Barriers to Reverse Logistics Practices in Malaysian SMEs

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Abstract

As industrial activities increased, environmental problems have become inevitable. Consumers and retailers return product to manufacturers due to a variety of reasons: the product does not meet customer expectation, the product is defective or there is excess inventory, among others. Therefore manufacturers need to handle the returned product in an effective way to improve customer’s relationship and decrease its associated costs. Manufacturing firms however often focused on forward logistics and as a result, they tend to overlook at the importance of reverse logistics activities. From the manufacturers’ point of view to handle the environmental aspects of the enterprise activities, in terms of production and distribution, reverse logistics is an important tool. While implementing this environmental perspective option, as well as larger companies, small and medium enterprises (SMEs) can face some barriers such as company policies, lack of information, financial or personnel resource. The objective of the study is to identify reverse logistics practices and evaluate the barriers to those practices in Malaysian SMEs manufacturing industries. The study identifies internal and external barriers for the adoption of reverse logistics practice in Malaysian SMEs. The Contingency Theory is considered as the most appropriate theory to study the barriers for the adoption of reverse logistics practice in Malaysian SMEs.

Keywords: Reverse logistics, Internal barriers, External barriers, SMEs, Supply chain management
Introduction

In an increasingly dynamic and competitive business world, proper management of the supply chain is a key feature for promoting efficient management and for developing important competitive advantages (Rao et al., 2006; Andersen and Christensen, 2005; Quayle, 2003). Products continuously flow in both the direct and the reverse direction in the supply chains, from manufacturers to consumers and from consumers to manufacturers. Many firms will accept almost anything sent back up the channel, regardless of reason or condition, if they perceive that doing so could benefit customer relationship (Merritt, 2001; Stock, 1998). Some studies show that up to 20% of all goods that are sold are returned to the vendor (Rogers and Tibben-Lembke, 1999). Consequently, firms need to implement reverse logistics programs to handle the returned product and as such, reverse logistics as a part of supply chain is gaining momentum worldwide due to global awareness and consequences of resource depletion and environmental consequences.

Furthermore, it is well known that reverse logistics is mandatory in European countries where standards such as the Restriction of Hazardous Substances (RoHS), Waste Electrical and Electronic Equipment directive (WEEE) and the Registration, Evaluation, Authorization and restriction of Chemical substances (REACH) strictly enforced. These regulatory standards make it mandatory for original manufacturers of such products to undertake the responsibility for the collection, treatment, and recycling and/or safe disposal of end-of-life (EoL) of their products and materials used for their manufacture (Lai and Wong, 2012; Zhang et al, 2011). Literature have reported several benefits that could be achieved with reverse logistics such as efficient resource utilization and environmental protection (Gunasekaran and Spalanzani, 2011; Fernandez et al., 2010; Tsai et al., 2008).

However, scarcity of resources and increasing international markets regulatory pressures has forced manufacturers to realize the importance of improving their environment and to implement sustainable practices that reuse/recycle critical resources (Lai and Wong, 2012). In this context, Malaysian firms nowadays sense the pressure to introduce reverse logistics in their operations. One of the main challenges faced by Malaysian SMEs that planning to go green and go global is the fact that many countries have introduced legislation or directives to ensure effective disposal of manufactured products and its waste. Furthermore, the increase in awareness on environmental issues and the benefit of recycling had also placed more pressure on firms to create a better reverse logistics strategy.

Based on the above issues, there is a need to identify the barriers that hinder reverse logistics practices in SMEs. It has been pointed out in the literature that the barriers are categorized in two groups as internal and external barriers which are defined in the perspective of their impact area whether they come from outside or inside the organization. In this context, to carry out those activities properly, identifying the barriers that impede the implication is one of the main goals of this study as well as identifying the scope of reverse logistics activities within the SMEs in Malaysia.
Literature Review

The concept of Supply Chain Management (SCM) can be defined from different approaches. In order to achieve the objectives of our research we assume the definition proposed by the Council of Supply Chain Management Professionals (CSCMP): SCM encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers. In essence, SCM integrates supply and demand management within and across companies. Companies have showed a growing interest in the adoption of sustainable practices in business operations using an integrated quality, environmental and safety management system (Ferrer, 2008). Recent studies such as the one by Dale et al. (2011) analyze the implementation of sustainability concepts which is closely related with sustainable practices is the field of reverse logistics.

