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THE INFLUENCE OF ENGLISH COMPETENCY AND COMMUNICATION CHANNEL SELECTION IN KNOWLEDGE SHARING: THE CASE OF A TYRE MANUFACTURING COMPANY

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By

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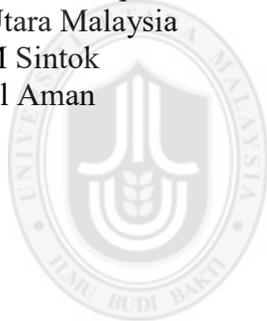
ABSTRACT

Knowledge sharing has been regarded as key to long term organizational success. Recent trend in the field of strategic management has been to emphasize the role of organizational knowledge as a basis for competitive advantage of particular organizations. Therefore, the study is conducted related to knowledge sharing activities in organization and the factors that influence the process. Specifically, the main objective of the study is to examine the influence of English competency and communication channel selection on knowledge sharing among employees. The research was conducted quantitatively and 133 questionnaires were gathered from employees in tyre industry organization in Malaysia. Several tests such as Multiple Linear Regression, Independent Sample T-Test and One-Way ANOVA were performed to address the research objectives. The result shows that knowledge sharing was positively influenced by English competency and communication channel selection. It can be concluded that English competency and communication channel selection play an important role in determining the success of knowledge sharing among employees. Apart from that, knowledge sharing activities were found significantly differs between gender, nationality and among job position. The study contributes to better understanding in knowledge sharing and gives alternatives for improved practices in future.

Keywords: Knowledge sharing, English competency, Communication channel selection

ABSTRAK

Perkongsian ilmu merupakan salah satu kunci kejayaan jangka masa panjang bagi sesebuah organisasi. Dalam bidang pengurusan strategik telah menekankan peranan pengetahuan organisasi sebagai asas persaingan positif kepada organisasi tertentu. Jadi, kajian yang dijalankan ini berkaitan dengan aktiviti-aktiviti perkongsian pengetahuan dalam organisasi dan faktor-faktor yang mempengaruhi proses tersebut. Secara khususnya, objektif utama kajian ini adalah untuk mengkaji kesan kebolehan berbahasa Inggeris dan pemilihan saluran komunikasi terhadap perkongsian pengetahuan dalam kalangan para pekerja. Kajian ini dijalankan secara kuantitatif dan sebanyak 133 kaji selidik dikumpul daripada para pekerja di organisasi tayar industri di Malaysia. Bagi menjawab objektif-objektif kajian, beberapa ujian seperti *Multiple Linear Regression*, *Independent Sample T-Test* dan *One-way ANOVA* telah dijalankan. Keputusan menunjukkan bahawa kebolehan berbahasa Inggeris dan pemilihan saluran komunikasi mempengaruhi perkongsian pengetahuan secara positif. Ini boleh disimpulkan bahawa kebolehan berbahasa Inggeris dan pemilihan saluran komunikasi memainkan peranan penting dalam kejayaan perkongsian ilmu dalam kalangan para pekerja. Selain itu, dapatan mencadangkan bahawa usaha bagi meningkatkan progam perkongsian ilmu perlu direkabentuk berdasarkan jantina, kewarganegaraan dan jawatan kerja. Kajian ini turut memberi pemahaman yang lebih mendalam di dalam perkongsian ilmu serta memberi alternatif yang lebih baik di masa hadapan.

Kata kunci: Perkongsian ilmu, Kebolehan berbahasa Inggeris, Pemilihan saluran komunikasi
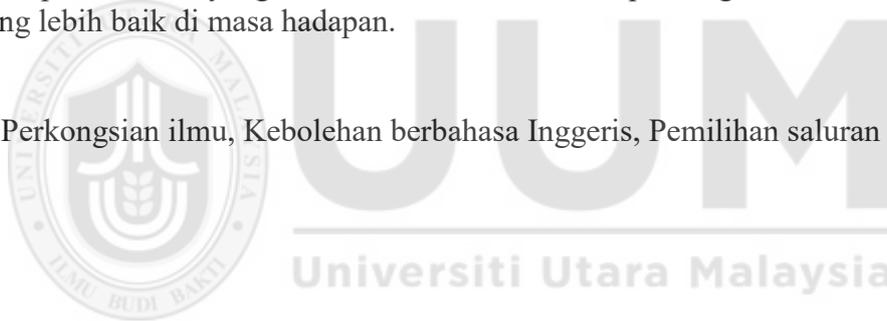
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TABLE OF CONTENTS

CHAPTER 3: METHODOLOGY

CHAPTER 4: DATA ANALYSIS AND FINDINGS

CHAPTER 5: DISCUSSION, CONCLUSIONS AND SUGGESTIONS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ABBREVIATION

Abbreviation	Definition
ANOVA	Analysis of variance
DV	Dependent variable
HRM	Human resource management
HSD	Honestly significant difference
ICC	Information and communication channel
ICT	Information and communication technologies
IV	Independent variable
HQ	Headquarter
SECI	Socialization, externalization, combination and internalization
SPSS	Statistical package for the social sciences
UUM	Universiti Utara Malaysia

CHAPTER 1
INTRODUCTION

1.1   Research Background

Knowledge is defined as a combination of experience, values, contextual information and expert insight that help evaluate and incorporate new experience and information (Gammelgaard & Ritter, 2000). Knowledge is important key in business where it has become one of resources to organization. Knowledge exploitation is the key source of competitive advantage for organizations (Marouf, 2016).

The resource (knowledge), if managed well by organization, can be one of the strategic moves in business. The distribution of knowledge resources would be successful if the required knowledge at the right time is received by the right people take right action (Al-Hosani, 2011). Organizations are being competitive in this challenging industry, and knowledge can play it role to strengthen the business.

According to Al-Hosani (2011), knowledge is regarded as set of tools, skills, rules, procedures, data, technique and concepts that is embedded in people or process or routine in organization. This is similar to knowledge definition which defined as an organized body of data, information, skills and expertise for the purpose to create new information when carrying out task (Hamid, 2015). Daud (2010) also defined knowledge as experience, values, contextual information and expert insight. Furthermore, Nonaka and Takeuchi (1995) defined knowledge as a dynamic human process of justifying personal belief toward the truth.

Somehow, there are researchers that defined knowledge and information differently, thus might have different interpretation. Information is defined as a set of meaningful facts in

a particular context (Hamid, 2015) and Arif (2014) defined information as set of data and facts which individuals convert it into application of as knowledge.

There are two types of knowledge which are tacit and explicit knowledge. Tacit knowledge is basically related to skills, expertise and personal experience. Tacit knowledge is not codified and acquired during sharing experience, observation and imitation. Explicit knowledge is a codified form of knowledge which normally presented in term of procedures, report, data, rules and other documented record.

Knowledge is being shared in organization as one of the method for organization to keep its competitive advantage. Knowledge has become one of the important key factors in an organization's success. Knowledge sharing is a process where individuals mutually exchange knowledge and create new knowledge (Hamid, 2015). The process is important to organization as it increase the value of knowledge shared.

Knowledge sharing has been regarded as key to long term organizational success. Today organizations are forced to face challenges whereby organizations are competing with other, thus need to be innovative and managing sources well. The process of knowledge sharing require organization to strategize with innovation and unique. Knowledge sharing is a critical step for successful knowledge management, and constructing knowledge sharing and transfer network is an important approach to enhance the efficiency of knowledge sharing and transfer (Xiangyi & Qingpu, 2007).

Knowledge sharing is important and critical for organization to be able to response in fast changes in industry. The interaction between individual and organization can be seen during knowledge sharing activities. Knowledge sharing has become a supporting aspect in representing important concept in organization. The main objective of knowledge sharing is to share knowledge to organizational resources and assets (Al-Hosani, 2011). Knowledge sharing take place when a knowledgeable individual supports other individual develop new capabilities or experience.

The importance of knowledge sharing is to improve competitive edge of organization. The interaction during knowledge sharing activities help employees to obtain new knowledge. The generation of new knowledge can obviously be beneficial to organization, thus lead to innovativeness.

Knowledge sharing can also benefit organization in term of individual performances. Successful knowledge sharing process can be achieved if one person willingly to share knowledge or experience with another person. It is highly dependent on individual willingness. The knowledge acquired can help employees to achieve their goal, thus enhance employees' work performance. Knowledge sharing also assists in organizational learning and in its absence, the gap between individual and organizational knowledge widen. Individual knowledge can be converted to organizational knowledge if individual share their knowledge with the rest of the organization team members (Pangil, 2016).

Furthermore, the engagement of employees during knowledge sharing activities can avoid redundancy of knowledge and contribute to implementation of best practice. Pangil (2015) also stated that systematic knowledge sharing activities among employees enable

organization to make relevant personal knowledge available to the problem solving process, where the knowledge is readily available. Knowledge that are being used and shared together will become valuable to the organization for long term instead of keeping to oneself.

In multinational company, knowledge sharing is important as the company needs to maintain the way of work and system to ensure the process is running the same all around the globe while producing same quality of work. As mentioned by Argote and Ingram (2000), it is easier to interact within similar organizations than in between organizations.

However, the process of sharing knowledge from one to another is affecting by several factors such as culture, structure, process, and strategy and information technology. Other researcher may have integrated the factors into more detailed expression and some of the factors might be cross with each other. Fatemeh (2014) categorized factors that affecting knowledge sharing into three groups, which are individual (trust, perception, attitude, communication and cooperation and motivation), organizational (management support, reward system, organization culture, organizational structure and culture) and technological (social networks, ICT and availability of ICT).

Pangil (2016) also categorized the factors into three groups which are individual (individual motivation, organizational commitment, perceptions of information ownership, complementary knowledge or individual absorptive capacity, evaluation apprehension, perceived benefits, self-efficacy, trust in management, ethics and self-interest), group (social networks and group membership, group identification, interpersonal trust and expert status) and organization (organization culture, HRM practices, capacity to learn from failure, leader

support, management control, communication climate, collaborative climate, institutional-based trust, and information technology).

Organizational culture is defined as the shared, basic assumptions that an organization learnt while coping with the environment and solving problems of external adaptation and internal integration that are taught to new members as the correct way to solve those problems. The sub factors in organizational culture are being categorized into six major items; information system, people, process, leadership, reward system and organization structure (Al-Alawi, 2007), refer to Figure 1.1. Through Fatemeh (2014), organization culture is being viewed into more on personal preference as perception, trust, openness in communication, collaboration reward system and communication channel.
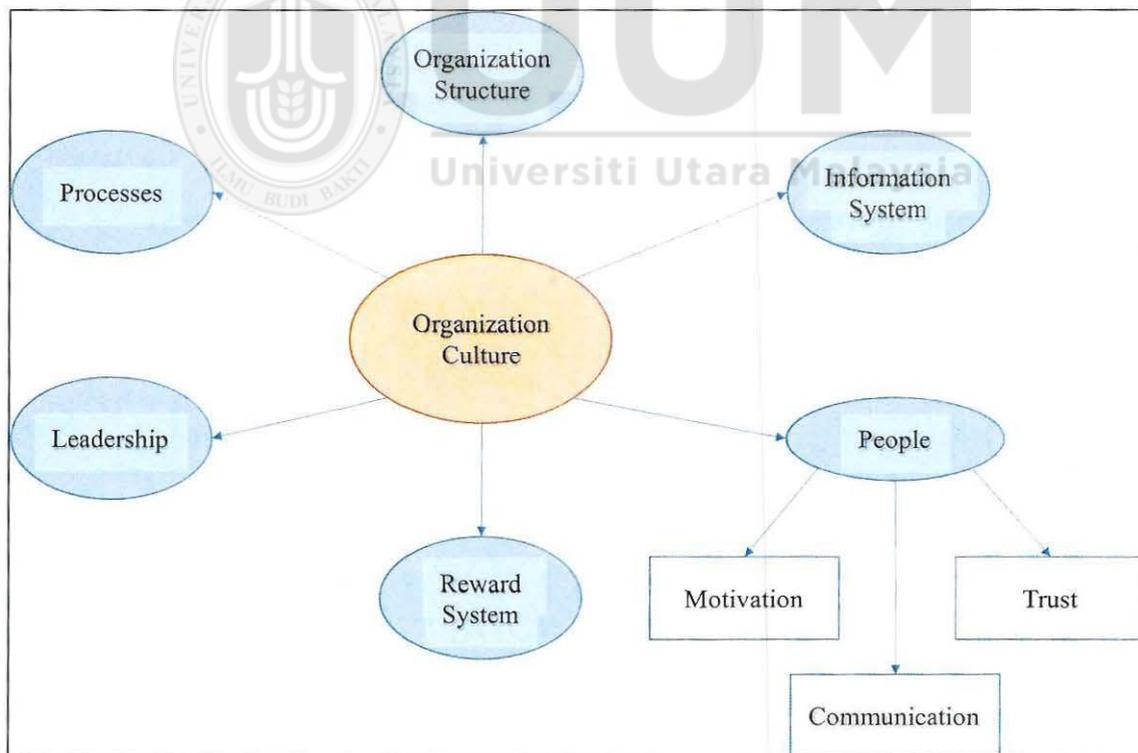
Figure 1.1
Organizational culture framework
Source: Gupta and Govindarajan (2000)

Through the factors, communication is part of element in influencing knowledge sharing process. Communication is regarded as human interaction during conversations and body language with one another. Communication is enhanced by medium of interaction such as language, facilities, technologies and others. Organizations use communication process intensively in creating and transferring policies and strategies to workers (Tingoi & Efiloglu, 2009). Employees use communication as medium to interact to each other in performing task. It is essential for organization to prepare medium or facilities for employees for efficient interaction, thus enhancing work performance. Language, media and tools are also identified as factor that affecting knowledge sharing process.

