Chapter I
Theoretical Constructs and Relationships in Information Systems Research

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ABSTRACT

Constructs and the relationships between them are widely considered to be central to theory development and testing. Over time, information systems (IS) researchers have identified and explored an extensive set of relationships amongst a broad range of constructs. The result of these initiatives is a body of literature that can be considered to represent the cumulative learning of the discipline. Based on the premise that this cumulative learning is capable of providing valuable guidance to future theory development, the authors present a review and analysis of a large sample of empirical research published in two leading IS journals. The objective of this endeavor is to offer a broad perspective on the nature of the constructs and relationships explored in IS research and to develop a nomological network of the most salient relationships that can then serve to guide future research and to lend support to new and existing theory.

INTRODUCTION

The management and information systems (IS) literature provides IS researchers with numerous perspectives on the nature, use, and importance of sound theory to the conduct of rigorous research (e.g. Bacharach, 1989; Gregor, 2006; Sutton & Staw, 1995; Whetten, 1989). The views expressed in this literature have increasingly served to guide research inquiries such that the use of substantive theoretical foundations has become an essential hallmark of work considered suitable for publication in leading journals. Although our understanding of what is meant by good theory is the

subject of at least some measure of controversy (Weick, 1995), the importance of constructs and relationships to theory development and testing appears to be widely accepted by both IS researchers and by those working in other disciplines. Some have gone so far as to argue that constructs and their relationships form the very essence of theory (Bacharach, 1989). Although others have argued that good theory must go beyond this to provide sound explanations for the relationships that are posited (Sutton & Staw, 1995; Whetten, 1989), they continue to maintain that constructs and relationships are essential to much of what we call theory.

Inadequate attention to the nature of the constructs and relationships underpinning a theory can have severe negative implications for its application and ultimate success. The importance and relevance of a theory that fails, for example, to adequately identify and define its constructs can be difficult or impossible to ascertain. Similarly, without a clear depiction of the nature of the relationships posited by a theory it can be difficult to elucidate the substantive implications that it may hold for practice or future research. Scientific philosophy argues further that our confidence in the validity of a theory is increased by subjecting its posited relationships to repeated empirical testing (Popper, 1992). Such efforts can be significantly hampered when constructs and relationships remain ambiguous or undefined with the result being needless impediments to subsequent theory development.

The centrality of constructs and relationships to the theory development process is highlighted by research methods that call for a thorough exploration of their essence as the basis for the development of new theory (e.g., Glaser & Strauss, 1967). The objective of these methods is, among other things, to ensure that theory more faithfully reflects actual circumstance rather than being a product of researcher bias. Drawing upon the spirit of such perspectives, we aim in the following discussion to report upon an extensive examina-

tion of the empirical findings in two leading IS journals during the period from the start of 1999 to the end of 2007. Rather than seeking to support or refute a particular theory or collection of theories, this examination seeks to depict what the empirical literature says about the many constructs and relationships that have been explored by IS researchers. Our analysis is based on the premise that over time the results of empirical testing yield a growing body of knowledge that can serve to underscore those theoretical explanations that are proving most robust, to identify empirically supported relationships that are in need of more substantive theoretical explanation, and to draw attention to those areas where both theory and empirical testing are lacking.

In the following discussion the reader is urged to take a step back and reflect on the wider findings of the IS discipline, in particular those findings that extend beyond the constraints of individual theoretical perspectives, in an effort to better understand the broader framework upon which the discipline rests. We commence our discussion with a presentation of the conceptual background for our work. Subsequent to this presentation we describe the methodology that was used to acquire and analyze our data and then report on the key findings that stem from this analysis. Finally, we conclude with a discussion of some of the implications of our analysis, an assessment of key limitations, and some closing remarks.

BACKGROUND

Theoretical Constructs and Relationships

Theoretical considerations guide many facets of the research that is conducted and reported upon in the field of information systems including research conceptualization and choice of methodology. Despite such attention and the frequent calls for more and better theorizing (Weber, 2003), the

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