# BUREAUCRATISATION OF CODIFIED PROJECT MANAGEMENT PRACTICES AND ITS IMPACT ON PROJECT PERFORMANCE WITHIN MALAYSIAN CONSTRUCTION AND PROPERTY DEVELOPMENT INDUSTRIES.

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## UNIVERSITI SAINS MALAYSIA

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by

## NG SIN HONG

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# LIST OF ABBREVIATIONS

AIPM         Australia Institute of Project Management

APM         Association of Project Management

CB SEM      Covariance-Based Structural Equation Modeling

IPMA        International Project Management Association

ISO         International Standard of Organisation

LISREL      Linear Structural Relations

MGA        Multi-Group Analysis

PCM        Project Cost Management

PCOMM     Project Communication Management

PHRM      Project Human Resources Management

PIM         Project Integration Management

PLS         Partial Lease Squares

PMBOK     Project Management Body of Knowledge

PMI         Project Management Institute

PP          Project Performance

PPM        Project Procurement Management

PQM        Project Quality Management

PRM        Project Risk Management

PSM        Project Scope Management

PSTM       Project Stakeholder Management

PTM        Project Time Management

SEM        Structural Equation Modeling

SPSS        Statistical Package for the Social Sciences

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**BIROKRATISASI KODIFIKASI PRAKTIKAL PENGURUSAN PROJEK**

**DAN KESANNYA TERHADAP PRESTASI PROJEK DI DALAM INDUSTRI**

**PEMBINAAN DAN PEMBANGUNAN HARTANAH MALAYSIA**

**ABSTRAK**

Dalam beberapa dekad kebelakangan ini, penekanan pada kegunaan pengurusan projek telah berkembang dengan pesat kerana ianya telah dianggap sebagai kaedah untuk meningkatkan prestasi projek. Perkembangan ini telah menimbulkan dua pandangan yang bertentangan, di mana terdapat segolongan penyelidik mendapati praktikal pengurusan projek dengan peraturan kawalan telah menjadi birokrasi pengurusan dalam gaya Weberian yang dapat meningkatkan prestasi projek. Sebaliknya, golongan sarjana yang lain berpendapat bahawa birokrasi praktikal pengurusan projek adalah negatif dan akan menyekat prestasi pengurus projek. Kedua-dua pendapat yang bertentangan ini telah menyebabkan praktikal pengurusan projek menjadi satu bidang yang amat menarik untuk diselidik, iaitu membiarkannya secara lancar atau ianya mesti mematuhi disiplin teratur yang khusus. Tesis ini adalah bertujuan untuk meneroka bagaimana birokratisasi praktikal pengurusan projek adalah berkaitan dengan prestasi projek, sama ada ianya akan bermanfaat atau sebaliknya, di dalam konteks industri pembinaan dan pembangunan hartanah Malaysia. Komponen kecekapan praktikal pengurusan projek untuk penyelidikan ini adalah berdasarkan dari lima institusi pengurusan projek yang terkenal, di mana 10 komponen kecekapannya telah diringkas dan dipilih. Responden untuk penyelidikan ini adalah pengurus projek di industri pembinaan dan pembangunan hartanah Malaysia, di mana sejumlah 210 borang soal selidik telah diedarkan dan 194 soal selidik diterima. Penemuan yang ketara dari penyelidikan ini adalah bahawa kesemua 10 komponen kecekapan memaparkan birokrasi, dengan formalisasi mempamerkan lima komponen kecekapan (PSM, PTM, PCM, PQM & PCOMM) dan centralisasi juga memamirkan lima komponen kecekapan (PTM, PCM, PQM, PHRM & PRM) dalam set yang berlainan yang menunjukkan hubungan ketara dan positif dengan pretasi projek. Hasil dari kajian ini boleh dijadikan sebagai dasar garis panduan kepada industri pembinaan dan pembangunan hartanah Malaysia untuk menentukan komponen kecekapan yang mana yang patut dibirokrasikan, iaitu, dengan formalisasi yang tinggi dan centralisasi yang tinggi untuk meningkatkan prestasi projek. Kajian ini juga boleh diulangi dalam penyiasatan masa depan, di mana sampel yang lebih besar boleh digunakan dalam konteks yang berbeza, seperti di negara-negara membangun dengan penyelidikan yang lebih mendalam.

# BUREAUCRATISATION OF CODIFIED PROJECT MANAGEMENT PRACTICES AND ITS IMPACT ON PROJECT PERFORMANCE WITHIN THE MALAYSIAN CONSTRUCTION AND PROPERTY DEVELOPMENT INDUSTRIES

## ABSTRACT

In recent decades, the emphasis on project management activities has expanded substantially, perceived as a method to enhance project performance. Such rapid evolution has inevitably led to two opposing points of view, with some researchers found the usual methods of prefixed rules and regulations to be a bureaucratisation of management styles in the Weberian tradition that improves project performance. In contrast, other scholars have a different view, believing that the bureaucratisation of project management is flawed and can negatively impact the performance of project managers. The two rising differences of opinion have led to the development of project management practices becoming an exciting field for investigation and offers diverse views as to whether project management practices should be fluid or comply with specific structured disciplines. This thesis aims to explores how the bureaucratisation of codified project management practices are relevant to project performance, with a specific investigation of the construction and development industries in Malaysia. The competency components of the codified project management practices are taken from the summary of the five well-known project management institutions where 10 competency components been chosen. The participants in this study are project managers in Malaysia's construction and development industries. A total of 210 questionnaires were distributed, and 194 questionnaires were received. The notable finding is that all the 10 competency components display bureaucracy with formalisation of five competency components (PSM, PTM, PCM, PQM & PCOMM) and centralisation of another set of five competency components (PTM, PCM, PQM, PHRM & PRM) showing a significant, and positive relationship to project performance. The findings can serve as a guidance to Malaysia's construction and development industries which of the 10 competency components should be made bureaucracy, i.e., high formalisation and high centralisation for the enhancement of the project performance. Identifying other project performance enablers and examining their effects could be possible for future research. This study may be replicated in future investigations, and larger samples may be used in different contexts, such as in different developing or developed countries with more in-depth and more vibrant research.