Language, regardless of verbal or written, play an important role in people daily communication. Employees interact with common language with each other for understanding and exchange knowledge or information. It is important to demonstrate a language of employee's linguistic. This is to ensure that the knowledge delivered is being transferred successfully. According to Lauring and Selmer (2011), organizational diversity in terms of linguistic differences is likely to play an important role in interaction and performance of any group.

It is necessary for multinational organization to find and use one common language in order to reach mutual understanding with each other and English has gradually become most commonly used as corporate language. Schomaker (2006) made a note in her publication saying that English is now a language of instruction and known as lingua franca. As supported by Lauring and Selmer (2011), language serves in communication across many linguistic boundaries where it allows non-native speakers to communicate with each other and with native-speakers.

Information flows require a platform to transfer and it depends on various channel functions in the organization. The process become successful if the channel used correctly, suit the information delivered by employees to each other. Snyder and Lee-Partridge (2013) stated that effective communication occurs when one matches a channel's richness to the equivocality of the message being transmitted. Effective communication can be achieved if communication channel is available and used correctly.

Employees share information, experience and also knowledge by using numerous channel such as email, telephone, meeting, discussion, boards and so on. Snyder and Lee-Partridge (2013) in their study found that email, face-to-face and telephone are top three of communication channels used by employees. This is supported by Gruber (2000) that face-to-face received most development as people can read body language and have richest communication channel. The richness of communication channel is defined as feedback response by person involve in the communication.

According to Maki, Jarvenpaa, and Ziegler (2005), the used of media in information and communication technologies (ICT) as part of tools in communication has proven to improve knowledge sharing in an organization. Somehow there are advantages and disadvantages of each communication channels in term of availability of the facility, time consume, archiving, flexibility and complexity. Maki, Jarvenpaa, and Ziegler (2005) in his research studied the channel selection and also the pros and cons between the channels, resulted in top three choices; telephone, email and teleconference.

Knowledge sharing also influenced by demographic characteristic of employees, for instance age, years of experience, marital status, nationality, race, level of education and

others. Some characteristics are becoming a requirement for organization as job requirement. A study conducted by Ojha (2005) examine gender characteristic has impact in knowledge sharing process in software project teams. In India, gender is considered an important determinant in the process and the awareness of gender differences is quite high. Gender is likely to be a basis for formation for subgroups between team. A person who view himself/herself as a minority is less likely than others to participate in team level knowledge sharing processes.

In certain industry, gender requirement for work is somehow different for work preference, employer's preference and culture. Gender have very significant negative impact on individual participation in knowledge sharing process. The statement is contrary with Jain, Singh and Kaur (2007) where they found out there was no significant differences between male and female employees in knowledge sharing. But, Miller (2005) supported that female are more open to share feedback and may be considered a less risky course of action than male employees. Female employees are likely to be more direct in obtaining performance feedback in work due to higher level of uncertainty that leads to direct method of seeking information.

Next demographic element is nationality and it is closely related to nation culture where individuals with different nationality interact differently due to individuals' national culture. Wei (2009) mentioned that individuals with same country might behave differently because they have their own understanding and interpretation. Multinational organizations tends to have multinational employees in order to flatten organizational structures and to assemble geographically dispersed workers to work on tasks and problems at the international level. There are different levels of culture and national is one of them. National culture can be

defined as the integrated sum total of learned behavioural traits that are shared by members of a nation (Wei, 2009).

There are research that finds national culture does have impact on knowledge sharing activities. Wei (2009) examined the relationship between national culture and knowledge sharing by Chinese and American employees. In the study, distinctive cultural difference was identified between two different nations.

Workforce are becoming racial diverse s organizations are changing. The starting of diverse workforce is a turning point where employees are struggling with difference which results in conflict and lower performance. The reason behind is knowledge sharing process is not fully utilized because there are barriers which hinder the share of knowledge. The differences in race may have make employees hesitant to share knowledge which cause problem to organization's success in future. Grauss (2012) in his study examined the different race group in South Africa and found that race is one of factor in knowledge sharing process. He also supported that race produce inequality in barriers of knowledge sharing between white and black male and black female and colored female. The significant difference also can be in Malaysia scenario between Malay and Chinese (Jain, Singh and Kaur (2007) in knowledge sharing.

Another element in demographic characteristics is job position which is defined as level of job description in organization. Commonly there are three level of job position; top level (manager, head of department, senior manager), middle level (executive, engineer, senior executive) and low level (supervisor, operator). Job position in organization is believed to have affect in knowledge sharing process. Contrary to Steiger, Hammoul and Galib (2014),

the study found that there was no difference between management levels to knowledge sharing process.

Organizational structure determines the manner and extent to which roles, power, and responsibilities are delegated, controlled, and coordinated, and how information flows between levels of management. Most common organization structures are hierarchical, centralized and decentralized, flat and tall. A traditional hierarchical structure of the organization defines each employee's role within the organization and affects with whom each individual mainly and frequently interacts and share knowledge. Reporting relationships in those organizations influence the flow of data and information as well as the nature of groups who make decisions together and consequently affect the sharing and creation of knowledge. The most important decisions in organizations with a traditional hierarchical structure are usually taken by senior management.

1.2 Problem Statement

Knowledge sharing has become central role in organization. In challenging business industry, knowledge has become an asset to organization. Knowledge is being acquired, created, stored and shared among the employees to keep the industry competitive. Organization has to figure out how to manage knowledge efficiently and maintain the resource. This is to avoid knowledge loss or knowledge gap when employees with skills, technical knowledge and experience left the organization.

Somehow, the knowledge is held by employees and only available if the person is willing to share it with organization (Al-Hosani, 2011). Knowledge at individual level is encouraged to be share to organization and transform to organizational knowledge. It is better

to have the knowledge in organizational level because it has higher chance of the knowledge being recorded and maintained within the organization. Thus, ensure that the organization is continuing to receive benefit from the knowledge and avoid time wastage.

In some organizations, knowledge sharing is considered new and people are not willing to open up to each other which limit the interaction. The unwillingness are due to decrease in personal value, risk, uncertain of how the knowledge will be used, hierarchy and afraid of negative consequences (Pangil, 2016). Organization at management level need to implement knowledge sharing culture for employees to have knowledge and awareness of importance of sharing knowledge.

Knowledge sharing is essential when the process involves more than one organization, branch, alliance or collaboration. The organizations may resided in other location, either in the same country or abroad. Knowledge sharing is one of the way for the organizations to convey message, teleconference, submit report, and do discussion and so on. Difficulties may arise during the communication between the organizations due to different time work and zone, location, availability of communication channel, different systems install, language communicate and others. It is important for organization to have knowledge sharing process in place in order to ease the way. By implementing knowledge sharing, system created can be aligned, report can be shared and communication can be conducted in easier way.

For the same organizations, the way of work in system and technology need to be same. This is where the sharing process plays its role. The knowledge of system and technology need to be transferred to other branches, so that they can work simultaneously. The parent company need to ensure that all transferred knowledge are well practiced and

implemented. The process of transferring from one organization to another organization is carried out in order to achieve desired result or performance.

In this research, organization in tyre manufacturing industry was used as research area. The organization is functioning in high-involvement work practices. It is said that greater use of such practices is associated with significant productivity losses in the face of mounting employee turnover (Guthrie, 2001). The author assumed that the employee turnover rate for the organization is generalized according to study conducted by Guthrie (2001). It is crucial for the organization to retain employees such as the specialized skills and knowledge which is not easily replaceable. Guthrie (2001) suggested that failure to retain these increasingly valuable human asset may markedly diminish the payoff associated with the use of high-involvement work practices.

In organization where employees work in different culture, the dissimilarities can create barriers. Communication language is one of the critical problem because several languages are used as part of communication. English has gradually become the most commonly used corporate language, yet it still be a challenge to achieve consistency in its daily use (Lauring & Selmer, 2009) and due to its relatively low level of English competence, information and knowledge was not being effectively transferred into the subsidiary (Welch & Welch, 2008).

However, English has been used as a common language to decrease communication problem. In Schomaker's (2006) study, he mentioned that even by using English, misunderstanding did occur when the source and recipient have different interpretation. Even if English does not always provide the means to understanding, it may still be attractive as a

12

compensatory strategy with less potentially disruptive effects on communication ease. Investigating the use of these various strategies in the context of cross-linguistic knowledge sharing would be a logical extension of this dissertation.

According to Lauring and Selmer (2011), language is particularly challenging in multicultural organizations where cultural and linguistic differences create barriers to communication and understanding. Schomaker (2006) also agrees that language adds additional layer of complexity to the knowledge sharing process when the process takes places within groups with multinational workforce in multinational organization. This could affect communication between employees, thus performance of work. Studies of language did not attract much attention and the factor is overlooked.

Lauring and Selmer (2011) mentioned that differences in languages have a substantial impact on group interaction. This is supported by studies conducted by Lauring and Selmer (2011), which they rejected negative theory of knowledge sharing that is influenced by common language. Language is arbitrary symbols and rules used to communicate thoughts and ideas (Schomaker, 2006). Another researcher, Li (2010) also positively support that language could become barrier in the process, where the studies had been conducted between Australian and Chinese people. Other studies did not much detailed into language factor, where the research only covered on communication as a whole.

Communication in organization is assisted by communication tools or channels to make work more efficient. As indicated by Snyder and Lee-Partridge (2013) communication channels regardless of no-technology (e.g. face-to-face meeting and training) and with technology (e.g. telephone, email, and blogs) facilitates employees which is believed to

improve knowledge sharing and enhance efficiency. To remain competitive, organization is obliged to prepare necessary tools or communication channels for employees.

According to Maki, Jarvenpaa, and Ziegler (2005), traditional technologies (telephone and email) were used in daily basis. Somehow face-to-face interaction (meeting) is also important method for employees to discuss more details. Other technologies such as blogs, forums are used for passive information and least used (Snyder & Lee-Partridge, 2013). Therefore, communication channel selection is important for employees to convey message, get response in time and available.

In multinational organization, the time zone different in different locations, traveling, availability and feasibility of communication channels is concerned. Employees might find the issues are difficult, thus reducing work efficiency. A study done by Snyder and Lee-Partridge (2013) reported that more than 50% of employees have access to communication channel and more dependent on email, face-to-face meeting and telephone. Other researcher, Maki, Jarvenpaa, and Ziegler (2005) added that net-meeting and video conference as second and third place of channel used by employees.

