
**A STUDY ON “THE ROLE OF ERP IN OPERATIONS” AT UNO
MINDA LIMITED – SWITCH DIVISION**

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ABSTRACT

Enterprise Resource Planning (ERP) systems have become an essential part of modern business organizations, especially in manufacturing industries where coordination, efficiency, and accuracy are critical. ERP integrates various business functions such as production, inventory, finance, and human resources into a single unified system, enabling smooth information flow and effective decision-making. This study focuses on analysing the role of ERP in improving operational efficiency in Uno Minda Limited – Switch Division, Hosur. The research examines how ERP supports daily operational activities and identifies challenges faced by employees while using the system. The findings reveal that ERP improves efficiency by automating tasks, reducing manual errors, and providing real-time data access. However, issues such as lack of training and system complexity were identified. The study concludes that ERP plays a vital role in improving operational performance and suggests that organizations should focus on proper training and effective system utilization

KEYWORDS: ERP, Operational Efficiency, Manufacturing, Automation, Decision-Making, Inventory Management.

1. INTRODUCTION

Operations management is an important area of management that deals with planning, organizing, and controlling production processes to ensure efficiency and effectiveness in organizations. It involves converting inputs such as raw materials, labor, and technology into finished goods and services that meet customer requirements. Efficient operations

management helps organizations reduce costs, improve quality, and increase productivity.

In today's competitive business environment, organizations are increasingly relying on advanced technologies to manage their operations. One of the most important technologies used in modern organizations is Enterprise Resource Planning (ERP). ERP systems help organizations integrate different business functions into a single system, allowing better communication and coordination between departments.

ERP acts as a central system that connects various departments such as production, inventory, finance, purchasing, and human resources. It stores data in a centralized database and allows employees to access real-time information. This reduces duplication of work, minimizes errors, and improves decision-making. ERP systems also automate routine tasks, which increases efficiency and reduces manual effort.

In manufacturing companies like Uno Minda Limited – Switch Division, ERP plays a significant role in managing production activities, tracking inventory, and ensuring smooth workflow. The system helps in planning production schedules, monitoring stock levels, and coordinating activities between departments. By providing accurate and timely information, ERP enables organizations to improve operational efficiency and respond quickly to changes in demand.

However, despite its advantages, ERP implementation may face challenges such as lack of employee training, system complexity, and resistance to change. These challenges can affect the effective utilization of ERP systems and limit their benefits.

II. LITERATURE REVIEW

Patil and Sharma (2020) This study examines ERP adoption in manufacturing operations. ERP connects production, supply chain, and finance functions. Real-time monitoring improves operational planning. Automation reduces errors and manual work. Standardized workflows improve operational efficiency.

Rao and Iyer (2022) This study analyses ERP implementation in automotive component manufacturing. ERP integrates production, inventory, and supply chain operations. Real-time data helps managers monitor production activities effectively. Workflow standardization improves operational consistency. ERP improves inventory planning and resource allocation.

Verma and Nair (2021) This study examines ERP's impact on manufacturing operations and supply chain coordination. ERP provides centralized operational data across departments. Real-time monitoring improves responsiveness and planning accuracy. Automation reduces

manual operational tasks.

Kulkarni and Desai (2022) The study of ERP connects production planning, inventory management, and procurement systems. Real-time information improves coordination between departments. Automation reduces operational delays and manual errors. Workflow standardization improves operational efficiency.

Kumar and Sharma (2023) This study investigated ERP's role in supply chain management and operations. Their research revealed that ERP integrates procurement, production, and logistics processes effectively. ERP reduces manual errors and increases operational accuracy. The system ensures standardized procedures for inventory and production control.

Qureshi et al. (2024) This study ERP implementation in manufacturing firms and its effect on operational efficiency. Their research showed that ERP integrates production, inventory, procurement, and finance into a single system. This integration allows managers to access real-time information for better decision-making.

Hivale, Garad, and Talole (2025) This study analyze the impact of ERP systems on operational performance in companies. Their study found that ERP connects finance, human resources, production, and supply chain functions. The centralized database improves information flow between departments.

III. OBJECTIVES OF THE STUDY

- To analyze the usage of ERP modules in operational activities.
- To evaluate the impact of ERP on operational efficiency and productivity.
- To examine the role of ERP in supporting decision – making processes.
- To study employee perception and satisfaction towards ERP usage.
- To identify challenges and barriers faced in using ERP systems.

IV. RESEARCH METHODOLOGY

This study adopts a descriptive research design to analyze the role of ERP in uno minda limited.

