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Factors Affecting the Success of ERP Implementation Among Selected Organizations: A Proposed Operational Strategies

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ABSTRACT

The successful implementation of Enterprise Resource Planning (ERP) systems relies heavily on the interplay between management-specific factors and operational-specific factors. This study investigates these critical success factors, focusing on their impact on organizational performance. Management-specific factors, including top management support, package selection, and organizational fit, provide strategic direction and resources, ensuring alignment with operational goals. The research employed a quantitative approach to gather data from employees of selected organizations that have implemented ERP systems. The survey targeted employees from selected organizations who use ERP systems. The responses were analyzed using statistical techniques such as frequency analysis, mean, standard deviation, Spearman's rank correlation, and multiple regression to identify the relationships and impacts of various CSFs on ERP implementation success. The study reveals that effective project management significantly enhances package selection, while comprehensive training improves organizational fit. Communication emerges as a pivotal element, influencing all aspects of ERP implementation. These findings underscore the necessity for a balanced approach that integrates both management and operational strategies to achieve optimal ERP outcomes and organizational efficiency.

Keywords: ERP implementation, critical success factors, project management, training and education, communication, top management support, package selection, organizational fit

INTRODUCTION

ERP is a business software system that provides an integrated solution for organizations regarding their information processing needs while efficiently and effectively managing resources like materials, human resources, and finance (Adiasih et al., 2020). It is utilized to manage day-to-day business activities such as accounting, procurement, project management, risk management and compliance, and supply chain operations. A complete ERP suite also includes enterprise performance management, software that helps plan, budget, predict, and report an organization's financial results (Oracle, 2022). In a more profound sense, ERP allows different departments to communicate and share information more easily with the rest of the company. It collects information about the activity and state of different divisions, making this information available to other parts, where it can be used productively (Investopedia, 2022).

The researcher conducted this study to encourage further other researchers, business analysts, organizations, shareholders, and even customers to identify the trends knocking for a more operations-oriented enterprise, with hopes that considering these applications will prepare the organizations for

supply chain shocks and other global economic changes that may affect them. To fulfill the research objectives mentioned, the researcher used a survey questionnaire comprising the list of the critical success factors (CSF) of ERP implementation as anchored from the framework of Rizkiana, Ritchi & Adrianto (2021). It was designed and distributed among the organization's employees that operate the system daily. The quantitative findings of this study were treated using frequency analysis, mean, standard deviation and spearman's rank correlation and multiple regression.

Top Management Support

P. Hankin et al., 2021 states that key managers should be interested enough and must be convinced by the importance of the project. Top management are the ones who provide the necessary resources in any projects of an organization. They have the authority or power over project success. The responsibilities entail ensuring the provision of leadership, making available such resources that are necessary for implementing an ERP system as well as checking up on progress. Additionally, it should fully commit itself throughout all the implementation phases, ensuring that everything runs smoothly. Thus, top management support has been consistently identified as the most important and crucial success factor in an ERP system implementation (Fadelelmoula, A., & Abdulaziz, P. 2018).

Package Selection

Adequate ERP software selection enhances service quality (Qureshi, M.R.N.M. 2022). ERP is an application system that integrates information distribution from all functional areas inside a company through a centralized database. It is accessible through customized interfaces and communication. Additionally, it is a software package that facilitates the incorporation of all business operations and functions across an entire organization. The ERP system plays a crucial role in a company as it automates manual business activities, particularly through integration. This leads to increased efficiency in several areas such as service, customer relations, production, and distribution (Putri, A., Lubis M., & Azizah A. 2020). An ERP system inherently influences a company's strategy, organization, and mindset; hence it is crucial to choose the software package thoughtfully. It varies based on the business's operations and requirements (Kouriati, A., Bournaris, T. & Manos, B. 2020).

Organizational Fit

Choosing the right ERP solution is crucial for the success of ERP projects. Prior to obtaining an ERP system, firms typically do a needs analysis and evaluate the available ERP software packages in the market. Choosing the incorrect software package can result in adopting an IT infrastructure and applications that do not align with the organization's goals or business processes, therefore reducing the likelihood of ERP success (Chatti, H., Asfoura, E., & Kassem, G. 2020). In 2017, Arvidson and Kojic stated that an ERP system must align with the business processes of the organization for successful implementation, as advocated by several researchers favoring the vanilla approach to ERP system implementation.

Project Management

Project management in an ERP implementation encompasses the identification of a clear scope and project plan for the entire implementation process, setting a realistic timeline for the project and nominating the project leader to track the implementation progress. Through project management, organizations are able to generate items that can be viewed and examined by other individuals. These procedures include project schedules, risk registers, issue logs, and status reports (Battleson D., & Mathiassen L. 2020). Project Management organizes the application of expertise and information. It also tracks the advancement and

attainment of goals of the ERP project. The formal project implementation plan outlines milestones, project activities, personnel allocation, and organizes the ERP project process.

Training and Education

Training and Education of users are essential to the implementation of highly complex integrated systems such as ERP systems. The company should provide training to all employees who are responsible for the system. Provision of such qualified and training knowledge will result in the optimization of the ERP System. Training should be complete, given an adequate time, improves system understanding and should improve user's competencies (Putri, A., Lubis M., & Azizah A. 2020). The complexity of enterprise resource planning (ERP) systems causes users to undergo significant behavioral shifts and steep learning curves. ERP initiatives call for a great amount of effort and commitment to the project if they are to be successful. Failure to implement a training program leads to a poor level of acceptance, which in turn slows down the overall progress of the project. Users will need to be retrained in the use of certain application modules and retrained in regard to new technologies in order to do this. The most important users of a firm should not only be knowledgeable about the procedures that the company uses, but they should also be aware of the information systems that are used in the particular department. If users have the perception that they are the ones who choose and make the decision, then involving them in the process by which the possible ERP system is implemented might help reduce their opposition to the system.

Communication

According to Khan & Anwar (2019), communication is one of the most important critical success factors of an ERP System implementation. Communication provides better information access for planning and management during the project implementation. Planning for communication ensures that there is effective information transformation at all levels among stakeholders (Qureshi, M.R.N.M. 2022). For an ERP installation to be effective, it is important that employees are informed of the goals, scope, activities, and changes that will be executed (Shimange, P., & Pillay, K. 2023).

Research Questions

To fulfill the defined research objectives, this researcher seeks to answer the following questions:

1. What are the critical success factors among selected organizations in terms of:

1.1 Operational Specific

- 1.1.1 Project Management;
- 1.1.2 Training and Education;
- 1.1.3 Communication

1.2 Management Specific

- 1.2.1 Top Management Support;
- 1.2.2 Package Selection;
- 1.2.3 Organizational Fit?

2. What significant relationship exists between the two (2) critical success factors operational and management specific when they are treated as a whole and split per company?
3. Do the operational specific affect the management specific factors when the organization is treated as a whole and split per company?
4. Do the management specific affect the operational specific factors when the organization is treated as a whole and split per company?

