



# AN EVALUATIVE STUDY OF E- PROCUREMENT SYSTEM THROUGH GOVERNMENT E-MARKETPLACE (GEM) AND IT'S SIGNIFICANCE IN INDIA

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**Abstract:** - Public procurement is one of the very necessary aspects that a nation can do, which refers to the practice of procuring goods and services on behalf of a government organizations. The procedure that governments go through to obtain the goods or services that are required in their various countries is referred to as procurement procedure. The expenditures made by various countries government all over the world amount for approx. 15% of the total GDP. There is a wide variety of different estimates on the percentage of India's GDP that is provided through public procurement, however most of them fall somewhere between 20% and 30%. When it comes to the budgets that are at their disposal, many departments within the Indian government allocate nearly half of it to the expenditures that are associated with public procurement. As a consequence of this, the requirement for honesty in the procedure for acquiring government contracts becomes not just a moral demand but an economic and a social one. As a means of resolving this issue, the Indian Government launched the portal Government e-Marketplace, often known as GeM, in the year 2016. In year of 2017 the General Financial Rules (GFRs 2017) of the government of India was updated, and one of the changes was the addition of a new enabling rule. This rule was intended to provide support for government policy, along with this; it also shows the intention of the government to bring reforms in this sector. Since then, this Business to Government (B2G) platform has eliminated many steps of human, sequential verification and decision making, which has resulted in significant reductions in the amount of time limit that is necessary for government procurement. Examining orders & documents revealed how GeM was implemented. We have statistics on 2017 and 2019 purchases. The gateway simplifies procurement, eliminates paper, provides a clear, time-bound method, and requires little human intervention. GeM helpdesk and GeMmy are used. After conducting this research, it was found that on GeM, serious quality assurance, rate contracts, extended warranties, annual and comprehensive maintenance contracts may require reform.

**Index Terms:** Government E-Marketplace, Public procurement, E-Procurement, E-Governance.

## I. INTRODUCTION

Public procurement is a method or system by which public entities buy commodities, services, or sometimes both. It also accounts for and evaluates the overall demand for products and services. Scholars define It is in the form of assessing, buying and receiving goods and services. An activity is public when it is carried out by or for public organizations. Private firms' supply function manages timely delivery of products and services through a cost-effective and viable supply chain process. The government and state-owned companies buy a wide variety of goods and services from the private sector, from computer equipment to building and road construction materials. Public procurement is one of the government's most important economic activities, accounting for 15–25% of global GDP (OECD, 2015). (OECD, 2017) considers it one of the most corrupt public operations. 40–50% of the world's economy are represented by spending on private services and goods. Singapore spends 18% of its economy, while other emerging economies spend 80%. Despite having similar meaning and principles in the field of science, public procurement is one of the most neglected and under-researched areas.

Linking governmental and private procurement is their fundamental difference. Public procurement achieves social, ecological, and additional benefits in their procurement to fulfill government responsibilities to society. Though public procurement is an important government responsibility, public bodies, policymakers, and procurement experts have paid a lot of effort in developing and reforming it. Despite this, academics and researchers study it less. None of the members of the "National Association of Schools of Public Affairs and Administration" offer degree programs in public procurement, but more than 103 universities and colleges offer certificate programs and courses in public procurement in their bachelor's, master's, and doctoral programs in business administration provide management Science. (Ambe, I.M. and J.A. Badenhorst-Weiss, 2012) The history of public procurement is recorded on a Syrian red clay table. It illustrates 2400-2800 B.C. purchase. 50 jars of fragrant oil weighing 600 grains were purchased (Coe 1989, p. 87). (Anonymous, 2000 June 24) Other historical evidences from 800 B.C. relating to purchase include China-Greek silk commerce. Evidence from the US shows that municipal procurement preceded state or central government purchase. State-run printing helped with colonization and disbursements. (Evenett, S.J. and B.M. Hoekman, 2015) In those days, governments lacked procurement professionals and instead paid commissions to commissioners for items and services. Oklahoma was the first state to form a board committee for purchases in 1810.'

## II. E-Procurement

In its broadest sense, e-GP refers to the use of electronic technology to conduct any or all aspects of public procurement. The World Bank (2003b) defines e-GP as "the use of information technology (particularly the Internet) by governments in the conduct of their procurement agreements with providers". E-GP is also known as e-tendering and e-procurement. E-tendering is utilized for high-value, low-volume works, goods, and services. E-purchasing handles low-value, high-volume transactions for common items and services. Adotévi S (2014) The European Union (EU) defines government and public sector procurement similarly. (Kjöllerström, 2018) focused on process and refer to the introduction of ICT and transaction processing throughout the procurement chain, including the following steps: "publication of tender notices, provision of tender documents, submission of tenders, evaluation, award, order awarding, invoicing and payment" (European Commission 2010a). (European guidelines, 2003) End-to-end e-procurement refers to fully electronic, integrated procurement processes. Straight-forward e-procurement implementation is difficult (Vaidya et al. 2016).

