

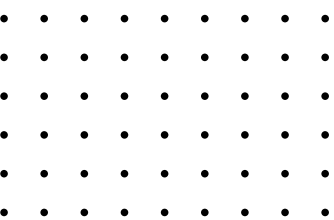
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Growth and Performance of the e-NAM Portal: An Empirical Study

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Article Info	ABSTRACT
Article History: Received: 15th Dec 2025 Accepted: 19th Dec 2025 Published: 20th Dec 2025 Keywords: <i>e-NAM Portal, National Agriculture Market, Farmer Registration, Trader Participation, Farmer Producer Organizations (FPOs), Commodity Registration, Trade Performance</i>	The National Agriculture Market (e-NAM) portal was launched in India with the main objective of creating a unified electronic platform to facilitate transparent and efficient agricultural marketing across the country. This study empirically examines the growth and performance of the e-NAM portal in India by analysing trading activities and registration trends over time. The research focuses on four key dimensions: the growth in the number of farmers registered on the platform, the registration of traders, commission agents, and Farmer Producer Organizations (FPOs), the trend in total commodities integrated into e-NAM, and the trade performance of agricultural commodities in terms of quantity traded (metric tonnes). Using secondary data sourced from official e-NAM records, the study employs descriptive and trend analysis to assess the portal's progress. The findings reveal a consistent increase in farmer participation and stakeholder registrations, indicating growing acceptance of the digital marketing system. An expanding range of commodities registered on e-NAM reflects enhanced market integration, while rising quantities traded indicates improvements in market access and transaction efficiency. The study concludes that e-NAM has contributed positively to agricultural marketing reforms, though further strengthening of infrastructure, awareness, and stakeholder participation is essential to maximize its potential.

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Introduction:

Agriculture forms the foundation of the Indian economy and plays a major role in rural livelihoods. Information gaps, reliance on middlemen, fragmented markets etc are some of the major drawbacks in conventional agricultural marketing systems in India. To promote the agriculture marketing system Government of India started the electronic National Agriculture Market (e-NAM) under the Agri-Tech Infrastructure Fund (ATIF). The pilot of this scheme was launched on 14 April 2016, covering 21 markets across 8 states.

e-NAM is a pan-India electronic trading portal. The prime aim of the e-NAM is to integrate the existing physical mandis on a single virtual platform and create unified national market for various agricultural commodities. Information on arrivals, quality, prices of commodities, buy-sell offers, online bidding, and direct electronic payments to farmers' bank accounts-all centrally located in one interface are some of the incorporated features of the e-NAM. e-NAM electronic trading portal is developed to lower the cost of transactions, reduce asymmetry in information, and broaden the access of farmers to markets. The Small Farmers' Agribusiness Consortium (SFAC) on behalf of the Ministry of Agriculture and Farmers' Welfare acts as a facilitator, linking farmers and entrepreneurs, providing support, and implementing central schemes for credit, equity, and market integration (e-NAM). e-NAM promotes direct, transparent trade between the farmer and buyer across the country through FPOs, traders, and mandi officials.

Objectives:

1. To examine the growth in the number of farmers registered on the e-NAM portal.
2. To analyze the registration pattern of traders, commission agents, and Farmer Producer Organizations (FPOs) on the e-NAM platform.
3. To study the trend in total commodities registered on the e-NAM portal.
4. To assess the trade performance of various agricultural commodities on e-NAM in terms of quantity traded (MT).

Research Methodology

The present study is descriptive and analytical in nature. The study is based on secondary data collected from Official e-NAM portal reports, Ministry of Agriculture and Farmers' Welfare publications and Annual reports. The study covers a period of year 2018-19 to 2024-25.

For the present study Registration and Trade Performance variables are considered. Registration Variables includes Number of registered farmers, Number of registered traders, Number of registered commission agents and Number of registered FPOs. While Trade Performance Variables includes Quantity of trade (MT), Total trade value, and Number of commodities traded.

Graphical representation is used to measure year-wise and overall growth in farmer registrations, to understand participation patterns across different stakeholder groups. Time-series graphs are used to identify expansion and diversification of commodities on e-NAM.

MS Excel Software Used is used for data processing, statistical analysis, and graphical presentation.

