Abstract

This research was initiated in light of three main trends occurring in the global market: (1) the growth of ICT in business practice, (2) the transfer of production bases from developed countries to emerging economies possessing lower labor cost such as India, China, and countries in Africa, and (3) the trend toward increasingly free trade practices. The business market in Thailand provides an appropriate research context for this project. Currently, Thailand is losing its low cost advantage to China and India, where labor costs are relatively low. The structure of this research has involves the convergence of themes extant in the literature from several areas: relationship marketing, adoption theory, and organization theory. The conceptual model was developed using the systems approach in which buyer-seller relationship strategy functions as an input to help determine ICT adoption level, which affects relational outcome. The three main conceptual models used as the background for this research are, (1) the buyer-seller relationship taxonomy of Cannon and William (1999), (2) the information system adoption model by Thong (1999), and (3) the fit between strategy and ICT adoption developed by Floyd and Zahra (1990). The conceptual model used in this research involved the integration of these three models to create the research conceptual model. It is composed of three major parts: (1) the determinants of ICT adoption, namely organization and market environment characteristics and buyer-seller relationship strategies, (2) ICT adoption, that is composed of utility and parity level, and (3) relational outcomes.

Four global hypotheses and twelve specific hypotheses were developed from the conceptual model. The first two global hypotheses focused on relationships between ICT adoption level and its potential determinants. The first global hypothesis stated that the level of ICT adoption is positively associated with organization size (H1a), employees' ICT knowledge (H1b), ICT capability (H1c), and information intensity (H1d). The second global hypothesis examined the association between market environment characteristics and the utility level of ICT adoption. The market environment characteristics are composed of four dimensions: availability of alternatives (H2a), market dynamism (H2b), supply importance (H2c), and supply complexity (H2d). The third global hypothesis concerned the relationship between closer types of relationship strategies and ICT adoption in terms of utility (H3a) and parity (H3b). The fourth global hypothesis regarded ICT adoption in terms of utility (H4a) and parity (H4b) levels as they relate to positive relational outcome. The research was conducted on Thai manufacturers in five major industries. A stratified random sampling method was employed to derive a sample representative of all five industries and firm sizes. The sample required 278 respondents for analysis. The expected low response rate from mail surveys led to the preparation of a mailing list of 2,298 firms. Confirmatory factor analysis was performed to develop measurement models for the 15 reflexive constructs which consisted of employees' ICT knowledge, ICT capability, information intensity, availability of alternatives, supply importance, supply complexity, operational linkages, legal bonds, cooperative norms, information exchange, honesty trust, benevolence trust, commitment, long-term orientation, and power.

The analysis proceeded with the application of cluster analysis to develop a buyer-seller relationship taxonomy that contained eleven dimensions: operational linkages, legal bonds, cooperative norms, information exchange, seller adaptation and buyer adapation,

benevolence trust, honesty trust, commitment, long-term orientation, and power. The final sample for testing the hypotheses contained 318 firms. Global hypotheses H1 and H2 were tested by using discriminant analysis, while the individual hypotheses were tested by using Pearson correlation test. Global hypothesis H3 was tested using nonparametric techniques since both independent (type of relationship strategies) and dependent (ICT adoption: utility and parity) variables are ordinally scaled. Global hypothesis (H4) was tested using ANOVA, because positive relational outcome is intervally scaled, while ICT: utility and parity, are ordinally scaled.

The cluster analysis identified five different types of relationship strategies: transaction, attitudinal-oriented, contractual, mutual adaptation, and partnership relationships. Organization characteristics are positively associated with ICT adoption-utility level at $p < 0.05$ for all dimensions. For H2, availability of alternatives and supply importance are significantly associated with the level of ICT adoption, while market dynamism and supply complexity are not associated with ICT adoption level. For H3, close relationship types are found to be significantly associated with ICT utility and weakly associate with ICT parity. A stronger association was found for utility level. For H4, ICT adoption at higher utility level or at parity with or higher level with their buyer provides significantly result in higher positive relational outcomes. A stronger association was found for parity level.

The findings from this study suggest that organization and market environment characteristics are not only associated with the decision to adopt or reject ICT, but they also influence the level of ICT adoption. Moreover, the organization strategy with respect to the type of relationships a company has with customers is associated with the level of ICT adoption both in terms of utility and parity. This research also confirms the benefits that the adoption of ICT conveys with respect to creating positive relational outcome. The results suggest that if the company adopts ICT at an advanced level, it is more likely to result in higher positive relational outcomes. In addition, ICT adoption at parity or higher with the customer is the basic requirement for the seller to retain its business relationship with their customer.

The research provides contributions to three main groups: academics, managers, and public policy makers. For academics, both relationship marketing and adoption theory are affected. For relationship strategy, the conceptual and empirical development of a buyer-seller taxonomy can benefit future research that is directed at understanding differences between close and distant relationship strategy types. The extension of explainability of traditional adoption determinants to classify different levels of advancement is a major contribution to adoption theory. Managerial implications, for both MNCs and supplying firms involve the benefits derived from understanding the factors that affect relationship strategy practices, and benefits of co-operation in the adoption ICT to enable better supply chain practices. Moreover, ICT service providers also benefit from this information with respect to their ability to respond to the needs of an important niche market. Lastly, public policy makers can use this information to customize the promotion benefits for ICT adopters and to identify the channels that encourage more ICT adoption among firms in the country.