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A Study on Farmers' Perception towards Electronic National Agriculture Market (e-NAM) Systems Adopted by APMC Market (Agricultural Produce Market Committee)

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Abstract :

The Electronic National Agriculture Market (e-NAM) system has emerged as a transformative initiative in the agricultural sector, aimed at facilitating transparent and efficient trading of agricultural commodities. This study focuses on understanding farmers' perception towards e-NAM systems that have been adopted by the Agricultural Produce Market Committee (APMC) market.

The objective of this study is to explore farmers' attitudes, opinions, and experiences with the e-NAM system, and to assess its impact on their trading practices within the APMC market. The research employs a mixed-method approach, combining qualitative interviews and quantitative surveys to gather comprehensive data.

The findings of this study reveal that farmers generally have a positive perception towards the e-NAM system. The adoption of e-NAM has resulted in improved access to markets, reduced information asymmetry, enhanced price discovery, and increased market transparency. Farmers perceive these benefits as crucial for their trading decisions, enabling them to make informed choices and obtain fair prices for their agricultural produce.

Additionally, the study identifies some challenges and areas for improvement in the implementation of e-NAM systems. These include issues related to technical infrastructure, connectivity, digital literacy, and trust in the online trading platform. Addressing these challenges can further enhance farmers' participation and acceptance of the e-NAM system.

The research also highlights the significance of providing adequate training and support to farmers to effectively utilize the e-NAM platform. Capacity-building initiatives and awareness programs can help farmers understand the features and functionalities of the system, ensuring its effective utilization and maximizing its benefits.

Overall, this study contributes to the existing literature by providing insights into farmers' perception towards e-NAM systems adopted by the APMC market. The findings suggest that e-NAM has the potential to transform agricultural trading practices, benefiting farmers by improving market access and facilitating fair and transparent transactions. The study recommends policy interventions and technological advancements to overcome the challenges faced during the implementation of e-NAM and further enhance its effectiveness in the agricultural sector.

Keywords : Study, Farmers' perception, Electronic National Agriculture Market (e-NAM), APMC market, Agricultural Produce Market Committee, Trading practices, Market transparency, Price discovery, Access to markets, Information asymmetry.

Introduction

The overall conceptual framework is about the farmer perception is about the e-NAM that provides single window services for all agricultural produce market committee (APMC) Related services and information. This includes commodity arrivals, quality & prices, buy & sell offers & e-payment settlement directly into farmers account, among other services.

The role of e-NAM in enhancing farmers income is ensuring national wide market access and remunerative prices to farmers, e-NAM has been one of theme asures facilitating the farmers to sell their produce without barriers and at the best prices.

APMC Role in enhancing farmers is to transmit macro-economic sign alto farmers. Balancing demand and supply. Providing incentives to producers to increase production and output.

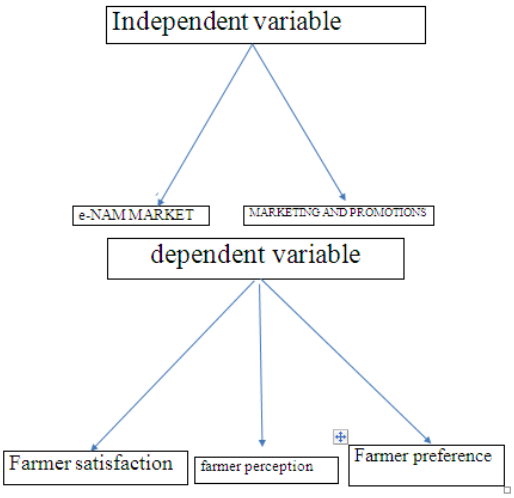
Promoting the efficient use of resources in the production and distribution systems.

