



Impact of Effective ERP on Supply Chain Management towards Employee Perception in VRL Logistics Limited Coimbatore

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ABSTRACT

ERP systems that deploy a common data model benefit the business with advanced analytics shared throughout the supply chain. Connecting an ERP system with SCM integrates operational systems and data so you can synchronize supply and demand to meet customer delivery expectations predictably. The objective of the study is to analyse the effectiveness of ERP on supply chain management in VRL Logistics Limited Coimbatore. The study based only on the opinion and expectation of consumer. Total number of sample taken for the study is 169 respondents. Convenience sampling techniques were used for the study. Primary data and secondary data have been used in the study. Simple percentage analysis, chi square analysis and correlation analysis have been applied in this study to reach the finding of the study. It is found that there is some significant relationship between experience of the respondents and cost reduction. It is suggested that organizations must develop the relations with suppliers based on integration and partnership. It is concluded that as per our findings helps to improve the reliability of decision by mutual participation of the participants, improves co-ordination of tasks which makes inter-related decision making easier. As a result it improves the satisfaction of decision process across the participants

I. INTRODUCTION

The simplest way to define ERP is to think about all the core business processes needed to run a company: finance, HR, manufacturing, supply chain, services, procurement, and others. At its most basic level, ERP helps to efficiently manage all these processes in an integrated system. It is often referred to as the system of record of the organization.

Enterprise resource planning (ERP) is defined as the ability to deliver an integrated suite of business applications. ERP tools share a common process and data model, covering broad and deep operational end-to-end processes, such as those found in finance, HR, distribution, manufacturing, service and the supply chain.

ERP applications automate and support a range of administrative and operational business processes across multiple industries, including line of business, customer-facing, administrative and the asset management aspects of an enterprise. ERP deployments are complex and expensive endeavours, and some organizations struggle to define the business benefits. Look for business benefits in four areas: a catalyst for business innovation, a platform for business process efficiency, a vehicle for process standardization, and IT cost savings. Most enterprises focus on the last two areas, because they are the easiest to quantify; however, the first two areas often have the most significant impact on the enterprise.

According to Karl Kapp, a complete understanding of an ERP system requires the concept of an “ERP system” be examined from five different perspectives. The first is that of a data management system. The second is simply that all the software modules in the organization are sharing the same database. The third is that of a manufacturing philosophy. The fourth is that of a business philosophy communication tool. Finally, ERP can be viewed as a knowledge management system.

Stephen Harwood says the implementation of an ERP application is about organizational change. The focus of the ERP implementations is the ERP system. The ERP system can simply be described as an integrated information system servicing all aspects of the business. It handles transactions, maintains records, provides real time information



and facilitates planning and control. However, its effectiveness is an outcome of the success of the implementation life cycle.

OBJECTIVES OF THE STUDY

Primary objective

- To study on effectiveness of ERP on Supply chain management in VRL Logistics Ltd, Coimbatore.

Secondary objectives

- To analyze the cost reduction in the company after ERP implementation in the supply chain practice
- To evaluate the performance on the lead time in the company after ERP implementation in the supply chain practice
- To examine the relationship with suppliers and customers by the ERP implementation in the supply chain management
- To understand the level of customer service by the ERP implementation in the supply chain management

II. RESEARCH METHODOLOGY

Research Methodology is a way to systematically solve the research problems. It may be understood as a science of studying how research is done scientifically. It includes the overall research design the sampling procedure, data collection method and analysis procedure.

Research design

The researches use descriptive research design in this study. It involves survey and fact findings enquires of different kinds. The major purposes of descriptive research are the state of affairs as it exists at present.

A Research Design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with the economy in procedure". The research design adopted for the studies is descriptive design. The researcher has to describe the present situation in order to know the behavior of the customers. Hence descriptive research study is used) Descriptive research can only report what has happened and what is happening.

SOURCES OF DATA ACOLLECTION

Data refers to information or facts. It includes numerical figures, qualitative and quantitative information. There are two types of data collection method. They are

- Primary data

- Secondary data

Primary data

A primary data is a data which is collected for the first time for a particular interest to collect more information. In this study the primary data was collected through questionnaire.

Secondary data

Secondary data consists of information that already exists somewhere have been collected for some other purpose. In this study secondary data was collected from company website, magazines, journals and books.

