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RICE FARMER'S USING MOBILE IN MARKETING OPERATIONS: AN ANALYTICAL STUDY IN THE SPECIFIC REGION OF BANGLADESH

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ABSTRACT

Rice is a major staple crop in Bangladesh, and its production has a profound effect on the country's agricultural sector. Large distribution networks in Bangladesh may drive up rice prices. The scarcity of marketing information prevents farmers from making decisions when planning their output and sales. This study aimed to analyse the variables that influence mobile usage and the effects of mobile use in rice marketing. 100 farmers were selected by two steps sampling procedure from the rural area of Upazila Bangladesh. 100 farmers in all, mostly small-scale rice farmers with an average plot size of 1.88 acres, were approached using a concise interview format & questionnaires. The data was evaluated using a variety of statistical methods, including correlation and regression analysis using a binary logistic regression model. The analysis was carried out utilizing the SPSS. Studies showed that 75% of mobile phone owners utilize it for paddy marketing. Income and education have a significant influence on cell phone usage, as shown in regression analysis. In the Likert scale study, there was a highly positive impact on having access to a broad variety of information, the accuracy of that information, negotiating power, and reducing market intermediaries' and transportation corporations' oppressiveness. Most farmers can save time and money by acquiring information themselves. It can be concluded that the adoption of mobile phones facilitates marketing activities and all potential consequences for rice farmers. Assuring mobile phone utilization could be essential in this area to improve the calibre of rice marketing.

INTRODUCTION

Food security and social stability are two areas in which rice has historically played a significant influence over the world (Zeigler & Barclay, 2008). Farmed in over a hundred different countries, rice is the staple food for more than half of the world's population (Fukagawa & Ziska, 2019). Millions of people may attribute the success of their economies, cuisines, and cultures to rice (Gnanamanickam, 2009). Some farmers preferred rice production over other crops because of rice's high adaptability to many environments and minimal cultivation risk (Al Mamun et al., 2021). United Nation (2022) estimates that the world's population will reach 9.7 billion by 2050 and peak at roughly 10.4 billion in the 2080s. It is estimated that 14,886 MMT of food will need to be produced to fulfil demand in 2050 (Islam & Karim, 2020).

In addition, rice accounts for 67.5% of daily calorie consumption in Bangladesh (Saha et al., 2021). The agriculture sector of the country's economy relies heavily on growing rice. Bangladesh's status as an agricultural giant would be further cemented by the country's projected rice output of 37 million tonnes for the 2023-24 season (Team, 2023). More than 165 million people are being produced at this time, and the crop is responsible for around 78% of annual land use (gross cultivated area) (Kabir et al., 2021). Agriculture is the backbone of Bangladesh's economy. Approximately 76% of the

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population resides in rural regions, with 47.5% of the overall workforce being employed in agriculture (Shelley et al., 2016). Agriculture contributes 13.6% to Bangladesh's GDP. Seventy-five percent of the land is used to grow rice, and 85 percent of it is planted in varieties with excellent yields (International Rice Research Institute, 2023). Seventy of Bangladesh's harvested farmland is used for rice production, and of the 71 million people who work in agriculture there, 65 million are small-scale farmers (Ganesh-Kumar et al., 2012).

Although selling rice on the official markets is crucial to many people's economic security, farmers often face barriers that prevent them from doing so. Smallholder market participation is both a cause and a consequence of a country's economic growth and development, crucial to the monetization of agriculture and the welfare of farmers (Hoq et al., 2021). Small-scale farmers, who account for almost all of the food producers in emerging nations, are often abandoned by the market (Barrett, 2008). Agricultural markets may be difficult for small-scale farmers because of a lack of knowledge or a systemic problem that results in discord between producers and buyers (Kydd & Dorward, 2004). Since the lengthy trek to distant, higher-paying markets is not worth it for an overwhelming number of small-scale farmers, they instead sell their rice in low-paying local marketplaces (Fafchamps & Hill, 2005).