The research of English competency of similar in language competency has been done in several countries such as China, Denmark, Japan and others by Wei (2009), Lauring and Selmer (2011), Peltokorpi and Vaara (2014) and Li (2008), respectively. However, the particular subject has not been done in tyre industry and Malaysia context yet. But, as for communication channel selection, there was one research has been conducted in Malaysia, focusing in using social media as medium of knowledge sharing between students by Hamid (2015). One other research was being conducted in Canada by Gruber (2000), China by Wei

14

(2009) and other country by Snyder and Lee-Partridge (2013). The framework of English competency and communication channel selection also has not been conducted in combine in the same context.

Another area to look that influencing knowledge sharing is demographic characteristics. Miller (2005) stated that gender diversity in the composition of teams is rapidly increasing as a result of the growing representation of women in work force, as well as increasing desegregation of male and female within job categories. In the communication that requires feedback, the differences may have significant impact on the result of team work.

In some work area, gender differences is contributing to creation of subgroups in teams that lead to weaker team process, hence lower levels of knowledge sharing (Ojha, 2005). Gender has become a requirement due to job requirement and the gap widen with formation of subgroups. The differences may reduce the interaction between male and female employees during work that leads to lower chance of knowledge sharing. In Miller (2005) study, it is suggested that female employees are more open to feedback because they are more concerned about interpersonal relationships and more sensitive to other opinion than male employees.

In nationality demographic characteristic, different national culture is seen as big factor in influencing knowledge sharing process. National culture has dimensions which are language, education, religion, attitudes, value and others that considered as barriers in knowledge sharing between multinational individuals. Organization might face challenges in getting multinational employees to interact and communicate without similarities, for example, language.

15

Wei (2009) characterized four cultural dimensions which influence knowledge sharing between different individual's nationalities, which are language, technical knowledge, concern for face and technological infrastructure. Technical knowledge of individual is not at the same level and it is required for employees regardless of nation different to share knowledge for work purpose. Concern for face is one of culture values that identify individuals' willingness to share knowledge due to self-pride. Technological infrastructure is a medium or channel that can assists employees to convey or collect knowledge from another.

Current organization's requirement in job placement has created diversity in work place. The diversity in race has developed a conflict which afraid leads to lower work performance. The differences might be factor in effectiveness of knowledge sharing process take place. Employees tend to find similarities and race is one of the typical reason. Ali (2009) stated that employees with same race are likely to be motivated to share knowledge than difference race. They show unconditional trust with each other due to value of being the same race. Jain, Singh and Kaur (2007) also proved that there was significant difference found between Malay and Chinese in knowledge sharing.

Another element in demographic characteristic is job position. There are different job position levels in organization that defined roles, responsibilities and so on. Knowledge sharing require information flow and the existing of level is a hard work to ensure that the information reaches the desired level. Hierarchal structure in organization affects interaction and took too much time to reach from top to low level or vice versa.

1.3 Research Questions and Research Objectives

Based on the problem defined, the study is carried out to answer the following research questions:

1. Does English competency influence knowledge sharing process among employees?

2. Does communication channel selection influence knowledge sharing process among employees?

3. Does knowledge sharing differs between male and female employees?

4. Does knowledge sharing differs between international and local employees?

5. Does knowledge sharing differs between employees' races?

6. Does knowledge sharing differs between employees' job position?

Therefore, the general objective of the study is to examine the influence of English competency and communication channel selection on knowledge sharing between employees in tyre industry organization in Malaysia. The specific objectives are:

1. To examine the influence of English competency on knowledge sharing among employees.

2. To examine the influence of communication channel selection on knowledge sharing among employees.

3. To examine the difference of knowledge sharing between male and female employees.

4. To examine the difference of knowledge sharing between international and local employees.

5. To examine the difference of knowledge sharing among employees' races.

6. To examine the difference of knowledge sharing among job position.

1.4 Scope of the Study

The study is focusing on examining the knowledge sharing activity among the employees in the aspect of English competency and communication channel selection. The population under study will be selected among employees of tyre industry organization. The investigation will be done to the employees in an organization from top level; managers and heads, middle level; executives and engineers and low level; supervisors and operators.

The research will be done in an organization in tyre industry in Malaysia. And due to time limitation and other resources, the research was conducted in only one branch. The organization's name is not being disclosed due to confidentiality. The organization has multicultural employees where the employees from other locations of the organization are being brought to share the skills and knowledge.

1.5 Relevance of the Study

The study is significant to both knowledge and the organization practices. Practically, the knowledge of the process gives understanding of how the practices are being done in actual daily work in an organization, thus add experience and skills for future reference. The importance of knowledge sharing process is very much significant for the organization because the organization can practice the correct way to enhance communication between the employees. Top management also can figure out how to reach employees from each level and delivered information successfully. The facilities of communication channel can be fully utilized, thus reduce resources to waste.

Theoretically, the research may become a reference for other study that factors related to knowledge sharing. In addition, the study is intends to promote better understanding and acknowledgment of the factors that may encourage of knowledge sharing activities. Furthermore, the research could enhance social exchange theory that will be used in relating the variables in knowledge sharing.

CHAPTER 2

LITERATURE REVIEW

2.1   Introduction

This chapter generally explains the literature of English competency, communication channel selection, knowledge sharing, the relationship between variables, theoretical background and hypothesis proposed.

2.2   Knowledge Sharing

Knowledge sharing is the third process in knowledge management process after knowledge creation and knowledge application. Knowledge sharing is considered as a crucial phase in knowledge management process. The main purpose of knowledge sharing process is to transfer the knowledge to organizational resources and assets and employ existing knowledge to improve work performance.

Knowledge sharing is defined as an individual or a group cooperate with others to share knowledge and achieve mutual benefits (Al-Alawi, Al-Marzooqi & Mohammed, 2007). While Gumus (2007) added that the process could create new knowledge and innovation. The term is also defined by the process of involving knowledge exchange between individuals and group of people by Zin Aris (2014) and the activity in which participants are involved in the joint process of contributing, negotiating and utilizing knowledge (Li, 2008).

Snyder and Lee-Partridge (2013) also defined knowledge sharing as a process where individuals can jointly transform their knowledge. Employees share knowledge such as skills, experience, insight, information and others with each other. It is important to share

21

knowledge in order to create such a sustainable environment in working place and add competitive advantage.

There was another version of knowledge sharing definition in two dimensions perspective. Pangil (2005) mentioned knowledge sharing consists of donating and collecting aspects of sharing. According to Pangil (2005), knowledge donating means communicating to others what one's personal intellectual capital or a person is engaged in active communication with others for the purpose of transferring knowledge. Knowledge collecting is consulting others in order to gain some access to their intellectual capital. It is a reciprocal process where contributing and accumulating knowledge is take place. The process show of knowledge sharing behavior between donating as a voluntary act of communicating and collecting as disseminating knowledge from another individuals.

Knowledge sharing occurs between at least two parties that involves in interaction or conversation of the knowledge into a form that can be understood, absorbed and used by other individuals (Pangil, 2005). It is basically a process of knowledge being transferred from one to another. Hamid (2015) stated that knowledge sharing can occur when a person is keen to cooperate with others to find solutions for the problems, develop innovative ideas or apply policies or process.

There are two types of knowledge shared in organization; tacit and explicit. Tacit knowledge is basically related to skills, expertise and personal experience. Tacit knowledge is not codified and acquired during sharing experience, observation and imitation. Explicit knowledge is a codified form of knowledge which normally presented in term of procedures, report, data, rules and other documented record. The sharing of explicit knowledge can be

22

done easily by reading the document and require not much encouragement to happen. But the sharing of explicit knowledge is yet important to improve employees' ability to work efficiently (Pangil, 2005).

Tacit knowledge in other hand require the willingness of individual to share knowledge because tacit knowledge is based on individual experience. The process shows human behaviour in interacting in form of evaluations, attitude, points of view, motivation and others (Pangil, 2005). Sharing of tacit knowledge is more challenging as it does not use formal language and difficult in expressing directly in word. Normally the process take place in face-to-face interaction such as meeting, training and discussion. Tacit knowledge sharing is important to organization as it improves individual's quality of work and competency in skills.

Knowledge sharing can happen if the knowledge can be transferred through channel or medium. There are two mechanism that can be used which are hard mechanism and soft mechanism (Al-Hosani, 2011). Hard mechanism is using a physical channel such as system database, manuals, boards and others. This mechanism is mostly suitable for sharing explicit knowledge. Soft mechanism is an approach through direct interaction such as coaching programs, gathering, discipline forums and other social networks (Al-Hosani, 2011).

2.3 English Competency

English competency is defined by the ability of a person's knowledge of the rules governing the formation of speech in their first language successfully or efficiently (Stevenon, 2010). Welch and Welch (2008) defined English competency as individuals to be constructive and facilitate process of development of English language. By definition, it is understood that

English competency is individual's skill or ability to communicate with another person in English in order to convey message or knowledge successfully and efficiently.

As for communicating with each other, a language is required for direct and indirect verbal communication. Employees use language in order to convey message, inform news, and interpret data or reading document. In multinational organization, employees consist of various race and national which speak in their own language. To communicate with each other, one common language must be used in order for communication to be successful. English is a spoken as a first language more than 300 million people around the world and used as second language by millions more and has become language of international communication (Stevenon, 2010). English has become the lingua franca in this challenging world and it is important for employees to be able to speak, write and listen in English.

English has been widely used in multinational organization in order to share knowledge between organizations from parent to host organization. Both sides are benefited from sharing knowledge in numerous way which help fine-tune and coordinate global strategies, improve process in their own units and provide missing link in developing new product (Peltokorpi & Vaara, 2014).

For individuals who are not be able to meet demand of conquering this language, obviously hinder knowledge sharing. For example, in China, Peltokorpi and Vaara (2014) cited that Western subsidiaries show that knowledge sharing require to translate all documents to Chinese which delaying the process and increase costs. In order to reduce barriers, it is required for host and parent organizations to master one common language.

2.4 Communication Channel Selection

Channel means a method or system for communication or distribution (Stevenon, 2010). Communication channel can help to enhance the knowledge transfer process. However, the use of communication channel is differ according to purpose, number of people involves, location and method. According to Snyder and Lee-Partridge (2013), communication channels are known as codification and personalization.

Method in technology or codification utilizes a people-to-documents approach by using information technologies to capture, codify, and store employee knowledge (Snyder & Lee-Partridge, 2013). Examples of technology channels are electronic mail, blogs, wikis, instant messaging, shared virtual workspaces, telephone, conferencing, intranets, discussion forums and voice over IP (Snyder & Lee-Partridge, 2013). Employees regularly use the channels in work place in order to give and collect information. Employees depends a lot in using technology channels, and this has been proven by Anasi, Akpan and Adedokun (2014), Courtney and Anderson (2009) and also Maki, Jarvenpaa and Ziegler (2005) where the using of ICT platforms for knowledge sharing is increased and enhances communication.

Second method, conventional method or no-technology or personalization relies on developing interpersonal networks in which tacit knowledge that cannot be codified can be shared. Examples of this channel are meeting or discussion by face-to-face (Snyder & Lee-Partridge, 2013), training, talk, information board, printed media (e.g. newsletter, document, etc.) and others.

While using communication channel in workplace, employee selects the most convenient and available medium to communicate. Communication channel selection is

defined by the decision driven by the value that people can derive from a specific medium (Lee, Dahui & Merrier, 2010).

Snyder and Lee-Partridge (2013) described that communication channel selection as a decision-making process by a person that is influenced by four circles; primary, secondary, tertiary and quaternary circle. First circle, primary, include type of information being shared, sender's efficacy level with communication channel and sender's personal preferences. People tend to use they have experience and comfortable with and private and sensitive information normally is not going to be shared by mass media channel.

Secondary circle consists of immediate audience and channel availability factor. The variables describe how audience considerations and channel capability in carry message complexity affect the selection of communication channel. Employees must feel how convenient the channel is use to everyone, ability to keep record and reliability to convey message to all recipients effectively.

