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e-NAM: An Overview of Economic and Trade in South India

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Abstract
e-NAM was initiated by the Government of India to eradicate the lack of efficiency and increase clarity in agricultural commerce and ensure fair prices to farmers for their produce. This Article focuses on (a) extent of APMC markets across the southern states and participation of FPO, Traders and farmers and (b) the benefits, and constraints of e-NAM trading. There is sufficient proof for improving agricultural marketing in southern states. Tamil Nadu show highest percentage of No of Markets, and participation of Traders. In case of Farmer participation, Telangana and Andhra Pradesh has highest numbers. It suggests a noteworthy benefit for the execution of e-NAM in Peninsular India. This shows promoting inter-market trading requires hastening the issuance of unified licenses and enhancing the awareness about e-NAM for farmers and FPO.

Keywords: Trade performance and concentration, stakeholder's participation, effect on farmers price, constraints in e-NAM trading

Introduction
Electronic-National Agriculture Market (e-NAM) is a digital platform launched by the Indian Government in 2016. The objective of e-NAM is to create a unified national market for agricultural commodities by integrating existing agricultural markets. The platform aims to help farmers improve their revenues by facilitating direct transactions between buyers and sellers from all over the country. (Vengatesh *et al.,* 2021) [8]. The e-NAM platform has the potential to revolutionize the way agricultural commodities are traded in India. It provides a transparent price discovery mechanism that enables farmers to earn a fair price for their produce. The platform also allows farmers to access a wider market and choose the best possible buyers for their produce. The e-NAM platform has been a huge success since its launch. It has brought together over 1000 mandis (agricultural markets) from different states and has enabled farmers to sell their produce online. The platform has increased the efficiency of the agricultural market by reducing intermediaries and promoting transparency. In addition to its benefits to farmers, the e-NAM platform also benefits buyers. It provides buyers with access to a wider market and enables them to purchase high-quality produce from different parts of the country. For buyers, the platform reduces the transaction costs associated with trading agricultural commodities.

Data and Method
We utilize the secondar data. The primary data, on the other hand, was collected through surveys and interviews with farmers. This allowed us to gain a understanding of the knowledge about e-NAM. The secondary data on e-NAM transactions were collected from the e-NAM portal (https://enam.gov.in).
By combining both secondary and primary data, we were able to paint a comprehensive picture of the e-NAM system and its impact on agricultural markets in India. This approach also allowed us to validate the accuracy of the secondary data and identify any gaps or inconsistencies that needed further investigation. Overall, our use of both secondary and primary data helped us to generate insights that would not have been possible with either source alone. We utilise the percentage analysis and chi square test to capture the figure of e-NAM and awareness among different age and educational group of farmers in South India. (Singh *et al.,* 2021) [6].

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Benefits and Constraints

Firstly, e-NAM has brought transparency to the agricultural market in India. Earlier, the farmers had to depend entirely on middlemen to sell their crops, and often they were unaware of the market prices. e-NAM, with its transparent price discovery mechanism, has enabled farmers to sell their produce directly to the traders with the guidance of APMCs (Agricultural Produce Market Committees). The platform aims to eliminate intermediaries, who charge exorbitant fees and commissions, thus ensuring that farmers receive the correct price for their crops. (CSC Sekar *et al.,* 2018) [3].

Secondly, e-NAM has paved the way for the integration of various mandis (markets) across the country. Earlier, each state or region had its own mandi, and farmers could only sell their crops in their respective mandis. With e-NAM, farmers can access multiple mandis across the country by merely uploading their produce on the platform. This open market system has increased competition, and farmers can now sell their crops at a competitive and fair price.

Thirdly, e-NAM has provided a wider range of options to farmers for selling their crops. Earlier, farmers were constrained to sell their crops within their mandis. But with the e-NAM platform, farmers can sell their produce to buyers from various parts of the country, including export-oriented firms. This has created a more accessible market for farmers, resulting in increased income and better quality of life.

Fourthly, e-NAM has brought in the digitalization of agriculture markets in India. This shift from the traditional paper-based system to a digital system has made the process of selling and buying crops more efficient and effective. Through the e-NAM platform, farmers can pre- register their crops, track the auction process, and receive payments digitally, thus eliminating any hassles that they had faced previously.

Finally, e-NAM has led to an increase in the incomes of farmers. A farmer can now avail the best price for their crops as the platform enables them to discover the highest bid price, and they can then sell their produce at such rates. This ensures that farmers receive the correct price for their crops, resulting in increased incomes, better standard of living, and better sustainability of the agriculture sector in India.

One of the significant disadvantages of e-NAM is the digital divide in India. Majority of the farmers who are supposed to benefit from e-NAM do not have access to the platform due to a lack of technology or adequate infrastructure. The digital divide also affects the participation of smaller farmers as they do not have the resources to access the platform. The government needs to invest in bridging the digital divide by providing the required infrastructure and training to farmers, especially those in remote areas.

Another disadvantage of e-NAM is the limited reach of the platform. e-NAM is only accessible to traders and farmers registered with the platform. Many small-scale farmers may not have access to e-NAM, which limits their reach in the agricultural market. The government needs to create awareness among farmers about the benefits of e-NAM and encourage more participation. Also, the government needs to increase the number of markets linked to the e- NAM platform to ensure the participation of more farmers and traders. (Singh *et al*., 2021) [6] & (Barman *et al.,* 2023) [2].

