

# A Study Focus on Information Technology in Rural development with Reference to Kangeyam

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**Abstract-** The Indian economy is the fourth largest in the world. But the disquieting feature is that growth pattern is not uniform. While the rate of growth for manufacturing, services, and communications sectors has substantially improved, in vital sectors such as agriculture, infrastructure, community and social services, and in rural development as a whole, the country's performance is not appreciable. Without the development of rural people, the country can never claim to be developed. In recent years, agricultural growth has fallen and so have investment and profitability of agriculture, net sown area under crops, and the area under irrigation.

## INTRODUCTION

**Rural development** is the process of improving the quality of life and economic well-being of people living in relatively isolated and sparsely populated areas<sup>1</sup>. India is emerging as a major power with the economy registering high growth rates and Indian cities and urban centers beginning to display marks of affluence. Yet, there is no uniform development, the rural hinterland not being able to march in tandem with urban India. More than 70 per cent of people live in villages, and 80 per cent of poor also live in rural areas. The benefits of economic growth are not percolating to more than two-thirds of the people. The visible symbols of development should not make us forget the problems of the rural areas.

The development challenge in rural India is not about making a choice between the imperatives of industrial development and the compelling need for agricultural growth; it is essentially about helping the rural sector realize its own potential for development by using the gains of modern science and technology and industrial development as such. It does not make good economic sense to reduce the whole issue to one of a choice between one sector or the other.

## IMPORTANCE OF THE STUDY

Around 65% of the State's population is living in rural areas. People in rural areas should have the same quality of life as is enjoyed by people living in urban areas. Further, there are cascading effects of poverty, unemployment, poor and inadequate infrastructure and substandard healthy life style in rural areas on urban centers causing slums and consequential social and economic tensions manifesting in economic deprivation and urban poverty. Hence rural development which is concerned with economic growth, social justice and improvement in the living standard of the rural people by providing adequate and quality social services and minimum basic needs becomes essential. Amid this backdrop, the present study has assumed greater significance than ever before.

## NEED FOR THE STUDY

The present study is an attempt to know how information technology is playing a significant role in the development of the rural society. The present world is engulfed in IT development. If one sees developed nations then it is known that India is lagging far behind in the usage of IT resources for rural development. Making all the public and private enterprises IT enabled is the demand of today. Every citizen wants transparency and fast and timely services from public and private enterprises. This can be achieved only by using internet and other IT based services like different IT tools and customized software. Government has to make access of each facility as simple as possible. More and more information should be available on websites of Government departments and other organizations.

## STATEMENT OF THE PROBLEM

In India, the present strategy of rural development mainly focuses on poverty alleviation, better livelihood opportunities, provision of basic amenities and infrastructure facilities through innovative programmes of self-employment. The above goal is accomplished by the significant role played by the rapid growth of information technology.

The financial, manpower and managerial resources devoted to the implementation of rural development programmes are utterly inadequate. Better implementation of rural development programmes can be ensured only if those responsible for actual implementation are paid reasonably well, appropriately trained, and sufficiently motivated. But this has not been done as yet.

It is being increasingly observed that the objectives of one programme conflict with those of others, and there is no institutional mechanism for reconciling them. Consequently, many programmes miserably fail in fulfilling their objectives. In addition, they also affect other programmes. In many cases, instruments of rural development are not properly selected, and their levels are not consistent with the objectives they seek to achieve. This results in the wastage of valuable public resources, and unnecessary delays in achieving the objectives.

The present study entitled "*A study focus on Information Technology in Rural Development*" attempts to provide answers to the above questions.

#### OBJECTIVES OF THE STUDY

*The objectives of the study are furnished hereunder.*

1. To study the respondents' awareness of various information technology services in the study region, Kangayam.
2. To identify the respondents' major purpose of usage of internet and mobile phones, and the factors affecting their uses in the study district.
3. To offer suitable suggestions based on the findings of the study.

#### Methodology

##### 1. Design

The research design of the present study is descriptive type of conclusive one.

##### 2. Data Source

The study has depended on both secondary and primary data.

