

Evaluating the Key Determinants of ERP Implementation Success in Garment Industries

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Abstract: Efficiently implementing Enterprise Resource Planning (ERP) solutions is crucial for contemporary firms seeking to improve efficiency and connect diverse business operations. This research examines the key elements that determine the effectiveness of implementing ERP systems in 65 clothing businesses. Data were gathered utilizing a well-organized questionnaire that targeted organizational characteristics and certain Critical Success Factors (CSFs). The results underscore the need of closely monitoring performance, having effective leadership, and establishing clear goals throughout the installation of an ERP system. Furthermore, the study revealed that the active participation of users, careful strategic planning, and sufficient training are essential factors for achieving effective adoption of ERP systems.

Keywords: *Success Factors, Management, Planning, Training, Education*

I. INTRODUCTION

Enterprise resource planning (ERP) systems have changed the operational landscapes of many sectors throughout the globe. These systems provide integrated solutions that help businesses improve their operations and become more efficient. In the highly competitive and rapidly evolving garment business, implementing enterprise resource planning (ERP) systems is both an urgent strategic need and a monumental undertaking. Being able to quickly adjust, be precise, and respond quickly are all equally important in this field. Production, inventory control, sales, client relations, and supply chain management are just a few of the many complicated operations that the garment industry uses enterprise resource planning (ERP) systems for. For an enterprise resource planning (ERP) implementation to be successful or unsuccessful, a number of interrelated aspects must be considered. Here, we're mostly interested in the results and performance indicators that ERP systems say they can provide. These systems are more than just software; they are game-changing instruments with the ability to improve decision-making, increase cooperation across different functions, and optimize the allocation of resources. Having a thorough grasp of the various operational intricacies prevalent in the garment manufacturing sector, meticulous execution of strategies, and strategic planning are all essential for attaining these advantages. There is widespread agreement that careful preparation is a key component of an effective ERP rollout. An effective ERP deployment plan begins with ensuring that ERP activities contribute to the firm's overall goals.

Strategic planning in the apparel business guarantees that ERP systems are configured to provide responsive supply chain management, flexible manufacturing processes, and fast delivery of products to prospective clients. This is an important factor to think about since market trends and customer tastes may change at a lightning speed. Strong leadership is crucial for ensuring a successful ERP rollout. At every stage of the ERP project, from planning to post-implementation assistance, good leadership cultivates a solid feeling of commitment across the business. Change management in the garment industry requires leaders with vision, determination, and initiative. In order to achieve operational excellence, they must overcome any reluctance to ERP and create a culture of continuous improvement that views ERP as a catalyst. User engagement and active participation are two of the most important variables that determine the effectiveness of installing Enterprise Resource Planning (ERP) systems in the garment sector. Information about operational methods and functional requirements is crucial for users at the end of the manufacturing process, including sales representatives, production managers, and supply chain coordinators. Users are more likely to adapt and embrace the ERP system if they are actively involved in its installation, which in turn makes customization and configuration easier. This not only reduces the likelihood of implementation failures but also helps maximize return on investment (ROI). Training and development are crucial for the successful adoption of enterprise resource planning (ERP) systems in the textile industry. Staff members may learn the fundamentals of ERP functionality and how to use

them correctly via in-depth training sessions. A company may foster a highly skilled workforce by funding employees' opportunities for further education and training. This paves the way for employees to effectively use ERP modules for data-driven decision-making, real-time production schedule monitoring, and inventory management. Performance monitoring and evaluation are crucial methods for assessing the efficacy of ERP deployment in the garment business. With the use of performance metrics, businesses can put a number on the real gains made by using ERP systems. Reducing cycle time, inventory turnover rates, and on-time delivery performance are a few examples of these performance metrics. To make sure that ERP systems can adapt to the evolving needs of the company, it is important to conduct performance evaluations on a regular basis. This allows for continual improvements. The success or failure of enterprise resource planning (ERP) systems in the garment industry is also dependent on how well the sector handles organizational change. In order to keep up with industry standards and technology developments, it is common for firms to restructure, reengineer, and reorganize their workflows after implementing enterprise resource planning (ERP) systems. Lessening disturbance and opposition, change management solutions that prioritize strong communication, stakeholder engagement, and a gradual implementation process allow for an unobtrusive and easy transition to ERP-driven processes. The success of ERP adoption in the textile industry is largely attributable to the technical infrastructure and the management of information technology. Implementing enterprise resource planning (ERP) system integration requires a solid IT foundation built on secure network architectures and flexible hardware platforms. To further protect against cybersecurity risks and interruptions to operational operations, good IT governance frameworks guarantee data accuracy and integrity, system stability, and compliance with industry regulations. To sum up, the apparel sector has come to understand that the success or failure of ERP adoption campaigns is heavily dependent on two factors: supplier selection and relationship building. Working with long-standing ERP providers that are familiar with the unique needs of the apparel industry is crucial. By working together, we can make sure that technological solutions are designed to tackle the industry's unique problems and seize its unique potential. Minimizing risks and improving long-term advantages of ERP system implementations requires experience, reliability, and the ability to give help after deployment.

