



*Research Article*

# **Exploring the Relationship between Job Design and Knowledge Productivity: A Conceptual Framework in the Context of Malaysian Administrative and Diplomatic Officers**

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## **Abstract**

To sustain its knowledge economic growth, Malaysian government had launched the K-Economy Master Plan in 2010; outlining the knowledge economy policy initiatives in supporting the knowledge based economy. The transition to knowledge based-economy, knowledge plays a governing role in leading the productivity and maintaining the economic performance growth. Equally important would be the factors that would contribute towards the knowledge creation. However, the literature indicates that very little attempts have been conducted to investigate factors that influence knowledge productivity. In Malaysia, the Administrative and Diplomatic Officers or PTD, are heavily involved in the development and implementation of the main policy makers of the federal government. However as to date, there are no mentions of any study exploring knowledge productivity of PTD. Against this background, this study intends to investigate the contributions of job characteristics towards knowledge productivity. In the process, it will propose a framework linking job characteristics and knowledge productivity. The proposed research method that will be employed will be a combination of qualitative and quantitative approaches. The qualitative approach will use interview as the main data collection technique, while the quantitative approach will adopt the questionnaire. The qualitative approach will help the researcher to develop the framework that depicts the factors that contribute towards knowledge productivity among PTD. Based on this framework a questionnaire will be developed so as to collect quantitative data involving PTDs. The contribution of the study can be viewed from two perspectives i.e. theoretical and practical. From the theoretical perspective, the study will develop an empirical based framework while from the practical perspective the study will help to devise strategies for improving and enhancing knowledge productivity. The significant of the study is that, it will further improve knowledge productivity among PTDs who are mainly involved in executing the country's development strategies including strengthening the administrative functions, social

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infrastructures and also the performance of the country's economic growth in line with the country's National Key Results Area (NKRA).

**Keywords:** Knowledge Productivity, Job Design, Conceptual Model, Malaysia.

## Introduction

Knowledge productivity can be defined as the process in which an employee identifies, gathers, exchange and interprets relevant information and uses this information to develop new skills and applies the skills in innovating services and work processes. In developed countries such as United States of America, United Kingdom, France and Japan, knowledge has become of its main source of national income. Realizing the contribution and importance of knowledge productivity, the Malaysian government had launched the K-Economy Master Plan in 2002, outlining the knowledge economy policy initiatives in supporting the knowledge based economy. Since then, the government has placed strong attention on knowledge production activities as one of the critical means of generating national income. Various initiatives and policies have been developed and implemented to support and provide conducive climate for knowledge production activities.

An individual who is heavily involved in knowledge production is usually referred to as knowledge workers. A creative worker is an individual who is able to come up with creative ideas especially in the context of problem and strategy formulation. In an organizational setting, white collar jobs such as engineers and researchers are among those associated with knowledge worker. In the Malaysian public setting, the Administrative and Diplomatic Officer or PTD is also regarded as one of the most critical knowledge worker as their tasks and jobs heavily involved in the development of national level strategies and policies. Considering their nature of work, PTD plays very critical role in driving the country's economic activities. This is because the development and implementation of all

government policies will affect all level society in the country ranging from an individual until giant business enterprise.

The literature suggests that various factors are linked or associated with knowledge production (e.g. Aminuddin, Tymms and Habsah, 2008; Sobia and Bakhtiar, 2011). These factors can be further categorized as organizational, individual and also external factors. Among these three groups of factors, the organizational and individual factors are considered the most influencing factors. The job design which is defined by Humphrey et al. (2007) as the elements of jobs and its environment, is considered as one of the strongest factors in shaping knowledge productivity. Job design by itself covers both organizational and individual factors. Given that very few studies have been done involving PTDs, very little is really known on the nature and scope of their jobs which have strong bearing on their knowledge production. Driven by this gap, this study attempts to investigate the nature of PTDs' job and how it affects their job productivity. As the main policy makers of the government, PTD will be the prime mover in promoting the widespread use of knowledge. Hence, the findings of the study is expected to further improve the knowledge productivity among PTDs who are mainly involved in executing the country's development strategies including strengthening the administrative functions, social infrastructures and also the performance of the country's economic growth in line with the government's National Key Results Area (NKRA).

