

## A Qualitative Analysis of the Perceptions of Knowledge Management Practices in a Public Utility Organisation

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### Abstract

This study aims to determine what procurement professionals think are important and inspiring parts of an organisation's Knowledge Management (KM) plan. This study completed the indicated goal with one case study. Semi-structured interviews were used to collect data and analyse it using content analysis. The primary motivations for implementing Knowledge Management were managerial concern and dedication to a knowledgeable staff. This study found that respondents had average management expertise. The study also found that senior management should commit to comprehensive knowledge management methods and believed to commit to them to support worker empowerment. More resources are needed to train and teach Knowledge Management strategies to enhance commitment.

Keywords: knowledge management; supply chain; supply chain management; public utility organization

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### 1.0 Introduction

A knowledge management system can find, transmit, socialise, measure, and expand internal information to meet strategic goals (Hislop et al., 2018). Knowledge management systems allow businesses to respond swiftly to market changes and requests without haggling with third parties for correct data. In order to avoid strategic value and third-party knowledge leakage to rivals, sensitive information may need to be kept within the organisation. A knowledge management system helps organisations use strategic information to compete in the global knowledge economy.

Knowledge management is crucial to an organisation's success. A knowledge management system will increase today's business organisation. It may improve corporate structure, including talent acquisition, HR management, procurement, and supply chain management. The supply chain is the network of firms, people, technology, activities, information, and resources that carry a product or service from manufacturing to usage (Gokhan & Needy, 2010). Successful supply chain results, including efficient and effective product transportation, need seamless coordination of information and interactions across all participants. Knowledge management in the supply chain sector is becoming an integral part of sustainability plans at all levels of government and business, locally and globally. As socioeconomic development and the market environment have altered, organisations' competitive tools have advanced from quality,

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service, brand, and service competition. Therefore, Information Management must be applied to guarantee that business staff can develop superior products and services.

Understanding why firms pursue Knowledge Management goals and strategies is crucial (Donate & de Pablo, 2015), and this statement applies especially to Malaysian organisations. Several academic studies argue that businesses should employ knowledge management. However, most of these ideas could be proven. Motivation is a complicated phenomenon that "implies that it will behave differently in different settings, and how it behaves may vary according to the nature of the issues for which it is alleged to be the answer" (Suchman, 1995). The researcher worried about the poorly advanced Knowledge Management activities in the supply chain and procurement strategies and operations. Given the many performance objectives and benefits of applying Knowledge Management to construct a business organisation plan, the company must begin establishing its knowledge management system strategies.

Significant challenges to knowledge management implementation in many sectors have just been addressed and researched. Previous research used only large corporations or SMEs. Knowledge management must be well-designed to meet businesses' general needs (Norzanah et al., 2019). Some firms need to realise the advantages of knowledge management and would rather stay the same. Management and the board of directors consider the pros and cons of Knowledge Management in the supply chain. Due to the many benefits of knowledge management, it is crucial to study how firms like Tenaga Nasional Berhad use it. Knowledge management in supply chain management is needed more. The researcher thinks that TNB may need to catch up to the trend towards sustainable business, which might cost TNB more money in the long term.

This survey seeks procurement practitioners' views on critical motivators for the organisation's Knowledge Management (KM) programme. To guide the research, objectives were created. The study examines TNB's procurement practitioners' knowledge management awareness and the reasons behind its deployment.

## 2.0 Literature Review

### 2.1 Supply Chain Management

Supply chain management involves all materials and procedures from product conception to completion. Tenaga Nasional Berhad's (TNB) supply chain method is typical of the power industry: turning a major fuel source into electricity and distributing it to consumers. Fuel for the home power station is essential for starting the stages. Lee and Billington (1992) defined procurement as buying things and services at the right price, quality, and timing to fulfil buyer needs.

To add value to the nation, TNB's Procurement Policy and Procedures shall give competitive local businesses that comply with applicable legislation and have the necessary competencies, credibility, and integrity a full, impartial, and reasonable opportunity to supply on fair terms and conditions that protect both buyer and seller. Additionally, TNB Fuel Services Sdn Bhd (TNBF) procures and supplies primary fuel sources converted to electrical energy via various power plant types, primarily coal. A Malaysian cabinet resolution named TNBF the nominated coal supplier for all coal plants on 27 May 1998. It is a wholly owned subsidiary of TNB, having RM10 million in permitted capital and RM2 million in paid-up capital.