Data Collection

- **Primary Data:** Collected through structured questionnaires (Google Forms)
- **Secondary Data:** Journals, articles, and company record

Sample Size

- 100 respondents (Managers, Engineers, Technicians, Supervisors, Operators)

Sampling Method

- Convenience Sampling

Tools for Analysis

- Percentage Analysis
- Chi-square Test
- Correlation
- ANOVA
- Charts and Graphs

Research Objectives

- To understand ERP system in operations.
- To analyse its usage in the organization.
- To evaluate its impact on operational efficiency.
- To study its role in decision-making.

V. DATA ANALYSIS AND INTERPRETATION

DEMOGRAPHIC ANALYSIS

The demographic analysis shows that most respondents are male (76%) and belong to the 31–40 age group (45%), followed by 21–30 years (25%). The majority are married (85%), indicating experienced employees with family responsibilities. In terms of education, diploma holders (38%) are the highest, followed by school level and undergraduate. Most respondents are operators (40%), showing strong involvement in operational work.

The income level is mainly between Rs. 30,001–50,000, indicating moderate earnings. Most employees (46%) have more than 9 years of experience, which helps in better understanding and usage of ERP system.

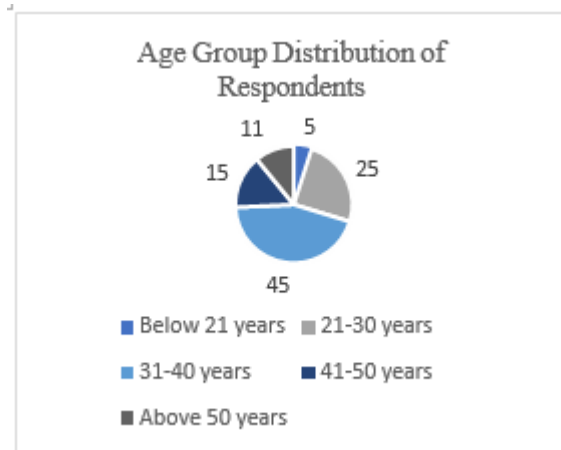


Figure 1 Age.

Interpretation

Most respondents belong to the 31–40 age group (45%), indicating a strong presence of middle-aged employees in the study. This is followed by the 21–30 age group (25%) and the 41–50 category (15%). A smaller proportion of respondents are above 50 years (10%) and below 21 years (5%), showing that very few young and senior individuals are included in the study.

Figure 2 Gender

Interpretation

Male respondents (77) are higher than female respondents (24), indicating greater male participation in the study. Overall, the sample is dominated by males, forming the majority of respondents.

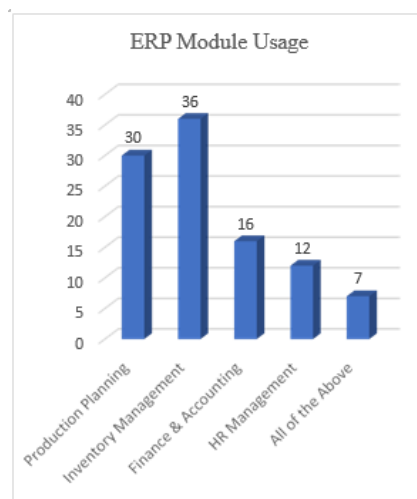


Figure 3 ERP Module Usage

Interpretation

Inventory Management (36) is used by the highest number of respondents, followed by Production Planning (30). Finance & Accounting (16) and HR Management (12) are used by fewer respondents. A small number of respondents (7) use all modules, indicating that most employees use specific ERP modules based on their job roles.

