

Predicting purchasing performance: the role of supplier development programs

Li Wen-li^{a,*}, Paul Humphreys^b, L.Y. Chan^c, Mohan Kumaraswamy^d

^a*CTS College, Jinan University, Jinan, China*

^b*School of Management, University of Ulster, Antrim, UK*

^c*Department of Industrial and Manufacturing Systems Engineering, The University of Hong Kong, Hong Kong, China*

^d*Department of Civil Engineering, The University of Hong Kong, Hong Kong, China*

Abstract

To examine the role of supplier development and its related elements in the context of purchasing performance from a buying firm's perspective, a survey was conducted of companies in the electronics industry in Hong Kong. Using factor analysis, seven factors were identified relevant to supplier development activities. These elements include: long-term strategic goals, effective communications, partnership strategy, top management support, supplier evaluation, direct supplier development and perception of supplier's strategic objective. Spearman correlation analysis indicated that all the supplier development elements are positively and significantly correlated to the perceived purchasing performance. From the results of regression analysis, two factors, direct supplier development and supplier's strategic objectives proved to be significant predictors of purchasing performance.

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1. Introduction

Facing increasingly competitive challenges, many organizations view supplier performance as an important contributor to their competitive advantage. They work closely with suppliers and expect to improve performance and capabilities by engaging supplier development programs.

Supplier development is defined as any effort of the buying firm with a supplier to increase the performance and capabilities of the supplier [1]. It has been reported that such programs have been extensively implemented in western countries [1–3]. However, developing the supplier has also proved quite challenging [3,4]. A conceptual model for guiding the implementation of supplier development program was proposed by Hahn et al. [5]. However, it was not empirically tested. Some perceived critical elements of supplier development were explored by Krause and Ellram [6] and some “antecedents” of involvement in supplier development program were also identified by Krause [7].

But these factors were not linked with purchasing performance. In this body of literature, few empirical research studies have been conducted to examine the factors which are critical to the success of the approach.

This paper explores the strength of the relationship between certain supplier development activities and purchasing performance. The central questions are: (1) What are reliable and valid measures of the critical elements of supplier development? (2) Whether supplier development and its related elements are strongly associated with purchasing performance improvement? To answer the above questions, several critical factors of supplier development were proposed on the basis of an extensive literature review. Research instruments were developed and statistical evidence was collected from 142 companies in the electronics industry in Hong Kong.

This paper is organized as follows: first, the relevant literature is reviewed and some key factors of supplier development are identified. Next, the data and samples used for analysis are introduced. Overviews of factor analysis, correlation analysis and regression analysis are provided. The results based on the analysis are presented and discussed. Finally, the paper concludes with a summary of the research findings.

* Corresponding author. Tel.: +86-755-26071098;

fax: +86-755-26900506.

E-mail address: li_wl1@ctstc.edu.cn (L. Wen-li).

2. Literature review

Hahn et al. [5] developed a conceptual model that described the organizational decision process associated with a supplier development program. However, this model was established just on the basis of experience of several companies actively engaged in such a program. A significant drawback was that no sufficient empirical evidence was collected to support their findings. Krause and Ellram [6] conducted a survey of 96 US purchasing firms and found that the majority of buying firms involved in supplier development perceived their suppliers as partners and placed a greater emphasis on some critical elements than those not involved in such programs. These critical factors included two-way communication, top management involvement, cross-functional teams and larger purchasing power.

The antecedents that motivated and preceded US buying firms' involvement in supplier development were identified by Krause [7]. In this study, he developed reliable and valid measures of the antecedent factors and tested a structural model that postulated the interrelationship among these factors. The results indicated that the buying firm's propensity to engage in supplier development was affected by its perception of supplier commitment, its expectation of relationship continuity and effective buyer–supplier communication.

The studies in this field provide some useful insights for managers who wish to invest their time and resources to improve supplier's performance. However, these studies failed to establish a link between supplier development programs and supplier performance. Although the literature on supplier development stressed that direct supplier development played a critical role in driving performance improvement in purchasing and contributes strategically to overall organizational effectiveness [3,8], statistical validation of the linkage between them has not been examined.

In this study, similar methods to those of Krause [1,7] were used to identify some critical influencing factors of supplier development and then, move on to use matched performance data to test the linkages between them and examine the role of supplier development on predicting purchasing performance. This is an additional step from Krause's contribution.

3. Theoretical framework

3.1. Influencing factors of supplier development

Some important elements of supplier development are identified from the buying firm's perspective on the basis of a detailed literature review and discussed below.

Long-term strategic goal: Watts and Hahn [2] proposed that supplier development efforts should focus on developing supplier future capabilities in technology and product development rather than focusing only on current quality

and cost. They insisted that the clarity of long-term strategic goals would be the key to the success of supplier development program.

Effective communication: Open and frequent communication between buying firm personnel and their suppliers was identified as a key approach in motivating suppliers [9,10]. Early involvement and open channels of communication increase both parties' understanding and encourage problem solving between both parties [11].

Partnership strategy: Krause and Ellram [6] determined that "the majority of buying firms involved in supplier development will perceive their suppliers as partners". Adopting a partnership strategy means that a buying firm pursues a long-term relationship with suppliers and they would like to show their commitment. Without buyer's commitment, the suppliers may be unwilling to make changes in its operation to accommodate the desires of that buyer [4].

Top management support: It is top management who recognizes the need to initiate a supplier development program based on the firm's competitive strategy [5,12]. Purchasing management needs the encouragement and support from top management to expend their resources within a supplier's operation.

Supplier evaluation: Not all selected suppliers qualify for development assistance and a buying firm must carefully identify where to focus its supplier development efforts [3]. Hahn et al. [5] specified further that supplier evaluation results can provide valuable information about general areas of weakness where performance improvements are required.

Direct supplier development: In order to pursue excellence and develop best practices, the suppliers need the encouragement or expertise of their buyers. Direct supplier development activities include providing support personnel, capital, equipment, technology, or direct involvement with suppliers in identifying and eliminating non-value or duplicate costs, processes and time [3,5]. These assistances from the buyers can accelerate supplier capability improvement greatly.

Perception on supplier's strategic objective: Supplier development requires a mutual recognition by the buyer and supplier of the need for continuous performance improvement [3]. Supplier development would not work if the supplier does not have a compatible strategic objective with that of customer.

3.2. Purchasing performance

Purchasing performance is defined in various dimensions in the purchasing literature. Giunipero [9] suggested that the effectiveness of the purchasing function could be measured on the basis of its ability to manage suppliers' quality, delivery, and lead time, and to control the total cost of acquisition. This research focuses purchasing performance on two dimensions: supplier performance improvement and supplier's contribution to a buying firm's competitive

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