Efficient market information provided has been proven to help farmers, traders, and policymakers (Dagar, 2015). Farmers require regular, timely, and trustworthy market information for production and marketing planning, in addition to other market participants, to make the best trading decisions. Ideally, marketing information services should be available to anyone. Farmers can benefit from proper marketing information services to help them better realize pricing for marketed products (SASEC Village, 2013). A rising amount of farmers in smaller economies are using mobile phone technology to increase their access to markets for agriculture. This is because mobile phone communication is one of the most significant drivers encouraging economic development in emerging economies (Katengeza et al., 2011). The majority of a farmer's income and ability to feed their family is dependent on the selling price of rice. Farmers' ability to gain entry to new markets has a significant impact on rice prices (Hoq et al., 2021).

Farmers' and businessmen's relationships are bolstered by the broad acceptance of mobile phone use (Kumar, 2023). The current global population is estimated to be 7.33 billion, making up 91.04% of those with cell phones (Turner, 2018). In developing nations, where computers and phones may not be readily accessible, almost 94% of farmers have their own mobile devices (AGRIVI, 2015). There are presently 186.10 million mobile phone users in Bangladesh (Bangladesh Telecommunication Regulatory Commission, 2023), and this number is expected to rise by 1% by 2022. In some parts of Bangladesh, 80.15 percent of farmers utilize a mobile phone service of some kind (Mamun-ur-Rashid et al., 2019). The potential for mobile phones to promote market transparency and efficiency in the agricultural sector has been at the forefront of discussions about the intersection of agriculture and information technology. Mobile phone usage in farming might influence market prices under certain conditions. Mobile phones could minimize the costs of farmers' households searching for private information, especially when compared to traditional mechanisms such as personal travel, periodicals, or landlines (Kusumaningsih, 2023). This research aims to identify the variables that contribute to mobile phone use and assess the results of mobile phone use among farmers seeking market data on rice. Analytical outlines of this study are – (a) To characterize the unique socioeconomic features of the farmers, (b) to ascertain the elements influencing the utilization of mobile phones for gathering market data, (c) to assess the effects of farmers using their mobile phones to get market information.

LITERATURE REVIEW

The world's rice production has more than tripled. The majority of the production came from Asia. More than 80% of the world's rice is produced in seven Asian nations, including Bangladesh (Bin Rahman & Zhang, 2022) and Bangladesh ranks third globally in rice production (Sarkar et al., 2022). The production and trading of rice in Bangladesh have been the main issues (Bala et al., 2016). For farmers, a successful rice market is crucial. Sometimes it is impossible to develop a well-designed rice market due to inaccurate market information (Rahman et al., 2020). In addition, high levels of market power among rice wholesalers and millers suggest that they have a monopolistic effect on the market. Consequently, farmers are receiving less money or profit than is paid for their products, which benefits the intermediaries (Khatun et al., 2020). Price increases are observed as a result of market manipulation by major merchants and millers (Rahman et al., 2021). Mobile devices improved the delivery of agricultural extension services (Fu & Akter, 2016). Information sharing in agriculture is essential for the widespread implementation of new farming techniques (Khan et al., 2019). An inefficient agricultural market has negative effects on market participants and, in the long run, has serious societal and economic ramifications when information is lacking. Improvements in market infrastructure, access to information and communication technologies, and potential development are all essential (Nugroho, 2021). Agricultural market information is crucial for small-scale farmers, hence they often turn to mobile devices as a reliable interaction route (Nyagango et al., 2023). Bangladeshi farmers utilize their cell phones largely for forecasts of the weather, market data, information on pests and diseases, and financial transactions (Rahman et al., 2020). Significant factors that influenced mobile phone usage included level of education, family size, income, and attitudes toward the use of mobile phones (Amir et al., 2016). By expanding farmers' access to information and services throughout the agricultural value chain, mobile phones boost farmers' influence and improve their quality of life (Anadozie et al., 2021). Farmers may increase their income, decrease their operational costs, and increase their crop yields by using mobile phones (Ogunniyi & Ojebuyi, 2016). Favorable effects of literacy, accessibility to local markets, size of the land, asset values at the time, crop revenue, and regional differences (Katengeza et al., 2013). The study found that using information systems, smallholder farmers' agricultural endeavors and agribusinesses improved agricultural output and boosted rural households' access to food (Mdoda et al., 2023). This study concentrates on the socio-demographic profile and correlation of different independent variables to find the results on different unique parameters that have strong driving power in agriculture marketing. Some of the studies have an analysis of factors and their

impact on overall areas, but this study solely focuses on rice farmers to assess what factors are responsible. This study has some unique analyzing features that outline the impact of using mobile on rice marketing, like degree and reliability of information, intermediaries' oppressiveness, information searching time and costs, bargaining power in all aspects, and rational decision-making.