5. Based on the findings what operational strategies can be drawn up as a basis to resolve the issues and concerns encountered?

METHODOLOGY

This research used a quantitative research method in data collection from the respondents. A descriptive approach was used to obtain information concerning such critical success factors in ERP System implementation. Furthermore, the researcher used purposive sampling technique in choosing respondents based on the established criteria made by the researcher in its questionnaire. Quantitative data were collected by the researcher using a survey questionnaire. The survey questions used in the questionnaire were adapted from related research. Before the distribution of questionnaires to employees. The selection of the company or organization was based on information obtained by the researcher while conducting this study. The researcher adopted a quantitative approach to gather all necessary information for the study. A survey questionnaire that uses a 4-point Likert scale was used in the data collection. Survey questionnaire was distributed to employees of the selected company or organization that have successfully implemented their own ERP System.

IBM SPSS Statistics was used to analyze the acquired data to provide relevant insight and reach conclusions. The precise statistical analyses were determined by the study's goals and research topics. The internal consistency of the survey forms was examined using Cronbach's Alpha. When the alpha coefficient is 0.8 and above, the survey items will be accepted by the researcher, otherwise, it will be removed from the questionnaire.

Frequency. It was used to describe the number of responses regarding the profile of the respondents and how they assess the critical success factors and the issues encountered during the implementation.

Percentage. It was used to describe the ratio of responses regarding the profile of the respondents and how they assess the critical success factors and the issues encountered during the implementation.

Mean. It was used to get the average frequency of the responses in terms of the respondent's assessment of the critical success factors and the issues encountered during the implementation.

Formula:

Standard Deviation. It was used to measure the dispersion of the responses relative to the mean of the responses in terms of the respondent's assessment of the critical success factors and the issues encountered during the implementation.

Shapiro-Wilk test. The researcher used Shapiro-Wilk test to check if the data was normally distributed.

Spearman's rank correlation. It is the non-parametric version of the Pearson product-moment correlation. Spearman's correlation coefficient, (ρ, also signified by r_s) measures the strength and direction of association between two ranked variables.

Formula:

Multiple linear regression. This test was used to examine the relationship between a single dependent variable and multiple independent variables.

Cronbach's Alpha. The researcher used Cronbach's alpha for the pre-test to determine the survey's reliability in the study. This is to ensure that each question on the questionnaire is clear and comprehensible to respondents.

RESULTS

Table 1.1 Operational Specific

Table 1.1.1 Project Management

	Mean	Interpretation
The tasks to be performed during ERP project are clearly defined	3.20	Observed
There is schedule for the ERP project and deadline	3.20	Observed
There is a clear document for the ERP Project	3.42	Highly observed
There is an internal teamwork during the ERP implementation	3.14	Observed
There is a leader willingness within the team towards the project	3.10	Observed
Overall	**3.21**	**Observed**

Legend: 1.00 - 1.75: Not Observed, 1.76 - 2.50: Slightly Observed, 2.51 – 3.25, Observed, 3.26 – 4.00: Highly Observed

Overall resulting mean of 3.21 suggests that their general response is Observed. Among the five attributes, only one rated as Highly observed, while remaining four are rated as observed. Highest mean is 3.42 which denotes that they Highly observed about the attribute "There is a clear document for the ERP Project" On the other hand, lowest mean is 3.10 which implies that they generally Observed about the attribute " There is a leader willingness within the team towards the project."

The result of the study corroborates with the statement of Anderson (2023) which stated that Enterprise Resource Planning (ERP) serves as a comprehensive platform enabling companies to efficiently manage and integrate key aspects of their operations. This software plays a crucial role in resource planning by consolidating all necessary processes within a unified system. Beyond this, ERP systems encompass functions like planning, inventory procurement, sales, marketing, finance, and human resources. They have evolved into web-based applications accessible remotely. The benefits of ERP include seamless communication across departments, a centralized source of information, and precise, real-time reporting of data.

Table 1.1.2 Training and Education

	Mean	Interpretation
Specific user training needs were identified early in the implementation	3.36	Highly observed
A formal training program has been developed to meet the requirements of ERP	3.33	Highly observed
The time for ERP training is enough for most of the employee	3.17	Observed
The trainings provided improves the confidence of the users	3.22	Observed
The trainings provided improves the understanding of the users regarding the ERP System	3.35	Highly observed
Overall mean	**3.28**	**Highly observed**

Legend: 1.00 - 1.75: Not Observed, 1.76 - 2.50: Slightly Observed, 2.51 – 3.25, Observed, 3.26 – 4.00: Highly Observed

Overall resulting mean of 3.28 suggest that their general response is Highly observed. Three attributes are rated as Highly observed while the remaining two attributes are rated as Observed. Highest mean is 3.36

which denotes that they Highly observed about the attribute "Specific user training needs were identified early in the implementation" On the other hand, lowest mean is 3.17 which is about the attribute " The time for ERP training is enough for most of the employee."

Through the analysis of the table that addresses training and education for ERP implementation, it can be deduced that training in general receives good perception as it has an overall mean that portrays that training is highly observed. This agreement goes to mean that education and training plays a critical role during the implementation process of ERP.

The greatest value was assigned to the identification of specific user training requirements at a relatively early stage of the implementation which is one of the identified outstanding characteristics of the system. This improves the need to undertake early and targeted training on the success of the implementation of ERP. The effectiveness of these structured educational initiatives was also manifested in the respondents' favorable evaluations of the advancement in the formal training programs aspect, as well as the improvement of the users' understanding of the ERP System.

The result of the study corroborates with the statement of Latifi (2020), which asserts that with proper training and education, ERP systems often become the standard solution for many companies after a careful and thorough evaluation of which ERP system best suits their specific needs. This alignment between the study's findings and Latifi's statement underscores the critical importance of investing in comprehensive training and education for employees. When companies take the time to educate their workforce on the functionalities and benefits of ERP systems, employees are better equipped to leverage these tools effectively, maximizing their potential to streamline operations, enhance productivity, and support strategic decision-making.

Table 1.1.3 Communication

	Mean	**Interpretation**
The plan and project schedule are communicated to all stakeholders	3.02	Observed
There is a system socialization	3.18	Observed
The is a continuous and great communication between the users and the project team	3.11	Observed
The communication is accurate within the system	3.14	Observed
is an information exchange between the company's departments and partners	3.14	Observed
Overall mean	**3.12**	**Observed**

Legend: 1.00 - 1.75: Not Observed, 1.76 - 2.50: Slightly Observed, 2.51 – 3.25, Observed, 3.26 – 4.00: Highly Observed

Overall resulting mean of 3.12 suggest that their general response is Observed. All five attributes, only one is rated as Observed. The highest mean is 3.18 and lowest mean is 3.02.

The overall mean score suggests that communication efforts are commonly attended as it is evidenced from the analysis done on the table pertaining to communication throughout ERP implementation. This means that in the process of communication there can be conditions for improving its efficiency in the course of interactions in order to achieve a greater result.

