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Effects of information and communication technology on small and medium enterprises in Cuddalore district

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Abstract
Now-a-days organisations of all types are utilising Information and Communication Technologies (ICT) around the globe for cutting costs, improving efficiency and providing better customer services. In this paper deals with impact of information and communication technology on performance of small and medium-sized enterprises (SMEs) in Cuddalore District was considered. The target population of the study was the small and medium sized enterprises in Cuddalore District. The purpose of the study, samples size of 180 small and medium sized entrepreneurs are selected. The collected primary data are subjected to various statistical techniques from descriptive statistics like Simple Percentage, Mean and Standard deviation. It is found that in the study area have moren manufacturing enterprises, most medium-scale enterprises are (54.55 percent) categorized as Partnership firm with only a small proportion (16.36 percent) classified as sole proprietorship, few enterprises (from both small and medium-scale) representing 13.89 percent have been in business for over 10 years and also reveals that effect of ICT implementation in SME in Cuddalore district were high in Reliable Business Forecast, Customer Profiling, Better Access to Information and Increased Efficiency with mean score more than 4.14. Whereas the low level of impact were shows High Quality of Customer Care, Improved Communication with Staff, New Products/Service Development and Increased Responsiveness to customers.

Keywords: communication technology, business, ICT

Introduction
Now-a-days all types' organisations are utilising Information and Communication Technologies (ICT) around the globe for cutting costs, improving efficiency and providing better customer services. Governments too, around the world, are adopting ICT to provide better services to their citizens. Most of the large and international organisations in India have effective computer systems to efficiently conduct business. A number of large organisations have spent huge amount of money on installing computer systems to support their business processes. Small and medium sized Enterprises (SME) play an important role in economic development of a country. Several theories elaborate on connection between information technology, economic development and social change. Almost all agree on the importance of ICT adoption in SMEs, while the importance of SMEs as engines to economic growth is well acknowledged worldwide. SMEs would need as well as effective information systems to support and to deliver information to the different users. Such information systems would include those technology that support decision making, provide effective interface between users and computer technology and provide information for the managers on the day-to-day operations of the enterprises. Information is needed for various purposes and serves as an invaluable commodity or product. Information is very important aspect of decision making in all levels of management in enterprises, especially in competitive business environment and managers utilise information as a resource to plan, organise, and staff administer and control activities in ways that achieve the enterprises objectives.

Review
Muller and Fallk (2001) [5] found for Indian manufacturing SMEs those enterprises that use more advanced forms of ICT have on average a higher productivity and a higher growth rate. Brynjolfsson and Hitt (2000); David (1990) [3]; Greenwood and Jovanovic (1998) [4]; Malone and Rockart (1991) have also analysed the impact of ICT on firm-level productivity. It is usually stressed that ICT investments must be combined with complementary investments in work practices, human capital and firm restructuring to have an impact on performance. Van Ark *et al.*, (2003), Nordhaus (2012) [6] argued that ICT-related productivity increases are primarily observed in those sectors that have invested heavily in the usage of ICT, including trade, financial services, business services, and the ICT manufacturing sectors themselves. Garsombke and Garsombke (1989) found computerisation to be a significant predictor of the performance of small manufacturing firms. Duan *et al.*, (1992) found SMEs with sophisticated ICT performed not better than SMEs with less sophisticated ICT.

Objectives of the study
The objective of the present study was to analyse the effects of

Information and Communication Technologies on Business Performance of Small and Medium Enterprises in Cuddalore District.

Scope of the study

In the present research, the researcher is going to deal with potential for analysis of impact of information and communication technology on performance of small and medium-sized enterprises in Tamil Nadu. Since, it is not possible to cover the entire state of Tamil Nadu due to limit of time and cost. So, they selected SMEs in Cuddalore District was considered for the study. Cuddalore District has a large number of populations; more number of small and medium scale industries and financial institution are situated in this District.

Methodology

The study focuses on perceptions of small and medium entrepreneur with regard to ITC utilized parameters. The information for the study is collected from major sources of primary data through questionnaire. The target population for data collection is the small and medium sized enterprises in Cuddalore District. The purpose of the study, samples size of 180 small and medium sized entrepreneurs are selected from convenience sampling techniques

Statistical Techniques

The collected primary data are subjected to various statistical techniques from descriptive statistics like Simple Percentage, Mean and Standard deviation.

Limitations of the study

The study is confined to following limitations.

1. Due to paucity of time, the size of the sample has been restricted to 180 from Cuddalore district is taken into consideration.
2. The study is confined only to the owner/head of industries, and so the outcome could not be generalized to the other categories of employees.

Analysis and Interpretation

The findings from the analysis on the study, the effects of Information and Communication Technologies on Business Performance of Small and Medium Enterprises in Cuddalore District are followings.