Tertiary circle mainly focused on team diversity where embedded practices, key boundaries and degree to which knowledge must be translated or transformed are represented. The tertiary circle is based on the culture of work and how employees interact to coordinate work together. Key boundaries are the gap between employees such as different functional units and differences in work practices. The degree to which knowledge to be translated or transformed requires time, relationship building and compromise.

Last circle, quaternary is mostly about organizational culture. The variable have organization norms for collaboration and cooperation in knowledge sharing. A competitive

corporate culture may influence communication channel selection in sharing knowledge to diverse team. Employees might choose less public channels and share knowledge with limited of employees. This is one reason why system is failed to use when employees chose to use own network and reluctant to use the system.

2.5   Relationship between English Competency and Knowledge Sharing

Numbers of previous studies had link the relationship between language and knowledge sharing. Referring to Table 2.1, all four (4) articles of related studies had positive finding, which agree that the English competency do affect knowledge sharing activity positively (e.g. Peltokorpi & Vaara, 2014; Wei, 2009; Lauring & Selmer, 2011; Li, 2008).

Peltokorpi and Vaara (2014) reported that a multinational company in Japan had practiced of only hired worker with English skill. The organization thought that it is important to have workers with English skill as strategy to enhance communication with other global partners. Wei (2009) had conducted interview and survey in China to examine English competency influence in knowledge sharing. With 11 respondents, the research resulted that the language efficacy was influenced knowledge sharing process.

Lauring and Selmer (2011) and Li (2008) also proved that language differences do affect knowledge sharing. Study by Lauring and Selmer (2011) was conducted in universities in Denmark was targeted to multicultural academic organizations. With sample of population of 489, the survey was done with subject of linguistic differences. The subject was argued to make use of knowledge sharing a challenge in multicultural organizations. Results showed a positive finding which consistent in English management communication was the dominating factor towards knowledge sharing.

Li (2010) who conducted the study in multinational company discovered that one of factors in impacting multicultural participants in sharing online knowledge is national cultural differences, which is language is one of it. The interview was conducted with participation of 41 employees, consisted of Chinese and American. The cultural differences made Chinese participants contribute knowledge less frequently that American peers. This proves that English language created barrier between Chinese and American employees to share knowledge.

Table 2.1

Literature review matrix of researchers whose conducted studies on the English competency with knowledge sharing

No	Authors	Research Setting	Sample	Methods of data collection and analysis	Variables Investigated	Findings
1	Peltokorpi & Vaara (2014)	Organizations in Japan	148	• Interview	• Language skills → knowledge transfer	• Multinational corporation selected only English-skilled employees are hired during recruitment
2	Wei (2009)	Company in China	11	• Interview and survey	• English competence → knowledge sharing • Communication tool knowledge → knowledge sharing	• Supported • Supported (depends on communication skills and hearing)
3	Lauring & Selmer (2011)	Universities in Denmark	489	• Survey • Pearson correlations	• Language diversity → knowledge sharing • English management communication → knowledge sharing • Communication frequency → knowledge sharing	• Positive relationship • Strong relationship • Positive relationship
4	Li (2008)	Chinese and American employees in company	41	• Interview • Qualitative method	• National cultural differences (language) → knowledge sharing	• Positive relationship as English created barriers for Chinese employees to share knowledge

2.6   Relationship between Communication Channel Selection and Knowledge

Sharing

Several studies had been conducted subject to communication channel selection in knowledge sharing. The studies showed that the subject is positively related to knowledge sharing (e.g. Snyder & Lee-Partridge, 2013; Gruber, 2000; Wei, 2008). Other article by Hamid (2015) focusing on social media which resulted in positive relationship with knowledge sharing. The articles related to the relationship between communication channel selection and knowledge sharing.

Snyder and Lee-Partridge (2013) had investigated what channel that employees frequently used for knowledge sharing purpose. They developed model that explained communication channel choice, where participants have access and an online questionnaire was conducted. The participants consisted of 76 of information-and-communication-channel-(ICC)-used employees. It was reported that employees tended to rely on face-to-face interactions, telephone and e-mail for sharing knowledge. The channel selection also was influenced by type of information being shared.

Hamid (2015) had interviewed 12 students in a university in Malaysia on effect of social media in sharing knowledge between students. Social media is a technology-based medium of communication channel that has been widely used. He found out that students depend mostly on social media to communicate with other students. There are several benefits in using social media as medium of communication such as it create new ideas and acquiring in depth understanding, exchange experience and perspective with different student background either from local or international, overcome time consumption by meeting or discussion in face-to-face, geographical distance for students who are not staying in

university campus and less cost. But, he also found out the barriers of using social media such as lack of personal interaction within team members, late in answering or reporting and Internet access where coverage could be problematic sometimes and students need to upload and download big file size of document or report which could resulted in time consuming.

Gruber (2000) also conducted interview and survey of communication channel used by workers in Canada. The response by workers resulted that they prefer face-to-face meeting with colleges as a medium of communication with each other. In China, communication tool was supported which depends on communication skills of employees and hearing (Wei, 2009).

Table 2.2

Literature review matrix of researchers whose conducted studies on communication channel selection with knowledge sharing

No	Authors	Research Setting	Sample	Methods of data collection and analysis	Variables Investigated	Findings
1	Snyder & Lee-Partridge (2013)	Online survey (ICC used employee)	76	• Questionnaire • Percentage	• Communication (access to what channel) → knowledge sharing • Communication (channel used) → knowledge sharing • Communication (channel choice) → knowledge sharing	• Employees have access to email, face-to-face, phone, intranet, instant messaging, video/web conferencing, shared virtual workspaces, voice over IP, discussion forums, wikis and blogs • Top 3 - e-mail, face-to-face and phone • Face-to-face (for sensitive information) and e-mail for general information • Factor- channel security and privacy
2	Hamid (2015)	University students in Malaysia	12	• Interview	• Social media (technology-based communication channel) → knowledge sharing	• Benefits- create new idea and acquiring in depth understanding, exchange experience and perspective, overcome time, geographical distance and cost • Barriers - lack of personal interaction, late in answering, Internet access
3	Gruber (2000)	Organization in Canada	29	• Survey • Interview	• Used of communication channel → knowledge sharing	• Face-to-face received richest capacity
4	Wei (2009)	Company in China	11	• Survey • Interview	• Communication tool knowledge → knowledge sharing	• Supported (depends on communication skills and hearing)

2.7   Theoretical Framework of the Study

Social exchange theory is being utilized in this study which help to explain the relationship between English competency and communication channel selection, respectively. The background of the theory is explained in next section which become the foundation of framework below.

As illustrated in Figure 2.1, English competency and communication channel selection are directly related to knowledge sharing. English competency and communication channel selection is classified as independent variables whereas knowledge sharing is classifies as dependent variable.
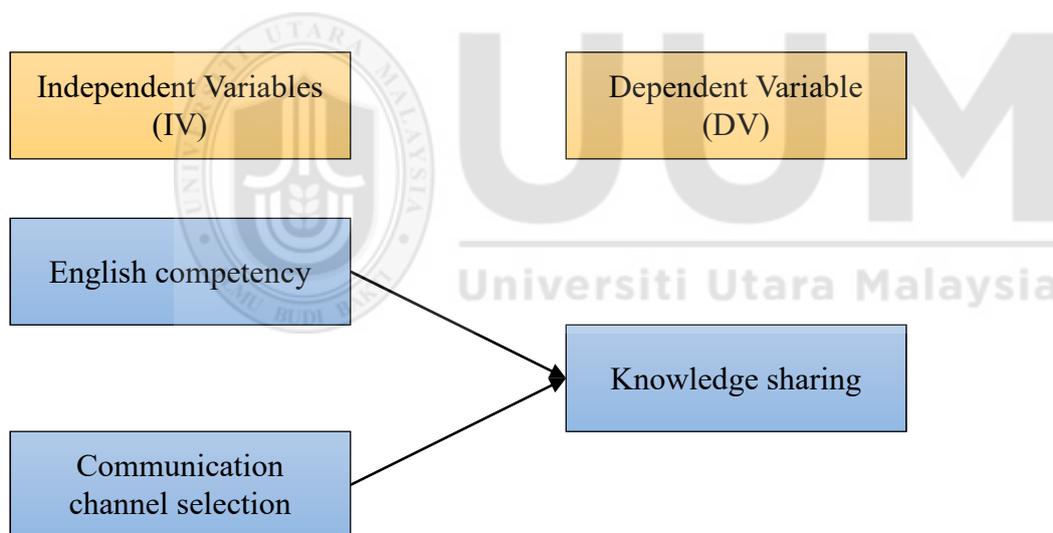
Figure 2.1
Theoretical framework of the study

2.8   Theoretical Background – Social Exchange Theory

In this study, social exchange theory is being utilized to explain the relationship between variables. The theory has been widely used to explain individual behavior across various domain. Social exchange theory was influenced by Thibaut and Kelley and George Homan (Heath, 1976). George Homan, one of the early theorist was interested in exchange as an

interaction of activity and focused mostly on psychological aspects of exchange. He believed that social exchange was based on three principles; success proposition, stimulus proposition and deprivation-satiation proposition (Heath, 1976). In Homan's view, human continue to participate in an exchange until participation ceases to be rewarding.

In Heath (1976), the author pointed out that Peter Blau was also another theorist who expert in sociology and contributed by analyzing human behavior. Blau extended exchange theory that include understanding of institution and organizations that emerge out from social exchange. In another view of social exchange theory development, John Thibaut and Harold Kelly elaborated on the theory based on stability and satisfaction. Thibaut and Kelly suggested that it is important to consider partners' perception of comparison level and available alternatives. Comparison level is where people evaluate rewards and costs of a given relationship in term of what they feel is deserved and realistically obtainable (Heath, 1976).

Social exchange theory is a method of explaining individual behavior involved in the process of resource exchange (Yan, Wang, Chen & Zhang, 2016) with purpose of maximize benefits and minimize costs. Heath (1976) defined social exchange theory as an exchange of activity, tangible or intangible and more or less rewarding or cost between at least two people. Costs are defined as having to put money, time, effort and risk in the process of exchanging and benefits are seen as positive outcome to the individual such as appraisal, satisfaction and social support. People are willing to exchange when the value of exchange is higher than the cost. Individuals choose those alternatives from which they expect the most profit from the exchange.

There are two approaches to social interaction and relationships which are individual and group. Individual approach view people as what the person want in exchange of resources. Group approach focuses on social system as a whole and believes that participating may contribute derive benefit from overall participation in the system.

The theory permits logical thinking which require people to be reasonable and logic in decision making. The implementation of the theory be able for people to achieve goals and making relationship with each other.

Social exchange theory can be applied in knowledge sharing process where people share knowledge in the hope of getting some return. Employees in organization who share knowledge may find joy in enhancing their own knowledge or find social value in educating others (Yan, Wang, Chen & Zhang, 2016) and enhance reputation in the organization.

During interaction of exchanging knowledge, employees might come across boundaries to communicate. In making communication successful, common language play a role in making understanding and exchange information. Language as medium of communication is used for efficient interaction, thus make knowledge sharing process successful. English has been used as first and second language of interaction in organizations. The efficiency and competency of English language in organizations are at different level, thus put social exchange interaction at uncertain level.

Knowledge flows also require a medium which assists efficiency of interaction. Somehow the interaction depends on various channel function availability and necessity in organization. Snyder and Lee-Partridge (2013) stated that effective communication occurs

35

when one matches a channel richness to the equivocality of the message being transmitted. This proves that selection of correct communication channel is influenced during interaction of social exchange.

