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## **Chapter III**

# **E-Commerce Adoption in Small Firms: A Study of Online Share Trading**

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## **ABSTRACT**

*This research examines the adoption of e-commerce technology (namely, order-execution online trading technology) by six small brokerage firms at various stages in the evaluation and adoption processes. The study is informed by innovation theory and prior research, and seeks to identify the key factors influencing the adoption process. Consistent with innovation theory, the case findings suggest that three classes of factors influence adoption: innovation factors, factors, organizational factors and environmental factors. The key factors within each of these classes were identified as compatibility and perceived benefits (innovation factors); IT sophistication, internal and external IT support and management support (organizational factors); and pressure from e-commerce-able competitors and clients (environmental factors). Of these variables, compatibility and perceived benefits were found to be the most significant in impacting e-commerce adoption.*

## INTRODUCTION

Electronic commerce (e-commerce) is significantly changing the dynamics of the business environment and the way in which people and organizations do business with one another. E-commerce addresses many of the needs within organizations. For example, e-commerce enables and facilitates electronic markets: it allows firms to cut service costs while improving speed of delivery and to simplify and streamline business processes; it supports the delivery of information products, services and payments; and it improves information exchange with customers. E-commerce also can enhance company image, enable access to new customers, and generate new business opportunities (Applegate et al., 1996; Nath et al., 1998; Turban et al., 2000). For these and many other reasons, firms are adopting e-commerce technology.

E-commerce adoption is particularly relevant in the financial services sector. Rapid advances in information and communication technology and increased public awareness have allowed e-commerce to evolve into a major distribution and service channel for financial services (e.g., online banking and online share trading), changing business processes as well as the dynamics of the financial market (e.g., Allgood, 2001). Although the financial services sector traditionally has lead the way in information technology (IT) adoption, there are few studies in the literature on e-commerce adoption in this sector (Ngai & Wat, 2002). Furthermore, because small firms often possess characteristics that are atypical of large firms (Fink, 1998), the relevance of existing research to small firms is not always apparent. It is therefore expected that this study will extend current understanding of e-commerce adoption in the financial services sector, and of small firm adoption. Understanding the factors that influence adoption is key to the success of e-commerce initiatives in any industry. For example, diffusion theory suggests that a technology would have little utility unless a critical mass of adoption is achieved (Rogers, 1989).

Drawing on existing research and innovation literature, this chapter seeks to identify key factors that motivate or inhibit e-commerce adoption among small firms. The contents are organized as follows. The following section introduces innovation theories that have been successfully used to explain innovation adoption and reviews previous findings. Innovation theory is then used to inform an investigative study of e-commerce adoption in small firms; more specifically, the adoption of order-execution online share trading technology by small brokerage firms. The research methodology is discussed and the research model assessed using case findings. The chapter concludes with a discussion of the findings, limitations, and directions for future research.

## BACKGROUND

Innovation theory suggests that adoption of an innovation may be viewed in terms of stages of adoption (e.g. Rogers, 1983; Zaltman et al., 1973). Zaltman et al. (1973) proposes two stages of innovation adoption: the *initiation* stage involving

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