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Knowledge Sharing Traits and Competitive Advantage: A Qualitative Inquiry

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Abstract

Purpose: *This paper explores the extent to which knowledge sharing traits shape organizational competitive advantage.*
Methodology: *In this qualitative inquiry, semi-structured interviews were conducted in nine Malaysian-listed organizations.*
Findings: *The results from summative content analysis suggest that the dimension of conscientiousness was the most dominant personality among sharers. In terms of competitive advantage outcome, the majority of the organizations were found to be at competitive parity stage.*
Practical Implications: *Organizations should invest in knowledge sharing through the alignment of dual training types with designated micro-groups facilitation in their quest for competitive advantage.*

Keywords: Knowledge Sharing; Five-Factor Model of Personality; Competitive Advantage; Resource-Based View (RBV) Theory; VRIO (Valuable, Rare, Inimitable, Organized) Framework.

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Introduction

Knowledge sharing is vital across industries as it is believed to improve organizational strategic outcome (Lin, 2007c; Matzler & Mueller, 2011; Ritala, Olander, Michailova & Husted, 2015). Most organizations use knowledge sharing as a platform to achieve competitive advantage (Hinds, Patterson & Pfeffer, 2001).

A person who shares knowledge or a sharer is a typical individual with detailed information in his or her area of expertise who has relevant awareness, motivation, personality and skills in their decision to share (Lin, 2007b; Lichtenstein & Hunter, 2008). There exists various perspectives related to human personality among them psychoanalytic, neo-analytic/ego, biological, behaviourist, cognitive, trait, humanistic and interactionist. Among all these, the trait perspective based on the Five-Factor Model of Personality (FFM) is the most influential across different fields (Goldberg, 1981; Conley, 1985; McCrae & Costa, 1987; Digman, 1990; Friedman & Schustack, 2012; Burger, 2015).

Although individual personal characteristics play an important role in work attitudes (Judge & Bono, 2001), the role of personality traits in knowledge sharing literature remains scarce (Memon, Nor & Salleh, 2016). Most studies are fixated on the motivational aspects of knowledge sharing (Newbert, 2007; Wang & Noe, 2010). Furthermore, studies utilizing quantitative approach in assessing the organizational strategic outcome tend to be overgeneralized as the specific elements of competitive advantage are not fully established (Priem & Butler, 2001; Andersen, 2011) in view of the complex subjective human interactions (Argote & Ingram, 2000; Foss & Pedersen,2002, Memon, Nor & Salleh, 2016).

The Resource-Based View (RBV) theory suggests that the key to competitive advantage is through exploiting differences and the uniqueness of an organization's resources (Fahy, 2001; Barney 1997). In strategy literature, an organization which is in position to exploit specific resources is likely to achieve sustainable competitive advantage through VRIO framework assessment: Valuable, Rare, Inimitable and Organized (Spanos & Liouskas, 2001; Barney & Hesterly, 2008). Among the array of organizational resources, knowledge has been recognised as a critical source of competitive advantage as evident in empirical studies based on VRIO framework across broad industry context (Berman, Down & Hill, 2002; McEvily & Chakravarthy, 2002; Kearns & Lederer, 2003; Sandhawalia & Dalcher, 2011).

This paper aims to explore the most dominant personality trait of a sharer through the perspective of FFM. This is followed by the extent to which knowledge sharing influences the competitive advantage outcome in the context of VRIO framework. To achieve this, semi-structured interviews were conducted in nine Malaysian listed organizations where knowledge was shared on closed-network basis.

By gaining a better insight on sharer's knowledge sharing personality traits, decision-making and problem-solving can be enhanced in many organizations (Yang, 2007). Moreover, awareness on the current competitive advantage position could assist top management in charting their intended strategic path.

Literature Review

Knowledge Sharing

Knowledge sharing relates to communicating available knowledge within individuals or groups for performance enhancement (Alavi & Liedner, 1999; Salisbury, 2003). The sharing process starts from collection, organisation and dissemination from one to another (Van den Hooff & De Ridder, 2004), thereby contributing to value expansion when it is shared. Knowledge sharing can be divided into two types: closed-network sharing and open-network sharing. The former is also known as person-to-person sharing where knowledge sharers have the freedom to make decision on the mode and person to share knowledge with. This type of interaction enables greater personal touch and enhanced trust. The latter happens through a central database system involving peer sharing of various knowledge assets (Muller, Spiliopoulou & Lenz, 2005).

Knowledge sharing types

The most common classification of knowledge is between tacit and explicit knowledge, even though various other classifications also exist. Tacit knowledge refers to individual contextual knowledge (Nonaka & Takeuchi, 1995) whereas explicit knowledge implies formal, systematic form of knowledge that is transferable (Brown & Duguid, 1998). The simplest form of knowledge codification is organised into four categories of know-what, know-why, know-how and know-who. Know-what constitutes factual knowledge, know-why is scientifically-linked, know-how concerns skills and capabilities whereas know-who is associated with person-linked information (Schultz & Schultz, 2012). In addition, Marouf (2007) categorized knowledge into public and private where the difference lies in open versus closed access. Christensen (2007) segregated types of knowledge into professional, coordinating, object-based and know-who. Professional knowledge combines an individual's educational and life experiences while coordinating knowledge is embedded into pre-set rules or standards. Object-based is a niche knowledge found in a specific departmental setting while know-who constitutes the source of the original knowledge.

Knowledge sharing level

Knowledge sharing derives from various levels through individual, group or organizational communication (Nonaka & Takeuchi, 1995; Cummings, 2004). It is anticipated that individual employees are less hesitant to share knowledge with their co-workers who had assisted them in the past (Han & Anantatmula, 2007). Generally, an individual with humble and respectful attitude along with willingness to learn and listen demonstrates tendency to share knowledge (Zhang & Jiang, 2015).