Table 1: Nature of the business

Nature of Business	No of Respondents	Percentage
Manufacturing	108	60.00
Service	72	40.00
total	180	100.00

Table - 1 shows that out of 180 sample respondents, 60.0 per cent of the respondents are manufacturing enterprises and 72 respondents are service companies, which is 40.0 per cent of the total companies, showing that in the study area is more in manufacturing enterprises, as it was first developed in these types of enterprises.

Table 2: Type of ownership

Types of Units	Small-scale		Medium-scale	
	No.	percentage	No.	percentage
Sole Proprietorship	94	77.69	13	22.03
Partnership	17	14.05	30	50.85
Private Company	10	8.26	16	27.12
total	121	67.22	59	32.78

Source

From Table 2, out of total enterprises, 121 small-scale enterprises, 77.69 per cent are classified as sole proprietors, 14.05 per cent are partnership firm and 8.26 per cent are private company. On the other hand, most medium-scale enterprises are (50.85 per cent) categorized as Partnership businesses with only a small proportion (22.03 per cent) classified as sole proprietorship enterprises.

Table 3: Level of computerized in the selected organisation

Percentage of computerized	No of Respondents	Percentage
Less than 25	25	13. 89
25 to 50	55	30.56
50 to 75	80	44.44
More the 75	20	11.11
total	180	100.00

In this regard from the table -3, nearly 13.89 per cent of the sample enterprises are computerised less than 25 per cent, 30.56 per cent of the sample enterprises have computerised their operations between 25 to 50 per cent, 44.44 per cent of the sample enterprises have computerised their operations between 50to 75 per cent, and only 11.11 per cent of the sample enterprises have computerised their operation more than 75 per cent.

Table 4: Experience of current business

Year	No of respondents	Percentage
Less than 1 Year	21	11. 67
1-5 Years	44	24.44
5-10 Years	90	50.00
More than 10 Years	25	13. 89
	180	100.00

The number of years in business normally determines one's level of exposure and experience in the field of business. As indicated in Table - 4, majority of small and medium scale enterprises (50.00 per cent) have been running in business between 5 - 10 years, whereas, 24.44 per cent of the sample enterprises run between 1-5 years and only 11.67 per cent of the enterprises below one year. It is also evident that few enterprises (from both small and medium-scale) representing 13.89 per cent have been in business for over 10 years.

The level of impact on business performance by implementing ICT is measured in the following manner. The level of categories as high, moderate and low, If the value of impact is more than mean 4.14 (overall mean + standard deviation = 3.22 + 0.92) is considered as high level. If the values less than mean 2.30 (over all mean – standard deviation = 3.22 - 0.92) is considered as low level impact. If the value is between high and low is considered as moderate level.

Table 5: Level of effects on information and communication technology implementation

	Mean	Standard Deviation
Increased Revenue	3.65	0.917
Increased Customers	3.55	0.947
Reduced Costs	3.00	0.819
Reduced Overhead	3.21	0.865
Increased Efficiency	4.25	0.988
Better Access to Information	4.30	0.981
Prompt Deliveries	3.15	0.814
High Quality of Customer Care	2.15	0.907
Increased Sales	3.65	0.939
Improved Communication with Staff	2.15	0.936
New Products/Service Development	1.25	1.074
Reliable Business Forecast	4.70	0.957
Customer Profiling	4.65	0.872
Increased Market Share	2.75	0.896
Business Data Storage/Retrieval	3.54	0.807
More Secured Business Transactions	2.89	1.112
Employee Satisfaction	2.99	0.986
Increased Responsiveness to Customers	2.15	0.798
Average	3.22	0.92

An observation of the Table 5 shows that impact of ICT implementation in SME in Cuddalore District towards Reliable Business Forecast, Customer Profiling, Better Access to Information and Increased Efficiency were high level effects with mean score more than 4.14. Regarding 'Increased Revenue, Increased Customers, Reduced Costs Reduced Overhead, Prompt Deliveries, Increased Sales, Increased Market Share, Business Data Storage/Retrieval, More Secured Business Transactions and Employee Satisfaction' were 'moderate level' with secure mean score range between 2.30 - 4.14, whereas the low level of impact were shows High Quality of Customer Care, Improved Communication with Staff, New Products/Service Development and Increased Responsiveness to customers.

Conclusion

The ICT systems do have positive effects on SMEs implementing them, and the results show that all of the SMEs under study admitted that. From present research though, it is evident that the level of ICT penetration into the SMEs in Cuddalore District is too low. SMEs are either unaware of such packages, or unwilling of using them. Moreover, this finding shows that how much potential is in this part of the world to put the endeavour in making the package first known and second acceptable for the SMEs. It seems that though SMEs do need such systems, the two reasons mentioned above are the possible reasons of this low percentage of ICT usage in Cuddalore District. The reason could be the SMEs financial inability of purchasing ICT systems. But as the new version for such systems have emerged in the market in the form of rental ICT packages, the second hunch for none-using of such system that is the lack of knowledge regarding the latest trend.

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