MATERIALS AND METHODS

Population and Sampling Technique

The population of the study was mostly made up of local rice farmers. A basic random sample approach was used to select 100 farmers from 501 farmers (20% of the total population), with the decimal number adjusted accordingly.

Method of Data Collection

Face-to-face interviews were used to acquire data for the primary sources which was achieved with well-designed interview schedule that included both open and closed-ended queries. These were briefed to them and easy to answer with a view to collecting more precise opinions from the farmers over two months period.

Location of the Study

The study was conducted in a rural area in a specific region of Bangladesh (Coordinates: 23°36′N 90°59.5′E / 23.600°N 90.9917°E / 23.600; 90.9917).

Analyzing Data

The primary data that had been obtained were carefully scrutinized to look for flaws and omissions. The completed data was then entered into the SPSS program for additional analysis.

Approaches for Analysis

We utilized a binary logistic regression approach to analyze how various characteristics of participants influenced their likelihood to open marketing messages on their cell phones. A null hypothesis was created in accordance with the purpose to be used while running the regression model.

Multiple variables in an analysis of multiple linear regression that are highly associated with each other and with the dependent variable are said to be multicollinearity. Due to multicollinearity, several previously significant variables become nonsignificant. Multiple collinearity between the independent variables was discovered via the use of a correlation analysis.

The following describes the binary logistic regression model used in this study:

$$\mathbf{Log\ [P/1\text{-}P] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + e}$$

Where, **P**= Probability of outcome, β_0 = Intercept, X_1 = Age of the farmer's (Year), X_2= Farmers' Gender (Male=0, Female=1), X_3=Level of Education, X_4=Duration of farming (Year), X_5=Average Income/Year (BDT), X_6=Terms of using mobile, X_7= Plot Size (Acre), $\beta_1 - \beta_7$ = Regression Coefficient of the predictors, **e** = Random error

The data was analyzed using SPSS. * signifies significance when applied to the 0.1 level, ** signify significance at the 0.05 level and ***signify importance when comparing groups at the 0.01 level.

Lastly, descriptive statistics like percentage, mean, and standard deviation were utilized to examine the data from the likert scale and categories.

RESULTS

Farmers' Socioeconomic Profile

The criteria were the farmer's age, farmer's gender, education level, plot size, farming duration, income, data of mobile use, and terms of mobile using mobile phones. Tables 1 and 2, demonstrate the category distribution of farmers' socioeconomic characteristics and descriptive statistics of farmers' socioeconomic characteristics, respectively. Approximately 90% of men and 10% of women work as farmers, according to Table 1. A third of farmers (34%), on average, have a secondary education. In the study area, there is a 73.0% literacy rate among respondents. As can be seen in Table 1, around 79% of people in the research region use mobile phones. The selected farmers' average age, according to Table 2, is 51.3 years, but the average length of time they have been farming is 23.50 years.

Table 1. Categorical distribution of farmer's socio-economic characteristics (N=100)

Specification	Frequency	Percentage
Gender		
Male	90	90%
Female	10	10%
Education Level		
Illiterate	27	27%
Primary	17	17%
Secondary	34	34%
Higher Secondary	18	18%
Graduation & Above	4	4%
Mobile Phone		

Mobile Phone Users	79	79%
Mobile Phone Non Users	21	21%

The majority of farmers in the research areas are small farmers, with a mean plot size of 1.88 acres; there are no large farmers in the region. The survey comprised small-holder farmers with small-category farms and annual incomes of roughly 2-3 lacs shown in Table 2.