LIMITATIONS OF THE STUDY

- Due to the time constraint the study is made only with limited respondents.
- There is a chance of personal bias which affects the original data.
- The sample size is limited to 169.
- As the research is done only in VRL Logistics Ltd, Coimbatore. So it cannot be applicable for other companies.
- Limited number of respondents has been chosen due to time constraint and this could affect the accuracy of result to certain extent.

HYPOTHESIS

- Chi-square analysis
- correlation

III. REVIEW OF LITERATURE

Maditinos, D., Chatzoudes, D. and Tsairidis, C. (2012), The present study seeks to introduce a conceptual framework that investigates the way that human inputs (top management, users, external consultants) are linked to communication effectiveness, conflict resolution and knowledge transfer in the ERP consulting process, as well as the effects of these factors on ERP system effective implementation. The questionnaire was distributed to a group of 361 Greek companies that have implemented an ERP system. Information technology (IT) managers were selected as the key respondents of the questionnaire. The main findings of the empirical study can be summarized in the following categories: the assistance provided by external consultants during the ERP implementation process is essential; knowledge transfer is an extremely significant factor for ERP system success; knowledge transfer concerning technical aspects of ERP systems is more important than effective handling of communication, as well as conflict resolution among organizational members; the role



of top management support seems to be of less importance than the one provided by users.

Yu, C. (2005), This article aims to find a chain of causal relations affecting the operating effectiveness of the implemented enterprise resource planning (ERP) system instead of focusing on either the evaluation of software/vendors/consultants or critical successful factors (CSF) identification for ERP implementation, a course followed by the dominant ERP literature. This article is a process-oriented approach and aims to give a moving picture of how one step affects another step from pre-implementation stage, to during-implementation stage, and to post-implementation stage. A significant insight learned from this study is that end-users across the organization must be educated from the onset of ERP implementation. Although education is a corner-stone of ERP implementation, the user training is usually only emphasized and the courses

are centered on computer/system operation rather than on understanding the ERP concept and spirit.

Wen-Hsien Tsai, Shu-Ping Chen, Elliott T.Y. Hwang and Jui-Ling Hsu (2010), An ERP implementation takes many years to complete and requires a large amount of IT investment and their effectiveness is hard to evaluate. Companies implement ERP systems to integrate the business processes of a company, and help organizations obtain a competitive advantage. In each ERP implementation stage, Business Process Reengineering (BPR) plays different important roles. This study examined the process problems (system process / business process), BPR and performance of ERP systems by using the questionnaire survey and AVOVA analysis. We also examined the relationship between degree of BPR and ERP system performance using regression analysis.

PERCENTAGE ANALYSIS

INCOME LEVEL OF THE RESPONDENTS

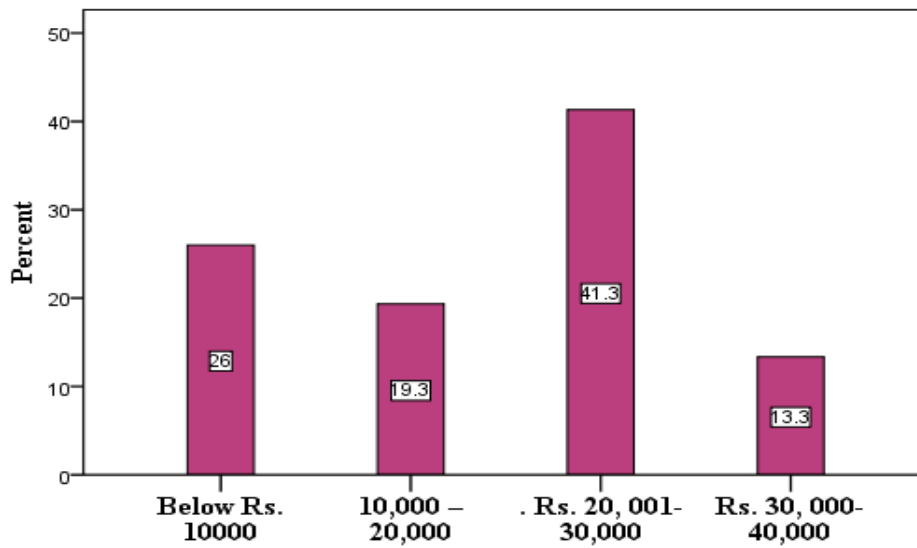
| INCOME | No. of Respondents | Percent |
|-----------------------|--------------------|---------|
| Below Rs.10000 | 44 | 26.0 |
| 10,000 – 20,000 | 33 | 19.3 |
| . Rs. 20, 001- 30,000 | 70 | 41.3 |
| Rs. 30, 000- 40,000 | 22 | 13.3 |
| Total | 169 | 100.0 |

Source: primary data

INTERFERENCE:

The above table shows that 26.0% of respondents have below Rs.10, 000, 19.3% of the respondents have Rs.10, 001-20,000, 41.3% of the respondents have Rs.20, 001-30,000 and 13.3% of the respondents have above Rs.30, 000 as their income level.