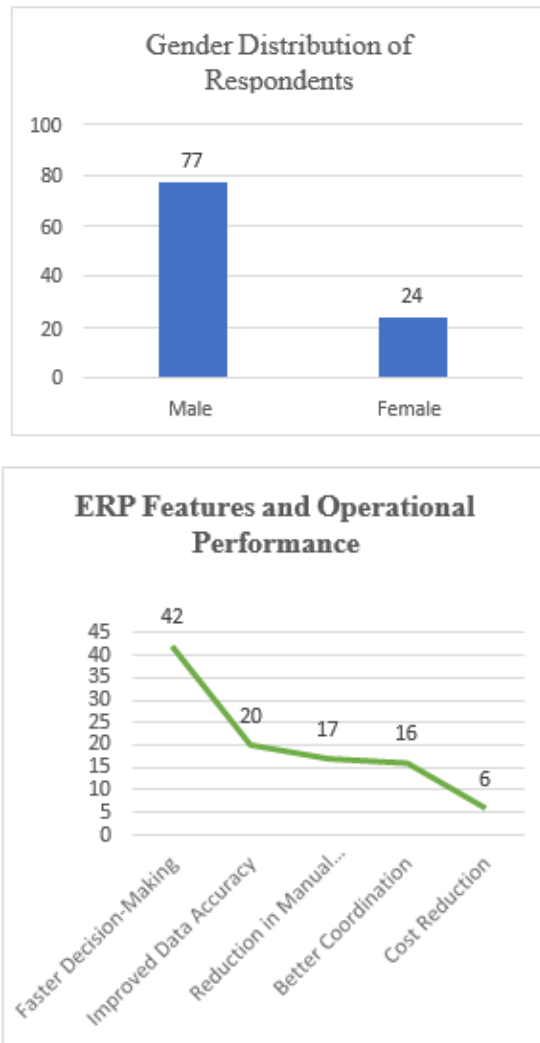


Figure 4 ERP Features and Operational Performance

Interpretation

Faster decision-making (42%) is the main factor improving operational performance through ERP. Automation of tasks (36%) is the most impactful feature, showing efficiency improvement. The production stage (46%) benefits the most from ERP implementation. This highlights the importance of ERP in improving planning, scheduling, and overall operations.

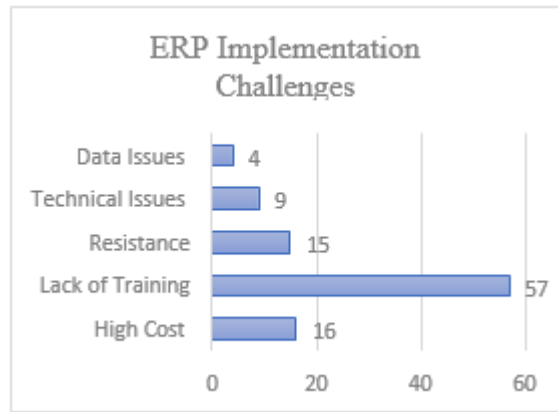


Figure 5 ERP Implementation Challenges.

Lack of proper training (56%) is the major challenge in ERP implementation. Other issues include high cost (16%), resistance to change (15%), and technical problems (9%). This shows that without proper training, the full benefits of ERP cannot be achieved.

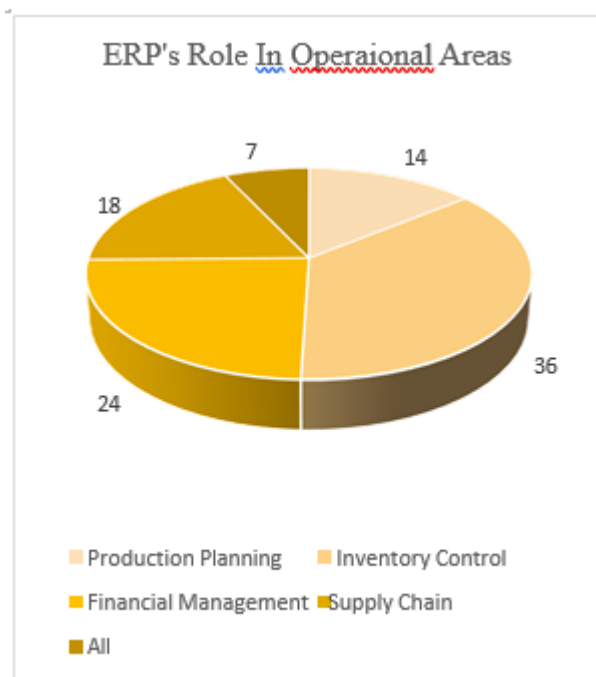


Figure 6 ERP'S ROLE IN OPERATIONAL AREAS

Interpretation

Inventory Control (36) is the most important area improved by ERP, followed by Financial Management (24) and Supply Chain (18). Production Planning (14) is used by fewer respondents. A small number (7) selected all areas, showing that ERP mainly supports specific functions rather than all areas equally.

STATISTICAL ANALYSIS

1. Chi Square Test

The Chi-Square test indicates no statistically significant association between Age and the perceived primary components of an ERP system ($\chi^2=15.812$, $df=16$, $p=.464$), as the p-value exceeds the standard .05 threshold. Therefore, the null hypothesis is accepted and the alternative hypothesis is rejected. Furthermore, the results should be interpreted with caution because 72% of cells have expected counts less than five, which violates the basic assumptions required for a valid Pearson Chi-Square test.