The overall rating of system socialization among the attributes received the highest result, thus pointing to fairly good efforts made to familiarize stakeholders with the system. This aspect of communication is crucial in ensuring that stakeholders and users are aware of the system's changes and the general functionality of the system.

In contrast, the attribute that is associated with the communication of the plan and project schedule to respondents got the least rating. It implies that somewhere, there may be an issue in disseminating all the relevant information concerning the project schedule and developments to all the stakeholders. In this aspect it could be recommended that more can be done to enhance the general project transparency and stakeholders' involvement.

The result of the study corroborates with the statement of Cube (2022) which states that ERP facilitates effective communication, automates processes through robotic automation, and enables real-time data access for resource management.

Table 1.2 Management Specific

Table 1.2.1 Top Management Support

	Mean	**Interpretation**
The Management support the use of the system	3.09	Observed
The management understands the use of the system	3.20	Observed
The management understands the urgency of the system	3.31	Highly Observed
The management gives priority on the system implementation	3.51	Highly Observed
The management has the intention to use the system	3.30	Highly Observed
Overall mean	**3.28**	**Highly Observed**

Legend: 1.00 - 1.75: Not Observed, 1.76 - 2.50: Slightly Observed, 2.51 – 3.25, Observed, 3.26 – 4.00: Highly Observed

Overall resulting mean of 3.28 suggest that their general response is Highly Observed. Among the five attributes, two are rated as Observed. The highest mean is 3.51 and lowest mean is 3.09.

The overall mean score suggests that top management's commitment is highly practiced as concluded from the analysis of table. The level of support exhibited by the management in the adoption and implementation of the ERP system is notable, thus underlining the centrality of management in the process.

The result of the study corroborates with the statement of Gill et al. (2020) which states that ERP systems promote and exhibits industries best practices with the help of management support. An in-depth analysis of existing business processes is the backbone for BPR. Business Process Re-engineering would allow the organization to modernize their procedure from top to bottom.

Table 1.2.2 Package Selection

	Mean	**Interpretation**
The system answers the information requirements of the organization	3.08	Observed
The system meets the user's expectation	3.13	Observed
The system provides easier analysis	3.14	Observed

The system is easy to use	3.11	Observed
The software package is carefully selected	3.15	Observed
Overall mean	**3.12**	**Observed**

Legend: 1.00 - 1.75: Not Observed, 1.76 - 2.50: Slightly Observed, 2.51 – 3.25, Observed, 3.26 – 4.00: Highly Observed

Overall resulting mean of 3.12 suggest that their general response is Observed. Among the five attributes, all are rated as Observed. Highest is 3.15 which is rated on the two attributes while lowest is at 3.08.

The mean score is a good sign of the general perception as pointed out by the analysis of the table on package selection for the ERP system. This suggests that in terms of the selection of the ERP packages, there is overall satisfaction but with the prospect of improving the initiative to better meet the needs of the organization and its users.

Thus, the system seems to be rather satisfactory in terms of its performance and ease of use as indicated by the attributes like expectation matches or easy analysis or simple in this regard. However, the score given to the system is slightly lower in the capacity to meet the organization's information requirements, suggesting the area of improvement. The above identified requirements could also be useful in increasing the perceived effectiveness of the specific ERP system in the organization by handling them in a comprehensive manner.

The result of the study corroborates with SAP (2023) which states that Enterprise Resource Planning (ERP) is a sophisticated software system designed to streamline and automate various essential business functions, including finance, human resources, manufacturing, supply chain, and procurement. It acts as the central hub for managing all core processes within a company, often referred to as the organization's system of record.

Table 1.2.3 Organizational Fit

	Mean	**Interpretation**
The system works as desired	3.14	Observed
The system improves the productivity of the users	3.13	Observed
The system improves the performance of the users	3.13	Observed
The system enhances the organization's operations	3.12	Observed
The system imposes the company's logic and own strategy	3.13	Observed
Overall mean	**3.13**	**Observed**

Legend: 1.00 - 1.75: Not Observed, 1.76 - 2.50: Slightly Observed, 2.51 – 3.25, Observed, 3.26 – 4.00: Highly Observed

The mean score shows that, in essence, the observation of the fact that the overall response is perceived is made; the organizational fit of the ERP system has been analytically discussed. This means, however, that there might be more room for optimization of the ERP system, even though it is usually compliant with the needs of the organization and enhances the functioning of the enterprise.

Also seen are characteristics that relate to the optimization of operations of the organization, application of the company's normalized and rationalized approach and strategy as well as optimization of productivity and performance among the users of the systems. This is an indication that most of the various elements of the system's support for operations and enhancement of organizational strategies is positively

perceived. However, that the ratings are alike in different attributes implies that the system is functional, though it may not have significantly boosted the performance and productivity in practice.

The result of the study corroborates with the statement of Microsoft (2023) which emphasizes that ERP technology plays a crucial role in consolidating business processes, systems, and data, leading to improved business intelligence, operational efficiency, and adaptability. It offers three key advantages: Firstly, with the integration of AI-driven solutions, it provides valuable insights for informed decision-making and enhances operational performance. Secondly, by linking processes and data, it grants employees greater visibility and flexibility, enabling swift action and adding value across the organization. ERP solutions are designed to be adaptable, allowing businesses to proactively respond to operational disruptions or market changes. ERP systems optimize various core functions within an organization, bridging the gap between front and back offices. It transforms commerce by providing a unified omnichannel solution for retailers, enhancing customer experiences and boosting productivity.

3.2 Results of Test of Relationship between two Critical Success Factors Operational and Management Specific when treated as a whole and split per company

Table 2.1 Overall Spearman's Rho Correlation between the Operational Specific and Management Specific Factors (Overall)

Variable		R	Sig
Project Management	Project Management	1.000	
	Training and Education	.573**	0.000
	Communication	.264**	0.000
	Top Management Support	.290**	0.000
	Package Selection	.402**	0.000
	Organizational Fit	.370**	0.000
Training and Education	Project Management	.573**	0.000
	Training and Education	1.000	
	Communication	.311**	0.000
	Top Management Support	.279**	0.000
	Package Selection	.213**	0.001
	Organizational Fit	.365**	0.000
Communication	Project Management	.264**	0.000
	Training and Education	.311**	0.000
	Communication	1.000	
	Top Management Support	.452**	0.000
	Package Selection	.419**	0.000
	Organizational Fit	.610**	0.000
Top Management Support	Project Management	.290**	0.000
	Training and Education	.279**	0.000
	Communication	.452**	0.000
	Top Management Support	1.000	
	Package Selection	.466**	0.000

	Organizational Fit	.559**	0.000
Package Selection	Project Management	.402**	0.000
	Training and Education	.213**	0.001
	Communication	.419**	0.000
	Top Management Support	.466**	0.000
	Package Selection	1.000	
	Organizational Fit	.643**	0.000
Organizational Fit	Project Management	.370**	0.000
	Training and Education	.365**	0.000
	Communication	.610**	0.000
	Top Management Support	.559**	0.000
	Package Selection	.643**	0.000
	Organizational Fit	1.000	

***. Significant at the 0.01 level.*

The Organizational Fit has a low positive association with Project Management (rs=0.370) and Training & Education (rs=0.65) which is significant, and a moderate positive association with Communication (rs=0.610) which is also significant.

