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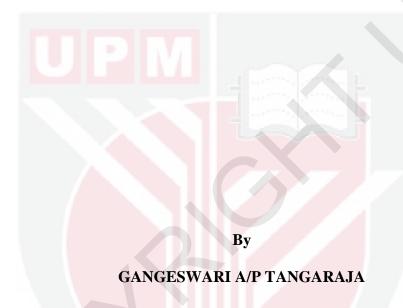**UNIVERSITI PUTRA MALAYSIA**

PREDICTORS OF KNOWLEDGE SHARING BEHAVIOUR AND MEDIATING ROLE OF ORGANISATIONAL COMMITMENT AMONG MALAYSIAN PUBLIC SERVICE ADMINISTRATORS

GANGESWARI A/P TANGARAJA

FPP 2016 35

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By

GANGESWARI A/P TANGARAJA

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Doctor of Philosophy

August 2016

DEDICATION

This dissertation is especially dedicated to my husband

Mr Barathidasan Subramanian,

my children

Veyrroshen Barathidasan

Harshini Barathidasan

Dhaannya Barathidasan

and to my parents

Mr & Mrs Tangaraja Muthusamy

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Fostering employees' knowledge sharing behaviour (KSB) is an important agenda for the HRD practitioners in this knowledge era. This is because knowledge sharing has been identified as the most crucial process for effective knowledge management and has been associated to organisational performance. Although in recent years studies associated to knowledge sharing started to proliferate, however, the mediating effect of organisational commitment on the relationships between the intrinsic motivational factors (knowledge self-efficacy, enjoyment in helping others, public service motivation), extrinsic motivational factors (reciprocity, recognition practices), comfort factors (time availability, ICT support) and organisational socialisation factors (social network, trust) and KSB were poorly understood. Moreover, less focus was given to the administrators in the Malaysian public sector organisations. Therefore, to bridge these gaps and to gain new insights, this study aims to examine selected factors that influence KSB and the mediation effect of organisational commitment among the Malaysian public service administrators. The study theorised knowledge sharing using the General Workplace Commitment Model by Meyer and Herscovitch (2001) as the main underpinning theory and has integrated it with Three Component Model of Organisational Commitment (Meyer & Allen, 1991), Self Determination Theory (Deci & Ryan, 1985) and Social Capital Theory (Nahapiet & Ghoshal, 1998) to explain Malaysian public service administrators' KSB.

The present study employed a quantitative approach with correlational research design. In addition, it adopted a cross-sectional survey using structured questionnaires in data collection. A number of 231 Administrative and Diplomatic Service (ADS) Officers Grade M44 and above (the respondents) from various ministries/central agency of Malaysian public sector organisations in Putrajaya, the Federal Administrative Centre of Malaysia participated in this study. Their responses were analysed for descriptive statistics to determine the levels of all continuous variables involved in this study. As for the proposed hypotheses, the data were

analysed using PLS-SEM. The analysis of descriptive statistic indicated that Malaysian public service administrators actively engage in KSB. The study revealed that intrinsic motivational factors (knowledge self-efficacy, enjoyment in helping others, PSM) are key factors in developing administrators' affective commitment towards the organisation. Further, it showed that, organisational socialisation factors (trust, social network) are crucial factors in developing administrators' normative organisational commitment. As a whole, the study found that affective organisational commitment is the key intermediate factor to enable intrinsically motivated administrators to engage in KSB. In addition, it was found that normative organisational commitment is pertinent intermediate factor to enable administrators who are socially connected in a trustworthy environment to engage in KSB.

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Abstrak tesis ini dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

PENENTU PERLAKUAN PERKONGSIAN ILMU PENGETAHUAN DAN PERANAN KOMITMEN ORGANISASI SEBAGAI PENGANTARA DI KALANGAN PENTADBIR PERKHIDMATAN AWAM DI MALAYSIA

Oleh

GANGESWARI A/P TANGARAJA

Ogos 2016

Pengerusi   :   Profesor Madya Roziah Mohd Rasdi, PhD
Fakulti   :   Pengajian Pendidikan

Memupuk tingkah laku perkongsian ilmu dalam kalangan pekerja adalah agenda penting bagi pengamal HRD dalam era pengetahuan ini. Ini adalah kerana perkongsian ilmu telah dikenal pasti sebagai satu proses yang paling penting bagi pengurusan pengetahuan yang berkesan dan juga telah dikaitkan dengan prestasi organisasi. Walaupun dalam kebelakangan ini, kajian berkaitan dengan perkongsian ilmu telah mula berkembang, namun, peranan komitmen organisasi sebagai pengantara kepada hubungan di antara faktor-faktor motivasi intrinsik (pengetahuan efikasi-kendiri, keseronokan membantu orang lain, motivasi perkhidmatan awam), faktor-faktor motivasi ekstrinsik (timbal balik, amalan pengiktirafan), faktor-faktor keselesaan (ketersediaan masa, sokongan ICT) dan faktor-faktor sosialisasi organisasi (rangkaian sosial, kepercayaan) dan tingkah laku perkongsian ilmu adalah kurang difahami. Tambahan pula, kurang tumpuan diberikan kepada kumpulan pentadbir dalam organisasi sektor awam Malaysia. Oleh itu, bagi merapatkan jurang ini dan juga bagi mendapatkan pemahaman baru, kajian ini bertujuan untuk mengkaji faktor-faktor yang mempengaruhi tingkah laku perkongsian ilmu dan peranan komitmen organisasi sebagai pengantara dalam kalangan pentadbir sektor awam di Malaysia. Kajian ini telah menyepadukan beberapa teori bagi memberikan penerangan yang menyeluruh kepada tingkah laku perkongsian ilmu dalam kalangan pentadbir sektor awam di Malaysia. Kajian ini telah menggunakan '*General Workplace Commitment Model*' oleh Meyer and Herscovitch (2001) sebagai teori yang menjadi asas utama dan telah menyepadukan dengan '*Three Component Model of Organisational Commitment*' (Meyer & Allen, 1991), '*Self Determination Theory*' (Deci & Ryan, 1985) dan '*Social Capital Theory*' (Nahapiet & Ghoshal, 1998) untuk menjelaskan tingkah laku perkongsian ilmu dalam kalangan pentadbir sektor awam di Malaysia.