## Literature Review

### *Knowledge Productivity*

Referring knowledge productivity as knowledge-based production process, Huang

and Wu (2010) interpret knowledge productivity as “the capability with which individuals, teams, and units across an organization achieve knowledge-based improvements, exploitation, and innovations”. On the other hand, Amiri, Ramezan and Omrani (2010) define knowledge productivity as “the learning ability in order to create knowledge-based results.” Ramezan (2011) also defined knowledge productivity as “the way in which individuals, teams and units across an organization achieve knowledge-based improvements and innovations”. In an attempt to measure knowledge production, researchers have developed various model and frameworks. In the process, the SECI model originally developed by Nonaka & Takeuchi (1995) has been referred and applied.

The SECI model proposed four ways that knowledge types can be combined and converted, showing how knowledge is shared and created in the organization. The four ways are (i) socialization (tacit to tacit) - knowledge is passed on through practice, guidance, imitation, and observation, (ii) Externalization (tacit to explicit) - tacit knowledge is codified into documents, manuals, etc. so that it can spread more easily through the organization, (iii) Combination (explicit to explicit) - codified knowledge sources (e.g. documents) are combined to create new knowledge, and (iv) internalization (explicit to tacit) - as explicit sources are used and learned, the knowledge is internalized, modifying the user's existing tacit knowledge.

### **Job Design**

Various model and framework have been developed by various researchers to explain job design. The model developed by Morgeson & Humphrey (2006) is considered the most comprehensive model as it has been referred and applied by numerous researchers in studying job design of various professions (e.g. Humphrey et al., 2007 and Dere, 2011). The model describes work

design as consisting of motivational characteristics, knowledge characteristics, social characteristics and work context characteristics.

The work characteristic is further divided as consisting task autonomy, task variety, task significance, task identity and feedback from others. Task autonomy includes three interrelated aspects centered on freedom in (a) work scheduling, (b) decision making, and (c) work methods. Task variety refers to the degree to which a job requires employees to perform a wide range of tasks on the job. Task significance reflects the degree to which a job influences the lives or work of others, whether inside or outside the organization. Task identity reflects the degree to which a job involves a whole piece of work, the results of which can be easily identified. Feedback from job reflects the degree to which the job provides direct and clear information about the effectiveness of task performance.

According to Morgeson & Humphrey (2006), knowledge characteristics reflect the kinds of knowledge, skill, and ability demands that are placed on an individual as a function of what is done on the job. They further divided knowledge characteristics as consisting job complexity, information processing, problem solving, skill variety and specialization. Job complexity refers to the extent to which the tasks on a job are complex and difficult to perform. Information processing reflects the degree to which a job requires attending to and processing data or other information. Problem solving reflects the degree to which a job requires unique ideas or solutions and reflects the more active cognitive processing requirements of a job. Skill variety reflects the extent to which a job requires an individual to use a variety of different skills to complete the work. Specialization reflects the extent to which a job involves performing specialized tasks or possessing specialized knowledge and skill.

Within social characteristics, the job characteristics that involved include social

support, interdependence, interaction outside organization and feedback from others (Morgeson & Humphrey, 2006). Social support reflects the degree to which a job provides opportunities for advice and assistance from others. Interdependence reflects the degree to which the job depends on others and others depend on it to complete the work. Interaction outside the organization reflects the extent to which the job requires employees to interact and communicate with individuals external to the organization. Feedback from others reflects the degree to which others in the organization provide information about performance.

