



Problems and Suggestions for Use of Information and Communication Technologies by The Farmers in Modernizing Agriculture at Barind Tract Area of Bangladesh

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ABSTRACT: Although the use of ICT in agriculture is growing daily in Bangladesh, a number of obstacles prevent it from being fully utilized. The purpose of the study was to identify the challenges that farmers in Bangladesh's Barind tract area had when using information and communication technologies (ICT) to modernize agriculture, as well as potential solutions to these challenges. Data were collected during January to April 2024 from 386 ICT-using farmers as a sample from Gomostapur and Nachole upazilla under Barind area. Twelve significant problems and suggestions related to the utilization of ICT by farmers for modernization of agriculture were selected through judge rating, item analysis and finally by pre-tested. Farmers were asked to put their extent of problem by a scoring system of extent of problem is very -2, important -1 and not important -0. Possible suggestions were measured for overcoming the problem in same way. In case of problem, 'high ICT costs' were the ranked 1st in both upzillas whereas 'reduction of ICT costs' for possible suggestion to overcome the problem was ranked 1st in Nachol Upzilla and 'strengthening the network' for Gomostapur. The importance of the problems and suggestions were measured by using 'Important Problems Score Index (IPSI)' and 'Important Suggestion Score Index (ISSI)'. Through the t-test it was found that out of 12 problems, ten were significantly differs at Gomostapur and Nachole and two differs insignificantly, whereas out of twelve items of suggestions three items have been found insignificantly differ between two upzillas and the rest nine differ significantly.

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KEYWORDS:

Information and Communication Technologies (ICT), Problems, Suggestion, modernization of agriculture, agricultural practices.

INTRODUCTION

In recent years, the global agriculture sector has undergone significant transformation, largely driven by advancements in technology. The role of Information and Communication Technology (ICT) in revolutionizing agricultural practices, enhancing productivity, and reshaping decision-making processes is significant. The implementation of ICT applications, such as precision agriculture, market systems, meteorological forecasting, and e-commerce, has enhanced resource allocation and information dissemination, thus empowering farmers and various stakeholder. Agriculture is vital in Bangladesh, accounting for 11.38% of GDP and employing 45.33% of the labor force (BBS, 2023). Nonetheless, obstacles including land degradation, population expansion, climate change, and insufficient industrialization endure. The annual loss of 80,000 hectares of arable land (Mondal, 2010) indicates that traditional knowledge alone cannot fulfill the nation's food requirements. Consequently, modernization is necessary for the agricultural industry of Bangladesh. Agricultural mechanization entails the utilization of machines and technology to augment productivity in agriculture, which is essential for food supply and alleviating poverty. Crop establishment, protection, harvesting, processing, and value addition—sectorial areas that have historically been neglected in Bangladesh—all depend on it. The efficiency of inputs like labor, fertilizer, and seeds is increased by mechanization. It benefits from technological improvements and requires cooperation across the environmental, agricultural, social, and economic spheres (Sessiz et al., 2014). Mechanization include the processes of creating, selecting, repairing, and managing machinery, while it is frequently primarily linked to tractors. Regarded as a significant accomplishment of the 20th century, mechanization exhibits global variability and is essential for cost reduction and

enhancing farmers' income (FAO, 2000). Agricultural advancement depends on the degree of mechanization, typically assessed by metrics such as electricity per acre (Singh, 2006). Inadequate agricultural electricity impedes prompt cultivation, labor efficiency, and post-harvest operations. Sufficient power guarantees prompt, effective agriculture and enhanced market regulation, conserving resources. Sustainable mechanization enhances post-harvest, processing, and marketing processes and is crucial for addressing agricultural challenges, especially in rice production, in Bangladesh. To accelerate use of Information and Communication Technologies (ICT) by the farmers in modernizing agriculture at barind tract area of Bangladesh, the present study was undertaken with the objectives:

- I. Determine the chronology the important problems and depict the priority of important suggestions and
- II. Compare the significant relationship of views between farmers of two upazilla (Gomostapur and Nachole) under barind area.