Kajian ini telah menggunakan pendekatan kuantitatif dengan reka bentuk penyelidikan korelasi. Di samping itu, ia menerima pakai satu kajian keratan rentas dengan menggunakan soal selidik berstruktur dalam pengumpulan data. Sejumlah

231 Pegawai dari Perkhidmatan Tadbir dan Diplomatik (ADS) daripada Gred M44 dan ke atas (responden kajian) dari pelbagai kementerian / agensi sektor awam Malaysia di Putrajaya iaitu Pusat Pentadbiran Persekutuan Kerajaan Malaysia telah mengambil bahagian dalam kajian ini. Jawapan mereka telah dianalisis secara statistik deskriptif untuk menentukan tahap kesemua pembolehubah berterusan yang terlibat. Bagi menjawab hipotesis, data dianalisis dengan menggunakan PLS-SEM. Analisis statistik deskriptif menunjukkan bahawa pentadbir sektor awam Malaysia melibatkan diri secara aktif dalam perkongsian ilmu pengetahuan. Kajian ini menyokong bahawa faktor-faktor motivasi intrinsik (pengetahuan efikasi-kendiri, keseronokan membantu orang lain, motivasi perkhidmatan awam) adalah faktor utama dalam mempengaruhi komitmen afektif pentadbir awam terhadap organisasi. Seterusnya, faktor-faktor sosialisasi organisasi (rangkaian sosial, kepercayaan) adalah faktor penting dalam mempengaruhi komitmen normatif organisasi dalam kalangan pentadbir awam. Secara keseluruhannya, kajian ini mendapati bahawa komitmen afektif organisasi adalah faktor perantaraan utama untuk membolehkan pentadbir yang bermotivasi intrinsik untuk melibatkan diri dalam perkongsian ilmu pengetahuan. Di samping itu, kajian ini juga menunjukkan komitmen normatif organisasi adalah faktor pengantara penting untuk membolehkan pentadbir yang mempunyai hubungan sosial yang rapat dalam persekitaran yang boleh dipercayai untuk melibatkan diri dalam perkongsian ilmu pengetahuan.

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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Declaration by Members of Supervisory Committee

This is to confirm that:
- the research conducted and the writing of this thesis was under our supervision;
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LIST OF ABBREVIATIONS

ADS	Administrative and Diplomatic Service
AVE	Average Variance Extracted
CB-SEM	Co-variance based SEM
CMV	Common Method Variance
CR	Composite Reliability
HOC	Higher Order Construct
HTMT	Heterotrait-Monotrait Ratio
KSB	Knowledge Sharing Behaviour
KSV	Voluntary Knowledge Sharing
KSR	Requested Knowledge Sharing
LOC	Lower Order Construct
MOSTI	Ministry of Science Technology and Innovation
MOT	Ministry of Transportation
NRE	Ministry of Natural Resources and Environment
PLS-SEM	Partial Least Square Structural Equation Modelling
PSD	Public Service Department
PSM	Public Service Motivation
SCT	Social Capital Theory
SDT	Self Determination Theory
TRA	Theory of Reasoned Action
TPB	Theory of Planned Behaviour
VIF	Variance Inflation Factor

CHAPTER 1

INTRODUCTION

Background of the Study

Knowledge sharing is a critical area of concern in HRD (Blankenship & Ruona, 2009) and it refers to the individual's actions of providing work-related knowledge and expertise to others within organisation which ultimately improves organisation's performance (Yi, 2009). Knowledge sharing is acknowledged as the cornerstone for successful knowledge management (Yesil & Dereli, 2013). The justification behind this recognition is because knowledge resides and embedded in the minds of the employees (Ling, Sandhu & Jain, 2009; Sandhu, Jain & Ahmad, 2011; Gupta, Agarwal, Samaria, Sarda & Bucha, 2012; Amayah, 2013) who recognize, archive, access, create and apply knowledge in carrying out their day to day duties (Bock, Zmud, Kim & Lee, 2005). As such, only through employee's knowledge sharing behaviour (KSB), the individual knowledge can be translated into group and organisational knowledge (van den Hooff & de Ridder, 2004; Bock et al., 2005; Karkoulian, Harake & Messarra, 2010). Hence, the ultimate success of knowledge management is dependent on KSB of employees (Bock et al., 2005; Ling et al., 2009; Wang & Noe, 2010; Gupta et al., 2012; Olatokun & Nwafor, 2012; Sharma, Singh & Neha, 2012).

