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How Attitude Impacts IT Implementation Quality: An Exploratory Investigation of the Small Business Entrepreneur

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Abstract

Theories concerning the entrepreneur's attitudes towards IT are important because studies show that the entrepreneur's positive attitude towards IT is a key factor in achieving a high quality IT implementation in his/her business. Our study, based on data from multiple cases, supports this contention. Surprisingly, the data shows that those with negative attitudes towards IT also achieve high quality IT implementations. Those with uncertain attitudes towards IT had low quality IT implementations in their businesses. The results of this study yield some useful propositions: the most interesting is the importance of entrepreneurs with negative attitudes to rely on modern management policies in order to achieve a higher quality implementation.

Introduction

For years, computer specialists extolled the virtues of the high tech outfit. The positive impact IT can provide for small businesses has further been documented in studies. The impressive array of benefits that an organization might derive from using IT includes improving worker efficiency, eliminating menial jobs, and cutting costs of financial transactions.

One would have a difficult time finding the entrepreneur that would not at least acknowledge some benefit of using IT in his/her business. It can be further assumed that most entrepreneurs could find extensive support for the incorporation of IT into their businesses. It is interesting to note that while many entrepreneurs have positive attitudes to IT many others have negative or uncertain attitudes towards IT.

A recent survey of IT implementations in small businesses indicates that owners' having positive attitudes towards IT was an important factor associated with successful implementations. The implementation process begins with scanning the environment for IT opportunities and solutions and adopting the appropriate IT and ends with institutionalizing the use of IT as part of regular work behaviors.

This case study has three goals: (1) it categorizes entrepreneurs, those who direct and manage their own businesses, into three profiles based on their attitudes towards information technology and managing style, traditional or modern (2) it directs attention to case data that reveals how initial IT attitudes affect the exploitation of IT in business and (3) concludes with propositions concerning the entrepreneurs' likelihood of achieving a high quality implementation.

The Impact of Attitudes on Implementation Quality

Explanations concerning how attitudes towards IT affect the quality of an IT implementation can help guide the entrepreneur and information expert concerned with the design and plan of the implementation process.

Attitudes Toward IT - Entrepreneurs with positive attitudes towards IT will commit to an IT implementation. This commitment helps the entrepreneur endure the frustration and effort of overcoming the technical and organizational obstacles that always confront new ideas.

- We found that the entrepreneurs with positive attitudes were intimately involved in the implementation process. The entrepreneurs' understanding of how IT could provide a competitive advantage to their companies resulted in their decision to invest in integrated strategic applications.

Entrepreneurs with negative or uncertain attitudes towards IT may have trouble committing to an IT implementation. This lack of commitment results in reducing the amount of resources allocated to the project, inhibiting organizational changes required by the innovation and preventing the use of the IT to its fullest potential.

- Data from our cases show that entrepreneurs with negative attitudes went ahead with IT implementations. This group of entrepreneurs also achieved high quality IT implementations. This was a surprise because the literature suggests that entrepreneurs having negative attitudes towards IT will most likely achieve poor quality implementations.
- Initially, we presumed that the uncertain entrepreneur would seek advice from employees concerning the type and level of IT application to invest in. Interestingly, the data shows that these entrepreneurs became immobilized, perhaps as a result of information overload (i.e., the large volume of conflicting information regarding any particular IT). They were unable to initiate a forward-looking approach to guide them through the implementation process.

Quality of the IT Implementation - Specific outcomes identified with a successful IT implementation include increased profits, market share or ROI performance. Outcomes such as the ones suggested, however, are often causally distant from the

attitudes and actions that the entrepreneur exhibited during the implementation process. The quality of the IT implementation, however, has a much more direct causal relationship. The entrepreneurs evaluated the quality of the IT implementation based on improvements to business processes. Ultimately, the anticipated outcome associated with a high quality implementation is increased organizational performance.

Methodology

Case data was obtained through the use of an open-ended interview format. Open-ended interviewing is a valuable research methodology for business studies because it provides the researcher with rich and detailed data. By encouraging the interviewees to describe their worlds in their own terms an understanding of social phenomena evolves. Surveys, although the prominent orthodoxy for business studies, can not explore the detailed experiences of those being surveyed.

The research data for this study is derived from thirteen in-depth interviews with entrepreneurs that both own and direct their businesses. Table 1 exemplifies three entrepreneurs and characteristics of their business and IT implementation.

A number of questions in the interview guide help to determine the entrepreneurs attitudes, as follows:

Positive attitudes - This category includes entrepreneurs reporting without doubt that implementing IT will increase their organization's efficiency and effectiveness.

Negative attitudes - This group of entrepreneurs have a tendency to resist suggestions that IT can improve business efficiency and effectiveness. They argue that IT will not have any conclusive positive affect on their own business.

Uncertain attitudes - This category of entrepreneurs exhibited conflicting attitudes or feelings. The entrepreneurs express both positive and negative attitudes to IT.

