

A STUDY ON e-NAM A DIRECT LINK BETWEEN FARMERS AND CONSUMERS

B. Gattaiah,

Research Scholar, Dept. of Commerce,
Osmania University, Hyderabad.

Sr. Prof. D. Chennappa,

Dean, Faculty of Commerce, Osmania
University, Hyderabad.

Abstract

e-NAM is an online marketplace for trading agricultural products in India. Online commodity trading is made possible by the market for farmers, traders, and purchasers. The National Agriculture Market (e-NAM) is an electronic trading platform that aims to create a standardized national market for agricultural commodities. It functions by connecting the existing Agricultural Produce Market Committee (APMC) mandis across India. Small Farmers Agribusiness Consortium (SFAC), operating under the direction of the Ministry of Agriculture and Farmers' Welfare, implemented e-NAM, which was introduced on April 14th, 2016, with full support from the Central Government. The e-NAM system facilitates enhanced marketing opportunities for farmers to vend their agricultural products via an internet-based system that ensures competitive and transparent price discovery, with an online payment mechanism. The market facilitates the efficient selling of commodities and aids in improved price discovery. By January 2018, the market saw largely intra-market transactions totalling 36,200 crore (410 billion or US\$5.2 billion in 2020). Currently, its list of commodities available for trade includes over 90 items, such as common food grains, vegetables, and fruits.

Keywords: Online, Trading, e-NAM, APMC, Mandis, price discovery.

INTRODUCTION:

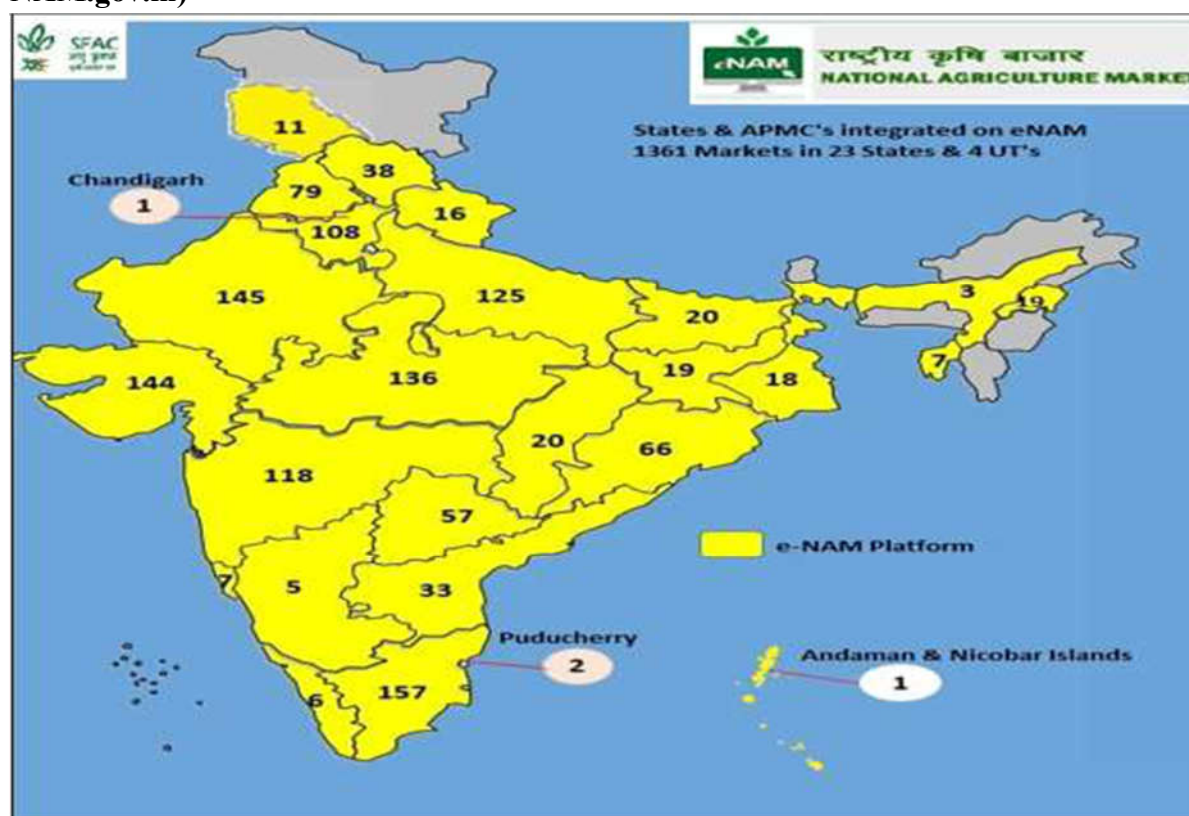
A nationwide market for agricultural commodities would be created by connecting the existing APMC marketplaces through the nationwide Agriculture Market (e-NAM), a pan-Indian electronic trading network. The e-NAM platform provides a comprehensive range of information and services linked to the Agricultural Produce Market Committee (APMC), serving as a centralized hub for all relevant needs. The APMC markets facilitate the movement of agricultural produce, providing valuable information on commodity arrivals, prices, trade offers for buying and selling, responsiveness to trade offers, payment settlements, and grievance resolution, among other services. The asymmetry of information and transaction costs is decreased via the Internet market. Over time, the goal of e-NAM has been to lower transaction costs by separating the physical transportation of goods from trade operations utilizing warehouse receipts and grades (Coulter & Onumah, 2002).

