



Research Paper

Farmers Perception towards implementation of e-NAM in Nizamabad District of Telangana, India.

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Abstract:

The study assesses farmers' perception towards the Electronic National Agriculture Market (e-NAM) in Nizamabad district, Telangana, a key agricultural hub producing crops like turmeric, maize, and pulses. e-NAM, a digital initiative, aims to improve price discovery, reduce transaction costs and empower farmers. However, adoption has been slow due to factors like low awareness, limited digital literacy, and infrastructure challenges. The study involved 120 respondents, including 60 farmers, 20 market officials, 20 traders, and 20 commission agents. Data were collected using structured interview schedule, and statistical tools were employed to analyze perception levels and identify adoption barriers. Findings revealed that 50.0 per cent of farmers were having medium level of perception towards e-NAM followed by low (36.7%) and high (13.3%). Majority (50.0%) of market officials were having high perception followed by medium (40.0%) and low (10.0%). Majority (55.0%) of commission agents were having medium level of perception followed by low (25.0%) and high (20.0%). Majority (50.0%) of traders were having medium level of perception followed by low (30.0%) and high (20.0%). The analysis indicates the need for targeted capacity-building programs, such as workshops and hands-on training, to enhance knowledge, especially for farmers, traders, and commission agents. Additionally, the study emphasizes the importance of user-friendly digital tools, video tutorials in local languages, and improved internet connectivity were highlighted as critical factors to bridge the digital divide. The study emphasizes the importance of enhancing awareness on farmers perception towards e-NAM to ensure its effective adoption. Policy interventions, such as subsidies for digital tools and improved connectivity are essential for addressing knowledge gaps. Strengthening the role of market officials through advanced training could streamline norms implementation, promoting market efficiency, reducing intermediaries influence and enhancing farmers income levels

Keywords: e-NAM; Perception, Agricultural marketing; Nizamabad district.

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I. INTRODUCTION

The agriculture sector in India is a cornerstone of the nation's economy, providing livelihoods to nearly 50% of the population and contributing about 18% to the gross domestic product (GDP). Agriculture remains the backbone of India's economy, contributing significantly to GDP and employing a majority of the rural population. However, the agricultural marketing system has long been plagued by inefficiencies, including the dominance of intermediaries, lack of price transparency, and inadequate infrastructure. To address these issues, the Government of India introduced the National Agriculture Market (e-NAM) in April 2016, a digital initiative aimed at integrating the country's wholesale markets into a unified online platform. The primary objective of e-NAM is to ensure better price discovery for farmers, reduce transaction costs, and promote transparency in the agricultural marketing ecosystem (Chand, 2017). By enabling inter-state trade and providing access to a wider market base, e-NAM has the potential to empower farmers and improve their income levels. Despite its critical

role, the agricultural marketing system has faced longstanding challenges, including the dominance of intermediaries, limited market accessibility, and inefficiencies in price discovery mechanisms. To address these issues, the Government of India launched the e-NAM in April 2016, a path-breaking initiative aimed at creating a unified digital marketplace for agricultural produce. By fostering competition, ensuring transparent price discovery, and empowering farmers with greater market choices, e-NAM is envisioned as a transformative intervention in India's agricultural marketing ecosystem (Samantaray et al., 2024; Punia & Bishnoi, 2022; Venkatesh et al., 2021).

The e-NAM platform integrates Agricultural Produce Market Committees (APMCs) across India, enabling farmers to trade their produce digitally. Key features include real-time price discovery, e-bidding, a single license for trading, and integrated payments. By October 2024, e-NAM had onboarded over 1,000 mandis across

18 states and 3 Union Territories, facilitating trade worth over ₹2.5 lakh crore. While the platform's potential for revolutionizing agricultural trade is undeniable, its adoption by farmers has been uneven, often hindered by low awareness, inadequate digital literacy, and infrastructural challenges (Kumar et al., 2021; Sharma et al., 2023).

1.1 SIGNIFICANCE FOR TELANGANA AND NIZAMABAD DISTRICT

Telangana, with its progressive agricultural policies, has integrated over 50 APMCs into the e-NAM system, making it one of the leading states in leveraging this platform. Nizamabad district, known for its production of turmeric, maize, and pulses, is a critical agricultural hub in the state. Despite this, the adoption of e-NAM by farmers in the district has been relatively low. Limited knowledge about the platform, coupled with challenges such as inadequate access to internet facilities and training, continues to impede the realization of its benefits (Reddy et al., 2022; Gupta & Rao, 2021).