Effective reverse logistics focuses on the backward flow of materials from customers to suppliers (or alternate disposition) with the objective of maximizing value from the returned item and assuring its proper disposal (Rogers and Tibben-Lembke, 1999; Stock, 1998). This may include product returns, recycling, materials substitution, reuse of materials, waste disposal, refurbishing, repair, and remanufacturing (Stock, 1998). Consequently, reverse logistics research has emphasized the use of environmentally conscious logistics strategies, the so-called green logistics (Murray, 2000; Van Hoek, 1999; Carter and Ellram, 1998; Green et al., 1998; Stock, 1998). Many firms recognize the economic impact of reverse logistics in addition to the environmental aspects (Klausner and Hendrickson, 2000; Ritchie et al., 2000). Additionally, some research suggests that companies can recapture value through an efficient and effective returns process (Ayres et al., 1997; Autry et al., 2001). Furthermore, Freires and Guedes (2008) show the existence of forward relation between trust among agents of the supply chain and effectiveness and efficiency of reverse logistics systems. Firms are willing to accept returns from customers since quick an efficient handling of returned product can also be critical in sustaining relationships and creating repeat purchases. Therefore, reverse logistics allows companies an opportunity to differentiate themselves with respect to competitors, builds customer loyalty in the company brand, and positively influences customer satisfaction (Blumberg, 1999).

Large companies face higher rates of returns due to more lenient return policies and therefore, the returns problem is more acute in such companies. Many firms will accept almost anything sent back up the channel, regardless of reason or condition, if they perceive that it could benefit the customer relationship (Merrit, 2001; Stock, 1998). Therefore, if SMEs wish to remain competitive they need to do the same. Most of the literature focuses on the reverse logistics activities of large firms. Furthermore, Rogers and Tibben-Lembke (1999) carry out an extensive survey with the objective of identifying and describing current practices and trends of reverse logistics. However, most of the firms included in the research were very large companies.
As previous research has shown (e.g., Richbell et al., 2006; Emiliani, 2000) SMEs present a different business profile to larger companies, with particular aspects that may influence their performance (e.g., fewer resources, management systems in which there is often no separation between ownership and management, the academic education of the manager not always meeting the real needs of the firm). It is possible that many of these firms (or some of their suppliers) may not always be able to take on the cost of introducing certain SCM systems or may be unable to manage them satisfactorily. For these reasons, the paper of Vaaland and Heide (2007) discusses the viability of SMEs in view of the new competitive framework of supply chains.

In any case, if SMEs want to increase competitiveness in the new scenario, they must make an effort to adopt new management trends, as efficient reverse supply chain systems are. However, owners/managers must consider that some changes cannot be implemented immediately. For this reason, firms need to analyze their specific barrier, challenges, resources and capabilities before thinking about solutions and decisions, considering both the characteristics of the company and of the suppliers.

**Barriers To Reverse Logistics Activities**

There are quite few studies which analyzed the major barriers in the context of developed countries. Even though enough evidence in terms of regulations, awareness, public participation, resources and government support exist in Europe they found few criticalities in implementing reverse logistics. It is well known that reverse logistics is mandatory in European countries, however we find few key barriers in implementing reverse logistics in European context such as little senior management attention, difficulties in extended producer responsibility across countries, little recognition of reverse logistics as competitive factor, lack of appropriate performance management system, tax issues, little collaboration, limited forecasting and planning, lack of clear return policies, lack of awareness in environmental regulations (PricewaterhouseCoopers, 2008).

In Malaysian context the scenario is entirely different and it is obvious that most of the generated industrial wastes were sold to private individual collectors and passed to informal recycling processes. Given this background we intend to study the real barriers according to SMEs view to establish the major issue in reverse logistics implementation. To identify the barriers, most of researches have been performed in large companies (Ravi and Shankar, 2005). But with respect to the position of SMEs in the economies, the number of studies in this context is very scarce.

In the literature, the classification of barriers in reverse logistics are various such as industry-specific barriers and organizational barriers (Post and Altman, 1994), driving barriers and driven barriers (Ravi and Shankar, 2005). Industry-specific barriers are defined as the broader external barriers such as industry characteristics or the external forces in the industry. Those barriers are also called as external barriers. (Ravi and Shankar, 2005) Organizational barriers are the internal
barriers that occur within the company and affect their operations and capacity to deal with the changes including environmental change. (Post and Altman, 1994)

External Barriers

External barriers are examined into 6 categories as follow:

Financial Resources

Having adequate financial funds are essential to carry out reverse logistics activities as the necessary technology and programmes are significant in reverse logistics. However, setting up an advanced technological and information systems is an expensive initiative for the businesses. (Ravi and Shankar, 2005). In the studies of Azzone et al. (1997) and Azzone and Noci (1998), it has been shown that SMEs have limited financial resources. Because of that, they are not able to develop necessary technologies and programmes. (Del Brío and Junquera, 2003). Besides, companies often consider the rate of return when they make investment and the slow rate of return on the investments as well as the cost of investments hinder implementation of reverse logistics activities (Zilahy, 2004).

