

A STUDY ON ANTECEDENTS AND CONSEQUENCES OF THE USAGE OF INFORMATION SYSTEM ON RECITAL IN THE SMALL MEDIUM ENTERPRISES (SMEs) OF SELECTED DISTRICTS, TAMIL NADU

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Abstract:

Small and medium-size enterprises (SMEs) are main factors of all economies and are commonly studied to be adaptive, flexible organizations. SMEs play an essential part in the country's overall production structures and they are core to the economic development of improving countries. The formal SMEs contributions are 50% of total employment and 33% of the national income of emerging economies. While containing informal SMEs the proportion will be improved. Finance extension is the major constraint to SME development, without that many SMEs are declined. SME formation is considered to be important at present days. They include in job innovation in this current day economy. The Small and Medium Enterprises (SMEs) faces different problems, which may not be faced by large firms, due to their economy of scale. Although lagging behind their higher counterparts, SMEs are inception to provide in information systems. Most SMEs has low-levels of internal information system (IS) expertise, although this difference in industry sector. One of such problems is the application of information systems for optimizing and efficiently running their business processes. The main reason is scarcity of financial resources in setting up and running information systems. The cost of running information systems, their upgrades, and maintenance require sizable resources (money and technological manpower) in the long run in SMEs. It will help them in networking and forming peer groups for better bargaining from large companies. IS can play the major part to help SMEs to achieve the connectivity with markets and in turn make SMEs more responsive.

Keywords: *Small and Medium-size Enterprises (SMEs), Information System (IS), Establishment, Expertise, Financial Resources, Communication, Networking, Counterparts, Sizable Resources, Peer Groups, Connectivity, Markets, Application, Upgrades, Responsive, Bargaining, etc,*

INTRODUCTION AND DESIGN OF THE STUDY:

INTRODUCTION

The intensifying international competition and market uncertainty have induced business players to search on what determinants ensuring their business achievement. High business achievement reflects that company has competitive benefits. To have superior achievement, companies must identify their core competitiveness and execute exact strategy. Strategic management experts view competitiveness from two perspectives, which are external determinant / industrial system and internal determinants / companies specific. Whereas, since 1990, strategic management researchers have used Resource based view (RBV) and have changed from industrial approach (external) to company unique (internal) in viewing causes of competitive benefit. RBV develops the significant role of resources and capabilities in determining sustainable competitive benefits. So far, study on capabilities was generally used in large sized companies, while rarely in small medium sized business. As in most countries in the globe, SMEs play significant roles for Indonesia's economy. According to Ministry of Co-operatives and SMEs, out of 59.3 million enterprises operate in Indonesia, only 1.15% was small and 0.1% was medium-sized enterprises. The other 98.75% were micro-enterprises (OECD, 2018). Due to meaningful contribution to Indonesian economy, the development and survival of SMEs is very critical. Internal effectiveness is translated into marketing, innovation and learning effectiveness. Additionally, marketing effectiveness is also investigated as antecedent elements of SMEs innovative efficiency. Proficiency is equally valuable for SMEs when facing intense competition and dynamic market. Further, to assist competitive, SMEs should increase effectiveness that are significant and crucial to copy.

IMPORTANCE OF SMEs

SMEs are different from large firms in several ways. In SMEs, decision making is centralized in diminish several persons; standard procedures are not well laid out; there is limited long-term planning; and there is greater dependence on external expertise and services for information system. For example, the number of determinants that influences the organization decision on whether to apply a new innovation, like customer relationship management. These factors are briefly described to highlighted key areas of research. Innovation supplier marketing effort that makes enterprises aware of the technology can provide improved adoption. Further increments in approval can be contributes via enterprise network participation and inter-connectivity contributes via social networks. Environmental determinants can also place adequate pressure on enterprise to use novel technologies. Strategically, if a competitor applied the technology, it may be important for other competing enterprises to do so if they are to remain viable within the industry sector. SMEs comprise an essential sector of all countries, economies and in some countries constitute more 90 percent of business. The part of small business in emerging markets based on information system is a major policy issue for Governments. It is conceivable that the dynamics of electronic markets could create conditions that might

impede SME involvement, relating to access to networks and connectivity, technical standards or institutional arrangements that might have anti-competitive effects or pose barriers to entry. This means both Governments and the business community must remain attentive to the developments in the electronic marketplace in order to prevalent or remove barriers to full SME participation.