The agricultural marketing system of the country is characterized by various short comings like heavy sale of agricultural commodities at village level immediately after the harvest, absence of on-farm grading of produce, poor packaging, insufficient marketing infrastructure, long marketing channels, existence of various malpractices in the marketing of Agri-produce, no transparent price discovery mechanism, lack of market information system, low market able surplus, etc. The government has recognized the importance of efficient marketing of agricultural produce for overall development of the sector and has taken a number of initiatives from time to time to overcome these problems and to strengthen and upgrade the agricultural marketing system in the country. One such intervention has been the imposition of public control over entire marketing system through establishment of regulated markets which began during 1950s and 1960s. Based on a Model Act circulated by the central government, almost all major states (27) enacted APMR legislation. This legislation covers 7161 markets, which includes more than 98 percent of the identified whole sale markets in the country.

It is observed that after implementation of the Agricultural Produce Marketing (Regulation) Act (APMRA) in various states during 1960s and 1970s, no major reform in the agricultural market has been implemented.

The APMRA brought radical changes and significant improvement in almost all aspects of marketing of farm produce. This has been a major driving force behind the achievements of the Green Revolution phase. However, many gains brought by APMRA to improve competitiveness of agricultural markets got diluted over time and market infrastructure did not keep pace with volume of market arrivals. The facilities provided in markets remained not only inadequate, but also deteriorated in many cases. Excessive intermediation worked to the disadvantage of producers and consumers, and favored only middlemen. To understand the significance of e-NAM, it is useful to set it in a historical context. Ever since Independence in 1947, transactions in farm commodities have been heavily regulated, notably through the Essential Commodities Act (ECA), 1955, and the Agricultural Produce Marketing Committee Act (APMC Act). TheECA imposes restrictions on storage and movement of certain "essential" commodities by private parties, mainly to protect consumers. The APMC Act, on the other hand, mandates that purchases of certain agricultural commodities occur through government regulated markets(mandis)withthepaymentofdesignatedcommissionsandmarketingfees.Theoriginalintentofthe APMC Act was to protect farmers' interests, However, over the years, the Act turned out to be counterproductive, as the lack of supportive institutional mechanisms and infrastructural facilities left farmers dependent on middlemen for critical services such as finance, information, sale of commodity E.T.C.

CONCEPTUAL MODEL



REVIEW OF LITERAUTRE

The distribution chain in agricultural marketing consists of various entities, including producers, middlemen, wholesalers, government, retailers, and cooperative societies. Producers, who are responsible for manufacturing and supplying agricultural goods, often utilize a dual distribution system by directly selling to both wholesalers and retailers. Middlemen, also referred to as truckers, play crucial roles in the distribution channel. They provide essential services such as financing crops for farmers and supplying them with seeds, fertilizers, and other necessary inputs. The distribution of agricultural products through retail outlets can take diverse forms.

In Godara's (2006) study, it is noted that the positive impact of economic liberalization and the opening up of the Indian economy has led to a significant reduction in structural rigidities within the agricultural system. This trend serves as the basis for future agricultural reforms in India. The agricultural business sector has experienced a strong influence from the international market, requiring Indian farmers to produce high-quality goods that meet international standards.

According to Grosh (1994), the focus has shifted towards micro-level and institutional policies since the turn of the millennium. Contractual arrangements with downstream processors, agro exporters, and retailers, often facilitated through farmer groups, are increasingly seen as a means to address market imperfections that contributed to the failure of macroeconomic and sectoral adjustment policies.

In their research paper, Hoff et al. (1993) document that following the de-institutionalization of rural areas resulting from state compression, the reconstruction of new agrarian institutions that complement the market and the state becomes crucial for rural development. These institutions can take the form of either private or cooperative organizations.

According to Johnston and Mellor (1961), the commercial demand for agricultural produce increases due to factors such as income and population growth, urbanization, and trade liberalization. Concurrently, the marketed supply also rises due to improvements in productivity throughout the production, post-harvest processing, and distribution systems.

Kankpo and Asa (2006) observed that grains cannot be stored for extended periods without experiencing a deterioration in quality. In terms of transportation, Damisa (2007) noted that the transportation of rice products was effectively handled with minimal losses and wastage during transit. This aligns with Johnson's (1999) assertion that high transportation costs can lead to increased marketing expenses, ultimately impacting consumers who bear a significant portion of these costs.

