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Adoption of management accounting innovations: Organizational culture compatibility and perceived outcomes

Christian Ax[a,*], Jan Greve[b]

[a] University of Gothenburg, School of Business, Economics and Law, P.O. Box 610, SE-405 30 Gothenburg, Sweden
[b] Örebro University School of Business, SE-701 82 Örebro, Sweden

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ABSTRACT

Although the introduction of a number of successful management accounting innovations over the past few decades has generated a vast amount of research, we have limited knowledge about how the diffusion of innovations is affected by the interplay between characteristics of adopters and characteristics of innovations. The study presented in this paper contributes to the literature that examines the adoption of innovations at the firm level of analysis. We develop and test an adoption model which draws on two recently introduced ideas about innovation adoption—the notion of compatibility between organizational culture and the values and beliefs embedded in innovations, and the perspective that early and late adopters might both be motivated to adopt based on expected economic and social gains and losses. In synthesising these models, we assume that a diffusing innovation that is compatible with a firm's values and beliefs is adopted early if it is perceived as delivering adequate gains while the innovation is rejected if it is not perceived as doing so, and that a diffusing innovation that is incompatible with a firm's values and beliefs is adopted late if it is perceived as reducing the likelihood of incurring losses while the innovation is rejected if it is perceived as not doing so. Hypotheses are generated and tested using data provided by a web-based survey of Swedish manufacturing firms on the diffusion of the balanced scorecard across those firms. In most respects, the pattern of results this study finds supports our model and assumptions.

1. Introduction

Research on the supply and demand of administrative innovations has emerged as fundamental in many fields. The introduction of management accounting innovations (MAIs), such as activity-based costing, the balanced scorecard, strategic management accounting, target costing, and the beyond budgeting approach, has produced an impressive body of research (e.g. Ansari et al., 2007; Gosselin, 2007; Langfield-Smith, 2008; Zawawi and Hoque, 2010; Hoque, 2014). The prevailing focus of such research has been on identifying general contextual factors and firm characteristics that influence the adoption of innovations at the firm level (e.g. Cadez and Guilding, 2008; Abdel-Kader and Luther, 2008; Baird et al., 2004; Brown et al., 2004). Another research direction draws on the new-institutional perspective on diffusion (DiMaggio and Powell, 1983; Tolbert and Zucker, 1983). Management accounting researchers have typically used the management fashion variant of new-institutional theory (Abrahamson, 1991, 1996; Abrahamson and Fairchild, 1999; Abrahamson and Rosenkopf, 1993). Studies have reported how MAI adoption motivations vary through successive phases of the diffusion trajectory (Malmi, 1999, 2001; Malmi and Ikäheimo, 2003).

Recent decades have, however, witnessed the emergence of a debate about the application of new-institutional theory in the area of diffusion (e.g. Staw and Epstein, 2000; Lounsbury, 2008; Colyvas and Jonsson, 2011; Chandler, 2014). The influential two-stage model of diffusion (Tolbert and Zucker, 1983) has been criticized for oversimplifying behaviour in organizations because it ignores the fact that economic logic is institutionally determined (Lounsbury, 2007) and because it makes unrealistic assumptions about management, whereby "early adopters are motivated by technical considerations and later adopters engage in mindless imitation fuelled by anxiety-driven pressures to conform" (Lounsbury, 2008). Recently, two models that were designed to overcome some of the problems with new-institutional theory have been introduced in the literature.

Presenting one such model, Love and Cebon (2008) argue that adoption behaviour is connected to organizational culture but,

* Corresponding author.
E-mail addresses: christian.ax@gu.se (C. Ax), jan.greve@oru.se (J. Greve).

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contrary to universal contextual models, theirs highlights the notion of compatibility (fit) between organizational culture and the values and beliefs embedded in an innovation that is being considered for adoption. They also demonstrate empirically a positive relationship between compatibility and innovation adoption rates, but observe that the influence of compatibility declines as diffusion unfolds over time. The study makes an important contribution to the field by presenting compatibility as a factor explaining early versus late innovation adoption. In presenting the other model, Kennedy and Fiss (2009) rethink the two-stage model's relationship between adoption motivations and timing. Contrary to the conventional model, their model suggests that adoption in the early stage is related to opportunity framing and the motivation to achieve gains (both economic and social), while adoption in the later stage is related to threat framing and the motivation to avoid losses (again both economic and social). Kennedy and Fiss (2009) argue that, therefore, economic and social motivations complement rather than conflict with each other.[1] The approach addresses the criticism of the conventional two-stage model that economic and social motivations to adopt are separated in space and time. The model makes an important contribution by highlighting the interplay between economic and social considerations in adoption decision-making over the diffusion trajectory.