Table indicates that there is a significant relationship between the overall operational-specific and management-specific factors across variables. It indicates that Training & education has a moderate positive correlation with project management with rho=.573. Low positive correlations of Communication with Training & Education at rho = 0.311, may be explained by good communication going with these specific operational aspects. Top Management Support is related to Communication, rho = 0.452. It would appear from these values that the top management support variable is strongly correlated with communicative elements. The package selection scores show low positive correlations for factors: project management, rho 0.402; communication, rho 0.419; top management support, rho 0.466—thereby underpinning its importance across the operational and managerial contexts. Organizational Fit has, finally, the largest correlations with the factors of Project Management, rho = 0.370 with low positive correlation; Training & Education, rho = 0.365 also with low positive correlation; Communication, rho = 0.610 with moderate positive correlation; Top Management Support, rho = 0.559 resulted also to a moderate positive correlation; and Package Selection, rho = 0.643 which was also resulted to a moderate positive correlation—thereby underscoring its significance in aligning both operational and management-specific factors within an organization. These correlations show that while all of them play a crucial role independently, their integration and alignment are very important in the overall effectiveness and success of the organization. In view of the demographic profile of the respondents—who are full-time employees 100%, graduate-level education with a majority 91% being graduate and 9% postgraduate and work mostly in operation 30% and finance 26% departments—the findings reiterate that organizational alignment is one of the important factors to enhance overall management-specific functions. The high percentage of 92 percent of respondents who occupy rank-and-file positions compared to managers at 8 percent also helps to underscore the fact that these organizational and operational factors play a big role at all levels of the organization in how tasks are managed, employees are trained, the nature of communication, support from top management, and suitable packages chosen to support operational goals. This is important in the alignment of efficiency and effectiveness in all areas of organizational management.

Table 2.2 Split per company Spearman's Rho Correlation between the Operational Specific and Management Specific Factors

Variable		A		B		C	
		R	**Sig**	**R**	**Sig**	**R**	**Sig**
Project Management	Project Management	1.000		1.000		1.000	
	Training and Education	.684**	0.000	.465**	0.000	.514**	0.000
	Communication	.585**	0.000	-0.038	0.780	0.075	0.422
	Top Management Support	.588**	0.000	-.371**	0.005	.420**	0.000
	Package Selection	.554**	0.000	.294*	0.028	.302**	0.001
	Organizational Fit	.566**	0.000	0.106	0.435	.261**	0.004
Training and Education	Project Management	.684**	0.000	.465**	0.000	.514**	0.000
	Training and Education	1.000		1.000		1.000	
	Communication	.426**	0.000	-0.158	0.245	.327**	0.000
	Top Management Support	.514**	0.000	-0.157	0.248	0.160	0.084
	Package Selection	.324**	0.002	.366**	0.005	0.008	0.929
	Organizational Fit	.408**	0.000	.269*	0.045	.261**	0.004
Communication	Project Management	.585**	0.000	-0.038	0.780	0.075	0.422
	Training and Education	.426**	0.000	-0.158	0.245	.327**	0.000
	Communication	1.000		1.000		1.000	
	Top Management Support	.770**	0.000	.456**	0.000	0.031	0.743
	Package Selection	.789**	0.000	0.075	0.583	0.048	0.603
	Organizational Fit	.834**	0.000	.467**	0.000	.329**	0.000
Top Management Support	Project Management	.588**	0.000	-.371**	0.005	.420**	0.000
	Training and Education	.514**	0.000	-0.157	0.248	0.160	0.084
	Communication	.770**	0.000	.456**	0.000	0.031	0.743
	Top Management Support	1.000		1.000		1.000	
	Package Selection	.797**	0.000	-0.051	0.708	.344**	0.000
	Organizational Fit	.764**	0.000	.427**	0.001	.356**	0.000
Package Selection	Project Management	.554**	0.000	.294*	0.028	.302**	0.001
	Training and Education	.324**	0.002	.366**	0.005	0.008	0.929
	Communication	.789**	0.000	0.075	0.583	0.048	0.603
	Top Management Support	.797**	0.000	-0.051	0.708	.344**	0.000
	Package Selection	1.000		1.000		1.000	
	Organizational Fit	.789**	0.000	.550**	0.000	.447**	0.000
Organizational Fit	Project Management	.566**	0.000	0.106	0.435	.261**	0.004
	Training and Education	.408**	0.000	.269*	0.045	.261**	0.004
	Communication	.834**	0.000	.467**	0.000	.329**	0.000
	Top Management Support	.764**	0.000	.427**	0.001	.356**	0.000
	Package Selection	.789**	0.000	.550**	0.000	.447**	0.000
	Organizational Fit	1.000		1.000		1.000	

***. Significant at the 0.01 level.*

Company A, the Spearman's rank correlation coefficients make a statistically significant relationships between Operational and Management Specific critical success factors (CSFs), when taken as a whole or company-wise segmented. These high rho values present strong correlations among these factors within Company A's operational and managerial contexts. On one hand, Project Management shows moderate positive correlations with Training & Education (.684**), Communication (.585**), Top management support (.588**), Package selection (.554**) and Organizational Fit (.566**). This supports the very important role that effective project management plays in coordinating operational tasks with other broad management strategies of the company. Communication is also moderately correlated with Project Management (.585**), reflecting its importance in ensuring that information flows smoothly through the different departments for operational efficiency. Focusing on Company A specifically, then, the Spearman rho values clearly bring out the interdependence of the Management Specific factors: Top Management Support, Package Selection, Organizational Fit. These three variables always show high positive correlations (.770** to .834**) with each other and the Operational CSFs, thus showing a holistic approach to managing projects and integrating organizational objectives with the operational goals. This holistic view suggests that it is the effective management of these critical factors in tandem that strengthens Company A's success through improved overall performance and strategic decision-making capabilities.
Company B suggests different degrees of relationship between Operational and Management Specific critical success factors. In some cases, rho values obtained had very strong positive correlations, while others were weak or even negatively correlated in the organizational framework of Company B. For instance, Training & Education has low positive correlations with Package Selection (.366**), therefore investments in training and educational programs might be related to organizational strategies concerning the selection of appropriate packages and ensuring the cohesion of an organization. At the same time, factors like Communication and Top Management Support are characterized by negligible correlation and with most of the CSFs, including Project Management, Training & education and Package Selection. This might indicate areas where it would particularly benefit Company B from having better communications channels and top-level support, hence improving operational goals and management strategies. On the whole, though some of the CSFs with positive correlation may evidence their importance in organizational success, others could highlight areas where interventions or improvements targeted to benefit from strengthening operational effectiveness and strategic alignment can make a difference.
Spearman rank correlation coefficients indicate that there are significant Operational and Management Specific CSFs in Company C Rho values show varying strengths of correlations among these factors within the organizational context of Company C For example, project management is moderately positively correlated with training and education (.514**) and top management support (.420**) with low positive correlation, thus showing the requirement for strong project management practices aided by a good level of training for the personnel and top leadership. This would mean that investment in training and education programs, in conjunction with top-level support, is therefore very important in order to enhance project execution and general efficiency in organizations. Further, Communication indicates a low positive correlation with Training & Education (.327**) and Package Selection (.344**), thus showing its disposition towards providing a smooth platform of information flow and transparent decision-making activities within Company C. In the same vein, Package Selection and Organizational Fit show low positive correlations all round, ranging from .302** to .447**, thus further justifying that a proper orientation of the technological investment with organizational structure and goals is one sure way to maximize operational results. These findings imply that Company C benefits due to the integration and