Lin (2007a) examined the role of exchange theory that defines the sharer and recipient relationship. In a study conducted by Cabrera, Collins and Salgado (2006), the openness to experience is positively correlated to individuals' self-declared knowledge exchange. Their study suggested that sharers have openness to experience and have tendency to seek others' ideas and feedback through high level of inquisitiveness. On top of that, sharers with higher education level and vast work experience are also more willing to share their expertise and recognized sharing as positive attitudes (Constant, Kiesler & Sproull, 1994). It is also widely acknowledged that a sharer's comfort level and ability to utilise information technology result in higher knowledge sharing predisposition (Jarvenpaa & Staples, 2000).

Additionally, there are a few studies that investigated the expertise-knowledge sharing relationship with varying results. Constant, Sproull and Kiesler (1996) discovered that individuals with higher expertise were passive - they are more prompted to share knowledge upon being requested through an organization knowledge repository. Several authors found out sharers with confidence appear to be more willing to share as opposed to their individual expertise (Wasko & Faraj, 2005; Cabrera et al, 2006; Lin, 2007b,c). In contrast, the main barrier to knowledge sharing by individuals is mainly attributed to anxiety-related fear of negative evaluations (Bordia, Irmer & Abusah, 2006). Other factors discouraging knowledge sharing include, but are not limited to unfair acclamations and exposure to intellectual property pilfering (Riege, 2005).

As for group level knowledge sharing, Lin (2008) believed knowledge sharing with key stakeholders leads to greater innovation which in turn could enhance organizational competitive

advantage. Existing individuals within groups which have been formed for longer duration with high level of cohesiveness are more likely to share knowledge (Bakker, Leenders, Gabbay, Kratzer & Van Engelen, 2006; Sawng, Kim & Han, 2006). At the organizational level, studies have also shown that organizations should open opportunities for employee interactions without delineation on job title, rank, position, hierarchy or seniority to facilitate company knowledge sharing (Liebowitz, 2003; Jones, 2005; Tagliaventi & Mattarelli, 2006; Yang & Chen, 2007). On the other hand, in a dual organizational cooperative and competitive business environment, Cheng, Ho and Lau (2008) discovered knowledge sharing boost competitive advantage through strategic alliances.

Personality-linked factors namely sharer expertise recognition, group-based identity and self-esteem hold vital factors determining the willingness to share knowledge apart from other factors such as organizational or technological (Hahn & Subrami, 2000; Sondergaard, Kerr & Clegg, 2007). Despite this, not all knowledge is shared as the type and amount of knowledge shared rely on the worth of the knowledge to each related individuals involved (Larsen & Buss, 2013). Riege (2005) further added that other contributing factors to knowledge sharing include availability and copyrights protection. Positive knowledge sharing behaviour can be traced to an individual's personality factor in their intention to share (Bock & Kim, 2002; Lin, 2007b). Thus, a grasp of personality theories could unveil more insight on the attitudes of a sharer's perceived traits.

Five-Factor Model of Personality

Despite various contradictions, personality-based theories have converged based on five concepts in order to classify its attributes (Digman, 1990). This set of five classification schemes is refined by Norman (1963) and subsequently the five dimensions are used consistently across various social science literature and have been referred to as Five-Factor Model of Personality (FFM) or Big Five (Burger, 2015). The comprehensiveness of this model is evident across various theoretical frameworks covering different measurements in various contexts across methodological mixes (Goldberg, 1981; Conley, 1985; McCrae & Costa, 1987). Nevertheless, the model lacks explicit specifications of its dimensions (Briggs, 1989; Livneh & Livneh, 1989) beyond the five (Hogan, 1986) despite possessing a great deal of traits commonality (Barrick & Mount, 1991).

The study adopts the five dimensions recommended by Digman (1990): Extraversion, Emotional Stability, Agreeableness, Conscientiousness and Openness to Experience. The first dimension of the Big Five, Extraversion is commonly linked with the traits of expressive, sociable, assertive, talkative, active and outgoing. Emotional Stability makes up the second dimension with traits such as anxious, depressed, angry, embarrassed, emotional, worried and insecure. The third dimension is generally interpreted as Agreeableness. Under this dimension, traits include courteous, flexible, trusting, good-natured, cooperative, forgiving, gentle and tolerant. The fourth dimension Conscientiousness reflects dependability through being careful, meticulous, responsible, well-organised, hardworking, result-oriented and persevering. The fifth and the last dimension Openness to Experience corresponds to traits which include imaginative, cultured, curious, original, broad-minded, intelligent and sensitive (Hogan, 1986; Barrick & Mount, 1991; Burger, 2015).

According to Klein and Kozlowski (2000), majority of quantitative studies on an individual sharer's personality lack theoretical alternative explanations and causal inferences. Bearing this in mind, the FFM is adapted in order to gain deeper comprehension of individual sharer's personality in producing, distributing and applying their professional knowledge through the outlook of recipients in matching this resource to the formation of organizational competitive advantage (Bryant, 2005; Andersen, 2011).

Competitive Advantage

Michael Porter introduced the term *competitive advantage* which grows from the value a company created for its consumers (Porter, 1990; Dube & Renaghan, 1999) that exceeds the cost of creation (Passemard & Kleiner, 2000). Competitive advantage is defined as the organizational ability to create value and strategy different from the competitors (Porter, 1985; Barney, 1991). In majority of strategy literature, competitive advantage remains the most widely cited concept

but it can also be referred to as Competitive Edge, Distinguishing Features, Unique Selling Position, Core Competencies, Discriminators and Differentiators (Smith & Flanagan, 2006).