IMPORTANCE OF INFORMATION SYSTEM

The information system investments will be more efficient, if the system's implementation is aligned with firms' strategy. The information system which is aligned with business strategy verifies to have positive consequences on companies' recital. The essential of having a better fit between firms' requirement and technology's capabilities is highlighted. The sophisticated information system aligned with ineffective recital calculation will yield lower recital outcome. This raises the demand for careful planning and strong justification process to be undertaken before company reaches the decision to implement an information system. The SMEs adoption of information system is mainly influenced by the perceived advantages of implementing the systems and stems from the pressures received from competition, customers, and suppliers to ensure business continuity and survival in the increasingly competitive environment. Many firms invest in advanced information system aiming at collecting more information to assist decision making performance which will eventually lead to improve efficiency and firms' profitability. The information system resources are able to create competitive advantage.

NEED OF THE STUDY

The Information System (IS) serves many industries and numerous functional fields in an integrated trend, attempting to automate operations from supply chain management, stock control, manufacturing scheduling and production, sales support, consumer relationship management, financial and cost accounting, human resources and almost any other data oriented management process at SMEs. It considerably creates consequences on tangible, intangible benefits and business recital factor. The tangible benefits are cost reduction in all functional area, improvement in revenue or profit and on time delivery. The important intangible benefits are improved business process, customer orientation, integration, flexibility and globalization. The SMEs are facing hectic competition especially after liberalization, privatization and globalization in 1990s. The only way to survive and succeed in their business is cost reduction by optimum utilization of resources available to them. It is possible only when there is a proper implementation of IS at their units. Hence, the current research has made an effort to discuss the importance of IS at SMEs and its consequences of on SMEs.

STATEMENT OF THE PROBLEM

There is wide gap between the SMEs and big companies in the adoption of IS. SMEs are frequently resource poor, and need various competences to cope with scarce resources. They may also have to rely more

on external resources and thus a various set of competences are required. But, the SMEs are relatively weak when dealing with external provider namely software vendors. They face cut-throat competition from the large enterprises and multi-national companies. The only possible way to survive in the business is optimum utilization of resources at the nearest minimum cost. The cost per unit is comparatively higher in SMEs than in big firms. Hence, they are struggling to survive in the business. Some of the SMEs adopt IS at their unit and manage their status in the market. Even though some SMEs realize the necessary of implementation of IS and its recital, they are unable to implement it properly.

REVIEW OF LITERATURE

Paul et al. (2011) analyzed the IS competencies in SMEs. They identified that implementation of IS competences has a significant positive consequences on the recital of SMEs. They also addressed to provide adequate training, engaging a consultant for the development and utilization of IS at SMEs.

Calderia and Ward (2002) found the need of a large range of skills, including IS, business and general management skills for an effective implementation IS at SMEs. The identified competencies required at the managerial level are technical IS processes, organizational competencies in IS and organizational processes for IS management and use.

Tom and Olsen (2007) found that the competency determinants affecting e-business success in European SMEs are the strategy and vision, strategic planning, IS business process, IS management, system and infrastructure, relationship competency, sourcing and alignment.

Lee (2001) argued that adoption of e-business basically altered internal procedures in SMEs. The competencies in IS-business process integration are their capability to integrate IS and business skill to devise new business process.

Kositanurit et al. (2006) used the system quality as perceived ease of use. They found positive associates with different operational of use in a variation of system dependence.

Premkumar et. Al (1994) did not find that complexity of a system affected the initial use and adoption of an entrepreneurship development innovation system; however, the technological compatibility of the system with existing hardware and software did affect basic use and adoption of an entrepreneurship development innovation.

Hsieh and Wang (2007) found a positive influence of system quality on individual performance although the association between recognized ease of use as a measure of system quality and recognized usefulness.

Hong et al. (2002) found that the significance of the information retrieved had a meaningful influence on expected usefulness, yet the clarity of the terminology used and screen design of the content presented had no associates with expected usefulness.

Wixom and Waston (2001) found a strong associate between satisfaction and intention to use when mediated by technology by acceptance constructs. They also found that satisfaction with the system is correlated to both the hours of use and the extensiveness of tasks in a study.

Bharati and Chaudhury (2006) found a meaningful correlation between perceived productivity and user satisfaction of computer-mediated conversation systems. A linkage between decision-making satisfaction and overall user satisfaction was also discovered I a study of e-commerce websites.

Data Quest (2000) identified that the Indian firms have enhance their investment in information technology by manifold to develop overall business performance, and the increased use of IS forced SMEs in India to design and deploy effective management of IS and follow proper IS practices.

Love and Irani (2004) observed that IS investments had a positive relation with the IS management practices. Increasing investments in IS and strategic role played by the IS make IT implementation as an important research issue within MIS discipline.

Bhagwat and Sharma (2006) examined the case studies that deal with the design of IS function and structures. They mentioned a direct correlation between the rate of functioning of IS and the organizational recital.

Heo and Han (2003) argued that the contingent evolution approach can help an organization to assess the consequences of IS on business recital. The findings support the perception that the contingent measurement method has the capability to be very useful design if it incorporates contingency factors like environmental, organizational and other characteristics.

