Fit in strategic information technology management research: an empirical comparison of perspectives

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‘The beginning of administrative wisdom is the awareness that there is no one optimum type of management system.’
Burns and Stalker [1, p. 125]

Abstract

The impacts of information technology on business performance has been a focus of research in recent years. In this regard, contingency models based on the notion of “fit” between the organization’s management of IT, its environment, strategy, and structure seem to show promise. Six perspectives are examined as they pertain to the relationships between the firm’s environmental uncertainty, its strategic orientation, its structure, its strategic management of IT, and its performance, namely moderation, mediation and matching as bivariate approaches to fit, and covariation, profile deviation and gestalt as systems approaches. These relationships are analyzed by means of an empirical study of 110 small enterprises. Results obtained from applying and comparing the six perspectives illustrate their significant differences and confirm the need for conceptual and methodological rigor when applying contingency theory in strategic information technology management research. © 2001 Elsevier Science Ltd. All rights reserved.

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1. Introduction

Since the publication, in 1961, of Burns and Stalker’s pioneering work, the idea that there is no one best way to manage an organization has been the underlying assumption of a great number of research models, in several areas of study. Organization theorists have focused on the study of contingency models that share the “underlying premise that context and structure must somehow fit together if the organization is to perform well” [2, p. 514]. In strategic management, the general axiom of contingency theory is that no “strategy is universally superior, irrespective of the environmental or organizational context” [3, p. 424]. Contingency models, which hypothesize that there is no best way to organize, have also been proposed and tested in IS, be it for studying strategies for information requirements determination [4], individual impacts of information technology [5], IT impact on learning [6], the impact of IT problem solving tools on task performance [7,8], or IT impacts on organization performance [9–11].

While they agree that contingency theory has been an important contributor to the advancement of knowledge, several authors have deplored the fact that researchers were not cautious or consistent enough in defining the concept of...
fit — which is central to any contingency model — and in selecting the most suitable data analysis approach to a given definition of fit [2,12–14]. Definitional rigor is critical, since different conceptual definitions of fit imply different meanings of a contingency theory and different expected empirical results [2]. This lack of definitional and methodological rigor has led to inconsistent results and could eventually alter the very meaning of a theory [3,13,15,16].

Along the years, much effort has been put on understanding and clarifying the theoretical and methodological issues associated with contingency models. In organization theory for instance, Drazin and Van de Ven [2], and Van de Ven and Drazin [16] have examined different approaches to defining fit and to testing fit-based hypotheses. In a conceptual article, Venkatraman [3] proposed a classificatory framework for the concept of fit, wherein six different perspectives of fit are defined. This was done in an effort toward definitional clarity of the concept of fit and to help researchers draw the appropriate links between the verbalization of fit-based relationships and the statistical analyses chosen to test these relationships. The six fit perspectives and the related statistical analysis methods were illustrated by referring to previous studies in the domain of business strategy. Building on this work, Chan et al. [17] performed a comparative analysis of two of the six perspectives of fit defined by Venkatraman [3], in the particular context of the relationship between IT and organizational performance.

The present study pursues the previous efforts in conducting a comparative analysis of all six perspectives in the context of the IT–performance relationship. Moreover, it examines the contingency relationships between strategic orientation of the firm, strategic IT management, organizational structure, environmental uncertainty, and business performance. These relationships are analyzed by means of an empirical study of 110 firms. Alternative perspectives of fit are first presented followed by the study’s theoretical background, methodology, a discussion of the results and their implications.

2. Alternative perspectives of fit

2.1. A classificatory framework for fit perspectives

Venkatraman [3] proposed a framework that comprises six different perspectives from which fit can be defined and studied; these are fit as (a) moderation, (b) mediation, (c) matching, (d) covariation, (e) profile deviation, and (f) gestalts. The framework classifies each perspective along three dimensions: the degree of specificity of the functional form of fit, the number of variables in the equation, and the presence — or absence — of a criterion variable. The following paragraphs describe each perspective of fit according to these three dimensions, along with its particular conceptualization of fit, the corresponding verbalization of hypothesized relationships, and the appropriate analytical schemes for testing the relationships.

2.1.1. Fit as moderation

In this criterion-specific perspective, fit is conceptualized as the interaction between two variables. Fig. 1 illustrates this perspective of fit. The verbalisation of the relationship between the strategic orientation of a firm and strategic IT management would be as follows: The interactive effect of the strategic orientation of a firm and its strategic IT management will have implications on firm performance. The relationship between the other two variables (structure and environmental uncertainty) and strategic IT management would be verbalised in the same way. When this perspective of fit is adopted, correlations for various subsamples, is the appropriate testing technique.

2.1.2. Fit as mediation

This criterion-specific perspective adopts a conceptualization based on intervention. That is, according to the mediation perspective, there exists an intervening variable between one or several antecedent variables and the consequent variable. As illustrated in Fig. 2, the corresponding verbalisation of the relationships would be as follows: strategic IT management is an intervening variable between strategic orientation, structure, environmental uncertainty, and firm performance. The appropriate analytical scheme here is path analysis.
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