According to their agri-marketing regulations, the states oversee agriculture marketing. The management of each market region within the state is overseen by an Agricultural Produce Market Committee (APMC) market, which establishes its own regulations pertaining to marketing practices. These regulations encompass market fees as well as the permissible commission fees that are levied by commission agents. The state is divided into several market regions, each of which is supervised by an Agricultural Produce Market Committee (APMC) market. The presence of market fragmentation within a state hinders the unrestricted flow of agricultural goods between different market areas.

The involvement of several intermediaries in the processing of agricultural goods, along with diverse market charges, contributes to the escalation of prices, resulting in a larger proportion of profits being accrued by middlemen, sometimes to the detriment of farmers. The e-NAM addresses these challenges by creating a unified market through a national trading platform and promoting standardization of established procedures throughout the integrated marketplaces. According to Schmitz (2000), the transparent automatic auction procedure and price discovery facilitate seamless information flows between buyers and sellers. Farmers have access to customers across the country through e-NAM, and a price is established depending on the caliber of the crop and its level of demand across the country.

It also guarantees instantaneous online payment. The farmers' ability to use e-NAM, however, is dependent on a number of factors, including how well the available e-market options meet their needs as well as those of traders, other stakeholders, and other farmers (Lee, Shin, and Lee, 2009). Additional elements to consider encompass the punctuality of auctions and remittances, the reliability of transactions and payment mechanisms, the extent of operations and potential for wider engagement, universal accessibility for all farmers and merchants, as well as user-friendly interface and navigational convenience.

Figure 1: States & APMC's integrated to e-NAM in 2023, (Source:<https://www.e-NAM.gov.in>)



Implementation Phases of e-NAM:

As of May 2020, 18 states implemented e-NAM, which replaced physical commerce with electronic trade in all 585 mandis. To facilitate the establishment of e-NAM as a fully functional nationwide market for price discovery, there are plans to electronically connect all individual e-markets. This will enable traders from diverse geographical places to participate

in the process of bidding. As of now, the e-NAM platform has garnered participation from over 7.3 million farmers, 54,000 commission agents, and over 100,000 dealers. Given the prevailing circumstances, it is noteworthy that the total count of farmers in India exceeds 120 million, a figure that may be perceived as relatively diminutive. The introduction of e-NAM, which was intended to be a single nationwide electronics agriculture market, was fraught with difficulties.

The progress of e-NAM

The pilot phase, which started on April 14th, 2016, encompassed a total of 21 markets across 8 states. By September 2016, the initiative had expanded its coverage to include 10 states and a total of 250 markets.

