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Adoption of information and communication technology (ICT): A fairy tale in Bihar

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Abstract

India is second most populous country in the world. Majority of its population lives in villages and their main occupation is farming. Agriculture contributes around 17 per cent of the total GDP, 65 per cent of Indian population lives mainly in its 600,000 villages. Farmers in India facing a lot of problems in maximizing the crop productivity because of experts/scientific advice on crop production and marketing is not reaching the farming community in a timely manner. With the fixed availability of land and water, higher agricultural growth can only be achieved by increasing productivity through effective use of the better technology; farmers also face high transaction costs and information constraints that limit optimal production and marketing choices. Information and Communication Technologies (ICT) have significant potential to solve these shortcomings, providing cost-effective communication that allows farmers to take advantage of previously untapped trade opportunities and to learn about previously unknown innovative practices. Since this is an era of information & technology, ICT has a great role in transforming our society. So, keeping these things in mind the present study was conducted in Samastipur district of Bihar to know that how far technologies are available and how far their implantation have been done and use more easily.

Keywords: Information communication technology, innovative practices, crop production

Introduction

Today is an era of Information and Communication Technology, since morning till evening we gain and reciprocate according to information received. No work is possible without Information and Communication Technology. It has become part and parcel of our life. ICT have key role in the development sector especially in the rural areas. For rural India, information is key issue and providing the right information at the right time to vast rural majority in a short time is of paramount importance. Information and Communication Technology plays a key role in the dissemination of the information in short span of time to large numbers. The uses of ICT for development are actively promoted for economic development, job-creation, rural development and poverty alleviation. Since this is an era of information & technology, ICT has a great role in transforming our society. Strategic reforms in telecommunications sector since 1990's, facilitates strong ICT infrastructure in India. As on June, 2012, total telephone subscribers 965.52 million (31.43 million fixed land line telephones, 934.09 million wireless) and 14.50 million broadband subscribers were estimated by the Telecom Regulatory Authority of India, TRAI, 2012. The tele-density has reached 76.99 (number of telephone subscribers per 100 individuals). However, there is huge gap between urban and rural tele-density, 162.46 and 39.80, respectively. Despite several policy initiatives to promote rural ICT penetration, growth in tele-density continues to be skewed in favor of urban India, TRAI, 2012. Estimates indicated that 60 per cent of farmers do not access any source of information for advanced agricultural technologies resulting in huge adoption gap, NSSO, 2005. As per NSS survey, only 0.4 per cent farmers had access to extension workers for information on modern farm technology in Bihar against 5.7 per cent at national level and 22 per cent in Gujarat. As far as quality of information received by farmers through different sources is concerned, about 10.4 per cent of farmers received quality information from extension workers in Bihar against 51.5 per cent at national level. It clearly indicates inadequate and poor quality of information passed on through extension workers to farmers in Bihar, NSS 2005. Bihar aims to achieve 5-7 percent agricultural growth rate in XI Five Year Plan. Transfer of technology has been among the major obstacles in achieving the targets set in the past. There is a wide gap between the potential yield and the actual yield. However, due to various reasons new technologies are not using properly by the farmers. Keeping these points in mind, the present investigation was undertaken with the objective to identify the major constraints faced by farmers in using ICT.

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Materials and Methods

There are 20 blocks in Samastipur district out of which two blocks viz. Pusa and Kalyanpur were selected purposively. Out of these two blocks two villages from each block were selected randomly for study. 40 farmers from Pusa block and 40 farmers from Kalyanpur block were selected as sample for data collection. Out of these 40 farmers, 20 progressive and 20 non- progressive farmers selected that included small,

medium and large farmers on the basis of land holding.

The data collected were compiled, tabulated and subjected to the appropriate statistical tools to draw meaningful conclusions. In the present study, constraints have been operationalized as the problems encountered during using of ICT.

Results and Discussion

Table 1: Distribution of respondents into different categories with respect to constraints faced by them.

