

Empirical Study on the Efficacy and Impact of the Gem Portal

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Abstract:

The Government e-Marketplace (GeM) portal has revolutionized the public procurement landscape in India, enhancing transparency, efficiency, digital governance, and participation in public procurement. The purpose of this study was to assess the efficacy and impact of the GeM portal on procurement efficiency, transparency, vendor engagement, procurement quality, and user acceptance. A quantitative, descriptive, and analytical research design was employed. A structured questionnaire was given to 254 valid respondents in order to collect primary data, and official GeM reports and government publications were used to collect secondary data. To investigate correlation between the various variables of the present study Spearman's Rank Correlation was used. The results showed a strong positive correlation between system usability and GeM adoption ($\rho = 0.681$ at $p = 0.000$) and a significant positive correlation between transparency and governance mechanisms and procurement efficiency ($\rho = 0.662$ at $p = 0.000$). There was, however, a weak, and statistically non-significant, association between vendor participation and procurement outcomes ($\rho=0.097$, $p= 0.123$). By contrast, L1 pricing had a significant negative correlation with procurement quality ($\rho = -0.217$, $p = 0.000$) suggesting that the “lowest price” incentive to procure could be negatively associated with quality. There was also significant improvement in the number of seller registrations, the number of service types recorded, and the number of MSMEs, startups, women entrepreneurs, and other priority groups engaged with the platform, underscoring the platform's increased inclusiveness and popularity. The study results conclude that online public procurement through GeM has brought a lot of strength to digital public procurement through transparency, governance and better operational efficiency. However, ongoing enhancements in the evaluation, monitoring and quality-driven purchasing processes are necessary to fully realize the benefits of procurement and to continue to create value for the public.

Keywords: Government e-Marketplace (GeM), Public Procurement, Digital Governance, Procurement Efficiency, Transparency, Vendor Participation, L1 Pricing Mechanism.

1. Introduction

Overview of Public Procurement in India

Public procurement in India is the procurement by public authorities of goods, works and services with public money. It contributes to about 20-30% of the GDP of the country. The framework is based on the General Financial Rules (GFRs) 2017 published by the Department of Expenditure, Ministry of Finance and relevant manuals for procurement of goods, works and services. The rules will highlight key principles like transparency, economy, efficiency, fairness and competition, which are enshrined in the Constitution, such as the principle of equality of rights and non-arbitrariness in government action under Article 14 (**Partners, 2026**).

India does not have a specific procurement law like many other nations, but has guidelines and instructions by the executive. Public sector undertakings (PSUs), federal and state government ministries, departments, and other independent organizations are the procuring bodies. The system has developed to overcome the issues such as delays, risk of corruption and inefficiency in the manual system with an increasing focus on digitalization of operations to modernize the system (**Chawla, 2021**).

The concept and evolution of Government e-Marketplace (GeM) Portal

The Govardhan e-Marketplace, often known as the Government e-Marketplace (GeM), is a nationwide online marketplace where the general public can purchase common goods and services. It replaced the previous position of the Directorate General of Supplies and Disposals (DGS&D) by introducing a new digital, contactless, paperless, and cashless marketplace. It was introduced by the Ministry of Commerce and Industry on August 9, 2016. It is intended to create an open, transparent G2B (Government-to-Business) portal for PSUs, state and federal government agencies, etc.

GeM grew from its pilot implementation with the help of National e-Governance Division to become a fast-growing organization. It's now an enormous platform overseen by a Section 8 (not for profit) company under the Department of Commerce. It now enables e-bidding, reverse auctions, demand aggregation and has provisions for MSMEs, startups and women run businesses. GeM has evolved from a mere portal to an advanced ecosystem, integrating AI, analytics and other relevant features to foster greater equity and efficiencies in procurement, fostering a brand-agnostic, competitive scenario (**Impact, 2019**).

The role of GeM in advocating transparency, efficiency, and digital governance

GeM is a key player in promoting transparency in e-Governance, as it maintains auditable digital trails for each transaction, minimises man to man interaction and facilitates real-time tracking and competitive bidding process. This reduces the chances of malpractices and makes it easier to be accountable, which means that buyers would get more value for their money and sellers in all parts of India, especially MSMEs, would have an equal opportunity (**Impact, 2019**).