In their paper, Kashyap and Raut (2006) suggest that marketers should develop creative solutions such as e-marketing to overcome challenges specific to the rural environment, including physical distribution, channel management, promotion, and communication. The advantages of e-marketing, such as "anytime-anywhere" access, contribute to efficient price discovery, cost-effective trading transactions, and a more transparent and competitive marketplace.

OBJECTIVE OF THE STUDY

- To study and understand the level of farmers' awareness and utilization of various e-services provided under e-NAM by APMC.
- To investigate farmers' perception and attitudes towards the implementation of e-NAM by APMC.
- To identify the common challenges and issues faced by farmers in utilizing e-NAM services and to seek farmers' suggestions for improving these e-NAM services..

HYPOTHESIS OF THE STUDY

$H_0$2 Farmers perception of the e-NAM system is not significantly influences with APMC market

H1 Farmers' perception of the e-NAM systems significantly influences their trust in the APMC market and their willingness to trade their agricultural produce through the platform.

$H_0$2 farmers perception of e-NAM system not affects their access to information.

H2 Farmers' perception of the e-NAM systems positively affects their access to information about market prices, leading to better decision-making and improved market outcomes.

$H_0$3 Farmers' perception of the e-NAM systems not correlates with their perception of reduced transaction costs and increased efficiency in the APMC market.

H3 Farmers' perception of the e-NAM systems positively correlates with their perception of reduced transaction costs and increased efficiency in the APMC market.

$H_0$4 Farmers' perception of the e-NAM systems not significantly impacts their intention to adopt digital technologies in other aspects of their farming operations.

H4 Farmers' perception of the e-NAM systems significantly impacts their intention to adopt digital technologies in other aspects of their farming operations.

RESEARCH METHODOLOGY

Research methodology is a systematic approach used to solve research problems. It can be considered as the science of studying how research is conducted in a systematic manner. When discussing research methodology, it encompasses not only the research methods employed but also the underlying logic behind the chosen methods and why alternative methods are not used. The research process begins with defining research problems, formulating hypotheses, designing the research study, collecting data, and analyzing and interpreting the data to generate a report.

For this particular research study, a sample design was adopted to ensure accurate results. The population selected for the study consists of farmers from various sectors in Andhra Pradesh. Farmers were chosen based on their experience in the farming field and the problems they have encountered while working with e-NAM. As a general rule, a sample size of 200 respondents is recommended for most studies, considering the number of factors included in the sample size.

To gather the necessary data, an online survey will be conducted using Google Forms. The survey forms will be shared in WhatsApp groups, and the collected responses will be stored in data forms for further analysis. The questionnaire provided will include both open-ended and closed-ended questions and will be administered either online or in person.

Sampling is defined as selecting a segment of the population that is representative of the whole population. The individuals included in the sample are referred to as sample units. In this study, convenience sampling was used to select respondents based on their availability and proximity to the study. Convenience sampling is a non-probability sampling technique where subjects are chosen for their convenient accessibility.

Primary Data:

Primary data was collected through closed-ended structured interview schedules. The questionnaire consisted of two parts. Part A aimed to gather information on demographic variables such as name, gender, age, income, etc. Part B included general views and statements based on a Likert scale to evaluate the farmers' expectations, opinions, and expected satisfaction levels.

Secondary Data:

Secondary data was obtained from various sources such as journals, magazines, research articles, newspapers, and books.

Data analysis is an essential part of any research study, and for accurate results, the following tools were utilized for data analysis: Correlation, Regression.