## III. Public e-procurement status in India

India's Public Procurement expenditure is currently at 340 billion British pounds (roughly 15 to 20 per cent of the country's annual GDP), and it is plagued by a complicated policy scenario, manual and inconsistent processes, and long lead times in central and state procurement organizations. As a result, there are a number of inefficiencies that arise as a result of India's public procurement spends. When these challenges are resolved, great value will be made available, and it will be simpler to distribute resources across a wide range of development schemes and initiatives. Beth E (2017) E-government procurement demands more than technological specs. Political and institutional leadership are also important for e-GP. Certain policy and regulatory considerations are needed to deploy e-GP successfully. These decisions include functionality, legal

and technical issues. (Walker H, Brammer S 2019) Government decision makers often make technical decisions without considering the policy implications. Without a central lead procurement agency, an e-GP implementation would be of minimal benefit. The e-GP should have an independent procurement policy and oversight body and a separate central procurement office to lead and maintain the system and provide mechanisms such as agreement across government structures. (Knight L, Harland C, Telgen J, Thai KV, Callender G, McKen K 2012) The creation of process reengineering of e-business GPs may require interdepartmental working groups or committees. Procurement policies and regulations should be redefined to update management practices and transactions in the electronic environment and eliminate operational problems that did not exist under the manual process, such as the need for electronic and hard copy documentation from government agencies. Discrepancies between and premature breakdown of government facilities. (GREIFFENHAGEN, C. and SHERMAN, W., 2018) The e-GP law should not include system details. The lead agency should create policies and rules governing the operational details of the e-GP system, which can be implemented to address current concerns. (Brandon-Jones A and Silvestro R 2015) An e-GP scheme should be visualized as a single system spanning all government institutions and levels of government. It will improve the use of technology and reduce duplication of security management, catalog management, supplier registration and inter-operable difficulties. (Teo T S H, Lin S and Lai K 2014) The use of the web for procuring goods and services has the potential to simplify administrative procedures. (Panayiotou N A, Gayialis S P and Tatsiopoulou I P 2013) The buying processes are streamlined as a result, allowing for superior service to be acquired from the numerous vendors. The utility of this method has been proved by a number of e-procurement success stories in India, which have been recorded in both the government and private sectors. These success stories have occurred in both the commercial and public sectors. The e-Choupal platform that was established by ITC Ltd. not only made it simpler for soybean farmers to purchase commodities, but it also helped these farmers to enhance their trade decisions by increasing the amount of openness in the procurement process. (McKnight D H and Chervany N L, 2013) The procurement portal that the Andhra Pradesh government uses to facilitate activities such as e-procurement, e-tendering, e-selling, and e-auctions have also contributed to an increase in the ease with which procurement procedures can be completed. This is one of the many ways in which the ease with which these procedures can be completed has increased. (McQuiston, D.H., 2015) In a way somewhat dissimilar to this, the Karnataka State Police Housing Corporation accomplishes the successful acquisition of services through the utilization of electronic tendering in conjunction with an online bidding method.

An objective of the Mission Mode Project (MMP) of the Government of India for the year 2016 is the deployment of the GePNIC solution that was developed by National Informatics Centre (NIC), which are the implementing authorities for the e-procurement project. NIC is the agency responsible for the project's overall implementation. (Kraljic, P., 2014) MMPs are independent initiatives that concentrate on a single area of electronic governance, such as commercial taxes, property records, or banking, for example. Some examples of MMPs include these: Managed metadata projects (MMPs) are another name for MMPs that you could hear. (Cannon, J.P. and Perreault Jr., W.D., 2015) This website aggregates all of the bids that have been issued by the different state governments and union territories around the country and gives information on the contracts that have already been granted. The objective of this consolidation is to bring about procurement reforms across the government by increasing the efficiency and integrity of the process of procurement of goods and services for the government. (Parker, D.B., Zsidisin, G.A., and Ragatz, G.L., 2018) Specifically, this consolidation aims to bring about procurement reform across the Department of Defense. Electronic request for quotations (e-RFQ), electronic tendering, electronic auctions, and electronic invoicing are some of the web-based standardized processes that the main CPSEs employ. (Bunn, M.D., 2014) These several sorts of electronic procurement processes are the foundation of an e-government system's ability to function in an effective manner. It is essential to emphasize the role that businesses operating in the private sector play in contributing significantly to the general acceptability of electronic government and digital governance.

### 3.1 Public e- Procurement: Impact Dimensions

GeM has enabled the formation of an electronic procurement platform known as B2G (Business to Government), which stands for "Business to Government." In the past, several studies on the impact of electronic procurement, measurement of Benefits of electronic procurement, value of electronic procurement and electronic procurement models adopted in western countries. These studies have been published in academic journals. (Mabert, V.A. and

Skeels, J.A., 2012. ) The following is a list of important performance measures that have been developed from the major objective on the basis of which GeM has been introduced as an electronic procurement platform. (Losch,A. and Lambert, J.S., 2017) This primary goal is to reduce the time and effort involved in the procurement process.

### 3.2 Government e-marketplace (GeM)

The Government e-Marketplace, commonly referred to as GeM, is a major event that was launched by the Government of India with the aim of implementing e-governance across the country. GeM is an open, efficient, and transparent digital end-to-end marketplace reform that gives a solution to the problem. The commerce department is in charge of the management of the platform, which went live on August 9, 2016, and is managed by GeM Special Purpose Vehicle, which is a Section 8 corporation that is wholly owned by the government and falls under its jurisdiction. (Short, J.A., Williams, E., and Christie, B.,2014) Since its start, GeM has been able to achieve a significant level of scale in its business operations, and has also made significant progress in improving the efficiency of the activities was done on its platform. (Daly, S.P. and Nath, P., 2014) It is projected that its growth would accelerate by a factor of ten over the course of the next two years, and it has already attained a cumulative GMV of close to 4 billion GBP. (Giampetro, C. and Emiliani, M.L., 2017) It is projected that it would reach its potential GMV of ninety billion British pounds during the next five to seven years. This would be equivalent to four to five percent of India's GDP in the long term (Beall, S., Carter, C., Carter, P.L., Germer, T., Hendrick, T., Jap, S., Kaufmann, L., Maciejewski, D., Monczka, R. and Petersen, K., 2013).