The portal is efficient, with the procurement process streamlined, order fulfilment time reduced, demand aggregation, and considerable cost savings (10-25%). It saves paper, cuts delays and facilitates bulk buying, saving the government millions of dollars in expenditure and resources—including millions of paper sheets.

GeM is an example of digital governance and is spearheading the e-governance agenda in India. It ensures the inclusion of small businesses, supports interfacing with other government portals, encourages sustainable and green procurement, and encourages the use of technology for data-driven decision making. Overall, it enhances public trust, helps economic development and ensures procurement is in line with the objectives of good governance and digital empowerment (**Singh & Lal, 2022**).

Research Problem

The Government e-Marketplace (GeM) portal has been launched to help in making public procurement more transparent, efficient and inclusive; but it has faced some problems. The following research problems are tackled in the present study:

- While there has been a lot of progress in the implementation of GeM, there are still aspects of vendor compliance, procurement quality and governance which are of concern.
- Mechanisms and effectiveness of systems usability and transparency need to be empirically evaluated.
- The real impact of increasing the participation of vendors in GeM portal cannot be assured as an increase in their participation does not necessarily reflect good procurement outcomes.
- Heavy usage of the L1 (Lowest Price) bidding method can result in some time poorer quality goods/services procured in the platform.

Aim of the Study

To evaluate the impact and efficacy of the Government e-Marketplace (GeM) portal on enhancing vendor participation, efficiency, transparency, and quality in India's public procurement system.

Objectives

- To analyze the correlation between system usability and acceptance of GeM portal among procurement users.

- To measure the effectiveness of transparency and governance in making procurement process efficient on GeM portal.
- To study the correlation between the participation of the vendors and the procurement outcomes on the GeM.
- To study the impact of L1 pricing system on quality of Goods and Services sourced from GeM portal.
- To review the trend of Seller registration, Vendor evaluation, type of service being offered and vendor participation in inclusive procurements in GeM.

2. Literature review

(Pradhan et al., 2026) The Government e-Marketplace (GeM) is a game-changer in the realm of public procurement, offering a platform for increased transparency and cost-effectiveness in government procurement. The study on the impact of GeM has been analyzed and analyzed in PSUs in light of DeLone and McLean Information Systems Success Model which has been taken as the basis for this study and measurement scale of the model has been derived and broken down into various dimensions including, system functionality, data reliability, service responsiveness, user satisfaction and overall benefits. Structured surveys and interviews provide valuable insights into significant enhancements in procurement timelines and cost savings, while revealing common challenges such as platform delays, data inaccuracies, and insufficient customer support. Improving IT infrastructure, refining vendor authentication, and adhering to existing systems are key to GeM's future success in digital governance. The relevance for academia and science: The research, using DeLone and McLean IS Success Framework, provides theoretical and policy insights to digital governance for the system quality of GeM and its influence on user experiences [15, 18].

(L et al., 2025) MSMEs (Micro, Small and Medium Enterprises) constitute the very backbone of the Indian Economy. The economy as a whole will benefit from an improvement in MSMEs' performance. The Indian government's online marketplace for government procurement is called the Government e Marketplace (GeM). On August 9, 2016, the Indian government's Ministry of Commerce and Industry launched the GeM to give government purchasers a transparent and open procurement platform. To enable government users to make purchases through GeM, the Ministry of Finance has authorized and published a new Rule Number 149 in the General Financial Rules, 2017. The purpose of this article is to give an overview of Government of India's initiatives for MSMEs empowerment through GeM, assess the utilisation of GeM by MSMEs, and explore the application of GeM's Public Procurement Policy for MSEs (Micro, Small & Medium Enterprises). In the last seven years, GeM has initiated a great revolution in the working of the government offices in terms of public procurement. It has been continuously expanding from the date of registration of Buyer & Seller in GeM till the sale made through GeM. The government has made multiple attempts to give MSMEs, startups, and female entrepreneurs the chance to enter the GeM market and compete with other suppliers. Many people have benefited from these new initiatives, particularly through GeM, and the number of startups and MSMEs in GeM will surely increase in the future years. The primary data was gathered using a structured questionnaire technique and the convenience sampling method. The data was analyzed using Kendall's tau-b, Chi-Square tests, frequency analysis, and percentage analysis. According to the survey, the majority of respondents profited from being exempt from the tender fee and EMD, and 72.5% of respondents believe that the GeM platform has helped them increase their sales. Regarding pricing and margin pressure in GeM, 72.5% of the respondents view the intense competition as a challenge. The exemption benefits of tender fees, earnest money deposits, bidder turnover, and experience are strongly correlated with the kind of firm. The report also suggests that the government promote the GeM site in regional languages and require MSMEs to register on the GeM portal in addition to registering with Udyam.