However, the effective management of available knowledge is the most challenging task faced by many organisations in today's business (Davenport & Prusak, 1998; de Vries, van den Hooff & de Ridder, 2006; Fathi, Eze & Goh, 2011; Okyere-kwakye, Md Nor & Ologbo, 2012; Amayah, 2013). As knowledge is personal, only employee's willingness and co-operation to share knowledge will lead to organisation's effective knowledge management (Lin, 2007a; Gupta, Joshi & Agarwal, 2012; Zhang & Ng, 2012; Amayah, 2013).

Knowledge sharing has been associated with positive outcomes in the past such as increase in organisation innovation capability (Lin, 2007a; Chee, 2009; Kumar & Che Rose, 2012), better productivity (Laycock, 2005; Yusof, Ismail, Ahmad & Yusof, 2012), increase in organisation effectiveness (Yang, 2007), team task performances (Cheng & Li, 2011), as well as individual performances (Reychav & Weisberg, 2009; van Woerkom & Sanders, 2010). Overall, knowledge sharing enhances organisational performance and therefore, it plays a major role in organisational development, a core component of HRD. Besides that, knowledge sharing also is able to improve the quality of public service delivery system and enhance the productivity level of public service employees (Gorry, 2008; Yusof et al., 2012). As such, knowledge sharing is regarded as one of the building blocks for organisation's success (Burke, 2011; Witherspoon, Bergner, Cockrell & Stone, 2013).

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In line with that, firms and organisations are taking various measures to inculcate KSB among their employees and some of the initiatives taken are such as, establishing communities of practice, investing on knowledge networks, rewards for knowledge sharing, linkage with performance appraisal and organising training (Bock et al., 2005; Ling et al., 2009). However, fostering knowledge sharing in organisation is not an easy task (Bock & Kim, 2002; Olatokun & Nwafor, 2012; Yusof et al., 2012; Kuo, 2013). Despite all the incredible benefits and importance of knowledge sharing, studies have proven that some employees are still reluctant to share knowledge with other colleagues (Bock et al., 2005; Kankanhalli, Tan & Wei, 2005; Naachimuthu, 2007; Ling et al., 2009; Suppiah & Sandhu, 2011; Husted, Michailova, Minbaeva & Pedersen, 2012; Welschen, Todorova & Mills, 2012). Employee's reluctance to share knowledge can lead to inefficiency and fragmentation of services and at times to the extent of service breakdown in organisation (Konstantinou & Fincham, 2010).

Therefore, organisations have to undergo a lot of challenges in order to foster KSB among employees especially when comes to dealing with employees' retirement, transfer or resignation which could lead to knowledge being lost (Yang, 2007; Ling et al., 2009; Gupta et al., 2012; Amayah, 2013).

Organisational Challenges with regard to Employee Retirement/Turnover

It has been reported that in ten to fifteen years down the road, a large percentage of older workforce will be retiring from their organisation (Joe, Yoong & Patel, 2013). This means that these workforce will also bring with them their work-related knowledge, expertise and skills (Syed-Ikhsan & Rowland, 2004a; Sharma et al., 2012; Joe et al., 2013). Retirement can lead to organisational knowledge lost if the skilled, experienced and trained expert employees leave the organisation without getting involved in knowledge sharing activities (Treleaven & Sykes, 2005; Ling et al., 2009).

The impact of organisational knowledge lost to any organisation among others are, firm losing its credibility with clients, performance decrease, loss of clients and decrease in revenue, to name a few (Joe et al., 2013). In such an instance, knowledge sharing helps to minimise the negative effects of brain-drain when employees leave the organisation (Fathi et al., 2011). Hence, knowledge sharing certainly plays imperative role in organisations to overcome such challenges. The immense importance of knowledge sharing is not only applicable to the private sector organisations but also to the public sector organisations as a whole.

Knowledge Sharing and Its Importance to the Public Sector

Knowledge sharing is very crucial to non-profit organisations such as the public sector organisations (Sandhu et al., 2011; Kumar & Che Rose, 2012). Knowledge sharing can enhance the public service organisations' competitive advantages and

innovation capability (Sandhu et al., 2011; Kumar & Che Rose, 2012). Moreover, public sector organisations these days are regarded as knowledge intensive organisations, because of the availability of large amount of knowledge within public sector organisations as knowledge is continuously generated (Sandhu et al., 2011). As such, effective interdepartmental and intradepartmental knowledge sharing in public sector organisations is vital (Willem & Buelens, 2007). Besides, public sector organisations play key role in developing and providing knowledge services to the public at large, therefore, focus should be made in implementing knowledge sharing initiatives (Sandhu et al., 2011).

Knowledge sharing also enables the transformation of an ordinary organisation into a more productive and competitive organisation (Yusof et al., 2012). In addition, it has been ascertained that knowledge sharing is able to increase worker's performance, improve public delivery system and public satisfaction and above all enhance the productivity of public servants (Yusof et al., 2012).