A private consortium that is led by the GeM Special Purpose Vehicle and includes an e-commerce player, a systems integrator, and an IT infrastructure provider is tasked with the responsibility of maintaining and expanding the technological platform. This consortium is a part of the GeM Special Purpose Vehicle. (Williamson, O.E., 2018) The GeM Special Purpose Vehicle serves as the administrator for this consortium's day-to-day operations. It is expected that the platform has resulted in total cost savings for the government of up to 25 percent, while simultaneously boosting both openness and efficiency in the process of public procurement. When the system is running at its maximum potential, the savings that it creates will have a significant impact on the elimination of the budget imbalance that the nation is now experiencing. (Jap, S.D., 2017)



Figure 1: "Government e-Marketplace (GeM) - a path breaking evolution in India's public procurement."

Source: Sureshkumar, AddlceGeM (Workshop on national nutrition mission 20 th March, 2018)



### 3.2.1 Reasons to introduce Gem

1. GeM's 1.27 lakh products and 26,000 sellers in COVID-19 categories helped fight the pandemic. Since 1 March 2020, several government organizations have placed 3 lakh COVID-19 orders worth Rs 4,564.99 crore. (McIvor, R., 2019)
1. Public Savings: GeM's average pricing are 15-56% lower. The Government to Business (G2B) platform offers items and services from a number of suppliers. Government agencies can acquire them through a transparent bidding process.
2. An independent World Bank review of GeM found that it saved 9.75% on the median price between February 2019 and January 2020, with highest savings in the top five categories ranging from 23.48 to 60.52. This is due to more bids and improved price discovery.
3. GeM has allowed efficient policy transmission by implementing the Make in India and MSE policies on its portal and promoting local products through the "Vocal for Local" project.
4. Innovative procurement system: Transparent public procurement improves government functioning and encourages private enterprises to bid. This secured a competitive bidding procedure and boosted private sector innovation.
5. The site helps MSMEs expand up and enhance sales. Public procurement is 20% of GDP.
6. Scheduled public procurement process: As a B2G platform, GeM has removed manual, sequential verification and decision-making, reducing government procurement time. Vendors gain from no intermediaries and quick payment.
7. Future Expansion: The GeM platform is regarded a game-changing tool for MSME growth. Budget 2020-21 calls for boosting the public procurement portal's turnover to Rs 3 trillion.

GeM was established with the objective of modernizing the existing public procurement system in India, which is something that may be done via the use of various technological improvements. This was the motivation for the beginning of GeM. Both the implementation of an electronic system for public procurement and the automation of the procurement process contribute to the reduction of instances of corrupt behaviour as well as the avoidance of wasteful spending of public funds. (Daft, R.L. and Lengel, R.H., 2014) In addition to the good impact, it has on the effectiveness of government procurement; this also has the effect of improving the monitoring of procurement patterns, contracts, and pricing. The GeM platform has the potential it should be seen as a solution to the problems of poor efficiency and corruption that plague the current Indian public procurement system. These problems afflict the country due to the lack of a transparent and accountable system. (Hannon, D., 2013)

#### a) To curb corruption

In the past, the key factor that led to corruption in the field of the procurement process was the limited accessibility or restricted admission of vendors to the government market. This was one of the primary causes of corruption. (Handfield, R.B. and Straight, S.L., 2013) Because of this, there were possibilities for corrupt behaviour to emerge. By limiting the amount of discretion that procurement authorities are permitted to exercise and the amount of personal interaction they have with representatives (McDade, S.R., Oliva, T.A. and Pirsch, J.A., 2012) from the private sector, GeM guarantees that digital procurement is both transparent and efficient. As a consequence, this makes it more difficult for corrupt acts to take place. It gives unrestricted access to any legal suppliers, even new business owners and those who are just getting their feet wet in the commercial world. The following is a quote from Ankit Srimal, who is 29 years old and lives in Jaipur, Rajasthan and works for RA Enterprises, provides the following remark to provide an example: "In July 2017, we got our first order valued 7 lakhs on as of this moment, I have concluded transactions using GeM with a total value of INR 70 lakh, which approximates almost 75% of the worth of my company. (Quigley N R, Tesluk P E, Locke E A and Bartol K M

2017 )I can't stress enough how important it is for everyone to join up for GeM so they can track the development of their company. Because I am already an established seller on GeM, I do not need to make any financial investments in order to sell my brand on the platform. This is in contrast to the situation on other portals. Even though I conduct my work from a distant hamlet in Rajasthan, the fact that I am able to make a contribution to the expansion of our great nation fills me with a sense of pride.( Chang H H and Wong K H 2016 )The source of this information is the monthly newsletter that is produced by the GeM site.

It is just one of the many examples, and there are a large number of other young entrepreneurs, including women folk from rural areas, who are getting unrestricted accessibility on this platform in order to sell their products to government departments, and they are doing so at no cost to themselves. This is just one of the many examples. (Quesada G, González M E, Mueller J and Mueller R 2016 ) This is only one of the many illustrations. The only thing that is required to be done is to sign up on the GeM portal for free. In addition, the total amount of time necessary is significantly less than twenty minutes. This is without a doubt one of GeM's most important achievements to this point.