Thus the majority of the respondents have Rs.20, 001-30,000 as their income level.



EDUCATIONAL QUALIFICATION OF THE RESPONDENTS

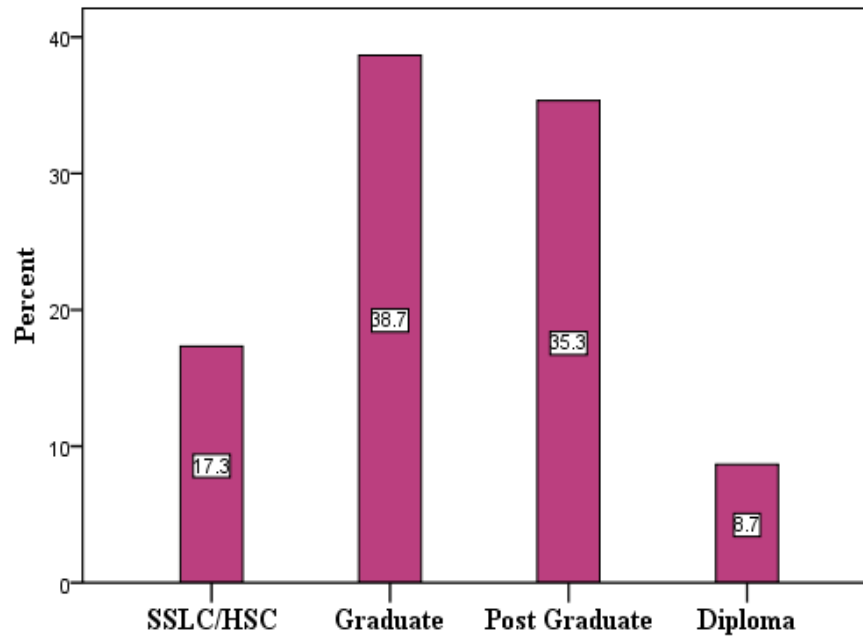
| Educational Qualification | No. of Respondents | Percent |
|---------------------------|--------------------|---------|
| SSLC/HSC | 29 | 17.3 |
| Graduate | 65 | 38.7 |
| Post Graduate | 60 | 35.3 |
| Diploma | 15 | 8.7 |
| Total | 169 | 100.0 |

Source: primary data

INTERFERENCE:

The above table shows that 17.3% of respondents have completed SSLC/HSC, 38% of the respondents have completed Graduate, 35.3% of the respondents have completed Post graduate and 15% of the respondents have completed diploma in educational qualification.

Thus the majority of the respondents have completed graduate.



REDUCES OPERATION AND ADMINISTRATIVE COST

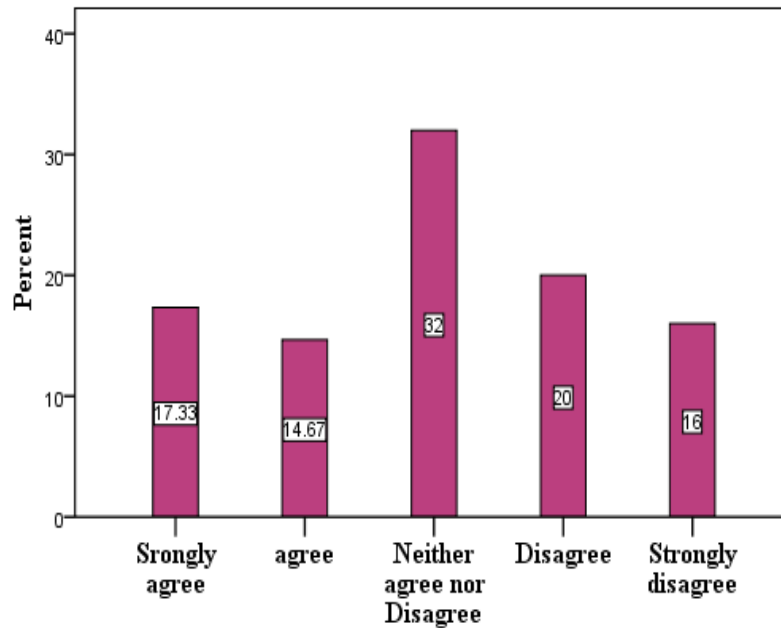
| Particulars | Frequency | Percent |
|----------------------------|-----------|---------|
| STRONGLY AGREE | 29 | 17.3 |
| AGREE | 25 | 14.7 |
| NEITHER AGREE NOR DISAGREE | 54 | 32.0 |
| DISAGREE | 34 | 20.0 |
| STRONGLY DISAGREE | 27 | 16.0 |
| Total | 169 | 100.0 |