# CHAPTER 1

# INTRODUCTION

## 1.1    Introduction

Project management has existed in various forms since time immemorial without formal acknowledgment of its existence (Seymour & Hussein, 2014). Many mega-projects, such as the Great Wall, the Taj Mahal, and the Pyramids, required a monumental workforce, extensive logistics, long periods of hard work, careful planning, and practical implementation, which today are viewed as core tasks in project management. Unfortunately, very little detailed documentation of these activities has been presented for reference (Hodgson & Cicmil, 2006; Hodgson et al., 2015; Westland, 2018). It was not until the 19th century that construction projects started to be managed professionally by professional architects, engineers, and master builders. It was during this time period that the project management discipline came into existence and began to flourish (Hodgson et al., 2015; Westland, 2018; Seymour & Hussein, 2014).

Project management emerged in a more formal way during the Second World War, and spread to a limited number of engineering industries in the 1950s, 1960s, and 1970s (Morris, 1994; Seymour & Hussein, 2014). The planning for large-scale projects involving financing, resources, and labour management took place within a defined time-frame. In the 1970s and 1980s, most organisations discarded their conventional project management models and introduced new models to better adapt to the increasing complexity of projects (PMI, 2013; Westland, 2018).

Throughout the 1990s, organisations began to understand that the implementation of project management models was a necessity rather than a choice (David, 2016; Turner, 2009; Westland, 2018), and the use of project management practices has since gathered momentum. The competitiveness expected of organisations, whereby projects have become more intense, the financial stakes higher, the demand for end-users more rigorous, and the expectations of stakeholders higher (Hodgson, 2005; Paton et al., 2015; Rahman, Muhammad & Ammar. 2018), has also driven organisations to explore appropriate project management practices to improve outcomes significantly, minimise costs and increase performance (Dalcher, 2012; Yanwen, 2012; Namratha, 2019). Since then, project management activities have increased dramatically in a variety of industries (Wang, Liu, Li, Luo & Liu, 2020; Hodgson et al, 2015; Lundin & Ralph, 2000; Hermano, 2021; Too & Weaver, 2017; Picciotto, 2019; Besner & Hobbs, 2013; Ling et al., 2009; Mir & Pinnington, 2014; Demirkesen & Ozorhon, 2017; Ofori, 2013; Karen et al., 2010), especially in the areas of construction and property development (Picciotto & Towards, 2020; Zhang, Wu, Shen, & Skitmore, 2014; Joyce et al., 2011; Adeyemi, 2013).

Project management is the dominant model for most corporations in this new millennium for project implementation, development, continuous change, and product creation (Tooa & Weaverb, 2014; Namratha, 2019), in order to increase the organisational efficiency of corporations (Soderlund, 2011; Westland, 2018), to boost the level of project success and efficacy (Crawford & Pollack, 2008; Soderlund, 1997; Namratha, 2019), and to realise the objectives of projects (Bouki, 2015). Project management has since been used by organisations to execute, plan, and control their schedules intensively and effectively to enhance overall organisational performance (Soderlund, 201; Westland, 2018). Project management

processes are increasing in importance as more projects become constrained to experience, schedules and other performance factors. Project management brings structured and consistent performance resulting in widespread successes.

A significant pace of growth for project management practices has significantly increased its popularity and relevance over the last decade (Kwak & Anbari, 2009; Mir & Pinnington, 2014; Seymour & Hussein, 2014). This growth has also increased the demand for qualified project managers and led to calls for further education in the expertise and skills required to serve this expanding role, which has traditionally depended on subjects offered in engineering degrees in academic institutions (Morris, 2013). To meet these demands and the workplace realities for project management, numerous universities now offer project management courses as core programmes or electives (Morris, 2013). The new form of project management is no longer just a sub-discipline but is a crucial professional discipline (Kwak & Anbari, 2009; Mir & Pinnington, 2014; Soderlund, 2011; Namratha, 2019).

With increasing market demand for efficiency, the primary role of project managers is not only to meet the requirements of operational and management activities of architecture and engineering, but also to be accountable for the reliability of the project (Andersen, 2016; Andrews et al., 2017; Gilliard & Chong, 1996) in achieving the scope, time and cost performance of the overall plan (Asbjorn, 2014; Avots, 2013; Shenhar, Levy & Dvir, 1997). Given the current challenges that project managers face and the different positions they need to play, they are now responsible for many things that have typically not been part of their responsibilities (Andrews et al., 2017; Avots, 2013; Cater, 2000).

As a consequence of companies around the world continually using project management methods and strategies to achieve their goals (Avots, 2013; Crawford, 2005; Namratha, 2019), the demand for project management personnel and the performance dimensions they are responsible for have expanded and are evolving. To address this shifting role, practitioners need to add specific knowledge and skills to their conventional roles, alongside other non-engineering knowledge and expertise (Andersen, 2016; Avots, 2013; Celan & Dorman, 1995; Jaselski & Russell, 1997).

