

# “Study on E-procurement Practices in Government Organizations situated in Madhya Pradesh”

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## **Abstract:**

Electronic Procurement Systems is a fast and effective system, with this secure, fair, transparent and cost effective working can be done in the field of procurement management. Central Public Procurement Portal and Government e-Market Place are the examples of electronic procurement system which are using in the Government Organizations in India. The objective of this research is to study on e-procurement practices of government organisation and explore the factors that affect mainly adoption and implementation of e-procurement in Government Organisations. There are several factors which directly affects the adoption and implementation of e-procurement in the Government Organizations.

Exploratory research methodology was used for the research. Primary and secondary data were collected and analysis of hypothesis was carried out through Anova test. The result shows that all the Government Organization are working on electronic platform CPPP and GeM as e-procurement systems reduces procurement time and enhance secure, fair, transparent & cost effective-procurement process. This study was restricted to only Government Organization situated in the Madhya Pradesh.

**Keywords:** e-procurement, Public Procurement, Government organisation.

## **Introduction**

Procurement is a process of buying goods, services or works from the external source, management of procurement processes involves some steps i.e. from the tendering to acceptance and supply of materials from the supplier.

Before electronic procurement system, traditional procurement system was in vogue in the government organisations. It was very complex in nature as well as cost & time consuming. In this system all the procurement related works were done manually. Heavy paper work, manpower was used in this traditional procurement system like:

- Scrutiny of suppliers
- Preparation and sending of tender documents
- Receiving of tender and their scrutiny
- Preparation of Comparison chart
- Issuing Purchase Order and make payment.

Central Public Procurement Portal was established and operational from 01.01.2012. This system is very efficient and effective for public procurement. Secure, fair, transparent and cost-effective working can be done in the field of procurement management through Central Public Procurement Portal & Government e Market Place. Electronic procurement system also helps to create a data bank which is very useful for supporting strategic decisions towards public expenditure reduction and its optimum utilization. As per the General Financial Rules-2017 CPPP & GeM are mandatory in all the Ministries/Departments of the Central Government, Central Public Sector Enterprises, State Govt., Autonomous and Statutory Bodies etc. for the procurement of the available items.

Central Public Procurement Portal comprises:

- E-Procurement Portal –This portal is being used for complete online procurement i.e. from Publishing of e-tenders/enquiries, Bid Submission, Bid Opening, Evaluation of bids to Award of contracts.
- E-Publishing Portal – This portal is used for publishing of tenders, Corrigendum and Awards, however bids are received manually by post.

GeM, it is “one stop Government e Market Place, it is hosted by DGS&D through GeM:

Below are the data showing uses of electronic procurement year wise:

Financial Year	Electronic Tenders	Value of Tender (in Cr.)
2019-20	13,15,769	15,84,891.71
2018-19	13,67,149	18,07,951.49
2017-18	11,11,230	19,58,787.38
2016-17	6,81,971	8,90,968.84
2015-16	5,13,842	6,92,177.78
2014-15	3,08,854	4,77,517.24
2013-14	2,20,640	3,66,458.00

\* Data comprise of eTenders processed through NIC system, GePNIC in CPP portal as well as 27 States/UT's.

Madhya Pradesh State Government joined CPP Portal in the year 2018-19.

Data for the year 2018-19 related to Madhya Pradesh State Government are as follows:

Financial Year	Electronic Tenders	Value of Tender (in Cr.)
2018-19	27946	36,268.00

## Review of Literature

1. CarrenChepng’etich, Dr. Esther Waiganjo and Dr.Noor Ismail (2020), “Influence of strategic e-procurement practice on performance of devolved systems of government in kenya” The aim was to establish the influence of strategic e-procurement practice on performance of Devolved systems of government in Kenya. The study adopted cross-sectional survey design using both quantitative and qualitative approaches. Population was all the 47 devolved systems of government.

2. Christopher G. Reddick (2004), “Examines the development of the Internet and electronic procurement or e-procurement in American state governments”. It demonstrates an e-government growth model as a way of modelling the development of e-procurement. E-procurement was examined with data from a national survey of

state procurement officers. The results of the e-procurement model indicated positive support for electronic procurement on state management capacity and IT management capacity, indicating that high performing management is a critical catalyst for e-procurement development.

3. Dhiona Ayu Nani, Syaiful Ali (2020), "Determinants of Effective E-Procurement System: Empirical Evidence from Indonesian Local Governments". This study investigates the effect of the Strategy-Technology-Organization-People Environment variables on the effectiveness of e-procurement implementation in improving accountability, transparency, efficiency, and effectiveness of local governments in Indonesia. The data was collected through questionnaires. The findings show that strategies, objectives, integration between organizations and systems, and human resource assistance can improve the accountability, transparency, efficiency, and effectiveness of the government in implementing procurement activities.