##### i. Secondary Data

The secondary data were collected from published materials like books, journals, magazines, bulletins and websites of Tirupur district, District Industries Centre of Tirupur, Infrastructure Development Finance Company (IDFC) and Census India.

##### ii. Primary Data

The demographic profile of the study population was collected from the government web portal (Census India). Primary data were collected by conducting a sample survey of rural people involved in the agricultural people. A well structured questionnaire was used for the collection of primary data.

#### RESEARCH DESIGN

Research is a systematic and methodical process of enquiry and investigation with a view to increasing knowledge. A research is undertaken to discover, check and ascertain relationships between variables of a selected and identified scope of study.

Research design is a plan of action to be carried out for research work. The research design is a conceptual structure within which research is conducted; it constitutes the blueprint for collection, measurement and analysis of data.

#### Sampling Framework

The data was collected from the in and around Tirupur District. The method for selecting the sample was non-probability - judgment sampling method was used. Judgmental sampling is a non-probability sampling technique where the researcher selects units to be sampled based on their knowledge and professional judgment. In this study, the entire population is the agriculturalist using technology. It is viable to use judgmental sampling if the researcher knows a reliable professional or authority that he thinks is capable of assembling a representative sample. Based on the literature review and secondary sources researcher arrived at judgment that computer / Information Technology and internet savvy people are capable as representative sample. The questionnaire was given to all the agriculturalist those who prefer technology.

#### Data Collection

The research was conducted in Kangayam. The researcher would have liked to cover other cities also but for the want of time and other constraints, the

research was restricted to particular place. The questionnaire was filled by personally meeting and interviewing the respondents.

#### Techniques of data analysis

The data was analyzed in SPSS version 16 using different statistical tools such as Frequency table with percentages, weighted average score.

#### Limitations of the study

The study is restricted to Kangayam only. However, the study area fairly represents the other rural based regions of Tamilnadu state.

The study covers only the one major segments of rural development, namely, agriculture allied activities. The study does not cover the other segments like education and health care.

### REVIEW OF LITERATURE

A literature review is an evaluative report of studies found in the literature related to the selected area. The reviews describe, summarize, evaluate and clarify the literature. It gives a theoretical basis for the research and helps to determine the nature of one's own research.

ArijitGhosh (2011)<sup>1</sup>discusses that the various initiatives in the recent past portrayed the significant role that the I.C.T plays in the realm of rural development. Several projects have reduced the costs, and it also has increased transparency. A large number of rural e-Governance applications, developed as pilot projects were aimed at offering easy access to citizen services and improved processing of government to citizen transactions. This paper presents a brief review of the innovative projects in information and communication technologies for rural development and how far it has contributed. The other aim is to ponder over the achievements and the failures of ICT in the sustainable development march. The analysis also indicates communication related initiatives and projects for development before media liberalization and post media liberalization.

Praveen Sharma (2011)<sup>2</sup>highlighted that there is wide scope in rural market of India. The study examined several ongoing projects that aim to provide IT-based services to rural populations in India. These projects were distinguished by the goalof commercial

sustainability, which supports scalability and, therefore, more widespread benefits. The analysis highlighted the common building blocks required for successful implementation, and the relative strengths and weaknesses of different approaches.

Vikram Singh et al. (2011)<sup>3</sup>study was based on the impact of e-governanceon economy of rural people through t-test analysis of sample size of 790 respondents from rural Punjab. The evaluation of e-governance was conducted through this study. This study revealed that people has to face corruption and harassment while availing these services, however the level of harassment and corruption was different for different services. There is no doubt that E-Governance has increased transparency and efficiency. As a result, services were being delivered very efficiently through information technology to far away and distinct places also which is proving as tool of social and economic change in lives of rural people.

### RESULTS AND DISCUSSIONS

In the present study, the primary data were collected from the groups of respondents, namely, those who were engaging in agriculture and allied activities.