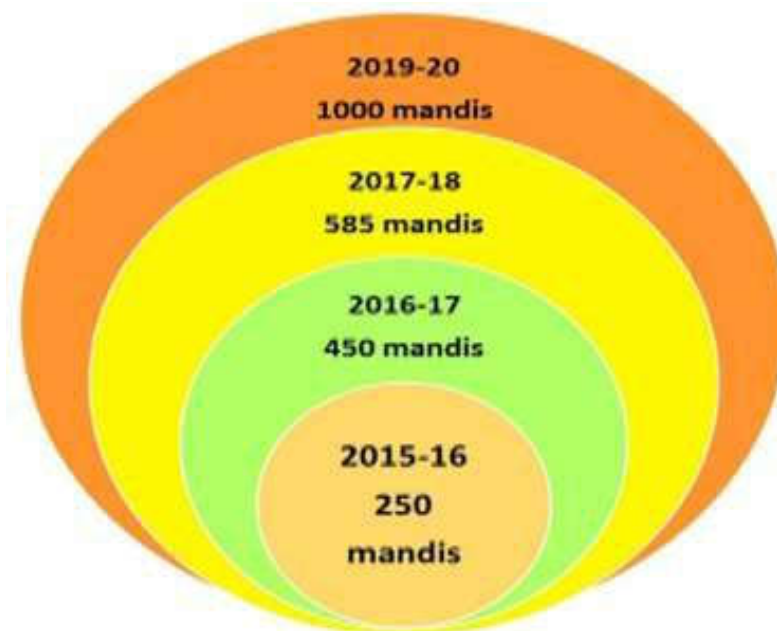
By March 2017, a total of 13 states and 417 markets were included.

By May 2018, a total of 13 states and 455 markets were included.

By July 2019, a total of 16 states and 2 union territories were encompassed, resulting in the coverage of 585 markets.

By May 2020, the company had expanded its operations to encompass a total of 18 states and 3 union territories, effectively reaching a network of 1000 markets. conducted by Renu and Goswami (2021).

Figure 2: Current status of e-NAM



(Source: Ghosh *et. al.*, 2021)

The progress achieved via e-NAM

Compared to the 279 million tonnes of grain produced in 2017–2018, only 11 million tonnes of agricultural products were traded on e-NAM. When contrasted with According to Reddy (2018), the value of agricultural commodities in India was estimated to be 13 lakh crores.

However, the transacted value in 2017-2018 was significantly lower, amounting to just 29,000 crores.

The reason for this analysis is the e-NAM implementation's acknowledged challenges and poor progress. The article's primary focus is on the influence of e-NAM, and it does so by selecting the 585 e-NAM with the best performance by looking at its prices and market arrivals. Then it looks into how market committees, commission agents, farmers, and dealers feel about its execution.

The Adoption of e-NAM Poses Several Challenges:

The establishment of the electronic National Agriculture Market (e-NAM) has encountered several challenges. The primary obstacles in the implementation of e-NAM can be categorized into three main areas, sometimes referred to as the "3 I's": Infrastructure, the topic of discussion pertains to the institution and the information it encompasses. Infrastructural One of the obstacles that can hinder progress is the presence of inadequate back-end infrastructure, such as the rural road has substandard quality, while the scientific storage facilities are insufficient. In the context of logistics, it is worth noting that there exists a restricted availability of cold storage facilities for the purpose of storing goods, alongside the broader operations of warehousing. Due to the absence of chilled transportation vehicles, and limited market concentration, the availability of grading facilities is restricted to certain markets. The ability of these devices to effectively handle large quantities During the peak season, there is a significant increase in the production and availability of agricultural commodities. There exist varying criteria and benchmarks for evaluating agricultural commodities. The presence of fragmented Agricultural Produce Market Committees (APMCs) and the absence of coordination between them. Marketing organizations and service providers are entities that engage in activities related to the promotion and provision of goods and services. The participation of traders in the marketing of agricultural products in the current situation is characterized by a lack of sufficient internet connectivity, resulting in a suboptimal number of available resources. In the current market, there exists a variety of computing devices, including computers, servers, and kiosks. The occurrence of an interrupted power supply and related issues, the presence of institutional barriers the subject matter can be further categorized into two distinct divisions: legal and b) The obstacles related to human resources. The absence of proper orienting is recommended that states undertake the adoption and amendment of their Agricultural Produce Market Committee (APMC) Acts. The implementation of a single-point levy in the market is being considered. The topic of discussion pertains to a solitary trading license, electronic trading, and the issue of latency. The primary legal challenges revolve around the notice of identical occurrences.