As a wholly owned subsidiary of TNB, TNBF buys and delivers fuel and coal for power generation to the Tenaga Nasional Berhad group and independent power producers. Indonesia, Australia, South Africa, and Russia supply TNBF with coal. TNBF's long-term coal supply aim is to offer the lowest delivered-cost coal to its coal-fired power plants without compromising supply dependability, coal quality, environmental standards, or market risk.

### 2.2 Knowledge Management

According to King (2009), knowledge is sometimes called "justified personal belief." Knowledge is a fluid mix of framed experiences, values, contextual information, and expert insights that help evaluate and assimilate new material (Davenport & Prusak, 1998). Knowledge Management (KM) is a hot topic in business. KM is a systematic method for obtaining, organising, and sharing employees' knowledge to improve productivity and effectiveness (Alavi & Leidner, 1999). Kianto et al. (2016) defined knowledge management as collecting and shaping collective knowledge to provide an organisation with a competitive edge in its operational market.

Commercially, KM is a "collaborative and integrated approach to creating, capturing, organising, accessing, and using an enterprise's intellectual assets" (Chung et al., 2016). Large corporations have extensively researched and used knowledge management approaches in today's business environment. Canon, Honda, Toyota, Price Waterhouse Coopers, TX Instruments, and HP have long realised the importance of knowledge management (Nunes et al., 2006). Large companies understand their business processes, respond faster to customers, can create new markets, produce new products, and handle evolving technology (Nonaka & Takeuchi, 1995), and this shows that knowledge management improves performance and production. Given the importance of knowledge management, a primary research question was:

RQ1 Which TNB procurement professionals use Knowledge Management (KM)?

### 2.3 Organisational Knowledge Sharing Factors

The attitudes, concepts, and institutions that support or hinder knowledge development and sharing in organisations are called "organisational culture" or "corporate culture" (Newell et al., 2009). Each company has a visible and invisible culture (Al-Alawi et al.,

2007). An institution's principles, mission, and philosophy evolve its visual culture. The invisible factor affects employees' cultural values and behaviours.

Firms should incentivise employees to share and grow knowledge (Roda et al., 2003). Research shows corporate culture is crucial to IT adoption and learning organisations (Jackson, 2011). Organisational culture and interpersonal interactions can also motivate employees to share information (Hung et al., 2011). New systems may need management and behavioural change to integrate information-sharing strategies (Roda et al., 2003). Research has shown that a lack of strategy, ambiguous company objectives, and perceived user advantages hinder knowledge sharing (Mukamala & Razmerita, 2014).

Informal workplaces have direct, engaging communication. Professionally, managers want consensus, cohesion, and quality. The "who do you think you are?" mindset, or Law of Jante (Sandemose, 1933), denigrates achievements and accomplishments. Not distinguishing oneself from coworkers and the group is unacceptable. A second research topic was presented because Malaysia is a developing country with a knowledge economy, making this study relevant:

RQ2: What motivates TNB procurement practitioners to embrace Knowledge Management (KM)?

#### 2.4 Framework Concept

The SECI model by Nonaka and Takeuchi (1995) was used to conceptualise knowledge management in the supply chain in this study. Nonaka (1994) defines knowledge generation as systematic, dynamic, and continuing. The generation-codification-transfer-application process (Davenport & Prusak, 1998; Ford, 2004), the four knowledge management process conceptualisations (Alavi & Leidner, 2001), and the accumulation of dynamic competence development (Zollo & Winter, 2002) differ from the spiral SECI root metaphor. These models depict information evolving with the same quality but a different "stage of life" and organisational utility. This progression is compatible with the commonly recognised concept of knowledge management as obtaining, storing, and applying knowledge (Chen & Chen, 2006). SECI focuses on complete methods that translate knowledge into new information.

