

A Study on AI and Automation for Reducing Employee Workload and Improving Operational Efficiency in Access Management and Organizational Processes in MNC's.

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Abstract- In the modern business environment, multinational corporations (MNCs) are increasingly relying on Artificial Intelligence (AI) and automation technologies to improve operational efficiency and reduce employee workload. Traditional access management processes often involve repetitive manual activities such as user access requests, approvals, modifications, and de-provisioning, which consume considerable time and may lead to operational delays and human errors.

This study examines the role of AI, automation, and Lean process improvement approaches in streamlining access management and organizational operations within multinational corporations. The research mainly focuses on understanding employee perceptions regarding repetitive workload, operational efficiency, and the effectiveness of automation-driven solutions. Primary data for the study was collected through a structured questionnaire distributed among employees working in departments such as IT Support, Software Development, Finance, and Data Analytics. The collected responses were analyzed using percentage analysis and graphical interpretation methods.

The findings of the study indicate that employees strongly believe AI and automation technologies can reduce repetitive work, improve process speed, minimize errors, and enhance overall operational efficiency. The study also highlights that automation enables employees to focus more on strategic and value-added activities instead of routine administrative tasks.

The research concludes that the integration of AI, automation, and Lean methodologies can significantly improve workflow efficiency, support cost optimization, and enhance organizational productivity in multinational corporations.

Keywords: Artificial Intelligence, Automation, Access Management, Operational Efficiency, Employee Workload, Cost Optimization

INTRODUCTION: In today's digital business environment, multinational corporations manage large volumes of employee data, applications, and system access requests on a daily basis. Access management has therefore become an essential part of organizational operations because it ensures that employees receive appropriate access to systems, applications, and sensitive information according to their roles and responsibilities.

However, many organizations still depend heavily on manual access management processes. Tasks such as account creation, password resets, approvals, access modifications, and de-provisioning are often repetitive and time-consuming. These activities increase employee workload and may negatively affect productivity, operational efficiency, and service delivery timelines.

Manual processes also increase the chances of human error, delays, compliance issues, and security risks. As organizations continue to grow and adopt digital transformation strategies, there is an increasing need for faster, smarter, and more efficient operational systems.

Artificial Intelligence (AI), automation, and Lean methodologies are emerging as effective solutions for improving organizational efficiency. Lean principles help organizations identify unnecessary activities and reduce operational waste, while AI-based technologies improve decision-making and automate repetitive tasks. Automation tools further help organizations simplify routine processes, reduce manual intervention, and improve workflow management.

The integration of AI and automation within access management systems can help organizations improve process speed, reduce operational costs, minimize errors, and enhance employee productivity. Employees can also focus more on analytical and strategic work rather than repetitive administrative activities. This study aims to understand how AI and automation can support workload reduction and operational efficiency in multinational corporations. It also examines employee perceptions regarding automation technologies and their effectiveness in improving access management processes.

Research Questions

Research Question 1

How do manual and repetitive access management processes affect employee workload and productivity in multinational corporations?

Research Question 2

How can AI and automation improve operational efficiency and reduce workload in access management processes?

Research Question 3

How does AI-driven automation help in reducing human errors and improving process accuracy?

Research Question 4

What impact do AI and automation have on cost optimization and process efficiency in multinational corporations?

Objectives of the Study

1. To understand the impact of repetitive manual tasks on employee workload.
2. To analyze the role of AI and automation in improving operational efficiency.
3. To study employee perceptions regarding automation technologies.
4. To evaluate how automation contributes to workload reduction and cost optimization.
5. To examine the effectiveness of AI-driven access management systems.

Scope of the Study

The study focuses on employees working in multinational corporations across departments such as IT Support, Software Development, Finance, and Data Analytics. The research mainly examines the impact of AI and automation on operational efficiency, workload reduction, and access management processes.

Need for the Study

Organizations today are continuously looking for ways to improve operational efficiency while reducing costs and employee workload. Since access management processes are often repetitive and dependent on manual efforts, there is a growing need for automation-driven solutions.

This study is important because it helps understand employee perspectives regarding AI and automation technologies and their practical role in improving organizational processes.

REVIEW OF LITERATURE

The adoption of Artificial Intelligence (AI), automation technologies, and Identity and Access Management (IAM) systems has

significantly transformed organizational operations in recent years. Researchers and industry experts have highlighted the importance of AI-driven solutions in reducing manual workload, improving efficiency, strengthening security, and supporting cost optimization.