Since the last two decades, Fahey (1999) discovered that two strategic paradigms were prominent in the strategy landscape which competitive advantage originated. The first school of thought is a result of Industrial Organisation (IO) economics which concentrated on cost and differentiation. The core theory of IO is based on external opportunities, threats and industry competition (Grant, 2005). The second school of thought is known as the 'Austrian' school of strategy (originated in Vienna with the work of Carl Menger, Eugen von Bohm-Bawerk, Friedrich von Wieser and others) that emphasizes more recognition on effects of uncertainty, change, continuous innovation, disequilibrium and other unobservable factors (Jacobson, 1992). This second model is better known as Resource-Based Theory or RBV based on the early work of Schumpeter (1950). The RBV theory centres on organizational resources, driven by internal factors such as strengths and weaknesses based on the assumption of industry heterogeneity and limited resources transfer from one organization to another (Barney, 1991).

RBV-VRIO

Due to common resources similarities between organizations, the RBV theory asserts that a resource must fulfil four requirements to form a source of sustainable competitive advantage. It must be Valuable, Rare, Inimitable and exploited by the Organisation (VRIO) as shown in Table 1.

Table 1:
VRIO Model

Is a resource or capability?				
Valuable	Rare	Costly to Imitate	Exploited/ Organized	Competitive Advantage Outcome
No			No	Competitive Disadvantage
Yes	No			Competitive Parity
Yes	Yes	No		Temporary Competitive Advantage
Yes	Yes	Yes	Yes	Sustained Competitive Advantage

(Source: Barney & Hesterly, 2008)

There are four different approaches in the VRIO resource context interpretation: resource heterogeneity, organising, conceptual-level and dynamic capability (Newbert, 2007). Resource heterogeneity is based on quantifiable amount of resource or capability, organising specifies the exact resource as a basis for competitiveness, conceptual-level involves testing one of the four VRIO attributes while dynamic capability involves dual resource-capability interface (Barney, 1991).

An organization's resource is considered valuable when it responds to environmental opportunity. The resources should only be available or controlled by few competitors to ensure rarity. The potential of imitation should be minimal, resource should be ideally fully capitalized by the companies to create sustained competitive advantage (Barney & Hesterly, 2008). Depending on these four factor's impact towards the organization's resources or capabilities, the competitive outcome can fall under competitive disadvantage, competitive parity, temporary competitive advantage and sustained competitive advantage.

Even with these readily constructed outcomes, the exact measurement of VRIO outcome is still not readily available especially using qualitative techniques. Establishing objective bases for resource value in VRIO is difficult as the specific notion of value creation differs widely across organizations (Kraaijenbrink, Spender & Groen, 2010). This is further heightened by the need to take into account rapid changes or unpredictability which could result in shift towards operational or strategic decision (Lin, Tsai, Wu & Kiang, 2012). In consideration of the above limitations, this

study incorporates the use of a set of subjective-based indicators for VRIO competitive advantage outcome assessment from the following four questions:

1) Is the resource obtained via knowledge sharing valuable?
2) Is the resource rare to attain?
3) Is the resource not easily imitated?
4) Does the company fully exploit the resources?

Methodology

Research Design

Interpretive inquiry paradigm is followed in this study where substantive concepts and categories are expected to emerge through iterative analytical process which is useful in explaining unknown phenomenon. Case study design was adopted in view of gaining new perceptions of individual personality traits within the changing landscape of competitive advantage catalyst which could lead to the emergence of new themes and augmented unique experience (Marshall & Rossman, 2011; Yin, 2014). It largely followed Yin's (2014) guidelines based upon close linkage between the research questions and theoretical-oriented reasoning. The interpretation of the case study was guided by the FFM and VRIO framework employing multiple case-holistic case study type (Sobh & Perry, 2006; Yin, 2014). Data was analyzed using summative content analysis.

Unit of Analysis

The study was carried out at Malaysian listed organizations across diverse industries. Within these industries, recipients who were directly exposed to knowledge sharing were targeted. As the focal point of the study is about professional knowledge, sharers identified by the recipients are considered someone holding a Diploma and above as well as minimum five-year relevant work experience. Each recipient working in the same organization was reminded to identify one sharer they associated with in advance to avoid duplication. In view of the sensitivity of the subject matter, the names of the recipients, sharers and affiliations were withheld. This also ensured anonymity and confidentiality of the respondents were not compromized.

Sampling

Purposive sampling was employed based on the eligibility criteria as mentioned earlier. 18 listed organizations were approached for this research. A total of 23 recipients coming from nine different companies were involved. 18 classified their job level as executives while 2 were senior executives/supervisors and the rest were managers. As for the sharers they identified, the average age was 40 with male-female ratio of 15:8, whereby 19 were Bachelor degree and above qualified while the rest were Diploma holders. The recipients were mainly assigned to HR department with the rest working under Audit, Production, Operations, Sales, Purchasing and Finance. The sampling number was determined through the concept of data saturation where data collection stopped only upon reaching the point of redundancy (Marshall & Rosman, 2011). Thus, the percentage of response rate was considered not applicable as the generalizability of the findings was not the main concern (Creswell, 2012). The details of the participating listed organizations are shown in Table 2.

Table 2:
Number of participants and type of industry

Organization	Participants (Recipients)	Industry
A	2	Specialty Finance
B	3	Engineering/Construction
C	4	Chemical
D	1	Chemical
E	2	Properties/Construction
F	3	Utilities
G	3	Utilities
H	2	Oil Palm/Energy
I	3	Automotive

Data Collection

Prior to data collection through semi-structured interviews, a pre-test was conducted. Informed consent was obtained through a formal request in writing. Due to anticipated bureaucracy, two questions which contravened the confidentiality of the targeted organizations had to be revised. There were no significant changes made to the interview questions with the exception of minor refinements to one question from the pre-test feedback. Those who agreed to face-to-face interviews were given the questions five days in advance.

