

ENTERPRISE RESOURCE PLANNING FOR TEXTILE

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Abstract

An enterprise resource planning system (ERP) is the information backbone of a company that integrates and automates all business operations. It is a critical issue to select the suitable ERP system which meets all the business strategies and the goals of the company. This study presents an approach to select a suitable ERP system for textile industry. Textile companies have some difficulties to implement ERP systems such as variant structure of products, production variety and unqualified human resources. This project presents the findings of the investigation of ERP implementation. It highlights the challenges and experiences of Companies in ERP implementation. The success factors, failures are analyzed and have proposed recommendations to improve ERP implementation. The results of the study revealed that the majority of the respondents are aware of what ERP is all about, and they are also aware about critical issues in the implementation of ERP. The findings revealed that: failure to select committees needed for the successful implementation of ERP, an inadequate financial budget and resources, and failure to make knowledgeable input at the planning stage can be problems to successful implementation of ERP. The conclusions suggest for addressing challenges and problems in the ERP implementation. Enough time should be provided to project team, show leadership in change management and sufficient resources should be allocated for the proper implementation of ERP.

INTRODUCTION

In every sector of our textile business, the market is forcing companies to stay competitive by taking proactive steps to improve operations. In the pursuit of profitable growth in a global marketplace, mills are looking for new strategies to

improve the quality, cut costs, respond swiftly to changes in customer demands and vagaries in raw material supply position, expand globally, develop new distribution channels and forge new value-added relationships with suppliers and customers. With the increase in competition and quality awareness within and outside India, no

developing and progressive industry would be able to survive for long without application of Enterprise resource planning (ERP). It plans and controls various operations right from the purchase up to selling of the product. This paper mainly elaborates the concept of ERP, its development, implementation with its success and failure factors. There are many slacks in use of manpower, energy, fuel, textile material, and other processing materials in textile industry. Management of the manufacturing resources plays a vital role in any textile industry. It helps in the optimal uses of manufacturing resources. It reduces the wastage of the raw materials.



Fig. 1.1 ERP in Textile Industry

Controlling of the different textile mills in the different location can be made easy by this system. It vanquishes the old standalone computer system in Finance, HR,

Manufacturing and Warehouse, and replaces them with a single unified software program divided into software modules that roughly approximate the old standalone system. It provides software for textile industries of all kind, from vertically integrated companies requiring system top cover the entire production cycle to those to those specializing in single stage of the production process. It helps in the planning for optimizing and scheduling of production orders. It not only provides a user-friendly environment can be tailored to the needs of companies both large and small, but also progressively expanded, both in the `horizontal` sense to embrace additional organizational functions, as well as `vertically to integrate other stages of the production process.

The textiles and clothing industry is highly oriented towards labour, raw material, product, capital and inventory. These companies have employed a wide array of technologies for enhancing the efficiency and effectiveness of different business processes. Enterprise Resource Planning (ERP) is one such technology and it has proved to be critical to the success of many companies. The Indian textile industry has a significant presence in the Indian economy as well as in the international textile economy. However,

technology obsolescence is one of the major issues faced by them. The penetration of ERP in this industry is low. This research aims to investigate the motivational factors and their intervening effect that influence the driving force in ERP adoption, particularly in the knitwear garment sector of the industry. This chapter presents and the current scenario of the textile and apparel industry in the global and Indian context. The need and scope of the study are motivated by the problems faced by the industry. This leads to the research question and finally, the objectives of the study.

LITERATURE SURVEY

1.Data Mining Tools and Techniques to Manage the Textile Quality Control Data for Strategic Decision Making

The forces of liberalization, globalization and competition have led to a remarkable evolution in the general theory of quality. Quality control usually refers to an evaluation of inspection, product through testing and recording the nature and analysis of data where necessary, the location of the defect found. In existing the rapid development in Information Technology has ushered in a revolution in manufacturing and

interactive marketing across the globe. IT applications like MIS, ERP, Network, Multimedia and Data Mining etc are today's indispensable tools to boost productivity and drive maximum benefits. In other word we can say that the success of an organization depends on faster processing of raw data, which are based on application of Data Mining. The use of Data Mining application to manage quality and laboratory result of the modern textile plant is not a new concept. Most laboratories today have some sort of computerized system to log and manage data. Every progressive organization has the only major objective to increase its profitability. However, in today's competitive marketplaces, profitability is not only depending on increasing sales but also just as importantly on reducing cost and improving the quality. Introducing Data Mining Tools and Techniques into textile production processes can achieve a substantial increase in productivity and quality of work.