The overarching objective of the present study is to contribute to our understanding of the adoption of MAIs at the firm level of analysis. We attempt to do so by integrating insights from these recently introduced theoretical approaches, with the goal of providing scholars with a model that explains the dynamic interplay between organizational culture, the values and beliefs embedded in an innovation, and motivations for adoption over the course of the diffusion process.[2] Looking at these variables and their interplay would provide a fuller understanding of innovation adoption decision-making in a collectivity than has previously been recognized, with the potential to offer an enhanced understanding of why certain firms are early adopters and others are late adopters, how adoption motivations for early and late adopters differ, and why certain firms are non-adopters.

Hypotheses are developed and tested using data from a web-based survey of Swedish manufacturing business units on the diffusion of the balanced scorecard (BSC) during the time period 1992–2008. In most respects, the pattern of results this study finds supports our model and assumptions.

The remainder of the paper is organised as follows. The next section presents the study's theory and hypotheses. The research method is described in Section 3. Section 4 covers the data analysis and results. In the concluding section, we discuss the results, highlight our research contributions, note the study's limitations, and present suggestions for further research.

2. Theory and development of hypotheses

In this section, we present the theoretical ideas on which our study draws. First, we discuss the link between organizational culture and management innovations. Second, we briefly review the current debate about the validity of the new-institutional two-stage model of diffusion, and we present recent ideas within institutional analysis which cast new light on the two-stage model and the relationship between adoption motivations and timing. Finally, based on the previous sub-sections, we develop hypotheses regarding innovation adoption.

2.1. Compatibility—a link between organizational culture and management innovations

The 1980s witnessed the emergence of organizational culture as an important concept in the analysis of organizations. Today, the concept is firmly established and has been linked to a number of organizational activities and outcomes, including success and failure, innovativeness, creativity, change implementation, restructuring, and learning. There is no consensus in the literature on a definition of organizational culture. However, the majority of definitions highlight notions such as shared values, beliefs, and assumptions among organizational members (Schein, 1985; Kotter and Heskett, 1992; Detert et al., 2000; Jung et al., 2009; Bligh and Hatch, 2011).[3] From this perspective, organizational culture "deeply affects how organizational members interpret social objects and practices, what goals members develop, and what strategies members enact to link the objects and practices to the goals" (Love and Cebon, 2008).

The general idea that organizational culture fit is an important factor influencing behaviour and outcomes in organizations has been established in the literature for decades (Kotter and Heskett, 1992; Jung et al., 2009; Bligh and Hatch, 2011). In this study, we are especially interested in the notion of compatibility (fit) between organizational culture and management innovations. An innovation is compatible with an organization's culture when "the values and beliefs that are normatively desirable for effective use of the practice are similar to relevant shared values and beliefs of organizational participants" (Love and Cebon, 2008). Thus, compatibility refers to a relationship between a firm and an innovation (and is, thus, not a characteristic of the firm alone). The notion of compatibility applied in this study is based on a framework that was developed by Detert et al. (2000). Their framework gives particular importance to Schein's (1985) view of culture, mainly his values and beliefs dimension. Henceforth, we refer to compatible firms when organizational culture and the values and beliefs associated with an innovation are similar to or complement one another and to incompatible firms when organizational culture and the values and beliefs associated with an innovation are dissimilar.

Prior research suggests that compatibility is linked to the diffusion process. The view that changes in practices that conflict with existing cultural values and beliefs are likely to meet resistance among organizational members is widely accepted in the organizational culture literature. Studies suggest that new practice implementation occurs more easily and is more successful, and that the continued and successful use of an innovation is more likely, when organizational culture fits with the values and beliefs that are embedded in administrative innovations (Detert et al., 2000; Kirkman and Shapiro, 2001; Lozeau et al., 2002). To our knowledge, only one study has empirically examined the influence of compatibility on innovation adoption. Love and Cebon (2008) examined the adoption of best manufacturing practices, such as TQM, benchmarking, customer focus, and continuous improvement, among 1161 manufacturing sites in Australia and New Zealand. They found that adoption rates are directly related to the

[1] Kennedy and Fiss (2009) are not the first to argue that economic and social motivations for adoption complement each other rather than conflict. Abrahamson and colleagues (e.g. Abrahamson, 1991; Abrahamson and Rosenkopf, 1993) discussed this idea in the 1990s.

[2] The link between organizational culture and management accounting has generally been overlooked in previous research (Chenhall, 2003; Henri 2006). However, a few studies have investigated the link between organizational culture and the adoption of MAIs (Baird et al., 2004; Baird, 2007). These studies see organizational culture as a general characteristic of the firm, thereby representing the view that some cultures are generally more adoption-oriented than others. As discussed above, this view of the link opposes the view of the present study (Love and Cebon, 2008).

[3] Many definitions of organizational culture also include artefacts, which are tangible organizational structures and processes, e.g., dress codes, furniture, symbols, organizational structures, and stories.

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