management of these critical factors in a cohesive manner for attaining enhanced operational performance and strategic alignment.

3.3 Do the Operational Specific affect the Management Specific factors when the organization is treated as a whole and split per company?

Table 3.1 Overall

Table 3.1.1 Multivariate Tests (Overall)

Effect		Value	*F*	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.103	9.729	3.000	254.000	<0.000
	Wilks' Lambda	0.897	9.729	3.000	254.000	<0.000
	Hotelling's Trace	0.115	9.729	3.000	254.000	<0.000
	Roy's Largest Root	0.115	9.729	3.000	254.000	<0.000
Project Management	Pillai's Trace	0.081	7.444	3.000	254.000	<0.000
	Wilks' Lambda	0.919	7.444	3.000	254.000	<0.000
	Hotelling's Trace	0.088	7.444	3.000	254.000	<0.000
	Roy's Largest Root	0.088	7.444	3.000	254.000	<0.000
Training & Education	Pillai's Trace	0.034	3.007	3.000	254.000	0.031
	Wilks' Lambda	0.966	3.007	3.000	254.000	0.031
	Hotelling's Trace	0.036	3.007	3.000	254.000	0.031
	Roy's Largest Root	0.036	3.007	3.000	254.000	0.031
Communication	Pillai's Trace	0.767	278.965	3.000	254.000	<0.000
	Wilks' Lambda	0.233	278.965	3.000	254.000	<0.000
	Hotelling's Trace	3.295	278.965	3.000	254.000	<0.000
	Roy's Largest Root	3.295	278.965	3.000	254.000	<0.000

The analysis shows that Project Management significantly impacts various organizational aspects, especially in Package Selection. With a standardized coefficient (β) of 0.188 and a highly significant p-value ($p<0.00$), effective project management is closely linked to better decision-making when choosing packages or solutions within the organization. This strong statistical significance highlights the reliability and importance of this relationship.

On the other hand, Project Management's influence on Organizational Fit is present but less pronounced, with a standardized coefficient (β) of 0.095 and a significance level of $p=0.010$. This indicates that while good project management can help employees feel more aligned with the organization's culture and values, its impact is more moderate compared to its effect on Package Selection. Despite being less strong, this relationship is still statistically significant, showing that there is a meaningful, albeit smaller, connection between Project Management and Organizational Fit.

When it comes to Top Management Support, Project Management's effect is not significant, with a standardized coefficient (β) of 0.046 and a significance level of $p=0.436$. This suggests that the quality of project management practices does not notably influence the level of support from top management. The lack of statistical significance indicates that other factors might be more important in determining top management support.

Table 3.2 Split per company

Table 3.2.1. Company A Multivariate Tests

Effect		Value	*F*	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.072	2.057	3.000	80.000	0.113
	Wilks' Lambda	0.928	2.057	3.000	80.000	0.113
	Hotelling's Trace	0.077	2.057	3.000	80.000	0.113
	Roy's Largest Root	0.077	2.057	3.000	80.000	0.113
Project Management	Pillai's Trace	0.082	2.391	3.000	80.000	0.075
	Wilks' Lambda	0.918	2.391	3.000	80.000	0.075
	Hotelling's Trace	0.090	2.391	3.000	80.000	0.075
	Roy's Largest Root	0.090	2.391	3.000	80.000	0.075
Training & Education	Pillai's Trace	0.199	6.609	3.000	80.000	0.000
	Wilks' Lambda	0.801	6.609	3.000	80.000	0.000
	Hotelling's Trace	0.248	6.609	3.000	80.000	0.000
	Roy's Largest Root	0.248	6.609	3.000	80.000	0.000
Communication	Pillai's Trace	0.832	132.318	3.000	80.000	0.000
	Wilks' Lambda	0.168	132.318	3.000	80.000	0.000
	Hotelling's Trace	4.962	132.318	3.000	80.000	0.000
	Roy's Largest Root	4.962	132.318	3.000	80.000	0.000

Table shows the multivariate regression analysis result for Company A indicates that there were significant effects of operational and management-specific factors on organizational performance. Of these, communication factors were the most influential, evidenced by the highest value of Pillai's Trace of 0.832 with a very low p-value of $p < 0.001$, which suggests that effective practices in communication have a lot to do with overall outcomes in the organization. The Wilks' Lambda values confirm further that the strong impact of communication with a value of 0.168 means that a big part of the variance in organizational performance can be explained by communication practices. Project management states not significant values for: Pillai's Trace is 0.082 ($p = 0.075$). This may be taken to mean that while project management practices add to organizational performance, their influence is not as strong as that of communication. Training and education have a large effect with a Pillai's Trace of 0.199 ($p < 0.001$), thus proving that investing in training and educational efforts pays off with very substantial gains in organizational outcomes.