ERP systems in garment industries

Enterprise resource planning (ERP) systems have transformed operational efficiency and strategic decision-

making in the garment industry, making them crucial tools in the field. Enterprise resource planning (ERP) systems are crucial in the fast-paced garment manufacturing industry because they optimize and integrate many business processes, which is necessary in a world where fashion cycles are short, supply chains are worldwide, and quality standards are strict. Enterprise resource planning (ERP) systems in the apparel industry may include modules tailored to particular needs. Management of inventory, planning of production, processing of orders, logistics of the supply chain, and financial management are all part of these modules. These modules aim to help with process simplification, departmental collaboration, and providing real-time insights into critical operational data. For instance, ERP systems provide for precise tracking of raw materials, WIP, and finished goods across several production locations or warehouses. An essential part of managing stock is this. Proper stock levels must be maintained regardless of changes in market demands, and this capability not only improves inventory accuracy but also facilitates accurate demand projections and procurement strategies.

Furthermore, enterprise resource planning (ERP) systems have the capability to automate scheduling, resource allocation, and capacity utilization in production planning. This enables garment makers to optimize production cycles and decrease downtime. Having this capability is very necessary in order to achieve stringent production schedules while also guaranteeing that product quality is constant and that regulatory criteria are met. Through the use of electronic data interchange (EDI) and other collaboration tools, enterprise resource planning (ERP) systems also make it possible to integrate with external stakeholders in a smooth manner. These stakeholders include retailers, distributors, and suppliers. When this integration is implemented, supply chain visibility is improved, order fulfillment procedures are sped up, and connections across the value chain are significantly strengthened. Furthermore, enterprise resource planning (ERP) systems provide powerful capabilities for budgeting, cost control, and financial reporting in the realm of financial management. These technologies enable garment makers to effectively monitor profitability, manage cash flow, and comply with accounting rules. ERP systems are especially helpful in the garment sector because of their scalability and flexibility. This is because garment firms are required to have the capacity to swiftly adjust to changes in the market, seasonal variations, and growing customer tastes. Garment manufacturers are able to employ sophisticated analytics, machine learning, and predictive modeling for strategic decision-making thanks to cloud-based enterprise resource planning (ERP) systems, which further improve

accessibility, scalability, and data security. To successfully adopt and use enterprise resource planning (ERP) systems in the garment sector, however, requires careful planning, participation from stakeholders, and continuing assistance from ERP suppliers. It is necessary to take proactive measures to overcome challenges such as resistance to change, the complexity of data transfer, and the needs for customisation in order to take full advantage of the advantages that ERP investments provide.

ERP (Enterprise Resource Planning) systems are a game-changing technology that may help garment manufacturers improve their operational efficiency, agility, and competitiveness in a worldwide market. Garment industry stakeholders are able to simplify processes, manage resources, and generate sustainable development by employing ERP functions that are suited to the unique demands of the business. This is possible despite the fact that market dynamics are always changing.

II. REVIEW OF LITERATURE

Mohammad Saif, Abu Naser et al., (2021) It is now necessary to reconsider the problems that arise after implementing Enterprise Resource Planning (ERP) systems in the garment sector of emerging nations worldwide, during the fourth industrial revolution (sector 4.0). This bibliometric research seeks to identify the issues that arise after the adoption of an Enterprise Resource Planning (ERP) system in the garment sector of a developing nation. Approaches and protocols: A total of 4854 articles published between 2000 and 2021 were examined from the Scopus and ScienceDirect databases. Using the PRISMA flow diagram, 52 relevant publications were identified. The word co-occurrence network map was generated using VOSviewer 1.6.16 by synthesizing comprehensive bibliometric information. Subsequently, the authors correlated the bibliometric keywords from the meta-analyses with the six comprehensive qualitative interviews carried out in a developing nation. They then identified themes based on three degrees of connection. The outcomes: The study's findings have identified three distinct themes: technological, operational, and human. The apparel sector in developing countries has technological, operational, and human obstacles throughout the post-implementation stage of adopting ERP systems. The main hurdles that must be overcome to ensure the long-term success of ERP adoption in developing nations may be categorized into three primary areas: technical, operational, and human. Therefore, everyone working in the garment business, including practitioners, consultants, policymakers, IT specialists, and other knowledge workers, should prioritize these concerns in order to develop more robust ERP systems. Ultimately,

