# ACCOUNTABILITY PRACTICES IN PUBLIC PRIVATE PARTNERSHIPS: ACTOR NETWORK THEORY'S PERSPECTIVE

BY

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## **ABSTRACT**

Globally, Public Private Partnerships (PPP) is a widely used mode of providing public infrastructure. This study seeks to understand the accountability practices and implications of the concession agreement (CA) on accounting and accountability in PPP arrangements. Using an interpretive approach, data were collected through 25 semistructured interviews with participants from private sector providers, public sector clients (MOHE, IIUM and UiTM) and PPP monitoring agency (UKAS), and reviews of relevant documents. The concept of public accountability is used to conceptualise the relationships and collaboration among multiple experts as actants from the government and the private sector. The PPP performance relies on the contribution made by experts. This study also revealed that communication and adherence to the CA are critical for good collaboration. The findings show the ways in which accountability is being practised in PPP implementation as evidenced by the vital roles of experts, the collaboration of actants within the SPV and between the SPV and the public sector. Drawing on the ANT perspective, this study notes differences in accountability translation during the three phases of PPP projects. During the pre-construction stage, where various negotiation takes place, the translation process centres on the problematisation moment, although interessement, enrolment and mobilisation moments are also present. In the construction stage, when the facilities are constructed, the four translation moments involve greater emphasis on problematisation and interessement moments. In the final stage (maintenance period), which is the longest phase, the translation process focusses on the interessement and enrolment moments. This study also reveals that accountability practices are fostered by collaboration among experts, especially technical and financial experts, in ensuring the on-time completion of a PPP project. Contrary to the notion that a contract is always inadequate to manage PPP projects, this study reveals that the CA is the leading reference that shapes the execution of PPP projects. KPIs are vital components of the CA and align the interests of experts in the PPP project. In light of the above findings, this study contributes to the limited literature on the role of experts and CA on accountability in PPP. It illuminates the importance of collaborative arrangements in PPP that influence the ways in which accountability is discharged to the public.

## ملخص البحث

على المستوى العالمي، تُعد الشِّر اكات بين القطاعين العام والخاص (PPP) وسيلة تستخدم على نطاق واسع لتوفير البنية التحتية العامة. لذلك، تسعى هذه الدراسة إلى فهم ممارسات الْمُساءَلة والآثار المترتبة على اتفاقية الامتياز (CA) على المحاسبة والمساءلة في ترتيبات الشِّراكات بين القطاعين العام والخاص. وبناء على المنهج التفسيري، لقد تم جمع البيانات من خلال 25 مقابَلة شبه منظمة مع مشاركين من مزوّدي القطاع الخاص، و عملاء القطاع العام (MOHE ، و MUIH ، و UiTM )، ووكالة المراقبة لـ PPP (UKAS)، ومراجعات للوثائق ذات الصلة. يستخدم مفهوم المساءلة العامة لتصور العلاقات والتعاون بين خبراء متعددين كعناصر فاعلة من الحكومة والقطاع الخاص. ويعتمد أداء الشِّراكات بين القطاعين العام والخاص على مساهمة من قبل الخبراء. تكشف هذه الدراسة أن التواصل والالتزام باتفاقيّة الامتياز (CA) أمران ضروريان للتعاون الجيد. وتُظهر النتائجُ الطرقَ التي تُمارَس بها المساءلة في تنفيذ PPP كما يتّضح من الأدوار الحيوية للخبراء، وتعاون الجهات الفاعلة داخل SPV وبين SPV والقطاع العام. واعتمادا على منظور ANT، تلاحظ هذه الدراسة الاختلافات في ترجمة المساءلة خلال المراحل الثلاث لمشاريع PPP. وذلك خلال مرحلة ما قبل البناء، بحيث تجري مفاوضات مختلفة، وتركز عملية الترجمة في لحظة إشكالية على الرغم من وجود لحظات توقف، وتسجيل، وحشد؛ وفي مرحلة البناء، وعندما يتم إنشاء المرافق، تنطوي لحظات الترجمات الأربع على زيادة التركيز على الإشكالية ولحظات التوقف؛ وفي المرحلة النهائية (فترة الصيانة)، وهي أطول مرحلة حيث تتركّز عملية الترجمة على فترات التوقف والتسجيل. تكشف هذه الدراسة أيضًا أن ممارسات المساءلة يتم تعزيزها من خلال التعاون بين الخبراء، وخاصة الخبراء التقنيين والماليين، من أجل ضمان إكمال مشروع PPP في الوقت المحدد. على عكس الفكرة القائلة بأن العقد لا يكفى دائمًا لإدارة مشاريع PPP، تكشف هذه الدراسة أن CA هو المرجع الرئيسي الذي يصوغ تنفيذ مشاريع PPP. والمؤشرات الرئيسية للأداء (KPIs) هي المكونات الحيوية لـ CA حيث توفِّق بين مصالح الخبراء في مشروع PPP. في ضوء النتائج المذكورة أعلاه، تساهم هذه الدراسة في إضافة شيء جديد إلى الأدبيات المحدودة حول دور الخبراء واتفاقية الامتياز (CA) في المساءلة في PPP. كما أنها تبرز أهمية الترتيبات التعاونية في PPP التي تؤثر على الطرق التي يتم بها إبراء ذمة الجمهور.

