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Factors of Environment Management Practices Adoptions

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Abstract

There is an increasing growth of customers and regulators requesting enterprises to adopt the Environmental Management Practices (EMP) over the last 15 years and because of this, researchers and practitioners are becoming more interested in this area of study. This paper proposed an integrated model that combines the Theory of Planned Behavior (TPB) and Technology-Organization-Environment Model (TOE), two theories that are most often used in environment and innovation studies. In this paper, a model is created to show the relationship between TOE model, TPB theory and EMP implementation. With 205 valid questionnaires from the Federation of Malaysian Freight Forwarders (FMFF), the author tested the model on SPSS and AMOS. It was found that the environmental factor was the most influential factor affecting the adoption of EMP followed by organizational and technological factors. The entire TOE dimension and TPB theory greatly determines the company's adaptation of EMP. Finally, this study presents some suggestions to make EMP adaptation easier.

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Keywords: environment management practices; TOE model; TPB model

1. Introduction

The foundation of several previous new technology and innovation adoption studies was based on the theoretical frameworks derived from Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA), Ajzen's (1985) Theory of Planned Behaviors (TPB), Theory of Acceptence Model (TAM); Rogers's (1983 and 1995), Diffusion of Innovations (DOI) theory and Tornatzky and Fleischer's (1990) Technological-Organizational-Environmental (TOE) model. Some of these theories are able to explain the organization level of innovation adoption, while others

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focused on the individual acceptance of new technology. This article proposes the integration of TOE model and TPB model for the framework of EMP adoption.

2. Background

2.1. Environment Management Practices (EMP)

An EMP or Environment Management Practices is a tool for an organization to managethe impacts of its activities on the environment. It provides a structured approach to plan and implement environment protection measures. An EMP monitors environmental performance similar to the way a financial management system monitors expenditure and income and enables an organization to regularly check its financial performance. An EMP integrates environmental management into a company's daily operations, long-term planning and other quality management systems (Chavan, 2005; Marimon Viadiu, Casadesús Fa & Heras Saizarbitoria, 2006; Zutshi, Sohal & Adams, 2008). An EMP is one of the tools an organization can use to implement an environmental policy (Ann, Zailani & Wahid, 2006; Chan & Wong, 2006; Fuong, 2010; Harangzó, Kerekes & Zsóka, 2010). An EMP illustrates an extension of the core principles of total quality programs to manage the environment (Florida & Davison, 2001). In other words, an EMP can be described as the systematic application of business management to environmental issues (Florida & Davison, 2001).

2.2. Technology-Organization-Environment (T-O-E)

The Technology-Organization-Environment (TOE) framework of Tornatzky and Fleischer (1990) undertakes a generic set of factors to predict the likelihood of innovations adoption. The theory suggests that innovations adoption is influenced by technology development (Kauffman & Walden, 2001), organizational conditions, business and organizational restructuring (Chatterjee, Grewal & Sambamurthy, 2002), and industrial environment (Kowtha & Choon, 2001).

The Technological context asserts that adoption depends on the collection of technologies inside and outside the firm as well as the application's noticed relative advantage (gains), compatibility (both technical and organizational), complexity (learning curve), trialability (pilot test/experimentation), and observability (visibility/imagination). The Organizational context apprehends firm's business scope, top management support, organizational culture, complexity of managerial structure measured in terms of centralization, formalization, and vertical differentiation and the quality of human resource (Jeyaraj, Rottman & Lacity, 2006; Tornatzky & Fleischer, 1990). The Environmental context facilitates and inhibites the factors in areas of operations. Significant among them are competitive pressure, trading partners' readiness, socio-cultural issues, government encouragement, and technology support infrastructures (Al-Qirim, 2007; Jeyaraj et al., 2006; Scupola, 2003a and 2003b; Zhu & Kramer, 2005).

The major problem of the T-O-E is that the theory is lack of the influences of behavioral, attitudes, awareness and benefits construct on technological and innovation adoption decision (Awa, Emecheta & Ojiabo, 2012). However, integrating the T-O-E with other models such as the TPB, with each theory offering larger number of constructs than the original, provides finer theoretical lenses to the understanding of technological and innovation adoption behavior.

2.3. Theory of Planned Behavior (TPB)

The TPB is an established general theory of social psychology, which emphasizes that specific significant beliefs influence behavioral intentions and subsequent behavior (Ajzen & Fishbein, 1975; Ajzen, 1985; Lin, Hsu, Kuo & Sun, 1999; Netemeyer, Ryn & Ajzen, 1991). The TPB extends the theory of reasoned action (TRA) (Ajzen & Fishbein, 1975) to explain for conditions where individuals do not have control over the situation (Kaiser, Wolfing Kast & Fuhrer, 1999; Pavlou & Chai, 2002). The Theory of Planned Behavior has been used in several studies for examining the intention behavior to adopt innovation towards environment (Kumar, 2012). The theory of planned behavior completes the framework for exploring the factors which influence the decision to engage in behavior