(Saha et al., 2025) The question of recent transformation of public procurement due to technology is explored in this paper, with a particular focus on the Indian context. This study conducts a thorough investigation of the nature of this transition using a variety of methods, including the examination of social media posts regarding the new electronic public procurement platform (Government e-Marketplace, GeM) as well as auction data on GeM itself. In addition to the still-developing field of electronic public procurement, this study explores the new

topic of technology-driven inclusive development, which aims to make it easier for small and marginalized sellers to participate in public procurement. We see that the process of transformation is non-linear and iterative; many additional players are in the process of transitioning, but only a small number of government buyers have taken control of the platform. This is evident in the differing stakeholder attitudes to the platform. The policy recommendation that can be made immediately is to propose a diversification of the support system of the electronic platform for the purposes of addressing different queries and complaints. Additionally, the government would be better able to reach out to similar entities and achieve better results in inclusive development if small and marginal sellers were collectively represented before it.

(Ali Alryalat et al., 2023) The impact of various elements on people's readiness to adopt e-government services in various circumstances has been assessed by a number of research. However, no study has examined the perceived hurdles to B2G e-commerce and attempted to identify the causative and effect group variables. This study is the first of its kind to thoroughly examine the pertinent literature on e-commerce adoption and evaluate the chosen critical elements that are equally important for B2G e-commerce adoption. The authors gather information from eight experts with experience in B2G procurement in the public sector and government organizations using a novel multi-criteria decision-making technique called DEMATEL to comprehend the nature of the hurdles. Five variables (i.e., lack of IT infrastructure [B1], lack of expertise and technical skills [B2], high cost of technology [B3], perceived information security risk [B5], and lack of awareness of government issues and legal policies [B6]) were found to be associated with the "cause group," while the remaining four variables (i.e., organizational resistance to change [B4], lack of top management support [B7], low perceived operational benefits [B8], and unwillingness to adopt B2G e-commerce services [B9]) were classified under the "effect group." The findings of the present study could be useful in theoretical and practical aspects to improve the understanding of the adoption of B2G e-commerce.

3. Methodology

Research Design

The present study is based on the type of research design which is quantitative, descriptive and analytical in nature to analyse the success and effectiveness of Government e-Marketplace (GeM) portal in the public procurement process in India. This study concentrated on examining relationships between system usability, transparency and governance mechanisms, vendor involvement, L1 pricing practices and procurement performance. The research design allowed the researchers to evaluate the effectiveness of the GeM portal objectively, by analyzing the perceptions of the respondents and indicators related to procurement process through statistics.

The sample size and data collection

A mix of primary and secondary data sources have been used in the study. A systematic questionnaire was used to collect primary data from government buyers, procurement authorities, consignees, and GeM users, among other procurement process players. Out of 254 responses (81%), 254 were valid. Official GeM reports, government publications, policy documents, research articles and procurement statistics were used as secondary sources to gather some of the data. These sources furnished the details about enrollments by sellers, assessments by vendors, type of services offered, procurement values, participation of various groups of vendors in the GeM portal.