1. Gartner (2022), in its report on access management solutions, explained that AI-powered platforms such as Okta and Ping Identity improve authentication systems and reduce unauthorized access risks through machine learning and adaptive access control. The report also emphasized that automation helps organizations optimize operational costs by reducing manual dependency.
2. Forrester (2021) discussed the growing importance of AI-enabled identity governance systems. According to the report, automation simplifies activities such as access certification and role management, which significantly reduces the time required for compliance and operational reviews.
3. Chen and Zhang (2020) examined AI-enabled automated access control systems in cloud environments. Their research showed that predictive access provisioning and anomaly detection improve onboarding efficiency and reduce unnecessary access allocation within organizations.
4. Okta's State of Identity Report (2023) highlighted that AI and automation technologies improve operational efficiency by reducing helpdesk workload and improving just-in-time access management practices. The report also noted that organizations adopting AI-driven identity management systems experienced faster operational processes and improved workflow efficiency.
5. IBM's Cost of a Data Breach Report (2019) found that organizations using AI-based security and access management systems experienced lower breach-related costs compared to organizations relying on traditional manual processes. The report emphasized the importance of automation in reducing security risks and improving organizational control.
6. Saviynt (2022) evaluated the economic impact of cloud-based IAM systems and reported significant return on investment through automation. The study explained that organizations were able to reduce audit efforts, improve workflow speed, and lower operational expenses.
7. Li et al. (2023) explored the use of machine learning in intelligent access management systems. Their findings showed that AI-driven automation improved access request processing efficiency and reduced operational delays in multinational enterprises.
8. Microsoft (2021) explained how AI-based identity governance tools improve workflow automation and entitlement management within organizations. The study highlighted that automation technologies help reduce provisioning costs and improve operational performance.
9. Ping Identity (2024) discussed the role of AI-powered access optimization in detecting access sprawl and improving compliance processes. The report suggested that automation significantly improves process speed and reduces unnecessary licensing costs.
10. Deloitte (2020) concluded that organizations implementing AI and robotic process automation (RPA) in identity and access management achieved better operational efficiency, faster access

request fulfillment, and reduced administrative costs.

11. Overall, previous studies clearly indicate that AI and automation technologies play a major role in improving operational efficiency, reducing manual workload, minimizing human errors, and supporting digital transformation initiatives in multinational corporations.

HYPOTHESES FRAMING

H1: Manual and repetitive tasks significantly increase employee workload and reduce productivity.

H2: AI and automation significantly improve operational efficiency in access management processes.

H3: Employees positively support the adoption of AI and automation tools in organizational operations.

RESEARCH METHODS

The study follows a descriptive research design to analyze employee perceptions regarding AI and automation in access management processes. Primary data was collected using a structured questionnaire distributed through Google Forms.

The questionnaire consisted of demographic questions, Likert scale-based questions, and multiple-choice questions related to workload, repetitive tasks, operational efficiency, and automation benefits.

The sampling method used for the study was convenience sampling. The sample frame included employees working in multinational corporations across departments such as IT Support/Operations, Software Development, Finance, and Data/Analytics. A total of 104 responses were collected and analyzed.

The collected data was analyzed using percentage analysis and graphical representation methods such as pie charts and bar charts.

RESULTS

Statistical Analysis and Interpretation

The collected survey data was analyzed using percentage analysis and graphical representation techniques to understand employee perceptions regarding workload, operational efficiency, and the role of AI and automation in access management processes within multinational corporations.

The demographic analysis shows that respondents belong to diverse departments such as IT Support/Operations, Software Development, Finance, Data/Analytics, and other operational functions. This indicates that access management and operational efficiency are cross-functional concerns impacting multiple business areas.

The analysis further reveals that a majority of employees are involved in repetitive and manual tasks as part of their daily work activities. Most respondents agreed that manual processes consume significant time and increase workload, which negatively affects employee productivity and operational performance. The findings indicate that traditional operational processes continue to create inefficiencies and increase dependency on manual effort.

The survey results also highlight a strong positive perception toward Artificial Intelligence (AI) and automation technologies. Employees believe that AI-driven automation can significantly reduce repetitive tasks, improve process speed, minimize human errors, and streamline workflow management. Respondents also agreed that automation enables employees to focus more on strategic and higher-value activities rather than routine operational tasks.