### **(b) Reductions in Costs**

The potential for increased cost savings is one of the most significant benefits that can be substantiated by using electronic procurement. There is a good chance that considerable cost savings will be realized when transitioning from a traditional paper-based procurement system to an electronic public procurement system. This is one of the most significant and far-reaching advantages that can be anticipated to be attained as a result of making the transition. According to (Kühn and Sherman, 2014), the World Bank estimates that the potential savings that can be realized as a result of the utilization of an electronic public procurement system can range anywhere from 6% to 13%. (Hunter, G.K., Bunn, M.D. and Perreault, Jr., W.D., 2016) Those savings could be realized as a result of the elimination of paper documents and the transition to an electronic system. GeM has surpassed rupees 10 thousand Crores in Gross Merchandise Value (GMV), as stated in a press release that was issued on August 8, 2018, by the Press Information Bureau of the Government of India's Ministry of Commerce and Industry. Furthermore, there have been more than 6.26 Lakh transactions completed on the platform. An average savings of 25% has been gained across the board for all of the different transactions that have taken place on the platform. It's astonishing how much money has been put away up to this point in time for savings. In addition, as of the 15th of April in 2019, (Bowonder, B., Gupta, V. and Singh, A. 2017) ) GeM has achieved a Gross Merchandise Value (GMV) of over Rs 23,000 crore through more than 17 lakh transactions at savings of 15-25%. We have been able to provide substantially more competitive pricing now that the GeM portal is available. In addition to this, it is aggregating demand for commodities that are required to be acquired by a number of different departments located both at the central & state levels of government. Because of the rising total amount of demand, the price is continuing its downward trend. The aggregation of yearly demand is estimated to result in cost reductions on an annual basis of around Rs. 40 thousand Crore. (Government of India (GoI)'s GePNIC 2016) GeM would ultimately become the National Public Procurement Portal would be in sync with internationally employed best practices if this line of reasoning was followed to its logical end. This would be the case if this line of reasoning were followed to its logical conclusion. In addition to this, Integration with Quality Council of India (QCI), with an objective to verify the standard compliance of the products and services offered through GeM, assures standard goods at lower cost and gives a complete transaction that gives "value for money".

### **(c) Increased Openness and Transparency**

Administrative transparency is the practice of maximizing the flow of information both inside and outside an organization that is responsible for public affairs. This is done in order to promote openness and accountability. Users of the GeM platform have access to any and all information that associate to the digital procurement of goods and services.

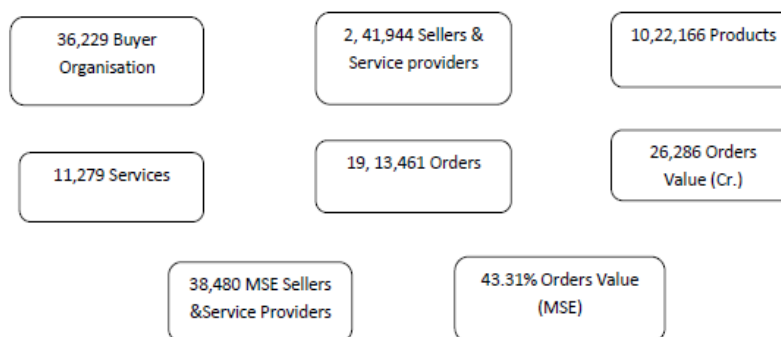
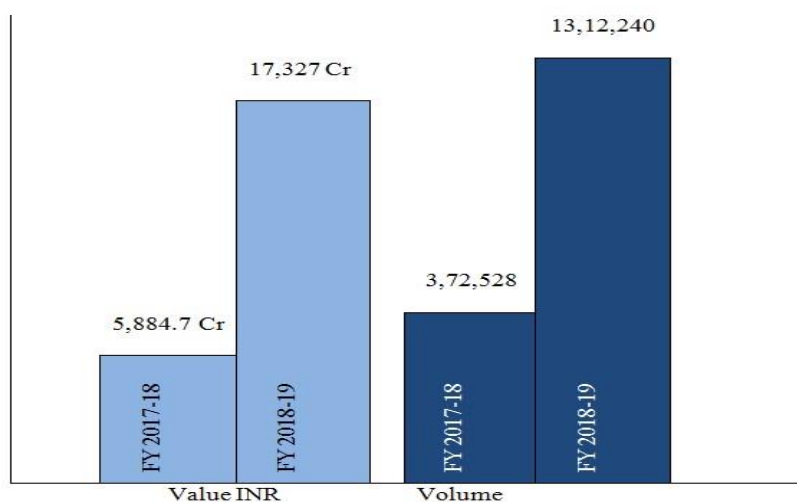


Figure 2

Alerts are sent out through email and text message to the buyer or head of the organization at each level, as well as to the paying authorities and the vendor. The greater use of automation by GeM has resulted in government procurement professionals having less room to employ their own judgment in making purchasing decisions. Digital bidding and reverse auctions foster open competition from any and all possible buyers. This is accomplished by the transmission of information to all of the sellers that are available on the portal. In addition, all of the information on the numerous different tender papers that have been published on the CPP portal is presently being provided on the site of the GeM in order to make the information surrounding Tenders more easily accessible and to speed up the process of its dissemination. As a direct result of this, the costs of various goods and services have decreased, while simultaneously exhibiting an improvement in terms of quality control. In addition to this, the outcome is a rise in trust in the system of procurement, as well as an overall increase in confidence in the system's integrity.

#### (d) Exponentially higher levels of revenue

Ever since GeM was shown to the public for the very first time in 2016, the number of sales has shot through the roof. When compared to the previous year, the total value of all transactions was shown to have significantly increased as the fiscal year 2018–19 drew to an end. This was a major rise from the previous year. The sales figures for March 2018 were 5,884.7 crore, which is a considerable increase when compared to the sales figures for March 2017, which were 426 crores. As of right present, the total value of all of the sales amounts to 17,327 crores. Out of the more than 30,000 government agencies that have registered, just 18,000 are actually using the platform to conduct transactions.