Simple random sampling technique

To find respondents with pertinent knowledge and expertise on procurement activities conducted via the GeM portal, a purposive sample technique was employed. The gathered data was coded, tallied, and subjected to statistical analysis. To determine the correlations between the study variables and to evaluate the developed hypotheses, Spearman's Rank Correlation Coefficient was employed. There was an evaluation of statistical significance for the 5% and 1% level of significance. Furthermore, descriptive analysis was conducted to analyse the trends of registrations, vendor assessment, procurement and user participation on GeM platform.

Study Variables and Outcome Measures

The four independent variables that were studied were system usability, transparency and governance mechanisms, vendor participation and the L1 pricing mechanism. The dependent variables were: portal adoption, procurement efficiency, procurement outcomes, and procurement quality. Further, the effectiveness of the GeM portal was evaluated using parameters like seller registration growth, increased scope of categories, assessment results of the vendors, procurement volumes and involvement of Micro and Small Enterprises (MSEs), Startups, Women entrepreneurs, SCs, STs, and SHGs. The results were analysed and interpreted to measure the general impact of the GeM portal on enhancing transparency, efficiency, inclusiveness and accountability in the public procurement process.

4. Result**General Information Maintenance**

- Total vendors who refused to fulfill order after being declared L-1 (Normal GeM Bids): Data is not maintained by GeM
- Total vendors who refused to fulfill order after being declared L-1 (Reverse Auction Bids): Data is not maintained by GeM
- Total number of GeM incidents raised in each type of GeM Incident Categories (month- wise): Data is not maintained by GeM

Raised Incidents by Specific Category

The following figures represent the reported counts for specific contract and compliance violations:

The data is to cover a breakdown of various incident categories, but does not reflect the final closure status. for this need to deep dive for further research.

Table 1: Distribution of Incident Categories Reported on the GeM Portal

Incident Category	Count
Violation of integrity pact or exercising corrupt influence on stakeholders	21,931
Delay or refusal in payment of wages/salaries to resources deployed at consignee location	4,323
Delivery of fake, counterfeit, or refurbished products	4,205
Delay in submission of statutory compliances (PF, ESI, other statutory payments)	2,169
Failure to produce requisite documents, information, certificates, or test reports during inspection	1,150
Supply of inferior or substandard goods (contracts up to Rs. 10 lakh)	1,000
Non-honoring of warranty obligations (contracts up to Rs. 10 lakh)	665
Submission of incorrect shipment details leading to auto CRAC/SDAC generation	534
Non-honoring of warranty obligations (contracts more than Rs. 10 lakh)	268

Non-compliance or unsatisfactory performance in Service Contracts (value more than Rs. 10 lakh)	232
Non-compliance or unsatisfactory performance in Service Contracts (value up to Rs. 10 lakh)	216
Indulgence in anti-competitive behaviour / cartel formation / One Bid per Bidder (raised only by GeM Admin)	181
Supply of inferior or substandard goods (contracts more than Rs. 10 lakh)	176

Incident categories analysed on the GeM portal reveal that violation of the integrity pact / corrupt influence on stakeholders was the most common incident, with 21,931 incidents reported, followed by delays in wage payments (4,323 incidents) and delivery of fake / counterfeit / refurbished products (4,205 incidents). Other concerns of note were delays in fulfilling statutory obligations, provision of poor quality products and failure to meet warranty requirements. The results indicate that governance, ethical compliance, and product quality are still major issues in the effectiveness of procurement on the GeM portal and in the accountability of vendors.

Financial Year-Wise Seller Registrations (Cumulative)

Status as of November 24, 2025

Table 2: Year-wise Growth of Registered Sellers and Profile Completion on GeM

Fiscal Year	Total Registered Sellers	Sellers with Profile Completed
FY-16-17	4,211	3,327
FY-17-18	84,138	36,263
FY-18-19	2,01,418	1,14,844
FY-19-20	3,36,142	2,08,559
FY-20-21	13,69,247	10,48,982
FY-21-22	39,82,362	12,24,436
FY-22-23	59,49,207	13,66,372
FY-23-24	85,13,728	21,07,903
FY-24-25	95,85,341	23,02,075
FY-25-26	1,02,34,514	24,02,976

As per the data, the number of seller registrations on GeM portal has increased significantly over the years from 4,211 sellers in FY 2016-17 to 1,02,34,514 sellers in FY 2025-26. Likewise, the numbers of sellers with completed profile increased from 3,327 to 24,02,976 in the same timeframe. The rise in the trend is attributed to the rising adoption on the platform and growing participation in the market by vendors, albeit at a relatively lower rate in comparison to platform registrations.