While interest in project management has increased significantly over the last decade, both academics and practitioners have demonstrated significant interest in the field (Brière et al., 2015; Westland, 2018), as an instrument that provides organisations with the ability to be efficient, effective and competitive in today's shifting, volatile and unpredictable environment (Avots, 2013; Carvalho et al., 2015; Lavagnon, 2009). This change has led to the codification of practice and knowledge in project management (Shenhar, 2001; Seymour & Hussein, 2014). The justification behind this codification, as well as the growing use of codified project management practices, is that the coded components identify the criteria for efficient implementation of codified project management practices in the workplace, and it is argued that those who fulfil the requirements will perform better (Carvalho et al., 2015; Morris, 2013; PMI 2014).

Recognising the importance of project management practices, several professional bodies and organisations have established their own codified project management practices. The disciplines of global professional project management organisations have also developed into a knowledge-based working structure that has pressured project managers to adopt specific standardised guidelines, thereby creating the opportunity and the need to improve various project management

institutions with their own body of knowledge (Carvalho et al., 2015; Jetter, Albar, & Sperry, 2016; Westland, 2018).

Consequently, there is a global movement to systematise project management practices, as evidenced in the numerous project management professional bodies that have established their own respective best practices, such as the US-based Project Management Institute with its Project Management Body of Knowledge (PMBOK Guide), the Australia-based Australian Institute of Project Management (AIPM) with its National Competency Framework for Project Management Guidelines, the European-based International Project Management Association (IPMA) with its Competency Baseline, the UK-based Association of Project Management (APM) with its Body of Knowledge, and even the International Organisation for Standardisation (ISO), which has also joined the fray to create the ISO 21500 Project Management Guideline.

Several large organisations in Malaysia, such as Jabatan Kerja Raya (JKR), Jabatan Peparitan & Salinan (JPS), Tenaga National Berhad (TNB), Telekom Malaysia Bhd (TM), Sunway Bhd, Bina Puri Bhd, IJM Corporation Bhd (IJM), Eco World Bhd, Gamuda Bhd, United Engineering Malaysia Bhd (UEM), SP Setia Bhd, and Mahsing Bhd, have also developed their own project management practices. Such large organisations are project-oriented organisations that routinely apply project management practices (Cicmil & Hodgson, 2009; Shenhar, 2001; Namratha, 2019). They implement their own set of codified project management practices by either adopting those promoted by one of the many knowledge-based bodies in the market or creating their own structures.

Codified project management practices have become so frequently used that there is now clearly a relationship between project management practices and project performance (Carvalho, Patah, & Bido, 2015; Dana, 2019). There are now prefixed rules, controlling tools, and elements of bureaucratisation, and under this new structure the use of codified project management and control methods are seen as mechanisms and management techniques to achieve the goals of the project and the objectives of an organisation (Crawford, 2015; Dana, 2019).

The rapid development of codified project management practices has resulted in two conflicting views. On the one hand, some scholars conclude that codified project management practices with prefixed rules and regulations are a reflection of the bureaucratisation of management styles in the Weberian context (Morris, 2013) and praise the fact that codified project management practices have defended and encouraged bureaucracy, in the sense that these practices increase productivity and bring many benefits (Carvalho et al., 2015; Dalcher, 2013; Hodgson, Fred, Bailey et al., 2019). These academicians are in line with Max Weber's philosophy. On the other hand, some researchers have a different opinion, arguing that the bureaucratisation of project management practices is flawed, and they have raised critiques that use the word ''bureaucracy' in a pejorative tone (David, 2016). Such scholars criticise the bureaucratisation of project management.

Scholars who support the bureaucratisation strongly believe that an organisation's hierarchical model enables it to reconcile differences of interest when confronting the absence of mutual objectives in an increasingly heterogeneous and diverse society (Goodsell & Charles, 2015; Olsen, 2006; Hodgson, Fred, Bailey et al., 2019). The magnitude of bureaucratisation has been recognised over the last

century, with an argument that it is critical to emerging or complex activities (Avots, 2013; Hodgson, Fred, Bailey et al., 2019).

Bureaucratisation of project management practices is also said to offer excellent prospects for project performance. It minimises the likelihood of failure (Munns & Bjeirmi, 2012; Westland, 2019; Thoha & Avandana, 2020), is more effective than conventional project management approaches, and has less costs than pluralistic types of delegated responsibility (Gay, 2000; Dana, 2019). It raises organisational value (Dalcher, 2012) and the effectiveness of human involvement in the project, ultimately increasing performance (Morris, 2013; Westland, 2018; Hodgson, Fred, Bailey et al., 2019). However, the above positives have not yet been investigated in terms of how bureaucratisation relates to project performance.

In comparison, scholars who are sceptical of project management practices argue that some aspects of the Weberian bureaucracy theory may lead to a form of bureaucracy that focuses more on administration, but undermines the creativity and innovation needed in project management (Cicmil, 1997; David, 2016; Hodgson, 2004; Morris, 2014; Powl & Skitmre, 2005; Styhre, 2006; Hodgson, Fred, Bailey et al., 2019).

This group of scholars suggests that the bureaucratisation of project management practices includes Weberian bureaucratic concepts that are implemented predominantly in the context of a temporal structure (Clegg & Courpasson, 2013; Hodgson, 2004; Morris, 2014; Hodgson, Fred, Bailey et al., 2019), which places a greater emphasis on written reports and other structured reporting systems, with less emphasis on development and technical issues. They

find the bureaucratisation of project management practices inefficient and adverse on project management professionals.