SOURCE: GeM portal

Mrs. Radha Chauhan, Chief Executive Officer of GeM, feels that the platform is capable of sustaining the exponential growth that is being planned. This is based on the developments that have been achieved with the platform. Since it was first implemented, This has become a major reason for the increase in the overall number of product categories, which has climbed from 2,20,470 when it was first introduced to the current total of 10,22,166. During the last two years, there has been a meteoric rise in the count of buyers and sellers who have registered their accounts. This trend is expected to continue. According to the most recent information provided by the GeM Portal, the following are the relevant statistics:

### **3.2.2 Positive Impact of GeM**

#### **(a) The Inauguration of the SWAYATT**

On February 19, 2019, Suresh Prabhu, the Minister of Commerce and Industry for the Union, opened a startup runway on GeM that is known as SWAYATT (Companies, Women and Youth Advantage Through e-Transactions). This was done with the intention of luring additional startup companies to sign up as members of GeM. By utilizing a platform known as startup runway corner, which provides particular tax breaks to businesses that are just getting their feet off the ground, the objective of the program is to give recent established businesses with the opportunity to sell their goods and services to government purchasers. As of the month of April 2019, according to DPIIT Secretary Ramesh Abhishek, a total of 1862 start-up firms have registered with the GeM platform and have secured orders with a combined value of 275 Crore Indian Rupees.

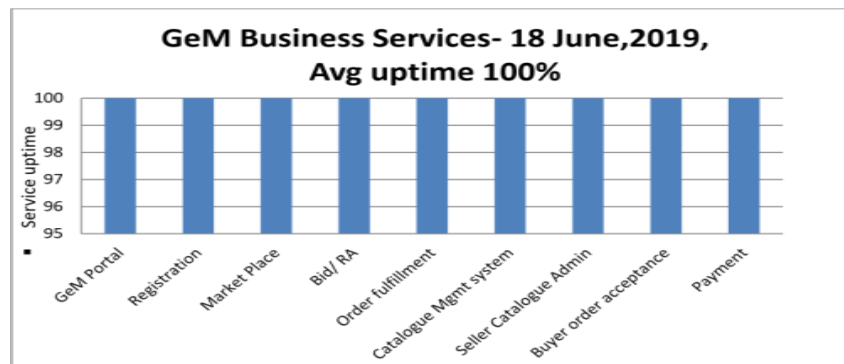
#### **(c) The Beginning of the Womaniya**

Womaniya on GeM is an initial step that has been launched by the central government with the intention of providing women business owners and Women Self Help Groups (WSHGs) get an opportunity to sell handicrafts and handlooms, furnishings, jute and coir products, home decor and organizational supplies straight to a variety of government organizations, ministries, departments and other institutions. (Bunn, M.D., 2015) Objective of the program is to promote gender-inclusive economic growth in disadvantaged sectors of society by providing support for the development of female entrepreneurship in such regions. (Dillman, D.A., 2013) It is in keeping with the target that the government has set to reserve 3 percent of government procurement for company owners who run micro, small, and medium firms that are owned by women (MSME).

#### **d) Microenterprises and other small businesses (MSEs)**

To comply with a particular condition that has been imposed by GeM, 25% of the procurement that is done by government departments must be done with MSEs. To participate of small, micro and medium-scale companies (often abbreviated as MSEs) in public procurement is going to see an increase as a direct result of this project's efforts. After two years of operation, GeM has accumulated a gross merchandise value of over Rs. 10,000 crores, according to a report that was issued by the Press Information Bureau on August 08, 2018. (Farhat Perveen 2019) More than forty percent of the volume wise transactions are done with MSMEs registered on GeM platform. (e) The availability of GeM's services is guaranteed to be 100% of the time. During the 2018–2019 financial years, the GeM site was responsible for more than 17 lakh transactions with a combined value of about Rs. 23,000 Crore. The statistics from the prior year had increased by a factor of four to this point (As per Press Information Bureau report dated 15 April 2019). In addition to this, it concluded the financial year with over 2 lakh merchants and service providers, which is double the number from the previous year. (Lösch, A. and Lambert, J.S., 2017) Additionally, it had 50% more traffic on its website than it did the previous year. In spite of the precipitous increase in the number of people using the website, the GeM portal preserved a perfect uptime.





*Source: GeM portal report*

The 21st of April, 2019 saw the launch of GeM's very own chat box, which goes by the name *GeMmy*. It acts as a personal assistant that is ready to respond to users' inquiries at any time of the day or night. Approximately 50,000 people tried out the newly implemented chat box in the first 10 days after it was made available to the public. [15] On a daily basis, there were, on average, close to 10,000 people inquiring about anything. In order to secure the success of this endeavor, the team that is working on the back end is actively revising their replies to all of the critical questions that have been asked.

#### IV. REVIEW OF LITERATURE

Electronic procurement, often known as e-procurement, is a way of acquiring products and services that makes use of the internet as both a source of information and a channel of communication (Spector, P.E., 2013). According to GeM electronic procurement is sometimes known by its shorter version, e-procurement. E-procurement is the process of purchasing goods and services via the utilization of computerized systems that take advantage of the communication and information technology that is available to assist in the public bidding process electronically. This process is also specified to as e-procurement. The principles specified in Presidential Decree 80 of 2003 were accepted in Indonesia's purchase of goods and services, together with any later adjustments to those principles. In point of fact, the selection of service providers is accomplished via the use of a variety of distinct election and selection procedures, some of which are as follows: The procedure for picking the vendors of products or services to evaluate and contrast when there are fewer than three (three) offers is known as an auction or direct selection.

