness is operationalized as employees' propensity to innovate, conceived as a complex behaviour consisting of idea exploration, generation, championing and implementation with the aim of meeting organizational goals (De Jong and Hartog, 2010).

### **1.10.2 Knowledge Sharing**

The conceptual and operational definitions of knowledge sharing are presented as:

#### **Conceptual Definition**

Knowledge sharing is conceptualised in terms of two knowledge sharing behaviours consisting of knowledge donating and knowledge collecting (Van den Hooff and De Ridder, 2004; De Vries *et al.*, 2006). Knowledge donating is actively communicating to others what one knows while knowledge collecting is actively consulting others to learn what they know.

### **Operational Definition**

In this study, knowledge sharing is operationalized as employee's behaviour focused on donating and collecting knowledge in the organization (De Vries *et al.*, 2006). To donate means to share one's knowledge while to collect knowledge simply means to encourage others to share their knowledge (Van den Hooff and De Ridder, 2004; De Vries *et al.*, 2006).

#### **1.10.3 Job Satisfaction**

The conceptual and operational definitions of job satisfaction are presented as:

##### **Conceptual Definition**

Job satisfaction is conceptualised in accordance with Locke (1976) original definition as the pleasurable or positive emotional state resulting from the appraisal of an individual's job or job experience.

##### **Operational Definition**

In this study, job satisfaction is operationalized as the extent to which employees like their work (Agho *et al* 1992).

#### **1.10.4 Organization Commitment**

The conceptual and operational definitions of organization commitment are presented as:

### **Conceptual Definition**

Organization commitment is conceptualised as a psychological state consisting of individual's desire, need and obligation to maintain employment in an organization (Meyer and Allen, 1991). According to Meyer and Allen, (1991), organization commitment has three components namely: affective commitment, continuance commitment and normative commitment.

### **Operational Definition**

In this study, organization commitment is operationalized as individual's attitude and attachment towards their organization (Saks, 2006).

#### **1.10.5 Organizational Citizenship Behaviour**

The conceptual and operational definitions of organizational citizenship behaviour are presented as:

### **Conceptual Definition**

Organizational citizenship behaviour is conceptualised as work-related behaviours that are discretionary, not related to the formal organisational reward system, and, in aggregate, promote the effective functioning of the organisation (Organ, 1988). OCB goes beyond the call for duty, it is discretionary and voluntary, and goes beyond the normal role expectations (Mackenzie and Podsakoff, 1999, Allison *et al*, 2001).

### **Operational Definition**

Organizational citizenship behaviour is operationalized as the degree of employee's voluntary and informal behaviours directed towards helping co-workers

and the organization (Saks, 2006). It consists of citizenship behaviours directed toward individuals and citizenship behaviours directed towards the organisation (Saks, 2006).

### **1.10.6 Employee Engagement**

The conceptual and operational definitions of employee engagement are presented as:

#### **Conceptual Definition**

Employee engagement is conceptualized using definition by Kahn (1990, p. 694) as “the harnessing of organization members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances.” Engagement is a positive fulfilment and work-related state of mind that is characterized by dedication, absorption and vigour (Schaufeli *et al.* (2002).

#### **Operational Definition**

Employee engagement is operationalized as the degree to which an individual is attentive and absorbed in the performance of their work and organization roles (Saks, 2006).

## 1.11 Organization of the Thesis

This thesis is organized into five chapters. This is the foremost chapter of the five chapters of this study. It presents the overview of the study background, statement of the research problem, research questions, research objectives (stated in consonant with the research questions), the significance and scope of the study, as well as conceptual and operational definitions of the study variables.

Chapter 2 presents the evaluation, review and synthesis of the related literature on the research area. This second chapter harnessed and synthesised all the existing literature in knowledge sharing and innovation research domain, as well as the research findings postulated by other researchers. Furthermore, the theoretical underpinnings, the research hypotheses and research model were presented in this chapter.

Chapter 3 is devoted to the research methodology. It presents the methods employed for the study, which is the research design and procedure. This chapter demonstrates the selection of the respondents, sample technique and sample size, the development of the questionnaire and data collection procedure. This third chapter ended with a brief description of the strategies and procedures that will be employed to evaluate data collected from the survey.

Chapter 4 discusses the analysis and interpretation of the research findings. The reports of the descriptive and inferential statistical analysis were also presented. The results were summarized in a number of tables to facilitate interpretation.

Chapter 5, which is the final chapter of this study, presented the interpretation of the research findings. The findings from this study were compared to those found in previous research literature reviewed in Chapter 2. Chapter 5 ends the study with the conclusion, discussion of the findings, recommendation and some suggestions for future research.

## **1.12 Conclusion**

This is the end of the first chapter of this study that focuses mainly on the influence of attitudinal and behavioural factors (namely: job satisfaction, organization commitment, organizational citizenship behaviour and employee engagement) on knowledge sharing and employee innovativeness as well as the influence of knowledge sharing on employee innovativeness. So far, the chapter have presented the background of the study, the statement of the research problem, the research questions and objectives, the scope and significance of the study, the conceptual and operational definitions of the study variables and finally the structure of the thesis. The next chapter which is Chapter 2 of the study is devoted to the discussion on the review of related literature in the area of study.



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