Vendor Assessment Status (Year-Wise)**Table 3: Vendor Assessment Outcomes on the GeM Portal (2018–2025)**

Year	Total Assessments Conducted	Successfully Completed (Passed Applications)	Successfully Completed (Actual Vendors)	Failed / Unsuccessful (Applications)	Failed / Unsuccessful (Actual Vendors)
2018	3,361	1,150	1,140	2,211	2,206
2019	3,180	1,587	1,582	1,593	1,593
2020	2,408	2,317	2,243	91	89
2021	4,776	4,447	4,238	329	323
2022	2,900	2,398	2,286	502	484
2023	4,246	3,369	3,184	877	848
2024	11,686	6,564	5,754	5,122	4,887
2025 (up to Nov 24)	47,636	5,407	4,465	42,229	32,790
Grand Total	80,193	27,239	24,892	52,954	43,320

From the assessment data it can be seen that 80,193 assessments of vendors have been carried out over the period from 2018 to November 2025. Of these, 24,892 applications were successful, and 52,954 were unsuccessful. Failure rates have remained high, despite a significant rise in the number of assessments, especially in 2024 and 2025. The results above indicate that more vendors are getting involved in the vendor assessment process, but there remain issues in achieving compliance and qualification with GeM's standards.

Service Categories (Year-Wise)**Table 4: Year-wise Expansion of Service Categories Available on GeM**

Fiscal Year	Number of Service Categories
2018-19	16
2019-20	50
2020-21	102
2021-22	180
2022-23	265

2023-24	316
2024-25	333
2025-26	349

The data reveal that the number of services categories offered on GeM portal has grown from 16 in FY 2018-19 to 349 in FY 2025-26. This continued expansion is a result of the platform's commitment to expanding its procurement products and catering to a broader government service needs to further increase procurement flexibility and market accessibility for service providers.

Registered Buyers (Primary & Secondary)**Table 5: Fiscal Year-wise Distribution of Primary and Secondary Users on GeM**

Fiscal Year	Primary Users	Secondary Users
FY-16-17	2,288	2,464
FY-17-18	18,702	42,781
FY-18-19	13,726	29,931
FY-19-20	9,958	26,874
FY-20-21	6,847	24,734
FY-21-22	7,569	24,522
FY-22-23	8,028	24,853
FY-23-24	84,027	39,043
FY-24-25	13,376	19,609
FY-25-26	3,227	6,495

The data shows that there are differences in the degree of user engagement on the GeM portal between the fiscal years. The number of secondary users has been greater than the number of primary users between FY 2016-17 and FY 2022-23 indicating overall participation in supporting procurement functions. The primary number of users has increased sharply in FY 2023–24 to 84,027 users. The numbers of both types of users, however, saw a decrease the following years, which is indicative of variations in platform use and user activity.

Summary of Key Procurement Segments (Annexure - A)

Below is the total volume and value of orders issued to specialized entrepreneur segments.

Micro & Small Enterprises (MSEs) vs. Startups vs. Specialized Entities**Table 6: Procurement Performance of MSEs, Startups, and FPOs through GeM**