4. Erne Suzila Kassim, Husnayati Hussin (2010), "Public e-Procurement: A Research Synthesis". The main aim was to investigate how the research has been developed during this period. Study has shown that public e-procurement, it has attracted researchers from various disciplines. In addition, We found that the articles were mainly empirical with the main focus on the case study and government side

5. Gioconda Quesada, Marvin E. Gonza'lez, James Mueller and Rene Mueller (2010), "Impact of e-procurement on procurement practices and performance" The purpose of this paper was to investigate the impact of electronic procurement technologies on procurement practices and procurement performance. This paper posits a model of the relationships between e-procurement technology usage, PPR, and PP. This model was tested and validated using a sample of 368 procurement specialists in the USA. The findings suggest that EPT usage positively affects managers' perceptions of both PPR and PP.

6. Geoffrey Kipngeno Rotich, Barrack Okello (2015), "Analysis of use of e-procurement on performance of the procurement functions of county governments in Kenya". This study aimed at examining the relationship between e-procurement and procurement performance of County Governments in Kenya. The results revealed that e-procurement was positively related with performance of supply chain function of County Governments in Kenya.

7. Matunga, Denish Ateto, Nyanamba, Steve Ondieki, Dr. Walter Okibo (2013), "The Effect of E-Procurement Practices on Effective Procurement in Public Hospitals: A Case of KISII Level 5 Hospital". The study was conducted through a descriptive research design. This implies that majority of the respondents have adequate experience as heads of department and hence have adequate knowledge on matters pertaining to process of procurement. A study also needs to be done to establish the effect of e-procurement on prompt delivery of supplies at the hospitals.

8. Nikolaos A. Panayiotou, Sotiris P. Gayialis, Ilias P. Tatsiopoulou (2004), "An e-procurement system for governmental purchasing" The objective of the analysis was to identification of potential problematic areas and the design of new processes in order to maximise the possibilities of a successful implementation of a new e-procurement system.

The study revealed the difficulties in reengineering the public sector and identified the most important barriers in the adoption of private sector's e-procurement business models.

9. Noor Ismail Shalle, Wario Guyo, Iravo Mike Amuhaya (2013), "Factors Affecting Implementation of E-Procurement Practices in Public Service in Kenya: A Case of Ministry of Finance", This paper presents a study into the key lessons learnt from e-procurement implementation at public sector organisations in Kenya. The

research carried out was intended to explore the perceptions and reflections of both ‘early’ and ‘late’ adopters of e-procurement.

10. Yifan Chen, Stuart Bretschneider, Justin M. Stritch, Nicole Darnall and Lily Hsueh (2021), “E-procurement system adoption in local governments: the role of procurement complexity and organizational structure”, The article examines how local governments’ procurement complexity and structure interact to influence e-procurement adoption. The findings shed insights on how local governments with different structures can best deal with complex managerial activities and facilitate e-procurement adoption.

## Research gap

E-procurement system adopted globally because of its effectiveness. Many of the researchers have carried out their research work on the topic related to e-procurement practices from the different places of India, however the research on e-procurement practices and their implementation in the different organizations situated in Madhya Pradesh has to be carried out.

## Objective of the study:

To study the effectiveness of E-procurement practices in relation with the Cost and Time in the Government Organizations:

**H<sub>0</sub>** : There is no significant effect on cost & time of procurement in Government Organization.

**H<sub>1</sub>** : There is significant effect on cost of procurement in Government organization

## Research Methodology:

**Sample size:** 80-100

**Sample Method:** Random sampling

**Data Collection-** For the study we have taken primary data as well as secondary data. Primary data were collected through structured questionnaire from the respondent and secondary data were collected from the website through literature review. A structured questionnaire was prepared and floated to the respondents for testing of hypothesis regarding adoption and implementation of e-procurement system.

**Tools of data collection:** Data were collected through Google Form

**Tool of Data Analysis:** Descriptive and inferential Statistics Statistical Tools like ANOVA used to get the finding.

## Data Analysis & Interpretation

**Objective -:** To study the effectiveness of E-procurement practices in relation with the Cost and Time in the Government Organizations

**Hypothesis:**

**H<sub>0</sub>** : There is no significant effect on cost & time of procurement in Government Organization.

**H<sub>1</sub>** : There is significant effect on cost & time of procurement in Government Organization

**Table-1**

Is e-procurement system is cost effective?

	SumofSquares	df	MeanSquare	F	Sig.
Between Groups	21.382	4	5.346	5.336	<.001
WithinGroups	59.102	59	1.002		
Total	80.484	63			

Given this distribution,  $F(4,59) = 5.346$ ,  $p < 0.001$ , therefore E-procurement system is likely to be cost effective.

