



INFLUENCE OF INFORMATION TECHNOLOGY ADOPTION ON SMALL FAMILY ENTERPRISES OF VIDHARBHA REGION: AN ANALYTICAL APPROACH

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Abstract

IT has really evolved into an essential instrument for business operations. Small family businesses are currently spending a sizable amount of money on IT to improve their competitive positions. Small Family Businesses have been subject to a number of related hazards in the adoption and development of IT solutions as a result of the widespread use of IT among these businesses. Small Family Businesses clearly recognize their need for it and the proportionate benefits of IT for their organization as they work toward a better knowledge of a suitable approach to well-organized deployment and effective use of IT. Small Family Businesses evaluated the costs and advantages of using IT.

Keywords: Small Family Business, IT, proportionate advantages of IT

Introduction

In many developing nations, a sizable portion of firms are small family businesses (SFBs). For those conducting business globally, information technology (IT), which has been developing for years, now has new significance. In fact, because practically every organization now uses IT, some Small Family Businesses (SFB's) claim that it is no longer considered an advantage. There have been very few studies on the population of Small Family Businesses (SFBs) in India, particularly in the Vidarbha area, despite the literature revealing a number of studies on the use of IT among SFBs across nations. This study aims to demonstrate the significance of IT adoption in Small Family Businesses (SFBs). IT may assist Small Family Businesses (SFBs) with a variety of tasks, including account preparation and management, data organization, and work process execution.



As time goes on, information technology (IT) advances and becomes increasingly beneficial to both the general public and companies throughout the world. There will almost always be some type of IT usage, regardless of the size of the organization. People often use computers, laptops, notebooks, tablets, or smart phones, for example, to work or to access the Internet. IT has become a need for the majority of people.

IT is used in every aspect of business, from standard word processing to enormous data warehouses that store a lot of information for the company. Accounting IT consists of both software and hardware components. Account Information Systems (AIS) may be developed internally in large organizations. The Resource System (ERP) of the firm may be subject to minor alterations that the company's IT professionals, off-the-shelf IT specialists, or even the corporate needs may impose.

The acceptance of new inventions or technologies at a specific moment is known as adoption. According to Nguyen (2009), adoption is the choice to employ a new technology. The term "adoption" refers to a decision by an organization to embrace and employ technology-enabled tools, procedures, and approaches for managing customer interactions that the organization has not previously used. The adoption notion has been contextualized using a variety of frameworks. Among these include adopter centered process oriented model (Pereira, 2002) that deals with individual perceptions and attitudes that form part of the adoption process; diffusion of innovations model (Rogers, 1995) that deals with user perceptions and attitudes towards adoption; theory of planned behavior (Fishbein and Ajzen, 1975) that deals with behavior, attitude and subject norm that can be used to determine adoption; theory of reasoned action (Ajzen, 1985) that deals with the attitude and subject norm and behavioral control that determine intention towards adoption; technology acceptance model (1986) used to predict the adoption of the technology based on the ease of use and usefulness of the technology; TOEM (Tornatzky and Klein, 1982; Tornatzky and Fleischer, 1990; Thong, 1999) that deals with Technology, Organizational, Environmental and Management adoption factors; Inter Organization Relationship factors (Chong et al., 2009) that focuses on factors that facilitate technology



adoption as a result of a relationship between two or more organizations. These include elements like cooperation, communication, and technological power.

Review of Literature

Sharma (2004) undertook an overview study that detailed the broad subjects of interest, methodological frameworks, and findings of 217 peer-reviewed publications that had been published previous to 2004 in order to condense much of the research that had been done on family companies. Based on the particular subject on which the writers concentrated, the author divided the literature into a number of different categories (i.e., individual, interpersonal or group, organizational, social). The author was able to demonstrate the topic of each piece by classifying the content into these groups. Sharma said that the entire area of family business research is progressing favorably toward more complex study that is influenced by widely accepted theory.

Winter et al. (1998) criticized prior research in an effort to explain some of the methodological difficulties, conundrums, and potential alternative ways to analyzing family companies. The authors claimed that family companies were essential to the economy on all scales, from the local to the global. Previous study was alleged to have had restricted criteria and sampling, which led to limited results. Using a methodological approach that enables greater consideration to be given to family factors, company features, as well as the relationship between the two, was advised by Winter et al. (1998). In order to improve the capacity to extrapolate findings to the broader population, it was also recommended that researchers employ a representative sample of family companies in the United States.

A significant research to ascertain the incidence of family companies in the United States was carried out by Heck and Trent in 1999. The number of family companies in the United States has previously been attempted by other writers (e.g., Barnes & Hershon, 1976; Holland, 1981); however, these studies were based on US Small Business Administration statistics that did not distinguish between family and nonfamily enterprises. Heck and Trent made use of information



from the National Family Business Study (NFBS) conducted in 1997. The same data that Heck and Trent utilized to identify the factors that lead to company success and profitability will be used in this thesis project. Heck and Trent used frequencies, percentages, standard deviations, and means to conduct a data analysis to assess the frequency of family companies in the U.S. A family company manager or owner was found to live in 10% of American homes.