Morgeson & Humphrey (2006) noted that work context characteristics include ergonomics, physical demands, work condition and equipment use. Ergonomics reflects the degree to which a job allows correct or appropriate posture and movement. Physical demands reflect the level of physical activity or effort required in the job. Work conditions reflect the environment within which a job is performed. Equipment use reflects the variety and complexity of the technology and equipment used in a job.

### ***Job Design and Knowledge Productivity of PTD***

The importance of job design in boosting individual's productivity and performance has been discussed extensively in few studies (Ali & Aroosiya, 2010; Fernando & Ranasinghe, 2010; Dere, 2011). From the organizational aspect, job design plays crucial part in supporting the employees' work performance in achieving organizational relevant outcomes as it may directly or indirectly influence the manner they perform their responsibilities and tasks (Ali & Aroosiya, 2010). Better known as Pegawai Tadbir dan Diplomati or PTD, it is one of the positions serving under the public sector or government in Malaysia. The PTDs mainly involve in generalizing the country's

development strategies including strengthening the administrative functions, social infrastructures and also the performance of economic growths (Pegawai Tadbir dan Diplomati, 1999).

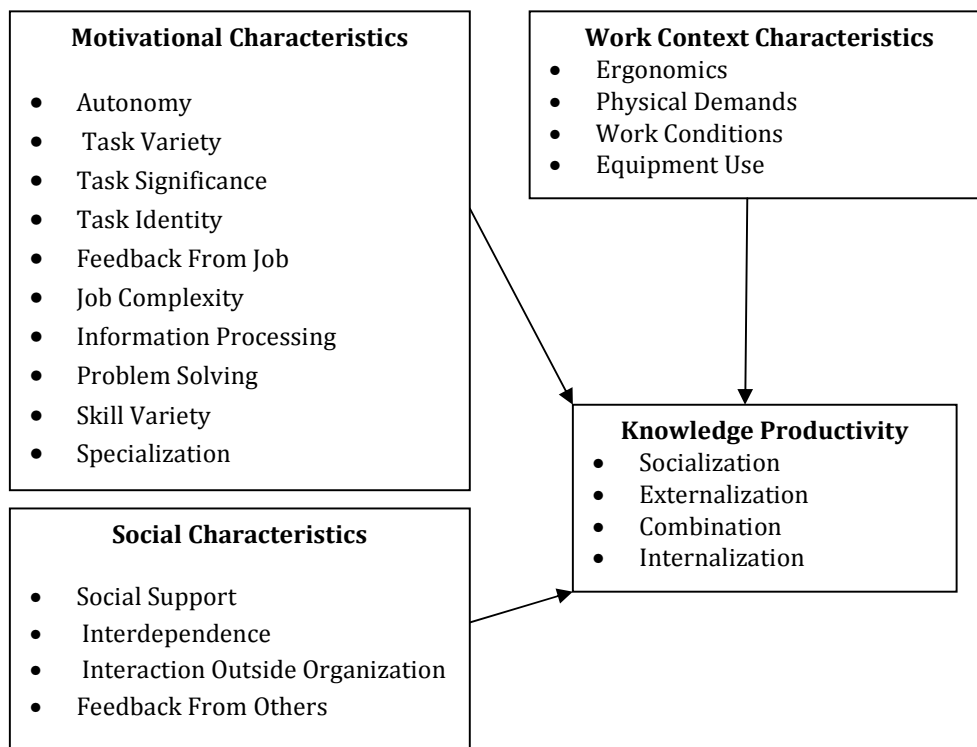
PTD as the core knowledge worker in Malaysia have and will continue to act as the backbone of the knowledge economy initiatives. Their work diversity need to be in parallel towards the transition of knowledge based economy as outlined in the country's National Key Results Area (NKRA). As the main policy makers of the government, PTD will be the prime mover in promoting the widespread use of knowledge. Given the critical role played by PTD, study investigating their job design has been very limited. In addition, to date, there is still no study to measure their job productivity. As noted Morgeson & Humphrey (2006), study focusing on job design should be comprehensive and covers aspects such as motivational characteristics, knowledge characteristics, social characteristics and work context characteristics. In the same light, applicability of the SECI model which indicates the knowledge production process in the context of PTD is still unknown. In other words, a study is needed to unveil how the four processes namely socialization, externalization, combination and internalization take place in the context of PTD.