Besides that, according to Syed-Ikhsan and Rowland (2004a), employees in public sector organisations also leave their organisation because of retirement, transferred laterally or being promoted to higher grade to some other ministries, department or agencies. In view of that, the Malaysian Public Service Department has reported that in the next four years, a significant number or 643 Administrative and Diplomatic Service (ADS) officers will be retiring from the Malaysian public service organisations i.e. the scheme identified for the present study as Malaysian public service administrators (refer to Table 1.1). This figure indicates the potential organisational knowledge lost if knowledge sharing does not take place effectively in the Malaysian public sector organisations.

Further, on 30 March of 2009, the Government of Malaysia has approved New Economy Model for the country. The new model has detailed out eight Strategic Reform Initiatives (SRIs), which includes the development of a quality work force by upgrading the skills and knowledge of existing employees to enable them to be multitasking through continuous education programme. In order to achieve these objectives, knowledge sharing is a crucial feature. As knowledge sharing is a crucial process in public service (Sandhu et al., 2011), therefore, there is a great need for empirical research that can serve as a basis for further development of policy on KSB among Malaysian public service administrators. Overall, knowledge sharing among public service employees should be made an integral part of their daily routines to ensure quality service.

Table 1.1: Estimated Number of ADS Officers Retiring from the Malaysian Public Sector Organisations

Year	2016	2017	2018	2019	Total
No. of ADS retirees	202	191	162	88	643

(Source: Public Service Department, Malaysia (2013))

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However, till now how far the Malaysian public sector organisations have embarked on knowledge sharing initiatives and the current involvement of public sector employees on these initiatives should be overviewed in order to get an insight.

Current Knowledge Sharing Initiatives in the Malaysian Public Sector Organisations

The fourth Prime Minister of Malaysia had addressed that sharing of knowledge should be made a culture in Malaysia to be able to compete globally with the developed nation (Harun, Business Times, 1995). However, past research has revealed that the Malaysian public sector has not fully embarked on knowledge sharing initiatives extensively (Yusof et al., 2012). As of now, the initiatives were only taken in small scale (Yusof et al., 2012) and decentralised into certain public sector organisations.

A survey conducted by Sandhu et al. (2011) among two Malaysian public sector organisations (Implementation Coordination Unit (ICU) and Public Works Department (PWD)), revealed that employees in these two organisations were very positive on the importance of knowledge sharing and have strongly agreed that knowledge is the main source of competitive advantage in public sector organisations. However, the respondents felt that the importance of knowledge sharing was not clearly communicated to employees at all levels. In fact, despite being in the knowledge era, a large number of employees in these two public service organisations were not aware whether knowledge sharing strategies actually existed in their organisations (Sandhu et al., 2011). This is quite alarming and indicates that initiatives should be taken to develop policies associated to knowledge sharing in order to foster sharing culture in the public sector environment (Sandhu et al., 2011).

In a separate research, a survey conducted by Syed-Ikhsan and Rowland (2004b) among 154 officers of various schemes in the Ministry of Entrepreneur Development of Malaysia revealed that the Ministry did not have well-defined comprehensive strategies for knowledge management, what more knowledge sharing. It was also found that about 27.6% of the respondents were uncertain about the existence of any knowledge management strategies in the ministry and this figure includes those who have been in the Ministry over 10 years. This is certainly a critical issue to take note. In fact, more than half of the respondents involved in the survey felt that knowledge management is the responsibility of the top management of the Ministry (Syed-Ikhsan & Rowland, 2004b). Only 48.3% felt that knowledge management should be everyone's task. Finally, their findings also revealed that the most difficult and challenging part of knowledge management in the Ministry was to change the employee's behaviour (Syed-Ikhsan & Rowland, 2004b).

As Malaysia is moving towards knowledge-based economy, therefore, it is timely to expand knowledge management initiatives to the entire Malaysian Government organisations and to emphasize on knowledge sharing associated programs in

particular. Given the immense importance of knowledge sharing, a highlight on the role of knowledge sharing itself in HRD shall provide better connection overall.

The Role of Knowledge Sharing in Human Resource Development

HRD aims to develop and unleash human expertise via organisational development (Swanson & Holton, 2008). HRD's key role is to improve organisational performance through employees' capabilities (Swanson, 1987). Therefore, HRD ensures that employees function productively and bring about significant improvements to themselves as well as to the employing organisation (Swanson & Holton, 2008). It should be recalled that in the past, KSB has been proven to improve organisational performance (Lin, 2007a; Yang, 2007; Chee, 2009; Kumar & Che Rose, 2012) as well as individual's performance (Reychav & Weisberg, 2009; van Woerkom & Sanders, 2010). These evidences justify the central role of knowledge sharing in HRD.

HRD is supported and explained using three core theory domains of psychological theory, economic theory and the system theory (Swanson, 1995). Though each of these theories is unique, but together they frame the core theory of HRD. The economy theory is the primary driver and acts as the survival metric of an organisation. The system theory focuses on purpose, relationship and pieces in the system and subsystem. The psychological theory on the other hand, recognises human as the productivity and renewal agent, who is blended to the cultural and behavioural nuances. The three theories are presented in a three-legged stool that should support and complement each other in times of uncertainty (Swanson & Holton, 2008). The whole theory of HRD is presented in Figure 1.1 below.