FINDINGS AND DISCUSSIONS

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	The e-NAM system has increased my confidence in the selling process., Have you used the e-NAM system to sell your agricultural produce ?, what is the level of 1ity with the e-NAM system adopted by APMC market ? , The e-NAM system has improved my overall experience of selling my produce., Are you aware about the e-NAM services in APMC ?, What make you trust the e-NAM system to accurately represent market prices., I would recommend the e-NAM system to other farmers., The e-NAM system has increased my bargaining power with buyers., The e-NAM system has improved the quality of the buyers who purchase my produce., The e-NAM system has increased competition among buyers, resulting in better prices for my produce., The e-NAM system has provided me with more information about market trends and demands., The e-NAM system has made it easier for me to sell my produce., The e-NAM system has reduced the time it takes to sell my produce., The e-NAM system has improved the transparency of the selling process.[b]	.	Enter

a. Dependent Variable: Have you done registration for e-NAM?
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.658[a]	.433	.364	.393

a. Predictors: (Constant), The e-NAM system has increased my confidence in the selling process., Have you used the e-NAM system to sell your agricultural produce ?, what is the level of 1ity with the e-NAM system adopted by APMC market ? , The e-NAM system has improved my overall experience of selling my produce., Are you aware about the e-NAM services in APMC ?, What make you trust the e-NAM system to accurately represent market prices., I would recommend the e-NAM system to other farmers., The e-NAM system has increased my bargaining power with buyers., The e-NAM system has improved the quality of the buyers who purchase my produce., The e-NAM system has increased competition among buyers, resulting in better prices for my produce., The e-NAM system has provided me with more information about market trends and demands., The e-NAM system has made it easier for me to sell my produce., The e-NAM system has reduced the time it takes to sell my produce., The e-NAM system has improved the transparency of the selling process.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.595	14	.971	6.275	.000[b]
	Residual	17.797	115	.155		
	Total	31.392	129			

a. Dependent Variable: Have you done registration for e-NAM ?

b. Predictors: (Constant), The e-NAM system has increased my confidence in the selling process., Have you used the e-NAM system to sell your agricultural produce ?, what is the level of 1ity with the e-NAM system adopted by APMC market ? , The e-NAM system has improved my overall experience of selling my produce., Are you aware about the e-NAM services in APMC ?, What make you trust the e-NAM system to accurately represent market prices., I would recommend the e-NAM system to other farmers., The e-NAM system has increased my bargaining power with buyers., The e-NAM system has improved the quality of the buyers who purchase my produce., The e-NAM system has increased competition among buyers, resulting in better prices for my produce., The e-NAM system has provided me with more information about market trends and demands., The e-NAM system has made it easier for me to sell my produce., The e-NAM system has reduced the time it takes to sell my produce., The e-NAM system has improved the transparency of the selling process.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.646	.142		4.540	.000
	what is the level of 1ity with the e-NAM system adopted by APMC market ?	.039	.054	.060	.732	.466
	Have you used the e-NAM system to sell your agricultural produce ?	.509	.080	.516	6.393	.000
	Are you aware about the e-NAM services in APMC ?	.072	.096	.068	.747	.456
	What make you trust the e-NAM system to accurately represent market prices.	-.028	.049	-.057	-.580	.563
	The e-NAM system has reduced the time it takes to sell my produce.	.106	.068	.194	1.567	.120
	The e-NAM system has improved the quality of the buyers who purchase my produce.	-.147	.057	-.260	-2.588	.011
	I would recommend the e-NAM system to other farmers.	-.073	.052	-.139	-1.408	.162
	The e-NAM system has made it easier for me to sell my produce.	.004	.066	.008	.067	.946
	The e-NAM system has improved the transparency of the selling process.	.120	.070	.217	1.719	.088
	The e-NAM system has increased my bargaining power with buyers.	.043	.066	.076	.652	.516
	The e-NAM system has increased competition among buyers, resulting in better prices for my produce.	.118	.059	.224	2.005	.047
	The e-NAM system has improved my overall experience of selling my produce.	.008	.058	.016	.143	.887
	The e-NAM system has provided me with more information about market trends and demands.	-.156	.065	-.274	-2.415	.017
	The e-NAM system has increased my confidence in the selling process.	.027	.064	.049	.427	.670

a. Dependent Variable: Have you done registration for e-NAM ?