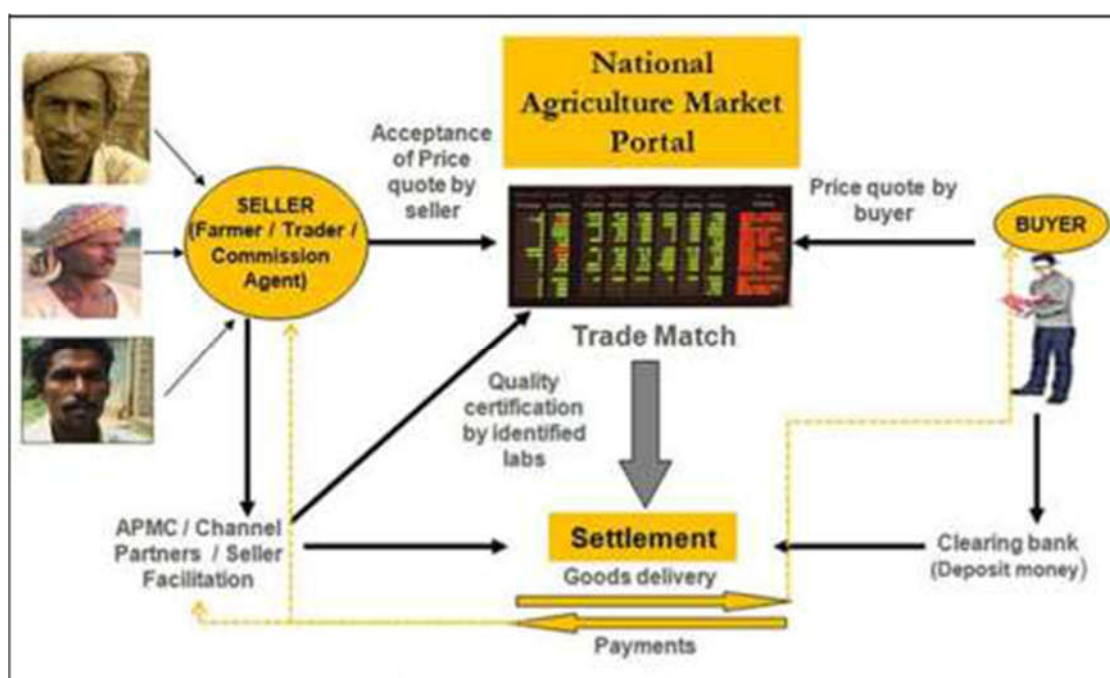
The implementation of the e-NAM system. Conversely, the APMCs suffer from a deficiency in skilled labour, which is constrained in its availability. The number of proficient traders engaged in electronic trading. Two factors that contribute to the challenges faced by farmers are the limited access to technological platforms and the relatively low levels of literacy among this population. The significant constraints in human resource management. One of the challenges that can hinder the acquisition and dissemination of information is a lack of sufficient understanding of a certain subject or topic. The farmers possess a weak

understanding of the electronic National Agriculture Market (e-NAM). The e-tendering process is hindered by a lack of information regarding its implementation and benefits. The advantages of the Electronic National Agriculture Market (e-NAM) and the concerns expressed by farmers the price of their produce will be lower if their produce is found of a lower standard. In an empirical investigation (Agarwal, 2016) conducted by the Indira Gandhi Institute according to a study conducted in the field of developmental research, it was documented that farmers perceive that the penalties associated with substandard quality will be reduced. When employing visual inspection. Notwithstanding the initial When experiencing hiccups, there are various strategies available to address such issues.

Multiple Stakeholders' Theory:

Farmers, dealers, commission agents, and market committee members are among e-NAM's stakeholders. Meeting the requirements of all market players is essential to e-NAM's success. The market as a whole cannot function well if a single category is not satisfied. For a market to be profitable, it must guarantee greater prices, prompt payments to farmers, incentives for traders, and lower transaction costs. To enable remote traders to engage in the bidding, the e-market should offer trustworthy assaying tools. The needs of farmers, dealers, and commission agents should be easier for market authorities to meet. The overall efficacy of an electronic marketplace is contingent upon its ability to attract a larger number of market participants, as well as its capacity to remunerate farmers equitably for their agricultural goods in a prompt way, while minimizing transaction costs and the need for extensive learning efforts. Farmers, traders, and other players won't be able to invest in the hardware, software, and skills they'll need until after then (Ghosh *et al.*, 2021).

Figure 3: Multiple Stakeholders and transactions.



