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A Study of Behavioral Factors Influencing Financial Decision Making in E-Procurement Systems

Dr. Shalini P[1], Manikandan R[2]

[1]DR. P. Shalini, Assistant Professor, Master Of Business Administration & Panimalar Engineering College, Chennai - 600123

[2]Manikandan R, Student, Master Of Business Administration & Panimalar Engineering College, Chennai -600123

Abstract - This study examines the impact of purchase management on cost control with special reference to Larsen & Toubro. Effective purchase management is critical in large engineering and construction organizations where a major share of project costs is associated with procurement activities. The research focuses on how financial planning, supplier selection, inventory control, and procurement strategies influence cost efficiency and organizational profitability. It also analyzes behavioral factors affecting financial decision-making within e-procurement systems, including risk perception, employee experience, and technology adoption. The study adopts a descriptive research design and uses primary data collected through structured questionnaires from finance and procurement employees. Statistical tools such as normality tests, Chi-square, Mann-Whitney U, and Spearman correlation are applied for analysis. Findings reveal that effective procurement practices and digital systems enhance transparency, reduce unnecessary expenditure, and improve financial performance. The study concludes that strategic purchase management significantly strengthens cost control and supports sustainable organizational growth.

***Key Words*:** Purchase Management (**PM**),Cost Control (**CC**),E-Procurement Systems, (**EPS**) Financial Decision Making (**FDM**),Vendor Selection (**VS**), Inventory Management (**IM**), Behavioral Factors (**BF**), Cost Efficiency (**CE**).

INTRODUCTION

Purchase management (PM) plays a vital role in the financial success of any organization, particularly in large engineering and construction companies like Larsen & Toubro. In today's competitive business environment, organizations must focus on cost control (CC) and cost efficiency (CE) to sustain profitability and achieve long-term growth. In infrastructure projects, a significant portion of total expenses is related to materials and procurement, making PM a key driver of project profitability (PP).

Effective procurement planning (PPN) ensures that materials are acquired at the right time, cost, and quality. Activities such as supplier selection (SS), price negotiation, and maintaining strong supplier relationships help organizations minimize procurement costs. In addition, proper inventory management (IM) reduces excess stock and avoids wastage, thereby improving operational efficiency. These practices collectively contribute to better financial performance (FP) and resource utilization.

On the other hand, poor purchasing decisions can result in higher costs, delays, and financial losses. Therefore, this study focuses on analyzing how PM influences CC, highlighting the importance of efficient procurement systems in achieving sustainable organizational growth.This study focuses on analyzing the impact of purchase management on cost control within L&T. It examines how effective procurement planning, strong supplier relationships, and efficient inventory management contribute to cost reduction and improved financial performance

NEED OF THE STUDY

1. To understand the influence of behavioral factors on financial decisions in eprocurement systems at Larsen & Toubro.
2. To evaluate the effectiveness of e-procurement systems in financial decision making.
3. To identify factors affecting vendor selection and procurement approvals.
4. To improvetransparency and efficiency in procurement processes.
5. To provide suggestions for better financial decision making in the organization.

OBJECTIVES OF THE STUDY

1) To understand the concept and process of E-Procurement systems in organizations.
2) To identify the behavioral factors that influence financial decision-making in procurement.
3) To analyze how employees make decisions regarding vendor selection, purchase approval, and payment processing.
4) To study the role of digital procurement systems in improving financial transparency and efficiency.
5) To provide suggestions for improving financial decision-making in eprocurement processes.

SCOPE OF THE STUDY

1. The study focuses on financial decision making in e-procurement systems used in Larsen & Toubro.
2. The study examines behavioral factors affecting procurement and financial approvals.

3. The study covers employees working in the finance and procurement departments.
4. The study analyzes the use of digital procurement systems in the organization.
5. The study provides suggestions to improve financial decision making in procurement activities.

REVIEW OF LITERATURE

1. Procurement System Adoption– Ajay Kumar (2019) E-procurement systems are increasingly adopted by organizations to improve efficiency and transparency in purchasing activities. Ajay Kumar explains that digital procurement platforms integrate vendor management, purchase orders, and financial approvals into a single system. The system also helps track procurement data accurately and supports financial monitoring. As a result, organizations can manage procurement activities in a more structured and effective manner.