Table 2. Socioeconomic features of farmers

Independent Variables	Min.	Max.	Mean	Std. Deviation
Age of the Farmer's	28.0	75.0	51.32	12.71
Grade of the Education	0	16.0	6.99	4.95
Farming Duration	4.0	50.0	23.50	12.68
Terms of using mobile (years)	4.0	17.0	8.71	2.87
Household Income (BDT in lac)	0.50	12.00	2.72	1.52
Plot size (acre)	0.20	5.50	1.88	1.08

Analysis of the factors driving using mobile in paddy marketing:

The characteristics affecting rice farmers' usage of mobile phones to learn about the market were identified using a binary logistic regression model. In this model, the independent factors included the farmer's age, farmer's gender, education level, household income, mobile phone usage duration, farm size, etc., whereas the dependent variable was the mobile phones used to get market information. Through SPSS software, the model was tested. Prior to performing the regression analysis, a correlation study was conducted to determine whether the independent variables were multicollinearity.

Table 3. The independent variables' coefficient of correlation

	Age of the Farmer's	Level of Education	Farming Duration	Average income/Year (BDT In lac)	Mobile phone use duration (years)	Plot Size in Acre
Age of the Farmer's	1	-0.475**	0.847**	-0.038	0.088	0.140
Level of Education	-0.475**	1	-0.424**	0.529**	0.220*	0.394**
Farming Duration	0.847**	-0.424**	1	-0.061	0.003	0.071
Average income/Year (BDT In lac)	-0.038	0.529**	-0.061	1	0.352**	0.596**
Mobile phone use duration (years)	0.088	0.220*	0.003	0.352**	1	0.429**
Plot Size in Acre	0.140	0.394**	0.071	0.596**	0.429**	1

** Significant at the 5% level

A correlation analysis in SPSS revealed a correlation coefficient of 0.847 between the age of the farmers and their terms of farming, which is significant at the 5% level of significance. This information is displayed in Table 3. It suggests that the age of the farmer and the number of years they have been farming have a significant positive link. A variable should be removed in order to prevent multicollinearity. Years of agricultural experience have been eliminated as an independent variable in the ensuing binary logistic regression analysis. The remaining six independent variables were utilized in regression analysis. The dependent variable was the use of mobile phones to get market information. Table 4 presents the results of the regression.

Table 4 examines the null hypothesis and implies that the significant contributing factors (at the 1% and 5% levels of significance) are education and income and the other 4 parameters are unrelated to farmer's use of mobile phones to receive market information.

Model validity: It was checked through Cox and Snell R2, Nagelkerke R2, and Chi-square test where Cox & Snell R2 and Nagelkerke R2 values were 0.556 & 0.815 respectively.

According to the Cox and Snell R^2 value of 0.556, the explanatory variable may account for around 56% of the variance in the response. Unknowns are responsible for the remaining 44.4%. The farmers' usage of mobile phones to receive market information varies significantly among respondents, although each predictor might be able to account for some of the variation by pure chance. Adjusting the Cox and Snell R^2 is done via Nagelkerke R^2. According to the Nagelkerke R^2 value of 0.815, the explanatory factors can account for 82% (roughly) of the variance in the response. Additionally, 93.5% of predictions were accurate overall. The omnibus test value for the model coefficient is about 62.46, which is greater than the tabular value (18.48) of chi-square ($\chi 2$) test at the 1% level of significance with 6^0 of freedom. This indicates that this model passes the omnibus test of model coefficient value. These findings collectively show that the model is valid and best fitted.

Table 4. Binary logistic regression coefficients of the influencing variables: the farmers' usage of mobile phones to receive market information was the dependent variable

Independent variable	ß	SE	Wald	Sig.	Exp (ß)
Age of the farmers	-0.036	0.116	0.097	0.755	0.965
Gender	1.839	2.057	0.799	0.371	6.288
Education	0.640	0.195	10.767	0.001***	1.896

Household income	1.946	0.844	5.309	0.021**	6.998
Length of using mobile phone	-0.058	0.255	0.052	0.819	0.943
Plot size	-0.725	0.727	0.995	0.318	0.484

*** Significant at 1%; ** Significant at 5%.

Impact of using mobile phone- description with null hypothesis

Farmers' propensity to utilize mobile phones to get market information is hypothesized to be positively correlated with their level of education and family income.

H_1: There is no educational value in trying to convince farmers to use cell phones to get access to market information.
H_2: The likelihood that farmers will utilize their mobile phones to receive market information is unaffected by household income.