the qualitative article concludes by providing guidance for future research in the particular domain of corporate information systems. Suhaimi, Nazatul et al., (2017) The objective of this research is to analyze the elements that impact the effectiveness of implementing an enterprise resource planning (ERP) system and investigate any issues related to its execution. Two firms operating in the building and property development sector were chosen as subjects for further analysis. The data collecting process included the use of triangulation, which encompassed the methodologies of observation, document analysis, and interviews. This research identified top management support, end-user happiness, change management, and business process reorganization as critical elements that might determine the success or failure of an ERP system adoption. Seyal, Afzaal. (2014) This research aims to examine the influence of top management support, government assistance, company vision, external expertise, and perceived advantages on the effectiveness of Enterprise Resource Planning (ERP) systems. The research used a survey methodology, selecting 150 commercial businesses at random from the Brunei Yellow Pages. 45 of them are actively using ERP for at least a year and are included in this analysis. The data evaluated using PSW-18 software confirms that most of the prior conclusions are supported, indicating that all the contextual factors utilized are relevant, with the exception of top management support. The results are compared to previous research and the practical ramifications of the findings are examined. Gajic, Gordana et al., (2012) Many of the already established enterprise resource planning (ERP) systems have not been successful in meeting the criteria for business process management, cost reduction, and increasing firm profit margins. Hence, there is a genuine need for an assessment of the impact of ERP on the company's performance metrics. This article presents a sophisticated methodology for assessing the effectiveness of implementing ERP systems in oil-gas firms, specifically in terms of their impact on organizational and operational performance metrics. The proposed approach provides a relationship between a technique based on processes, a model for measuring performance, and important success elements for enterprise resource planning (ERP). The methodology was validated and evaluated via the examination of two case studies within the oil and gas industry. The technique included the development, testing, and implementation of a model in a pilot gas-oil firm. Subsequently, the obtained findings were implemented and verified in another gas-oil company. Candra, Sevenpri. (2011) In order to remain competitive in today's business landscape, companies must integrate technology and match it with their overall company strategy. One often used

technology is Enterprise Resource Planning (ERP). This study aims to investigate the important success factors of ERP and their influence on company results. The framework model for successful ERP implementation is derived from many research studies on ERP implementation.

Soja, Piotr. (2006) This study aims to elucidate the factors that determine the success of enterprise resource planning (ERP) implementations. The research done among practitioners involved in ERP projects will serve as the foundation for this investigation. A compilation of possible determinants for successful ERP adoption was established. The respondents shared their views on the significance of several elements for the successful execution of projects and how these aspects manifested in their own projects. A composite measure of implementation success was created and the influence of several elements on the success of the implementation project was analyzed. Subsequently, the most pivotal aspects contributing to the success of ERP adoption were chosen. The document acknowledges the primary elements that exert the most significant impact on the successful execution of a project, irrespective of its kind. Furthermore, some project groups exhibit prominent aspects in their leadership responsibilities. The practitioners lack an understanding of the relevance of certain aspects that have a crucial effect on project success. However, some elements, such as the existence of a project manager, are given more importance than they really deserve. Several disparities in views and attitudes among the stakeholders engaged in an implementation project were uncovered. Additional study is required to verify the success variables based on the kind of project, perhaps including the incorporation of supplementary criteria such as the industry of the firm. The study findings are valuable for professionals who are in charge of directing implementation projects and for individuals who are making initial choices about the installation of ERP systems. The findings may be used by

professionals in project management to effectively navigate the project and address individuals' dispositions. This article demonstrates the impact of certain elements on the success of an ERP project under specific conditions, providing a deeper understanding of the actual processes that determine the result of an ERP project.

III. RESEARCH METHODOLOGY

Research Design

This investigation makes use of a quantitative research approach in order to analyze the essential success elements that are involved in the ERP system deployment phases. The garment sector that has adopted ERP systems was given a structured questionnaire that was prepared and circulated in order to collect data that was relevant to the industry. Additionally, descriptive statistics are used in order to provide the demographic profile of the respondents, and inferential statistics are utilized in order to rank the influential aspects that contribute to success.

Sample Selection

For the purposes of this research, the population of interest consists of garment sector companies that have already deployed ERP systems. In order to pick 65 clothing businesses, a method known as purposive sampling was used.