2. **Digital Procurement Efficiency– Priya Sharma (2020)** Digital procurement systems play an important role in improving organizational efficiency. Priya Sharma states that automated tools simplify processes such as purchase order creation, invoice verification, and payment tracking. These systems reduce manual errors and improve coordination between procurement and finance departments. Managers can easily analyze procurement data for better financial decisions. Therefore, digital procurement improves operational performance.

3. **Behavioral Finance in Procurement– Rohit Mehta (2018)** Behavioral finance concepts influence how employees make financial decisions in procurement. Rohit Mehta explains that personal judgment, experience, and psychological bias may affect procurement approvals. Even with digital systems, employees sometimes depend on intuition when evaluating suppliers. This behavior may influence vendor selection and pricing decisions. Understanding these behavioral aspects helps organizations improve procurement policies.

4. **Employee Experience and Decision Making– Sneha Reddy (2021)** Employee experience plays a key role in procurement decision making. Sneha Reddy explains that experienced employees understand procurement procedures better and use e-procurement systems effectively. Their knowledge helps them evaluate vendors accurately and make correct financial approvals. Experience also reduces operational mistakes. Organizations therefore benefit from skilled employees in procurement.

5. **Trustin Technology– Vikram Patel (2022)** Trust in digital procurement systems affects how employees use technology. Vikram Patel explains that when employees trust system data and reports, they rely more on automated processes. This trust increases system usage and improves financial decision accuracy. Reliable systems also reduce resistance to technological changes. As a result, procurement efficiency improves

RESEARCH METHODOLOGY
RESEARCH DESIGN

DESCRIPTIVE RESEARCH
The term descriptive research describes the nature of situation or an event which exists at the time of study. It primarily concerned with finding out "who, what, where, when, how." It includes survey and facts finding enquires of different kinds. The researcher has no control over the variables; he can only report what has happened or what is happening.

DATA COLLECTION

Primary Data: Collected through a structured questionnaire from employees.

SAMPLING METHOD
The study uses probability sampling.

SAMPLING TECHNIQUE
Convenience sampling was adopted, where respondents were selected based on accessibility and willingness.

SAMPLE SIZE

When the population size is unknown, determining an appropriate sample size becomes challenging. In such cases, a pilot study is often conducted to estimate key parameters, such as the proportion (p) of the target characteristic in the population. This preliminary data helps in calculating the sample size needed for the main study using statistical formulas designed for proportions.

n = Z^2 * p * q / e^2

Where,

- n = required sample size
- Z = confidence level (e.g., 1.96 for 95% confidence)
- p = estimated proportion
- q = complement of the estimated proportion
- e = margin of error

Sample Size Calculation for Pilot Study Given,

Z = 1.96, p = 0.9, q = 0.098 ≈ 1, e = 0.05

Calculation,

n = (1.96^2 * 0.9 * 0.1) / (0.05^2) n = (3.8416 * 0.9 * 0.1) / 0.0025

n = 0.345744 / 0.002500

n = 138.2976

Rounded up sample size = **140**

STATISTICAL TOOLS USED

The gathered information was examined using:
- The Mann-Whitney U Test
- The Kruskal-Wallis H Test
- Correlation of Spearman Rank
- Chi – Square test

DATA ANALYSIS

The collected data were analyzed using statistical tools to interpret employee responses

Percentage = (Number of Respondents / Total Respondents) × 100

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RESULTS & DISCUSSION

Table -1: MANN – WHITNEY U TEST RESULT

Ranks

	EPROCUREMENT USAGE IN PROCUREMENT ACTIVITIES	N	Mean Rank	Sum of Ranks
E PROCUREMENT SIMPLIFIES PURCHASING PROCESS	YES	65	73.92	4804.50
	NO	76	68.51	5206.50
	Total	141		

The Mann–Whitney U test was conducted to determine whether a significant difference exists in the improvement of team productivity between male and female respondents. The findings indicate that male respondents (Mean Rank = 68.37) and female respondents (Mean Rank = 74.16) show only a slight variation in mean ranks. However, the significance value (p = 0.347) exceeds the threshold of 0.05, indicating that the observed difference is not statistically significant. Therefore, the null hypothesis is accepted, leading to the inference that there is no meaningful difference in perceived productivity improvement between genders. This suggests that gender does not significantly influence how respondents experience productivity gains from AI-driven SEO tools, and both male and female groups benefit similarly.