## **APPROVAL PAGE**

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## **DECLARATION**

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## LIST OF ABBREVIATIONS

**ABC Activity Based Costing** Actor Network Theory **ANT Concession Agreement** CA Decision Support System **CPLD** Critical Path Method **CPM Economic Planning Unit EPU GPM** Georges Perrin method IC Independent Checker

ICT Information Communication Technology
IIUM International Islamic University of Malaysia

KPI Key Performance Indicator MAS Unit Kerjasama Awam Swasta

MBS Value Management

MOHE Ministry of Higher Education Malaysia

NPAS Universiti Teknologi MARA NPM Obligatory Passage Point

NS Needs Statement

OPP Obligatory Passage Point

PAC Value for Money

PMIS Project Management Information System

RM Relationship Management SOP Activity-Based Costing SPV Special Purpose Vehicle

TOC Terms of Contract

UiTM Universiti Teknologi MARA UKAS Unit Kerjasama Awam Swasta

VE Value Engineering
VFM Value for Money
VM Value Management

## **CHAPTER ONE**

## INTRODUCTION

#### 1.1 BACKGROUND OF THE STUDY

A Public Private Partnership (PPPs) is the provision of services and facilities by a private sector consortium, called a special purpose vehicle (SPV), on behalf of the government (Spackman, 2002; Smyth & Edkins, 2007; Hodge & Greve, 2007; Demirag & Khadaroo, 2008). PPP differs from conventional contracts because it involves a longer duration than a one-time relationship which is normally practised in a conventional contract (Forrer et al., 2010).

The SPV is created specifically for PPP projects and is responsible for financing, designing, and constructing facilities, providing services and maintenance throughout the agreed term of the contract (English, 2007). In addition, the SPV is a framework that legally links the private sector participants with the public sector (Chowdhury et al., 2011). Private sector participants comprise financiers, construction contractors, facilities management operators.

The contractual period is typically between 15 and 30 years, starting from the signing of the concession agreement between the government and the SPV. It covers a lengthy period of pre-construction, construction and post-construction. Pre-construction is the negotiation phase between government representatives and the awarded concession company. The construction phase is the period when the facilities are built and usually takes three years. Post-construction refers to the maintenance period, which takes up to 20 years of the concession period. The unforeseeable future due to the

complexity of the PPP structure and the long duration of the PPP agreement (Shen et al., 2006; Wilson et al., 2010) may result in the possibility of partnership problems among the parties involved (Abednego & Ogunlana, 2006). The complexity of the PPP structure is due to the involvement of multiple experts from both government and private entities. Prior to competitive tendering, technical experts need to prepare a technical report to secure the financing (Grimsey & Lewis, 2002). The financial experts from the government side play their role during the negotiation stage of the PPP arrangement in ensuring that the approved design will not exceed the approved budget. The financial experts from the private sector play a vital role (Raisbeck, 2008) as they need to prepare a stable internal rate of return (IRR) to secure PPP financing. The role of the insurers and the financial experts from the banks (Wilson et al., 2010) is to make financing decisions on behalf of the financing parties.