Questions in the interview guide identify some of the actions the entrepreneurs took regarding IT and include: type of hardware and software purchases, hiring consultants, studying and learning about IT, initiating employee training, or taking no action. Statements that reflect the objectives and purposes for these actions help determine the entrepreneurs' management style. The entrepreneurs, also, reported their view of how the actions that they took, regarding IT, impacted their business.

Data

We became familiar with data gleaned from the interviews by using two recommended methods: (1) within case analysis and (2) cross case pattern. Importantly, these methods helped us to look beyond our first impressions of the data and made it possible to identify replication existing across cases.

Relying on both interview transcripts and cross-case analysis files three profiles emerged: Positive-Innovator, Negative-Entrepreneur and Uncertain-Traditionalist. The following represents examples of the coding:

Positive-innovator: Entrepreneurs indicating that they have positive attitudes towards IT often have an in-depth knowledge about IT.

Case P1. Positive statement: IT is fun! It allows you to do things faster and more accurately.

IT knowledge: We know the technology because we develop software for it. We put in the latest technology to maintain a leading competitive edge.

Negative-entrepreneur: These entrepreneurs as a group stated that although they follow reactive strategies they manage their businesses based on modern policies.

Case N1. Reactive strategy: We go to accounting shows and are bombarded by advertisements for information technology products. We couldn't hide from this stuff even if we wanted to!

Modern policy: We use young employees right out of college to show us how to use some of the new IT required by law. They tell us what we need.

Uncertain-traditionalist: Several entrepreneurs suggest that their uncertain attitudes developed because they did not have the resources to decipher the overwhelming data regarding IT. These entrepreneurs following traditional policies do not want to change internal processes.

Case U1. Information overload: IT is coming too quickly. Society is frantic. Technology is coming at us in a frantic way.

Traditional policy: For us to put in a voice mail system would cost over five thousand dollars and it's not necessary. We like the personal touch that comes from a person actually picking up the telephone.

Contending with Uncertainty

Positive-innovators perceive that their investment in IT have beneficial effects on their business. These effects range from increased operational effectiveness and efficiency to cultural changes that help to improve the quality of work life for the employees.

The cultural impact an implemented IT has on a business does so with a substantial degree of risk. For example, it reflects the empowerment of employees that now have access to more business information. This impact does not only have to represent a negative force on that business. It can have a positive affect on operations. None the less, changes will occur!

Table 1

Case	Entrepreneur	Type of Business	Number of employees	Age of business	Attitude toward IT	IT
U1	Jerry	Accounting Firm	9	51	Uncertain	Network- Accounting Sys. & Internet
N1	Martin	Accounting Firm	6	15	Negative	Accounting& Tax software
P1	John	Telecommunications software developer	10	11	Positive	Network - Groupware; DBMS; DSS; MIS; Internet

Four of the five entrepreneurs with uncertain attitudes inherited family businesses, averaging over forty-three years in existence. These entrepreneurs indicated that they feel most comfortable with hierarchical structure and control of all decisions. Bureaucracy, very much a part of their business climate, inhibits innovation and reduces the chances for a quality implementation of IT.

The most surprising results come from the negative-entrepreneurs. They perceived positive impacts on their business from the implementation of IT. They reduced the risk associated with IT by encouraging collaboration among employees and shared management policies.

Results

The following propositions emerged through the study of both existing theory and case data:

Proposition 1. Entrepreneurs with positive attitudes towards IT and who actively acquire IT knowledge through a variety of sources, will have a strong likelihood of achieving a high quality IT implementation.

Proposition 2 . Entrepreneurs with negative attitudes, who rely on modern management policies, have a strong likelihood of achieving a high quality IT implementation.

Proposition 3. Entrepreneurs with uncertain attitudes towards IT will have low quality IT implementations unless they find ways to “break the habit” of managing with traditional organization policies.

Proposition 4. Entrepreneurs who manage creative organizations and support collaboration among employees will achieve higher quality IT implementations than entrepreneurs who defend traditional organizations with clearly defined boundaries of operational responsibility.

Proposition 5. Entrepreneurs who promote shared management policies will achieve higher quality IT implementations than entrepreneurs who endorse policies emphasizing hierarchy and statue.

Assessment and Implications

As a multiple case study design the analysis and interpretations are based on a limited number of cases. This affects the generalizability of the study. Caution, therefore, must be used when applying these findings to other small business situations. By positioning our examination of the entrepreneurs attitudes towards IT on existing literature and by using two methods of data analysis we feel confident that another similar study will validate our conclusions.

Future research might look at the benefits of using creative problem solving (CPS) techniques to motivate the entrepreneur to explore a broader range of topics, than he/she might ordinarily explore, for a solution on how to reduce the amount of uncertainty linked to new IT.

One goal of a research project being pursued is the use of a knowledge based system to support entrepreneurs with the diffusion of IT in their organizations. Such a system could be helpful to those with uncertain attitudes towards IT similar to that of a computer specialist.

When the entrepreneur becomes an advocator to a new IT application the likelihood that the IT will benefit the business greatly increases. By building on positive attitudes and countering uncertain ones entrepreneurs can speed the diffusion of the IT within the organization.

References

References available upon request from author.