J. Eng. Technol. Manage. 31 (2014) 58–72

Contents lists available at ScienceDirect

Journal of Engineering and Technology Management

journal homepage: www.elsevier.com/locate/jengtecman

The role of technological intensity in services on the capability to performance relationships – An examination in the Australian context

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ARTICLE INFO

JEL classification:
M10

Keywords:
Operational capabilities
Quality
Cost
Technological intensity
Service

ABSTRACT

This study examines the direct effect of operational capabilities (quality and low cost) on firm performance among Australian service firms, and the extent to which these relationships are influenced by varying levels of technological intensity. The findings show that technological intensity strengthens the relationship between quality capabilities and business performance, while it weakens the relationship between low cost capabilities and business performance. Theoretically, this study reinforces the contingency effect of technological intensity on the capability–performance relationships. From a practical perspective, this study suggests the need to consider technical intensity and desired capabilities in an integrated fashion to enhance business performance.

Introduction

More and more economic activities are being generated through services, particularly for those in developed nations. Indeed, services provide the single largest opportunity for revenue generation and maintaining profit margins (Brechbühl, 2004), and they continue to provide a pivotal role in the next cycle of economic development. In Australia, where this study is positioned, services account for more

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http://dx.doi.org/10.1016/j.jengtecman.2013.10.005

than three-quarters of the economy's output and provide for four out of every five new jobs (McLachlan et al., 2002). For that reason, an understanding of the role and consequences of different competitive capabilities on bottom line performance is critical. In this research, competitive capabilities represent the firm's actual (or realized) competitive strength relative to primary competitors in its target markets (Rosenzweig et al., 2003, p. 438). These competitive capabilities include those at the operational level, such as quality, delivery, cost, and flexibility (Hayes and Wheelwright, 1984). Firms that can build one or more superior capabilities will likely have competitive advantage which is translated in business (including financial) performance. In this paper, we focus on two competitive capabilities (i.e. quality and low cost) that represent two generic sources of competitive advantage, namely differentiation and cost leadership, suggested by Porter (1985). Furthermore, we also examine the role that technology intensity plays in affecting firm's performance as they pursue leadership through being a low cost provider or a differentiator via better service quality. In this regard, we adopt the contingency view of Porter's generic strategies as applied in the service context (Murray, 1988).

Service firms could be classified on several dimensions, including the extent to which they are technologically intensive. This study examines the role of technological intensity in influencing the effectiveness of two competitive capabilities in service operations (quality and low cost) in predicting business performance. In what way does the technology setting affect the performance of firms as they pursue various competitive goals? Is technology of equal importance across firms, regardless of the competitive priorities they choose to emphasize? To examine these issues, two major research questions are posed: (1) Do service firms compete by using similar types of capabilities as their manufacturing counterparts in achieving high business performance? (2) Does technological intensity influence (i.e. moderate) the relationship between competitive capabilities and business performance? If so, what is the nature of the influence (strengthen or weaken)?

This study potentially provides two key contributions to the extant literature. First, it adds to the literature on the relationship between generic strategies and performance in a service context. Despite earlier studies that have examined the sources of competitive advantage for service firms (O'Farrell et al., 1992, 1993), few studies have linked operational capabilities to business performance in the Australian context. We believe that such a study is important to pursue because, similar to manufacturing firms, service firms also build their competitive advantage through their operations. Second, the present study contributes to this body of literature by examining the contingency perspective of technology on the relationship between capabilities and firm performance. Clearly, services are often quite different from manufacturing, yet there is little research in services that explores the relationship between these variables using a contingency perspective. Yet we know that competitive advantages are specific to a particular organizational context. As such, this study demonstrates the fit between strategies and technology in delivering competitive advantage in service firms. The concept of strategic fit suggests that firms must match the demands of their competitive environment with their internal operational capabilities in order to survive and succeed. A good fit positively affects performance, while a misfit may negatively affect firms' business performance (Thompson and Strickland, 2003).

Theoretical context and hypotheses

The relationship between competitive capabilities and business performance

According to Porter (1985), firms can choose among three major capabilities in competing in a market: cost leadership, differentiation, and focus. With a few exceptions, most prior studies that have examined the relationship between competitive strategies and business performance have focused on the manufacturing sector (e.g. Spanos and Lioukas, 2001; Ward et al., 1996; Ward and Duray, 2000). O'Farrell et al. (1992, 1993) examined the effects of generic strategies on performance in service sectors. They suggested that differentiation is relatively easier to be achieved in services than in manufacturing. This is because the intangible outcomes of services such as brand image, and reputation are more difficult to evaluate. These sources of differentiation produce economic rents via a premium price. Since then, a number of studies have investigated the effects of various capabilities on