2.9   Research Hypothesis

Based on the evidence from previous studies, the following hypotheses were developed:

- H1: English competency influence knowledge sharing in tyre industry organization

- H2: Communication channel selection influence knowledge sharing in tyre industry organization

- H3: Knowledge sharing differs between male and female employees

- H4: Knowledge sharing differs between international and local employees

- H5: Knowledge sharing differs among employees' races

- H6: Knowledge sharing differs employees' job position
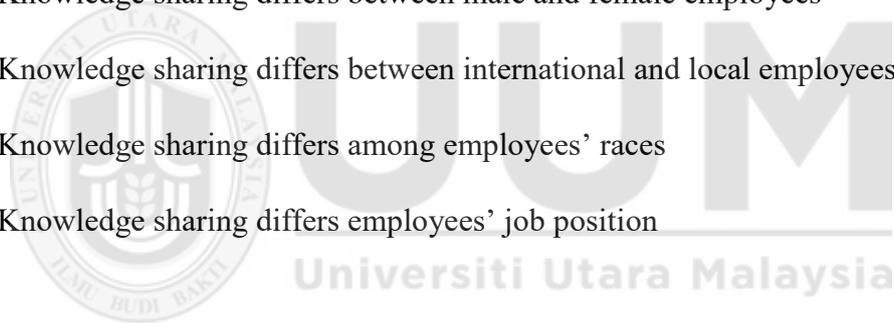
CHAPTER 3

METHODOLOGY

3.1 Introduction

The chapter describes method used in the study conducted such as research design, population and sample, measure of variables and analysis used to analyze the data.

3.1 Research Design

The purpose of research is to identify the relationship between knowledge sharing and its factors such as English competency, communication channel selection. Therefore, hypothesis testing is employed which a survey was conducted. Quantitative research design was applied and survey was conducted through questionnaires. The research was design in accordance with principles of cross-sectional field survey where data was collected once from March to April 2017. Cross-sectional is defined as either the entire population or a subset thereof is selected, and from these individuals, data are collected to help answer research questions of interest. It is called cross-sectional because the information about X and Y that is gathered represents what is going on at only one point in time (Olsen & George, 2004).

3.2 Population, Sample, and Unit of Analysis

The target population of the study involves is employees in operational management section which consists of 242 employees from various position background such as manager, head of department, executive, engineer, supervisor and operator. Based on the given population, the sample size required is 148 according to Krejcie and Morgan (1970) (refer to Appendix D). The unit of analysis was individual as data was collected from individual employee of the organization.

3.3   Sampling Design

As the number of population is quite small (i.e. 242), the sampling is not utilized in this study as the questionnaires are distributed to all population.

3.4   Data Sources

The study involves the use of both primary and secondary data. The primary data is collected from survey conducted to employees in tyre organization in Malaysia. The data is used in order to test hypothesis in the study by conducting several testing methods. Secondary data is taken from the organization which the survey was conducted by contacting human resource staff and data was sent was email. The data includes the number of employees that work in the organization.

3.5   Data Collection Methods

Data for the research was obtained from survey conducted as the means of data collection. Survey method is defined by a collecting information process by asking people questions, which their answers constituted data to be analyzed and to perform by sampling on a population of people (Fowler, 2014). During collecting process, the respondents were selected based on the simple random sampling. In simple random process, the respondents have known and equal chances of being selected as subject in the studies or in other words weight times the probability of selection is the same for all respondents (Fowler, 2014).

3.6   Questionnaires Design and Measurement

The questions in the survey are divided into several sections. Refer to Appendix B for Malay language version and Appendix C for English language version of survey questionnaire. There are four sections; Section A, Section B, Section C and Section D. Section A consists of

38

six questions that measures the general information of respondents by using nominal scale, from question 1 to 5 and question 6 use interval scale of 1 to 2 based on frequency of usage.

Table 3.1 summarizes the variable measurement used in the Section A of General Information in survey questionnaire.

Table 3.1
Summary of variable measurement used in survey questionnaire

Description	Measurement
Section A General information (Question 1-5)	Nominal scale
Section A General information (Question 6)	Interval scale (Likert 1-2)

Knowledge sharing is measure by five-point Likert scale in which the respondents need to rate the degree of agreement from 1 = strongly disagree to 5 = strongly agree. In the survey, knowledge sharing variable is being asked in Section D, which consists of 12 questions. The items were adapted from Ramayah, Yeap and Ignatius (2012).

English competency variable is measured by five-point numerical scale based on Likert scale whereby, 1 = strongly disagree, and 5 = strongly agree, respondents rated their degree of agreement. The items were adapted from Wei (2009) which to determine the competency of English language of employees in term of their reading, speaking, writing and self-confident when use English during communication with colleges.

In communication channel selection, the respondents were asked in Section C on how they use or select communication channel or media in daily work basis. The section consists of seven questions and were measured by five-point Likert scale whereby 1 = strongly disagree, and 5 = strongly agree, respondents rated their degree of agreement, with total of

39

nine questions. The items were adapted from three articles, which are Alawamleh and Kloub (2013), Annadatha (2012) and Al-Hosani (2011). The section is focused more on how employees or respondents use or select communication channel in their work for knowledge sharing.

The measurement for variables under study are summarized in Table 3.2.

Table 3.2
Operational definition and measurement of variables summary

Dimension	Operational Definition	Items	Adapted from	Measurement
English competency	Individuals to be constructive and facilitate process of development of English language (Welch & Welch, 2008)	Section B Question 1-9	Wei (2009)	Interval scale (Likert 1-5)
Communication Channel Selection	Decision driven by the value that people can derive from a specific medium (Lee, Dahui, & Merrier, 2010)	Section C Question 1 Question 2,3,4,5,7 Question 6	Alawamleh and Kloub (2013) Annadatha (2012) Al-Hosani (2011)	Interval scale (Likert 1-5)
Knowledge sharing	The process of involving knowledge exchange between individuals and group of people (Zin Aris, 2014) and the activity in which participants are involved in the joint process of contributing, negotiating and utilizing knowledge (Li, 2008)	Section D Question 1-12	Ramayah, Yeap and Ignatius (2012)	Interval scale (Likert 1-5)

3.7   Data Analysis

The data collected will be analyzed using statistical method in order to test the hypothesis of the research. SPSS version 22 is used to test the analysis which includes descriptive statistic, correlation, multiple regression analysis, T-test analysis, reliability, and validity testing. SPSS is a statistical analysis package which using statistics to turn raw data into information essential to decision-making (Boslaugh, 2005).

3.7.1 Reliability Analysis

The most frequently reported reliability statistic for multiple-item scales is Cronbach's coefficient alpha, α and many researchers report this coefficient for their two-item measure (Eisinga, Grotenhuis, & Pelzer, 2012). Cronbach's alpha is a statistical test of how well the items in a scale are correlated with one another and a good set of scale items should have a Cronbach's alpha of 0.80 or higher (Bernard, 2013).

According to George and Mallery (2003), the Cronbach's alpha reliability coefficient ranges is interpreted as Table 3.3.

Table 3.3
Cronbach's Alpha Reliability Coefficient Range

Cronbach's Alpha	Interpretation
More than 0.9	Excellent
More than 0.8-0.9	Good
More than 0.7-0.8	Acceptable
More than 0.6-0.7	Questionable
More than 0.5-0.6	Poor
Less than 0.5	Unacceptable

Source: George and Mallery (2003)

3.7.2 Descriptive Analysis

Descriptive statistics include frequency counts (how many), measures of central tendency such as mean, median, or mode or a measure of dispersion (variation) such as standard deviation (Hair, Wolfinbarger, Money, Samouel, & Page, 2011).

3.7.3 Multiple Linear Regression

Multiple Linear Regression is a statistical approach used to describe the simultaneous associations of variables. The analysis is used to help us understand how the independent variables affect the dependent variable. The independent variable was knowledge sharing and dependent variables are English competency and communication channel selection.

3.7.4 Independent Sample Test

Independent sample test or known as T-test is used to test a hypothesis stating that the means for the variables associated with two independent samples or groups will be the same (Hair, Wolfinbarger, Money, Samouel, & Page, 2011). In this case, the method is used to see if there is any difference of mean between employee's gender of male and female, and employee's nationality of local and foreign towards knowledge sharing in tyre industry organization.

3.7.5 One-way ANOVA

One-way ANOVA is used to test for differences among group means (Chalmer, 1987). The test is using one subject of grouping for each time, for example races. There are three (3) assumptions when the test is being conducted;

1. All individual scores be independent of one another, both within and among samples

2. All populations have normal distributions

3. All populations have same standard deviation

In this research, One-Way ANOVA is being used to test between employee's races and job position.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.1   Introduction

This chapter represents the result of data analysis and findings of the study. The chapter starts with demographic background of respondents and followed by results from reliability and regression test. The results of descriptive, Regression, T-test and One-Way ANOVA are also presented. Finally, this chapter summarizes the overall findings of the study.

4.2   Sample of Study

Out of 242 questionnaires distributed, only 133 were replied which leaving 56.19% of response rate.

4.3   Demographic Background

Descriptive analysis was performed to get the frequency and percentages of age, gender, nationality, race, work position and religion.

4.4   Demographic Characteristics

Table 4.1 shows the summary of number of respondents in person and percentage. From the data, the respondents consists of 75.2% of male (100 person) and 24.8% of female (33 person). The disproportionate of gender is because of nature of work in tyre industry where the work requires physical attribute activities, which favor to male worker.

As for years of working in the organization, the result shows that majority of the respondents have work between 6-12 years (28.6%), followed by more than 21 years (27.8%), 0-5 years (22.6%) and 13-20 years (21.1%).

The result also shows most of respondents were local employees (93.2%) and the remaining are expatriate (6.8%). In term of job position category, executive or engineer (33.1%) is the highest participated in the survey, followed by operator (26.3%), supervisor (22.6%) and manager or head (18.0%). In term of race, the statistic is led by Malay (73.7%), followed by Chinese (14.3%), Indian, (5.3%) and others (6.8%).

Table 4.1
Demographic of participant's characteristic

Characteristic	Number of respondents (person)	Percentage (%)
Gender		
Male	100	75.2
Female	33	24.8
Years of working (year)		
0-5 years	30	22.6
6-12 years	38	28.6
13-20 years	28	21.1
More than 21 years	37	27.8
Group of employees		
Malaysian	124	3.2
Expatriate	9	6.8
Position		
Manager/ Head	24	18.0
Executive/ Engineer	44	33.1
Supervisor	30	22.6
Operator	35	26.3
Race		
Malay	98	73.7
Chinese	19	14.3
Indian	7	5.3
Others	9	6.8
Total	133	100

Majority the organization consists of Malay people as employees, and it is expected for the employees to have Malay language as main language of communication between each other. Figure 4.1 exhibits the evidence where Malay language was chosen as main language by respondents and English is highest as second language.
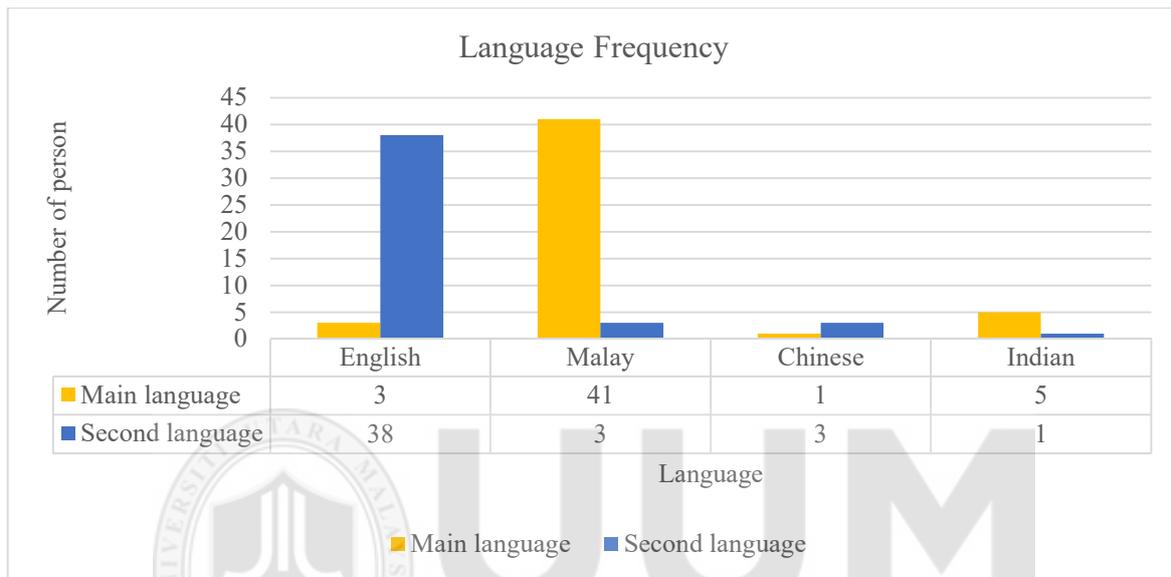
Figure 4.1
Frequency of language used in daily work by employees

4.5 Reliability Analysis

Referring to Table 4.2, English competency Cronbach's alpha value is 0.978 which is excellent result. But, as for communication channel selection, the value was lower, 0.830 but still good. And for knowledge sharing, the Cronbach's alpha value was 0.908, which is excellent.