Figure 1.1: The Theoretical Foundations of HRD
(Source: Swanson and Holton (2008, p. 93))

The economy theory comprises of three component theories namely the Scarce Resource Theory, Sustainable Resource Theory and Human Capital Theory. Among these theories, the Sustainable Resource Theory recognises knowledge (brain power) as an important capital for future sustainable long-term economic performance and for competitive advantage. Knowledge sharing is essential to ensure organisation's

competitive advantage (Bock et al., 2005) as emphasised in the Sustainable Resource Theory.

The psychology theory consists of three components namely Gestalt Psychology Theory, Behavioural Psychology Theory and Cognitive Psychology Theory. One of the component theories i.e. the Behavioural Psychology Theory emphasises on human behaviour and their motivation. It highlights that employees behave according to what their capacity is. As such, it focuses on enhancing the knowledge and expertise of employees which can be attained through KSB. The system theory on the other hand, comprise of General System Theory, Chaos Theory and Futures Theory. All these theories are relevant to knowledge sharing because they highlight organisations' readiness to face uncertainties.

As knowledge sharing is crucial in HRD, substantial knowledge sharing researches have been conducted in the past which yielded a long list of enablers. A review of these enablers would shed light on important enablers identified this far.

Knowledge Sharing Enablers

Past researchers have extracted as well as identified a huge number of knowledge sharing enablers ranging from soft factors associated to individuals and organisations such self-efficacy, altruism, enjoyment in helping others, reciprocal relationships, reputation enhancement, employee's attitude, sharing intention, subjective norm, psychological contract (Gupta et al., 2012), HRM practices (Camelo-Ordaz, Garcia-Cruz, Sousa-Ginel & Valle-Gabrera, 2011), knowledge source motivation (goal orientations) (Swift, Balkin & Matusik, 2010), top management support, culture et cetera to hard factors associated to ICT support and organisational structure (Yusof et al., 2012). However, an analysis of relevant literatures from past divulged that the major enablers of employee's KSB were associated to soft factors such as the intrinsic motivational factors (Chennamaneni, 2006; Lin, 2007a, Kumar & Che Rose, 2012; Olatokun & Nwafor, 2012, Akhavan, Rahimi & Mehralian, 2013). Among the intrinsic motivational factors, knowledge self-efficacy and enjoyment in helping others have been consistently highlighted as the pertinent determinants of employee's KSB (Chennamaneni, 2006; Lin, 2007a; Lin, 2007b; Fathi et al., 2011; Olatokun & Nwafor, 2012). Nevertheless, extrinsic motivational factor such as reciprocity was also found as an important determinant of knowledge sharing attitude in the past (Lin, 2007b; Tohidinia & Mosakhani, 2010).

Besides, as knowledge sharing is mainly embedded in social contexts (Lin, 2007a), a number of social factors were found to be important enablers in the past (Ardichvili, Page & Wentling, 2003; Cho, Chen & Chung, 2010). Specifically, in the Malaysian public service environment, ADS officers are the custodians of Government interests. Therefore, the presence of trust was found to be vital to allow ADS officers (administrators) share knowledge with others (Kumar & Che Rose, 2012). Likewise, employees' social network was found to be crucial to enable KSB since employees

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tend to look for their existing personal network to share work-related experiences as compared to electronic networks (Huysman & Wulf, 2006).

Some previous studies have suggested that KM system and ICT support are only enablers of knowledge sharing actions. Thus, they do not guarantee that individuals share and utilise each other's knowledge (Raghu & Vinze, 2007; Sandhu et al., 2011; Kumar & Che Rose, 2012). Others have acknowledged that ICT support in fact, acts as a decisive factor in facilitating KSB among employees (Tohidinia & Mosakhani, 2010). Though the findings were contradicting, in this ICT era, ICT support is crucial to facilitate interactions among employees.

Overall, the key enablers of KSB reported in the past were found to be related to soft factors as compared to hard factors. Hence, in this study several key soft factors such as intrinsic motivational factors (knowledge self-efficacy and enjoyment in helping others) and organisational socialisation factors (trust and social network) were incorporated in the framework. Nevertheless, few understudied enablers were also included to add knowledge to existing literature.

Statement of the Problem

Despite its recent popularity in the knowledge management literature, past research has revealed that the Malaysian public sector organisations have not fully embarked on knowledge sharing initiatives extensively. In fact, as of now the initiatives taken are only in small scale (Yusof et al., 2012). Besides that, in the past, substantial number of KM initiatives failed mainly because the organisations have failed to focus on human factor (Kankanhalli et al., 2005). As a result, the new KM model has shifted its focus to employees' KSB (Yi, 2009; Noaman & Fouad, 2014). Hence, in recent years many KM researchers have focused on employees' unidirectional KSB using the reflective lens (Will, 2012; Razzaque, Eldabi & Jalal-Karim, 2013; Lin & Hwang, 2014). However, the unidirectional KSB also can be viewed using the formative lens (Yi, 2009; Tangaraja, Mohd Rasdi, Abu Samah & Ismail, 2016). The identified two dimensions of formative unidirectional KSB as conceptualised by Tangaraja et al. (2016) are voluntary knowledge sharing (KSV) and requested knowledge sharing (KSR). Undoubtedly, in the past scarce of researches have measured KSB using these dimensions because they are still novel in the literature.