E-procurement has brought us some of the benefits outlined in (Teo et al, 2009) which we have reaped as a result of using it. According to them the benefits of e-procurement can be divided into two categories: direct advantages and indirect advantages. The direct advantages of e-procurement are as follows: improve data accuracy; increase efficiency in operations; process applications faster; reduce costs administration; and reduce operating costs. Direct advantages include an improvement in data correctness, an increase in operational efficiency, a faster processing of applications, a reduction in expenditures associated with administration, and a reduction in operating costs (e-procurement to make procurement more competitive, improve standard customer services, and improve partners relationships). E-procurement enables the consolidation of resources, which, when combined with an electronic network between organizations, is thought to increase coordination within the firm and save expenses incurred when searching for relevant goods and services. E-procurement may save supplier costs by an average of 1%, according to (Panayiotou et al, 2004) which also said that e-procurement can lower administrative costs. E-procurement provides for consolidation of resources so that with electronic networks between organizations, costs per tender may be reduced by an average of 20%.

According to the information presented in (Panayiotou et al, 2004) a B2B e-marketplace can be the notion of as a platform that serves as a gathering place for buyers seeking new goods and services and sellers in search of new customers and market opportunities. This helps to keep the transaction costs low for both buyers and sellers. E-marketplaces' primary function is to bring together people who might be interested in buying and selling goods or services. Participation in an online marketplace may be influenced by diversity of different components, along with the following:

- (1) The efficiency of reducing expenses while simultaneously preserving available time
- (2) The legality of the organization, as the organization must justify their behaviour and strategy according to social norms and institutional expectations
- (3) Information Technology capacity needed businesses need a solid infrastructure to take advantage of market participation. (Boyer, K.K. and Pagell, M., 2015)

E-marketplaces are able to provide suppliers with access to a Hicksville of decision-making authority within the purchasing organization. Building a sustainable competitive edge and improving a company's ability to participate in electronic markets is not a straightforward or low-cost process. On the other side, if a firm chooses not to participate in an activity, this might lead to the company being isolated.

## V. General Financial Rules (GFR) 2017: Procurement characteristics

The GFR is a collection of general rules and orders that must be tracked by government institutions in connection with topics affecting public financial management. These rules and directives can be found in the GFR. The purpose of this is to make the functioning of the government more efficient in a manner that is accountable and follows the protocol for maintaining fiscal discipline. It was first passed into law in 1947, and since then, it has been amended and published as General Federal Regulations in 1963, 2005, and 2017. The adjustment that was done in 2017 was done to accommodate the recent changes that have been made in administrative work across all of the government institutions. Additionally, this revision was done to add ease and clarity to the day after day running of the government. The following is a list of the primary characteristics of GFRs:

- Outlines the types of works, goods, and services that are eligible for public procurement as well as the parameters of such procurements
- Describes various procuring methods and their suitability
- Determine Code of Integrity
- Determine tender award criteria
- Main features of general principles and guidelines for public procurement

Depending on the nature (works/goods/services) and volume of procurement, the GFR mandates the adoption of a specific basic procurement approach (LTE, open tender enquiry, single tender enquiry, two-stage bidding, or e-reverse auctions) (in monetary terms). The open tender enquiry is the ideal approach since it tends to encourage competitive edge and equal chance to the expected bidders. This is why it is specified as the preferred method. In a handful of exceptional circumstances, such as when there is a sense of urgency or when there is only one possible supply source, a single bid may be requested, provided that the necessary justification is provided and that the responsible authority gives their consent. When there is a sense of urgency, it is possible to call for a limited tender rather than an open one, provided that there will be at least three bids. On the other hand, the management or a purchasing board of the organization doing the procuring will not issue a request for tender for low-valued acquisitions. These acquisitions will be completed without competitive bidding.

Although the GFR 2017 has maintained the same monetary threshold limitations for a few categories as were specified in the GFR 2005, it has increased the threshold limits for a number of other categories. For instance, the GFR 2017 has maintained the same threshold restriction for the purchase of original works by limited tender. On the other hand, it has increased the maximum ceiling for open tender inquiries from INR 10 lakhs to INR 30 lakhs. In a similar fashion, it has increased the upper threshold limit for the procurement of products by the purchase board from INR 1 lakh to INR 2.5 lakhs. While the GFR 2005 considered the acquisition of all types of services to be the same, the GFR 2017 has divided the acquisition of services into two major grades, namely, "consulting services" and "non-consulting services." In addition to these alterations, the GFR 2017 incorporates a

number of significant measures, some of which are stated below, to facilitate the streamlining of activities related to national public procurement

- The General Financial Rule -2017 suggests using a 2-step bidding process, in which the first stage of the process involves a purchasing organization holding negotiations with the bidder community to determine the technical parameters. The financial bid is then solicited from those whose ideas were chosen to be implemented, and the contract is awarded to the bidder who offered the most attractive combination of quality and cost. It is anticipated that this will improve the technical capacity of the business doing the purchasing by utilizing the know-how available from the market (Rule 164).
- It specifically directs to give more importance to quality than price in procurement of services through a quality- and cost-wise selection process (Rule 192).
- It emphasizes the use of information technology in public procurement to establish superlative transparency and competition. This is accomplished by mandating the use of the Central Public Procurement Portal (CPPP) for publication of all tender details (Rule 159), requiring electronic bidding for all purchases (Rule 160) and promoting e-reverse auctions (Rule 167). is done.
- Integrity Code has been initiated to address issues of integrity in procurement exercises (Rule 175).
- It directs to share the reasons for rejecting a tender or not issuing the bid document to the prospective bidder on request [Rule 173(iv)].
- It's a request inclusion of environmental issues in the bidding documents [Rules 173(xi), 217, and 218]. It encourages the inclusion of environmental issues in bid documents.