Table 4.2
Cronbach's alpha value for the variables

Variable	Cronbach's alpha	Number of items	Result
English competency	0.978	9	> 0.6, excellent
Communication channel selection	0.830	7	> 0.6, good
Knowledge sharing	0.908	12	> 0.6, excellent

4.6   Descriptive Analysis on Data Distribution

Description analysis is performed to obtain a basic understanding that involves measure of means, standard deviation and normality of the data. Skewness measures the degree and direction of asymmetry. A symmetric distribution such as a normal distribution has a skewness of 0, and a distribution that is skewed to the left has a negative skewness. Kurtosis is a measure of tail extremity reflecting either the presence of outliers in a distribution or a distribution's propensity for producing outliers.

Table 4.3 shows mean score for all variables, communication channel selection has highest mean, 3.8894, followed by knowledge sharing at 3.5949 and English competency at 3.3325. The skewness of the data is in negative position for all variables, where normal skewness is at 0. The kurtosis value read positive reading for English competency and knowledge sharing, while communication channel selection is at positive value.

Based on George and Mallery (2010), the skewness and kurtosis values between -2 and +2 are considered acceptable to prove normal distribution. Therefore, all variables investigated in the study are normally distributed as the skewness and kurtosis values are within the range.

Table 4.3
Descriptive statistic for all variables

Variables	N Statistic	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Kurtosis Statistic
English competency					
QB1	133	3.76	0.986	-0.462	-0.354
QB2	133	3.27	1.213	-0.355	-0.686
QB3	133	3.29	1.241	-0.392	-0.670
QB4	133	3.08	1.259	-0.213	-0.825
QB5	133	3.59	1.059	-0.523	-0.443
QB6	133	3.40	1.193	-0.516	-0.516
QB7	133	3.23	1.259	-0.274	-0.911
QB8	133	3.16	1.248	-0.209	-0.890
QB9	133	3.23	1.277	-0.233	-0.967
Communication channel selection					
QC1	133	3.73	0.799	-0.467	0.409
QC2	133	4.18	0.695	-0.534	0.209
QC3	133	3.99	0.821	-0.319	-0.692
QC4	133	4.19	0.719	-0.422	-0.532
QC5	133	3.80	1.064	-0.924	0.713
QC6	133	3.71	1.191	-0.904	0.049
QC7	133	3.62	1.204	-0.826	-0.063
Knowledge sharing					
QD1	133	3.43	0.890	-0.501	0.619
QD2	131	3.33	0.948	-0.428	0.111
QD3	133	3.41	0.946	-0.297	0.148
QD4	133	3.94	0.814	-0.230	-0.721
QD5	133	3.98	0.802	-0.317	-0.564
QD6	133	3.15	1.084	-0.159	-0.259
QD7	133	3.66	0.928	-0.369	-0.154
QD8	133	3.64	0.907	-0.207	-0.709
QD9	133	3.75	0.839	-0.364	-0.335
QD10	133	3.68	0.917	-0.446	-0.025
QD11	133	3.81	0.863	-0.343	-0.147
QD12	133	3.35	1.009	-0.310	-0.051

4.7   Hypothesis Testing

The results of hypotheses testing of study are explained in detailed in the following subsections.

4.7.1   Multiple Linear Regression

Multiple Linear Regression was conducted to test the following hypothesis:

- H1: English competency influence knowledge sharing in tyre industry organization

- H2: Communication channel selection influence knowledge sharing in tyre industry organization

Pearson correlation was performed to check the association between English competency and knowledge sharing and also between communication channel selection and knowledge sharing. Based on Table 4.4, the result shows a significant and positive relationship between English competency and knowledge sharing ($p=0.000 < \alpha$) and also between communication channel selection and knowledge sharing ($p=0.000 < \alpha$).

Table 4.4
Correlation result

		EC	CCS
KS	Pearson Correlation	0.519^{**}	0.612^{**}
	Sig. (2-tailed)	0.000	0.000
	N	133	133

Multiple Linear Regression was performed to determine the best set of predictor variable in predicting online knowledge sharing. As depicted in the Table 4.5, the ANOVA table revealed that the F-statistics (46.265) is large and the corresponding p-value is highly significant (0.000) or lower than the alpha value of 0.05. This indicates that the slope of the

estimated linear regression model line is not equal to zero confirming that there is linear relationship between knowledge sharing and the two predictor variables (English competency and communication channel selection). The R-squared of 0.416 implies that the variables explain about 41.6% of the variance in the satisfaction.

Based on Coefficient table, two predictor variables which are English competency (b=0.249, p<0.05) and communication channel selection (b=0.469, p<0.05) were found to be of significance in explaining knowledge sharing. Thus, H1 and H2 were accepted.

The largest beta coefficient is found communication channel selection (beta=0.469) and followed by English competency (0.249). This means that communication channel selection makes the strongest contribution to explain the knowledge sharing. It suggests that one standard deviation increase in communication channel selection is followed by 0.469 standard deviation increase in knowledge sharing.

Table 4.5
Multiple Linear Regression result

	Standardized Beta	T	Sig.
English competency	0.249	3.030	0.003
Communication channel selection	0.469	5.714	0.000
R square	0.416		
Sig.	0.000		
F	46.265		

4.7.2 Independent Sample T-Test

Independent sample T-test was performed to test the following hypothesis:

- H3: Knowledge sharing differs between male and female employees

- H4: Knowledge sharing differs between international and local employees

49

Based on Table 4.6, the result shows a significant difference of knowledge sharing between male and female employees (p=0.048 < α). Thus, the hypothesis (H3) was supported.

Table 4.6
Knowledge sharing by gender

	Gender	N	Mean	Std. Deviation	Std. Error Mean	
Knowledge Sharing	Male	100	3.5316	0.67006	0.06701	
	Female	33	3.7867	0.51994	0.09051	
		Sig.	t	Df	Sig. (2-tailed)	Mean Difference
Knowledge Sharing	Equal variances assumed	0.179	-1.996	131	0.048	-0.25514
	Equal variances not assumed		-2.266	69.902	0.027	-0.25514

Based on Table 4.7, the result shows no significant difference of knowledge sharing between nationality of employees between Malaysian and expatriate (p=0.031 < α). Thus, the hypothesis (H4) was supported.

Table 4.7
Knowledge sharing by nationality

	Nationality	N	Mean	Std. Deviation	Std. Error Mean	
Knowledge Sharing	Malaysian	124	3.5756	0.65808	0.05910	
	Expatriate	9	3.8611	0.30901	0.10300	
		Sig.	t	Df	Sig. (2-tailed)	Mean Difference
Knowledge Sharing	Equal variances assumed	0.024	-1.288	131	0.200	-0.28554
	Equal variances not assumed		-2.404	14.035	0.031	-0.28554

4.7.3 One-way ANOVA

One-way ANOVA was conducted to test the following hypothesis:

- H5: Knowledge sharing differs among employees' races
- H6: Knowledge sharing differs employees' job position

Based on Table 4.8 for races category, the result shows no significant difference of knowledge sharing between races (p=0.313 > α). Thus, the hypothesis (H5) was not supported. And, for job position of employees, the result shows significant difference of knowledge sharing between the employees (p=0.000). Thus, the hypothesis (H6) was supported.

Table 4.8
One-way ANOVA result for races and job position

Races

	Sum of squares	df	Mean square	F	Sig.
Between Groups	1.483	3	0.494	1.198	0.313
Within Groups	53.232	129	0.413		
Total	54.715	132			

Job position

	Sum of squares	df	Mean square	F	Sig.
Between Groups	7.859	3	2.620	7.212	0.000
Within Groups	46.857	129	0.363		
Total	54.715	132			

Further analysis for job position was conducted by using post hoc analysis. Post hoc test is called posteriori test, which mean the test is being performed after the event. Post hoc analysis enables the author to see the specific groups that differ. The test used Turkey's honestly significant difference (HSD) since the data met the assumption of homogeneity of variances. From Table 4.9, the post hoc results shows that a significant differences were found between manager and operator (*p*=0.001) and between Executive/ Engineer and Operator (*p*=0.000).

Table 4.9
Post-Hoc test result for job position of knowledge sharing between employees

(I) Position	(J) Position	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Manager/ Head	Executive/ Engineer	0.03243	0.15294	0.997	-0.3656	0.4305
	Supervisor	0.24444	0.16505	0.452	-0.1852	0.6740
	Operator	0.60299[*]	0.15973	0.001	0.1873	1.0187
Executive/ Engineer	Manager/ Head	-0.03243	0.15294	0.997	-0.4305	0.3656
	Supervisor	0.21202	0.14270	0.449	-0.1594	0.5834
	Operator	0.57057[*]	0.13650	0.000	0.2153	0.9259
Supervisor	Manager/ Head	-0.24444	0.16505	0.452	-0.6740	0.1852
	Executive/ Engineer	-0.21202	0.14270	0.449	-0.5834	0.1594
	Operator	0.35855	0.14995	0.084	-0.0318	0.7489
Operator	Manager/ Head	-0.60299[*]	0.15973	0.001	-1.0187	-0.1873
	Executive/ Engineer	-0.57057[*]	0.13650	0.000	-0.9259	-0.2153
	Supervisor	-0.35855	0.14995	0.084	-0.7489	0.0318

4.8   Summary of Hypothesis Results

As depicted in Table 4.10, out of six, five hypotheses were supported.

Table 4.10
Summary of hypotheses result

Hypothesis	Relationship	Result
H1	Knowledge sharing → English competency	Supported
H2	Knowledge sharing → Communication channel selection	Supported
H3	Knowledge sharing → Gender of male and female	Supported
H4	Knowledge sharing by nationality of local and expatriate	Supported
H5	Knowledge sharing by races	Not supported
H6	Knowledge sharing by job position	Supported

53

CHAPTER 5

DISCUSSION, CONCLUSIONS AND SUGGESTIONS

5.1   Introduction

The research was conducted in order to examine the factors that influence knowledge sharing activity in tyre industry organization in Malaysia. In this study, English competency and communication channel selection are selected as factor that affect knowledge sharing activity which were tested in tyre industry organization employees in Malaysia. Thus, the overview of the finding, result, conclusion and suggestion for future avenues are discussed in this chapter.

5.2   Discussion of Findings

5.2.1   RO1: English Competency and Knowledge Sharing

In this study, H1 was developed, showing that English competency correlate significantly in knowledge sharing. The result of regression analysis in Table 4.5 showed that a significant and positive relationship was found between English competency and knowledge sharing (p=0.000, p<0.05). The result indicates that English competency play an important roles in determining the level of knowledge sharing among employees in tyre industry organization.

The similar results were also found in study by Peltokorpi and Vaara (2014) where they explained that only language skills are hired in multinational company to maintain organization sustainable. Also, the result was affirmed with study conducted by Lauring and Selmer (2011) in universities in Denmark, which rejected negative theory in language does affect knowledge sharing. Besides that, Wei (2009) also supported the theory that language which is English competency does give significant effect in knowledge sharing. Similar with Li (2008), who also had conducted study between American and Chinese employees in China

company, agreed that cultural difference, which is the language, created barrier between the employees. The negative impact of the barrier on Chinese willingness to share knowledge with American employees. The organization should take initiative to do translation to local and English language of employee's opinion or view.