Literature also provides evidences that only few researches have examined empirically the effect of motivational factors (Olatokun & Nwafor, 2012) especially intrinsic motivation factors on knowledge sharing (Welschen et al., 2012; Akhavan et al., 2013). Intrinsic motivational factor and knowledge sharing is still an emerging area which need to be investigated further in other context (Welschen et al., 2012). Liu and Fang (2010) stressed that the motivational factors to share knowledge in non-profit organisations may differ if compared with profit oriented organisations. Hence, in the context of public sector which operates as non-profit in nature, public service motivation (PSM), an intrinsic motivational factor which previously has been associated to other pro-social behaviours, was scarcely researched in view of

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knowledge sharing (Tangaraja, Mohd Rasdi, Ismail & Abu Samah, 2015) and therefore, has been included in this study. The effect of time availability (comfort factor) and KSB was also poorly understood in the Malaysian public sector context using the quantitative approach.

Apart from that, a thorough analysis of past knowledge sharing literature revealed the possible mediation effect of organisational commitment on the relationships between the identified exogenous variables in this study and KSB. Past researches have proven the direct influence of intrinsic motivational factors, extrinsic motivational factors, some social and ICT related factors on KSB (Lin, 2007a; Chee, 2009; Casimir, Lee & Loon, 2012; Olatokun & Nwafor, 2012). However, the influence of intrinsic motivational factors (knowledge self-efficacy, enjoyment in helping others, PSM), comfort factors (time availability, ICT support), extrinsic motivational factors (reciprocity, recognition practices) and organisational socialisation factors (trust, social network) on KSB can be more complex than what previous frameworks have suggested. The findings of numerous separate piecemeal researches in the past have contributed to the possible mediation effect of the affective and normative commitment on the relationships between the exogenous variables identified in this study and KSB.

However, so far, dearth of knowledge sharing researches has proven the mediation effect of organisational commitment (Hislop, 2003; Camelo-Ordaz et al., 2011). Although, Hislop's (2003) and Camelo-Ordaz et al.'s (2011) researches revealed the mediation effect of organisational commitment, however, they focused on other exogenous variables such as HRM practices, climate et cetera. Hence, in this study the affective and normative organisational commitment were tested for its mediation effect. This is further supported by the integration of The General Workplace Commitment Model (Meyer & Herscovitch, 2001), Three Component Model of Organisational Commitment (Meyer & Allen, 1991), Self-Determination Theory (SDT) (Deci & Ryan, 1985) and Social Capital Theory (SCT) (Nahapiet & Ghoshal, 1998) in this study. Moreover, the theories were found to be relevant in explaining KSB (a crucial process in KM) because their final outcome improve organisational as well as employees' workplace performances i.e. core components of HRD. As a whole, this research can provide new ways to HRD practitioners on how to foster KSB in the Malaysian public service.

Therefore, the present research aimed to address the following research questions: Do intrinsic motivational factors (knowledge self-efficacy, enjoyment in helping others, PSM) explain KSB via the mediation effect of affective commitment? Do comfort factors (time availability and ICT support) explain KSB via the mediation effect of affective commitment? Do extrinsic motivational factors (reciprocity and recognition practices) explain KSB via the mediation effect of normative commitment? Do organisational socialisation factors (trust and social network) explain KSB via the mediation effect of normative commitment? These research questions have led to the specific objectives of this study.

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Objectives of the Study

General Objectives

The overall objective of this study is to examine the factors explaining KSB among Malaysian public service administrators via the mediation effect of organisational commitment (affective and normative).

Specific Objectives

Specific objectives are as follows:

(i) To determine the level of KSB among Malaysian public service administrators;

(ii) To determine the levels of affective and normative commitment among Malaysian public service administrators;

(iii) To determine the levels of intrinsic motivational factors (knowledge self-efficacy, enjoyment in helping others. PSM), comfort factors (time availability, ICT Support), extrinsic motivational factors (reciprocity, recognition practices) and organisational socialization factors (trust, social ties) among Malaysian public service administrators;

(iv) To determine the influence of intrinsic motivational factors (knowledge self-efficacy, enjoyment in helping others, PSM) and comfort factors (time availability, ICT Support) on affective commitment among Malaysian public service administrators;

(v) To determine the influence of extrinsic motivational factors (reciprocity, recognition practices) and organisational socialisation factors (trust, social ties) on normative commitment among Malaysian public service administrators;

(vi) To determine the influence of affective and normative commitment on KSB among Malaysian public service administrators;

(vii) To determine the mediation effect of affective commitment on the relationships between intrinsic motivational factors (knowledge self-efficacy, enjoyment in helping others, PSM) and comfort factors (time availability, ICT Support) and KSB among Malaysian public service administrators;

(viii) To determine the mediation effect of normative commitment on the relationships between extrinsic motivational factors (reciprocity, recognition practices) and organisational socialisation factors (trust, social ties) and KSB among Malaysian public service administrators; and

(ix) To develop a knowledge sharing model for the Malaysian public service administrators.