The interview questions are divided into two main parts, the first part relates to traits which are deemed to reflect the sharer's most dominant personality. Recipients were questioned on their stance of sharers' personalities when sharing professional knowledge through the five dimensions of FFM. The corresponding personality traits based on the model are then further probed to ensure the most accurate description. The second part contains questions based on the VRIO framework in gaining further understanding of how knowledge sharing resource possibly leads to competitive advantage. Next, the competitive advantage outcome is determined according to the set of four indicators developed earlier.

Data Analysis

Content analysis is defined by Cole (1988) as a cluster of analytic approaches covering written, verbal or visual communication messages. The aim is to gain condensed description of phenomena to provide new insights. Shieh & Shannon (2005) recommended three approaches to content analysis: conventional, directed or summative which differ in coding origins. As the study explores the contextual usage of FFM associated traits and VRIO competitive advantage outcome, summative content analysis is chosen.

Summative content analysis is nonreactive way to study the phenomena of interest (Babbie, 1992; Morgan 1993) providing insights on how words are actually used (Hsieh & Shannon, 2005). Manifest level of abstraction is used in the analysis which involved counting the appearance or frequency of specific words in textual materials (Kondracki, Wellman & Amundson, 2002). The analysis is divided into three steps: immersion, coding and conceptual mapping construction (Dey, 1993; Miles & Huberman, 1994; Potter & Levine-Donnerstein, 1999).

During immersion, the data is read several times to gain familiarity and senses (Krippendorff, 1980; Weber, 1990).Coding is then developed based on the predetermined FFM dimensions and VRIO framework criteria with the assistance of NVivo software. Once the codes have been developed, the data were reviewed for key concepts before being assigned a theme to fit the newly created conceptual model (Downe-Wamboldt, 1992; Sandelowski, 1998).

Trustworthiness

Trustworthiness in this study follows the qualitative criteria recommended by Lincoln and Guba (1985). Credibility is achieved in this study through member checks where recipients were

given the copies of their transcripts to verify the accuracy of the information provided. Three transcripts were subsequently modified from the resulting feedback. Transferability is enhanced through background data provision and detailed description of study context. Coding and conceptual mapping diagram procedures were clearly explained as well as recognition of study's shortcomings in increasing confirmability.

ANALYSIS & FINDINGS

Content Analysis

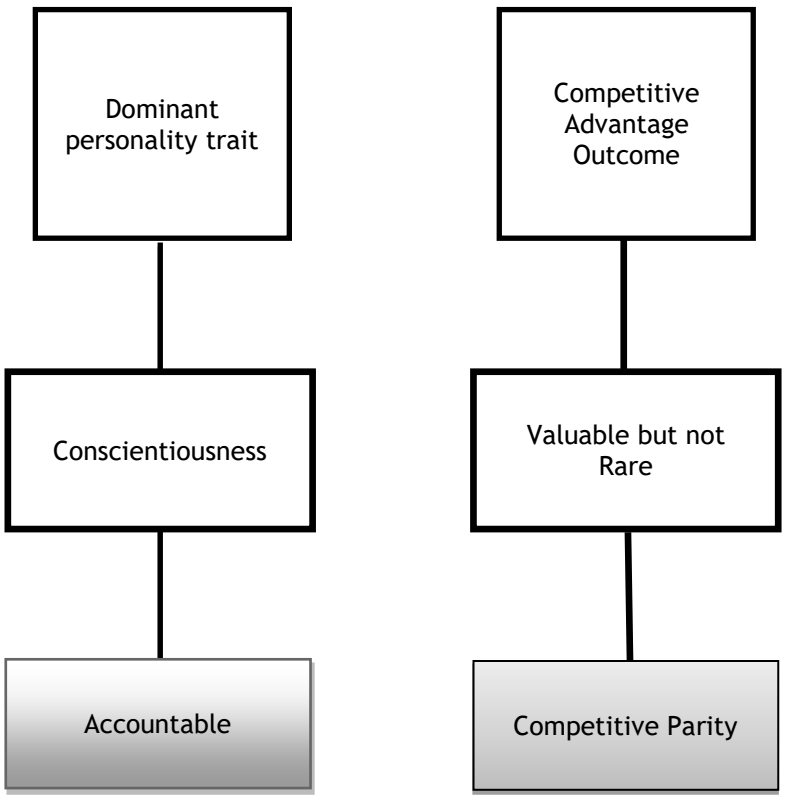
The responses obtained were first transcribed and then orientated with the depth and relevancy of the information. Note taking in the form of short phrases was done before the data were identified for patterns of similarities and differences. Thereafter a code is assigned that best represent the sharers' meaning. For example, a 'good-natured' description of personality when sharing knowledge is coded under the corresponding dimension of Agreeableness. During the course of analysis, none ascertained the sharers to have traits under Emotional Stability which was then removed during coding. In VRIO framework, all the potential outcomes of competitive advantage were coded as per relevance. From the coding process, a total of eight codes fitted within the theory which is illustrated in Table 3.

Table 3:
Code generation

Theory	Code Label
FFM	Extraversion
	Agreeableness
	Conscientiousness
	Openness to Experience
VRIO	Competitive Disadvantage
	Competitive Parity
	Temporary Competitive Advantage
	Sustained Competitive Advantage

Through a manifest interpretation, the entire data were reviewed to check for coherence and consistency. Once all the contours of the data were captured, searches for the highest frequency of occurrences revealed being *responsible* is the most frequently mentioned trait in sharers while *competitive parity* has the highest count among the four criteria of VRIO framework. Subsequently, a theme is then assigned to all the codes to create a conceptual mapping as shown in Figure 1.