### ***Conceptual Framework***

Figure 1 illustrates the proposed framework for the study which is developed based on the work of Nonaka and Takeuchi (1995); Morgeson and Humphrey (2006); Humphrey, Nahrgang and Morgeson (2007) and Easa, (2012). The dependent variable for this framework is knowledge productivity which is derived from the work of Nonaka and Takeuchi (1995) and consists of four dimensions namely socialization, externalization, combination and internalization.

The independent variables of the framework are mainly adapted from Morgeson and Humphrey (2006) consists of the job design characteristics which are the motivational characteristics, social characteristics and work context characteristics. The dimensions of motivational characteristics are autonomy, task variety, task significance, task identity, feedback from job, job complexity, information processing, problem solving, skill variety, and specialization.

The dimensions of social characteristics are social support, interdependence, interaction outside organization and feedback from others. Whereas the dimensions of work context characteristics are ergonomics, physical demands, work conditions and equipment use.



**Fig. 1. Conceptual Framework**

### Research Methodology

Figure 2 is the illustration of the steps in research design in its entirety. There are two sources of identifying research topic, the literature and directly from the workplace or community settings (Gray, 2004). For the purpose of this study, both sources will be employed. Upon completion of formulating the research hypotheses, the researcher will conduct a preliminary study with a twofold objective. The first objective was to gain better understanding on the state of affairs of knowledge productivity among the PTDs. The

second objective is to clarify that the proposed research framework will reflect the real world phenomenon i.e. determining other potential factors that are applicable in the context with the present study. The findings obtained from the preliminary study are expected to help the researcher to refine the definitions of research problems, research objectives, theoretical framework and generation of research hypotheses.

The next stage of the study will involve in conducting a survey to collect the research data to be used for answering the research