Fiscal Year	Overall MSE Order Volume	Overall MSE Order Value (INR)	Startup Order Volume	Startup Order Value (INR)	FPO Order Volume	FPO Order Value (INR)
FY16-17	2,969	70,66,41,490.41	84	2,13,38,977.36	0	0.00
FY17-18	2,23,612	22,82,67,16,400.84	6,040	1,13,02,22,237.79	0	0.00
FY18-19	6,05,719	92,01,33,69,491.20	14,423	4,86,14,09,756.44	0	0.00
FY19-20	9,03,988	1,38,17,20,10,581.24	25,736	8,49,49,42,428.02	0	0.00
FY20-21	10,97,781	2,26,03,01,02,671.93	37,346	19,14,84,55,455.40	0	0.00
FY21-22	16,46,689	5,90,33,94,98,185.50	50,656	37,47,52,56,575.57	0	0.00
FY22-23	29,26,759	9,73,06,43,58,456.24	66,620	61,95,68,09,020.35	78	7,48,114.00
FY23-24	39,25,523	19,04,54,69,52,701.48	97,111	1,10,41,32,46,306.81	148	14,61,543.10
FY24-25	48,34,403	19,59,90,34,03,029.73	1,19,616	1,40,98,45,15,537.93	57	49,48,943.90
FY25-26	31,38,118	14,97,71,95,47,415.20	82,757	1,13,47,89,87,909.35	114	5,24,73,133.40

The data reflect significant expansion in procurement of Micro and Small Enterprises, Startups and Farmer Producer Organizations (FPOs) on the GeM portal. This is reflected in the growth of order value and volume in MSE, which rose considerably over the years, showing more of a focus on small businesses in public procurement. The commencement of startup participation also steadily increased and the involvement of FPOs began from FY 2022-23. These trends illustrate the effectiveness in promoting inclusive procurement and the supporting of diverse supplier categories at GeM.

Sub-Categories of MSE Orders (Women, SC, ST, and SHG)**Table 7: Procurement Participation of Female, SC, ST, and SHG Enterprises on GeM**

Fiscal Year	Female MSE Volume	Female MSE Value (INR)	SC MSE Volume	SC MSE Value (INR)	ST MSE Volume	ST MSE Value (INR)	SHG Volume	SHG Value (INR)
FY16-17	318	8,07,36,992.23	86	58,71,589.05	5	5,58,108.00	0	0.00

FY1 7-18	35,837	3,09,22,31,536.1 5	4,012	18,19,05,563.6 2	495	12,75,82,311.8 0	0	0.00
FY1 8-19	83,358	12,31,53,55,009. 37	13,742	86,67,45,634.2 4	1,811	15,11,21,690.8 9	0	0.00
FY1 9-20	1,33,83 9	17,22,00,44,408. 41	24,059	1,80,57,48,731 .76	2,322	45,69,20,095.7 4	0	0.00
FY2 0-21	1,53,77 3	24,21,29,88,551. 22	24,959	3,64,69,08,134 .30	2,947	58,87,99,046.6 2	11	61,701.4 0
FY2 1-22	2,39,58 6	52,26,45,18,742. 13	37,925	8,75,45,65,701 .72	8,967	3,23,50,79,828 .23	7	74,236.0 0
FY2 2-23	5,63,45 4	1,07,62,51,46,33 7.61	89,466	18,17,13,13,41 4.77	21,52 3	8,71,56,75,316 .89	27	1,83,902. 00
FY2 3-24	8,98,30 2	1,66,90,34,67,83 7.59	1,35,2 34	29,60,75,82,24 0.87	35,68 1	13,27,03,92,64 6.79	17	51,287.0 0
FY2 4-25	12,21,8 89	2,20,87,65,99,66 8.15	1,68,6 37	36,63,79,98,47 0.39	47,15 5	14,82,11,52,78 6.40	0	0.00
FY2 5-26	8,32,24 4	1,70,96,97,57,20 3.71	1,13,8 60	28,06,72,94,86 1.07	28,49 2	13,24,94,67,55 4.88	0	0.00

The data show significant participation of women, Scheduled Caste (SC) and Scheduled Tribe (ST) Micro and Small Enterprises (MSEs) in procurement process through the "GeM" portal. The order volumes and procurement values increased remarkably over the years, more for the female MSEs. While the number of suppliers who participated in the Self-Help Group (SHG) program was not significant, it offers a strong indication of GeM's efforts to ensure inclusive procurement and improve opportunities for socially and economically weaker groups of supplier.