Sl. No.	Category	N= 80					
		Progressive farmers(40)			Non-progressive farmers (40)		
		No. of farmers	%	Rank	No. of farmers	%	Rank
A.	Personal Constraints						
I	Low level of education	12	30	II	33	82.5	I
II	Lack of confidence	14	35	I	15	37.5	III
III	Mobility constraints	11	27.5	III	22	55	II
B.	Socio-personal Constraints						
I	Lack of pertinent knowledge about new innovation	35	87.5	I	36	90	I
II	Negative social attitude	8	20	III	32	80	II
III	Fear of failure is strong	12	30	II	20	50	III
IV	Social customs and tradition	7	17.5	IV	17	42.5	IV
C	Economic constraints						
I	Lack of capital/money	34	85	II	38	95	II
II	Inadequate subsidy and loan by the government	32	80	III	38	95	II
III	Non-availability of credit in time	24	60	IV	35	87.5	III
IV	Communicational Constraints	18	45	VII	26	65	V
V	Lack of market information	23	57.5	V	29	72.5	IV
VI	Inadequate access to training programme	20	50	VI	24	60	VI
VII	Lack of knowledge about using modern communicational techniques i.e. computer etc.	40	100	I	40	100	I
D	Technological Constraints						
I	High cost of agricultural tools	28	70	I	37	92.5	I
II	Poor infrastructural particularly transport and communicational facilities	27	67.5	II	15	37.5	III
III	Lack of modern techniques of production	26	65	III	30	75	II

No. of farmers =Frequency

It is cleared from the Table No. 1 that constraints faced by farmers in using ICT

- 1. Personal Constraints:** The data reported in Table No. 1 revealed that in personal constraints maximum progressive farmers having faced lack of confidence (35 per cent) Whereas, personal constraints faced by maximum non-progressive farmers, low level of education (82.5 per cent) respectively.
- 2. Socio-Personal Constraints:** By reviewing the socio-personal related constraints faced by maximum progressive farmers it can be seen that lack of pertinent knowledge about new innovation (87.5 per cent) Whereas, constraints faced by maximum non-progressive farmers, it can be seen that lack of pertinent knowledge about new innovation (90 per cent) respectively.
- 3. Economic Constraints:** The data revealed that under economic constraints faced by all progressive farmers, having lack of knowledge about using modern communicational techniques i.e. computer etc. (100 per cent) Whereas, economic constraints faced by all non-progressive farmers, also having lack of knowledge about using modern communicational techniques i.e. computer etc. (100 per cent) respectively.
- 4. Technological Constraints:** Table No. 1 revealed that among technological constraints in a large no. of progressive farmers, faced constraints in high cost of agricultural tools (70 per cent). Whereas, among

technological constraints in maximum no. of non-progressive farmers, also faced constraints related to high cost of agricultural tools (92.5 per cent) respectively.

Fig A. Constraints faced by farmers in using Information Communication Technology.

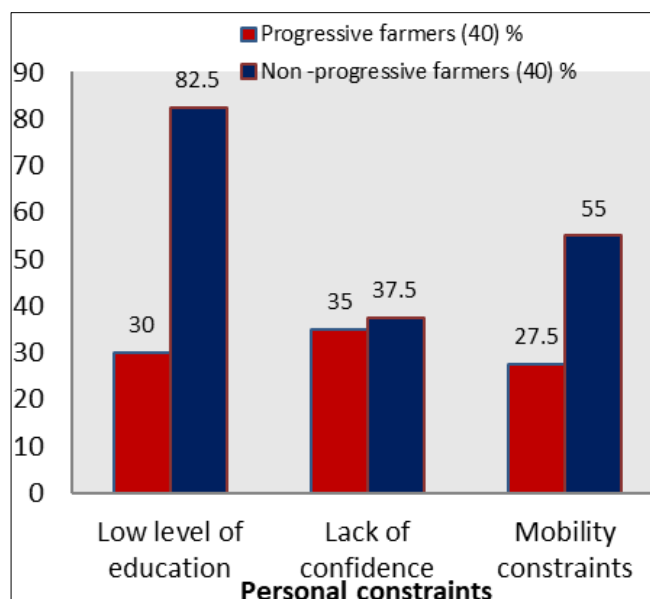


Fig 1: Distribution of respondents with respect to personal constraints faced by farmers

