

Clean Production Strategies Adoption: A Survey on Food and Beverage Manufacturing Sector

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Abstract

Clean production strategies are the continuous application of an integrated, preventive environmental strategies applied to process, products and services to increase overall efficiency and reduce risks to humans and the environment. This paper provides an analysis of factors influencing the adoption of clean production strategies among food and beverage firms in Peninsular Malaysia. The main purpose is to determine the relationships of three non-regulatory factors with clean production strategies adoption. Three sets of interrelated factors leading to the widespread adoption of these technologies considered are: technology characteristics, technology performances and communication networks. This paper begins with an introduction and literature review, followed by the hypotheses statements. Pearson Correlation analysis was applied to examine these hypotheses. A sample of 76 Malaysian food and beverage firms was used for investigation, with one respondent for each firm. The results of the analysis indicated that technology characteristics, technology performances and communication networks are significantly influence the adoption of clean production strategies.

Keywords: Environmental technology; technology adoption; food and beverages industry.

Introduction

According to Blackman (2005), although the strategy for controlling pollution which is promoting the voluntary adoption of environmental technologies has drawn considerable attention in policy circles, empirical research on the adoption of environmental technologies in developing countries is limited. Environmental technologies are different from other technologies, where generally the incentive for firms to develop, or to adopt environmental technologies comes from the regulatory pressure (Rothenberg and Zyglidopoulos, 2004; Bernauer et al., 2006; Saint-Jean, 2006). Once regulatory requirements are met, additional environmental improvements are often seen as non-essential to the functioning of the organization. However, the adoption of environmental technologies is not just because of response to regulation. Like other

technologies in general, there are many other factors that govern environmental technologies.

Technology adoption is the set of practices and factors related to organizations selecting, deploying, and sustaining the use of the technology (Troshani and Doolin, 2005). The literature on the determinants of technology adoption is vast. Yet, most of this literature focuses on particular determinants of technology, and only small parts of this literature focus on environmental technology (Bernauer et al., 2006). Therefore, there is a need for an investigation on factors influencing environmental technology adoption. This paper provides a brief overview of the theoretical background of environmental technology adoption and associated hypotheses. The methodology employed to empirically analyse the data is explained. The findings from the study are