Significance of the Study

The present study's contribution covers all three areas i.e. theoretically, for practical use as well as for policy development. From a theoretical perspective, the implications of the present research are manifold. First, this study used a new approach in theorising KSB among Malaysian public service administrators. Voluminous of past researches have theorised KSB by either using Theory of Reasoned Action (Fishbein & Ajzen, 1975) or its extension Theory of Planned Behaviour (Ajzen, 1991)(Bock et al., 2005; Chennamaneni, 2006; Fathi et al., 2011; Olatokun & Nwafor, 2012; Welschen et al., 2012). Though the theories are well-established, however, they have pre-determined variables that explain actual behaviour. Therefore, it is a limitation for researchers to deduce new variables within the theories (Tangaraja et al., 2015). Besides, in the past the theories have also been extensively used to study KSB.

Therefore, the present study used a different approach to gain new insights in knowledge sharing research. This study employed The General Workplace Commitment Model (Meyer & Herscovitch, 2001) as the main underpinning theory and integrated it with the Three Component Model of Organisational Commitment (Meyer & Allen, 1991), Self Determination Theory (SDT) (Deci & Ryan, 1985) and Social Capital Theory (SCT) (Nahapiet & Ghoshal, 1998) instead, to formulate the research framework. This new approach shall assist HRD practitioners specifically in the Malaysian public service to gain new insights on how to foster KSB among administrators. These theories are relevant to KM in HRD because the two commitment models unveil employees' discretionary target-relevant behaviour/on-the-job behaviour at workplace via commitment. The 'target' identified in this study is the organisation; therefore, committed employees shall exhibit discretionary organisational-relevant behaviour / on-the-job behaviour which ultimately translate into better individual's and organisation's performance (Meyer & Allen, 1991; Meyer & Herscovitch, 2001), core components of HRD. SDT focusses on the various types of motivations within individuals and how that determines their behavioural choices. Intrinsic motivations were found to bring about positive behavioural outcomes at workplace such as improved performance (Gagne, 2009). This is in line with the psychology theory in HRD which emphasises on human behaviour and their motivation. On the other hand, the systems theory in HRD focusses on the relationships in a system and subsystem among others. Similarly, SCT emphasises on the valuable social resources which is embedded in social relationships in any human networks. KM itself is a subfield within HRD which focuses on the management of knowledge asset within organisation to improve organisation's as well as individual's performance. Therefore, the theories employed are relevant to KM in HRD to study KSB among Malaysian public service administrators and therefore, would provide new insights to KM practitioners in specific.

In addition, previous scholars have argued that knowledge sharing researches should go beyond knowledge sharing intention and measure actual KSB instead, to get better insights on the levels of actual knowledge sharing in the organisational context

(Kuo & Young, 2008). The integration of the General Workplace Commitment Model as the main underpinning theory addressed this issue by measuring the actual KSB of public service administrators. Besides, this research enables the testing and confirmation of The General Workplace Commitment Model (Meyer & Herscovitch, 2001) and other theories involved. Moreover, this study had combined the motivation and commitment theories to explain KSB. Meyer, Becker and Vandenberghe (2004) have argued that integrating theories of motivation and commitment provides better understanding of workplace behaviour.

Second, this study has enriched the theoretical knowledge on unidirectional knowledge sharing using formative lens by incorporating both its dimensions as conceptualised by Tangaraja et al. (2016) namely, voluntary knowledge sharing (KSV) and requested knowledge sharing (KSR) in the context of public sector from a developing nation's perspective.

Third, the present study had extended the knowledge sharing research by incorporating a context specific intrinsic motivational factor that is scarcely researched in the knowledge sharing literature i.e. PSM (Tangaraja et al., 2015). Therefore, this study had tested the items for the four-dimensions of PSM as revised by Kim (2009) and were found suitable in the Malaysian public service context. Kim (2009) has confirmed its generalisability in the Korean public service context, but invited other researchers from other nations to test it in other context especially in the Asian context. This is because the original version of PSM items was more appropriate for use in the western context such as the U.S. Hence, the study had contributed to the body of knowledge on PSM as well as knowledge sharing. Fourth, this study also had integrated few other factors that have been scarcely researched in the knowledge sharing literature particularly in the Malaysian public sector context such as time availability and social network.

Besides that, so far dearth of knowledge sharing researches has proven the mediation effect of organisational commitment on KSB (Hislop, 2003; Camelo-Ordaz et al., 2011). Based on the evidences from past empirical researches, there is a possibility that organisational commitment (affective and normative) has a mediation effect on the relationships between the identified exogenous variables in this study and KSB. Therefore, the present study's fifth theoretical contribution is, it had empirically examined and proven the mediation effect of organisational commitment (affective and normative) on certain identified exogenous variables and KSB among the Malaysian public service administrators.

Sixth, the present study had presented a valid and reliable knowledge sharing model which includes pertinent factors such as, the intrinsic motivation factors and organisational socialisation factors. From the lens of the General Workplace Commitment Model (Meyer & Herscovitch, 2001) and by integrating it with the constructs from Self-Determination Theory (Deci & Ryan, 1985), Social Capital Theory (Nahapiet & Ghoshal, 1998) and Three Component Model of Organisational Commitment (Meyer & Allen, 1991), the present research had enhanced the

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combination explanatory power of these theories on KSB. Therefore, the present study had filled these gaps in the knowledge sharing literature.