The controversial issues in PPP are not limited to the complexities of PPP but also cover inefficiency and questionable cost savings (English et al., 2010). The concern about efficiency is in the management of the concession agreement (CA), particularly on the facilities management arrangements. Even though the said matters may be documented comprehensively, the issue is one of how well actual practice follows the formal guidelines and how efficiency has to be judged by these CA (English et al., 2010).

Given the above complex roles of each party, a sense of accountability is essential in a PPP arrangement. However, a few studies that had been conducted in the United Kingdom found that accountability in PPP is often found to be inadequate (Watson, 2003; English & Guthrie, 2003; English & Guthrie, 2006; Shaoul et al., 2008; Shaoul et al., 2010). It reveals the limited and insufficient contractual terms in PPP contracts (Shaoul et al., 2008) and failure to disclose relevant information in PPP arrangements (English & Guthrie, 2006). In terms of disclosure level, English and

Guthrie (2003) reveal that only 7.9 percent of PPP projects comply with the PPP performance audits for the detailed disclosure. Disclosure is not covered in the current study. However, it should be noted that failure to disclose may result in impaired public accountability practices to the public at large (Watson, 2003).

Hence, further studies are needed to ascertain the level of coordination among various parties that differ in terms of work culture, perceptions and backgrounds (Shen et al., 2006). As a result of such variation, government authorities experience difficulties in balancing the interests of the public and those of the private parties in PPP arrangements (Kurniawan, Ogunlana & Motawa, 2014; Yescombe, 2007). Balancing interests can be realised by the practice of accountability during pre-construction, during construction and the maintenance stage of PPP work. There is a need to have an open governance system through transparent processes and procedures that can be easily accessed by the general public (Kim et al., 2005). Eventually, good collaboration in a project management team, trust, effective leadership, coupled with clear and consistent communication, can be achieved with all stakeholders in PPP arrangements (Forrer et al., 2010).

The focus of this current study is on accountability in complex PPP arrangements from the perspective of Actor Network Theory (ANT) with an emphasis on collaboration and experts. Collaboration among experts from various fields in PPP mechanisms is realised via a consortium with the SPV as coordinator. Using ANT, this study also emphasises the impact of CA on accounting and accountability in PPP. The aim is to understand how and why collaboration, experts and CA have influenced accountability practices in PPP.

#### 1.2 PROBLEM STATEMENT

The PPP mechanism involves financing, constructing and maintaining public facilities in a single long-term contract. In order to accomplish the three tasks, the appointed SPV is obliged to search for funds to finance PPP projects, to manage the construction work and perform necessary maintenance work on PPP facilities. Such essential and challenging efforts require experts to collaborate to ensure the goal of the PPP project is achieved successfully. This collaboration, in turn, needs to be supported by accountability in PPP (Pongsiri, 2002).

The concern over PPP accountability stems from the unique relationship between the government and private consortium in PPP (Forrer et al., 2010). The government retains ultimate responsibility for the delivery of the service and at the same time, becomes a partner with the private sector in decision-making and delivery (Grimsey & Lewis, 2004; Yescombe, 2007). Consequently, maintaining a good relationship between the government and the private consortium is essential for public facility delivery.

The emphasis on accountability in PPP is also between the members of the private consortium who manage the construction. There are unfavourable reports of poor relationships within the PPP (Akintoye et al., 2003; Markom & Engku Ali 2012; Abednego & Ogunlana, 2006). Markom and Engku Ali (2012) report that the failure of the PPP project via Built-Operate-Transfer (BOT) in Malaysia is due to problems in administration (internal problem), particularly the lack of transparency in the project procurement process. Abednego and Ogunlana (2006) stress that management problems are one of the challenges of the PPP procurement system, and Woon (1989) claims that efficient management is insufficient to be incorporated in privatisation in Malaysia.