(Source: <http://sfacindia.com>)

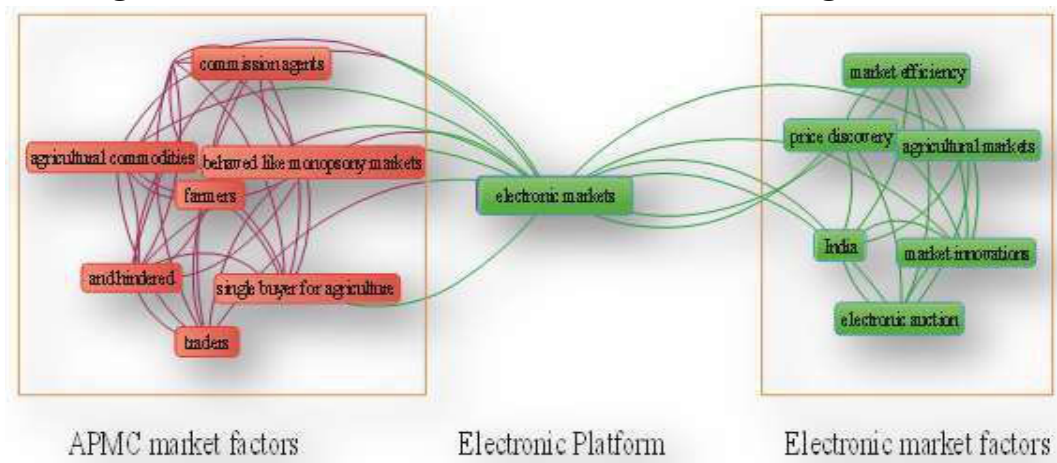
Agricultural Produce Marketing Committee Acts:

The country's main agricultural markets are overseen by the APMC Acts. The segmentation of the agricultural markets in the nation that results in inefficiencies in price discovery is generally caused by the way the markets are currently operating under the APMC Acts. Throughout APMC mandis in India as well as among the states, Chatterjee and Kapur (2016) examined the geographical variability in wholesale prices of the major commodities. They examined the respective roles of various factors in determining this price variance using Shapley-Shorrocks decomposition. They discovered that both time and location-changing factors (39%), as well as time-invariant site-specific factors (37%) are to blame for the significant overall difference in costs among mandis. The farmers profit from market power since there is little competition in the geographically remote mandis where they sell their produce at discounts of up to 5%. The APMC Acts enhanced agricultural markets in a number of ways, but over time, the power dynamic in transactions shifted back in favour of traders and middlemen. The political influence of the trading class on market reform measures of the state governments has been negatively impacted by the special interest groups of dealers and other middlemen (Chand, 2012). Additionally, it enabled them to prevent new competitors from entering the market, suppressing market competition (Acharya 2004).

Aggarwal, Jain, and Narayanan (2017) highlighted the significance of institutional reforms and the establishment of a legal framework, developing incentive structures for stakeholders, and providing market infrastructure, such as physical as well as financial payments infrastructure, dependent on their qualitative survey of different mandis in Karnataka.

A nationwide or even a state-level common market creation clause was absent from the model APMC Act. e-NAM is an advance in that regard and ought to directly aid in raising the level of efficiency and competition in the agricultural markets. Additionally, e-NAM should aid in lessening the price differential between producers and consumers as well as in the dismantling of local trading groups' cartels and price-fixing practices.

In the states of Punjab and Haryana, e-NAM is anticipated to encourage market-driven crop pattern diversification and lessen farmers' reliance on MSP and governmental procurement. If new APMC reform proposals don't give farmers more options to get higher pricing, they are doubtful to serve their interests and are low on ambition. e-NAM initiatives can be improved by treating the entire nation as a single market, including fruits and vegetables in the scope of 4 mandatory trading in APMC market yards, attracting private investment in alternative marketing facilities, and weakening the Essential Commodities Act (ECA), as well as by pushing APMC reforms (Pravesh Sharma, 2017).

Figure 4: Interaction of the APMC Factors and the Digital Factors

Source: (Yadav *et al.*,2020)

OBJECTIVES OF E-NAM:

The e-NAM portal seeks to bridge the gap between producers and consumers through the use of technology, with the goal of transforming the agricultural-marketing system in the country.

In order to facilitate pan-India trade, e-NAM is working with the primary goal of integrating the State level markets initially, and in the long run, the markets across the nation through a common online platform.

Along with promoting the effective operation of the markets, e-NAM will also help to streamline the marketing and transaction processes, create uniformity across all markets, and do so.

The establishment of a quality assaying system, which examines the quality guarantee of the commodities and will assist buyers in making better offers, is another objective of this portal. The efficiency of marketing is also influenced by factors like price stability, accessibility of high-quality produce to consumers, transparency during auctions, online payment options, etc.