MATERIALS AND METHODS

Use of Information and Communication Technologies (ICT) by the farmers in modernizing agriculture means using mobile phones, internet, apps, and other digital tools to help farmers get better information, make smarter decisions, and improve their farming methods, making agriculture more productive and modern. The researcher considered mainly use of (i) Mobile phone (voice call, SMS, etc.), (ii) Internet, (iii) Computer/Laptop/Tab/ Smartphone/ other communication device, (iv) YouTube/Facebook/Messenger/Imo/Krishi Apps/WhatsApp, (v) Union Development Centre (UDC), (vi) Agricultural Information Communication Center (AICC), (vii) Farmer's Help Line (Call center), (viii) Farm related TV Programme and (ix) Farm related Radio Programme for the study area due to their availability of use. The study was carried out in Bangladesh's northwest, in the Chapainawabganj district. Because of Gomostapur and Nachole Upazilla are classified as being in the Barind area, they were specifically selected from this district. 211 and 175 farmer of each upazilla were interviewed for the problems of use of information and communication technologies with possible suggestions for overcoming the problems by the same questions as prepared in interview schedule. The ICT user farmers from all Paurasava and unions of Gomostapur and Nachole Upazilla are the population of the study. Total 386 (211 and 175) respondent, which covered 3.5% of ICT user were selected separately as representative sample by through Taro Yamane Formula (Yamane, 1973) described below:

$$n = \frac{N}{1 + Ne^2}$$

Where, n = sample size, N = population size, e = error (0.05) reliability level 95% or 1.95, e = level of precision always set the value of 0.05. For selecting the use of information and communication technologies problems, the related literatures were reviewed as much as possible. Continuous field observation and consultations with teachers, extension personnel, experts and farmers were also made. Through such analysis, finally twelve common problems regarding use of information and communication technologies were identified and twelve possible solutions/ measures as suggested for overcoming the problem. Data were collected from January 2024 to April 2024 through pre-tested interview schedule. In addition to primary data, essential secondary data were gathered from various sources.

Measurement of the importance of problems in use of Information and Communication Technologies (ICT)

Extent or importance of each problem in use of information and communication technologies as opined either by the farmers of Gomostapur or by the farmers of Nachole upzilla were computed. The respondents of the study area pointed out the importance of different problems. The respondents did it putting a tick mark in any one of three columns such as very important, important and not important. These responses were quantified by assigning weights very important, important and not important as 2, 1 and 0.

The important score was computed for each problem by summing the weights for responses farmers of two upazilla against that problem. Therefore, the importance score of Gomostapur and Nachole upazilla farmers problem could range from 0 to $(211 \times 02 =) 422$ and the importance score of and Nachole farmers problem could range from 0 to $(175 \times 02 =) 350$. For easy understanding of the problem, the importance score (IS) of each of the problem was computed and was expressed in percentage by using the following formula: $IS = \text{Very important} \times 2 + \text{Important} \times 1 + \text{Not important} \times 0$ and

$$\text{Important Problem Score Index (IPSI)} = \frac{\text{Observed Problem Score}}{\text{Possible Problem Score}} \times 100$$

The possible important problem score index (IPSI) of a problem could range from zero (0) to 100, where zero indicated that the statement did not cause any problem in use of information and communication technologies, while 100 indicated very high problem in use of information and communication technologies faced by the farmers. That is, the higher is the important problem score index (IPSI), higher the problem responsible for use of information and communication technologies.

Measurement of the importance of suggestions in use of Information and Communication Technologies (ICT)

In respect of each suggestion, the respondents indicated importance of solutions/suggestions. The respondents did it by putting a tick mark in any one of three responses such as such as very important, important and not important. These responses were quantified by assigning weights very important, important and not important as 2, 1 and 0.

The important score (IS) of solutions/suggestions were computed by summing the weights for responses of the respondents. Therefore, the importance score of solution/suggestion could range from 0 to $(211 \times 02 =) 422$ for farmers of Gomostapur while it could range from 0 to $(175 \times 02 =) 350$ for farmers of Nachol. For easy understanding, the importance score (IS) of each of the solution/suggestion was computed and expressed in percentage by using the following formula:

$$\text{Important Suggestion Score Index (ISSI)} = \frac{\text{Observed Suggestion Score}}{\text{Possible Suggestion Score}} \times 100$$

Where zero indicated not important suggestion for use of information and communication technologies and 100 indicated very high encouraging suggestion for use of information and communication technologies by the farmers. That is, the higher is the ISSI, the higher was the solution important for use of information and communication technologies.

