

Chapter 5.11

Entrepreneur Behaviors on E-Commerce Security

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INTRODUCTION

Electronic communication developments have always been associated with many security *risks* since the ARPANET implementation in 1960s. In 1972, John Draper (Captain Crunch) unlocked the AT&T phone network marking the beginning of the modern technology of hacking. Later in the 1980s, the seminal developments in the U.S. laid the conceptual and practical foundation for future electronic crime tools such as trapdoors, trojans, and viruses. More recently in the Internet environment, *electronic attacks* have reached an epidemic level (US-CERT, 2004). In South Africa alone, over 500 Web sites were defaced in January 2005 and e-crime losses are estimated at around 40 billion a year.

BACKGROUND

While electronic attacks present serious social and economic implications for small organizations

engaged in e-commerce, these organizations are complacent about these attacks and continue to ignore *good security practices* (Jacque, 2003). One possible explanation for this *low regard for security* and subsequent attacks could be found in the examination of the *decision-making behaviors* of entrepreneurs during the e-commerce adoption process. While researchers have looked at *entrepreneurial traits* to explain the adoption process of e-commerce and many agree that personal characteristics of individual actors modulate the adoption of innovations (Wejnert, 2002), the potential impact of these traits on the adopted systems has not been examined. It is the view of the researcher that the decision-making behaviors of entrepreneurs at the time of e-commerce adoption affect the security of their information systems (IS). Entrepreneurs are mainly business owners who operate in uncertain environment and make all of the business decisions. They use intuition rather than data analysis and are often perceived to be somewhat irrational (Olson, 1985). *IS security*

is the protection of information and the systems that use, store, and transmit that information.

This study examines the influence of entrepreneur decision-making behaviors on the quality of IS security. It explains why entrepreneurs ignore security, creates awareness of the dire consequences of *mistaken perceptions of security*, and emphasizes the importance of proper analysis of business and technological implications before the implementation of e-commerce. In the following sections, the decision-making behaviors of entrepreneurs, their potential influence on IS security, and the research propositions are presented. The research methodology is presented first. This is followed by the data analysis, the results of the survey, and finally the conclusion.

ENTREPRENEUR BEHAVIOR AND IS SECURITY

Two influential concepts in the field of entrepreneurship are used to examine this relationship. These are: entrepreneurial orientation (Miller, 1983) and entrepreneurial management (Stevenson, 1983). Entrepreneurship may be defined as the art of finding profitable solutions to problems.

Entrepreneurial Orientation

Entrepreneurship researchers have used the term entrepreneurial orientation to describe the methods, practices, and decision-making styles managers use to keep the firms competitive. Several researchers (Grundy & Kickul, 2001; Miller, 1983; Miller & Friesen, 1978) emphasize the need for risk-taking, innovativeness, and proactiveness. Risk-taking refers to taking chances in a decision-making situation. Innovation refers to doing new things by recombining parts of what is already being done, and proactiveness is the ability to take the initiative whenever the situation arises (Jun & Deschoomeester, 2004).

However, entrepreneurs take risks because they are unaware of risk implications or sometimes simply ignore them. They tend to have low-risk perception (defined as the subjective assessment of the probability of a risk (Sjöberg, Moen, & Rundmo, 2004)) and consequently implement risk prevention measures as a hurried reaction to a bad experience. Jun and Deschomester (2004) argue that *proactive risk-handling* is an important dimension of entrepreneurial orientation which has unfortunately received limited consideration. They contend that successful entrepreneurs do not only take risks, but also possess the propensity to handle them proactively. They define risk-handling as the process in which potential risks to a business are identified in advance, analyzed, mitigated, and prevented, and the cost of protection is balanced with the cost of exposure to the risk. In an electronic environment where market needs, technology requirements, and security challenges change very rapidly, proactive risk-handling is essential.

Entrepreneurial Management

Stevenson (1983) views entrepreneurship as a management approach of pursuing opportunity without regard to resources currently used. He categorizes management behavior into the following dimensions. These behaviors and their influence on IS security are discussed as follows. The research propositions are also named.

Strategic Orientation

Strategic orientation describes what factors drive the creation of strategy. For an entrepreneur, strategy is driven solely by the opportunity, not the resources needed to exploit the opportunity. Resources are defined here as assets, capabilities, routines, and knowledge used by an organization.

As entrepreneurs seek new opportunities, they give limited attention to resources and some

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