Configurations of low-contact services

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Abstract

This study uses a cluster analysis procedure to develop a classification model of low-contact services based on seven operations objectives. The effectiveness of the classification scheme is tested by demonstrating the link between the objectives, competitive priorities, and performance. This study also identifies eight underlying factors of competitive priorities in low-contact services. Furthermore, discriminant analysis on competitive priority dimensions shows that low-contact services consist of multiple groups and therefore should not be lumped into one group in any analysis scheme. © 2000 Elsevier Science B.V. All rights reserved.

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1. Introduction

Services continue to increase in importance as the postindustrial economy evolves in the developed nations around the world (Chase, 1978, 1981; Schmenner, 1986; Wemmerlov, 1990; Silvestro et al., 1992; Kellogg and Nie, 1995). Both academic and practitioner literature cite *low-contact services* as being efficient (similar to assembly lines in manufacturing) and capable of producing service products at very

high productivity levels (e.g. Bowen and Youngdahl, 1998). Although low-contact services exist in many different industries, e.g. fastfood, dry cleaning, and automobile repair, the literature often treats them as a single homogeneous group. Also, most of the low-contact services are assumed to be efficient, productive and/or profitable. In this paper, we demonstrate that low-contact services are, in fact, comprised of multiple groups, with different operational objectives, competitive priorities and performance.

The motivation for our work stems from two streams of research. First, a number of articles have argued that service management research has moved beyond the primary classification stage and therefore, it is now necessary to validate the generally accepted concepts/frameworks (Meredith et al., 1989; Flynn et al., 1990; Swamidass, 1991; Chase,

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1996). For example, recently, Kellogg and Chase (1995) empirically identified the three dimensions of customer contact: contact time, intimacy, and, information. Similarly, Silvestro et al. (1992) gathered in-depth data from 11 service organizations and identified firms as people-focused, people/equipment-focused and equipment-focused. More recently, teams of international researchers have started collecting large-scale empirical data from senior executives from service firms in Europe and the Unites States to identify the characteristics of "world-class" service firms (Voss and Johnston, 1995; Roth et al., 1997). Along similar lines, our work focuses on the in-depth analysis of low-contact service operations.

The second motivation for this research comes from a series of recent articles which argues that in order to effectively compete in a competitive marketplace, service companies must develop a coherent operations strategy (Vickery et al., 1993, 1997; Ahmad et al., 1996). For example, Smith and Reece (1999) presented a path analysis model linking service strategy, fit, productivity and performance for individual branches of a large organization. Our study demonstrates the linkages between objectives, competitive priorities, and relative performance within segments of low-contact services.

The rest of the manuscript is divided into the following sections. First, we review the past research and develop research questions. Next, we describe the research design, present the results and discuss the findings, and finally, we conclude and provide directions for future research.

2. Background and research questions

2.1. Service typologies and taxonomies

This section offers a review of various service classification approaches, as well as a discussion of their relative strengths and weaknesses. This review is provided in order to illustrate that while a variety of insightful conceptual typologies have been developed, there is a need to provide empirical validation in order to identify whether these typologies accurately model reality, as well as identify any shortcomings. The readers can refer to a recent article by

Bozarth and McDermott (1998) for an overview of manufacturing typologies/taxonomies.

In one of the early classifications, Judd (1964) classified services according to three categories: rented goods, owned goods and non-goods services. Similarly, Rathmall (1974) categorized services according to: type of buyer, buyer motives, buying practices, type of seller, and degree of regulation. Other classification schemes explored the complex nature of service delivery systems with the goal of identifying differentiating characteristics that affect quality and process improvement, as well as service design. For example, Shostack (1977) and Sasser et al. (1978) developed the concept of "product–service package" based on the tangible vs. intangible nature of services.

More recent researchers advocated an integrated approach to service management. For example, Lovelock (1983) classifies services in five different two-by-two matrices and examines how the specific nature of services in a particular class affects operations and marketing. The framework of Lovelock (1983) addresses the following: the nature of service act; the type of relationship between service organization and its customers; customization; the nature of demand and supply; and service delivery process.

Chase (1978, 1981) proposed that if there is less direct *customer contact* in the service system, then the service system is more likely to operate at its peak efficiency. Conversely, the system is less likely to operate at its peak potential with high direct customer contact. Mersha (1990) proposed a broadened definition of customer contact and differentiated between active and passive contact.

Building on the customer contact model of Chase (1978, 1981), Schmenner (1986) proposed a *Service Process Matrix* (SPM) based on three characteristics of service delivery systems: labor intensity, customer contact and service customization. Labor intensity is defined as the ratio of the labor cost incurred to the value of the plant and equipment. A high labor intensity business involves relatively small plant and equipment investment relative to a considerable amount of worker time, effort, and cost. The second dimension in the classification scheme combines two distinct concepts: customer interaction and customization. The joint measure has a high value when a service exhibits both a high level of interaction and