This suggests that respondents across all age groups perceive the primary components of an ERP system - such as real-time information and process automation - in a broadly similar manner, regardless of age.

Interpretation

The results show no significant relationship between age and the primary components of ERP, as the p-value is greater than 0.05. This means all age groups have similar opinions about ERP components, with no major difference in preferences.

Correlation Test

The Pearson correlation shows a weak positive relationship ($r = .143$) between Occupation and the types of ERP modules used in the organization, which is not statistically significant ($p = .154$). The non-parametric Kendall's tau_b ($\tau = .128$, $p = .161$) and Spearman's rho ($\rho = .151$, $p = .132$) also confirm no significant association. Since all p-values exceed the .05 significance level, the null hypothesis is accepted. This indicates that an employee's occupational role - whether Operator, Technician, Supervisor, Engineer, or Manager - does not significantly determine which ERP modules are utilized. ERP module usage appears to be driven more by organizational policy and departmental requirements than by individual job designation.

Interpretation

The results show no significant relationship between occupation and the ERP modules used, as the p-value is greater than 0.05. This means employees in different job roles use ERP modules in a similar way, with no major difference based on occupation.

2. Anova Test

The ANOVA results indicate no statistically significant difference across the groups of the most important factor for improving operational performance through ERP ($F(4, 96) = 1.312, p = .270$).

Since the p-value exceeds the .05 significance level, the null hypothesis is accepted and the alternative hypothesis is rejected. This suggests that work experience does not significantly influence which operational performance factor employees consider most important when using ERP.

Interpretation

The results show no significant difference between work experience and the most important factor for improving operational performance through ERP, as the p-value is greater than 0.05. This means employees with different experience levels have similar opinions, with no major difference.

VI. FINDINGS

- Inventory management is the most widely deployed ERP module (36%), followed by production planning (30%), highlighting ERP's primary role in material and production control.
- Real-time information access is considered the most critical ERP component (40%), emphasizing the operational value of instantaneous data in fast-paced manufacturing.
- Automation of tasks (36%) is the ERP feature with the greatest impact on work efficiency, reducing repetitive manual processes and enabling employees to focus on higher-value activities.
- Faster decision-making (42%) is the most important factor in improving operational performance through ERP, confirmed by access to accurate, real-time performance reports.
- The production stage gains the highest benefit from ERP implementation (46%), validating ERP's direct impact on core manufacturing workflows.
- ERP is most beneficial in inventory control (36%), supporting stock management, reducing shortages, and preventing excess inventory.
- Cost reduction is recognized as the primary strategic importance of ERP by 48% of respondents, reflecting its long-term financial impact.
- Lack of training (56%) is the dominant ERP implementation

challenge, indicating a critical gap between system capability and user proficiency.

- Statistical analyses (Chi-Square, Correlation, ANOVA) confirm that ERP perceptions and usage patterns are independent of demographic factors such as age, occupation, and experience — demonstrating ERP's universal applicability across employee categories.
- Overall, employees hold a strongly positive attitude towards ERP, and the system is credited with enhanced productivity, transparency, communication, and goal alignment.

VII. SUGGESTIONS

- The organization should provide regular training programs to improve employees' understanding of ERP systems. Continuous training will help increase efficiency and reduce errors.
- Efforts should be taken to simplify ERP systems to make them more user-friendly. This will improve employee acceptance and ease of operation.
- The company should create awareness about different ERP modules among employees. This will help in better utilization of system features.
- Regular updates and maintenance of ERP systems should be ensured. Updated systems improve performance, security, and adaptability.
- Management should actively support ERP implementation and encourage its usage. Strong leadership support will motivate employees and improve outcomes.
- The organization should enhance communication and integration across departments through ERP. This will improve coordination and reduce duplication of work.
- Continuous monitoring and evaluation of ERP performance should be carried out. This helps in identifying issues and improving overall effectiveness.

VIII. CONCLUSION

The study concludes that ERP systems play a vital role in improving organizational performance, efficiency, and decision-making. It helps in enhancing productivity, coordination, and communication among employees. Although ERP implementation faces certain challenges such as lack of training and system complexity, its benefits outweigh the limitations.

The statistical analysis shows that demographic factors like age and occupation do not have a significant impact on ERP effectiveness and talent acquisition strategies. This indicates that ERP systems are universally applicable across different employee groups. Overall, the study

highlights that effective implementation and proper utilization of ERP systems can lead to improved operational efficiency and better organizational outcomes.

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