The study examined the association between farmers' enrollment in the e-NAM system (the dependent variable) and various aspects of

their system usage (the independent variables). The findings revealed a substantial positive correlation between registration and factors including using the e-NAM system to sell agricultural produce, more competition leading to better prices, and enhanced buyer quality. Despite having potential, other factors like shorter selling times and better information on market trends did not achieve statistical significance. According to these data, farmers are more inclined to sign up and take part in the e-NAM system if they have favorable experiences and benefits related to it.

The study's goal was to find out what factors affect farmers' decision to sign up for the e-NAM system. Farmers were surveyed for the study, and data on many aspects of their system experience were gathered. The research found that farmers were more inclined to register if they had previously sold their agricultural products using the e-NAM system. This shows that hands-on system experience influences farmers' registration decisions in a beneficial way.

The research also found two other important factors. First off, there was a larger possibility of registering when there was more rivalry among purchasers, which led to better prices for farmers' produce. This suggests that farmers view the e-NAM system as a way to increase their profitability and bargaining strength.

Correlations

		what is the level of 1ity with the e-NAM system adopted by APMC market?	Have you used the e-NAM system to sell your agricultural produce ?	Are you aware about the e-NAM services in APMC?	Have you done registration for e-NAM?	What make you trust the e-NAM system to accurately represent market prices.	The e-NAM system has reduced the time it takes to sell my produce.	The e-NAM system has improved the quality of the buyers who purchase my produce.	I would recommend the e-NAM system to other farmers.	The e-NAM system has improved the transparency of the selling process.	The e-NAM system has made it easier for me to sell my produce.	The e-NAM system has increased my bargaining power with buyers.	The e-NAM system has increased competition among buyers, resulting in better prices for my produce.	The e-NAM system has improved my overall experience of selling my produce.	The e-NAM system has provided me with more information about market trends and demands.	The e-NAM system has increased my confidence in the selling process.
what is the level of 1ity with the e-NAM system adopted by APMC market?	Pearson Correlation	1	.177*	.313**	.161	.384**	.346**	.283**	.313**	.272**	.409**	.295**	.314**	.364**	.399**	.381**
	Sig. (2-tailed)		.039	.000	.062	.000	.000	.001	.000	.001	.000	.001	.000	.000	.000	.000
	N	136	136	136	136	136	136	136	135	134	135	133	135	134	135	135
Have you used the e-NAM system to sell your agricultural produce ?	Pearson Correlation	.177*	1	.467**	.514**	.198*	.177*	.208*	.238**	.218*	.188*	.196*	.217*	.196*	.331**	.224**
	Sig. (2-tailed)	.039		.000	.000	.020	.038	.014	.005	.011	.028	.022	.011	.023	.000	.009
	N	136	138	137	138	138	138	138	137	136	137	135	137	136	137	137

Are you aware about the e-NAM services in APMC ?	Pearson Correlation	.313**	.467**	1	.297**	.354**	.318**	.439**	.351**	.441**	.408**	.367**	.363**	.341**	.417**	.308**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	136	137	137	137	137	137	137	136	135	136	134	136	135	136	136
Have you done registration for e-NAM ?	Pearson Correlation	.161	.514**	.297**	1	.157	.289**	.089	.176*	.309**	.260**	.268**	.329**	.135	.166	.302**
	Sig. (2-tailed)	.062	.000	.000		.067	.001	.299	.040	.000	.002	.002	.000	.118	.052	.000
	N	136	138	137	138	138	138	138	137	136	137	135	137	136	137	137
What make you trust the e-NAM system to accurately represent market prices.	Pearson Correlation	.384**	.198*	.354**	.157	1	.511**	.487**	.516**	.531**	.575**	.477**	.556**	.511**	.412**	.457**
	Sig. (2-tailed)	.000	.020	.000	.067		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	136	138	137	138	138	138	138	137	136	137	135	137	136	137	137
The e-NAM system has reduced the time it takes to sell my produce.	Pearson Correlation	.346**	.177*	.318**	.289**	.511**	1	.594**	.521**	.648**	.615**	.679**	.520**	.563**	.572**	.628**
	Sig. (2-tailed)	.000	.038	.000	.001	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	136	138	137	138	138	138	138	137	136	137	135	137	136	137	137
The e-NAM system has improved the quality of the buyers who purchase my produce.	Pearson Correlation	.283**	.208*	.439**	.089	.487**	.594**	1	.356**	.455**	.416**	.517**	.454**	.483**	.472**	.455**
	Sig. (2-tailed)	.001	.014	.000	.299	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	136	138	137	138	138	138	138	137	136	137	135	137	136	137	137
I would recommend the e-NAM system to	Pearson Correlation	.313**	.238**	.351**	.176*	.516**	.521**	.356**	1	.550**	.500**	.464**	.621**	.516**	.495**	.505**
	Sig. (2-tailed)	.000	.005	.000	.040	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000