## VI. RESEARCH METHODOLOGY

This was a retrospective observational study that was carried out between 2017 and 2019 at the hospital procurement division of a 2,000-bed tertiary care centre located in North India. Reviewing the orders, records, and documents from the Hospital Procurement Division and the office of the medical Superintendent allowed for the process of putting GeM into practice at the institute to be analysed and investigated. The Hospital Purchase Division provided the information that was retrieved, which data was relating to items purchased and budget spent from the years 2017 to 2019. On the basis of the authors' experiences, a list of the benefits obtained as well as the difficulties encountered throughout the implementation was compiled. A percentage has been determined.

## VII. RESULTS

In compliance with the directives issued by the Government of India, the institution's responsible authority has made the decision to move forward with the implementation of procurement through the GeM site. The Department of Hospital Administration created Standard Operating Procedures in order to lay out the protocol that needs to be followed in the purchase process through Government e Marketplace portal. It was decided that the Medical Superintendent of the facility would be the Primary user of the system. The leaders of all of the procurement divisions, including the division of hospital procurement, Department of Engineering, Research cell, and procurement of equipment, were nominated as secondary users, along with the heads of all of the departments. Under the 50 divisions, there are 91 people who have registered as secondary users as of December 2019, meaning that they are either or both secondary buyers and consignees and PAOs. There have been close to one thousand four hundred orders placed, and their combined worth is roughly twenty five crores of rupees. (Heide, J.B. and John, G.,2014)

Direct role-based participation in the procurement process was available to the officer in charge (the buyer), the store officer (the consignee), and the account officer (the payment authority) under the HPD. Up until the end of the year 2019, the Hospital Purchase division has placed a total of around one thousand orders and has spent a total of ten crores of rupees on the purchase of a variety of different things from the consumable stores. The things that the HPD purchased through GeM could be broken down into one of seven categories for the most

part. The majority of the purchases were classified as belonging to the segment of surgical items, which included lab accessories (23%), followed by furniture (22%), and then computers (19%). (Figure 1).

## 7.1 Government-e-Marketplace: Characteristics unique to it and the benefits it offers

### a) *Simple accessibility and straightforward transaction processes*

On the web portal that has been authorized for use by government entities, there is a large selection of items and services that may be purchased at reduced prices. In addition to this, it provides all potential traders from a large geographic portion across the nation the chance to take part in the purchase process. The procurement procedure will also be made easier thanks to the portal's provision of alternatives for direct purchase within some price ratio (up to Rs. 5 lacs for the lowest bidder), making it possible to make purchases from a variety of products with only the click of a button. Features like bunch bidding, in which bids of a similar sort can be bunched together, save the buyer's end of the transaction time by reducing the number of individual bids that need to be processed.

After the essential approvals that are required by the GFR have been submitted, there is also a facility for directly acquiring a proprietary article that is available.

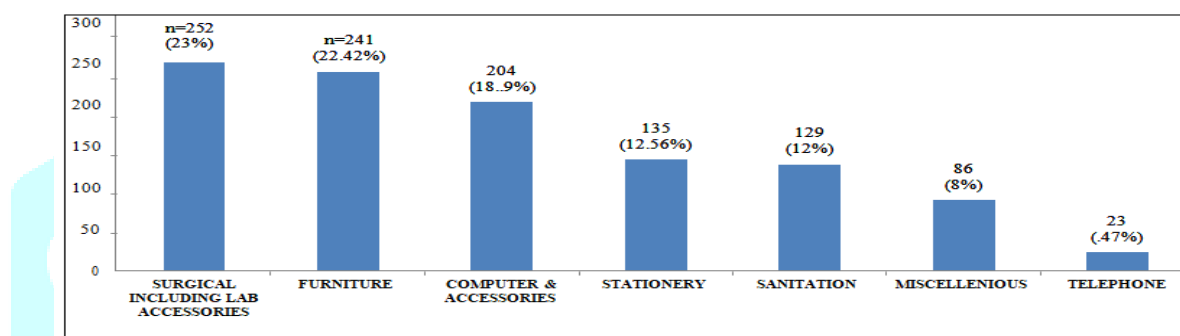


Figure 4: displays the distribution of items acquired through GeM according to their respective stores.

Source: Compiled by authors

### b) *Reporting that is both time-bound and in real time*

There are strict time limits placed on each stage of the procurement process, including product delivery, reception, and inspection by the purchasing organization, as well as payment, regardless of which method of purchase is chosen [direct purchase, bidding process, or e-reverse auction]. On the user's dashboard, all of the time delays will be displayed at the appropriate times. These kinds of delays have an effect not only on the ratings of the seller but also on the ratings of the purchasers. The one-of-a-kind incident management system gives users the chance to voice any concerns they may have about the delays from either end of the process. (Ministry of Finance Government of India. Manual for procurement, 2017)

Because of some factual facts that the bidding is finalized online, the bids are broadly published, and the percentage of time spent soliciting offers can be reduced to as little as five days or less. The time it takes to open bids and place an order can both be done online, which significantly cuts down on the overall amount of time required. Analysis of technical aspect and financial aspect can also be done online. All of the information that is relevant to the various stages of the procurement process is disseminated to the various stakeholders in real time via emails and text messages. This helps to cut down on the amount of paperwork required and makes the process more effective.

### c) *Accountability and openness to the public*

One of the primary goals of implementing GeM has been to increase the level of transparency that is present in the country's public procurement processes. This is ensured by having only a limited amount of human interaction and providing real-time information to all of the relevant parties. The initial & primary user, who is also the commanding officer for the secondary user, has a user-friendly dashboard that compiles and summarizes all of these actions and makes them available to the secondary user. This ensures accountability. The fact that the data can be retrieved online promotes accountability at every stage.