Figure 1:
Conceptual mapping of content analysis



Most dominant personality trait

Of the five FFM dimensions, 18 or almost 70% of the recipients apprised the sharers as having different traits under Conscientiousness. Under the dimension of Conscientiousness, majority of the sharers were described as committed with a clear sense of responsibility:

> *"He (sharer) wanted the younger ones (subordinates) to be exposed to this (knowledge). Training is one part of his KPI (key performance indicators) so he holds the responsibility."*
>
> *[Production Executive, Company D]*

> *"She (sharer) thinks that our company can't just rely on the foreigners forever on their expertise…since she has the required academic qualification and specific know-how, she is not someone who is parsimonious. She exerts her authority."*
>
> *[Training and Development Executive, Company H]*

Three recipients deemed the sharers as having personality traits under Agreeableness with traits such as courtesy and good natured while the remaining distinguished the sharers' personality traits as proactive under Extraversion and cultured under Openness to Experience respectively.

Competitive advantage assessment

Fourteen (14) or about 60% of the recipients believed knowledge sharing is still a valuable resource even if the contents are not rare, costly to imitate and unable to be exploited:

> Knowledge is a prized resource that could contribute to competitive advantage (valuable). We do not have many qualified people with advanced knowledge in this field (not rare).Our technical expertise has not reached the level of developed countries….because it is quite expensive and takes years of training to transfer that kind of expertise to Malaysia [costly to imitate]. We still have a lot to go in order to close this gap (unable to exploit).
>
> [Field Supervisor, Company F]

Other than that, five recipients regarded knowledge sharing as highly specialized-thus making it rare and valuable which could lead to temporary competitive advantage. Three did not see knowledge sharing as having satisfied the four criteria of VRIO which represent competitive disadvantage outcome. One supposed that knowledge sharing as a resource had fulfilled the four VRIO criteria which result in sustained competitive advantage.

Discussion and Conclusion

Theoretical Implications

The findings of this study contain similarities with Zhang and Jiang (2015) who described sharers as humble as well as willing to learn and listen. Sharers were depicted from the recipient perspective as not too bothered about self-ego, instead trusting the benefits of channelling the knowledge they possess to younger subordinates. One of the responses given fit the findings of Han and Anantatmula (2007) on reciprocity to repay the good faith of a colleague who had assisted previously. Majority of the sharers with higher educational qualifications also showed higher tendency to share knowledge as stipulated by Constant et al (1994).Conversely, a sharer's confidence acted as an extra inducement to increase the willingness to share as mentioned by some authors (Wasko &Faraj, 2005; Cabrera et al, 2006; Lin, 2007b,c).For example, there were recipients who sensed sharers' feeling of self-reassurance as a trait arising from their gratitude of credence acknowledged by their co-workers.

A notable dissimilarity occurred in the form of the sharers' most dominant FFM dimension of Conscientiousness, as opposed to Openness to Experience in Cabrera et al (2006).This could be due to the Cabrera et al (2006) context which is based on sharers' descriptive self-report on their apparent personality traits as opposed to the findings of this study which is based on recipient perspective. Apart from that, the findings in this study deviate from Jarvenpaa and Staples (2000) who postulated that a person who are more susceptible to sharing knowledge are more comfortable with their co-workers and have good computer skills. There are two possible reasons which contributed to this disparity. Firstly, the huge circles of direct and indirect co-workers may contribute to more restrictive choice of who to share. Secondly, less than half of the recipients reported that the sharers rarely utilized the centralized knowledge management system in their existing workplace for various reasons.

Even though Hayton (2005) discovered that there was significant correlation between knowledgeable employees and organizational performance in public-listed high technology ventures in United States, the findings of this study disclosed that over half of listed organizations in Malaysia which participated are merely on par in terms of organizing resource around knowledge sharing. A possible explanation could be due to the shortages of highly skilled employees in Malaysia especially in engineering or technological-related fields (Beechler & Woodward, 2009). This could have resulted in the inability to capitalize on specific knowledge of high value which is hard to imitate by competitors. In a study of small-medium enterprises in Sweden, Wiklund and Shepherd (2003) concluded that knowledge-based resource and competitive advantage are positively linked. Apart from the opposite spectrum of this study, another potential reason of the incongruity is most likely attributed to the bureaucracy, workflow or hierarchical structures

challenges in most large organizations (Daft, 1995) which affect knowledge sharing planning, implementation or monitoring. As a result, this could impact the pursuit of advancing this resource to a higher level.

Managerial Implications

It would beneficial for listed organizations, especially in near-developed countries to continue identifying sharers with humility and good listening skills to optimise knowledge sharing practices. Highly specialized employees in various disciplines should be given encouragement or reward to share their knowledge in parallel with continuous acceptance by recipients as a spur for competitive advantage (Bartol & Srivastava, 2002; Wang & Noe, 2010). Organizations may implement on-the-job training by reducing the sessions into micro-groups across different departments or regions to further disseminate the knowledge effectively. Not only that, it is critical for stakeholders to recognize knowledge sharing as an investment and useful resource towards achieving competitive advantage. It would be conducive for organizations to consider aligning closed-network sharing with open-network sharing in order for the knowledge to reach a wider scope of intended recipients.

Over and above, organizations with strong financial resources need to continuously address the issue of employee shortages in certain highly skilled positions through various recruitment initiatives (Pulakos, Dorsey & Borman, 2003; Reige, 2005). One example is offering bonded scholarships in niche STEM (Science, Technology, Engineering and Mathematics) oriented courses as an avenue to develop knowledge value base. Investing in knowledge upgrade of existing employees with good potentials is also another measure worth considering in assisting the transfer of knowledge gained externally into existing workplace. Despite not being easy to implement, hierarchal barriers which may impede the promotion of knowledge sharing should be reduced or ideally removed.

Limitations and Recommendations

The study is limited in terms of the departmental composition: access to the targeted organizations was mostly restricted to their Human Resource or Training department which reduced the participation of other departments. Some recipients were not so used to subjective measurement which was applied on questions related to sharers' personality traits and VRIO competitive advantage outcome as compared to common scale rating techniques. The viewpoint of recipients towards sharers personality traits could potentially unveil a different outcome should more stringent eligibility criteria be imposed, for instance opportunity to share the review with sharers on an open-basis or more scrutiny on the existing level of work relationships between recipients and sharers to eliminate potential bias. The actual value and benefits of knowledge gained by the recipients could also impact their discernment on sharers personality traits and competitive advantage outcome.