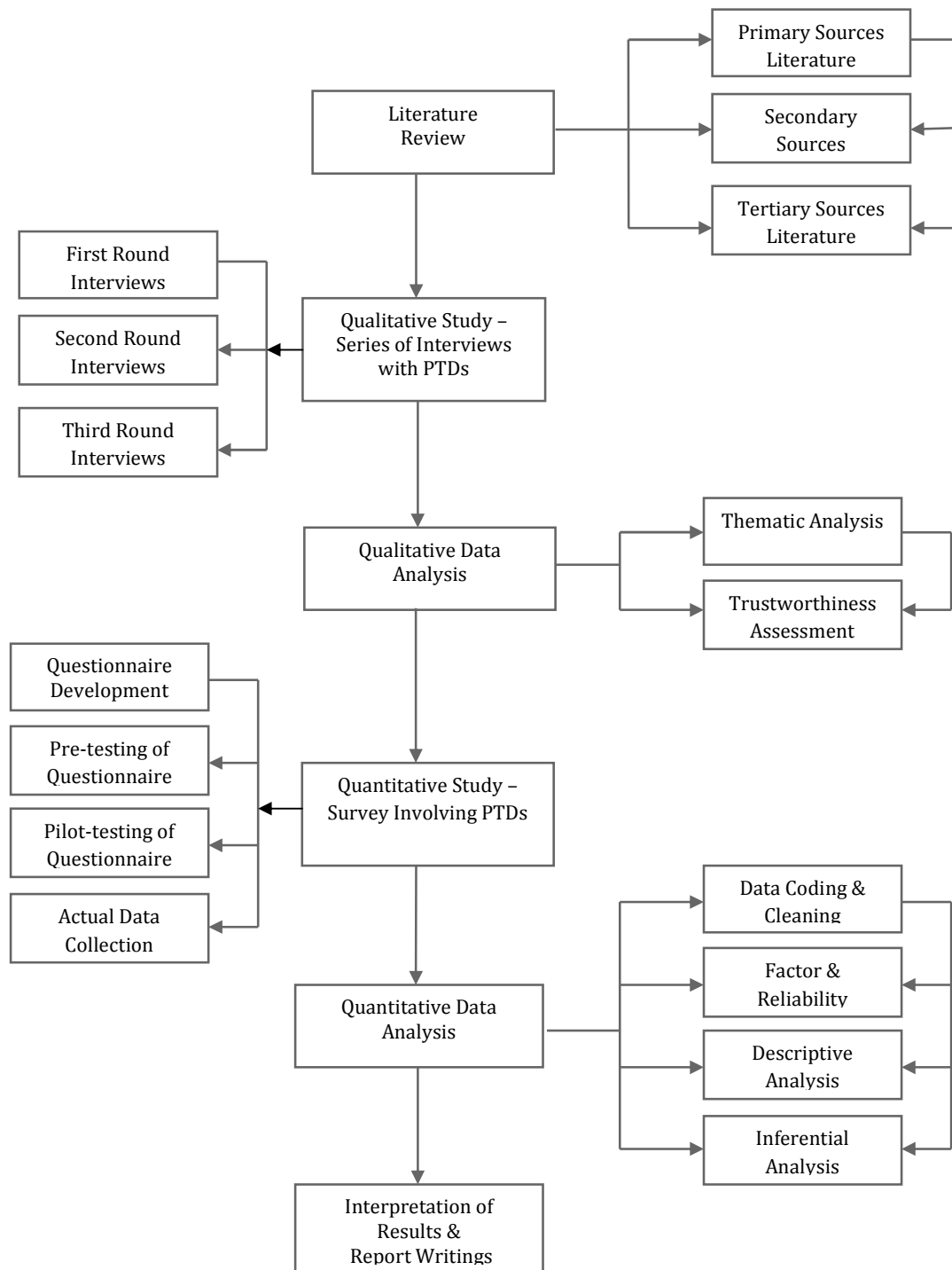
questions and testing the formulated hypotheses. The first part of the survey will involve in the development of the research instrument i.e. the survey questionnaire. In developing the questionnaires, validated measures that have been empirically used by previous researchers will be adapted and adopted. To ensure a quality and accurate research outcome resulting from the use of the research instrument, the questionnaire will undergo pre-testing and pilot study. The population of the study will be 5942 PTDs working in federal ministries located in Putrajaya. Following Gray (2004), the required sample size that should participate in this study would be 724. A stratified simple random sampling will be adopted. The population will be stratified according to ministries. Based on the PTD listing obtained from Public Service Department or Jabatan Perkhidmatan Awam (JPA), systematic random sampling will be used for each stratum. After obtaining a valid and satisfactory number of returned questionnaires, the researcher will then embark on data analysis and interpretation stage. From the results of data analysis and interpretation, deductions will be finally made.

### **Conclusion**

PTD are directly involved in the Malaysian government policy making. The policies

adopted by any country will surely have great impact to the society and economy of the country. Better and improved knowledge worker such as PTD will significantly influence their job quality and productivity which will also affect in the country's policy formulation. To date, studies investigating the factors influencing the knowledge productivity have received little attention in Malaysia. Thus, the conduct of this study will attempt to provide empirical evidences on the job design features that influence the knowledge productivity of PTD in Malaysia.

In order to develop the theoretical framework for the study, several theories and framework have been referred. The findings from the preliminary fieldwork will be applied to refine the theoretical framework to ascertain that it conforms to the actual phenomenon of job designs and knowledge productivity of the PTDs. Hence, the main contribution of the study is the establishment an empirical-based framework. The findings of the study can be used to either defy or strengthen the theories or frameworks that have been adapted. The instrument developed in the study can be used by researchers or practitioners to conduct further research in identifying the job design factors influencing the knowledge productivity in different settings or research design.



**Fig. 2. Research Methodology**

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