Unmaintained / Omitted Data Disclaimer:

- **Product Categories:** Excluded because GeM noted the metric is completely dynamic and shifts daily based on active requests and reviews.
- **Bids with Zero Participation:** Excluded because GeM explicitly stated this information is not maintained by their system.
- **Cumulative Order Value / Volume (Section 9 & 10):** The text formatting in the original document's source table for cumulative values was heavily jumbled/unaligned across columns, rendering parts of those specific rows unreliable for direct transcription. Use the itemized segment metrics in the Annexure tables above for accurate procurement breakdowns.

Hypothesis 1

Null Hypothesis (H01)

There is no significant relationship between system usability and adoption of the GeM portal among procurement users.

Alternative Hypothesis (HA1)

There is a significant relationship between system usability and adoption of the GeM portal among procurement users.

Table 8: Correlation between System Usability and Adoption of the GeM Portal

Correlations				
			System Usability	Adoption
Spearman's rho	System Usability	Correlation Coefficient	1.000	.681
		Sig. (2-tailed)	.	.000
		N	254	254
	Adoption	Correlation Coefficient	.681	1.000
		Sig. (2-tailed)	.000	.
		N	254	254
. Correlation is significant at the 0.01 level (2-tailed).				

System usability and GeM portal adoption are strongly positively correlated, according to Spearman's rho correlation analysis results ($r = 0.681$, $p = 0.000$, $N = 254$). The link is statistically significant because the p value is less than 0.01. As a result, the alternative hypothesis (HA1) is supported and the null hypothesis (H01) is rejected, leading to the conclusion that procurement users on the GeM site are more likely than not to have improved system usability.

Hypothesis 2

Null Hypothesis (H02)

There is no significant relationship between transparency and governance mechanisms and procurement efficiency on the GeM portal.

Alternative Hypothesis (HA2)

There is a significant relationship between transparency and governance mechanisms and procurement efficiency on the GeM portal.

Table 9: Correlation between Transparency & Governance Mechanisms and Procurement Efficiency

Correlations				
			Transparency & Governance	Procurement Efficiency
Spearman's rho	Transparency & Governance	Correlation Coefficient	1.000	.662
		Sig. (2-tailed)	.	.000
		N	254	254
	Procurement Efficiency	Correlation Coefficient	.662	1.000
		Sig. (2-tailed)	.000	.
		N	254	254
. Correlation is significant at the 0.01 level (2-tailed).				

Transparency and governance systems and procurement efficiency in the GeM portal are strongly positively correlated, according to Spearman's rho correlation study ($r = 0.662$, $p = 0.000$, and $N = 254$). The link is statistically significant because the p value is smaller than 0.01. Therefore, it may be inferred that greater openness and governance systems result in increased procurement efficiency on the GeM site, since the Alternate Hypothesis (HA2) is supported and the Null Hypothesis (H02) is rejected.

Hypothesis 3

Null Hypothesis (H03)

There is no significant relationship between vendor participation and procurement outcomes on the GeM portal.

Alternative Hypothesis (HA3)

There is a significant relationship between vendor participation and procurement outcomes on the GeM portal.

Table 10: Correlation between Vendor Participation and Procurement Outcomes on the GeM Portal

Correlations				
			Procurement Outcome	Vendor Participation
Spearman's rho	Procurement Outcome	Correlation Coefficient	1.000	.097
		Sig. (2-tailed)	.	.123
		N	254	254
	Vendor Participation	Correlation Coefficient	.097	1.000
		Sig. (2-tailed)	.123	.
		N	254	254

Vendor participation and procurement outcomes on the GeM portal appear to have a very weak positive link, according to Spearman's rho correlation analysis ($r = 0.097$, $p = 0.123$, $N = 254$). The association is not statistically significant because the p -value is greater than 0.05. As a result, the alternative hypothesis (HA3) is rejected and the null hypothesis (H03) is accepted, indicating that vendor involvement in the procurement process has no discernible effect on the study's procurement outcomes.