They conclude that today's project management personnel are merely corporate reporting devices, and the bureaucratisation of project management activities has diminished project managers' confidence and morale (Styles, 2006; Hodgson, Fred, Bailey et al., 2019; Westland, 2018). At best, the project manager is a project executor or, at worst, a planner or scheduler. For many established project team members, their position provides poor decision-making and directional autonomy (Hodgson et al., 2015; Paton, 2010; Hodgson, Fred, Bailey et al., 2019) in handling projects necessitating fast-moving and decisive action, as suggested by project management practices proponents (Morris, 2014; Styhre, 2006).

Despite the fast growth of project management practices, there has so far been no comprehensive study on how bureaucratisation of codified project management practices is related to project performance. This makes the two surging contrasting views in project management practices an exciting field for research, as there is now a critical crossroads between facilitating a fluid form of project management or abiding to specific structured disciplines. If it is to be fluid, then it is expected that the project manager is innovative and creative (David, 2016). In contrast to this, if project management is to be structured, the project manager must follow specific pre-set rules, which in the Weberian sense is regarded as a bureaucratisation of management styles that, at worse, may restrict, obscure or hide their performance (Steinfort & Walker, 2007).

## 1.2    Problem Statement

There have been many studies on how project management practices may be relevant to project performance (Crawford, 2005; Eskerod & Riis, 2009; Lechler & Cohen, 2009; Morris, 2014; Thomas & Mullaly, 2007; Winter & Szczepanek, 2008; Zhai et al., 2009; Hodgson, Fred, Bailey et al., 2019). But there has been no comprehensive study on how bureaucratisation of codified project management practices will affect project performance. This is where the knowledge gap lies that deserves our attention. To the best knowledge of the researcher, no study has been reported or tested to what degree, without judgment, the bureaucratisation of codified project management practices could be relevant to project performance, whether beneficial or otherwise.

This study is motivated by the researcher's desire to address this knowledge gap in the context of Malaysia's construction and development industries. The researcher chose these industries because they are not only key fields in which the country has significant strengths, but also significant contributors to its social and economic performance (Azman & Adeleke, 2018). The Malaysian construction industry plays a vital role in the country's economy, yet it has been plagued with negative publicity of cost overruns, uncontrolled and unrealistic schedules, accidents, poor workmanship, conflict among project team members, and abandoned and unfinished private and public construction projects (Ting, Khoo  & Wong, 2009; Azman & Adeleke, 2018). The industry has been tarnished by the existence of failed or abandoned projects, resulting in structures collapsing, roads cracking and bridges toppling. These issues have left a bad impression in the minds of the wider public.

Malaysia has seen tremendous progress in its national construction industry since the 1980s, in tandem with the growth of the national and world economy (Takim & Adnan, 2009). There is a need and urgency to prevent the failure of projects which can be attributed to poor project management practices (Azman & Adeleke, 2018; Ting, Khoo & Wong, 2009). Today, projects are far more complicated than ever before due to large capital investments involving multiple disciplines, widely dispersed project participants, tighter schedules, stringent quality standards, escalating cost, environmental shocks and increasing stakeholder power (Adeyemi, 2013; Azman & Adeleke, 2018). This is where the project manager's role and performance become so important, and makes the project manager a key player in the construction industry. Presently, most project managers in Malaysia come from a wide range of professional disciplines, and no one individual can claim to be the top-flight 'ideal' project manager (Tan, 2016). Hence, it is important for the project manager in the Malaysia construction industry to be knowledgeable and have the required knowledge for application of the tools and techniques of project management practices.

The Malaysia construction and development industries are significant and legitimate sectors of the economy, making significant contributions to the national economy (Azman & Adeleke, 2018; Hillebrandt, 2000), It has been recognised that they act as promoters and accelerators for the development of other industries in the country (Morris, 2013) and can be used to advance entrepreneurship and technology transfer (Azman & Adeleke, 2018).

This study can potentially provide useful insights regarding the codification of project management practices for Malaysia's construction and development industries. It can also provide advice on the most suitable competency components