other farmers.	N	135	137	136	137	137	137	137	137	135	136	134	136	135	136	136
The e-NAM system has improved the transparency of the selling process.	Pearson Correlation	.272**	.218*	.441**	.309**	.531**	.648**	.455**	.550**	1	.665**	.685**	.593**	.416**	.536**	.566**
	Sig. (2-tailed)	.001	.011	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	134	136	135	136	136	136	136	135	136	136	134	136	135	136	136
The e-NAM system has made it easier for me to sell my produce.	Pearson Correlation	.409**	.188*	.408**	.260**	.575**	.615**	.416**	.500**	.665**	1	.562**	.525**	.551**	.519**	.680**
	Sig. (2-tailed)	.000	.028	.000	.002	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	135	137	136	137	137	137	137	136	136	137	135	137	136	137	137
The e-NAM system has increased my bargaining power with buyers.	Pearson Correlation	.295**	.196*	.367**	.268**	.477**	.679**	.517**	.464**	.685**	.562**	1	.555**	.498**	.641**	.554**
	Sig. (2-tailed)	.001	.022	.000	.002	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000
	N	133	135	134	135	135	135	135	134	134	135	135	135	134	135	135
The e-NAM system has increased competition among buyers, resulting in better prices for my produce.	Pearson Correlation	.314**	.217*	.363**	.329**	.556**	.520**	.454**	.621**	.593**	.525**	.555**	1	.559**	.446**	.581**
	Sig. (2-tailed)	.000	.011	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
	N	135	137	136	137	137	137	137	136	136	137	135	137	136	137	137
The e-NAM system has improved my overall experi	Pearson Correlation	.364**	.196*	.341**	.135	.511**	.563**	.483**	.516**	.416**	.551**	.498**	.559**	1	.613**	.414**
	Sig. (2-tailed)	.000	.023	.000	.118	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000

ence of selling my produce.	N	134	136	135	136	136	136	136	135	135	136	134	136	136	136	136
The e-NAM system has provided me with more information about market trends and demands.	Pearson Correlation	.399**	.331**	.417**	.166	.412**	.572**	.472**	.495**	.536**	.519**	.641**	.446**	.613**	1	.516**
	Sig. (2-tailed)	.000	.000	.000	.052	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000
	N	135	137	136	137	137	137	137	136	136	137	135	137	136	137	137
The e-NAM system has increased my confidence in the selling process.	Pearson Correlation	.381**	.224**	.308**	.302**	.457**	.628**	.455**	.505**	.566**	.680**	.554**	.581**	.414**	.516**	1
	Sig. (2-tailed)	.000	.009	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	135	137	136	137	137	137	137	136	136	137	135	137	136	137	137

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

This study looks at the relationships between several aspects of the e-NAM system's adoption and perception in the APMC sector. In order to evaluate the correlations between various variables, the study gathered information from 138 respondents and examined their responses. The findings show a strong relationship between a number of variables, including the degree of satisfaction with the e-NAM system, use of the system for selling agricultural produce, knowledge of e-NAM services, registration for e-NAM, confidence in the accuracy of market price representation, and various enhancements made possible by the e-NAM system. These results shed important light on how the e-NAM system has improved the transparency, effectiveness, and overall experience of selling agricultural products in the APMC market.