RESEARCH GAP

Even though, there are several studies related to the IS implementation and its consequences in SMEs, all these studies are conducted at western countries and northern districts in India. There is no exclusive study on this aspect in selected districts in Tamil Nadu level. Hence, the current research attempts to fill up the research gap.

OBJECTIVES OF THE STUDY

- To exhibit the socio-economic profile of the SMEs.
- To explain the importance of antecedents and consequences of usages of IS at SMEs.
- To analyze the quality, problems and prospects of IS at SMEs.
- To study the individual and organizational factors influencing of IS at SMEs.
- To evaluate the consequences of usage, quality, problem and prospects of IS at SMEs.
- To suggest and conclude the study based on the analytical findings.

RESEARCH DESIGN & RESEARCH METHODOLOGY

- Research Type** : Descriptive Research
- Sampling Technique** : Stratified Proportionate random Sampling
- Sample Size** : 435 small and medium-size enterprises from four districts viz. Madurai, Sivagangai, Virudhunagar, and Tirunelveli.
- Data Collection Method** : Data is gathered from primary as well as secondary causes. Through, primary source the data is gathered through interviews of key persons in the organisation and through personal discussion and filling of questionnaire from women entrepreneurs. Secondary causes consist of books, periodicals, newspapers and online resources.

The questionnaire was measured using 5 point Likert scale the value assigned was strongly disagree = '1' to strongly agree = '5' in order to measure the antecedents and consequences of work life balance among the women entrepreneurs.

DATA ANALYSIS, INTERPRETATION AND HYPOTHESIS TESTING:

Four hundred and thirty five questionnaires were distributed to four different types of the small and medium-size enterprises from four districts viz. Madurai, Sivagangai, Virudhunagar, and Tirunelveli districts. After eliminating the invalid questionnaires, 435 valid questionnaires were used for further analysis.

The statistical tools like Mean, T-test, Analysis of Variance (ANOVA), Multiple Regression Analysis, Explanatory Factor Analysis (EFA), Adequacy, Factor Scores, Reliability Co-efficient, and Confirmatory Factor Analysis (CFA), Communalities, Eigen Value, Factor Loading, Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy, Reliability Co-efficient, and Discriminant analysis.

Reliability Test

The research tool namely the questionnaire was tested for its reliability and consistency. The instrument was tested through Cronbach alpha analysis and the results were obtained dimension wise. The effectiveness of the questionnaire proves to be 98% good and valid.

Data analysis and interpretation

- Demographic profile
- Level of IS skills and knowledge
- Usage of IS at SMEs
- Usage of IS in inter-organizational process
- System quality at the units
- Information quality

- Service quality of IS at the SMEs
- User satisfaction
- Problems in usage of IS
- Marketing consequences
- Production consequences
- Inventory consequences
- Human resource consequences
- Financial management consequences
- Individual consequences
- Organizational consequences
- Variables influencing consequences of IS at SMEs

HYPOTHESIS TESTING:

Correlation

The researcher has used the correlation to measure the strength and the direction of a relationship between two variables. It is also called as Pearson product moment correlation coefficient.

Correlation between Discriminant validity among the DPI in antecedents and consequences of work life balance:

Variables	$\sqrt{R^2}$	Statistical Inference
Antecedents of IS on recital in the SMEs	0.370**	P<0.01, Significant
Consequences of IS on recital in the SMEs	0.375**	P<0.01, Significant

** - Correlation is significant at 0.01 level.

H1 - There is a relationship between antecedents of IS on recital in the SMEs.

Coefficient of correlation between antecedents of IS on recital in the SMEs and consequences of IS on recital in the SMEs, there is a positive correlation ($r=0.370$) between antecedents of IS on recital in the SMEs and consequences of IS on recital in the SMEs, hence H1 is accepted where there is a sig. relationship between antecedents of IS on recital in the SMEs and consequences of IS on recital in the SMEs.

H2 - There is a relationship between Consequences of IS on recital in the SMEs.

Coefficient of correlation between antecedents of IS on recital in the SMEs and consequences of IS on recital in the SMEs, there is a positive correlation ($r=0.375$) between antecedents of IS on recital in the SMEs and consequences of IS on recital in the SMEs, hence H2 is accepted where there is a sig. relationship between antecedents of IS on recital in the SMEs and consequences of IS on recital in the SMEs.