for Malaysia's construction and development industries, as some components might not be relevant or, worse, bear negative influence. The formal hierarchy of authority (centralisation) and formal reporting and documentation (formalisation), both the main dimensions used to measure bureaucracy (Weber, 1947), are often used as independent variables for the measurement of bureaucracy. There are a lot of scholars who link bureaucracy to formalisation and centralisation as the characteristics of bureaucracy, and the researcher decided to follow the path of those scholars that have investigated formalisation and centralisation together. The Weberian bureaucracy theory has been summarised into these two essential elements by Ekaterini (2010) and Duhoux at el. (2018). The first is established guidelines for rational legal decision making governing the organisation and its members (formalisation) and second is structuring an organisation into a hierarchy (centralisation). Figure 1.1 shows the relationship between bureaucratic codified project management practices and project performance
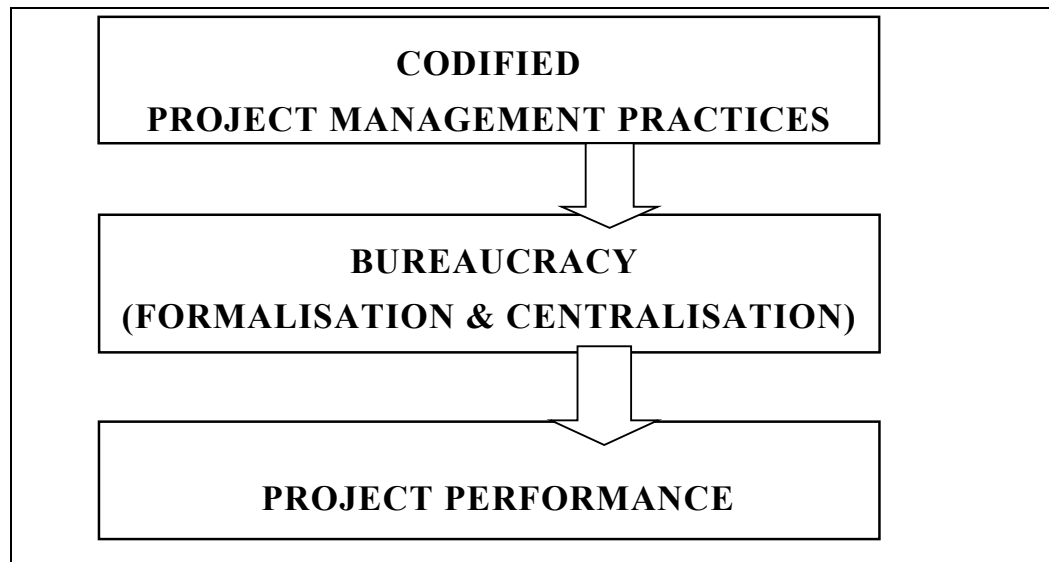


Figure 1-1    The relationship between bureaucratisation codified project management practices and project performance.
(Sources: Author)

After mapping the five most popular project management practices in the world (as detailed in Chapter 2), the Project Management Body of Knowledge (PMBOK Guide) was found to be the most suitable for this study to represent project management practices (Westland, 2019). The 47 project management processes identified in the PMBOK Guide (2018) are further grouped into 10 separate knowledge areas. A knowledge area represents a complete set of concepts, terms, and activities that make up a professional field, project management field, or area of specialisation. These 10 knowledge areas are used on most projects most of the time. Project teams will utilise these 10 knowledge areas and other knowledge areas, as appropriate for their specific project (Westland, 2019). The 10 knowledge areas are: integration management, scope management, time management, quality management, human resource management, communications management, risk management, procurement management and stakeholder management.

## 1.3    Research Objective

This study seeks to examine the relationship of the bureaucratisation of codified project management practices with project performance in Malaysia's construction and development industries. It also aims to resolve, without any pre-judgement, the two contradictory points of view that the bureaucratisation of codifies project management practices may be beneficial or detrimental for project performance, so as to clarify the suitability of these practices in large organisations within Malaysia construction and development industries.

Bureaucracy is examined along two dimensions: formalisation and centralisation, where formalisation refers to formal reporting and documentation, and centralisation refers to the formal hierarchy of authority. Respondents in this study

are project managers employed by large organisations in Malaysia's construction and development industries. These organisations are either publicly-listed companies or government bodies operating nationally.

The competency components of the codified project management practices for this study were chosen from the 10 components of PMBOK (Project Management Institute, 2017; Picciotto & Towards, 2020), as PMBOK is widely implemented around the world. Each of the components of PMBOK were also mapped to other project management knowledge bodies (Méndez, 2007). The main objective in this research is to examine the relationship between the bureaucratisation of the 10 competency components and project performance

More specifically, the research objectives of the study are:

1.  To determine whether the 10 competency components display bureaucracy (i.e. high formalisation and high centralisation)

2.  To examine the relationship between the bureaucratisation of the 10 competency components and project performance.

    2a.  Formalisation of the 10 competency components and project performance.

    2b.  Centralisation of the 10 competency components and project performance.

**1.4     Significance of the Study**

The Malaysian construction industry has seen tremendous change since independence. As competition intensifies, leading construction organisations need to be more active in enhancing the position of their project managers by improving their performance. Earlier research has demonstrated that findings such as these can be valuable to global associations such as the Project Management Institute (PMI), the International Project Management Association (IPMA) and the International Organisation for Standardization (ISO) when developing their bodies of knowledge and process-based standards. In addition, construction companies can use the results presented in this study when implementing their self-tailored project management methodologies or when trying to align generic principle-based standards of managing construction projects, such as PMI's Construction Extension to the PMBOK Guide.

The use of codified project management practices in Malaysia is still at an early stage. This study can potentially provide useful insights regarding the codification of best practices for Malaysia's construction and development industries. It can also provide advice on the most suitable competency components for Malaysia's construction and development's industries, as some components might not be relevant or, worse, bear negative influence.

The use of codified project management practices is also crucial and vital for the realisation of the objectives of Malaysia's Shared Prosperity Vision 2030, as the construction industry is one of the main sectors that contributes to the national economy and serves as the engine of growth (Memon et al., 2013). At the same time, the construction and development industries are also the highest contributor to economic expansion (Doloi et al., 2012; Westland, 2018). Therefore, effect of the

bureaucratisation of project management best practices on project performance in Malaysia's construction and development industries deserves our attention. Broadly, this study aims to provide an advice or guidance to Malaysia's construction and development industries which of the 10 competency components should be made bureaucratic, i.e., high formalisation and high centralisation for the enhancement of the project performance.

## 1.5    Scope of the Study

This study was conducted with project managers from 15 large publicly-listed companies and public organisations involved in the construction and property development industries across Malaysia.