Farmers' perception and understanding of e-NAM play a pivotal role in its adoption and utilization. Key components of this knowledge include awareness of the registration process, the use of digital tools, market linkages, and the benefits of transparent price discovery mechanisms. Studies indicate that farmers who are well-informed about e-NAM are more likely to use the platform effectively, leading to better price realization and reduced dependency on intermediaries (Singh et al., 2020). However, gaps in awareness and technical proficiency remain significant barriers, particularly in rural areas where traditional market systems dominate (Das et al., 2022).

This study seeks perception of farmers towards e-NAM in Nizamabad district, identifying gaps and barriers to its adoption. By providing actionable insights, it aims to contribute to the effective implementation of e-NAM, ultimately enhancing market efficiency and improving the livelihoods of farmers in the region. The findings will also inform policymakers and stakeholders to strengthen farmers' participation in digital marketplaces.

II. METHODOLOGY

An ex-post facto research design was employed for the study, with Telangana state selected due to the researcher's familiarity with the local language and culture. The e-NAM market in Nizamabad district was intentionally chosen, as it registers a higher volume of commodity arrivals and transactions on the e-NAM platform. A list of farmers who conducted transactions through e-NAM during 2019-20 was obtained from the district marketing department, and 60 farmers were randomly selected as respondents. To gain a holistic understanding of e-NAM implementation, additional key stakeholders were included in the study. From the lists of traders, commission agents, and market officials associated with the chosen market, 20 respondents were randomly selected from each group. This resulted in a total sample size of 120 respondents, comprising 60 farmers,

20 traders, 20 commission agents, and 20 market officials. Data were collected using structured interview schedule, and statistical tools were employed to analyze knowledge levels and identify adoption barriers. Appropriate statistical techniques such as correlation were applied to ensure accurate analysis of the data.

III. RESULTS AND DISCUSSION

Table1: Distribution of respondents according to their perception towards e-NAM

S. No	Category	Class Interval	Respondents							
			Farmers (n=60)		Market Officials (n=20)		Commission Agents (n=20)		Traders (n=20)	
			f	%	f	%	f	%	f	%
1	Low	18-30	22	36.7	2	10.0	5	25.0	6	30.0
2	Medium	30-42	30	50.0	8	40.0	11	55.0	10	50.0
3	High	42-54	8	13.3	10	50.0	4	20.0	4	20.0
	Total		60	100	20	100	20	100	20	100

Table 1 indicated that 50.0 per cent of farmers were having medium level of perception towards e-NAM followed by low (36.7%) and high (13.3%). Majority (50.0%) of market officials were having high perception followed by medium (40.0%) and low (10.0%). Majority (55.0%) of commission agents were having medium level of perception followed by low (25.0%) and high (20.0%). Majority (50.0%) of traders were having medium level of perception followed by low (30.0%) and high (20.0%). Market officials had high perception on e-NAM as they had high school to graduation education, attended and organized trainings to the stakeholders of e-NAM for its better implementation. This is in conformity with the results of Shivakumar (2015)

Table 2: Correlation coefficient (r-value) between independent variables and perception of respondents (farmers).

S.NO	Independent variables	"r" values
1	Age	0.003NS
2	Education	0.386**
3	Farming experience	0.057 NS
4	Land holding	0.105 NS
5	Indebtedness	0.009NS
6	Digital literacy	0.228 NS
7	Information seeking behavior	0.392*
8	Training received	0.074 NS
9	Market intelligence	0.327*
10	Risk orientation	0.305*

**=1% Level of significance NS=Non-significant

*= 5% Level of significance

A glance at the table 2. indicated relationship between independent variables and perception of respondents towards e-NAM. The Profile characteristics of respondents viz, education, Information seeking behavior, Market Intelligence and Risk orientation had a positive significant relationship with perception of respondents towards e-NAM.

EDUCATION vs PERCEPTION

There was positive and significant correlation found between Education and Perception of farmers. It is quite logical that due to education, understanding increases and perception towards any concept will improve hence a positive and significant correlation might have appeared between these two variables in the study. This is in conformity with results of Avinash (2013).