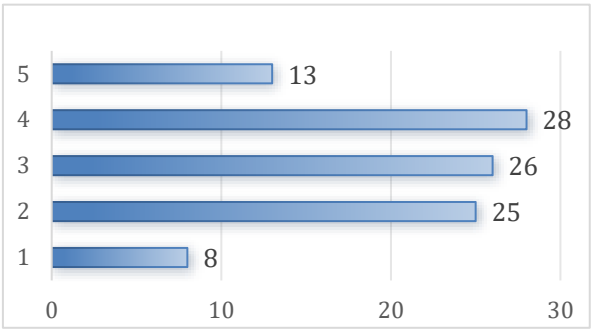
Table -2: SPEARMAN'S CORRELATION

Correlations

			DIGITAL PROCUREMENT SYSTEM IMPROVES TRANSPARENCY	DIGITAL PROCUREMENT REDUCES THE CHANCE OF FINANCIAL ERRORS
Spearman's rho	DIGITAL PROCUREMENT SYSTEM IMPROVES TRANSPARENCY	Correlation Coefficient	1.000	.136
		Sig. (2-tailed)	.	.108
		N	141	141
	DIGITAL PROCUREMENT REDUCES THE CHANCE OF FINANCIAL ERRORS	Correlation Coefficient	.136	1.000
		Sig. (2-tailed)	.108	.
		N	141	141

The Spearman's Rank Correlation test was conducted to examine the relationship between improvement in team productivity and reduction in time required to complete SEO tasks, and the results indicate a correlation coefficient of 0.348, reflecting a moderate positive relationship between the two variables; the significance value (p = 0.000) is less than 0.01, demonstrating that the correlation is statistically significant at the 1% level. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, leading to the inference that there is a significant positive relationship between time reduction and productivity improvement, implying that as the time taken to complete SEO tasks decreases, team productivity tends to increase, thereby highlighting the effectiveness of AI-driven SEO tools in enhancing overall team performance.

FIG NO : PROCUREMENT SYSTEM HELPS SIMPLIFY THE PURCHASING PROCESS.



The findings Majority of respondents (28%) disagree, followed by neutral (26%) and agree (25%). Smaller proportions strongly disagree (13%) and strongly agree (8%), indicating slightly negative but varied responses overall. The results show a leaning toward disagreement, suggesting dissatisfaction or concerns among respondents, though significant neutral and agreement responses indicate mixed opinions and scope for improvement in the system.

SUGGESTIONS

the findings of the study on behavioral factors influencing financial decision-making in e-procurement systems, several suggestions can be provided to improve effectiveness and adoption. Organizations should focus on enhancing awareness and training programs to increase employees' understanding of e-procurement systems, as many respondents showed neutral perceptions. Proper training can reduce uncertainty and improve confidence in using digital procurement tools. It is also recommended to strengthen transparency and accountability mechanisms within e-procurement systems to build trust among users. Since the correlation between transparency and reduction of financial errors is weak, organizations should implement stricter monitoring, auditing, and control systems.Management should emphasize cost efficiency and risk assessment practices, as these are key behavioral factors influencing decision-making. Developing standardized procedures and guidelines can help employees make more consistent and rational procurement decisions.

CONCLUSION

Based on the findings of the study on behavioral factors influencing financial decision-making in e-procurement systems, several suggestions can be provided to improve effectiveness and adoption. Organizations should focus on enhancing awareness and training programs to increase employees' understanding of e-procurement systems, as many respondents showed neutral perceptions. Proper training can reduce uncertainty and improve confidence in using digital procurement tools. It is also recommended to strengthen transparency and accountability mechanisms within e-procurement systems to build trust among users. Since the correlation between transparency and reduction of financial errors is weak, organizations should implement stricter monitoring, auditing, and control systems.Management should emphasize cost efficiency and risk assessment practices, as these are key behavioral factors influencing decision-making. Developing standardized procedures and guidelines can help employees make more consistent and rational procurement decisions.

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