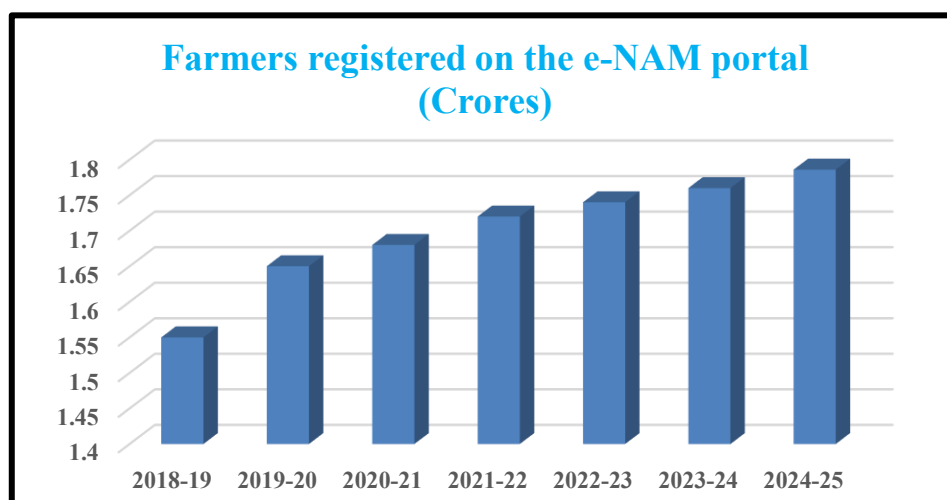
Limitations of the Study:

- i) The present study relies solely on secondary data.
- ii) Accuracy of the results depends on the reliability of published e-NAM data.
- iii) Present study does not considers qualitative factors such as user satisfaction or operational challenges.

Table No.01: Farmers registered on the e-NAM portal

Year	Farmers registered on the e-NAM portal (in Crores)
2018-19	1.55
2019-20	1.65
2020-21	1.68
2021-22	1.72
2022-23	1.74
2023-24	1.76
2024-25	1.786

Source: Compiled by the authors using secondary data obtained from the *Annual Reports* of the Department of Agriculture & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, Government of India.



This graph reflects a growth in the number of farmers registered on the e-NAM portal from 2018-19 to 2024-25. In 2018-19, the total number of registrations was 1.55 crore. It indicates the beginning of wider diffusion of the e-NAM platform. The number of registrations increased to 1.65 crore in the year 2019-20. It shows increased consciousness and acceptance of electronic modes of agricultural marketing. In 2020-21 increase in number of farmers registered on the e-NAM portal continued despite the disruption caused by the COVID-19 period, and it became 1.68 crore farmers. It shows resilient and usefulness of the platform. In 2021-22, the number of registrations increased to 1.72 crore, and it reached 1.74 crore farmers in 2022-23 reflecting increased farmers' confidence in online trading systems. In 2023-24, farmer registrations grew to 1.76 crore. During 2024-25, the number of registrations reached 1.786 crore. This is the highest value within the study period. The positive growth trend in farmer registrations in the e-NAM portal suggests effective implementation of the program, improved digital literacy among the farmers, expanded market linkages, and increasing trust in transparent technology-driven agricultural marketing systems in India.

Table No. 02: Traders registered on the e-NAM portal

Year	Traders registered on the e-NAM portal (in Lakhs)
2018-19	122171
2019-20	1.26
2020-21	1.51
2021-22	2.11
2022-23	2.39
2023-24	2.51
2024-25	2.634

Source: Compiled by the authors using secondary data obtained from the *Annual Reports* of the Department of Agriculture & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, Govt. of India.

The table No. 02 shows significant growth in the number of traders signed up on the e-NAM portal from 2018-19 to 2024-25. It reflects increased use of digital agricultural marketing in India. Trader registrations increased from 122171 in 2018-19 to 1.26 lakh in 2019-20, it shows initial adoption of the portal by the traders. In 2020-21, this increasing trend continued, and registration numbers reached to 1.51 lakh. In 2021-22 registration numbers rise sharply to 2.11 lakh. Registration further increased to 2.39 lakh in 2022-23, and 2.51 lakh in 2023-24. In 2024-25, it reached 2.634 lakh. Representing increase in

number of traders signed up on the e-NAM more than a twofold compared to 2019–20. This shows increased confidence among traders in the e-NAM ecosystem. It also indicates the growing role of the platform in increasing transparency, efficiency, and market access for agricultural trade.

Table No. 03: Commission agents registered on the e-NAM portal

Year	Commission agents registered on the e-NAM portal
2018-19	68429
2019-20	70765
2020-21	86889
2021-22	1.01 Lakh
2022-23	1.08 Lakh
2023-24	1.11 Lakh
2024-25	1.15 Lakh

Source: Compiled by the authors using secondary data obtained from the *Annual Reports* of the Department of Agriculture & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, Govt. of India.