Table 3.2.2 Company B Multivariate Tests

Effect		Value	*F*	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.270	6.157	3.000	50.000	0.001
	Wilks' Lambda	0.730	6.157	3.000	50.000	0.001
	Hotelling's Trace	0.369	6.157	3.000	50.000	0.001
	Roy's Largest Root	0.369	6.157	3.000	50.000	0.001
Project Management	Pillai's Trace	0.198	4.107	3.000	50.000	0.011
	Wilks' Lambda	0.802	4.107	3.000	50.000	0.011

	Hotelling's Trace	0.246	4.107	3.000	50.000	0.011
	Roy's Largest Root	0.246	4.107	3.000	50.000	0.011
Training & Education	Pillai's Trace	0.093	1.699	3.000	50.000	0.179
	Wilks' Lambda	0.907	1.699	3.000	50.000	0.179
	Hotelling's Trace	0.102	1.699	3.000	50.000	0.179
	Roy's Largest Root	0.102	1.699	3.000	50.000	0.179
Communication	Pillai's Trace	0.682	35.776	3.000	50.000	0.000
	Wilks' Lambda	0.318	35.776	3.000	50.000	0.000
	Hotelling's Trace	2.147	35.776	3.000	50.000	0.000
	Roy's Largest Root	2.147	35.776	3.000	50.000	0.000

Table shows the regression results for Company B, It shows the high significance of operational and management-specific factors on institutional performance. Communication ranked highest with a Pillai's Trace value of 0.682, $p<0.001$. This finding therefore suggests that effective communication practices have a very large contribution to overall organizational outcomes at Company B. The Wilks' Lambda value of 0.318 underscores a great effect of communication, indicating that a large part of the organizational performance variance is explained by the communication strategy. The effect of project management is also considerable but smaller compared with communication, given a Pillai's Trace equidistant to 0.198 ($p = 0.011$). This supports the view that effective project management practices are major contributors toward the improvement of outcomes at the organizational level, although to a lesser degree compared to communication. Training and education have an absolute minimal effect with a non-significant Pillai's Trace of 0.093, $p = 0.179$, indicating that while they may have some role to play, they don't really significantly affect overall organizational performance within the context of Company B captured by this analysis.

Table 3.2.3 Company C Multivariate Tests

Effect		Value	*F*	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.216	10.274	3.000	112.000	0.000
	Wilks' Lambda	0.784	10.274	3.000	112.000	0.000
	Hotelling's Trace	0.275	10.274	3.000	112.000	0.000
	Roy's Largest Root	0.275	10.274	3.000	112.000	0.000
Project Management	Pillai's Trace	0.159	7.043	3.000	112.000	0.000
	Wilks' Lambda	0.841	7.043	3.000	112.000	0.000
	Hotelling's Trace	0.189	7.043	3.000	112.000	0.000
	Roy's Largest Root	0.189	7.043	3.000	112.000	0.000
Training & Education	Pillai's Trace	0.059	2.33	3.000	112.000	0.078
	Wilks' Lambda	0.941	2.33	3.000	112.000	0.078
	Hotelling's Trace	0.062	2.33	3.000	112.000	0.078
	Roy's Largest Root	0.062	2.33	3.000	112.000	0.078
Communication	Pillai's Trace	0.653	70.362	3.000	112.000	0.000
	Wilks' Lambda	0.347	70.362	3.000	112.000	0.000

	Hotelling's Trace	1.885	70.362	3.000	112.000	0.000
	Roy's Largest Root	1.885	70.362	3.000	112.000	0.000

Table shows the factors correlated with operational and management-specific factors of Company C per the result it had a huge effect on the overall performance of the company. Among these is a very influential factor with a very high Pillai's Trace value of 0.653, which is communication ($p < 0.001$). This indicates that good communication practices are a strong determinant of organizational outcomes, as further put forth by the low Wilks' Lambda value of 0.347, thereby indicating that a large proportion of the variance in performance on the dependent variables is accounted for by communication. Project management has an equally significant effect, but slightly weak compared to that of communication, with a value of Pillai's Trace of 0.159 ($p<0.001$). The result suggests that good project management practices add to the improvement of organizational outcomes, although to a lesser degree as compared to communication. On the other hand, Training and Education have a minimum effect with a non-significant Pillai's Trace of 0.059 ($p = 0.078$), indicating that these factors do not affect the overall performance of the organization within the context of Company C as captured by this analysis. These findings therefore conclude to the fact that indeed, communication and project management are driving factors for organizational success and efficiency in any firm, highlighting the need for strong channels of communication and effective project management strategies in pursuit of peak performance.

3.4 Do the Management Specific affect the Operational Specific factors when the organization is treated as a whole and split per company?

Table 4.1 Overall

Table 4.1.1 Multivariate Tests (Overall)

Effect		Value	*F*	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.372	50.167	3.000	254.000	0.000
	Wilks' Lambda	0.628	50.167	3.000	254.000	0.000
	Hotelling's Trace	0.593	50.167	3.000	254.000	0.000
	Roy's Largest Root	0.593	50.167	3.000	254.000	0.000
Top Management Support	Pillai's Trace	0.050	4.47	3.000	254.000	0.004
	Wilks' Lambda	0.950	4.47	3.000	254.000	0.004
	Hotelling's Trace	0.053	4.47	3.000	254.000	0.004
	Roy's Largest Root	0.053	4.47	3.000	254.000	0.004
Package Selection	Pillai's Trace	0.066	5.986	3.000	254.000	0.001
	Wilks' Lambda	0.934	5.986	3.000	254.000	0.001
	Hotelling's Trace	0.071	5.986	3.000	254.000	0.001
	Roy's Largest Root	0.071	5.986	3.000	254.000	0.001
Organizational Fit	Pillai's Trace	0.204	21.707	3.000	254.000	0.000
	Wilks' Lambda	0.796	21.707	3.000	254.000	0.000
	Hotelling's Trace	0.256	21.707	3.000	254.000	0.000
	Roy's Largest Root	0.256	21.707	3.000	254.000	0.000

Table shows the results for whole organization factors have significant effects of management-specific factors on the operational outcomes. All of the dependent variables, including top management support, package selection, and organizational fit, retain the significance of Wilks' Lambda at $p < 0.001$, indicating that the management-specific factors, taken as a block, predict a sizable amount of variation in these facets of organizational performance. Moreover, the values of Pillai's Trace confirm these effects, with organizational fit having the strongest impact of all variables, Pillai's Trace = 0.204, which indicates management practices are inclined towards aligning organizational goals and structures. Top management support has a much smaller, yet significant effect. As indicated by Pillai's Trace = 0.050, $p = 0.004$, strategies of effective leadership and top management support contribute positively to overall organizational coherence. Similarly, the choice of packages has a moderate effect: Pillai's Trace = 0.066, $p = 0.001$.

Table 4.2 Split per Company

Table 4.2.1 Company A Multivariate Tests

Effect		Value	*F*	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.391	17.122	3.000	80.000	0.000
	Wilks' Lambda	0.609	17.122	3.000	80.000	0.000
	Hotelling's Trace	0.642	17.122	3.000	80.000	0.000
	Roy's Largest Root	0.642	17.122	3.000	80.000	0.000
Top Management Support	Pillai's Trace	0.263	9.513	3.000	80.000	0.000
	Wilks' Lambda	0.737	9.513	3.000	80.000	0.000
	Hotelling's Trace	0.357	9.513	3.000	80.000	0.000
	Roy's Largest Root	0.357	9.513	3.000	80.000	0.000
Package Selection	Pillai's Trace	0.131	4.01	3.000	80.000	0.010
	Wilks' Lambda	0.869	4.01	3.000	80.000	0.010
	Hotelling's Trace	0.150	4.01	3.000	80.000	0.010
	Roy's Largest Root	0.150	4.01	3.000	80.000	0.010
Organizational Fit	Pillai's Trace	0.158	4.989	3.000	80.000	0.003
	Wilks' Lambda	0.842	4.989	3.000	80.000	0.003
	Hotelling's Trace	0.187	4.989	3.000	80.000	0.003
	Roy's Largest Root	0.187	4.989	3.000	80.000	0.003

Table shows the significant effects of management-specific factors on many operational outcomes concerning Company A. All the values of Wilks' Lambda in all models are significant, thereby proving that the management-specific factors as a block explain a significant amount of variance in these aspects of organizational performance ($p < 0.010$). It is further confirmed by the Pillai's Trace values, where top management support has the largest effect: Pillai's Trace = 0.263, which shows this variable playing a very critical role in affecting organizational cohesiveness, and finally, support from top leadership. Package selection and organizational fit also have a significant effect but relatively lower, with a Pillai's Trace value of 0.131 and 0.158, respectively. These findings underline how tailored management strategies drive specific operational outcomes for Company A.