This paradigm emphasises knowledge generation rather than organisational stage functions. Polanyi compared implicit and explicit knowledge to an iceberg in 1967. The tip of the iceberg we can define and express using formal language is explicit knowledge. Newsletters, conferences, refresher courses, and knowledge products, including websites, databases, manuals, and patents, represent explicit organisational knowledge. Tacit knowledge from professional experience builds explicit knowledge. This knowledge is situational, routine, and analogous (Warnier, 1999). We need knowledge to drive or type. Nonaka and Takeuchi (1995) say tacit and explicit knowledge is converted and enhanced through interactions between people, groups, and organisation. Epistemological and ontological knowledge expands numerically and qualitatively. A company that wants to expand and convert its expertise should allow all conversion options to keep the cycle going.

The SECI model has four knowledge conversion modes: Socialisation–Externalisation–Combination–Internalisation (Nonaka, 1994). The Socialisation approach exchanges tacit information through daily social contact. Tacit knowledge is hard to describe and sometimes time- and space-specific; therefore, it can be obtainable by direct professional experience. Apprentices often learn craft skills via hands-on work and personal interactions (Nonaka & Toyama, 2003). This first mode defines "how to do things" patterns, beliefs, object representations, attitudes, and professional practise through interpersonal tacit knowledge exchange.

Externalisation clarifies tacit information into ideas, images, and documents. Dialogue, comparisons, and team fights encode tacit knowledge. Knowledge must be dis-embedded through reflection-on-action to create subject-object space (Gherardi, 2000). Organisations' memory sustains particular behaviours, mental maps, norms, and ideals across time, even as members come and go and leadership changes (Hedberg, 1981, p. 6). This formalisation produces future and coworker-accessible knowledge. It is "synthesising," Selection creates meta-knowledge connected to the organisation's knowledge system, enabling new models or mental maps (Nonaka et al., 2006).

The combination mode generates more sophisticated and systematic explicit knowledge by combining intra- or inter-organisational explicit information. Computerised communication networks and massive databases may transform knowledge. Groupware, online databases, intranets, and virtual communities have been studied for information exchange (Koh & Kim, 2004). These information-sharing processes provide models, best practices, handbooks, and information systems (Van den Hooff & Van Weenen, 2004).

The SECI spiral finishes with internalisation when people acquire explicit knowledge to improve their tacit knowledge base. Formal knowledge is combined with personal experiences to be transmitted and implemented in practice, producing updated routines. Training classes may help trainees take on new roles by reading and commenting on job/company papers. Learning-by-doing, simulations, and trial-and-error are additional options. Training activities help people integrate new knowledge into their mental models and professional expertise, creating tacit knowledge. Recirculating this new internalised information starts further conversions. Conversion modes generate knowledge spirally (Nonaka, 1994).

#### 2.5 Research Framework

The empirical research reveals that regulatory requirements, prospective benefits and costs, non-regulatory stakeholder pressure, and managerial concern and commitment motivated Knowledge Management system implementation. The following research framework (Figure 1) was suggested:

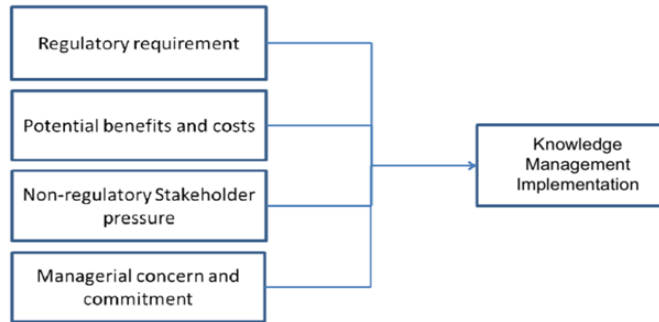


Fig. 1: Research Framework

### 3.0 Research Methods

#### 3.1 Research Design

This study used qualitative research to comprehend the phenomena better and explain its causes. This qualitative study uses non-statistical methods and a small, purposeful sample. A qualitative technique is best for deeply understanding little-understood phenomena, according to Polit and Hungler (1999). This qualitative case study (Yin, 2014) interviewed five TNB Fuel Services Sdn Bhd (TNBF) executives to understand the phenomenon, its regularities, and its exceptions.