The second reason is the lack of understanding among parties in PPP. The period of PPP arrangement from the start of PPP procurement until the maintenance phase requires a considerable amount of communication between various parties. Due to the complex structure of PPP arrangements, experts must have an understanding of each other's role. Failure to acknowledge the limitation of their roles may result in impaired relationships and eventually, poor PPP performance. A report by the Auditor General of Malaysia revealed that the excess of PPP expenditure made by the Ministry of Education was beyond the approved budget by 16.85 million in 2015. The occurrence of cost-overruns in PPP contracts is possibly due to delays in delivery of government grants (Markom & Engku Ali, 2012), which might be improved by having a better understanding among parties via efficient communication.

The third reason is the unclear CA reported by several researchers (Markom & Engku Ali, 2012; Abdul Aziz & Jahn Kassim, 2011; Hood et al., 2006, Tanaka et al., 2005). The non-clarity issue exists due to the standard documents being given to all parties involved in the PPP project (Markom & Engku Ali, 2012). Abdul Aziz and Jahn Kassim (2011) report that the reason for the failure of PPP in Malaysia is unclear concession agreements. Similarly, Abdul Rashid (2013) claims that the absence of a clause in the CA about the participation of the private sector's banking and other financial institutions in funding PPP projects is another drawback of the CA.

The above vague concession agreements may lead to the occurrence of variation orders (VO) and inadequate disclosure of PPP to the general public. The VO refers to construction risks which occur in both conventional government procurements (Grimsey & Lewis, 2004) and PPP procurement. In PPP procurement, the liability for VO is entirely shouldered by the private sector (Bing et al., 2005). Besides being required to rectify VO issues, the private sector also suffered several penalties for the failure to reach the

prescribed KPI. In the absence of a detailed clause in the CA, this would be unfair in the private sector. As a result, the consequences of the lack of transparency in PPP (Tanaka et al., 2005) may impair value to the overall cost of PPP performance.

As the focus of the current study is on experts, collaboration and the CA, the use of ANT, which combines both human and non-human elements in the interaction, can explain accountability in PPP. This forms the primary concern of the current study. ANT is suitable for this study because it explores how experts (human and non-human actants) interact and collaborate for better public accountability. ANT can also explain the impact of CA on accountability and accountability in the PPP mechanism. Based on the above arguments, there is a need for research on public-private collaborations (Bingham, O'Leary & Carlson, 2008) to coordinate and reconcile the role of multiple parties in PPP arrangements and to enhance the quality of accountability practices.

## 1.3 MOTIVATIONS FOR THE RESEARCH

Two factors motivate this research. The first factor is public accountability (Willems, 2014; Shah, 2006; Cameron, 2004; Bovens, 2003) specifically in the context of PPP in higher learning institutions. The impact of facilities development in institutions of higher learning via the PPP mode on public money is significant. According to the report by Treasury of Malaysia (2017), the education sector allocated 95 percent of the total national budget for operating expenditure from 2013 until 2017, which results in limited reserve for development expenditure. In UiTM, as a leading public higher learning institution, an average of RM2,200,000 million has been spent to date to finance PPP projects. This suggests that a significant amount of public money has been spent on constructing PPP facilities in higher learning institutions, and a significant amount of public money is used for

the maintenance of future PPP projects. This indicates that a study on the accountability relationship within PPP arrangements in higher learning institutions is timely. The second reason is due to the call for more studies on the importance of the three elements in PPP arrangement, namely experts (Power,1997; Scapen et al., 2003), collaboration (Smyth & Edkins, 2007; Sturmfels, 2008) and CA (Spackman, 2002; Abdul Aziz & Jahn Kassim, 2011; Sciulli, 2008; Dewulf et al., 2012; Barlow & Koberle-Gaiser, 2009; Bao et al., 2015). The role of experts is crucial in the PPP arrangement due to their technical (Grimsey & Lewis, 2002; Raisbeck, 2008) and financial knowledge (Sciulli (2008). The collaborative relationship is key to the PPP success (Forrer et al.,2010) and among the most critical issues in prior studies (Barlow & Koberle-Gaiser, 2009). Further, studies have sighted the significant role of CA of PPP (Spackman, 2002; Abdul Aziz & Jahn Kassim, 2011; Sciulli, 2008). The amount of public money involved in constructing and maintaining the PPP facilities, the call for more government scrutiny on PPP projects suggests that the close analysis of these elements are necessary. These elements are elaborated in chapters two and three.