Features of the Scheme:

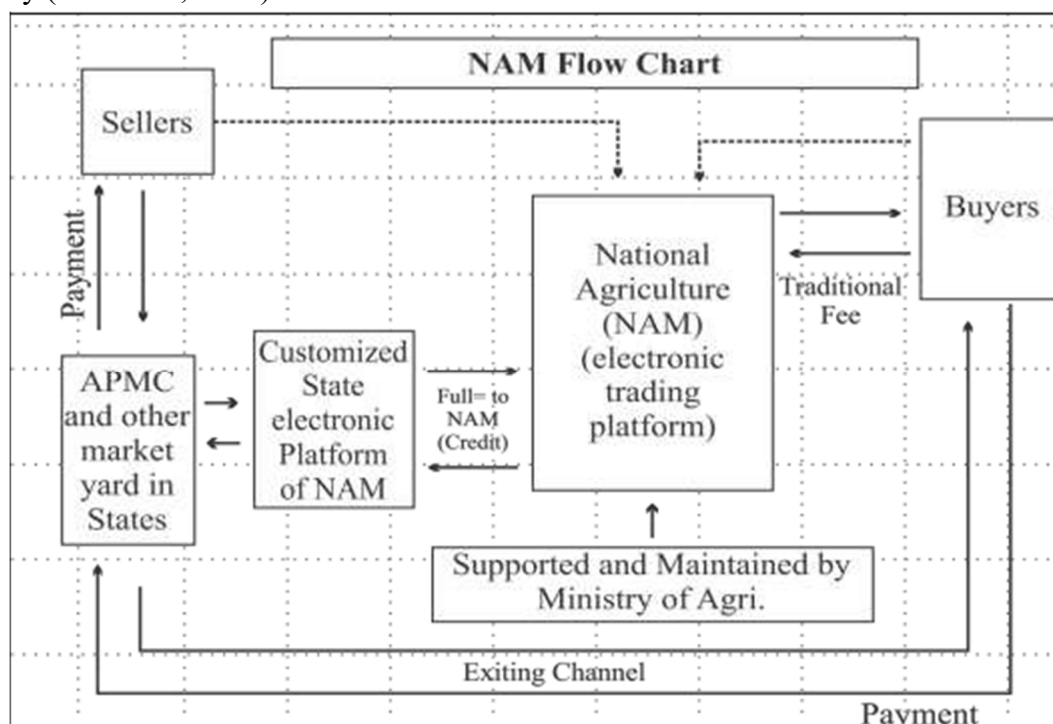
The national e-market platform, known as e-NAM, facilitates equitable transactions, price discovery, and regulated trading in various marketplaces such as kisan mandis, warehouses, and private markets. It is imperative for states to demonstrate their willingness by incorporating an e-trading provision inside their Agricultural Produce Market Committee (APMC) Act. The government is providing complimentary software and financial support of Rs. 75.00 Lakh per mandi for the procurement of related hardware, including quality-assurance tools, as well as for the enhancement of infrastructure, such as the establishment of facilities for maintenance, grading, sorting, packing, and composting. Emerging economies are seeing an increase in the promotion of food and agriculture through digital media.

This also applies to India. On July 14, 2022, the Ministry of Agriculture and Farmer Welfare released a mobile application in 12 different languages for (e-NAM)-Platform of Platforms (PoP). The PoP dashboard encompasses a range of services, such as trading, assaying,

transportation, storage, financial services, agri-advisory/extension services, market data, institutional buying and selling, and services related to agricultural inputs.

The agricultural market has gone through a gradual progression, starting with the implementation of e-NAM 1.0 as a first step towards e-NAM 2.0. The latter aims to facilitate warehouse-receipt (e-NWR) trade and direct marketing of farmer products through the APLM Act, 2017.

Furthermore, e-NAM 3.0 is anticipated to include the PoP app-based module. By incorporating the remaining APMCs, it is yet to make a significant impact on the agriculture industry (MoA FW, 2021).



Trade Performance in the e-NAM Platform:

In order to evaluate the level of acceptance among participants, an analysis was conducted on the trade performance of the electronic National Agriculture Market (e-NAM).

This analysis focused on the volume and monetary worth of commodities that were exchanged over the e-NAM platform.