Lack Of Awareness About Reverse Logistics

Researches of Post and Altman (1994), Hillary (2004), Ravi and Shankar (2005) present that there is a lack of awareness about reverse logistics activities in the firms. Azzone et al. (1997) and Azzone and Noci (1998) observed that SMEs have a very low level of environmental consciousness. Del Brio and Junquera (2003) pointed out that those practices are less known and the uncertainty of possible dissuades companies. Even if they are aware of the potential outcomes of reverse logistics activities, they are paying less attention regarding to other operational activities within the company. Consequently, the possible outcomes of reverse logistics activities are thought to be short-term and temporary.

Problems With Industrial Infrastructure

Establishing the adequate infrastructure to collect the products from the end users require significant investment which is considered as an obstacle for SMEs. Post and Altman (1994) and Del Brio and Junquera (2003) underline the importance of this barrier especially in small firms given their limited capacity to develop relations with the firms in the industry that would take part in the flow of returned products.

Environmental Legislations

Since the extended responsibility of the producer has been made clear by current legislations, firms have to consider environmental friendly technologies in their production and distribution systems. However, according to Azzone et. al (1997), environmental legislations caused inflexibilities in the technological choices those have impeded consideration of clean
alternatives and practices. Bureaucratic barriers can refer to getting special permit and rezoning for the implementation of reverse logistics activities such as establishing a facility may draw attention of the people living around the facility (Daugherty et al. 2001).

Cooperation Of The Supply Chain Partners (Dealers, Distributors, Retailers)

Among the supply chain partners, cooperation and trust are the utmost important elements that need to be emphasized in SCM. Without the support of supply chain partners that the company is in relation with, it’s difficult to carry out reverse logistics activities. Company return policies can facilitate the returns from customer to producer and lead to risk sharing between them (Ravi and Shankar, 2005).

Problems With Product Quality

Product quality plays a crucial role in reverse logistics activities because when a product is recovered or reproduced, the quality cannot be the same as a new product. The perception of poorer quality product acts as a barrier for the companies because in the eyes of customer, it is expected that the same quality level must be offered after processing the returned products. (Ravi and Shankar, 2005)

Internal Barriers

Internal barriers are explained into 3 categories as follow:

Human Resource

Lack of human resources and training is a significant barrier to reverse logistics. Education and training of the employees are one of the necessary elements for the success within the organizations (Ravi and Shankar, 2005). Furthermore, Hillary (2004) pointed out that lack of specialist staff and inadequate technical knowledge and skills of the employees act as a barrier to reverse logistics activities. It is pointed out in the researches of Azzone et. al (1997) and Azzone and Noci (1998) that SMEs’ personnel have a very low level of environmental awareness. The importances of training the human resource are shown and the higher percentages of educated employees lead to higher level of companies’ environmental action (Del Brio and Junquera 2003).

Organizational Structure

Characteristics of an organization affect the implementation of environmental actions. According to Scott (2008) SMEs ability to adapt environmental changes is better than larger companies. But a contrary finding is revealed by Alberti et.al. (2000) that in reality SMEs are less developed from environmental perspective than larger companies. Because the managers think that being reactive to environmental changes could make the company lose its flexibility (Del
Besides, inadequate organizational structure can discourage firms making changes in their production processes (Post and Altman 1994).

Management Style

Lack of commitment to environmental issues, negative corporate attitudes towards environmental friendly activities, inadequate company culture and inconsistent top management support represent another set of internal barriers (Zilahy, 2004 and Hillary, 2004). Without a strategic focus on environmental issues, standard operating procedures cannot provide a company to operate environment friendly. In this context, the management styles of businesses are important to carry out activities concerning the environmental impacts of their procedure. The environmental perception of managers in SMEs is presented in the researches of Azzone et.al. (1997), Azzone and Noci (1998) and Noci and Verganti (1999) as SMEs’ management style complies with the legislations without a perspective of environmental issues. The reason for that can be poor management capacities and the incompatibility of environmental objectives with the personal goals of top management (Zilahy 2004).

The above discussions lead to the following theoretical framework:

![Theoretical Framework](image)

**Figure 1: Theoretical Framework**

Conclusion

This study sought to find out the barriers for adoption reverse logistics practice in Malaysian SMEs. The Contingency Theory is considered as the most appropriate theory to study the barriers for adoption reverse logistics practice in Malaysian SMEs’ because it as a management
approach focuses on adapting management behavior to the particular circumstances of the organization and to each given situation. In particular, theorists have applied contingency theory to management problems of leadership, decision making like going green, organizational change, employee motivation, human resource management, and organization structure. As a result, managers have a new set of techniques to try, including situational leadership styles. As for improvements, further surveys and research should be carried out to test, validate and enhance the model shown above. The results obtained will be presented in a later article.

References