Future studies on knowledge sharing personality traits could be researched from the perspective of different generation cohort via different personality models spread across a diverse range of organizational types. The personality traits of sharers can be researched from their own cognizance and compared with external views of recipients who benefited from their knowledge sharing. Time horizon of responses to queries, facets of knowledge sharing namely interest in message content, frequency or quality of knowledge sharing are other areas worthy of examination (Wang & Noe, 2010). The adoption of external or convergent-oriented strategic framework could possibly offer new insights on the competitive advantage outcome using knowledge as a resource catalyst.

References

Alavi, M. & Leidner, D.E. (1999), Knowledge Management Systems: Issues, Challenges, and Benefits. *Communications of Association of Information Systems, 1*(7), 1-37.

Andersen, J. (2011). Strategic resources and firm performance. *Management Decision, 49* (1), 87-98.

Argote, L. & Ingram, P. (2000). Knowledge transfer: a basis for competitive advantage in firms. *Organisational Behaviour and Human Decision Processes, 82* (1), 150-169.

Babbie, E. (1992). *The practice of social research*. New York: MacMillan.

Bakker, M. Leenders, R. T. A. J., Gabbay, S. M., Kratzer, J., & Van Engelen, J. M. L. (2006). Is trust really social capital? Knowledge sharing in product development projects. *The Learning Organization, 13* (6), 594–605.

Barney, J. B. (1991), Firm resources and sustainable competitive advantage, *Journal of Management*, 17, pp. 99-120.

Barney, J.B. (1997). *Gaining and Sustaining Competitive Advantage*. Boston: MA: Addision-Wesley.

Barney, J.B. & W.S. Hesterly (2008).*Strategic management and competitive advantage: concepts and cases.*(2nd edn).Englewood Cliffs, NJ: Pearson.

Barrick, M. & Mount, M. (1991). The Big Five Personality Dimensions and Job Performance: A Meta-Analysis. *Personnel Psychology, 44,* 1-26.

Bartol, K. M., and Srivastava, A. (2002), Encouraging Knowledge Sharing: The Role of Organizational Reward Systems. *Journal of Leadership & Organizational Studies, 9* (1), 64-76.

Beechler, S. & Woodward, I.C. (2009).The global 'war for talent'. *Journal of International Management, 15,* 273-285.

Berman S.L., Down, J. & Hill CWL. 2002. Tacit knowledge as a source of competitive advantage in the National Basketball Association. *Academy of Management Journal,*45 (1), 13–31.

Bock, G. W. & Kim, Y. G. (2002).Breaking the myths of rewards: An exploratory study of attitudes about knowledge sharing. *Information Resources Management Journal, 15*(2), 14–21.

Bordia, P., Irmer, B. E. & Abusah, D. (2006). Differences in sharing knowledge interpersonally and via databases: The role of evaluation apprehension and perceived benefits. *European Journal of Work and Organizational Psychology, 15*(3), 262–280.

Brown, J. S. & Duguid, P. (1998).Organizing knowledge. *California Management Review*, 40(3), 90–111.

Bryant, S. E. (2005). The impact of peer mentoring on organizational knowledge creation and sharing: An empirical study in a software firm. *Group & Organization Management, 30,* 319–338.

Burger, J. M. (2015). *Personality* (9th edn.). Stamford, CT: Cengage Learning.

Cabrera, A., Collins, W. C. & Salgado, J. F. (2006).Determinants of individual engagement in knowledge sharing. *International Journal of Human Resource Management, 17*(2), 245–264.

Cheng, Y.M.., Ho, S.Y.J. & Lau, P.M. (2008). Knowledge sharing in academic institutions: a study of Multimedia University Malaysia. *Journal of Knowledge Management, 7* (3), 313-324.

Christensen, H.P. (2007). Knowledge sharing: moving away from the obsession with best practices. *Journal of Knowledge Management, 11*(1), 36-47.

Cole, F.L. (1988). Content analysis: process and application. *Clinical Nurse Specialist, 2* (1), 53-57.

Conley, J.J. (1985). Longitudinal stability of personality traits: A multi-trait multi-method multi-occasion analysis. *Journal* of *Personality*&*Social Psychology,* 49, 1266-1282.

Constant, D., Kiesler, S. & Sproull, L. (1994).What'smine is ours, or is it? A study of attitudes about information sharing. *Information Systems Research, 5*(4), 400–421.

Constant, D., Sproull, L. &Kiesler, S. (1996). The kindness of strangers: The usefulness of electronic weak ties for technical advice. *Organization Science, 7*(2), 119–135.

Creswell, J.W. (2012). *Educational Research: Planning, Conducting and Evaluating Quantitative and Qualitative Research* (4thedn.). Boston: Pearson.

Cummings, J. N. (2004). Work groups, structural diversity, and knowledge sharing in a global organization. *Management Science, 50* (3), 352–364.

Daft, R.L. (1995). *Organisation Theory and Design*. St Paul, MN: West Pub.

Dey, I. (1993).*Qualitative Data Analysis: A User-Friendly Guide for Social Scientists*. New York: Routledge.

Digman JM. (1990). Personality structure: Emergence of the five-factor model. *Annual Review* of *Psychology,* 41,417-440.

Downe-Wamboldt, B. (1992). Content analysis: method, application and issues. *Health Care for Women International, 13 (*3), 313-321.

Dube, K. & Renaghan, L.M. (1999). Sustaining competitive advantage. *Cornell Hotel and Restaurant Administration Quarterly, 40* (6), 27-33.