#### Age group of the respondents

Age is an important factor which determines the adherence of people to the current technological growth. It would determine the usage of IT resources. The age wise analysis (Table 1) reveals that 26.19 per cent of the respondents are in the age group of 18 – 24 years; 13.23 per cent of the respondents are both the age group of 25 – 31 and 32 – 38 years; 13.49 per cent respondents are in the age group of 39-45 years and 33.86 per cent of the agriculturists are above 45 years of age.

It can be seen that a sizeable 33.86 per cent of the agriculturists were aged above 45 years and the researcher pointed out most of the respondents are from senior people and experienced persons compare to the youngsters.

#### Gender of the respondents

Despite poor illiteracy among women in the last decades, the present study includes both the gender to understand the usage level of recent techno gadgets, especially among women.

Table 2 shows that 80.16 per cent agriculturists are men and the remaining 19.8 per cent are women.

It is clear that a majority 80.16 per cent of the agriculturists are the male.

#### Educational Qualification of the respondents

Education plays a vital role in educating/assisting the people to understand the recent advancement in technology.

The analysis discloses 68.78 per cent of the agriculturists have only done their schooling; 5.03 per cent of the agriculturists are from ITI or Diploma and 26.19 per cent of the agriculturists are graduates. The majority of the respondents are forming 68.78 per cent have only school level education.

#### Respondents' Monthly Family Income

Despite knowledge and expertise in handling IT gadgets, financial support is mandatory for using those items. Thus, monthly family income of the respondents could play a part in using IT resources.

Table 4 shows that 21.96 per cent of the respondents have monthly income less than Rs.5,000; 34.39 per cent of the agriculturists monthly income range of Rs.5,001 – 10,000; 30.16 per cent of the agriculturists have monthly income range of Rs.10,001 – 15,000; 11.90 per cent of the agriculturists have monthly income range of Rs.15,001 – 20,000 and only 1.59 per cent agriculturists have monthly income above Rs.20,000.

It is clear that a sensible, 34.39 per cent of the agriculturists have monthly income ranged between Rs.5,001 – 10,000.

#### Marital Status of respondents

Marital status of the respondents may influence the usage of IT resources in agricultural business.

Table 5 shows that 70.37 per cent of the respondents are married; 29.63 per cent of the respondents are unmarried and nil per cent of the respondents are divorcees.

It is a revelation that 70.37 per cent of the respondents married.

#### Respondents' awareness of IT resources

Respondents' awareness of IT resources determines their usage level of the IT resources.

The analysis unveils 80.16 per cent of the agriculturists are aware of computers. The awareness of laptop extends to 45.24 per cent among agriculturists. Tablet PC awareness among

agriculturists is 13.49 per cent. A majority 82.80 per cent of the agriculturists are using mobile phones. The awareness of internet extends to 31.95 per cent among agriculturists. Printer awareness among agriculturists is 16.40. Agriculturists forming 12.43 per cent are aware of scanners. The awareness of CD/DVDs extends to 33.33 per cent among agriculturists. Pen drive awareness among agriculturists is 26.98 per cent and 13.23 per cent agriculturists are aware of web camera. Table 6 bears evidence to this event, the awareness of mobile is largest among agriculturists with 82.80 per cent. Awareness of scanner is least among agriculturists 33.33 per cent.

#### Respondents' Level of usage of IT resources – Weighted average score

The awareness of various IT resources was presented supra, table 6 and the table 7 shows the respondents' ranking the level of usage of IT resources using weighted average score.

The usage of mobile stands first with mean score of 3.70 for agriculturists. The usage of computer is at second rank for agriculturists with mean score 3.16. The usage of laptop is at third rank for among agriculturists with mean score 2.27. The usage of tablets PC is at fourth rank for agriculturists with mean score 2.21. The usage of internet is ranked five by agriculturists with mean score 1.74. The usage of printer is at sixth rank for agriculturists with mean score 1.33 and the usage of scannerPen drive/ External HDD is at rank seven among agriculturists with mean score 1.32. The usage of CD/DVDS is at eighth rank for agriculturists with mean score 1.30 and the usage of scanner is ranked ninth for agriculturists with mean score 1.20. Web camera usage among agriculturists is ranked tenth with mean score 1.12.