Furthermore, the findings indicate strong organizational support for AI and automation adoption. Most respondents believe automation technologies can substantially reduce workload and improve operational efficiency. Employees also expect noticeable improvements in process turnaround time and overall productivity through automated systems.

Overall, the statistical analysis clearly demonstrates that AI and automation-driven approaches have strong potential to improve access management processes, reduce operational inefficiencies, and support cost optimization in multinational corporations.

Department	Number of Respondents
IT Support / Operations	38
Other	22
Software Development	17
Data/Analytics	17
Finance	10
Total	104

Table 1: Department-wise Distribution of Respondents

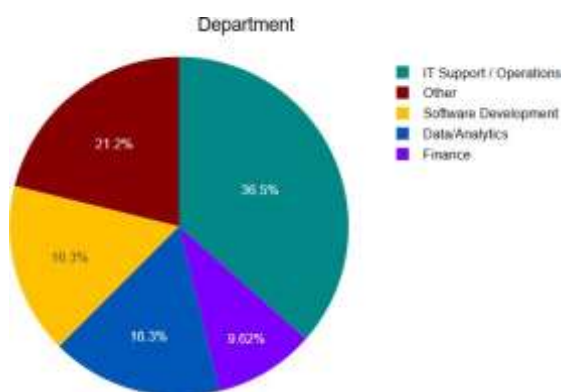


Figure 1: Department-wise Distribution of Respondents

The above figure represents the distribution of respondents across different departments. A majority of respondents belong to IT Support/Operations, indicating strong

participation from operational teams directly involved in access management and workflow activities.

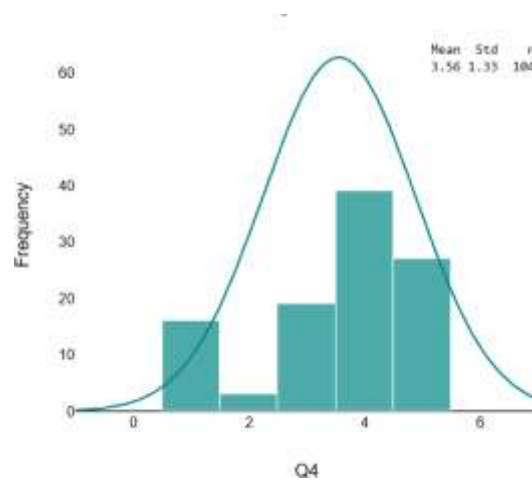


Figure 2: Repetitive Tasks and Workload Analysis

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neutral
- 4 = Agree
- 5 = Strongly Agree

The graphical analysis indicates that most employees agree that repetitive tasks and manual processes significantly increase workload and consume substantial time during daily operations. This highlights the need for process automation and operational streamlining.

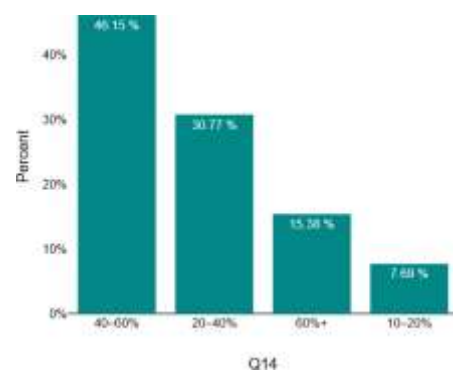


Figure 3: Employee Perception Toward AI & Automation

The above figure shows that employees have a strong positive perception toward AI and automation technologies. Most respondents believe that AI can reduce repetitive work,

improve process speed, and enhance operational efficiency.

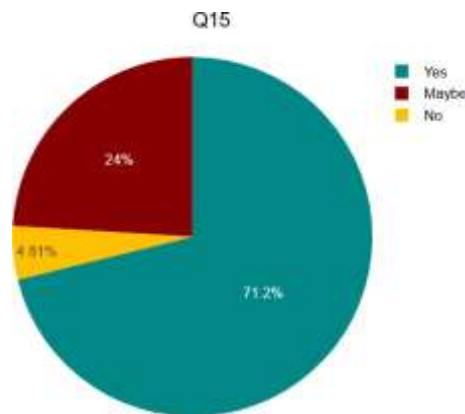


Figure 4: Expected Workload Reduction Through Automation

The majority of respondents believe that AI and automation technologies can significantly reduce employee workload.

Employees expect automation to simplify operational activities and allow them to focus more on analytical and strategic tasks.