The above table No. 03 indicates a continuous increase in the number of commission agents registered on the e-NAM portal from 2018–19 to 2024–25. It reflects expanding institutional participation in the digital agricultural marketing framework. Registrations gradually increased from 68,429 in 2018–19 to 70,765 in 2019–20. It reflects initial but steady adoption of e-NAM portal. A notable increase is observed in 2020–21 and registrations reached to 86,889 it indicates high awareness about e-NAM platform. This growth continued in 2021–22 with more than one lakh (1.01 lakh), commission agents registered on the e-NAM portal. Number of commission agents were 1.08 lakh and 1.11 lakh in the year 2022–23 and 2023–24, respectively. In 2024–25, registrations have reached 1.15 lakh. This shows substantial growth over the base year. Overall, the trend suggests that commission agents continue to integrate with the e-NAM ecosystem.

Table No. 04: FPOs registered on the e-NAM portal

Year	FPOs registered on the e-NAM portal
2018-19	653
2019-20	836
2020-21	1900
2021-22	2040
2022-23	2389
2023-24	3405
2024-25	4362

Source: Compiled by the authors using secondary data obtained from the *Annual Reports* of the Department of Agriculture & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, Govt. of India.

The table No. 04 reveals a strong and increasingly accelerating trend in the numbers of Farmer Producer Organizations represented on the e-NAM portal between 2018–19 and 2024–25. It shows rising institutional integration of farmers within the digital marketing framework. The number of registrations increased from 653 in 2018–19 to 836 in 2019–20. This shows initial awareness and gradual acceptance of scheme by farmers. There is sharp rise in number of registered FPOs in 2020–21. Number of registered FPOs increases manifold and reaches to 1,900 in 2020–21. It indicates that serious efforts were taken to support policy and increase awareness among farmers about marketing using e-NAM. This growth pattern continues into the following years, number of registered FPOs reaching 2040 in 2021–22, 2389 in 2022–23, 3405 in 2023–24 and reached to 4362 in 2024–25. The table reveals that more than six fold increase is recorded in less than seven years in number of FPOs registered on e-NAM.

Table No. 05: Trade Performance (in MT) of various agricultural commodities on the e-NAM portal

Year	Trade Performance (in MT) Cr.
2018-19	NA
2019-20	3.15

2020-21	3.89
2021-22	5.25
2022-23	7.07
2023-24	8.96
2024-25	11.02

Source: Compiled by the authors using secondary data obtained from the *Annual Reports* of the Department of Agriculture & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, Govt. of India.

The table no. 05 shows the year-wise trend in trade performance on the e-NAM platform in crore MT from 2018-19 to 2024-25. During 2018-19, data on trade performance were not available. During 2019-20, the trade volume recorded 3.15 crore MT. This has grown to 3.89 crore MT during 2020-21, reflecting early growth and wider participation of market stakeholders on the e-NAM platform.

It shows sharp acceleration in trade performance from 2021-22 onward. In 2021-22 trade volumes increase to 5.25 crore MT, which is the indicator of improved market integration and operational efficiency. In 2022-23, the trade volume reached to 7.07 crore MT, in 2023-24, it increased to 8.96 crore MT. During 2024-25, trade performance reached to 11.02 crore MT. In 2024-25 there is threefold increase over total trade on e-NAM in comparison with figures in 2019-20. Trade volume data shows reflection of increasing maturity of the e-NAM platform, stakeholder confidence in its features.

Table No. 06: Total trade value on the e-NAM portal

Year	Total trade value (Rs.) Crores
2018-19	64923
2019-20	89896
2020-21	114003
2021-22	167413
2022-23	242969
2023-24	319450
2024-25	401220.57

Source: Compiled by the authors using secondary data obtained from the *Annual Reports* of the Department of Agriculture & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, Govt. of India.

