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Manufacturing strategy, competitive strategy and firm performance: An empirical study in a developing economy environment

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Abstract

This paper examines the relationship between manufacturing strategy and competitive strategy and their influence on firm performance. We test how competitive strategy influences manufacturing strategy and also examine the impact that manufacturing strategy and competitive strategy have on firm performance among Ghanaian manufacturing firms. We found significant and positive relationships between competitive strategy and the manufacturing strategies of cost, delivery, flexibility, and quality. The findings also indicate that quality is the only manufacturing strategy component that influences performance. Our results further show that although competitive strategy does not directly affect firm performance, it does so indirectly through quality. Thus, whether a firm chooses to pursue a cost leadership or a differentiation strategy an emphasis on quality provides the most benefits with regard to firm performance. An emphasis on quality appears to provide a means by which companies can mitigate the effects of increased competition resulting from the economic reforms within the Ghanaian manufacturing environment.

Keywords: Manufacturing strategy; Competitive strategy; Firm performance; Developing economy; Path analysis

1. Introduction

About 25 years ago, Skinner (1969) argued that managers needed to give serious thought to the role that manufacturing strategy could have on a firm's competitive abilities and the resulting effect on the firm's performance. Ever since that time, several papers have been written either testing the assertions of Skinner or refining the conceptualizations of Skinner's arguments (e.g. Swamidass and Newell, 1987; Gupta and Somers, 1996; Ward and Duray, 2000; Dangayach and Deshmukh, 2001a). However, one of the core underpinnings of Skinner's work, the examination of interrelationships among manufacturing strategy and competitive strategy has not received as much attention as it deserves in the manufacturing strategy literature. Skinner's argument was that while a company's competitive strategy places specific demands on the manufacturing function, at the same time the company's manufacturing strategy should be specifically designed to accomplish the goals of the company's competitive strategy. A firm's competitive strategy

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drives its manufacturing strategy leading to operations decisions that result in some desired performance. For the competitive goals to be accomplished the manufacturing strategy should be aligned with the firm's competitive strategy. Therefore, the goal of this research is to examine the relationships between competitive strategy and manufacturing strategy, and their effect on firm performance. Specifically, we examine the impact of cost leadership and differentiation strategies on delivery, flexibility, low cost, and quality manufacturing strategies. Additionally, we investigate the influence of cost leadership and differentiation strategies on firm performance, the impact of manufacturing strategy on firm performance, and further whether the alignment of competitive strategy with manufacturing strategy improves firm performance.

This paper contributes to the existing knowledge on manufacturing strategy in several ways. We examine the alignment between manufacturing strategy and competitive strategy thus helping to understand how manufacturing capabilities should be adjusted to achieve corporate (or firm) objectives (Skinner, 1969; Anderson et al., 1989). There have been many studies linking operations strategy to business performance (Swamidass and Newell, 1987; Ward et al., 1994; Williams et al., 1995; Bozarth and Edwards, 1997; Vickery et al., 1997). However, with few exceptions (e.g. Badiri et al., 2000; Amoako-Gyampah and Boye, 2001; Dangayach and Deshmukh, 2001b; Zhao et al., 2006) most manufacturing strategy research has been confined to contexts involving developed economies where strategy implementation is perhaps well understood and practiced.

In this study we examine the relationships between manufacturing strategy and competitive strategy in the developing economy of Ghana and their impact on firm performance. It is important to find out if Skinner's paradigm, which has been argued to be valid in developed economies, is also valid in the context of the developing economy of Ghana. If we can establish that existing theories on manufacturing strategy are also applicable in such an environment, it will enhance the robustness of those theories. In Ghana, most companies are now operating in an environment of western style management involving free market principles as opposed to government dominated policies of price controls, subsidies, and setting fixed exchange rates. At the same time, market-supporting institutions, access to capital, logistical infrastructure, the enforcement of contractual agreements between customers and suppliers, and managerial talent are all very limited. Therefore one cannot be sure if firms in Ghana have the means and know-how to effectively formulate and implement competitive and manufacturing strategies. We note that although our study is carried out in the same environment as that of Amoako-Gyampah and Boye (2001), it is different in that they studied the impact of business environment factors on operations strategy while in this paper we focus on how competitive strategy impacts manufacturing strategy and their subsequent effect on firm performance. Also, we hope to ascertain if the alignment of specific competitive strategies with a given manufacturing strategy (e.g. the combination of cost leadership and quality) appear to offer performance benefits over a pure competitive strategy and thus provide guidance to managers in Ghana and similar environments on ways to enhance their competitive abilities. Although the importance of aligning competitive strategy with manufacturing strategy has been verified in several studies (e.g. Ward and Duray, 2000), we are unaware of any study that specifically examines the relationship and its impact on performance in a developing economy environment.

Although Ghana is a relatively small country its economic environment is similar to several other developing countries in Africa, Latin America, the Caribbean, and parts of Asia where former agrarian-based economies are now shifting to industrial and service-based economies. Most firms in these economies in the past operated in environments of limited competition, fixed currency exchange rates, price controls and government subsidies (Amoako-Gyampah and Boye, 1998). As firms in these countries integrate themselves into the world economy they find that multinationals and firms from larger emerging economies (e.g. India, China, Brazil) are also moving into their local economies and increasing the competition in the domestic market (Khanna and Palepu, 2006). Interestingly, these same conditions were faced by firms in India, as an example, in the early 1990s. The introduction of economic reforms in India resulted in increased competition from imports and from the multinationals in the domestic market (Dangayach and Deshmukh, 2001b). Thus, the increased competition brought about by market and economic reforms requires that companies in Ghana and similar environments not only have to develop appropriate