Fahey, L. (1999). *Competitors: Outwitting, Outmanoeuvring and Outperforming*. New York: John Wiley & Sons.

Fahy, J. (2001). *The Role of Resources in Global Competition*. London: Routledge.

Foss, N. J. & Pedersen, T. (2002).Transferring knowledge in MNCs: The role of sources of subsidiary knowledge and organizational context. *Journal of International Management, 8* (1), 49–67.

Friendman, S.H. & Schustack, W.M. (2012*). Personality: Classic Theories & Modern Research (5thedn.)*. Upper Saddle River, NJ: Pearson.

Goldberg L.R. (1981). Language and individual differences: The search for universals in personality lexicons. In Wheeler L. (Ed.), Review of Personality and Social Psychology (Vol. 2, pp. 141-166).Beverly Hills, CA: Sage Publications.

Grant, R.M. (2005). *Contemporary Strategy Analysis*. (5thedn). Malden, MA: Blackwell.

Hahn, J. & Subrami, M.R. (2000), *A Framework of Knowledge Management Systems: Issues and Challenges for Theory and Practice*. Proceedings of the 21st International Conference on Information Systems, Australia, 302-312.

Han, B. & Anantatmula, S.V. (2007). Knowledge sharing in large IT organizations: a case study. *VINE, 37* (4), 421-439.

Hayton, J.C. 2005. Competing in the new economy: the effect of intellectual capital on corporate entrepreneurship in high-technology new ventures. *R&D Management 35* (2),137–155.

Hinds, P. J., Patterson, M. & Pfeffer, J. (2001).Bothered by abstraction: The effect of expertise on knowledge transfer and subsequent novice performance. *Journal of Applied Psychology, 86,* 1232–1243.

Hogan R. (1986). *Manual for the Hogan Personality Inventory*. Minneapolis: National Computer Systems.

Hsieh, H.F. & Shannon, E.S. (2005). Three approaches to content analysis. *Qualitative Health Research, 15* (9), 1277-1288.

Jacobson, R. (1992). The Austrian school of strategy. *Academy of Management Review, 17* (4), 782-807.

Jarvenpaa, S. L. & Staples, D. S. (2000). The use of collaborative electronic media for information sharing: An exploratory study of determinants. *The Journal of Strategic Information Systems, 9*(2–3), 129–154.

Jones, M. C. (2005). Tacit knowledge sharing during ERP implementation: A multi-site case study. *Information Resources Management Journal, 18* (2), 1–23.

Judge, T. A. & Bono, J. E. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology, 86* (1), 80–92.

Kearns, G. S. & Lederer, A. L. (2003), A Resource-Based View of Strategic IT Alignment: How Knowledge Sharing Creates Competitive Advantage. *Decision Sciences, 34*, 1–29.

Klein, K.J. & Kozlowski, S.W.J. (2000). *Multilevel theory, research and methods in organisation: Foundations, extensions and new directions.* San Francisco: Jossey-Bass.

Kondracki, N.L., Wellman, N.S. & Amundson, D.R. (2002). Content analysis: review of methods and their applications in nutrition education. *Journal of Nutrition Education & Behaviour, 34*, 4, 224-230.

Kraaijenbrink, J., Spender, J.C. & Groen, A.J. (2010). The resource-based view: a review and assessment of its critiques. *Journal of Management, 36* (1), 349-372.

Krippendorft, K. (1980). Content Analysis: *An Introduction to its Methodology*. Newbury Park, CA: Sage.

Larsen, R.J. & Buss, D. M. (2013). *Personality Psychology: Domains of Knowledge About Human Nature* (5th ed.). New York: McGraw-Hill.

Lichtenstein, S. & Hunter, A. (2008).Toward a receiver-based theory of knowledge sharing.*Current Issues in Knowledge Management,* 7, 86-104.

Liebowitz, J. (2003). A knowledge management strategy for the Jason organization: A case study. *Journal of Computer Information Systems, 44* (2), 1–5.

Lin, C. P. (2007a). To share or not to share: Modeling knowledge sharing using exchange ideology as a moderator. *Personnel Review, 36* (3), 457–475.

Lin, H. F. (2007b). Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions. *Journal of Information Science, 33* (2), 135–149.

Lin, H. F. (2007c). Knowledge sharing and firm innovation capability: An empirical study. *International Journal of Manpower, 28*(3/4), 315–332.

Lin, W. (2008). The Effect of Knowledge Sharing Model. *Expert Systems with Applications, 34,* 1508-1521.

Lin, C., Tsai, H.L., Wu, Y.J. & Kiang, M. (2012). A fuzzy quantitative VRIO-based framework for evaluating organizational activities. *Management Decision, 50* (8), 1396 – 1411.

Lincoln, Y.S., & Guba, E.A. (1985).*Naturalistic Inquiry*. Beverly Hills, CA: Sage.

Livneh, H. & Livneh C. (1989). The five-factor model of personality: Is evidence for its cross-media premature? *Personality and Individual Differences,* 10,75-80.

Marouf, L. (2007). Social networks and knowledge sharing in organizations: a case study. *Journal of Knowledge Management*, *11* (6), 110-125.

Marshall, C. & &Rossman, G.B. (2011).*Designing Qualitative Research* (2nd edn.). Thousand Oaks, CA: Sage.

Matzler,K. & Mueller, J. (2011). Antecedents of knowledge sharing– Examining the influence of learning and performance orientation. *Journal of Economic Psychology*, 32 (3), 317–329.

McCrae R.R. & Costa P.T Jr. (1987).Validation of the five-factor model of personality across instruments and observers. *Journal* of *Personality* & *Social Psychology,* 52,81-90.

McEvily S.K. & Chakravarthy, B. (2002). The persistence of knowledge-based advantage: an empirical test for product performance and technological knowledge. *Strategic Management Journal* 23 (4), 285–305.