INFORMATION SEEKING BEHAVIOR vs PERCEPTION

There was a positive and significant correlation between Information Seeking Behavior and Perception of farmers. The more information seeking behavior an individual has, the more he / she gathers information

leading to better understanding and perception. Hence a direct correlation was observed between information seeking behavior of respondents and their perception on e-NAM

MARKET INTELLIGENCE vs PERCEPTION

There was a positive and significant correlation between Market intelligence and Perception of farmers on e-NAM. The more knowledge and understanding a respondent has on market prices, trends etc., the better clarity in perception he/she possess on e-NAM. Hence a positive correlation appeared in the study between market intelligence and perception about e-NAM

RISK ORIENTATION vs PERCEPTION

There was a positive and significant correlation between Risk orientation and Perception of farmers on e-NAM. Individuals with more perceptual clarity on the subject concerned are willing to take more risk for the sake of associated benefits. Hence a positive correlation appeared in the study.

Table 3. Correlation coefficient (r-value) between independent variables and perception of respondents i.e. market officials, commission agents and traders.

S. No	Independent variables	"r" values		
		Market officials	Commission agents	Traders
1	Age	0.394 NS	0.273 NS	0.224 NS
2	Education	0.127 NS	0.132 NS	0.595**
6	Digital literacy	0.715**	0.442 NS	0.473*
7	Information seeking behavior	0.542*	0.497*	0.606**
8	Training received	0.690**	0.399 NS	0.087 NS
9	Market intelligence	0.487*	0.496*	0.563**
10	Risk orientation	0.553*	0.592**	0.473*

**=1% Level of significance

NS=Non-significant

*= 5% Level of significance

Correlation between independent variables and perception of market officials, commission agents and traders was given in table 4.16. Digital literacy, information seeking behavior, training received, market Intelligence and risk orientation had positive significant relationship with the perception of market officials. Information seeking behavior, market Intelligence and risk orientation had positive significant relationship with perception of commission agents. Education, digital literacy, information seeking behavior, market intelligence and risk orientation had positive significant relationship with perception of traders.

EDUCATION vs PERCEPTION

There was positive and significant correlation found between Education and Perception of traders. It is quite logical that due to education, understanding increases and perception towards any concept will improve hence a positive and significant correlation appeared between these two variables in the study.

DIGITAL LITERACY vs PERCEPTION

A positive and significant correlation at between Digital literacy and Perception of market officials and traders. Medium to high and medium digital literacy levels possessed by market officials and traders respectively in terms of using mobile apps, websites, portals, attending online meetings etc. might have significantly improved perception on e-NAM. Similarly, low digital literacy levels possessed by majority of commission agents resulted in low perception on e-NAM.

INFORMATION SEEKING BEHAVIOR vs PERCEPTION

Information seeking behavior and Perception of farmers, market officials and traders were found to be positively and significantly correlated. The more information seeking behavior an individual has, the more perceptual clarity they gain. Hence a direct correlation was observed between information seeking behavior of respondents and their perception on e-NAM

TRAINING RECEIVED vs PERCEPTION

The study revealed a positive and significant correlation between Training received and Perception of market officials. It might be due to the fact that regular and mandatory trainings for market officials coupled with interactions, experience sharing and discussions during trainings might have improved their perception on e-NAM

MARKET INTELLIGENCE vs PERCEPTION

The results of the study indicated a positive and significant correlation between Market intelligence and Perception of market officials, commission agents and traders on e- NAM. The more market information a respondent has, the more is his/her perceptual clarity towards e-NAM. Hence a positive correlation appeared in the study between market intelligence and perception towards e-NAM

RISK ORIENTATION vs PERCEPTION

Finally, a positive and significant correlation was observed between Risk orientation and Perception of market officials, commission agents and traders on e-NAM. Individuals with more perception on the subject concerned are willing to take risk for the sake of associated benefits compared to low perception bearers. Hence a positive correlation appeared in the study

IV. CONCLUSION:

The study reveals Perception disparities about e- NAM, with 60% of market officials, 43.4% of farmers, 65% of commission agents, and 60% of traders having varying levels of awareness. To bridge these gaps, targeted capacity-building efforts, including workshops, training, and user- friendly digital tools, are essential. Collaborative initiatives with Farmer Producer Organizations (FPOs) and policy support such as subsidies for digital devices and improved internet connectivity can enhance adoption. Strengthening market officials' roles through further training will ensure smoother e-NAM implementation, contributing to greater market transparency, fair pricing, and increased profitability for stakeholders.

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