Hypothesis 4

Null Hypothesis (H04)

There is no significant relationship between the L1 pricing mechanism and the quality of goods and services procured through the GeM portal.

Alternative Hypothesis (HA4)

There is a significant relationship between the L1 pricing mechanism and the quality of goods and services procured through the GeM portal.

Table 11: Correlation between L1 Pricing Mechanism and Procurement Quality on the GeM Portal

Correlations				
			L1 Pricing	Procurement Quality
Spearman's rho	L1 Pricing	Correlation Coefficient	1.000	-.217
		Sig. (2-tailed)	.	.000

		N	254	254
	Procurement Quality	Correlation Coefficient	-.217	1.000
		Sig. (2-tailed)	.000	.
		N	254	254
. Correlation is significant at the 0.01 level (2-tailed).				

The L1 pricing mechanism and procurement quality on the GeM portal have a weak but significant negative link, according to Spearman's rho correlation study ($r = -0.217$, $p = 0.000$, $N = 254$). A significant relationship is indicated by a p-value of less than 0.01. As a result, the alternative hypothesis (HA4), which states that a decline in the quality of products and services procured is linked to an increase in reliance on L1 pricing, is supported and the null hypothesis (H04) is rejected.

5. Discussion

The present study examined the effectiveness and effect of Government e-Marketplace (GeM) portal in enhancing transparency, the efficiency of procurement, vendor participation and procurement quality in the public procurement system of India. The results showed that system usability was significantly and positively correlated with GeM adoption (Spearman's $\rho = 0.681$, $p = 0.000$, $N = 254$), showing that an easy-to-use and reliable digital platform significantly improves procurement officials' acceptance of the platform. Similarly, transparency and governance mechanisms showed a strong positive correlation with procurement efficiency ($\rho = 0.662$, $p = 0.000$), supporting the notion that transparent digital procurement processes play a key role in the overall effectiveness and accountability of these processes. However, vendor participation did not relate strongly to the procurement outcomes ($\rho = 0.097$, $p = 0.123$), indicating that high numbers of vendors are not necessarily correlated with good procurement performance if they are not accompanied by quality assurance and compliance processes. In addition, procurement quality and the L1 pricing mechanism were found to be weakly negatively correlated ($\rho = -0.217$, $p = 0.000$), which suggests that relying too heavily on lowest price bids could negatively impact the quality of goods and services procured. These trends were further confirmed by secondary data which showed that the number of seller registrations grew from 4,211 in FY 2016–17 to 10,234,514 in FY 2025–26; the number of service categories increased from 16 to 349; and the number of MSMEs, startups, women entrepreneurs, and other groups that were included as sellers in the procurement process had increased. To sum up, the study has revealed that GeM has significantly improved digital governance and transparency in procurement and has made considerable strides in enhancing the transparency of the system, but there is still immense scope for further improvement in the quality assessment of the vendors and the procurement policy to maximize the procurement effectiveness.

6. Conclusion

the Government e-Marketplace (GeM) portal has proven to be a highly successful e-procurement platform that has brought a lot of transparency, accountability and efficiency in public procurement. The statistical evidence validated the importance of system usability and good governance practices in improving the adoption of the system by its users and improving the efficiency of procurement, while vendor participation alone does not necessarily mean better procurement results. The negative relationship between the L1 pricing mechanism and procurement quality also suggests that there is a need to weigh cost competitiveness with quality-based evaluation criteria when making procurement decision. Further, the significant rise in the number of Sellers, number of services provided and participation of MSMEs/Startups, women sellers, Scheduled Castes, Scheduled Tribes and Farmer Producer Organizations in the procurement process is testament to the success of GeM in promoting inclusive and technology-driven procurement. Although the organization has made strides, compliance issues, unsuccessful vendor audits, and quality-related incidents continue to necessitate ongoing audits, more robust vendor evaluation mechanisms, and policy adjustments. Overall, the GeM portal has played a significant role in modernizing the public procurement landscape in India, but there is still room for

improvement in optimizing the procurement process, ensuring compliance by vendors, and enhancing governance frameworks for sustainable procurement to drive efficiency and long-term public value.

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