#### Most used three IT gadgets

The usage of mobile stands first with mean score of 3.70 for agriculturists and the usage of computers is at second rank for agriculturists with mean score 3.16. The usage of laptop is at third rank for agriculturists with mean score 2.27.

#### Least used three IT gadgets

CD/DVD usage, Scanner usage and Web camera usage among agriculturists is ranked eighth, ninth

and tenth with mean score 1.30, 1.20 and 1.12 respectively.

#### FINDINGS OF THE STUDY

*The findings that come into sight in the light of analysis of the study are providing hereunder.*

##### Demographic factors

1. It can be seen that a sizeable 33.86 per cent of the agriculturists were aged above 45 years and the researcher pointed out most of the respondents are from senior people and experienced persons compare to the youngsters.
2. It is clear that a majority 80.16 per cent of the agriculturists are the male.
3. The majority of the respondents are forming 68.78 per cent have only school level education.
4. It is clear that a sensible, 34.39 per cent of the agriculturists have monthly income ranged between Rs.5,001 – 10,000.
5. It is a revelation that 70.37 per cent of the respondents married.

##### Weighted Average Score

The evidence to this event, the awareness of mobile is largest among agriculturists with 82.80 per cent. Awareness of scanner is least among agriculturists 33.33 per cent.

##### Most and Least used three IT gadgets

The usage of mobile stands first with mean score of 3.70 for agriculturists and the usage of computers is at second rank for agriculturists with mean score 3.16. The usage of laptop is at third rank for agriculturists with mean score 2.27.

CD/DVD usage, Scanner usage and Web camera usage among agriculturists is ranked eighth, ninth and tenth with mean score 1.30, 1.20 and 1.12 respectively.

#### SUGGESTIONS

*The suggestions that emerge in the light of findings of the study are furnished hereunder.*

1. Though the awareness of key IT resources, namely, computers and mobile phones is found to be high, the awareness on internet is low. It suggests for the provision of availability of internet and feasibility of access to internet to the rural inhabitants. Also the awareness of other IT

devices was well below 50 per cent. Even though their usage might not be required on larger scale among agriculturists, the awareness about these devices are to be created which is possible only by making those devices available at affordable price in rural places. Furthermore, the awareness could be created via training programmes and providing free hands on experiences at the government Panchayat offices / NGOs.

2. It is understood the level of usage of mobile phones, computer, and laptop is high wherein their awareness is also high. However, the usage of web camera and scanner is low and for which the awareness is also found to be low. It can be well inferred that the usage of IT resources could increase only when there is awareness followed by their availability. Thus, usage could be increased only by creating awareness.
3. The surfing of internet has to be raised in order to facilitate the easiness of marketing the produced goods and also in availing of latest information about market and advancement in technologies.
4. Broadband seems to be the popular mode of accessing internet but the level of access to the internet is still low. The affordability of broadband access is again under question. The cost of equipment and the cost of access are still high and beyond the reach of the agriculturists. The availability of the mobile internet, namely, 2G has to be increased in the rural regions. The advanced technologies like 3G and 4G (in initial phase of implementation in Tamil Nadu) are to be made accessible to the rural people at cheaper price.
5. A majority of respondents have reported that the computers and mobile phones are highly useful and it is affected by the respondents' educational qualification and marital status. The different categories of marital status of respondents, namely, single, married and divorced have different level of usefulness of IT resources.
6. The usage of mobile to receive mobile alerts regarding information useful to their occupation was studied. It was found there is difference in the level of receiving information.
7. Among agriculturists, it is found the level of receiving agricultural techniques was same with all information except geological information

and information on training programmes. The level of receiving information on seed, feed, fertilizer, etc is different with all other information.

### CONCLUSION

The present study has examined the role of IT in rural development in Tirupur district from various perspectives. The study could be staged in two parts. The initial part of the study focused on the respondents' awareness of the IT resources, followed by usage of IT resources, the impact of the IT resources on economic uplift in their occupation experienced by the respondents.