The factors that inspire TNB staff to use Knowledge Management are unknown. Thus, a qualitative methodology was employed to collect narrative drawings from selected TNBF procurement practitioners on the factors encouraging Knowledge Management implementation at TNBF—semi-structured interviews with selected persons provided qualitative data.

#### 3.2 Interview Semi-structured

She used semi-structured interviews for her study. The researcher used a semi-structured interview to encourage participants to openly discuss TNB KM implementation motivators. Semi-structured in-depth interviews were also employed since they allow script improvisation and participants to express their feelings (Myers & Newman, 2007). Semi-structured interviews allow respondents to express their opinions and discuss numerous subjects without being limited by preset themes and questions. Thus, semi-structured interviews are more flexible than surveys or structured interviews. Thus, in this study, the semi-structured interview allowed the researcher to get respondents' opinions on knowledge management and any other relevant topic.

Qualitative data analysis is subjective; however, the researcher used content analysis to make sense of interview data. Titscher (2000) called content analysis "the most well-established approach of text analysis among the empirical methods of social study." The quantitative analysis will include topic identification and development. Interview data will be evaluated for study subject themes and distinctive traits. This topic identification process was undertaken after all interviews.

### 4.0 Results

Qualitative studies do not generalise to a larger population (Creswell & Poth, 2016), so a smaller sample size was appropriate. A typical case sampling was employed since qualitative research usually uses purposeful sampling (Lodico et al., 2010). five interviews were done. Detailed participant information was omitted due to privacy concerns and participant agreement. However, individuals were recognised by P1–P5 codes. Table 1 summarises the interviewees' characteristics.

One female and four male participants, one from TNBF and four from the Procurement Division; only two were under 40, two managers and senior managers, and one head of department, and three had worked for the company for more than 15 years and two for less. Each interviewee's office was scheduled at a convenient time. Interviews lasted 20–30 minutes. Notes were gathered throughout the interviews. Semi-structured interviews were unincentivised, like the questionnaire survey. Table 1 summarises participants' rating responses:

Table 1. Participant's responses

Motivating Factor	Ranking				
	P1	P2	P3	P4	P5
Regulatory requirements	1	2	2	2	1
Potential benefits and costs	4	3	3	3	3
Pressure from non-regulatory stakeholders	3	4	4	4	4
Managerial concerns and commitment	3	2	1	1	2

Interviews revealed the following themes:

- i. Lack of knowledge of management plan and policy
- ii. The Knowledge Management initiative in TNB was young. Various parties required increased interest in the issue.
- iii. Transformation projects like the Value Unlocking Programme are the emphasis.

## 5.0 Discussion

### 5.1 Objective 1

This initial study goal examined TNB Knowledge Management implementation motivators. This study aimed to rank Knowledge Management motivating elements by significance and relationship to other aspects. First, TNB procurement practitioners ranked the motivating factors for Knowledge Management implementation: managerial concern and commitment, organisational policy requirements, potential benefits and costs, and non-regulatory stakeholder pressure.

Results show management concerns and organisational policy needs are essential to adopting Knowledge Management. According to the interviews, TNB procurement practitioners ranked "Requirements imposed by the TNB's Group" first, followed by "Deriving economic benefits" and "Establishing company's sustainable roadmap". Thus, "the requirements imposed by the TNB's Group" was the most common variable picked by respondents as the best motivator for Knowledge Management adoption.

The interview also showed that regulatory requirements and Knowledge Management's prospective advantages and costs were strongly correlated with organisational concern/commitment. The relationship between organisational policy needs and non-regulatory stakeholder pressure must be more substantial. The managerial care and commitment construct had the highest weightage among the knowledge management motivating variables.

However, the respondents' least favourite Knowledge Management motivator was non-regulatory stakeholders' pressure. Respondents were more willing to accept management concern and dedication over non-regulatory stakeholder pressure as motivations for Knowledge Management implementation.

The Head of Departments and Senior Managers placed greater weight on organisational policy requirements as a motivator than managers or executives. Senior jobs usually grasp policy needs better. Why? Seniors in any business frequently handle policy needs. As we considered prospective advantages and expenses, department heads were given the highest priority and the lowest as their positions were lower than the department heads.