Comparing the means of problems of use of information and communication technologies by groups of farmers two upzilla, t-test was used.

$$\text{The ratio} = \frac{\text{difference}}{\text{standard error of difference}}$$

When, the standard error of difference is estimated from the sample is denoted by t. t-test is used for small samples, as t-distribution tends to be normal distribution when *df* is greater than 30 (in this case 211 & 175).

t is calculated by the formula,

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \text{ at } n_1 + n_2 - 2 \text{ df}$$

$$S = \sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}}$$

Where, $\bar{x}_1$ = mean of first sample (farmers); $\bar{x}_2$ = mean of second sample (officers); n_1 = number of observation in first sample; n_2 = number of observation in second sample.

RESULTS AND DISCUSSIONS

Problems in use of information and communication technologies by the farmers of Gomostapur and Nachole upzilla

It was assumed that the views of farmers of Gomostapur upzilla may differ with that farmers of Nachole upzilla regarding importance of problems in use of information and communication technologies by the farmers. As such cross check the matter between farmers of two upzilla were recorded. The problems with rank order as opined by the farmers of Gomostapur upzilla are presented in Table 1.

Comparative Analysis of Problems

From the rank orders of problems of farmers of Gomostapur and Nachole upzilla, it has been seen that the views are not same and the degree of importance given by scoring also differed from one another. Important Problem Index Score (IPIS) as obtained from farmers of Gomostapur upzilla ranged from 64.45 to 95.50 and IPIS from farmers of Nachole upzilla ranged from 54.00 to 87.43 percent. The problem range of farmers of Nachole is much more than the range of of Gomostapur and the second category of opinion (Very important, weight as assigned 2) ranks the top in total score from both type of respondents. Farmers of both upazilla opined no important category as last grade. The use of Information and Communication Technology (ICT) in agriculture in Bangladesh holds great potential, but it faces significant challenges. One major issue is the lack of reliable infrastructure in rural areas, such as stable internet connections and consistent electricity, which limits farmers' access to digital resources. Many small-scale farmers also lack digital literacy, making it difficult for them to use mobile apps, websites, and other ICT tools effectively. Language barriers further complicate this, as most ICT resources are available only in English or in limited Bengali formats. Financial problems also hinder adoption; many farmers cannot afford smartphones or data plans, making ICT solutions inaccessible to a large portion of the farming community. Additionally, there is a limited understanding and trust in digital tools, partly due to inadequate training and support for farmers on how to apply ICT in their daily agricultural practices. The digital divide limits the potential impact of ICT in increasing productivity, accessing market information, and enhancing knowledge of modern farming techniques, ultimately slowing the progress of agricultural development in Bangladesh. It might be for farmers' of Gomostapur ranked the reason 'high ICT costs (computer, laptop, radio, television, mobile phone and internet cost more)', 'poor network', 'electricity supply problems (electricity power shortage)' and 'lack of training of farmers on ICT' as 1, 2, 3 & 4 respectively. The concerned farmers of Nachole opined that 'high ICT costs (computer, laptop, radio, television, mobile phone and internet cost more)', 'lack of training of farmers on ICT' 'electricity supply problems (electricity power shortage)' and 'poor network' is ranked 1, 2, 3 & 4 accordingly. From the both group of respondents it has been found that each group had given prime concern of cost involvement as the leading problem of use of information and communication technologies. Other problems have also ranked by them with their views but the degree of importance and ranking differs distinctly. From the above observations it has been thought to proceed for looking into the

consistency or inconsistency for evaluating the difference statistically by t-test. Out of 12 identified & selected problems for use of information and communication technologies, it was found that views of farmers of Gomostapur and Nachole differs insignificantly only for 2 items of problems. The rest 10 differs significantly. Insignificant difference of two problems are electricity supply problems (electricity power shortage) and use of ICT media is difficult. So, statistically tendencies towards different problems are not same. It might be due to their practical experiences and situational orientation. Many farmers and rural residents have low incomes, making it difficult to afford devices like computers, smartphones, or even basic mobile phones. Most ICT hardware (e.g., laptops, smartphones) is imported, and costs are increased by import taxes, logistics, and currency fluctuations. Although mobile internet is available in many places, data packages can be expensive relative to income, especially for agricultural workers. ICT services and products are cheaper and more available in urban centers than in rural regions, where distribution and maintenance costs are high. Many farmers—especially older ones—lack formal education or exposure to digital tools and technologies. There are few government or NGO-led ICT training programs targeting rural or agricultural communities.