Murphy (2005) carried out a research in which the author tries to elucidate the difficulties of private family enterprises. This study's methodological strategy was straightforward. 187 family company owners completed a questionnaire asking them to list the top five problems they were currently facing and score each one from one to five. Murphy discovered that family company managers were more focused on immediate concerns, such as present operational challenges, than they were on ownership issues, which are seen as being of the utmost importance by managers of publicly listed firms.

In a research on small related firms, Bird, Sapp, and Lee (2001) investigated how industry location and the owner's gender affected business performance. Gross sales as reported by the company owner for 1994 were used by Bird et al. to determine the success of a firm. The authors concluded that the gender of the business had both direct and indirect effects on the success of the company based on analysis of data from 423 small business owners in Iowa. Women business owners were less likely to have previously operated a business and had much less work-related experience than males. Male business owners worked greater hours at their companies than did female business owners, and this increased small business success.

Research Methodology

Objectives

- To research the factors influencing the IT adoption process in SFBs.
- To look into and identify various internal and external problems that are pressing and influencing SFBs to embrace IT solutions.
- To categorize the various aspects of IT adoption in SFBs.



- To research the critical elements that either directly or indirectly influence the IT adoption process in SFBs.
- To investigate the degree to which SFB IT adoption helps the industrial sector achieve greater economies of scale.
- To determine if the use of information technology results in an improvement in economic conditions.
- Researching the social impacts of IT deployment in SFBs
- To assess the impact of new information technology adoption strategies on the overall expansion of SFB.

Hypothesis

Null Hypothesis H0:

- There is **no significant** relationship exists between Information technology adoption and smaller degrees of business problems.
- **That** there is **no significant** relationship exists between Information technology adoption and education of Small family Business owner.

Sample Method

The primary research tool used to gather the panel data for this study is a four-part survey instrument used to identify the characteristics of adoption of IT systems, the timeline of their adoption and the diffusion of their practice. Data on the timing and scale of production process changes and investments were also collected via the survey. Data on the performance outcomes were collected monthly via email and in-person.

Data were also collected via the survey on variables, other than adoption of IT, that impact production efficiency. Benefits deriving from economies of scale, the degree of knowledge transfer from foreign buyers and the sophistication of the equipment all also impact the production efficiency of an establishment and so data were collected on these and similar variables. In addition to collecting information on all the variables shown in Figure, information



was also gathered on the timing and degree of any re-engineering of production and the frequency of batch setting for new styles because of their impact on production efficiency.

Limitation of the study:

- One drawback is that the sample's male preponderance prevents generalizations to females, which is not always suitable.
- Response bias among the subjects was another drawback.
- Cross-sectional study like this one is subject to time-of-measurement influences.
- Since the data was only collected at one moment in time for that organization, it could only represent that point in time.
- It is not possible to extrapolate the results to other organizations.
- The sample's low response rate may have reduced the results' statistical power.
- Given that the sample size for this study was limited, the results would not be as significant.
- The higher the sample size, the more accurate a generalization to the entire population is.

Data Analysis and Interpretation

Ho₁: There is no significant relationship exists between Information technology adoption and smaller degrees of business problems.

| | | Mean | s.d. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|----|----------------------------------|------|------|------|-------|--------|-------|-------|-------|-------|-------|------|-------|------|
| 1 | Decision quality | 5.87 | .73 | | | | | | | | | | | |
| 2 | Management's decision commitment | 6.02 | .76 | .51* | | | | | | | | | | |
| 3 | Inside ownership | .79 | .27 | -.10 | .01 | | | | | | | | | |
| 4 | Board composition | .21 | .25 | .01 | -.14 | .38** | | | | | | | | |
| 5 | Board monitoring | 4.95 | 1.44 | .31* | .16* | -.23** | .38** | | | | | | | |
| 6 | Board counsel | 4.56 | 1.25 | .32* | .30** | -.04 | .13 | .50** | | | | | | |
| 7 | Generation | 2.18 | .99 | -.08 | .02 | .25** | .26** | .14 | -.04 | | | | | |
| 8 | Firm size | 1.90 | .77 | .08 | -.04 | .32** | .33** | .30** | * .15 | .37** | | | | |
| 9 | Past performance | 2.17 | 1.08 | .10 | .07 | .19* | -.08 | .03 | .04 | -.15* | .25** | | | |
| 10 | Dual leadership | .21 | .41 | .02 | .15* | .29** | .30** | .19** | -.05 | .23** | .32** | .17* | | |
| 11 | Voting control | .94 | .14 | -.13 | .03 | .51** | .35** | -.12 | -.01 | .03 | .24** | .09 | .15* | |
| 12 | Environmental turbulence | 4.15 | 1.41 | -.06 | -.05 | -.18* | .16* | .00 | * .16 | .12 | .08 | -.12 | -.15* | -.07 |

^a Variable is a logarithm
 ** p < .01; * p < .05; two-tailed test

The generation in charge and the size of the firm both indicate the stage of the company's lifetime. As might be predicted, they have a positive correlation with board composition and a negative correlation with inside ownership. Additionally, the size of the company is positively connected with both board duties—namely, monitoring and advice. As might be predicted, there is a positive correlation between firm size and the generation in charge.

