Chapter 109

Anti-Corruption Capabilities of Public E-Procurement Technologies:
Principal-Agent Theory

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ABSTRACT

Public procurement is an important area warranting further attention in government reform, as electronic systems for procurement have enormous potential to help reduce corruption. Public e-Procurement is the use of an Internet or Web-based system by government institutions for the acquisition of goods and services, which can improve transparency and accountability. This chapter discusses different types of e-Procurement technologies with case examples from different countries that demonstrate how the e-Procurement technologies have great potential as the anti-corruption technologies. The chapter reviews the Principal-Agent Theory and discusses other relevant theories including Transaction Cost Theory, Fraud Triangle Theory, Diffusion of Innovation Theory, and the Technology Acceptance Model. Following a discussion of the potential of e-Procurement systems in mitigating corruption, a theoretical research model is proposed for identifying public e-Procurement anti-corruption capabilities.

INTRODUCTION AND BACKGROUND

Governments across the globe have been increasing the adoption of information and communication technologies (ICTs) as tools to enhance transparency and accountability in government (McCue & Roman, 2012; Neupane &Soar et al., 2012). Public e-Procurement is an e-Government tool with the potential to help reform the government procurement systems

(Filho & Mota, 2012) and enhance efficiency, improve the speed and quality of procurement processes, and, importantly, to enhance transparency and accountability (Brun et al., 2010; Wen & Wei, 2007).

Public e-Procurement is defined as the use of ICT such as Internet or web-based systems by government institutions in conducting procurement-related tasks, such as the acquisition of goods, services, and the allocation of work to bidders (Davila,Gupta & Palmer, 2003; Leipold et al., 2004). Vaidya (2007) defined public e-Procurement as an Internet based inter-organisational information system that integrates and automates any parts of procurement processes in order to improve transparency and accountability.

Corruption in public procurement is believed to be rapidly increasing, especially in developing countries. It is a global threat to economic and human development of all nations (Neupane,Soar & Vaidya, 2012a). Public procurement accounts for almost 10 to 15 percent of Gross Domestic Product (GDP) in developed countries and almost 20% of GDP in developing countries (GTN, 2003). The basic principle of public procurement is to acquire the right item at the right time, and at the right price. Developing countries are more vulnerable to fraud and corruption and there is a need for procurement processes to be more transparent and accountable. There are many related aspects of corruption such as unjustified or hidden procurement planning, lack of assessment, political pressure, lack of monitoring capacity, inconsistent cost estimates, and weak professionalization of the bureaucracy of the country (Del Monte & Papagni, 2007; Kolstad & Wiig, 2009; Neupane andSoar et al., 2012; Pellegrini & Gerlagh, 2008; Subedi, 2006; Ware et al., 2012).

Public procurement processes have different phases and each phase has a potential risk for corruption. The three main phases of the public procurement process have been illustrated by Matechak (2002): procurement planning and budgeting, procurement solicitation, and contract award and performance. Szymanski (2007) proposed five stages for setting up structures to fight corruption in public procurement, these were: procurement planning and needs assessments, product design and document preparation, tender processes, contract award and implementation, and accounting and audit. Szymanski identified the most vulnerable areas of corruptions that need assessments as: project specification, bid evaluation, and sub-contracting. Szymanski suggested that the major risks for corruption arise from a lack of transparency, limited access to information, a lack of accountability and a lack of control at each stage of the public procurement process.

The main propose of this Chapter is to expand the existing Body of Knowledge about anti-corruption capabilities of public e-Procurement and to discuss relevant organizational theories, particularly Principal-Agent theory, Technology Acceptance Model, and Transaction Cost theory to identify and explain the relevant variables. The Principal-Agent Theory is considered the most relevant theory to understand the dynamics behind public procurement processes between government and their bidders. The theories of anti-corruption capabilities (Constructs) discusses and justifies why these characteristics play significant and positive roles in order to improve transparency and accountability in public procurement as to reduce the chances of corruption.

The Chapter is structured as follows. Firstly, it discusses the different types of e-Procurement technologies. Secondly, an overview of theoretical concepts in relation to perceived benefits of public e-Procurement has been presented. Next, capabilities of anti-corruption of public e-Procurement based on the theoretical constructs have been presented. Following the discussion of anti-corruption capabilities, the research model is presented. A discussion of the findings and the conclusion is presented in the final section.

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