Table 1. Rank order of different problems in use of information and communication technologies opined by farmers of Gomostapur.

Sl. No.	Problems	Very Important (2)	Important (1)	Not Important (0)	IS	IPSI	Rank order
1	High ICT costs (Computer, laptop, radio, television, mobile phone and internet cost more)	192	19	0	403	95.50	1
2	Poor network	192	12	7	396	93.84	2
3	Electricity Supply Problems (Electricity Power Shortage)	188	18	5	394	93.36	3
4	Lack of training of farmers on ICT	165	44	2	374	88.63	4
5	ICT literacy is low	158	35	18	351	83.18	5
6	Use of ICT media is difficult	152	36	23	340	80.57	6
7	Lack of awareness about ICT facilities	111	100	0	322	76.30	7
8	Digital Services Center deficiency	110	90	11	310	73.46	8
9	Inadequacy of agricultural programs on radio and television	108	86	17	302	71.56	9
10	Emergence of time-consuming mentality in ICT media	90	106	15	286	67.77	10
11	Low confidence in the use of ICT	103	68	40	274	64.93	11
12	Lack of knowledge on modern ICT media usage	122	28	91	272	64.45	12
	Total	1691	642	229			

IS=Importance Score, IPSI=Important Problem Score Index

Table 2. Rank order of different problems in use of information and communication technologies opined by farmers of Nachole.

Sl. No.	Problems	Very Important (2)	Important (1)	Not Important (0)	IS	IPSI	Rank order
1	High ICT costs (Computer, laptop, radio, television, mobile phone and internet cost more)	132	42	1	306	87.43	1
2	Lack of training of farmers on ICT	124	45	6	293	83.71	2
3	Electricity Supply Problems (Electricity Power Shortage)	120	45	10	285	81.43	3
4	Poor network	120	38	17	278	79.43	4
5	Use of ICT media is difficult	115	40	20	270	77.14	5

6	Inadequacy of agricultural programs on radio and television	65	110	0	240	68.57	6
7	Digital Services Center deficiency	74	87	14	235	67.14	7
8	Lack of awareness about ICT facilities	93	45	37	231	66.00	8
9	Emergence of time-consuming mentality in ICT media	54	105	16	213	60.86	9
10	Low confidence in the use of ICT	58	85	32	201	57.43	10
11	ICT literacy is low	20	155	0	195	55.71	11
12	Lack of knowledge on modern ICT media usage	67	55	53	189	54.00	12
	Total	1042	852	206			

IS=Importance Score, IPSI=Important Problem Score Index

Table 3. Showing significance difference of t-value for problems

S.L. No.	For the first Group (Farmers of Gomostapur)				For the second Group (Farmers of Nachole)				t- value
	$\bar{x}_1$	$\sum x_1^2$	$(\sum x_1)^2$	IS	$\bar{x}_2$	$\sum x_2^2$	$(\sum x_2)^2$	IS	
1	1.7725	704	139876	374	1.6743	541	85849	293	1.968*
2	1.5261	544	103684	322	1.32	417	53361	231	3.078**
3	1.4313	518	91204	302	1.3714	370	57600	240	1.019 ^{NS}
4	1.91	787	162409	403	1.7486	570	93636	306	4.28**
5	1.4692	530	96100	310	1.3429	383	55225	235	2.032*
6	1.6114	644	115600	340	1.5429	500	72900	270	0.98 ^{NS}
7	1.3555	466	81796	286	1.2171	321	45369	213	2.24*
8	1.8673	770	155236	394	1.6286	525	81225	285	4.691**
9	1.8768	780	156816	396	1.5886	518	77284	278	5.192**
10	1.6635	667	123201	351	1.1143	235	38025	195	10.483**
11	1.2986	480	75076	274	1.1486	319	40401	201	1.973*
12	1.2891	516	73984	272	1.0	323	35721	189	2.377*

* Significant difference at 5% level, ** Significant difference at 1% level, ^{NS} Not significant

Most ICT tools and training are in English or formal Bengali, while many rural farmers are more comfortable with local dialects, making learning harder. Many farmers are unaware of how ICT can benefit them, such as accessing market prices, weather forecasts, or agricultural advice. Rural regions frequently suffer from load shedding or inconsistent electricity, affecting device usage and internet access. Some remote areas still don't have grid electricity, making it impossible to use ICT tools consistently. Using generators or solar power as alternatives is often expensive or not well-supported in these regions. Mobile networks and internet services are less developed outside of cities, leading to slow speeds or complete lack of service. Telecom companies may avoid investing in low-income rural regions due to low profitability. Areas with rivers, forests, or hills can be harder to connect via traditional infrastructure. The national backbone network doesn't reach all areas, and last-mile connectivity is often missing.