**d) *Friendlier to the environment and requiring less paperwork***

GeM makes it possible to do online procurement from start to finish. Paperless contracts, also known as the capacity of joining into order contracts electronically, either through the use of email or through a website-based platform, encourage a more rapid and comprehensive dissemination of information. Sharing information in real time with all of the organization's stakeholders, both inside and outside of the organization, is possible without the burdensome paperwork typically associated with the government organizations. This helps the process become paperless and more environmental friendly. It is also cost effective because the expense of managing files and paperwork, as well as the manpower linked to those tasks, is reduced.

**e) *Help with technical issues***

It is possible to direct any questions concerning the utilization of the portal and the goods to the GeM helpdesk at any time of the day or night, and the staff is trained to respond to these questions in a fast manner, which is an advantageous feature. In addition, the GeM portal receives continual updates deriving from the comments and suggestions made by users. At this time, users are accessing the portal through its third iteration.

**f) *Constant updates and ground-breaking new interventions, such as GeMmy and GeMSamwad***

Interactive sessions are being organized across the country for buyers and sellers to realize the full potential of the product. During these events, buyers and sellers are taking input from end users and addressing concerns. A conveniently accessible help window provides additional online assistance that can be accessed whenever it is needed.

**g) *Accessibility of medical supplies and other consumables Items***

A medical facility needs a large array of items (products), and it is unlikely that any other industry has the same requirements for the diversity of products that must be purchased. There is a lack of availability on GeM for a significant amount of the healthcare-related equipment and consumables that are typically utilized in hospitals.

The filtering options for the product specifications are not very user friendly. In addition, the listing is not consistent. (Public procurement in India: assessment of institutional mechanism, challenges, and reforms. 2017) Because there are products that are comparable but found in different categories, it is impossible to do a comparison between them or process them in the same way. Differences in the requirements of many of these orders have resulted in their being delayed or cancelled. It is reassuring to know, on the other hand, that the portal is responding to inquiries concerning product specifications.

**h) *The assurance of quality***

There is a requirement for a system of quality control that is more stringent for the items that are now available. Because it is necessary to select the option of bidding when making large purchases, the product details (specifications) filters on the GeM should be made more severe in order to eliminate products of lower quality. Complaints about the product's quality have been received from a variety of sources, notwithstanding the absence of the aforementioned characteristics and the inability to offer a calculated sample for evaluation. Evaluation by sample has traditionally been carried out for certain products, including gloves, masks, and the like, which have generic standards. At the moment, there is no provision for sample evaluation, so the buyer is needed to rely on the inspection board for quality check. If the assignment is rejected at such a late stage in the procurement process, the entire process will need to be redone, which would cause delays. (Mehta PS. 2012) Despite this, the pre-inspection facility is available on the site; however, it is impractical to use this feature if the order is being placed in remote places or for a very small quantity.

**i) *Clauses regarding the availability of a warranty, CMC, and AMC for equipment***

In the field of medicine, where patients' lives depend on the proper functioning of complex life-saving technology, malfunctions must be prevented or kept to a minimum. In order to fulfil this objective, the institute follows a standard procedure that involves the incorporation of stipulations for a guarantee and AMC for a period of 5 years. Options for an extended period of warranty coverage The annual maintenance clause (AMC) & CAMC clauses could be investigated further.

**j) *Contracts with rates***

A hospital makes extensive use of a variety of products, many of which have a high consumption rate but a short shelf life or limited storage capacity. It is not possible to get into rate contracts or receive the item in instalments for these kinds of goods. When this occurs, purchasing the full lot at once can result in other unfavourable consequences, such as storage problems. In addition, there is no justification regarding the percentage product or the frequency of procurement of such things; repeated purchases take up a lot of time, are charged at different rates, and may even result in the orders being broken up into multiple parts.

## **VIII. DISCUSSION**

It is calculated that 20% of the country's GDP is spent on government purchase, and for quite some time it has been a very difficult task to manage the decentralized procurement of commodities that are often utilized. It is difficult for small suppliers to access buyers in remote parts of the nation without the assistance of middlemen, which drives up the price of doing business for those providers. Because it is more difficult to keep track of small proceedings or transactions, they are also more susceptible to fraudulent activity. To make the system more effective, having a transparent and competitive manner of doing things was a need, and GeM is expected to completely transform the way public procurement is done in India.

E-procurement process in the government organization is already established in a number of countries, including Singapore, the Ukraine, and the European Union. In recent years, this trend has expanded fast, resulting in increased productivity, transparency, and cost savings. To the middle of the year 2020, GeM government e marketplace, procurement reimaged 2020)the GeM in India will have 1013141 products, and 563642 sellers and service providers would have completed transactions totalling 65,228 Crores (INR). This e-procurement process model, which is part of the Digital India movement of the GOI, can achieve its goal with an integrated approach involving all stakeholders, despite the fact that there are several challenges, each with own set of advantages and disadvantages. For example, there is a lack of skilled expertise in procurement. In the field of medicine, the successful application of GeM in the country would unquestionably be precipitated by the insistence on on-time delivery of medications, high standards for the quality of health care supplies and equipment, holistic enhancements to the system, and management expertise.

## **IX. CONCLUSION**

The concept of a e-procurement is one that is not very old in the country. It has been around for a long time and is still developing. GeM is an adaptable platform that provides a wide variety of benefits. It offers a comprehensive solution that includes a procurement system that is cashless, contactless, and paperless in its entirety. With end known features that encourage participation of all stakeholders like GeMSamvaad, it is expected that over time the above challenges will be addressed, and efforts will be made to make it more user friendly to ensure quality services. This is because GeMSamvaad has end user friendly features encouraging participation of all stakeholders.

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