## 1.6    Research Methodology and Analysis Methods

Research data were collected through surveys using a questionnaire completed by respondents. This approach has greater generalisability and external reliability (Churchill & Iacobucci, 2006; Brewster, Mayrhofer & Farndale, 2018). It also provides access to an extensive collection of variables (Ma, 2007; Verma & Verma, 2020). Furthermore, it is convenient, fast, and cost-effective (Zikmund, 2000; Creswell & Creswell, 2018).

This research reflects a quantitative approach focused on deductive reasoning (Sekaran & Bougie, 2013; Creswell & Creswell, 2018). For this research Smart PLS-SEM model (Hair et al., 2019) was used for the study and evaluation with two stages involving the measuring model and structural model.

## 1.7    The Thesis outlines

There are five chapters in the study. An overview of every chapter is as follows:

Chapter 1:  Introduction

This chapter explains why the research area has been chosen for study. It contains the research background, problem statement, research questions, objectives of the research, the significance of the study, and the thesis outline.

Chapter 2: Literature Review

This chapter examines the academic literature surrounding bureaucracy, formalisation and centralisation, and project management. It focuses on definitions and historical development with a detailed literature review on the development and evolution of bureaucracy, formalisation, centralisation and project management practices that have been implemented globally.

Chapter 3:  Research Methodology

This chapter discusses the research design, data collection methods, respondents, pilot studies, the reliability and validity of data, and analysis methods. It provides detailed descriptions of the methodology and the data analysis tool adopted in conducting this research.

Chapter 4:  Data Analysis and Results

This chapter describes the data obtained via questionnaires. Data were collected through the quantitative methodology and analysed using descriptive analysis, path coefficient analysis, factor analysis, analysis of reliability and

regression, and the identification of R square values through Smart-PLS. A summary of the relationship between formalisation and centralisation for each competency component and project performance with the hypothesis testing ends this chapter.

Chapter 5: Discussion of Findings

This chapter addresses and explains the interpretation of the results and addresses in detail the hypotheses that emerge from the analysis of the data.

Chapter 6: Recommendations and Conclusions

This chapter finalises the thesis through a summary of limitations and findings and contains suggestions for future research. The results address the research's contribution to academia and practical advice for stakeholders involved.

**CHAPTER 2**

**LITERATURE REVIEW**

## 2.1    Introduction

This chapter provides the literature review to illustrate the interpretations and associations between the variables employed in the analysis. It seeks to develop a conceptual framework for the study. The chapter starts with an examination of the concepts of bureaucracy, formalisation, and centralisation, before moving on to look at the creation of project management practices and the body of knowledge for components of competency. The relationship between bureaucracy in the practices of project management, and project performance, will be discussed, and the chapter will conclude with a discussion of the theoretical research framework and the development of the hypotheses to achieve the study's goals.

## 2.2    Definition and Concept of Bureaucracy

"Bureaucracy is like the icy surface that glazes over the frigid ocean. Small cracks can make enough progress for a ship to pass. When sitting still, you risk getting stuck. However, if you gradually break up the ice as you go, you can keep moving forward. Instead of surrendering to bureaucracy, take it upon yourself to break it. Breakthrough bureaucracy is the hard work whenever you are trying to make it take place" (Powell, 1983).

The Oxford and Cambridge dictionaries define 'bureaucracy as a government system in which most crucial decisions are taken by government officials rather than

elected representatives. It is a structure for monitoring or administering a country, corporation, or organisation run by many employed officials who carefully follow the laws.

Max Weber (1864-1920), a German sociologist and political economist, was the first to formalise bureaucracy's ideal concept. He perceived bureaucracy as a type of organisational structure associated with the advent of modern society and as a method of governing and organising carried out from the workplace (Cunha & Rodrigues, 2002; Ferreira, Neves, & Caetano, 2004; Rost & Graetzer, 2014; Serpa, 2018; Souza, 2017). According to Weber, bureaucracy involves a formal and hierarchical organisational structure with the impersonal application of laws and rules. Organisational leaders are officially assigned authorities and duties, and career paths are established. He further describes that bureaucracy has been seen as an effective method of organising capitalist corporations (Florian, 2018; Godoi, Silva & Cardoso, 2017). Weber further expanded his concept of bureaucracy, highlighting the following interrelated characteristics of organisations, as shown in Figure 2.1:

(1)     The proposed division of work into official areas of expertise, where daily work, formal hierarchical patterns, and employment are regulated.

(2)     A hierarchy of organisations within which authority oscillates from above and the flow of information comes from below.

(3)     Assessment and selection of employees for their technical competence.

(4)     Formal, written documents or reports that reflect the company's information and allows for future action and transparency for past acts.

(5)     Division of works with high specialisation of the functions to perform.

(6)     the creation of a regular career for an employee over time.

(7)     Separation of ownership and employee function.