Suggestions for Overcoming the Problems in use of information and communication technologies

Technology is meaningless until the technology is adopted by the potential farmers. Attributes of production technologies are considered very important to play a crucial (positive or negative) role for preciseness of towards a technology. An attempt was made to find out the relevant suggestions/solutions for overcoming the problems in use of information and communication technologies. The means of suggestions to overcome the problems of use of information and communication technologies of two independent groups (farmers of Gomostapur and Nachole) are calculated as followed earlier (for comparing the means of solutions as given by the respondent farmers of Gomostapur and Nachole by t-test). The solution/suggestion with rank order as opined by the respondent farmers of Gomostapur and Nachole are presented in Table 4 and 5. Reducing ICT costs, providing ICT training to farmers, increasing electricity supply, and strengthening network connectivity are essential for driving rural development and digital inclusion in Bangladesh. Lowering the price of devices like smartphones, computers, and internet services is crucial because most rural people, especially farmers, cannot afford these tools that are vital for accessing information, markets, and services. However,

affordability alone is not enough—farmers also need proper training to understand and effectively use these technologies for agriculture, such as checking weather updates, learning modern farming methods, or connecting with buyers. Reliable electricity is equally important, as digital tools and internet services depend on consistent power supply, which many rural areas still lack due to load shedding or complete absence of grid access. Lastly, without strong and stable network coverage, even trained users with devices and electricity cannot benefit from digital resources, making it essential to expand mobile and internet infrastructure in remote regions. Together, these four elements form the foundation for building a digitally empowered rural economy in Bangladesh. With consider to the above field situation, the rank wise (1, 2, 3 and 4) important suggestions by the farmers of Gomostapur were strengthening the network, to increase electricity supply (alleviation of electricity power shortage), reduction of ICT costs (reduction in price of computer, lab, radio, television, mobile phone and internet) and to provide training to farmers on ICT. On the other hand, the four important suggestions by the farmers of Nachole to overcome the problems are in the following order: (i) reduction of ICT costs (Reduction in price of computer, lab, radio, television, mobile phone and internet), (ii) to provide training to farmers on ICT, (iii) to increase electricity supply (alleviation of electricity power shortage) and (iv) strengthening the network. From the rank orders by the farmers of Gomostapur and Nachole it has been seen that the views are not same and the degree of importance of suggestions given by scoring also differed from one another. Calculated values are placed in Table 6 for showing significance difference of t-value. Out of twelve items of suggestions three items have been found insignificantly differ between two independent groups of respondents but the rest nine differ significantly. Field level suggestions by the farmers of Gomostapur and Nachole don't consider the limitation of resources. The situational position of the respondents may draw different degree of importance. So combined evaluation of responses is being considered urgent in this regard to increase use of information and communication technologies. It might be due to unconsciousness or concealing tendency towards field level limitations.

Table 4. Rank order of different solutions in use of information and communication technologies opined by the of Gomostapur to overcome the problems

Sl. No.	Problems	Very Important (2)	Important (1)	Not Important (0)	IS	ISSI	Rank order
1	Strengthening the network	192	12	7	396	93.84	1
2	To increase electricity supply (alleviation of electricity power shortage)	176	35	0	387	91.71	2
3	Reduction of ICT costs (Reduction in price of computer, lab, radio, television, mobile phone and internet)	173	38	0	384	91.00	3
4	To provide training to farmers on ICT	165	44	2	374	88.63	4
5	Creating awareness about ICT benefits	141	70	0	352	83.41	5
6	making easy the use of ICT media is by training	152	36	23	340	80.57	6
7	To encourage spending time on ICT media	137	54	20	328	77.73	7
8	Enhancing ICT literacy	129	64	18	322	76.30	8
9	To increase agricultural programs on radio and television	126	68	17	320	75.83	9
10	Enhancing the use of ICT	93	118	0	304	72.04	10
11	To increase knowledge on modern ICT media usage	138	0	73	276	65.40	11
12	Establishment of more digital service centers	75	125	11	275	65.17	12
	Total	1697	664	171			