Results and Discussion

Pattern and growth in key characteristics of e-NAM

The closeness of top 5 South Indian markets to e-NAM and the active participation of stakeholders in e-NAM trade are important factors in the success of e-NAM (Table 1). During the last two years, the registration of agricultural producers (FPOs) and the issuance of unified licenses have improved significantly. The link between the market and the registration of traders also increased considerably. However, the increase in the number of farmers is very low. Andhra Pradesh recorded an increase in farmers' registrations. Tamil Nadu has a good share in the markets, trade registration and UL distribution. In Andhra Pradesh, FPOs were actively involved. From the Table 2, The study identified that 55 per cent of farmers were aware about the e- NAM, and 33 per cent of them were partially aware and 12 per cent of them were not aware. The study analyses the null hypothesis that there is no significant difference between age and awareness of e-NAM. However, P value 0.05 showed that significant difference between the age and awareness of e-NAM. Therefore, null hypothesis is rejected. the old age people were unaware about e-NAM. The second null hypothesis that there is no significant difference between the educational qualification and awareness about e-NAM. P value 0.05 showed that significant difference between the education and awareness among farmers. Therefore, the null hypothesis is rejected. (Singh *et al*., 2021) [6] & (Raju *et al.,* 2022) [5].

e-NAM trading process

The process begins with farmers bringing their products to the market, where registration and weighing take place, and a lot number is generated. To register, farmers must provide identifying proof and bank account details, which can be used for future transactions. However, there is no unique ID for farmers to trade across markets, so they must register separately in each market. Traders and commission agents must also register to participate in e-NAM trading.

Registration occurs at two levels: APMC level, where trading can only be done at a particular APMC, and state-level, where trading can be done across states. APMC-level registration is approved by APMC, while state-level registration (unified license) is approved by the State Agricultural Marketing Board. Nagarjuna Fertilizers and Chemicals Ltd (NFCL), Hyderabad, the strategic partner and service provider for e-NAM, provides the unified license with a unique ID. (Venkatesh *et al.,* 2018) [8].

In Tamil Nadu, farmers do not need to pay a registration or mandi fee, while traders must pay license and mandi fees at a rate of one percent of the value of trade. Once the lot number is generated, a sample is collected for quality assaying, and the complete details, including commodity name, varieties, quantity, and quality parameters, are uploaded to the online portal. (Singh *et al.,* 2021) [6].

The opening and closing times for bidding vary for each market. After the bidding closes, the system identifies the bid winner based on the highest bid for each lot, and an SMS is sent to the farmers for price confirmation. If the price is agreed upon, a sale agreement report is generated. In conclusion, the e-NAM trading process has the potential to revolutionize the agricultural market in India.

Table 1: Pattern of e-NAM mandis and Participants in peninsular India

S. No.	Name of State/UT	Mandis registered on e-NAM		No. of Farmers (In Lakhs)		Registered Traders on e-NAM		No. of Unified licenses issued by State		FPOs	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	Andhra Pradesh	33	2.6	14	8	3,546	1.5	3,546	2.2	193	7.5
2	Karnataka	2	0.2	0	0	701	0.3	701	0.4	13	0.5
3	Kerala	6	0.5	0	0	388	0.2	55	0	8	0.3
4	Puducherry	2	0.2	0	0	198	0.1	0	0	3	0.1
5	Tamil Nadu	127	10.1	3	1.7	8,907	3.7	5,517	3.4	124	4.8
6	Telangana	57	4.5	18	10.3	5,908	2.4	5,908	3.6	95	3.7
7	All India	1,260	100	175	100	2,43,193	100	1,63,474	100	2575	100

Source: Compiled from the e-NAM portal as on 31st March 2023

Table 2: Response of Farmers towards e-NAM awareness (N=60)

Farmers	Aware	Partially aware	Unaware	Frequency		Chi Square test
	33	20	7	60		
	55	33	12	100		
Age Group						
Young (Below 35)	15	3	3	21	35	
Middle (35-50)	10	8	5	23	38	P=0.05*
Old Age (Above 50)	4	5	7	16	27	
Total	29	16	15	60	100	
Educational Qualification						
Illiterate	1	2	5	8	13	
SSLC	7	6	4	17	28	P=0.05*
HSC	11	2	7	20	33	
Graduate	8	6	1	15	25	
Total	27	16	17	60	100	

*Significant @ $p<=0.05$

Conclusion

In conclusion, the e-NAM platform is a game-changer for the Indian agricultural market. It has the potential to transform the way agricultural commodities are traded in the country by providing a unified national market that benefits both farmers and buyers. The platform has already shown its potential by bringing together over 1000 mandis and enabling farmers to sell their produce online. As the platform continues to grow, it is expected to further improve the efficiency of the agricultural market in India. The platform has brought in many pros that include transparency, integration of mandis, wider options for farmers, digitalization of markets. Moreover, e-NAM has also helped in reducing the role of middlemen in the agricultural supply chain, which has resulted in better prices for farmers.

The platform has also enabled farmers to sell their produce directly to buyers, eliminating the need for intermediaries. This has not only increased the income of farmers but has also ensured that consumers get fresh produce at reasonable prices. With the success of e-NAM, the government is now planning to expand the platform to cover more commodities and increase the number of mandis connected to it. This will further boost the growth of the agricultural sector in India and benefit farmers across the country. After conducting a thorough analysis, it has become apparent that creating awareness among the farmers using various extension methods like campaign, farmer's meeting, farmers visit for e-NAM enabled APMC mandis. This will help to increase the participation of farmers, FPO and traders.

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