HYPOTHESES TESTING

The hypotheses were tested based on the responses collected through the employee survey. The analysis focused on understanding the relationship between repetitive workload, operational efficiency, and the adoption of AI and automation technologies within multinational corporations.

The survey findings indicate that a majority of respondents agreed that manual and repetitive tasks increase workload and negatively affect productivity. Employees also showed a strong positive perception toward AI and automation, believing that these technologies can reduce repetitive tasks, improve process speed, minimize errors, and enhance operational efficiency.

Furthermore, most respondents expressed support for the adoption of AI and automation tools within organizational operations. Based on

the analysis and interpretation of the collected data, all proposed hypotheses were accepted.

Hypotheses Statement	Result
H1: Manual and repetitive tasks significantly increase employee workload and reduce productivity.	Accepted
H2: AI and automation significantly improve operational efficiency in access management processes.	Accepted
H3: Employees positively support the adoption of AI and automation tools in organizational operations.	Accepted
H4: AI and automation help reduce human errors and improve process accuracy.	Accepted
H5: AI-driven automation contributes to workload reduction and cost optimization in multinational corporations.	Accepted

Table 2: Hypotheses Testing Result

Interpretation of Hypotheses Testing

The hypotheses testing results clearly indicate that employees experience workload pressure due to repetitive and manual processes. The analysis also confirms that AI and automation technologies are positively perceived and are considered effective in improving process efficiency, reducing operational delays, minimizing errors, and supporting cost optimization.

The findings strongly support the implementation of AI and automation-driven approaches in access management systems within multinational corporations.

DISCUSSION

The findings of the study indicate that employees working in multinational corporations experience a significant level of repetitive and manual workload in their daily operations. Manual processes related to operational activities and access management consume considerable time and negatively impact employee productivity and efficiency.

The survey results reveal a strong positive perception toward Artificial Intelligence (AI) and automation technologies. Employees

believe that AI and automation can reduce repetitive tasks, improve process speed, minimize human errors, and enhance operational efficiency. The analysis also highlights that automation enables employees to focus more on strategic and higher-value tasks instead of routine operational activities.

The study findings are consistent with previous literature, which emphasizes the growing importance of AI-driven automation and Lean practices in improving workflow efficiency and reducing operational costs. Employees also expressed strong support for the adoption of AI and automation tools within organizations, indicating readiness for digital transformation and process optimization. Overall, the discussion highlights that integrating AI, automation, and Lean approaches can significantly streamline access management processes and contribute to operational efficiency and cost optimization in multinational corporations.

FINDINGS AND CONCLUSION

Findings

- Employees are highly involved in repetitive and manual operational tasks.
- Manual processes increase workload and negatively affect productivity.
- Employees strongly believe that AI can reduce repetitive tasks and improve operational efficiency.
- Automation is perceived as an effective solution for improving process speed and reducing human errors.
- Most respondents expect considerable workload reduction through automation technologies.
- Employees show strong support for implementing AI and automation tools in organizational operations.

- AI and automation-driven approaches can contribute to operational efficiency and cost optimization in multinational corporations.

CONCLUSION

The study concludes that traditional manual processes continue to create operational inefficiencies and increase employee workload within multinational corporations. Repetitive tasks consume significant time and reduce overall productivity.

The findings clearly indicate that AI and automation technologies have strong potential to streamline access management processes, reduce manual effort, minimize errors, and improve operational efficiency. Employees also demonstrate a positive attitude toward adopting automation-driven solutions within organizational operations.

Therefore, multinational corporations should focus on implementing AI-driven automation and Lean process improvement approaches to enhance workflow efficiency, reduce operational costs, and improve overall organizational performance.

LIMITATIONS AND FUTURE RESEARCH SCOPE

Limitations

The study is limited to a sample size of 104 respondents.

- The research is primarily based on employee perceptions and survey responses.
- Time constraints limited deeper organizational analysis.
- The study mainly focuses on operational efficiency rather than technical implementation details.

- Responses may vary across different industries and organizational environments.

Future Research Scope

- Future studies can focus on industry-specific analysis of AI-driven access management systems.
- Research can be extended to larger sample sizes and multiple organizations for broader insights.
- Further studies can analyze real-time performance and cost savings achieved through automation.
- Advanced technologies such as machine learning, predictive analytics, and Zero-Trust security models can be explored in future research.
- Future research can also evaluate the long-term impact of AI and automation on employee productivity and organizational growth.

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