(8)     Employees receive regular wages (stability of wages and retirement income upon retirement).
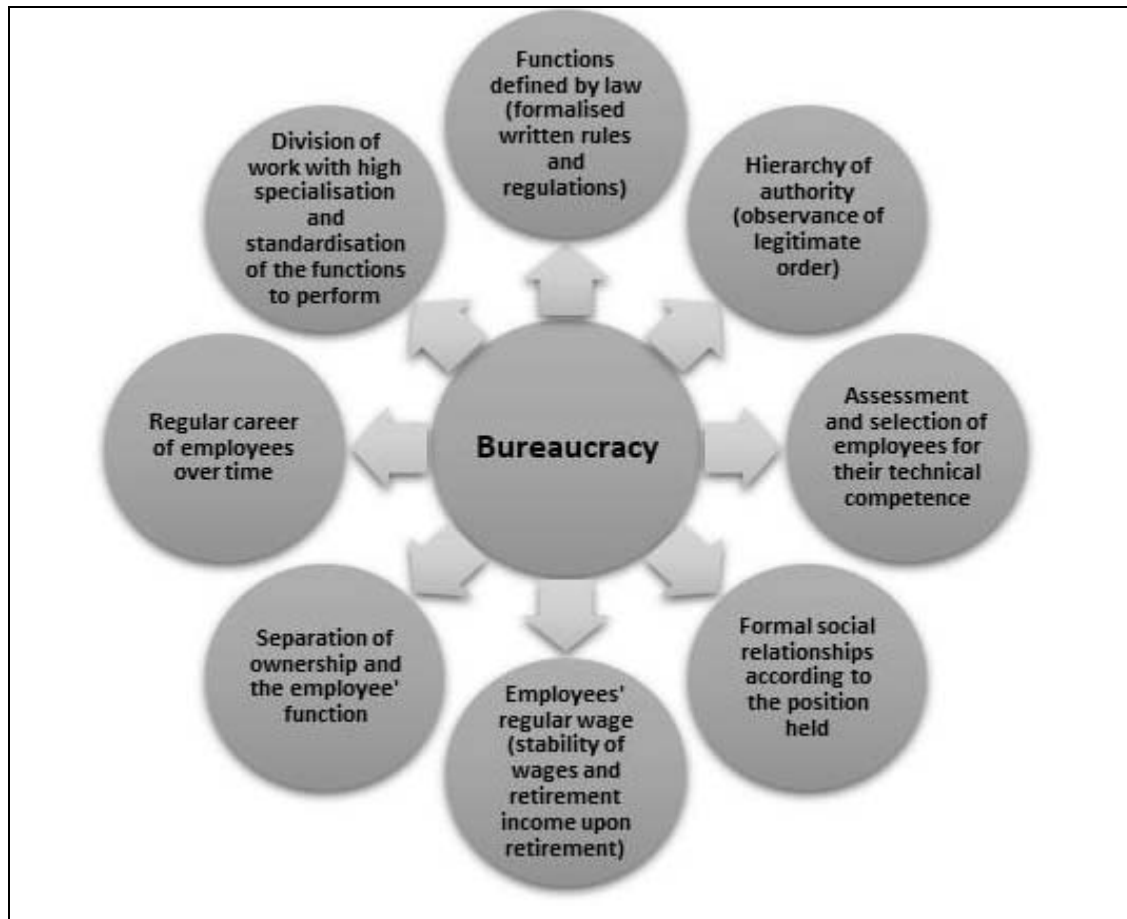


Figure 2-1     Characteristics of bureaucratic administration.
               Source: Adapted from Ferreira, Neves & Caetano, 2004, pp. 24 & 25

Bureaucracy is a widely disseminated concept in sociology and in organisational theory studies, and currently has an image where the negative aspects are often highlighted. However, for Max Weber, bureaucracy has very specific features that differ, in varied situations, from the representation and application often ascribed to this model of organisational administration. Weber sees bureaucracy as

the ideal type of theoretical, conceptual framework developed by studying a particular phenomenon's characteristics and behaviour type (Florian, 2018; Serpa, 2018; Ang, 2016), in the sense that it is a scheme composed of theorised features with which reality may compare. For Weber, impersonality and formality, ensured by bureaucratic rationalisation, guarantees that organisational objectives are not confused with personal motivations or other interests (Godoi et al., 2017). Impersonality and formality allows for dealing with situations and not exactly with people, treating all in the same formal way (Cour, 2018; Cruz, 1995). Furthermore, it increases predictability in any organisation (Ferreira, 2004; Serpa, 2018).

Figure 2.1 shows that there are several variables for measuring bureaucracy, and it is not possible to investigate all the characteristics of bureaucracy simultaneously in a single research study. Hence, the researcher has decided to follow the path of many scholars (such as Hinings and Lee, 1976; Goodsell, 2005; Panday, 2017; Chipea & Banciu, 2013; Widyastuti, 2017; Labolo and Indrayani, 2017; Contandriopoulos, Perroux & Duhoux, 2018) who have investigated formalisation and centralisation together as the main characteristics and the most common variables that have been used to measure bureaucratic structures. Centralisation occurs when "the power to make decisions is exercised at the upper levels of the organizational hierarchy" (Andrews et al., 2009). While formalisation is the "rules covering the rights and duties of positional incumbents and procedures for dealing with work situations" (Klaus & Waeger 2017) that are specified in official records and govern the whole organisation (Gibson, Dunlop, & Cordery 2019; Brewer & Walker 2009; Pollitt 2009).

In summary, the Weberian bureaucratic theory for this study can be summarised and concluded into two essential elements. First, it involves structuring

an organisation into a hierarchy, representing a clear line of authority that enables an individual to know who his immediate supervisor is directly accountable to (Ekaterini, 2010; Klaus & Waeger 2017). This can be labelled as centralisation. In this capacity, bureaucrats exercise their authority exclusively because they hold public office. Second, they establish guidelines for rational, legal decision-making, governing the organisation and its members (Contandriopoulos, Perroux & Duhoux, 2018). Formalisation can be conceived as both a process and an outcome. As an outcome, it is the extent to which specific procedures and rules prescribe behaviour within a team. Formalisation has to do with what Dalton et al. (2018) call the structuring as opposed to the structural components of organisational structure. In that capacity, bureaucrats exercise authority with well-defined rules and regulations (Gibson, Dunlop, & Cordery 2019).