Important governance factors in the model include dual leadership and family voting control, which are connected as would be predicted. Both of the factors have some relationships with other variables: within family ownership has a positive association, while board composition and business size have negative correlations. These findings are in line with existing governance



research. Additionally, dual leadership is positively connected with management's decision commitment but adversely correlated with board monitoring and generation in charge.

It's interesting to note that historical success is inversely connected with business size and favorably correlated with inside ownership and dual leadership. These findings imply that family businesses that are younger and smaller, where ownership and control have not yet been considerably separated, are more lucrative.

Ho₂: There is **no significant** relationship exists between Information technology adoption and education of Small family Business owner.

The variable adoption of IT in SFBs consists of following parameters:

- 1) Adverse effects of non-compliance of IT
- 2) IT is fair and unbiased
- 3) Staff is encourages
- 4) Adoption of IT reviews are taken seriously
- 5) Company policies supports staff development
- 6) IT goals are set for reflecting ever increasing customer demand
- 7) Management is transparent with IT
- 8) Management offers assistance to staff

In order to measure the term turnover rates, the percentage of workers with the establishment from longer time should be known.

So, in order to glimpse about the relationship between Information technology adoption and education of Small family Business owner, **statistical tool- correlation** is used and the result is as follows:



| | Adverse effects of non-compliance of IT | <i>IT is fair and unbiased</i> | <i>staff is encouraged</i> | <i>IT reviews are taken seriously</i> | <i>company policies support staff development</i> | <i>IT goals are set for reflecting ever increasing customer demand</i> | <i>mgt is transparent with IT</i> | <i>mgt offers assistance to staff</i> |
|---|---|--------------------------------|----------------------------|---------------------------------------|---|--|-----------------------------------|---------------------------------------|
| Adverse effects of non-compliance of IT | 1 | | | | | | | |
| IT is fair and unbiased | 0.30 | 1.00 | | | | | | |
| staff is encouraged | 0.11 | 0.11 | 1.00 | | | | | |
| IT reviews are taken seriously | 0.21 | 0.06 | 0.15 | 1.00 | | | | |
| company policies support staff development | 0.14 | 0.24 | 0.32 | 0.19 | 1.00 | | | |
| IT goals are set for reflecting ever increasing customer demand | 0.09 | 0.09 | 0.13 | 0.02 | 0.24 | 1.00 | | |
| mgt is transparent with IT | 0.07 | 0.05 | 0.01 | 0.11 | 0.17 | 0.30 | 1.00 | |
| mgt offers assistance to staff | 0.13 | 0.06 | 0.56 | 0.27 | 0.04 | 0.04 | 0.13 | 1.00 |

In this case it can be concluded that there exists a positive Correlation between Information technology adoption and education of Small family Business owner. Hence the null hypothesis



Ho₄: There is **no significant** relationship exists between Information technology adoption and education of Small family Business owner, is rejected and the alternate hypothesis Ho₄₋₁₁: There is **significant** relationship exists between Information technology adoption and education of Small family Business owner, is accepted.

Conclusion

- The purpose of this study was to offer an evaluation of the driving forces and potential remedies for SFBs' adoption and usage of technology.
- According to the survey, the majority of SFB CEOs and staff were supportive of their companies' embrace and use of technology; they valued its ability to boost their profit margins and improve operational efficiency.
- The enthusiasm, support, and dedication of the CEOs and workers to the adoption and usage of technology tools had a favorable impact on the entire process.
- But based on the survey, it seemed that most SFBs were either not using technology at all or just using it to a limited extent, as claimed by the majority of participants.
- The study found obstacles that prevented SFBs from adopting and utilizing technology without difficulty. These obstacles include the price of technological tools, a lack of technological know-how, uncertainty about the business benefits of adopting and using technology, technical difficulties (such as breakdowns), inadequate infrastructure and poor maintenance, restricted internet access, and limited and unreliable power sources, among others.
- SFBs have been found to be a key factor in a nation's economy's growth.
- Researchers have stressed the necessity for SFBs to utilize ICT in the current globalized environment.
- Its uptake is still lacking, especially in the Vidarbha area.
- Recent studies investigated different ICT application angles in SFBs enterprises to examine the ramifications of ICT adoption in smaller businesses as well.
- Owner-managers of these businesses may decide not to use ICT for a variety of reasons. Both internal and external, some of these elements have to do with owners while others have to do with staff.



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