Therefore, as per the result of anova test: Nul-hypothesis is rejected and alternate hypothesis is accepted.

**Table-2**

		PointEstimate	95%ConfidenceInterval	
			Lower	Upper
E-procurement system is cost effective?	Eta-squared	.266	.057	.395
	Epsilon-squared	.216	-.007	.354
	Omega-squaredFixed-effect	.213	-.007	.351
	Omega-squared Random-effect	.063	-.002	.119

a. Eta-squaredandEpsilon-squaredareestimatedbasedonthefixed-effectmodel.

b. Negative but less biased estimate sareretained,notroundedtozero.

$\eta^2 > 0.266$  indicates a large effect and shows that the e-procurement systems is highly cost efficient

**Table-3**

Does e-procurement system Reduces Procurement time?

	SumofSquares	df	MeanSquare	F	Sig.
Between Groups	37.776	4	9.444	11.679	<.001
WithinGroups	47.708	59	.809		
Total	85.484	63			

Given this distribution,  $F(4,59) = 11.679$ ,  $p < 0.001$ , therefore E-procurement system is unlikely to reduce procurement time

Therefore, as per the result of anova test: Nul-hypothesis is rejected, alternate hypothesis is accepted.

**Table-4**

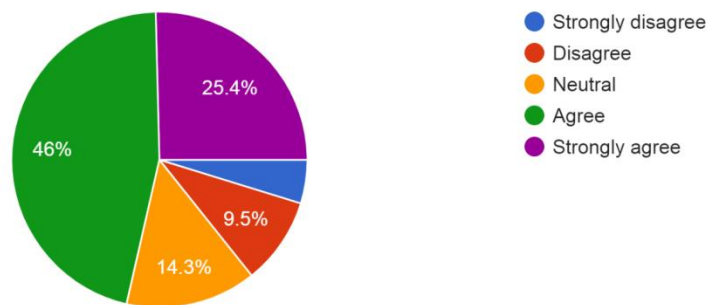
		PointEstimate	95%ConfidenceInterval	
			Lower	Upper
E procurement system Reduce Procurement time?	Eta-squared	.442	.216	.556
	Epsilon-squared	.404	.163	.525
	Omega-squared Fixed-effect	.400	.161	.521
	Omega-squared Random-effect	.143	.046	.214

a. Eta-squared and Epsilon-square are estimates done on the fixed-effect model.

$\eta^2 > 0.442$  indicates a large effect and shows that the e-procurement systems effectively reduce procurement time.

E-procurement system is cost effective?

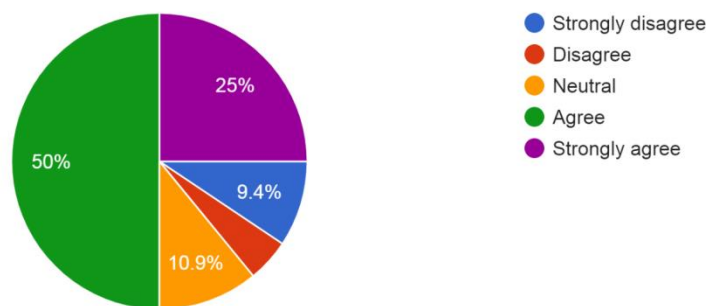
63 responses



Pie Chart:1

Does E procurement system Reduce Procurement time?

64 responses



Pie Chart:2

**Findings :**

Table-1: Given this distribution,  $F(4,59) = 5.346$ ,  $p < 0.001$ , therefore E-procurement system is likely to be cost effective. As per the finding Nul-hypothesis is rejected and alternate hypothesis is accepted.

Table-2 :  $\eta^2 > 0.266$  indicates a large effect and shows that the procurement systems are highly cost efficient.

Table-3: Given this distribution,  $F(4,59) = 11.679$ ,  $p < 0.001$ , therefore E-procurement system is likely to reduce the procurement time. As per the finding Nul-hypothesis is rejected and Alternate Hypothesis is accepted.

Table-4:  $\eta^2 > 0.442$  indicates a large effect and shows that the E- procurement systems reduce the procurement time.

Pie Chart-1 : As per the pie chart 25.4% respondent are strongly agreed that electronic procurement systems is the cost effective system, and 50% respondent agreed that electronic procurement systems is the cost effective system.

Pie Chart-2 : As per the pie chart (fig:6) 25% respondent are strongly agreed that electronic procurement systems reduces the procurement time, and 50% respondent agreed that electronic procurement systems reduces the procurement time.

25% respondent are agreed that electronic procurement systems is cost effective as well as it reduces the procurement time.

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