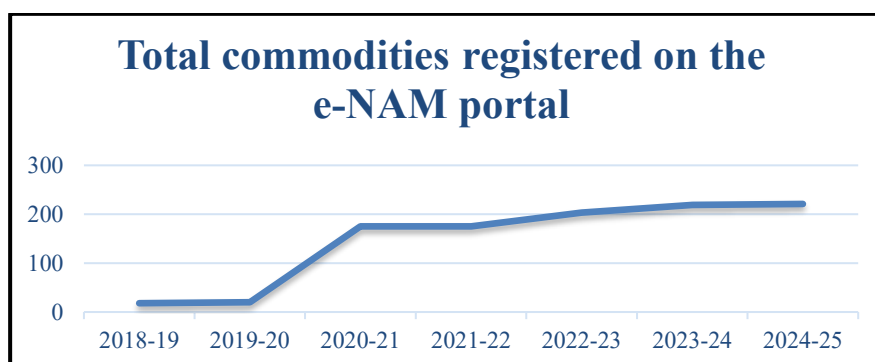
The table No. 06 reveals changes in total value of trade on the e-NAM platform from 2018-19 to 2024-25. It shows a sustained rise in India's digital agricultural trade. Starting with ₹64,923 crores in 2018-19, it rises to ₹89,896 crores in 2019-20 and then to ₹1,14,003 crores in 2020-21. It shows that the platform started to take hold. From 2021-22 trade value leaps to ₹1,67,413 crores.

This increasing trend in total value of trade continues in the following years, at ₹2,42,969 crores in 2022-23, then ₹3,19,450 crores in 2023-24, thereby reaches to ₹4,01,220.57 crores in 2024-25. Thus total value of trade more than a sixfold increase from the 2018-19. This increase in trade value shows growing confidence among the stakeholders, enhanced efficiency of markets, and greater integration of agricultural markets through e-NAM.

Table No. 07 : Total commodities registered on the e-NAM portal

Year	Total commodities registered
2018-19	18
2019-20	20
2020-21	175
2021-22	175
2022-23	203
2023-24	219
2024-25	221

Source: Compiled by the authors using secondary data obtained from the *Annual Reports* of the Department of Agriculture & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, Govt. of India.



This graph shows the growth of commodities registered on the e-NAM platform from 2018–19 to 2024–25, indicates progressive diversification within agricultural trade using the digital market framework in India. In its initial years, the number of registered commodities was low, rising gradually from 18 in 2018–19 to 20 in 2019–20. A noticeable expansion occurs during 2020–21, with the count of registered commodities rising to 175, thus showing an extensive broadening of the commodity base and greater inclusiveness of the platform. During 2021–22, the current count of registered commodities was maintained. In subsequent years, 203 commodities were recorded in 2022–23 and 219 commodities in 2023–24. The total number of registered commodities during 2024–25 reached to 221. Thus e-NAM grow from limited commodity coverage to a diversified trading portfolio.

Conclusion

- 1) The number of registrations of farmers, traders, commission agents, and FPOs indicates an increase with each passing year, indicating the gradual increase in awareness and acceptance.
- 2) The sudden increase in FPO also indicates improved collective participation of farmers in digital marketing.
- 3) e-NAM's coverage is not limited to the specific commodities previously known. More commodities have been registered than before, and this shows the inclusive nature of the coverage offered by the e-NAM.
- 4) Trade performance and total trade value has very high positive correlation.
- 5) Farmers' registration on the e-NAM portal is very highly positively correlated with traders' registration, commission agents' registration, FPOs' registration, trade performance, and total trade value.
- 6) Higher farmer participation ensures increased market participation of intermediaries and better trading outcomes.
- 7) Traders' registration is highly correlated with commission agents FPOs, trade performance, and total trade value.
- 8) Market stakeholders are integrated within the ecosystem of e-NAM.

References

1. S. B. Shinde, D. D. Suradkar, N. B. Netake, S. A. Thakare, and S. V. Demunde, "Awareness of Farmers about e-NAM," in International Journal of Agriculture Extension and Social Development, India.
2. R. Kumar, S. Kumar, P. C. Meena, B. Ganesh Kumar, and N. Sivaramane, (2020) "Strengthening e-NAM in India: Way Forward," in ICAR–National Academy of Agricultural Research Management Publications, Hyderabad, India.
3. S. Kumar A. D. and S. C. Pant, "Benefits of e-NAM Process to Farmers – A Study," in Publications of CCS National Institute of Agricultural Marketing, Ministry of Agriculture & Farmers' Welfare, Government of India, Jaipur, India, Oct. 2020.
4. C. S. Rao, Y. Bhatt, and S. K. Beero, "Electronic National Agricultural Market (e-NAM): A Review of Performance and Prospects," in Agricultural Economics Research Unit Publications, Institute of Economic Growth, University of Delhi (North Campus), Delhi, India.
5. Annual Reports (2018 to 2024), Department of Agriculture & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, Government of India.
6. www.enam.gov.in