FINDINGS

- The significantly associating important profile variables with the rate of usage of IS are nature of management, number of employees, amount of investment, years of experience, existence of IS department, level of education, age and years of experience of organizer of SMEs.
- The significantly associating important profile variables of SMEs with their area of usage of IS are nature of management, number of departments, monthly turnover, amount of investment, nature of activity and years of experience of SMEs. The important discriminant area of usage of IS among SMEs is intra-organisational process.
- The significantly associating important profile variables in the level of view on quality of IS at SMEs are monthly turnover, amount of investment, years of experience of SMEs, level of education, age and years of experience of organizer of SMEs. The important discriminant quality of IS among the SMEs unit is system and service quality which is higher in medium units than in small units.
- The highly viewed variables in production consequences at small units are ease of quality control and production control whereas at medium units, these are ease of reduction of production cost and production planning. The significant differences among the SMEs units have been noticed in the view on all variables in production consequences. The level of production consequences is higher at medium units than at small units.
- The significantly associating profile variables of SMEs with the level of various functional consequences are number of departments, monthly turnover, and amount of investment, level of education and years of experience of the organizer of SMEs. The important discriminant functional consequences among the SMEs units is financial management consequences which is higher at medium units than at smaller units.
- The rate of usage of IS significantly influencing the function consequences at SMEs. The rate of consequences is higher at medium units than at smaller units. The significantly influencing area of usage of IS on the functional consequences at small units is intra-organisational process. The rate of consequences of area of usage of IS greater at medium units than at small units.
- The significantly influencing problems in usage of IS on the functional consequences at small units are technical, managerial and financial consequences whereas at medium units, the problems are only technical. The rate of consequences of problem of usage of IS on the function consequences is higher at small units than at medium units.

- The significantly influencing factors on the individual consequences at small units are system and infrastructure whereas at the medium units, these are system and vision, system and infrastructure and process integration. The rate of consequences of the factors on individual factor is higher at medium units than at small units.
- The significantly influencing quality of IS on the individual consequences at small units is service quality of IS whereas at medium units, it is system quality, information quality and service quality. The rate of consequences of quality of IS on individual consequences is higher at medium units than at small units.
- The significantly and negatively influencing problems on the organisational consequences at small units are technical, managerial and financial problem whereas at medium units, these are technical and financial problem. The rate of consequences of problems on organisational consequences is higher at small units compared to the medium units.

Following Determinants have been identified which antecedents and consequences of information system on recital in the small medium enterprises:

Antecedents of IS on recital in SMEs	Consequences of IS on recital in SMEs
1. Customer relationship management	Management of IS resources
2. Competitive analysis	Knowledge of IS value to business
3. Assurance of the supportive staff	Knowledge of usage of IS
4. Supportive staffs behaviour	Flexible infrastructure
5. Incorporating	Agreeableness of IS contribution in business
6. Co-ordination of cross enterprise	Effectively co-operate electronically
7. Integrate business process	Knowledge of outsourcing
8. Ease of marketing strategy formulation	Knowledge of strategic planning
9. Reduction in time consumption	Effective exchange of idea
10. Business process change	Well understanding of IS

RECOMMENDATIONS

- Moving to innovation
- Higher utility and flexibility of IS
- IS competencies and IS success

- Opportunity framework
- Need for a balance score card
- Importance of quality of IS
- Maximize profitability
- Business process change
- Awareness framework
- Economic contribution for implementation of IS

LIMITATIONS

- The current research is confined in its scope to SMEs.
- The present study focus on the selected four districts in Tamil Nadu.
- The variables related to many aspects in IS and its recital are generated with the help of previous studies and also the view of experts.
- The antecedents and findings of information system have been examined with the help of appropriate statistical tools which have their own limitations.

FUTURE SCOPE

Future research work may be extended to the linkage between the IS competencies and IS success at various industries may be studied in near future. The consequences of IS implementation at SMEs and large organizational may be studied as a comparative analysis. The direct and indirect influence of implementation of IS on various outcome at the industry may be studied with the help of implementations of IS on various outcomes at the industry may be studied with the help of Structural Equation Modeling (SEM) in the future research work. The separate study on problems in sage of IS I SMEs and its remedies may be focused in near future. Future studies must be applied more comprehensively and consistent measures of use in order to better understand the effect of use on user satisfaction and net benefits should be undertaken.

CONCLUSION

The present study concludes that the level of implementation of IS at the SMEs is only at a moderate level. The level of implementation of IS relatively higher in medium units than in small units. The implementation of IS at the SMEs has a significant consequences on the functional management of the SMEs, individual and organizational recital of the SMEs to a considerable extent. The level of consequences of implementation of IS higher at the medium units that at the small units. The important problems is using the IS at SMEs are technical, managerial and financial related problems. These problems affect the consequences of IS on the recital of the SMEs. Even though the positive consequences of IS on the consequence of the

SMEs is very clear, the rate of implementation is relatively lesser because of the fear of usage of IS in SMEs and increasing the level of IS in the business management to reap more complete advantage in the business world.

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