4.2.2 Company B

Multivariate Tests Company B

Effect		Value	*F*	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.391	17.122	3.000	80.000	0.000
	Wilks' Lambda	0.609	17.122	3.000	80.000	0.000
	Hotelling's Trace	0.642	17.122	3.000	80.000	0.000
	Roy's Largest Root	0.642	17.122	3.000	80.000	0.000
Top Management Support	Pillai's Trace	0.263	9.513	3.000	80.000	0.000
	Wilks' Lambda	0.737	9.513	3.000	80.000	0.000
	Hotelling's Trace	0.357	9.513	3.000	80.000	0.000
	Roy's Largest Root	0.357	9.513	3.000	80.000	0.000
Package Selection	Pillai's Trace	0.131	4.01	3.000	80.000	0.010
	Wilks' Lambda	0.869	4.01	3.000	80.000	0.010
	Hotelling's Trace	0.150	4.01	3.000	80.000	0.010
	Roy's Largest Root	0.150	4.01	3.000	80.000	0.010
Organizational Fit	Pillai's Trace	0.158	4.989	3.000	80.000	0.003
	Wilks' Lambda	0.842	4.989	3.000	80.000	0.003
	Hotelling's Trace	0.187	4.989	3.000	80.000	0.003
	Roy's Largest Root	0.187	4.989	3.000	80.000	0.003

The table shows the results conducted at Company B yielded results showing that the management-specific factors had significant effects on the operational outcomes within the organization. With Wilks' Lambda at $p < 0.010$, this means that management-specific variables as a block account for a significant proportion of variance in operational performance. These effects are further confirmed by Pillai's Trace values, with top management support having a large effect, having a Pillai's Trace value of 0.263, thus underlining more this variable as a major determinant of organizational cohesion and hence leadership effectiveness. Package selection and organizational fit have significant, but smaller, effects with corresponding Pillai's Trace values of 0.131 and 0.158, respectively. These findings highlight the fact that, even in Company B, dedicated management strategies might play a crucial role in different dimensions of organizational performance. More top management support is required for overall organizational alignment and operational excellence.

Table 4.2.3 Company C

Multivariate Tests

Effect		Value	*F*	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.174	7.851	3.000	112.000	0.000
	Wilks' Lambda	0.826	7.851	3.000	112.000	0.000
	Hotelling's Trace	0.210	7.851	3.000	112.000	0.000
	Roy's Largest Root	0.210	7.851	3.000	112.000	0.000
	Pillai's Trace	0.072	2.899	3.000	112.000	0.038

Top Management Support	Wilks' Lambda	0.928	2.899	3.000	112.000	0.038
	Hotelling's Trace	0.078	2.899	3.000	112.000	0.038
	Roy's Largest Root	0.078	2.899	3.000	112.000	0.038
Package Selection	Pillai's Trace	0.044	1.715	3.000	112.000	0.168
	Wilks' Lambda	0.956	1.715	3.000	112.000	0.168
	Hotelling's Trace	0.046	1.715	3.000	112.000	0.168
	Roy's Largest Root	0.046	1.715	3.000	112.000	0.168
Organizational Fit	Pillai's Trace	0.239	11.732	3.000	112.000	0.000
	Wilks' Lambda	0.761	11.732	3.000	112.000	0.000
	Hotelling's Trace	0.314	11.732	3.000	112.000	0.000
	Roy's Largest Root	0.314	11.732	3.000	112.000	0.000

Table shows that in the case of Company C based on the analysis, there is a significant effect of management-specific factors on operational outcomes if one considers the organization as a whole. The organizational fit intercepts generally show a strong effect upon all dependent variables, with Pillai's Trace = 0.239 ($F = 11.732$, $p < 0.001$), indicating large effects. It may indicate that the fit between organizational strategies and structures is a very relevant factor of operational performance in the different domains of a company. In contrast, Top Management Support had smaller, yet still significant, effects with Pillai's Trace of 0.072, $F = 2.899$, $p = 0.038$, thus it has the ability to influence operational outcomes but less compared to Organizational Fit. In contrast, there were no large significant effects of Package Selection on operational factors, with a non-significant Pillai's Trace of 0.044 ($F = 1.715$, $p = 0.168$). These findings critically underline the very central role of organizational alignment under effective management in driving operational success at Company C, while still pointing to possible areas that could be considered further for strategic enhancement.

3.5 Proposed Operational strategies

Comprehensive Planning and Preparation

Comprehensive planning and preparation are essential for a successful ERP implementation. This process begins with a thorough needs assessment to understand the specific requirements of the organization, focusing on identifying the key business processes that the ERP system must support. Clearly defining the project scope and establishing specific, measurable objectives are crucial steps that help set realistic expectations and benchmarks for success. Additionally, ensuring that adequate resources, including budget, personnel, and time, are allocated to the project is vital. This includes assembling a dedicated project team with representatives from all relevant departments to ensure a collaborative and comprehensive approach to the implementation.

Prior literature emphasizes that strategic planning and vision are the key factors affecting the success of ERP implementation. According to Huang et al. (2019), business clarity to include an explicit business plan and vision are vital success factors in ERP programs. Some of them argue that a clear plan helps to set proper expectations, allocate the resources and guide the project to its goals.

Change Management

Effective change management is crucial for the successful implementation of an ERP system. It starts with a change readiness assessment to evaluate the organization’s preparedness for change and to identify potential resistance points. Comprehensive training and education for all users are essential to ensure they

are comfortable and proficient with the new system, which involves both initial training sessions and ongoing support. Additionally, establishing support mechanisms such as helpdesks, FAQs, and user manuals is vital to assist employees in adapting smoothly to the new system.

Stakeholder Engagement and Communication

Stakeholder engagement and communication are critical for the success of an ERP implementation. It begins with securing strong executive sponsorship, ensuring that top management is fully supportive and actively driving the project forward while addressing any challenges that arise. Engaging key stakeholders early in the process is also essential; gathering their input and fostering a sense of ownership helps build commitment and buy-in. Regular updates on progress and involving stakeholders in decision-making further enhance this engagement. Additionally, developing a clear communication plan is crucial to keep everyone informed about the project's status, upcoming changes, and how these changes will impact their work, ensuring transparency and minimizing resistance.