Table 1: From 2016–17 to 2019–20, the volume of commodity trades on the e-NAM

platform. Quantity: Metric Tons

Year	Food Grains	Oilseeds	Fruits	Vegetables	Spices	Miscellaneous
2019-20	4247151.72	326332.80	36008.73	274885.19	111472.16	5576.73
2020-21	6797886.89	787654.52	161714.88	713327.10	590019.81	674156.04
2021-22	4754556.4	958727.75	137674.81	944103.63	763995.30	711643.93
2022-23	6453645.99	991645.07	141366.57	981917.94	743672.09	1227013.01
CAGR	9.39	42.35	48.32	50.68	81.34	407.10

(%)						
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Source: <https://e-NAM.gov.in>

Table-1 shows the volume of commodities traded over the e-NAM platform under various headings from 2019–20 to 2022–23, along with the accompanying Compound Annual Growth Rate (CAGR) of the same.

What e-NAM (the Electronic National Agriculture Market) Can Do for Farmers?

Farmers from all around India have tremendously profited from the government's e-NAM (Electronic National Agriculture Market) program, which has resulted in profound transformations in the agricultural business. E-NAM stands for Electronic National Agriculture Market. These advantages are crucial for increasing farmers' access to markets, decreasing the number of middlemen involved, guaranteeing reasonable pricing, and bettering farmers' standard of living.

Key Advantages That Farmers Get from Using E-NAM Include the Following:

- **Increased Opportunity to Sell to Potential Customers:** The e-NAM platform helps farmers connect with potential customers on a worldwide scale. As a consequence of this, farmers may be able to broaden their customer base and locate new markets outside the mandis that are located in their local region.
- **Real-time commodities prices:** e-NAM. Farmers can monitor current market pricing, giving them the advantage in deciding when and where to sell their commodities.
- **Direct Engagement with Buyers:** Because e-NAM eliminates the need for several intermediaries, farmers are now able to bargain with buyers directly, which significantly increases the possibility that they will get a portion of the selling price that is equitable to them.
- **Efficient Trading:** The platform simplifies the selling procedure by letting farmers post their goods online, where traders can then place bids on it and the deal can be closed electronically. Time is saved, money is saved on transactions, and losses are kept to a minimum after harvest because of this efficiency.
- **Fast and efficient transactions:** Because farmers can sell their goods soon after harvest, they incur less losses due to spoilage and waste as a result of storage thanks to e-NAM's fast and efficient transactions. e-NAM gets rid of payment delays and ambiguities by making direct payouts into the bank accounts of farmers.
- **certification and testing:** It ensures certification and testing services to make sure that the products sold by farmers are quality standards set out by the relevant industry. Increased marketability as a result of quality assurance methods, which in turn inspires more customer confidence.
- **Market information:** Real-time market information is made available to farmers via e-NAM so that they may make more informed decisions about their crop planning, production, and marketing efforts.
- **Economic Empowerment:** and Inclusivity via the Establishment of Level Playing Fields
Small and marginal farmers are able to compete on a level playing field when they access a bigger market thanks to e-NAM, which increases their financial independence.

- **Reduce the number of intermediaries:** e-NAM has the given opportunity for the farmers will be paid a reasonable price for their goods by reducing the number of intermediaries that are engaged in the supply chain.
- **Improve digital literacy:** Digital literacy of farmers who utilize e-NAM are able to improve their level of digital literacy, which in turn increases their ability to flourish in the contemporary digital world.

When everything is taken into account, e-NAM has fundamentally altered the manner in which farmers do business in the agricultural market. Small farmers are able to maintain a higher level of living and develop a food system that is more egalitarian and sustainable as a result of the various advantages made available to them by Enma.

OUTCOMES OF e-NAM:

- The integration of 1000 markets across 18 States and three Union Territories has resulted in improved market connectivity through the implementation of e-NAM.
- The e-NAM platform has witnessed registration of over 1.69 crore farmers and 1.55 lakh dealers.
- The e-NAM platform has registered a total trading volume of 4.13 Crore MT of bulk commodities and 3.68 crore numbers of Coconut and Bamboo, with an estimated value of about Rs 1.22 lakh crore.
- The primary agricultural commodities that farmers trade on the e-NAM platform include paddy, wheat, cotton, chilli, soybeans, maize, potato, chana, tomato, groundnut, mustard seeds, gaur seeds, onion, turmeric, arhar (tur/red gram), bajra, moong whole (green gram), castor seed, lentil (masur), and sweet lemon, among others.
- The technology has facilitated the implementation of direct payment to farmers.
- The e-NAM portal has been made accessible in both English and 11 Indian languages, including Hindi, Bengali, Marathi, Gujarati, Tamil, Telugu, Punjabi, Odiya, Dogri, Malayalam, and Kannada. This provision aims to enable farmers to utilize the e-NAM platform in their preferred language.
- The National Agriculture Market (e-NAM) platform has recently introduced the Farmer Producer Organisation (FPO) trading module. This module aims to enable FPOs to engage in trading activities for their agricultural output directly from local collection centres, eliminating the need to transport the goods to the Agricultural output Market Committee (APMC) marketplaces.
- The e-NAM platform has introduced a trading module that is centered around warehouses, allowing farmers to sell their agricultural products from warehouses that are registered with the Warehousing Development and Regulatory Authority (WDRA) and designated as recognized markets.

CONCLUSION:

In India, the e-NAM (Electronic National Agriculture Market) platform has proven a game-changer for agricultural commerce. Utilizing digital technology, e-NAM has since started

making significant contributions to minimizing and upgrading the agricultural marketing system. It has altered the way farmers sell their produce, giving them access to a countrywide, efficient, and open market. The agricultural marketing environment in India has undergone a fundamental shift because to e-NAM. Farmers, merchants, processors, and consumers benefit collectively from the increased inclusion, transparency, and efficiency of the market that technology has helped to establish. e-NAM has the ability to completely transform the agriculture industry and support the overall expansion and advancement of the Indian economy with additional improvements and coordinated efforts.

REFERENCES:

1. Ministry of Agriculture and Farmers Welfare, 2021. <https://static.pib.gov.in/WriteReadData/specific/documents/2021/nov/doc2021112561.pdf>
2. Goswami, M., & Jatana, R. (2021). An analytical study on the functioning of e-NAM (with special reference to Rajasthan). *International Journal of Research Culture Society*, 5(1), 25-29
3. Ghosh, L., Sahoo, P. J., Nahak, K. S. & Samal, K. (2021) National agricultural market (e-NAM) for rebooting Indian farmers' economy. *Agriculture Letters*. 2(3-4), 55-62.
4. Kumar, S. A. D., & Pant, S. C. (2020). Benefits of e-NAM Process to Farmers—A Study. Available at: <https://ccsniam.gov.in/images/pdfs/Benefit-of-e-NAM-process-to-Farmer-A-Study.pdf>.
5. Yadav, J., Misra, M., & Goundar, S. (2020). Autonomous Agriculture Marketing Information System Through Blockchain: A Case Study of e-NAM Adoption in India. In Sam Goundar (Eds.), *Blockchain Technologies, Applications and Cryptocurrencies* (pp. 115-138). Publisher. DOI: 10.1142/9789811205279_0005
6. Reddy, A. A. (2018). Electronic national agricultural markets: The way forward. *Current Science*, 115(5), 826–837.
7. Gupta, S., & Badal, P., (2018). E-national Agricultural Market (e-NAM) in India: A Review. *BHU Management Review*, 6(1), 49-58.
8. Aggarwal, N., Jain S. and Narayanan, S. (2017). 'The Long Road to Transformation of Agricultural Markets in India - Lessons from Karnataka', *Economic & Political Weekly*, LII (41), 47-55.
9. Agarwal, N., Jain, S. & Narayanan, S. (2016). The long road to transformation of agricultural markets in India: lessons from Karnataka. Working paper no. 2016-026, Indira Gandhi Institute for Developmental Research, Mumbai
10. Chand, R. (2016), 'e-Platform for National Agricultural Market', *Economic & Political Weekly*, LI (28), 15-18.
11. Chatterjee, S. and Kapur, D. (2016), 'Understanding Price Variation in Agricultural Commodities in India: MSP, Government Procurement, and Agriculture Markets', *India Policy Forum*, NCAER, New Delhi, India.
12. Chand, R. (2012), 'Development Policies and Agricultural Markets', *Economic & Political Weekly*, xlvii (52), 53-63.
13. Lee, S., Shin, B., & Lee, H. G. (2009). Understanding post-adoption usage of mobile data services: The role of supplier-side variables. *Journal of the Association for Information Systems*, 10(12), 860–888.