The Weberian bureaucratic theory and its concepts have been praised by the well-known scholar Gay (2000). In his book 'In Praise of bureaucracy', Gay (2000) defines bureaucracy as a system of governing and organising from an office established by formal (formalisation) and hierarchical structures, with an impersonal application of laws and regulations. Where officials and roles are officially assigned to be representatives of the organisation, which explicitly prescribe career paths (centralisation), it is an efficient form of organisation adopted by capitalist enterprises.

Formalisation, as claimed by Draft (1965), Gibson, Dunlop, and Cordery (2019), and Contandriopoulos, Perroux and Duhoux (2018), refers to the use of written documentation in the organisation, and how it indicates the extent to which the job tasks are defined by standard rules and procedures, how the roles of the

organisation are structured, and how the activities of employees are governed by rules and procedures (Ang, 2016; Michaels, 1988).

Centralisation involves the concentration of decision-making power in roles and responsibilities at the top level (Daft, 1995; Klaus & Waeger 2017; Hage & Aiken, 1967; Jones, 2013). According to Ven and Ferry (1980), Klaus and Waeger (2017) and Ekaterini (2010), the organisational unit is considered to be centralised when most decisions are made hierarchically. Hage and Aiken (1967) view centralisation as having to do with how control is distributed within the organisation's hierarchy how workers are able to participate in decision-making.

In summary, bureaucracy refers to a set of fixed rules and regulations and a clearly defined hierarchy within an organisation or government office. Work is divided between technical experts dedicating their full capacity to the organisation, and whose activities are regulated by rational rules, written documents and a clear hierarchy (Cour, 2018; Cunha & Cunha, 2002; Hull, 2012; Olson, 1991; Serpa, 2016). It can also be an analytical tool for carrying out an elected leader's leadership within a political party, an expression of cultural values, and governance with inherent values in sociology associated with low corruption (Gay, 2000). The essential functioning of the bureaucratic model for an organisation with specific laws, regulations, powers, and functions have contributed to the successful adoption and implementation of bureaucratic structures today (Bosk, 2007; Gay, 2000; Serpa, 2016).

## 2.3    The History and Development of Bureaucracy

Bureaucracy has come a long way since its first development around 10,000 years ago, taking the hierarchy and the imposition of order and discipline as bureaucracy (Bozeman, 2000) as its elements. The emergence of bureaucracy began when the growing class used clay tablets for harvesting and spoiling. Bureaucracy then took shape in the Roman Empire, where the hierarchy of regional proconsuls and their administrators were established. In ancient China, the Han Dynasty developed a complicated bureaucracy based on the learnings of Confucianism, which stressed the importance of religious ceremonies in family and political relations (Gay & Vikkelso, 2017).

The term 'bureaucracy' originated in the 4th century B.C. (1712, Gurnay). The term 'bureaucracy' is of French descent and combines the English word 'bureau' with the Greek word 'kratos', where the bureau stands for desk or office, and 'kratos' means rules for political power or law. Halsey (1977) suggests that the term 'bureaucracy' was coined in the middle of the 18th century. By the middle of the 19th century, the industrialised world had widely accepted bureaucratic structures of administration, as thinkers such as John Stuart Mill (1806-1873) and Karl Marx (1818-1883) began to theorise the economic roles and power structures of modern society. Work on organisational theories by the founding father of bureaucracy, Max Weber (1864-1920), who was the first to recognise bureaucracy as an essential component of modernity, has been translated into English since the late 1940s. By the end of the 19th century, bureaucratic forms of administration had extended its reach from the government to other large-scale organisations (Goodsell, 2005; Kalberg, 2017; Rosser, 2018).

The bureaucracy model developed by Weber and further developed in the early 20th century consists of some essential details common to the modern business structure, which are seen as the social manifestation of different value systems (Rosser, 2018). It is not just a statement of formal rules, but also of the idea that office ethics implies a form of practical wisdom that functions as a gift for the organisation (Sennett, 2006; Serpa, Sandro & Carlos, 2018).

Several scholars argued that during the period between World War 2 and the late 1970s, among other things, the bureaucratising organisation was a record-keeping, reporting, dehumanising, overly complicated, inefficient, or overly rigid organisation (Gay & Vikkelso, 2017; Gay, 2000). These scholars wanted to seek a replacement system, which resulted in a post-bureaucratic situation which was interpreted as an extension of control that employed a horizontal structure with decentralised power that enabled employee empowerment (Clegget, 2011; Serpa, Sandro & Carlos, 2018). Unfortunately, these claims have not been consistent with evidence across key territories of change until today, as the trend towards increased bureaucratisation has continued (Hull, 2012). The trend continues because nothing can properly replace the structural system of bureaucracy (Rosser, 2018; Shannon, 2007). After all, it offers a stable, sustainable, and reliable institutional and governance arrangement in the public, private, and non-profit sectors (Bosk, 2007; Rosser, 2018). Most of today's organisations still rely on bureaucratic systems for managing information, processing records, and managing complex systems (Goodsell, 2005), although the widespread use of electronic databases is transforming the way bureaucracy operates (Gay & Vikkelso, 2017).

Therefore, despite the above, it is reasonable to assume that Weberian bureaucracy is the most effective and logical way to organise human activities and