Memon, M.A. Nor, K. M. & Salleh, R. (2016). Personality Traits Influencing Knowledge Sharing in Student–Supervisor Relationship: A Structural Equation Modelling Analysis. *Journal of Information & Knowledge Management*, 15(2), 1650015.

Miles, M.B. & Huberman, A.M. (1994).*Qualitative Data Analysis: An Expanded Sourcebook*. Newbury Park, CA: Sage.

Morgan, D.L. (1993). Qualitative content analysis: A guide to paths not taken. *Qualitative Health Research, 3*, 112-121.

Müller, R.M., Spiliopoulou, M. & Lenz, Hans-J. (2005), The Influence of Incentives and Culture on Knowledge Sharing. Proceedings of the 38th Hawaii International Conference on System Sciences - 2005.

Newbert, S. L. (2007), Empirical research on the resource-based view of the firm: an assessment and suggestions for future research. *Strategic Management Journal*, 28, 121-146.

Nonaka, I. & Takeuchi, H. (1995).*The Knowledge-Creating Company*. New York: Oxford University Press.

Norman W. (1963).Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nomination personality ratings. *Journal of Abnormal* & *Social Psychology,* 66,576-583.

Passemard, D., & Kleiner, B.H. (2000).Competitive advantage in global industries. *Management Research News, 23* (7/8), 111-117.

Porter, M.E. (1985*). Competitive advantage: Creating and sustaining superior performance*. New York: The Free Press.

Porter, M.E. (1990). *The Competitive Advantage of Nations*. London: MacMillan.

Potter, W.J. & Levine-Donnerstein, D. (1999).Rethinking validity and reliability in content analysis. *Journal of Applied Communication Research, 27*, 258-284.

Priem, R.L., & Butler, J.E. (2001). Is the resource-based 'view' a useful perspective for strategic management research?, *Academy of Management Review, 26* (1), 22-40.

Pulakos, E. D., Dorsey, D. W. & Borman, W. C. (2003). Hiring for knowledge-based competition. In S. E. Jackson, M. A. Hitt & A.S. Denisi (Eds.), Managing knowledge for sustained competitive advantage: Designing strategies for effective human resource management (155−176). San Francisco: Jossey-Bass.

Reige, A. (2005), Three-dozen knowledge-sharing barriers managers must consider. *Journal of Knowledge Management, 9* (3), 18-35.

Ritala, P., Olander,H., Michailova, S. & Husted, K. (2015). Knowledge sharing, knowledge leaking and relative innovation performance: An empirical study. *Technovation* 35, 22–31.

Sandhawalia, B.S., & Dalcher,D. (2011). Developing knowledge management capabilities: a structured approach. *Journal of Knowledge Management, 15* (2), 313-328.

Salisbury, M. W. (2003), Putting Theory Into Practice to Build Knowledge Management Systems. *Journal of Knowledge Management, 7* (2), 128-141.

Sandelowski, M. (1998). Focus on qualitative methods. The call to experts in qualitative research. *Research in Nursing & Health, 21* (5), 467-471.

Sawng, Y. W., Kim, S. H. & Han, H.S. (2006). R&D group characteristics and knowledge management activities: A comparison between ventures and large firms. *International Journal of Technology Management, 35*(1–4), 241−261.

Schultz, D. P. & Schultz, S. E. (2012). *Theories of Personality* (10th ed.). Belmont, CA: Wadsworth/Cengage.

Schumpeter, J.A. (1950). *Capitalism, Socialism and Democracy*. New York: Harpers.

Smith, J.L. & Flanagan, W (2006).*Creating Competitive Advantage: Give Your Customers a Reason to Choose You Over Your Competitors*. New York, NY: Doubleday.

Sobh, R. & Perry, C. (2006).Research design and data analysis in realism research. *European Journal of Marketing. 40* (11/12), 1194-1209.

Sondergaard, S., Kerr, M. & Clegg, C. (2007), Sharing Knowledge: Contextualising Socio-technical Thinking and Practice. *The Learning Organization, 14*(5), 423-435.

Spanos, E.Y. & Lioukas, S. (2001). An examination into the causal logic of rent generation: contrasting Porter's competitive strategy framework and the resource-based perspective. *Strategic Management Journal, 22* (10), 907-934.

Tagliaventi, M. R., & Mattarelli, E. (2006). The role of networks of practice, value sharing, and operational proximity in knowledge flows between professional groups. *Human Relations, 59* (3), 291–319.

Van den Hooff, B. & De Ridder, J. A. (2004). Knowledge Sharing in Context: The Influence of Organizational Commitment, Communication Climate and CMC Use on Knowledge Sharing. *Journal of Knowledge Management, 8*(6), 117-130.

Wang, S. & Noe, A.R. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review, 20*, 115-131.

Wasko, M. M., & Faraj, S. (2005). It is what one does: Why people participate and help others in electronic communities of practice. *The Journal of Strategic Information Systems, 9* (2–3), 155–173.

Weber, R.P. (1990*). Basic Content Analysis*. Sage, Newbury Park: CA.

Wiklund, J. & Shepherd D. 2003. Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management* Journal 24 (13), 1307–1314.

Yang, J. (2007). The Impact of Knowledge Sharing on Organizational Learning and Effectiveness. *Journal of Knowledge Management, 11*(2), 83-90.

Yang, C. & Chen, L.C. (2007). Can organizational knowledge capabilities affect knowledge sharing behaviour? *Journal of Information Science, 33*(1), 95–109.

Yin, R.K. (2014).*Case Study Research: Design and Methods.* (5thedn.). Thousand Oaks, CA: Sage.

Zhang, X. & Jiang, J.Y. (2015). With whom shall I share my knowledge? A recipient perspective of knowledge sharing. *Journal of Knowledge Management, 19* (2), 277-295.