From a practical perspective, the present study also provides various added values to HRD practitioners in the public sector organisations. First, the present research provides the Malaysian Public Service Department (PSD) and other public sector organisations in other developing nations, an insight and an understanding into what motivates and enables public service administrators to engage in KSB. The present research may shed lights on the appropriate HRD intervention programmes or strategies development to promote as well as foster KSB in the Malaysian public sector organisations. Top management of public service organisations can get an insight by looking at the factors, their relative importance as well as how interdependent the factors are.

Since the intrinsic motivational factors identified in this research were found to be important enablers of KSB in the Malaysian public sector context, the Public Service Commission of Malaysia (SPA) may use these factors as selection criterion in recruiting the right ADS officers into the civil service as their recruitment strategies. Besides, intrinsically motivated employees also are highly self-efficacious, and these employees could be established by screening, selecting and recruiting candidates who are proactive, have high self-esteem as well as high cognitive aptitude (Olatokun & Nwafor, 2012). As such, this strategy will help the organisation to foster knowledge sharing culture without much difficulty. Findings of the present research also can be useful to HR policy makers in enhancing and developing suitable public policy towards effective implementation of knowledge sharing programs. Finally, the findings of the present study also may shed lights for future researches in this field.

Scope and Limitations of the Study

First, this study only confines to administrators in the public sector from a developing nation i.e. Malaysia. Thus, it cannot be generalized to the private sector organisations and developed nations. Second, the present study generated data based on self-administered survey as its research design. The ADS officers (respondents of the present study) were requested to self-report the data concerning the endogenous and exogenous variables involved in this study. Therefore, there is a possibility of common method variance (CMV) since the same respondent measured the predictors and criterion variables. Self-reported in behavioural studies are always criticized as being tainted with biasness (Chennamaneni, 2006). However, a few procedural remedies and statistical remedy as suggested by Podsakoff, MacKenzie, Lee and Podsakoff (2003) were employed (please refer Chapter Three for more details) and the analysis revealed that CMV is not a serious issue in this study.

Third, the present research employed a cross-sectional survey rather than longitudinal survey. Data collected through cross-sectional survey limits its inferences. However, since this study hypothesized the relationships based on

established model and theories, as such, it has enough theoretical support for the direction of the relationships. However, a longitudinal approach would enhance further the benefits and findings of the present research and also would add more values to the body of knowledge on knowledge sharing.

Fourth, the study has only focused on selected motivational factors (intrinsic and extrinsic), organisational socialisation and comfort factors of Malaysian public service administrators. As such, the selected antecedents have explained only a portion of the variance in the endogenous variable i.e. organisational commitment and KSB. There may be other variables which are not part of this research but may have significant influence on KSB. Therefore, future researches could include other important variables such as attitude, social norms, organisational learning climate, top management support, organisational culture, organisational structure and effort et cetera to determine their influence on KSB.

Assumptions

A fundamental assumption made in this research was that knowledge sharing takes place in the Malaysian public sector organisations either formally or informally although, some may have been reluctant to share. Second, the important knowledge sharing determinants identified from the literature in the past were assumed would also influence KSB among the Malaysian public service administrators. Therefore, these variables have been included in the framework though; this study also has integrated several understudied variables. Third, this study recognises that knowledge sharing occurs between two or more employees via social interactions either through face to face or through online (email et cetera). However, the active participant is the knowledge provider. Finally, this study assumes that the instrumentations developed in other context are suitable and applicable for use in this study involving the Malaysian public service administrators. For instance, the PSM items for the four multi-dimensions revised by Kim (2009) for use in the Korean context were assumed as applicable for use in the Malaysian public service context. However, to confirm its suitability the validation process has been carried out.

Definitions of the Terms

KSB refers to the Malaysian public service administrator's actions of providing knowledge to other colleagues either voluntarily or when requested.

Affective commitment refers to the public service administrator's emotional attachment to, identification with and involvement in the Malaysian public sector organisation (Allen & Meyer, 1990).

Normative commitment refers to the public service administrator's internalised feelings of obligation towards the Malaysian public sector organisation (Jaros, 2007).

Knowledge self-efficacy refers to the Malaysian public service administrator's confidence in his/her ability to provide knowledge to other colleagues.

Enjoyment in helping others refers to the degree to which the Malaysian public service administrator derives pleasure through helping other co-workers with their knowledge needs.

Public service motivation refers to the Malaysian public service administrator's predisposition to respond to motives grounded primarily or uniquely in public organisations (Perry & Wise, 1990)

Reciprocity refers to the degree to which the Malaysian public service administrator feels a personal obligation to contribute knowledge and expects others to help (Cho et al., 2010).

Recognition practices refer to the non-monetary rewards the Malaysian public service administrator receives due to quality knowledge sharing efforts (Pare & Tremblay, 2007).

Social network refers to the degree to which the Malaysian public service administrator has existing social ties i.e. both instrumental and expressive ties with other colleagues.

Trust refers to the Malaysian public service administrator's beliefs in the good intent and the integrity of another party whether individuals or organisation (adapted from Kankanhalli et al., 2005).

Time availability refers to the degree to which the Malaysian public service administrator has slack time available at work.

ICT support (tools and technology) refers to the degree to which the Malaysian public service administrator believes that the facilitating ICT tools and technology for sharing knowledge are available as well as easy to use.

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