2.Automation in Textile Industry

This paper reviews the automation which has taken place in the textile industry in the recent past which has helped the industry in improving the productivity and quality of the textile products. The paper mentions various textile processes and the automation which has taken in these processes. The paper also

highlights various benefits which have been achieved through automation in the textile industry. Automation is recently done to separate out the contamination of any color, size and nature in the fiber. Machines using ultraviolet, optic and acoustic technologies are being used for the detection and elimination of contaminant of any color, size and nature thus improving the overall quality of the final yarn produced. Automation has been achieved in spinning by the invention of machines like ring spinning, air-jet spinning, rotor spinning, Vortex spinning etc. Improvements in Ring spinning machines have taken place through drive systems, drafting systems and use of robotics. Yarn fault detection has been automated now to improve the production and to get the uniform yarn quality.

3.Recent Trends and Techniques in Textile Industry Mining

The Indian textile industry is structurally flawed and its efficiency and growth depends upon the corrective measures and their effectiveness. This process of improving the structural aspects of the industry was initiated in the 1985 Textile Policy, which for the first time took a sectoral view of the industry. The government is spelling out the need for an integrated approach whereby all sectors will

be modernized synchronously. This integrated approach is felt to help the textile industry to achieve a reasonable level of upgraded production technology and make it strong enough to face the changed competitive global scenario from the year 2005. In order to meet the changed competitive conditions due to globalization and liberalization of the economy, there is an urgent need for upgrading the technology levels currently prevailing in the weaving segment, particularly the power loom sector. All these call for the preparation and implementation of proper action plan in which all the stakeholders i.e., the government, the weavers and the other interest groups get fully involved. In order to prepare an effective perspective plan, spread over 3-5 years of modernization for this important sector, this study on the status of the power loom sector in Tamil Nadu with focus on modernization has been carried out during August- December 2011.

guides the companies for effective decision making regarding the application of e-marketing in the textile sector of Pakistan. This current work attempts application of e-marketing in the textile sector of Pakistan and how this e-technology can be rewarding to promote the textile business of Pakistan in the local and foreign markets.

Existing System

ERP system integrates varied organizational systems and facilitates error-free transactions and production, thereby enhancing the organization's efficiency. To implement ERP system is always being a massive difficult process. Textile companies have some difficulties to implement ERP systems such as variant structure of products, production variety and unqualified human resources. In the context of information sharing, traceability has emerged as a viable solution for current manufacturing and distribution sectors.

Proposed System

The proposed system presents the outcomes of the investigation of ERP implementation. It acmes the challenges and experiences of Companies in ERP implementation. The realization issues, catastrophes are examined and have proposed recommendations to improve ERP implementation. The Observations will reveal about the majority of the respondents are aware of what ERP is all about, and they are also aware about critical issues in the implementation of ERP. The discoveries will reveal catastrophe to select agencies needed for the successful operation of ERP, an insufficient financial budget and resources,

and failure to make knowledgeable input at the planning stage can be problems to successful implementation of ERP.

Conclusion

Automation technologies has helped the textile industry to increase the output multiple times that too at a cheaper cost. Automation products and solutions are available now not only for the individual process or machine, but for the entire production line. Some of the key benefits achieved through automation are:

- ⊘ Improved production at cheaper cost
- ⊘ Better quality
- ⊘ Safety for the humans and machines
- ⊘ Predictable production and inventory
- ⊘ Energy savings
- ⊘ Lower impact on environment
- ⊘ Better machine uptimes
- ⊘ Self-diagnostics and

Future Work

The present article provides a generic framework to handle the situation related to traceability implementation in the textile supply chain. The next step would be to implement the proposed framework in an actual textile supply chain with real requirements; which would provide a better comprehension of the limitations and further modifications required for the refinement of this framework. Traceability is an information and communication technology (ICT)-based model. Subsequently, future studies can be focused to align these concepts with traceability information and the amendments required in the proposed framework.

REFERENCES

[1] Dr. B.K. Sharma, D.K. Sharma, Application of Information Technology in Textile Wet Processing for Strategic Decision Making, International Journal of Management and System, Australia.

[2] Dr. B.K. Sharma, D.K. Sharma, Harnessing IT for Environment Management in the competitive era presented at SM Convention Centre. Palampur (HP) on 13-15 June 2003 in the 5th world congress on environment management.

[3] Prof. S.M. Ishtiaque, Dr. B.K. Sharma, D.K. Sharma, Management Information System in Textile Wet Processing for better decision-making, International Conference on IT in Textile Sector organized by Ministry of Textile, Govt. of India

[4] Dr. B.K. Sharma and Dr. A. Das, Application of information Technology to manage the textile quality control text data, The Textile Industry and Trade Journal, Vol. No. 44, No. 5-6, May-June 2006

[5] Dr. B.K. Sharma, Prof. S.K.B & Abhay Bansal, Data Mining Tools and Techniques in Textile Industry for Effective Decision Making and Corrective Action, Asian Textile Journal, Vol No. 15, No. 8, August 2006

[6] Mr. Sajay Gupta and Dr. B.K. Sharma, IT: A Benison for Industry presented at 5th international petroleum conference (PETROTACH-2003) organized by ministry of petroleum and natural gas on 9-12 january,2003at vigan bhawan, New Delhi.