Education's Impact on the Likelihood of Mobile Phone Use

The variable 'education' has a p-value of 0.001 (Table 4). Based on the results of the relevant study's variables, the following conclusions were drawn: (a) Education significantly affects farmers' propensity to use mobile phones to get market information at the 1% level. The null hypothesis can thus be disproved. (b) Mobile phone use and education are positively correlated, which implies that a farmer had a better likelihood of acquiring market information via mobile phone if they had more education. Farmers who have greater education have an 89% more chance of utilizing a cell phone than those with less education, according to the Exp (ß) value of 1.896. Through education, farmers can improve their capacity to use mobile phones to get market information in a short amount of time.

Income's impact on the Likelihood of Mobile Phone Use

In Table 4, the variable household income's p-value was 0.021. Based on this value, under examination in the study, the following discussions were made: (a) at a 5% level, household wealth significantly affects farmers' propensity to use mobile devices to get market data. So, the null hypothesis is disproved. (b) Mobile phone usage and household income are positively correlated which defines that farmer who have higher income has a greater likelihood of acquiring market information via mobile phone. Farmers with higher household income might increase the possibility of using a mobile phone about 600%, as indicated by the exp (β) value (7).

Outcomes of Mobile Phone use in rice marketing

According to the discussion above, 79% of the farmers in the research region own mobile phones. The remaining 21% do not own mobile phones but do occasionally use those provided by their family, relatives, or other service providers. Farmers were further categorized based on whether they explicitly used mobile phones for paddy marketing in order to study the effects of their use in gathering market data.

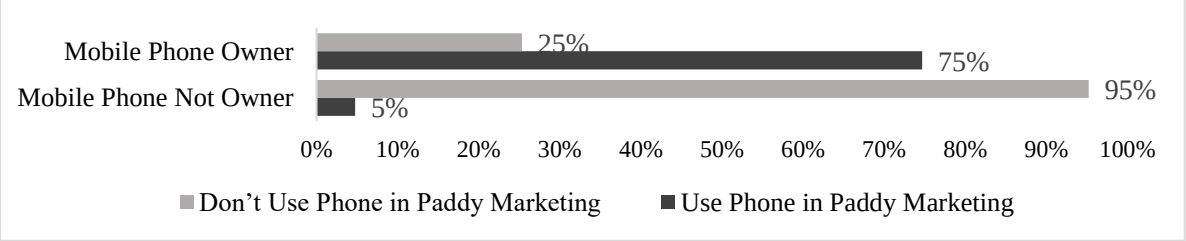

Figure 1. Landscape of farmer's mobile phone use in paddy market

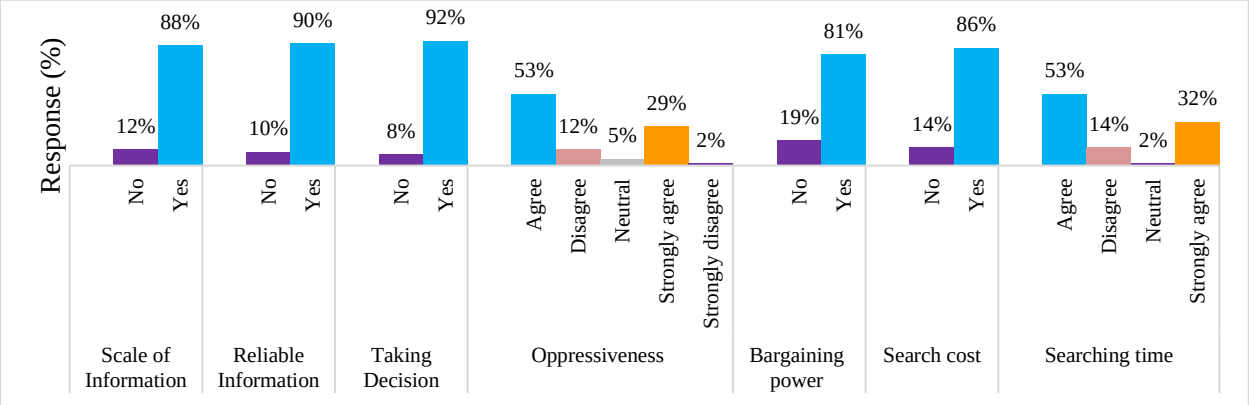

Figure 2. Response of the farmers who use mobile phone in paddy marketing. The detailed impact results is displayed here which is explained in Table 8.