Cost Control Measures

Effective cost control measures during ERP implementation involve several key strategies. Detailed budget planning is essential, including creating a comprehensive budget that accounts for all potential costs such as software licenses, hardware upgrades, training, consulting fees, and post-implementation support, along with allocating a contingency fund to cover unexpected expenses and avoid budget overruns.

Vendor selection and negotiation are also crucial. This involves soliciting competitive bids from multiple vendors to ensure competitive pricing and negotiating contracts that include fixed-price agreements, discounts, and clearly defined deliverables and milestones.

Phased implementation can help manage costs more effectively. Implementing the ERP system in phases allows for spreading out costs over time, and starting with pilot programs in specific departments or business units helps identify potential issues and refine processes before a full-scale rollout.

Utilizing in-house expertise wherever possible can reduce reliance on external consultants. Investing in training internal staff to manage and maintain the ERP system helps to reduce long-term dependency on external support.

Standardization and simplification of business processes before implementing the ERP system can reduce the need for customization, thereby avoiding additional costs and complexity. Limiting customization to essential requirements further aids in cost control.

Negotiating comprehensive vendor support agreements that include maintenance and upgrades ensures long-term cost predictability. Considering open-source ERP solutions can also reduce licensing costs, though this may require more in-house technical expertise.

Conclusions

To promote understanding and enhance the application of the theories regarding successful ERP implementation, this paper seeks to provide a systematic synthesis of research on the determinants of ERP systems' adoption. Towards the light of the said analysis, it is possible to make several critical conclusions. This study unveiled that operational-specific factors pinpoint the critical areas where enhancements can contribute to the implementation success. As featured on the survey, formal training programs and project management clarity were well received While on the other hand, there is a serious lack of leadership commitment in the implementation teams. More support from leadership; during the implementation lifecycle communicating, evaluating, and enhancing leadership support can prevent challenges, gain

consensus, and sustain implementation. In addition, it is vital to enhance the efficiency of training programs and reduce users' resistance toward change, including by expanding training for match ERP systems and users' demand.

Another factor that was noted as additional was communication where management ensured that plans and schedules relating to projects were communicated as planned. However, for stakeholders the consistency of information and engagement that comes with continued and accurate communication channels has to be established.

The survey findings revealed that top management support could be considered as one of the most explanatory factors of ERP implementation management factors influencing a successful management of the prioritized adoption of the new system and the comprehension of its strategic necessity. To enhance the sustainability of improved human resource performance, it is crucial to sustain robust support and escalate managerial involvement after the installation of the system. This will lead to more user involvement and to the fine-tuning of the system and its application in the future.

The findings of the factors and showed a positive association between all operational and management-specific factors, and highlighted the sensitive mutual link between conceptual and executive activities which are inherent to SL and to effective project management. Such synergy brings focus to the fact that there must be coordinated alignment between day-to-day operation and strategic goals to coincide with leadership's vision and the goals of the organization. The interplay between management-specific and operational-specific factors is crucial for the successful implementation of ERP systems. While management-specific factors provide the strategic direction and support necessary for ERP projects, operational-specific factors ensure the practical execution and day-to-day management of these projects. Organizations need to focus on both sets of factors to achieve optimal outcomes, enhance operational efficiency, and align their strategic goals with operational practices. The study's findings emphasize the importance of strong leadership, effective project management, comprehensive training programs, and robust communication strategies in driving the success of ERP implementations.

Therefore, this research adds knowledge and awareness to the acknowledged complexity of ERP implementation process and emphasizes the following factors as facilitators of ERP: commitment of leadership, the training programs and communication approaches, and strong top management support. Since the current study focused on the factors affecting the ability of ILEs to implement current strategies, future research could explore other possible dimensions apart from structural, technical and human resource dimensions such as Organizational culture and/or external environmental constraints. Hence, the work presents specific recommendations and valuable information that organizations can use in order to improve their competitive position, optimize activities and manage ERP projects in the contemporary environment.

Recommendations

Top Management

Having training sessions or workshops at least once a month is crucial not just for the employees, but for the senior management to be aware of the concept and idea of Business Process Reengineering (BPR). The use of this method to disseminate information is also another advantage of the ERP systems based on the BPR principles because it can be guaranteed that everybody, including the senior managers, will appreciate the fact that the new systems offer the possibility of transforming the existing enterprise. Moreover, specific funds must be devoted to the preparation of easy-to-read and understand

documentation that can facilitate the emergence of BPR standard work and the sale of ideas behind it. It is important in the use of ERP, to ensure that the foremost upper management and other stakeholders give the necessary support for the implementation.

IT Managers and Implementation teams

Some of the key points which call for improvements are that IT administrators and implementation teams need to improve their change management practices. Procuring change user acceptability, overcoming change resistance, and introducing new systems and processes without hitches can be achieved if good strategies include proper change communication plans and improved stakeholder management plans. Critical to such a solution is also the creation of enabling frameworks, for instance user support groups and internal change management teams. These structures help in managing user concerns, ensuring user requirements are met and maintaining pace in the ERP project.

Users and Employees

Open participation in training and development activities is singularly crucial or needed in influencing the behaviour of both the employees and users. Through the training offered from the user's side the user gains the confidence and ability to implement the refinement of the system which will indeed make them better at using the ERP system. The goals of the continuous improvement, conforming to the specifications of the user and the goals of the organization can be ensured through constructive critiques with relation to the usability of systems and the effectiveness of the training program.

Future Researcher

Thus, it seems logical for future researchers to explore the works on the integration of newer technologies like AI, IoT and blockchain with ERP systems. In this study, it is necessary to assess the potential impacts of such technologies in such areas as organization productivity and establishing a new business. Because the primary goal of the research is to establish challenges, opportunities, and practices for each sector, cross-sectional studies should be pursued to understand the implementation and deployment of ERP systems in other sectors. Research has proposed that comparative cross-national investigations of ERP implementation and ERP differentiation plans and performances can be sensitive to culture, rules, and/or requirements, as well as the generalized economic conditions in various geographic areas globally. Furthermore, researchers should heed any new trends in the evolution of ERP systems, such as the growth in the cloud ERP solutions, modular design of ERP, and specific industry-focused ERP solutions. There is the need to focus on the use of user-oriented design theories that are to be adopted with regard to the status of ERP systems as a way of enhancing satisfaction, the adoption values, as well as the utilization experience of the intended systems.

Compliance with Ethical Standards

The researcher upheld the rights of each participant during the whole study. The safety and welfare of every participant were always guaranteed by maintaining the highest ethical standards throughout the duration of the study. All gathered data was used solely for this study. Data such as personal information are protected by the Data Privacy Act and will remain confidential. The informed consent form was given together with the survey questionnaire.

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