Data Collection Methods

In order to gather data, a structured questionnaire was used. This questionnaire was meant to collect information on the demographics of the organization, the specifics of the ERP system deployment, and the perceptions of crucial success criteria.

Data Analysis Techniques

The analysis of the data was carried out by using both descriptive and inferential statistical approaches.

IV. DATA ANALYSIS AND INTERPRETATION

There were sixty-five clothing industries that answered to the questionnaire, and their profiles are shown in Table 1.

Table 1 Demographic Profile of Respondents

Variables	Category	Frequency	Percentage
Company size in term of Employees	5-50	20	30.8
	51-150	10	15.4
	More than 150	35	53.8
Total		65	100.0
Geographic Scope	Local	40	61.5

	Regional	15	23.1
	Worldwide	10	15.4
Total		65	100.0
Implemented ERP System	< 1 Year	8	12.3
	1 Year – 3 Years	25	38.5
	3 Years - 5 Years	17	26.2
	> 5 Years	15	23.1
Total		65	100.0
Delay of ERP System Implementation	Yes	27	41.5
	No	38	58.5
Total		65	100.0

The demographic profile of the sixty-five organizations that were questioned indicates a wide variety of organizational sizes, geographic scopes, and the lengths of time that ERP systems have been implemented. big organizations with more than 150 people make up the majority of respondents (53.8%), followed by small companies with 5-50 employees (30.8%), and then medium-sized companies with 51-150 employees (15.4%). However, the bulk of respondents are big companies. Local operations make up 61.5% of all businesses, while regional operations make up 23.1% and global operations make up 15.4% of all businesses.

38.5 percent of businesses have established their ERP systems during the previous one to three years, while 26.2 percent have systems that are between three and five years old. This information pertains to the length of the ERP system deployment process. The percentage of businesses that have ERP systems that are more than five years old is 23.1%, whereas the percentage of businesses that have recently implemented ERP systems is 12.3%. With regard to the ERP deployment, it is noteworthy that 58.5% of the firms did not encounter any delays, while 41.5% of the enterprises reported experiencing difficulties.

Table 2 Critical Success Factors Rank

S. No.	Critical Success Factors	Mean
1	Monitoring and evaluation of performance	4.04
2	Project champion	4.04
3	Top management support	3.95
4	Clear Goals & Objective	3.92
5	User Involvement	3.84
6	Strategic IT Planning	3.79
7	User training and education	3.75
8	Teamwork & Composition	3.72
9	Vendor support	3.69
10	Education on new business processes	3.69

The ranking of crucial success criteria for the deployment of an ERP system, which is based on the respective mean scores of these variables, illustrates the most significant features that were recognized by the respondents. Both "Monitoring and evaluation of performance" and "Project champion" are placed top, with a combined mean score of

4.04, suggesting that they are of the utmost significance in the effective adoption of ERP systems. After this, "Top management support" comes up at number three with a mean score of 3.95, highlighting the significant importance that leadership plays in the process of pushing ERP programs. This demonstrates how important it is to have

clearly stated goals and objectives, as "Clear Goals & Objective" comes in at number four with a score of 3.92.

The significance of including end-users in the process is shown in the fact that "User Involvement" is ranked fifth with a mean score of 3.84. With mean ratings of 3.79 and 3.75, respectively, "Strategic IT Planning" and "User training and education" are ranked sixth and seventh, respectively, highlighting the importance of meticulous planning and training. The fact that "Teamwork & Composition" placed seventh with a mean score of 3.72 demonstrates how important it is to have a cohesive team working on a project. In conclusion, "Education on new business processes" and "Vendor support" are tied for ninth position with a score of 3.69, highlighting the significance of external assistance and process education in the effective adoption of ERP software.

V.CONCLUSION

A holistic strategy that incorporates strategic planning, strong leadership, user involvement, extensive training, performance monitoring, change management, solid IT infrastructure, and strategic vendor alliances is required for the successful adoption of enterprise resource planning (ERP) systems in the garment sectors. In order to successfully navigate the intricacies of ERP implementation, successfully optimize operational processes, and successfully achieve sustainable development in a market that is becoming more competitive, it is vital to have these crucial success elements, which have been covered throughout this paper. Stakeholders in the garment industry have the power to leverage the full potential of enterprise resource planning (ERP) systems to increase efficiency, agility, and profitability by aligning ERP projects with organizational goals, cultivating a culture of innovation and continuous improvement, and exploiting technical breakthroughs. Acceptance of these success criteria will be essential in overcoming problems, making the most of opportunities, and guaranteeing long-term success in the changing environment of garment manufacturing. ERP deployment will continue to change, and it will be important to embrace these success elements.

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