## 1.4 RESEARCH OBJECTIVES AND RESEARCH QUESTIONS

The objectives of the research are:

- i) To understand the role of experts within PPP collaborative arrangement in accountability practices;
- ii) To understand the implications of CA of PPP on accounting and accountability.

This research is undertaken to answer the following research questions:

- i) How and why the role of experts within the collaborative arrangement among various parties are important in the practice of accountability in PPP?
- ii) How does CA influence accounting and accountability in PPP?

## 1.5 SIGNIFICANCE OF THE STUDY

This study is important in several aspects. Firstly, in the aspect of knowledge contribution, the study provides insights into the significant roles of two technical and financial experts in PPP. Both experts obtain appropriate qualifications and gather practical knowledge which is generated within the field of work and developed through repeated practice. Technical experts are essential at the three stages of PPP: pre-construction, during construction and the maintenance stage. Financial experts are significant in securing the best funding for the PPP project. The role of experts in PPP arrangements is crucial because of the strong dependence on the insights and skills of human capital to accomplish the tasks of the partnerships (Forrer et al., 2010). Consequently, all experts need to collaborate to achieve the PPP goals to develop and maintain PPP facilities.

Secondly, an essential aspect of knowledge contribution is the role played by inscription in protecting the interests of experts. The CA is the text or graphic representation that acts as the main reference for all aspects of PPP implementation, from the design, dispute resolution, mutual understanding and payment to the SPV. Other inscriptions are Key Performance Indicator (KPI), Standard of Operating Procedures (SOP), NS (needs statement) and Statement of Compliance (SOC). The findings show the way experts work with these inscriptions to achieve the PPP goal.

The role of inscription addressed in the current study is to protect the interest of the government, offer the detailed specifications of the concept design, and support mutual understanding among experts. The NS serves the public by clearly stating the specification of facilities required but noting that such specification is subject to certain limits set by the EPU. The purpose of the SOC is to safeguard public money by ensuring that the SPV/OPP follow all specifications of PPP facilities prescribed for them. KPI and SOP are other inscriptions that serve the public in terms of detailed and organised tasks to be followed. The end purpose is to achieve public accountability. In addition to the role of inscription in achieving PPP targets, new knowledge relating to inscription from this study is the stability of inscription. The stability of inscription relates to the interest of the actants being aligned with the interest stated in the inscription (Hanseth & Monteiro, 1997). Stability can be achieved via communication among actants and by hiring more actants in the PPP team. The possible consequences of lack of stability in the inscription are the failure to accomplish organisational targets as a result of communication problems, which, in turn, leads to failure to work around the inscription.

Thirdly, the new knowledge emerging from this study is the role of KPI as a practice within the network of allies. The actants in the current study regard trust as vital to establishing a network of allies. The finding differs from previous studies that conclude that KPI is ceremonial (Lapsley & Wright, 2004; Siti Nabiha & Scapens, 2005; Ferry et al., 2015). In this study, KPI is able to achieve organisational goals due to the efforts of actants towards organisational targets.

The fourth contribution of the current study is its application of ANT. The current study complements other ANT studies on accountability in PPP which adopt the translation process to describe their findings. Robson (1991) also describes his findings via the translation process in ANT by focusing on the roles of accounting and social

change. His study concludes that inscriptions are important to the development of accounting. Robson identifies the mobility, stability and combinability of inscription. The current study describes translation in three phases of PPP construction and all the four moments of translation (problematisation, interessement, enrolment and mobilisation) succeed in each of the phases mentioned without fail. Failure in translation means the translation moment cannot move on to the next moment due to certain barriers that prohibit the translation moment (Mahring et al., 2004).