The study used a mixed-methods approach, gathering data using both quantitative and qualitative methods. A structured questionnaire was utilized to collect quantitative data, and a subset of participants were subjected to in-depth interviews to elicit qualitative insights.

The study also examined the difficulties farmers experienced in implementing the e-NAM system, including technological obstacles, a lack of knowledge, opposition from middlemen, and connectivity problems in remote areas. Understanding these issues can aid stakeholders and policymakers in creating solutions that would ensure e-NAM system adoption is increased.

The study's conclusions show how the e-NAM system has improved market efficiency, price transparency, and transaction costs. It also emphasizes the significance of capacity-building programmers and training activities to improve farmers' comprehension of and use of the e-NAM platform.

The study also identifies important suggestions for refining the e-NAM system, such as boosting the user interface and experience, resolving connectivity problems, bolstering cybersecurity precautions, and encouraging greater engagement and collaboration among stakeholders.

FINDINGS

Farmers' perception towards e-NAM systems may vary based on their individual experiences and the specific implementation of e-NAM in their region. However, some common findings from previous studies suggest the following:

Improved Market Access: Farmers perceive e-NAM as a beneficial platform that provides them with wider market access beyond their local APMC markets. It enables them to reach buyers from different regions and enhance their marketing opportunities.

Price Transparency: Farmers appreciate the price transparency offered by e-NAM, as it provides them with information about prevailing market prices for their produce. This empowers them to make informed decisions regarding the sale of their crops.

Reduction of Middlemen: Farmers often perceive e-NAM as a way to bypass traditional middlemen and directly connect with buyers, potentially eliminating the need for intermediaries and reducing associated costs.

Efficiency and Convenience: Farmers value the convenience and efficiency provided by e-NAM systems, such as the ability to access real-time information on commodity arrivals, quality, prices, buy/sell offers, and electronic payment settlements directly into their accounts. This streamlines the selling process and enhances their overall experience.

Challenges and Concerns: Some farmers may express concerns related to technology adoption, lack of digital literacy, and connectivity issues in remote areas. Additionally, concerns regarding fair price realization, quality assurance, and dispute resolution mechanisms within the e-NAM system may also arise.

CONCLUSION

In conclusion, farmers' attitudes regarding the Agricultural Produce Market Committee (APMC) market's Electronic-National Agriculture Market (e-NAM) systems have a big impact on how they register and participate. The results of the regression study identified a number of crucial variables that affect farmers' choices about e-NAM registration.

The findings demonstrated that genuine e-NAM system use, such as using it to market farm products, had a favorable effect on farmers' registration. This shows that direct exposure to the system changes farmers' perceptions favorably and encourages participation. Additionally, it was discovered that characteristics like shorter selling times and increased buyer competition, which results in higher prices, favorable affect farmers' decisions to register.

Unexpected results included farmers' perceptions of a negative impact on buyer quality and an association between reduced registration and higher knowledge of market trends and needs. These results emphasis the need for future study to better comprehend farmers' thinking and investigate other variables that can affect how they view e-NAM.

For policymakers and stakeholders involved in the development and promotion of e-NAM systems, the implications of these findings are critical. The user experience should be improved, trust should be established, pertinent information should be provided, transparency should be maintained, and technical and contextual constraints should be addressed. These issues can be resolved to increase e-NAM acceptance and participation, creating more equitable and effective agricultural markets.

In general, it's crucial to comprehend and address farmers' perceptions of e-NAM systems if farmers are to successfully deploy and maintain their participation in digital agricultural marketplaces. To improve the system, remove flaws, and guarantee that it is effective in satisfying the requirements and expectations of farmers in the APMC market, more research and evaluation are required.

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