Peltokorpi and Vaara (2014) in their study found that the influence of language competency in deeper in knowledge sharing. The researchers stated language competency does have the ability to share knowledge but somehow it does not ensure that the employees are able or motivated to do so. Even with same language, employees might have different interpretation and understanding, which lead to uncertain effectiveness and efficiency of knowledge sharing.

5.2.2   RO2: Communication Channel Selection and Knowledge Sharing

As for H2, the hypothesis was developed, showing that communication channel selection correlate significantly in knowledge sharing. The result of regression analysis in Table 4.5 showed that a significant relationship was found between communication channel selection and knowledge sharing (p=0.000, p<0.05). The result indicates that communication channel selection play an important roles in determining the level of knowledge sharing among employees in tyre industry organization.

Similar finding was found in research report by Snyder and Lee-Partridge (2013), mentioning that communication channel used by employees does affect knowledge sharing activity and had detailed it down to several channel choices. Hamid (2015), who also conducted research in examining social media as one of communication channel in university supported the statement. Likewise, Gruber (2000) and Wei (2009) agreed that communication

channel does affect knowledge sharing by determining face-to-face as the richest capacity chosen by employees.

5.2.3 RO3: Employees Gender of Male and Female in Knowledge Sharing

The result from T-test conducted shows a significant difference of knowledge sharing between male and female employees as depicted in Table 4.6 ($p=0.048$, $p<0.05$).

Connelly and Kelloway (2003) supported that female employees will perceived their organization's knowledge sharing culture differently than their male counterparts. Women who reported a positive social interaction culture were also more likely to also perceive a highly positive knowledge sharing culture in organization.

Female employees may have been conditioned to be helpful, but given their, frequently less advantaged, positions in many organizations, they may hesitant to share with colleges of they believe that they will be sharing away their power. Ali (2009) in his research mentioned that female academics were more willing to share knowledge and learn than males as they are motivated to be promoted to leadership positions. In Jain, Singh and Kaur (2007) study, saw male employees see greater value in linking knowledge sharing with rewards as compared to female employees.

In cultural perspective, gender play a role in interaction between male and female. The gap between gender diversity can be seen in certain a part of the world where it is culturally unacceptable for female employees to interact with opposite gender in social activities (Ali, 2009). Female employees were found only to share knowledge with same

56

gender. But during the forum conducted for the research by Ali (2009), some individuals with western-educated have built a culture where interaction with opposite gender is not an issue.

5.2.4 RO4: Difference of Knowledge Sharing by Nationality

The result from T-test conducted shows significant difference of knowledge sharing between nationality of employees between Malaysian and expatriate (p=0.031, p<0.05). This finding is similar to Li (2010) where there was a gap of knowledge sharing between China and America employees in organization in China. The disparity was because of difference in language speaking between employees. The language differ caused negative influence in communication in the organization.

Even with language similarity, Peltokorpi and Vaara (2014) found that language commonality does not automatically lead to knowledge sharing. Sharing the same language, expatriates often distanced themselves from local employees in term of their nationality, values, HQ linkages and identity, and task roles. In addition, expatriates with overseas experience tends to have low attachment to organization, leading to less engagement with knowledge sharing.

Employees with different nationalities have different work culture or known as national culture. Individual national culture has mindset, beliefs and custom that exist within the population. In multinational company, employees with different national culture is expected to be more open in communication with different nation colleges and respect each other. It is interesting to learn about other culture and apply it on colleges because it might please the other person and encourage two way of interaction.

57

5.2.5 RO5: Difference of Knowledge Sharing by Races

The hypothesis H5 was developed and the result in Table 4.8 obtained from one-way ANOVA showed no significant difference of knowledge sharing between races (p=0.313, p>0.05). This is contradicted with study did by author Jain, Singh and Kaur (2007) on races regarding knowledge sharing and mentioned that Malays supported knowledge sharing more than the Chinese.

Grauss (2012) in his study also found that difference in race group in South Africa influence knowledge sharing process. This is due to the difference race group are having different living status, self-cautious, cultural differences and race value, which lead to less interaction. It is believed individuals tend to keep the knowledge within the same race due to value embedded and loyalty.

5.2.6 RO6: Difference of Knowledge Sharing by Job Position

One-way ANOVA was also been conducted to see the relationship between job position and knowledge sharing. The result shows significant difference of knowledge sharing between the employees. Further test was conducted in order to see how job position level affects knowledge sharing process. The post hoc test (Turkey) was conducted and result indicated that there are significant difference between Manager/Head level and Operator, as shown in Table 4.8 (p=0.01, p<0.05) and between Executive/Engineer and Operator (p=0.000, p<0.05).

Overall, knowledge sharing activity was significantly different between operator and manager/head and executive/engineer. This shows the gap between operator and other position level is quite high. It is important to reach out from top position to low position and

ensure information flows as much as possible because every employee need to get the right information in order to do their work, thus enhance work performance.

Management should take initiative to encourage employees to take part in corrective action and working together with managers in order to share ideas and knowledge or information for solving daily work issues. The structure is believed impacted by organization culture by some values such as freedom, flexibility and cooperative teamwork that can bring and enhance innovation and creativity (Steiger, Hammoul & Galib, 2014). If employees have flexibility and authority in participating of making decision, this will increase their effort to share and learn.

Islam, Ahmed, Hasan and Ahmed (2011) stated that organization must create a medium for open discussion and debate which could motivate and encourage individuals at various levels to freely give opinions and views on any issues. This is because the chances of interaction between levels especially from top to low level is small. Top level communication function also take too much time to filter down the knowledge through every level of the organization.

Formal organization structure limit access to knowledge thus create barrier to communication. Organization should support communication that operate freely where individuals can provide and seek knowledge and information through the shortest path. This will definitely enhance knowledge creation and knowledge sharing in organization.

5.3   Conclusions

The study was conducted objectively to determine the factor of influencing knowledge sharing activity among employees in tyre industry organization in Malaysia. Two main factors which are English competence and communication channel selection by employees were identified to have significant contribution on knowledge sharing in organization. The research was conducted by using quantitative method to collect information from respondent through survey.

Based on the finding, both English competency and communication channel selection have significant and positive relationship with knowledge sharing which indicate that both items are promising factors in organization long term success. Language efficiency is very important subject as it is an intermediate between employees receiving and understanding each other. Better communication channel selection also plays a role in enhance knowledge sharing in organization. With suitable method used, the information could be delivered successfully to desired receiver.

Apart from that, the study reveals that knowledge sharing was differ between gender, nationality and among job position. This result indicates knowledge sharing is being exercised differently between male and female employees, between local and expatriates, and also among various job position in organization. Therefore, Organization management must plan a program on how to approach employees from various categories and background to encourage knowledge sharing. The organization must overcome the boundaries between employees in order to maintain organization survival in industry.

5.4   Research Implications

The research findings could contribute for literature of knowledge sharing in certain factors in both theory and practice. In theoretical knowledge, the understanding of knowledge sharing is deepen and improved in educational context. This has enhanced theory of social exchange theory in explaining the influence of English competency and communication channel selection on knowledge sharing.

From practitioner perspectives, the study findings will benefit to the organization in understanding the practice of knowledge sharing in detail especially in the context of tyre industry in Malaysia.

There are suggestions recommended in order to improve knowledge sharing activity among employees in organization, such as recruitment of staff with English language skills, encouraging staff to attend company-sponsored language classes through corporate activities, sending employees to Europe to gain language skills, maintaining language abilities through training and strategic movement of staff (Welch & Welch, 2008).

It is important to create knowledge sharing culture among employees and this must be created by organization management in order to create long term engagement with employees at all level. If geographically dispersed organizations, management should consider to installing knowledge sharing technology such as email discussion (Connelly & Kelloway, 2003) or central database which accessible by employees. This would reduce time waiting because of different time zone between different branches of organization around the globe.

5.5   Limitation and suggestion for future research

During the research, there are some limitations identified and could have been avoided in future. The survey was carried out to management employees in the organization while neglecting operative employees. It is desirable to have more response and obtain more reliable data. The study also involved one branch of organization in Malaysia, excluding branches in other countries and other tyre industry organization in Malaysia. Since the sample size is relatively small (n=133), thus the findings could not be generalized to all tyre industry in Malaysia.

Apart from that, the study focused only on two variables, without taking into consideration of other factors that could affect knowledge sharing in the same organization or industry. While taking the research by quantitative method, the finding is very limited and respondent could not response or give opinion individually.

In order to overcome these limitations, future studies should consider conducting the survey to all tyre organizations in Malaysia. This could contribute to more survey data, so that the result could be generalized.

In this study, only two factors were being investigated, while Gupta and Govindarajan (2000) suggested that that knowledge sharing can be influenced by many more factors (refer to Figure 1.1). These factors should be considered in future studies. Lastly, the research also can be conducted in qualitative method in order to get more in-depth explanations from respondents.

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Appendix

Appendix A: Cover Letter for Survey

Continental Tyre AS Malaysia Sdn. Bhd.,
No. 1, Jalan Tunku Abdul Rahman,
P.O Box 100, Mergong,
05710 Alor Setar, Kedah.   1st Feb 2017

Subject: Survey

Dear Respondent,

I, Fathin Fathiha Ahmad, a student of Master of Science (Management) in Universiti Utara Malaysia's is presently conducting a research relating to knowledge sharing factors among employees in Continental Tyre AS Malaysia Sdn. Bhd. Knowledge sharing is a practice where people working together exchange their valuable information with each other.

The research is being undertaken for a dissertation in School of Business, under supervision of Dr. Hazlinda Hassan. The purpose of the study is to examine the influence of English competency and communication channel selection on knowledge sharing.

The research consists of survey, where the questions will be asking related to daily used language and selection of communication channel in sharing knowledge between employees and general information of knowledge sharing understanding.

Please be assured that your individual responses to the survey will be kept strictly confidential and any result will be represented as a summary of respondents. If you have any question or concern, kindly contact me, Fathin Fathiha Ahmad at phone: +6012-6598363 and e-mail: fathin.fathiha@yahoo.com.

Thank you in advance for your help.

Regards,
Fathin Fathiha Ahmad
Master of Science (Management)
Universiti Utara Malaysia

Appendix B: Survey Questionnaire (Malay version)

Bahagian A: Informasi Umum

Arahan: Sila isikan informasi umum anda dengan menandakan (X) dalam kotak yang berkaitan.

1. Jantina   : Lelaki   ☐   Perempuan   ☐

2. Jawatan   : Pengurus/ Ketua ☐   Eksekutif/ Jurutera ☐

                  Penyelia   ☐   Operator   ☐

3. Tahun berkhidmat :   0-5 tahun   ☐   6-12 tahun   ☐

                      13-20 tahun   ☐   21 tahun dan ke atas ☐

4. Warganegara   : Malaysia   ☐   Bukan warganegara ☐

5. Bangsa   : Melayu   ☐   China   ☐

                  India   ☐   Lain-lain (sila nyatakan): _____

6. Berdasarkan pilihan Bahasa dibawah, sila nyatakan 2 bahasa yang paling kerap anda gunakan dengan rakan sekerja anda dalam kerja (1=bahasa ibunda/harian, 2=bahasa kedua).

    Bahasa Inggeris   [   ]

    Melayu   [   ]

    Tamil   [   ]

    Mandarin   [   ]

    Lain-lain (sila nyatakan): _____

Bahagian B: Kebolehan Bahasa Inggeris

Arahan: Penilaian di bahagian ini adalah bertujuan untuk menilai kebolahan bahasa Inggeris pekerja yang digunakan dalam kerja seharian. Sila tandakan jawapan anda (X) di dalam kotak berkaitan berdasarkan skala di bawah.