The link between respondents' years of working experience and Knowledge Management implementation motivators was comparable. More years of work experience increased respondents' importance of organisational policy needs. Senior officials are more likely to obey company policies since they know how to promote the company. Longer-serving employees also think that prospective advantages are more important when implementing Knowledge Management. They may observe and grasp organisational decision-making, focusing on costs and advantages.

Results also revealed that respondents with fewer than 15 years of working experience were more oriented towards benefit and expense than other groups. This irregularity may be attributed to fewer responders for this population segment; hence, a quantitative survey was needed. Higher-experience respondents dominated the top rank, whereas lower-experience respondents were mixed. The topic matter covered was subjective and differed among people, which may explain this. Therefore, years of experience may not be the determining factor closely correlating with managerial concerns and dedication to Knowledge Management implementation.

The age of respondents and agreement on critical Knowledge Management aspects were also analysed. Years of experience may be like age, and this may only sometimes be true because some young respondents have more experience than older ones. The finding shows that age did not determine a person's grasp of a topic. Thus, various age groups had varying views on regulatory needs. Results revealed that younger respondents focused more on knowledge practice advantages without implementation costs. Older respondents were more concerned about knowledge exclusivity and operational benefits. When additional considerations, such as pressure from non-regulatory parties, were mentioned, respondents over 40 showed more interest.

### 5.2 Objective 2

The second research goal examined TNB's procurement practitioners' Knowledge Management understanding. Given the correct motivating causes and drivers for expertise Management adoption, practitioners' awareness and expertise were equally vital for its success. Thus, this finding concerns participant knowledge management awareness. The average awareness showed their Knowledge Management doubt, according to interview research. This research also showed that TNB's procurement practitioners had a medium understanding of knowledge management. Knowledge Management awareness qualitative results are summarised as follows:

- i. Knowledge Management requires a central policy and procedures, which TNB's Procurement Policy and Procedures need to have.
- ii. TNB needed to prepare knowledge management training.

The survey found that associated personnel's knowledge of Knowledge Management in TNB was rated 'average.' For a large company like TNB, this ranking may need to be more attainable. The semi-structured interview summary suggests that TNB had no

knowledge management policy, which reduced employee training and exposure. Thus, TNB's procurement professionals have average Knowledge Management understanding.

## 6.0 Conclusion

TNB procurement practitioners identified "Managerial Concern and Commitment" as the most crucial factor in encouraging knowledge management practices. This study's most significant contribution was the concealed assumptions of past research that firms adopt knowledge management under duress from legislation and stakeholders. This study found that "Managerial Concern and Commitment" motivated TNB more than "Pressure from non-regulatory stakeholders," which contradicted this notion, and this may be because the respondents looked at non-regulatory stakeholders like customers differently from monopolistic companies.

According to the survey, respondents' expertise in management was average. This study found that TNB procurement practitioners must familiarise themselves with knowledge management. Because TNB needed a central knowledge management strategy, personnel received less training and exposure, which may explain their average awareness level. Thus, TNB's procurement professionals have average Knowledge Management understanding.

Due to external and internal demands, most organisational functions now have improved knowledge management tools. As one of the country's largest companies, TNB should promote effective knowledge management to boost employee skills. Therefore, TNB should create a thorough Knowledge Management roadmap and action plan. Top management's concern about the turnover of human resources was the primary motivator for Knowledge Management adoption since their choice directly influenced organisational policy and strategy. Thus, top management should support comprehensive Knowledge Management policies to encourage staff to learn about knowledge management and offer resources for projects.

Supply chain management increasingly requires Knowledge Management integration. TNB may pay extra if it starts the travel late. With the average level of knowledge shown in this survey, procurement and supply chain practitioners need additional Knowledge Management education and training. A structured human skills development plan should also be implemented to train competitive knowledge management workers.

This study focused on Knowledge Management implementation motivations. The study targeted TNB procurement practitioners as Knowledge Management drivers. Other participant groups, firm board members, and senior management executives who make the final decisions might be studied to determine their motivations.

Knowledge Management research in TNB can also examine performance measurement, the impact of Knowledge Management on a company's performance, its costs and benefits, and implementation barriers.

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