The fifth contribution of the current study is in terms of practical application. The knowledge gained from experts and collaboration in PPP can be applied to practice in an attempt to strengthen the PPP workforce in either the public or private sector. Based on the findings of the current practice of the CA, revisions of the contents of the CA can be made and can be enhanced further. The success of PPP implementation depends on the extent of collaboration among experts in PPP, together with strong support from the government.

This study also offers methodological contributions by using qualitative data by means of the Actor Network Theory (ANT). Most previous studies on PPP/PFI, particularly in Malaysia, have used quantitative or a combination of both qualitative and quantitative research methods. The qualitative approaches are appropriate to be used in the current study because there is a need to understand organisations, groups, and individuals (Strauss & Corbin, 1998). In the current study, each participant has a different background from public to private entities. The researcher was able to gain understanding via interactive relationships built with respondents and thus obtain first-hand experience providing valuable data (Duffy, 1987). The study of the interaction between the various parties in PPP is important in understanding how collaboration accomplishes PPP objectives, eventually ensuring success. Collaboration, effective leadership, clear

communication, effective project management and trust are important for an effective collaboration in PPP (Forrer et al., 2010). This study uses the ANT diagram to explain the interconnection among parties (known as actants and non-actants) involved in the current study.

#### 1.6 STRUCTURE OF THE THESIS

The thesis contains eight chapters. The first chapter provides the background of the study, which comprises the problem statement, the purpose for which the research is conducted, theoretical framework, research methodology and significance of the research findings.

The New Public Management (NPM) and Public Private Partnerships (PPP) in Malaysia are elaborated in chapter two. The NPM is the starting point for the introduction of PPP in Malaysia. The source and the chronology of events and steps undertaken by the government in implementing PPP are explained in this chapter. It also explains the concepts of PPP, PPP in Malaysia together with a literature review on PPP related studies.

Chapter Three reviews the concept of accountability. The chapter discusses the philosophical concept of accountability and its importance. Prior studies on partnership collaboration and expertise in PPP arrangements are also discussed. Studies on accountability in PPP are addressed in another subsection of chapter three.

Chapter Four outlines the theoretical framework used in the study. Actor Network Theory (ANT) is used as the leading theory of the research. In addition to findings based on raw data, the analysis is also conducted based on the translation moment in ANT. The four moments of translation, namely problematisation, interressement, enrolment and mobilisation, are explained. The explanation includes

relevant terms used in ANT, such as betrayal, inscription, OPP and irreversibility. Prior studies of ANT application are also included.

The fifth chapter deals with the methodology adopted in this research. The methodology is explained, including the ontological and epistemological assumptions of the research. The case study approach is explained. The site visits and interview questions are then elaborated. Elaboration of the research framework is followed by an overview of the selected cases. The analysis is aided by NVivo 11, the latest version at the time of the study.

Chapter Six focuses on an explanation of the data analysis and findings of the study. Two organisations are chosen as case studies. The participants for such interviews are officers from both institutions, UKAS, MOHE and the clients from IIUM and UiTM. The participants from UiTM and IIUM are senior officers from each institution's Development Unit. The major participants are consultants from separate consultancy firms which form the special purpose vehicle (SPV). This chapter explains the findings gathered based on interview questions aimed to answer three research questions. RQ1 and RQ2 cover the role of experts and collaboration in PPP. These two RQ are supported by eight interview questions (IQs). The first four IQs emphasise the role of experts and another four IQs emphasises on the role of collaboration in PPP implementation. Next is seven IQs aimed to answer the second RQ2 on the impact of CA in accounting and accountability in PPP.

The seventh chapter discusses the case findings. ANT and public accountability concepts are used to inform the case findings. The discussion touches on the role of experts in PPP collaboration, and the CA as inscription. The analysis of findings is also conducted based on the translation moment in ANT in addition to findings based on the role of CA and experts within PPP collaboration. The role of other contractual documents and the way these inscriptions achieve public accountability are also discussed. Chapter seven also