Sangat tidak bersetuju	Tidak bersetuju	Neutral	Bersetuju	Sangat bersetuju
1	2	3	4	5

	1	2	3	4	5
1. Saya boleh membaca dan memahami kebanyakan penulisan dalam bahasa Inggeris.					
2. Saya boleh menulis dalam bahasa Inggeris dengan mudah.					
3. Saya boleh bertutur dalam bahasa Inggeris dengan yakin.					
4. Saya sangat yakin dengan kebolehan saya menulis dalam bahasa Inggeris dengan betul.					
5. Saya boleh memahami rakan sekerja bercakap bahasa Inggeris dengan agak baik.					
6. Kebolehan saya dalam bahasa Inggeris membolehkan saya menghadapi hampir semua situasi yang memerlukan saya menggunakan bahasa tersebut.					
7. Saya selesa apabila perlu berbahasa Inggeris dalam perbualan telefon.					
8. Saya berasa selesa apabila berjumpa dan bercakap dengan rakan sekerja dalam bahasa Inggeris.					
9. Saya bercakap bahasa Inggeris dengan orang atasan dengan bersahaja.					

70

Bahagian C: Pemilihan Saluran Komunikasi

Arahan: Bahagian ini bertujuan menilai kemahiran pekerja dalam pemilihan saluran komunikasi dalam kerja seharian. Sila tandakan jawapan anda dengan (X) berdasarkan skala yang dinyatakan di Bahagian B.

	1	2	3	4	5
1. Syarikat selalu mengeluarkan buletin bulanan untuk diedarkan kepada para pekerja bagi tujuan pengetahuan.					
2. Bagi saya perjumpaan secara terus membantu mengelakkan salah faham dalam pertukaran maklumat.					
3. Pengalaman bekerja adalah lebih baik dikongsikan semasa mesyuarat atau perjumpaan sosial dengan rakan sekerja.					
4. Kerjasama atau kerja berkumpulan membolehkan maklumat dikongsi bersama-sama.					
5. Saya berkongsi maklumat melalui mesej atau perbualan telefon.					
6. Perisian sosial dan alat komunikasi yang mempunyai kemudahan menyimpan informasi dan maklumat digunakan di syarikat saya.					
7. Kebanyakan maklumat dikongsikan melalui emel.					

Bahagian D: Perkongsian Maklumat

Arahan: Bahagian ini bertujuan menilai pengetahuan perkongsian maklumat dalam kerja seharian anda. Sila tandakan jawapan anda dengan (X) berdasarkan skala yang dinyatakan di Bahagian B.

	1	2	3	4	5
1. Saya selalu menyumbang idea dan pemikiran dalam mesyuarat.					
2. Saya aktif mengambil bahagian semasa aktiviti sumbang saran.					
3. Saya selalu bertanya dan menjawab soalan dalam perbincangan kumpulan.					
4. Pada pendapat saya, kisah kejayaan yang boleh memberi manfaat kepada organisasi patut dikongsi bersama rakan sekerja.					
5. Adalah menjadi keutamaan untuk berkongsi maklumat kegagalan atau kesilapan yang berkait dengan kerja agar dapat memberi pengajaran.					
6. Saya bersemangat membuat perbentangan dalam mesyuarat.					
7. Saya selalu membantu pekerja yang kurang berpengalaman membuat kerja baru.					
8. Saya akan membantu apabila rakan sekerja meminta bantuan (berkaitan kerja).					
9. Adalah menjadi kemestian setiap pekerja dalam jabatan untuk sentiasa mengemaskini maklumat untuk satu sama lain.					
10. Saya tidak keberatan meluangkan masa untuk membantu rakan sekerja dengan masalah yang berkaitan dengan kerja.					
11. Saya selalu berkongsi pengalaman yang boleh membantu mengelakkan risiko dan masalah.					
12. Saya suka terlibat dalam melatih pekerja baru untuk jangka masa panjang.					

Appendix C: Survey Questionnaire (English version)

Section A: General Information

Instruction: Please fill in your general information by tick (X) in the appropriate box.

1. Gender   : Male   ☐   Female   ☐

2. Position   : Manager/ Head ☐   Executive/ Engineer ☐

               Supervisor   ☐   Operator   ☐

3. Years of working : 0-5 years   ☐   6-12 years   ☐

   experience   13-20 years   ☐   21 years and above ☐

4. Nationality   : Malaysian   ☐   Expatriate   ☐

5. Race   : Malay   ☐   Chinese   ☐

              Indian   ☐   Others (please state):_____
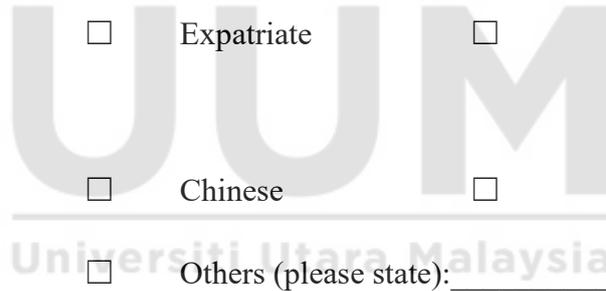
6. Based on below language selection, please rate **TWO (2)** most languages used in daily communication with your college (1=native/daily language, 2=second language).

    English   [   ]

    Malay   [   ]

    Tamil   [   ]

    Mandarin   [   ]

    Others (please state): _____

Section B: English Competency

Instruction: The purpose of this section is to assess the skill of employees regarding English competency in daily work. Please tick (X) in the appropriate box to represent your answer based on scale below.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

	1	2	3	4	5
1. I am capable of reading and understanding most texts in English.					
2. I know enough English to be able to write comfortably.					
3. I know enough English to speak confidently.					
4. I am very confident in my ability to write English correctly.					
5. I can understand my college speaking English quite well.					
6. My knowledge of English allows me to cope with most situations where I have to use that language.					
7. When I have to speak in English on the phone, I feel comfortable.					
8. Every time that I meet my college and speak with him/her in English, I feel at ease.					
9. I am relaxed when I speak English with my superior.					

Section C: Communication Channel Selection

Instruction: The purpose of this section assessment is to assess the knowledge of employees regarding communication channel selection in your daily work. Please tick (X) to represent your answer based on scale described in Section B.

	1	2	3	4	5
1. The company is keen on monthly bulletins for distribution of applications of knowledge workers.					
2. In person networking or face-to-face meeting helps me avoid miscommunication in information exchange.					
3. Personal experiences are better shared during meeting or socialization with college.					
4. Collaboration or working together in team enables knowledge sharing with each other.					
5. I share knowledge through messaging or chat.					
6. Social software and communication tools which support information and knowledge collection are used in our company.					
7. Most of my knowledge sharing is through emails.					

Section D: Knowledge Sharing

Instruction: The purpose of this section assessment is to assess your understanding in knowledge sharing activities in daily work. Please tick (X) to represent your answer based on scale described Section B.

	1	2	3	4	5
1. I always express ideas and thoughts in meetings.					
2. I actively participate in brainstorming sessions.					
3. I always ask and answer questions during team discussion.					
4. In my opinion, success stories that may benefit the organization should be shared together with colleges.					
5. It is important to share work-related failures or mistakes in meeting as lesson learned.					
6. I eagerly make presentation in department meetings.					
7. I always support less-experienced colleges to do new things.					
8. When my college ask for help (work related), I never say no.					
9. It is a tradition for our department members to keep each other updated with important information.					
10. I don't mind spending time to help my colleges with their work-related problems.					
11. I always share experiences that may help others avoid risks and trouble.					
12. I enjoy engaging in long-term coaching the junior college.					

Appendix D: Table for determining sample size of a known population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384
Note: N is Population size; S is Sample size									

Source: Krejcie & Morgan (1970)

Appendix E: Pearson Correlation result

Correlations

		EC2	CCS2	KS2
EC2	Pearson Correlation	1	0.576^{**}	0.519^{**}
	Sig. (2-tailed)		0.000	0.000
	N	133	133	133
CCS2	Pearson Correlation	0.576^{**}	1	0.612^{**}
	Sig. (2-tailed)	0.000		0.000
	N	133	133	133
KS2	Pearson Correlation	0.519^{**}	0.612^{**}	1
	Sig. (2-tailed)	0.000	0.000	
	N	133	133	133

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix F: Multiple linear regression result for English competency

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.645[a]	.416	.407	.49586

a. Predictors: (Constant), CCS2, EC2

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.751	2	11.376	46.265	.000[a]
	Residual	31.964	130	.246		
	Total	54.715	132			

a. Predictors: (Constant), CCS2, EC2

b. Dependent Variable: KS2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.354	.256		5.296	.000
	EC2	.145	.048	.249	3.030	.003
	CCS2	.452	.079	.469	5.714	.000

a. Dependent Variable: KS2

79

Appendix G: One-way ANOVA result for races

Descriptives

Knowledge Sharing

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum	Between-Component Variance
Malay	83	3.5042	.65499	.06816	3.4189	3.5957	2.02	4.62	
Chinese	16	3.7939	.53040	.13904	3.6597	4.0173	2.25	4.45	
Indian	7	3.4643	.54513	.26042	2.8583	3.9684	2.55	4.25	
Other	6	3.5611	.36507	.16830	3.6236	4.5366	3.25	4.25	
Total	132	3.5917	.56283	.06760	3.4846	3.7053	2.00	4.67	
Model	Fixed Effects			.06239	.26671	3.4943	3.7051		
	Random Effects				.07481	3.3575	3.6620			.06420

Test of Homogeneity of Variances

Knowledge Sharing

Levene Statistic	df1	df2	Sig.
3.559	3	128	.067

ANOVA

Knowledge Sharing

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.469	3	.494	1.182	.319
Within Groups	53.232	128	.418		
Total	54.715	132			

Appendix H: One-way ANOVA result for job position

Descriptives

Knowledge Sharing

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
					Lower Bound	Upper Bound			
Manager/Head	24	3.8964	.67235	.13520	3.5708	4.8468	2.25	4.58	
General Employee	44	3.7979	.62457	.09655	3.0598	3.9123	2.07	4.55	
Supervisor	30	3.5760	.68674	.12583	3.2174	3.8358	2.35	4.87	
Operator	35	3.2168	.75028	.12664	2.0857	3.4742	2.00	4.58	
Total	133	3.6949	.64452	.06953	3.4246	3.7588	2.00	4.87	
Model	Fixed Effects			.65298	.05709	3.4715	3.8863		
	Random Effects				.14422	3.1598	4.5549			.05028

Test of Homogeneity of Variances

Knowledge Sharing

Levene Statistic	df1	df2	Sig.
3.132	3	129	.005

ANOVA

Knowledge Sharing

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.889	3	3.320	5.212	.500
Within Groups	46.327	129	.349		
Total	54.715	132			

81

Post hoc test result

Multiple Comparisons

Dependent Variable: Knowledge Sharing

Turkey HSD

(I) Position	(J) Position	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Manager/Head	Executive/Engineer	.03243	.15294	.997	-.3656	.4305
	Supervisor	.24444	.16505	.452	-.1852	.6740
	Operator	.60299*	.15973	.001	.1873	1.0187
Executive/ Engineer	Manager/Head	-.03243	.15294	.997	-.4305	.3656
	Supervisor	.21202	.14270	.449	-.1594	.5834
	Operator	.57057*	.13650	.000	.2153	.9259
Supervisor	Manager/Head	-.24444	.16505	.452	-.6740	.1852
	Executive/Engineer	-.21202	.14270	.449	-.5834	.1594
	Operator	.35855	.14995	.084	-.0318	.7489
Operator	Manager/Head	-.60299*	.15973	.001	-1.0187	-.1873
	Executive/Engineer	-.57057*	.13650	.000	-.9259	-.2153
	Supervisor	-.35855	.14995	.084	-.7489	.0318

*. The mean difference is significant at the 0.05 level.

Homogeneous subset

Turkey HSD[a,b]

Position	N	Subset for alpha = 0.05	
		1	2
Operator	35	3.2165	
Supervisor	30	3.5750	3.5750
Executive/Engineer	44		3.7870
Manager/Head	24		3.8194
Sig.		.089	.374

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 31.671.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I

error levels are not guaranteed.*