

Chapter 19

A Qualitative Study of Green IT Adoption Within the Philippines Business Process Outsourcing Industry: A Multi-Theory Perspective

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ABSTRACT

This study explores the green IT adoption experience of organizations within the business process outsourcing industry in the Philippines using a multi-theory perspective. Through a multiple case study with three organizations, it presents a holistic account of the factors in green IT adoption. This study shows the usefulness of complementarily deploying adoption theory and offers important theoretical and practical implications for organizations as they extend their BPO operations globally. In this study, the authors discovered that technological and organizational context factors have greater positive impact on Green IT adoption within BPO organizations while environmental context factors have lesser impact in decision-making processes.

INTRODUCTION

Global warming and climate change are serious problems faced by humanity (Mowery et al., 2010). It was caused by business activities such as the exploitation of natural resource (Pavlakis, Alexandry and Sieber, 1996; Walsh, 2011), rise in energy generation and consumption (Platt, 2007; Salehfar and Benson, 1998), carbon emission (Fuchs, 2008) and toxic waste disposal (Harris and McCartor, 2011). The Information Technology (IT) industry is a notorious contributor to the environmental problems,

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which consumes nearly 40 million gigajoules of energy that produces 8 million tons of carbon dioxide annually (Ranganathan, 2010). Significantly, more than 50 million tons of toxic IT waste is improperly disposed of yearly, significantly contributing to pollution (Karin, 2009).

Although IT is a problem to the natural environment, it can also play an important role to solve the growing environmental problems. For example, using telecommuting to replace commuting can reduce millions of tons of greenhouse gasses physically (Fuhr and Pociask, 2011). The United Parcel Service has used IT for route optimization to reduce the traveling distance of its delivery trucks (Watson, Boudreau, Li and Levis, 2010). At this point, there is increasing consideration to address the global environmental problems resulted from IT, decrease the environmental challenges and shift towards sustainability (Jenkin et al., 2011). With the need to address the problems caused by IT and the potential of IT as a solution to environmental problems becoming more widely recognized, Green IT has become an emerging agenda, gaining increasing attention from both researchers and practitioners (Lei and Ngai, 2012). Green IT refers to the practices and processes enabled by information systems (IS) that can enhance the economic and environmental performance of an organization (Melville, 2010). Green IT covers wide range organizational activities such as human and managerial practices relating to the whole cycle of an IT infrastructure (Molla, Cooper, and Pittayachawan, 2011).

Prior studies deal with introducing green IT as a focus area in information systems research. Also, research gaps have been identified. First, most of these studies explore only general green IT and practices (including virtualization, IT end of life management and general data center practices). Only a handful of studies assesses a broad aspect of green IT such as IT procurement, IT working environment, data center operations, IT as low carbon enablers and IT end of life management. Furthermore, green IT is relatively new research topic, several studies developed a research model that predicts the adoption of a wide range of green IT initiatives. Also, many of these studies aggregate green IT adoption experience across multiple industries within a country using quantitative methods. Second, in the perspective of developing countries, there are limited researches on Green IT adoption from small to large organizations. Also, there are limited empirical studies in understanding green IT adoption by developing countries, in spite of some growing number technology diffusions that have taken place in those nations in the recent years (Kartiwi and MacGregor, 2007; Chowdhury, 2003). An understanding of the adoption of Green IT by developing countries is thus significant for both practitioners and academics. Moreover, the contextual situations of countries are arguably different in nature. For example, the maturity of the ICT infrastructure, e-commerce readiness, the degree of government support, and extent of business competitiveness vary considerably, not only between the developed and developing countries but also among developing countries. Furthermore, it would be inappropriate to assume that various dimensions of national culture remain somewhat similar across all developing countries. In fact, distinct cultural differences are noted among developing countries. Hence, it could be argued that qualitative studies focusing on Green IT adoption in some developing countries are not necessarily reflective of the Green IT trends and adoption dynamics of all developing countries across the globe. Thus, a detailed understanding of organizations' adoption experience is lacking (see Table 4 in Appendix A for a detailed summary of Green IT adoption studies in developed and developing countries).

Therefore, in summary, we argue that there is currently a lack of rich understanding of the Green IT adoption phenomenon in developing countries due to the dominance of quantitative studies and the limited application of adoption theories (Oliveria and Martins, 2011). In fact, the adoption process involves dynamic interactions among social, legal, economic, political and technological factors that call

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