Source: primary data

INTERFERENCE:

The above table shows that 17.3% of respondents are strongly agree, 14.7% of the respondents are agree, 32% of the respondents are neither agree nor disagree, 20% of the respondents are disagree and 16% of the respondents are strongly disagree towards the reduces operation and administrative cost.

Thus the majority of the respondents are neither agree nor disagree towards the reduces operation and administrative cost.



TESTING OF HYPOTHESIS

CHI SQUARE ANALYSIS

RELATION BETWEEN THE EXPERIENCE OF THE RESPONDENTS AND COST REDUCTION

Null hypothesis (Ho):

There is no significance difference between experience of the respondents and cost reduction.

Alternative hypothesis (H1):

There is some significance difference between experience of the respondents and cost reduction.

Case Processing Summary

| | Cases | | | | | |
|-----------------------------------------------------|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| COST REDUCTION* EXPERIENCE OF THE RESPONDENTS | 169 | 100.0% | 0 | .0% | 169 | 100.0% |

Chi-Square Tests

| | Value | Df | Asymp. Sig. (2-sided) |
|------------------------------|----------------------|----|-----------------------|
| Pearson Chi-Square | 477.733 ^a | 48 | .000 |
| Likelihood Ratio | 382.672 | 48 | .000 |
| Linear-by-Linear Association | 139.253 | 1 | .000 |
| N of Valid Cases | 169 | | |



Chi-Square Tests

| | Value | Df | Asymp. Sig. (2-sided) |
|------------------------------|----------------------|----|-----------------------|
| Pearson Chi-Square | 477.733 ^a | 48 | .000 |
| Likelihood Ratio | 382.672 | 48 | .000 |
| Linear-by-Linear Association | 139.253 | 1 | .000 |

a. 56 cells (82.4%) have expected count less than 5. The minimum expected count is .07

INFERENCE

As per the above table, it is inferred that the P value is .000; it is significant to 5% (0.05) significant level. The minimum expected count is .07. Thus null hypothesis is rejected and alternative hypothesis is accepted. It is finding that there is some significant relationship between experience of the respondents and cost reduction.

CORRELATION ANALYSIS

RELATIONSHIP BETWEEN GENDER OF THE RESPONDENTS AND PERFORMANCE ON THE LEAD TIME

Correlations

| | | PERFORMANCE ON THE LEAD TIME | GENDER OF THE RESPONDENTS |
|------------------------------|---------------------|------------------------------|---------------------------|
| PERFORMANCE ON THE LEAD TIME | Pearson Correlation | 1 | .808** |
| | Sig. (2-tailed) | | .000 |
| | N | 169 | 169 |
| GENDER OF THE RESPONDENTS | Pearson Correlation | .808** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 169 | 169 |

** Correlation is significant at the 0.01 level (2-tailed).

Inference:

The Above table indicates that out of 169 respondents, co-efficient of correlation between gender of the respondents and performance on the lead time is 0.808. It is below 1. So there is positive relationship between gender of the respondents and performance on the lead time.

IV. SUGGESTIONS

- Organizations should take advantage of the ERP system used that by modify these models to suit the nature of their own operations.
- Organizations have to exploit all their resources and various departments, which in turn

contribute to improving overall performance with more efficiently and effectively

- Organizations must develop the relations with suppliers based on integration and partnership.
- Organizations that are not using the ERP System need to expedite their adoption of the system in order to improve the supply chain



integration and internal processes which enhancing the strategic goals of organization

➤ Organizations' management have to give the direct higher attention and significance towards the development processes of supply chain integration skills that maximizing the supply chain management performance

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