

# Business and IT Strategic Alignment and Strategic Use of IT in Small Firms

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## ABSTRACT

*In businesses large and small, information technology has become an integral part of operation. To compete with large businesses, IT savvy small firms are at an advantage (Beheshti, 2004; Lin, Vassar, & Clark, 1993; Schaefer, 1995). Studies have shown positive impact of IT on small businesses, from helping small firms enhance their operational efficiency (Beheshti, 2004; Penhune, 1998) to driving business growth (Eckhouse, 1998), to integrating marketing operations with marketing strategies (Roge & Chakrabarty, 2002). In addition to the operational and strategic importance of IT, given small businesses' limited financial resources (Small Business Administration, 2000), small firms must invest wisely by making sure that their IT resource allocation properly reflects their business priorities. In other words, they must ensure their IT strategies are inline with their business strategies. This study examines the impact of IT and business strategic alignment in small firms, their business strategic orientations, and owner characteristics on the strategic use of IT.*

## LITERATURE REVIEW

Information technology strategic alignment is the fit between business strategy and IT strategy (Chan, Huff, Barclay, & Copeland, 1999; Hussin, King, & Cragg, 2002). According to Henderson and Venketraman (1993), strategic alignment involves strategic fit and functional integration. Chan et al., (1999) extended Henderson and Venketraman's work and developed instruments to measure strategic alignment. They studied the impact of strategic alignment on business performance and perceived IS effectiveness. They found that IS strategic alignment was a better predictor of business performance and IS effectiveness than either business strategic orientation or IS strategic orientation. Focusing on small businesses, Bergeron, Raymond, and Rivard (2004) studied 110 firms and found that firms with conflictual coalignment pattern of business strategy, business structure, IT strategy, and IT structure exhibited lower levels of business performance.

IT use in small firms is often characterized as tactical and lacking in sophistication (Bridge & Peel, 1999; Hassan & Tibbits, 2000; Igbaria, Zinatelli, Cragg, & Cavaye, 1997; Lin & Wu, 2004). Temtime, Chinyoka, and Shunda (2003) found that small firms more frequently used microcomputers for operational tasks—such as accounting, payroll, budgeting, production and sales planning, and stock control activities—than for managerial activities such as strategic analysis, investment appraisal, market research, and cash flow and profit forecasting. The tendency of small firms to focus on short-term operational efficiency instead of using IT for business planning, supporting business strategies, monitoring business performance, and improving competitive advantage could be attributed to several factors. Kyobe (2004) compiled a list of factors inhibiting strategic utilization of IT in small firms including lack of top management vision, lack of computer experience/expertise, and poor planning and inability to identify strategic use of IT. Among the inhibitors, management vision and support is clearly an important factor. The importance of management/owner influence is corroborated in studies that show small firms' owners' innovativeness, knowledge and perception of the relative advantage of IT played a critical role in IT adoption decisions (Cragg & King, 1993; Igbaria et al., 1997; Lee & Runge, 2001; Thong & Yap, 1995). The relationship between small firms' IS investment and strategic context was studied by Levy, Powell, and Yetton (2001). They found that small firms' IS use was a reflection of their strategic focus (cost reduction vs. value added) and market positioning (high or low customer dominance).

## STUDY FOCUS

The purpose of this study is to examine IT and business strategic alignment in small firms by comparing aligned and not-aligned small firms' IT use, business strategic orientations, and owner characteristics. Specific research questions and hypotheses include the following:

- Do aligned and not-aligned small firms differ in their IT use? Are aligned firms more strategic in their IT use?
  - H1: Aligned firms use IT for strategic analysis and planning more than non-aligned firms.
- Do aligned and not-aligned firms' owners differ in characteristics? Are aligned firms' owners more knowledgeable in IT? Are they more involved in IT implementation and management?
  - H2a: Owners of aligned firms are more knowledgeable in IT than their non-aligned counterparts.
  - H2b: Owners of aligned firms are more involved in IT implementation and management than their non-aligned counterparts.
- Do aligned and not-aligned small firms differ in their business strategic orientations? Are aligned firms more divergent in their business strategies such as focusing beyond cost and quality and on product/service differentiation also?
  - H3: Aligned firms are more divergent in their business strategies than non-aligned firms.

By comparing characteristics of small firms with aligned and not-aligned IT and business strategies, this study seeks to determine the impact of strategic alignment, owner characteristics, and business strategic orientations on IT use in small firms.

## RESEARCH METHOD AND EXPECTED STUDY OUTCOMES

Data for this study is based on input from small business owners (businesses with fewer than 500 employees) in several Midwest states in the U.S. While the study adopts the standard categorization of small-medium enterprises (500 or fewer employees), the survey included a "number of employees" question to aid classification of firms based on firm size in data analysis. The data collection instrument is a two-page questionnaire on the small firm's business and IT strategies, types of IT currently adopted, and business owner's IT knowledge and involvement in IT implementation and management.

To answer the research questions, several statistical analyses will be performed. First, cluster analysis will be used to identify firms with similar strategic alignment. Once clusters have been identified, additional analysis will be carried out to validate the clusters: t-test or analysis of variance will be used to determine whether significant differences exist between/among the clusters in the extent of IT and business strategic alignment of each cluster. Types of IT used and owner characteristics of firms in various clusters will also be compared. In addition, factor analysis will be used to detect existence of underlying dimensions of business strategies employed by small firms; the business strategic orientations of small firms in different clusters will then be compared. Finally, multiple regression analysis will be used to develop models for predicting small firms' strategic IT use based on various independent variables.

Expected findings from this study should enhance current understanding of IT utilization in small firms and its relationship with several variables (including

strategic alignment, owner influence, and business strategic orientation). While IT use in small firms has been a popular research topic, particularly studies that focus on e-commerce adoption in small firms (e.g., Grandon & Pearson, 2003; Martin & Matlay, 2003), this study explores the relationship between business and IT strategic alignment and IT use (including e-commerce), and examines the impact of mediating variables (business strategic orientation and owner characteristics) on strategic IT utilization. Such findings should add to existing literature on IT use in and strategic value of IT for small firms

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