Table 5. Response from the farmers who don't use mobile phone in paddy marketing

Impacts	Neutral N (%)	No N (%)	Yes N (%)	Agree N (%)	Disagree N (%)
Scale of Information	12 (60)	7 (35)	1 (5)		
Reliable Information	12 (60)	8 (40)			
Taking Decision	12 (60)	8 (40)			
Oppressiveness	7 (35)	13 (65)			
Bargaining Power	13 (65)	7 (35)			
Search Cost	12 (60)	8 (40)			
Searching Time	12 (60)			1 (5)	7 (35)

Individual visit expenses and expenses with mobile are calculated to understand the cost ratio during data collection. The mean cost of individual visit expenses and expenses with mobile was about 41.33 & 13.65 (BDT) respectively (Table 6).

Table 6. A scenario of the relative costs of collecting information

Categories	Sample (N)	Min. (BDT)	Max. (BDT)	Mean (BDT)	Std. Deviation
Individual visit Expense (Tk)	42	30.00	60.00	41.33	9.70
Mobile phone expense (Tk)	58	5.00	30.00	13.65	5.07

Table 7. Impacts result summary and findings

Impacts	Description	Results	Findings
Scale of Information	various levels of data were collected for paddy marketing and solicited for this study from 60 mobile users in rice marketing	88% of people think it's important to learn more, compared to 12% who don't (Figure 2). In contrast, 60% of non-user shared unfavorable opinions (Table 5)	In paddy marketing, the majority of people are positive about utilizing mobile phones to obtain extensive information.
Information reliability	Information reliability was asked to the both mobile users and non-users	90% of farmers who used mobile phones said they trusted the data more than other sources (Figure 2). Most farmers who don't use it, however, (60%) said they didn't get it. The other 40% of the population strongly disagreed with the comment (Table 5).	Comprehensive market information is available to rice farmers from a variety of vendors, allowing them to choose whether reports are reliable.
Rice Marketing in Decision	Decision parameters were evaluated with well-designed questions	Nearly all mobile users (92%) agree that having instantaneous access to a variety of factors facilitates better decision-making (Figure 2).	The marketing of rice requires several decisions from the farmer, including where to sell the crop, who to sell to, how to transport the crop, and what roads to take. It can be achieved easily with mobile phone ownership which simplifies their daily works
Intermediaries' oppressiveness	Influence and market power were assessed	29% strongly agree and 53% agree that mobile phones can lessen oppressiveness (Figure 2), in the contrary 65% of non-users showed a negative response (Table 5).	Using mobile phones in rice marketing can able to reduce the stiffness of the middlemen where producers can communicate directly and get optimum outcomes with faster communication.
Bargaining power of the farmer	Crosschecking and validation of prices and costs by the farmers were also evaluated	81% of cell phone users are farmers, giving them instantaneous access to numerous data on regional and international market trends and prices (Figure 2).	Communication with mobile phones in rice marketing broadens increases their reach and sales potential. This gives them greater sway in negotiations with potential buyers.
Information searching time	Can information be collected faster or not	53% of farmers agreed and 32% of farmers strongly agreed compared to conventional (Figure 2) and 60%had ambivalent opinions regarding cutting down on the amount of time needed (Table 5)	Utilizing their phones will speed up information gathering and paddy marketing.
Search cost with mobile phone	Cost effectiveness were examined compare to individual visit cost	When asked how often they seek information, 86% of farmers said it was less often than before they started using their mobile phones. (Figure 2)	Mobile phone use actively in rice marketing can save money to assist in getting the desired outcome.

DISCUSSIONS

Agriculture frequently provides the primary source of income for rural farmers in developing countries. There are so many factors that influence the income of farmers. It is assessed and evaluated in some studies regarding the influential parameters that contribute to household income. Numerous studies on mobile usage and its related economic and social effects have been conducted recently. Numerous studies examine the impact of mobile devices on market efficiency and agricultural pricing trends. An in-depth evaluation of the variables influencing paddy farmers' use of mobile phones to access market information was done in this study. Education and household income are among the socioeconomic factors of the respondents, who are farmers that have the greatest beneficial impact on the use of mobile phones to get market information. Rajkhowa and Qaim (2022) found that using mobile phones is linked to higher household earnings.