The initial part, analyzing the awareness of various IT resources indicates that the awareness on mobile phones, computers and laptops is high. The awareness about the other prominent IT resources such as internet, printer and web camera is low; the awareness about these devices is to be created which is possible only by making those devices available at affordable price in rural places.

The second section of the study on the number of users of IT resources brought forth the same result as that of the awareness of the IT resources. The primary reasons for the limited number of users can be attributed to respondents' lack of awareness of the IT resources and the availability and affordability of the IT resources. The success of IT penetration depends on the ease with which rural population can use them. This may require intuitive graphics based presentation and user manuals. Touch screen kiosks could be set up to encourage greater participation. Regional language fonts can be made available to facilitate the users.

Final part of the study focused on the effect of IT resources on rural development. Most of the respondents found mobile phones/computers are highly useful in gathering knowledge. A sizeable respondent agree to the statement of an increase in income after the use of IT resources. The total effect for IT resource usage level had large effect on rural development; similarly, the total effect for sales using IT resource also indicated a large value. There could be a focus on usage level of IT resource, say, usage of computer, mobile and internet in order for rural development in the study district. Also a sharp focus on sales using IT resources, say, sales via mobile and online would contribute to rural development.

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Table 1 Age group of the respondents

S. No	Age Group of the Respondents	Frequency	Percentage
1	18-24	39	26.19
2	25-31	20	13.23
3	32-38	20	13.23
4	39-45	20	13.49
5	above 45	51	33.86
	Total	150	100.00

Source: Primary data

Table 2 Gender of the respondents

S. No	Gender of the Respondents	Frequency	Percentage
1	Male	120	80.16
2	Female	30	19.84
	Total	150	100.00

Source: Primary data

Table 3 Educational Qualification of respondents

S. No	Educational qualification of the Respondents	Frequency	Percentage
1	Schooling	103	68.78
2	ITI / Diploma	08	05.03
3	Degree holders	39	26.19
	Total	150	100.00

Source: Primary data

Table 4 Respondents' Monthly Family Income

S. No	Respondents' Monthly Family Income	Frequency	Percentage
1	Less than Rs.5,000	33	21.96
2	Rs.5,001 – Rs.10,000	52	34.39
3	Rs.10,001 – Rs.15,000	45	30.16
4	Rs.15,001 – Rs.20,000	18	11.90
5	Above Rs.20,000	02	01.59
	Total	150	100.00

Source: Primary data

Table 5 Marital Status of the respondents

S. No	Marital Status of the respondents	Frequency	Percentage
1	Married	106	70.37
2	Single	44	29.63
3	Divorced	00	00.00
	Total	150	100.00

Source: Primary data

Table 6 Respondents' awareness of IT resources

S. No	IT Resources	Awareness	Frequency	Percentage
1	Computer	Yes	120	80.16
		No	30	19.84
		Total	150	100.00
2	Laptop	Yes	68	45.24
		No	82	54.76
		Total	150	100.00

3	Tablet PC	Yes	20	13.49
		No	130	86.51
		Total	150	100.00
4	Mobile	Yes	124	82.80
		No	26	17.20
		Total	150	100.00
5	Internet	Yes	46	30.95
		No	104	69.05
		Total	150	100.00
6	Printer	Yes	25	16.40
		No	125	83.60
		Total	150	100.00
7	Scanner	Yes	19	12.43
		No	131	87.57
		Total	150	100.00
8	CD/DVD	Yes	50	33.33
		No	100	66.67
		Total	150	100.00
9	Pen drive / External HDD	Yes	40	26.98
		No	110	73.02
		Total	150	100.00
10	Web Camera	Yes	20	13.23
		No	130	86.77
		Total	150	100.00

Sources: Primary Data

Table 7 Respondents' usage of IT resources

S. No	IT Resources	Weighted Score	Mean Score
1	Computer	1196	3.16
2	Laptop	858	2.27
3	Tablet PC	837	2.21
4	Mobile	1400	3.70
5	Internet	659	1.74
6	Printer	503	1.33
7	Scanner	455	1.20
8	CD/DVD	491	1.30
9	Pen drive/ External HDD	498	1.32
10	Web Camera	425	1.12

Source: Computed