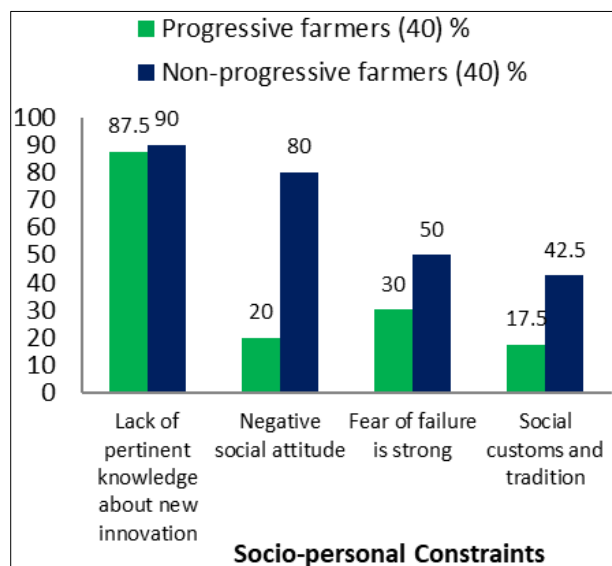


Fig 2: Distribution of respondents with respect to socio-personal constraints faced by farmers

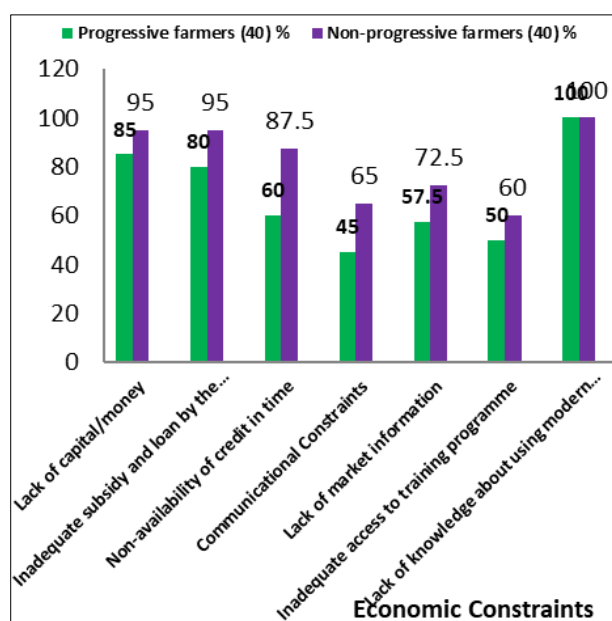


Fig 3: Distribution of respondents with respect to economic constraints faced by farmers

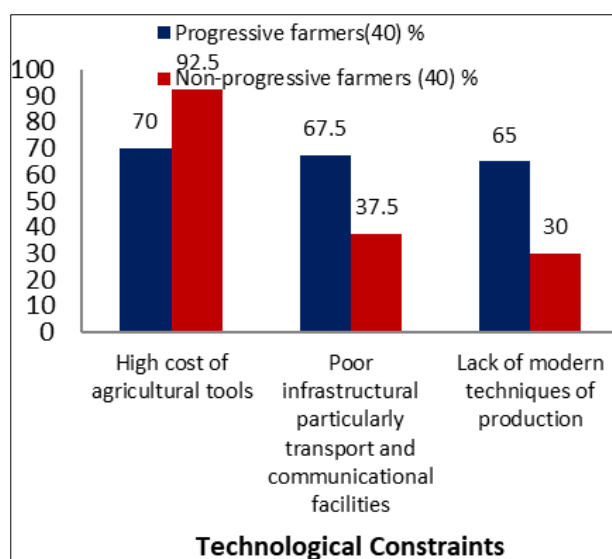


Fig 4: Distribution of respondents with respect to technological constraints faced by farmers

Conclusion

The study reveals that majority of the respondents i.e. 55 per cent progressive farmers and 82.5 per cent non-progressive farmers faced personal constraints like -mobility constraints and low level of education, and 90 per cent progressive farmers and 87.5 per cent non-progressive farmers faced socio-personal constraints like- lack of pertinent knowledge about new innovation, equal proportion of respondent i.e. 100 per cent progressive farmers and non-progressive farmers faced economic constraints like lack of knowledge about using modern communicational techniques i.e. computer etc., 92.5 per cent progressive farmers and 70 per cent non-progressive farmers faced technological constraints as high cost of agricultural tools .

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