The likelihood of using a mobile phone to get market information improves by 89% with education. The simplest practical explanation for this is that more educated farmers are more aware of their profit margins and subsequently aim to cut costs. They therefore look for farming and product marketing methods that are comparably less expensive. In addition, education raises farmers' marketing and agriculture understanding of the advantages of mobile. They get insight into potential applications of mobile technologies to improve their agricultural and marketing operations, which will lower their costs and boost their profit margin.

The likely outcome of using mobile devices for acquiring market data is significantly positively correlated with household income. The likelihood of using a mobile phone to receive market information grows by 600% with income. More amenities are guaranteed with higher income. In our nation, a cell phone still costs a lot to buy and maintain, especially for those with lower incomes. Higher earners would rather make a phone call than visit someone in person. They are not particularly bothered by the cost of phone calls. But it might be a burden for the underprivileged. So, using a cell phone to gather market data depends significantly on money.

Market information systems have the ability to deliver exact and reliable data on costs & agriculture product prices, arrivals & availability of the products, trends, analysis, etc. An effective and accessible marketing information system may control prompt product delivery, cut marketing expenses, and boost output and productivity. For farmers to achieve their targeted outcomes, real-time market knowledge and trustworthy data are essential. In this study, results showed that the majority of farmers who use mobile devices, using a mobile phone suggests a favorable impact on their marketing operations, such as information search time, search cost, decision making, and so forth. Varieties of agriculture marketing information can be collected easily from different trustworthy sources which assist the farmers to make appropriate and rational decisions. Mittal and Tripathi (2009) stated that mobile devices can be a catalyst for raising rural incomes and agricultural output while associated with three most crucial elements: quality, timeliness, and trustworthiness of the information. According to this study, the majority of farmers agreed that using a mobile phone implies a favorable impact on their marketing operations, such as providing a reliable, timely, and large volume of information.

As there remains a long chain that is dominated by many intermediaries can be mitigated by access to market information. Study findings indicated that most of the farmers can overcome these challenges and lessen the stiffness of intermediaries. Ilahiane (2023) asserted that farmers' use of mobile phones leads to increased farmers' market involvement and the gradual elimination of middlemen in the agricultural value chain. However, the opposite opinion was shared by non-users which forwarded the necessity of the use of mobile phones in rice marketing. Most importantly, rice marketing information can be managed with high speed, and the search cost with mobile is reduced by 68% compared to personal visit cost. As a result, bargaining ability and scope are increased. A study by Aker (2008), observed that using cell phones in the agriculture market reduces information searching costs. The non-user group, meanwhile, tended to give unfavorable feedback or remained silent. When comparing the two groups' comments, it can be concluded that the employment of mobile phones in the paddy marketing system has enormous potential.

CONCLUSIONS

The use of mobile devices is rapidly increasing worldwide. Farmers are finding mobile phones a fantastic tool to maintain and extend communication to all relevant stakeholders they need in agriculture marketing. Mobile Phone Adoption in emerging nations and its effects on the economy and Society In this study, most of the farmers are using mobile phones for rice marketing. The research region found that using a cell phone to get information on rice marketing worked satisfactorily. The use of mobile phones by farmers is significantly influenced by household income and educational attainment. Study results based on farmers' reactions found that mobile offers large-scale, fast, trustworthy information at a relatively cheaper cost, giving farmers more negotiating leverage in the market and lessening the power of the middlemen. Following the conversation, it is clear that using a mobile phone has enormous potential for expanding the agricultural marketing industry. Mobile phone usage among farmers has the potential to boost both the distribution and manufacturing sectors. The potential afforded by mobile phone technology can be used by the government and policymakers to boost production and create a productive and successful marketing system for farmers. Since rice is the primary staple food in the nation, the government ought to place more attention on supplying farmers with more facilities. If not, farmers will face difficulties in growing rice, which will cause the entire country to suffer in the near future.

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