IS=Importance Score, ISSI=Important Solutions Score Index

Table 5. Rank order of different solutions in use of information and communication technologies opined by the of t of Nachole o overcome the problems

Sl. No.	Problems	Very Important (2)	Important (1)	Not Important (0)	IS	ISSI	Rank order
1	Reduction of ICT costs(Reduction in price of computer, lab, radio, television, mobile phone and internet)	149	25	1	323	92.29	1
2	To provide training to farmers on ICT	124	45	6	293	83.71	2
3	To increase electricity supply (alleviation of electricity power shortage)	132	28	15	292	83.43	3
4	Strengthening the network	120	38	17	278	79.43	4
5	Establishment of more digital service centers	109	52	14	270	77.14	5
6	making easy the use of ICT media is by training	115	40	20	270	77.14	6
7	Enhancing ICT literacy	49	126	0	224	64.00	7
8	To increase agricultural programs on radio and television	47	128	0	222	63.43	8
9	Creating awareness about ICT benefits	63	75	37	201	57.43	9
10	To increase knowledge on modern ICT media usage	51	85	39	187	53.43	10
11	To encourage spending time on ICT media	10	155	10	175	50.00	11
12	Enhancing the use of ICT	69	33	73	171	48.86	12
	Total	1038	830	232			

IS=Importance Score, ISSI=Important Solutions Score Index

Table 6. Showing significance difference of t-value for suggestions

S.L. No.	For the first Group (Farmers)				For the second Group (Officers)				t- value
	$\bar{x}_1$	$\sum x_1^2$	$(\sum x_1)^2$	IS	$\bar{x}_2$	$\sum x_2^2$	$(\sum x_2)^2$	IS	
1	1.7725	704	139876	374	1.6743	541	85849	293	1.968*
2	1.6682	634	123904	352	1.1486	327	40401	201	8.332**
3	1.5166	572	102400	320	1.2686	316	49284	222	4.32**
4	1.8199	730	147456	384	1.8457	621	104329	323	-0.661 ^{NS}
5	1.3033	425	75625	275	1.5429	488	72900	270	-3.908 ^{NS}
6	1.6114	644	115600	340	1.5429	500	72900	270	0.98 ^{NS}
7	1.5545	600	107584	328	1	195	30625	175	10.127**
8	1.8341	739	149769	387	1.6686	556	85264	292	3.206**
9	1.8768	780	156816	396	1.5886	518	77284	278	5.192**
10	1.5261	580	103684	322	1.28	322	50176	224	4.237**
11	1.4408	490	92416	304	0.9771	309	29241	171	6.381**
12	1.3081	552	76176	276	1.0686	291	34969	187	2.733**

* Significant difference at 5% level, ** Significant difference at 1% level, ^{NS} Not significant

Both group rankings are valid and reflect complementary perspectives. A balanced development strategy should address both views: improve infrastructure while simultaneously making ICT affordable and understandable for users, especially in rural Bangladesh.

CONCLUSION

The most important problems reported by the of Gomostapur and Nachole ranked in the following order: (i) high ICT costs (Computer, laptop, radio, television, mobile phone and internet cost more), (ii) poor network, (iii) electricity supply problems (electricity power shortage), (iv) lack of training of farmers on ICT, (v) ICT literacy is low, (vi) use of ICT media is difficult and

(vii) lack of awareness about ICT facilities. Similarly top ranking of suggestions by farmers and officials (i) high ICT costs (Computer, laptop, radio, television, mobile phone and internet cost more), (ii) lack of training of farmers on ICT, (iii) electricity supply problems (electricity power shortage), (iv) poor network, (v) use of ICT media is difficult, (vi) inadequacy of agricultural programs on radio and television and (vii) digital services center deficiency. Out of 12 problems, it was found that views of farmers Gomostapur and Nachole differed insignificantly only for 2 items, rest differed significantly. In case of suggestions, three items have been found to differ insignificantly between two independent groups of respondents but the rest nine differed significantly. It might be due to both group rankings are valid and reflect complementary perspectives. A balanced development strategy should address both views: improve infrastructure while simultaneously making ICT affordable and understandable for users, especially in rural Bangladesh.

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