www.irmbrjournal.com March 2023
International Review of Management and Business Research Vol. 12 Issue.1

"Impact of Supply Chain Management & Accounting and Finance of ERP Implementation on Organizational Performance of SMEs; with Business Users as a Moderator"

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Abstract

Enterprise resource planning, accounting & finance, and supply chain management are three crucial IT investment options that managers turn to. These choices are recognized as elements enhancing organizational success in the pertinent literature. The goal of this study is to examine how supply chain management, accounting, and finance are used to embrace enterprise resource planning and how that adoption affects organizational performance. In order to achieve the best organizational performance, this article proposes a new model that combines supply chain management and enterprise resource planning. The four proposed hypotheses and the model fitting level were tested using a structural equation model. Through prepared surveys, the necessary information for this study was gathered from 12 companies in Karachi. The findings support the existence of favorable benefits of enterprise resource planning on the supply chain and accounting & finance through empirical data, which eventually leads to enhanced overall performance of the analyzed firms.

Keywords: *Enterprise Resource Planning, Supply Chain Management, Accounting & Finance, Organizational Performance, Business Users'.*

Introduction

The adoption of enterprise resource planning (ERP) systems has been the most significant and crucial information technology initiative that interacts with the accounting function in the previous 15 years. Enterprise resource planning systems share a database and connect a number of business processes, apps, and divisions to help businesses respond to actual-time information. Software systems have fundamentally altered how corporate data is gathered, saved, shared, and used. The orientation of information processing has changed, which has an impact on accounting (Sutton, 2006).

Our study's main goal was to examine the accounting benefits that Greek businesses who adopt ERP systems can experience, as well as the relationship between accounting benefits and ERP user happiness. Examining whether accountants and IT professionals have different perceptions of the advantages of ERP accounting and user satisfaction was another goal of the current study. In order to accomplish the findings

of the study, we drew on theories investigated and debated in prior studies in the field that information about accounting, and we develop research instruments proposed and created by researchers in related researches. Any firms considering merging their accounting methods and procedures with an ERP system may find the study's findings useful.

For example, proposed that software is the cornerstone of SCM and that combining the two will enable businesses to utilize the advantages of links in a supply chain. As a result, the primary focus of this work is on investigating the connections between ERP, SCM, A&F and OP. We investigate if ERP has any appreciable direct and indirect effects on OP. We are particularly interested in examining how ERP's indirect effects on OP through SCM and A&F.

Research Objectives

These research objectives are being followed in the research:

I. To examine how ERP contributes to bettering organizational operations.
II. To examine how ERP contributes to the improvement of external operations for the firm.
III. To evaluate the ERP's contribution to the activities of SCM and Accounting & Finance.
IV. To examine how ERP influences supply chain management decision-making and Accounting & Finance.

Research Questions

The following questions serve as the methodology for the study:

I. How does enterprise resource planning support the SCM and Accounting & Finance process?
II. How do organizational decisions affect by enterprise planning system?

Significance of this Study

In SCM and Accounting & Finance, ERP is crucial. According to the demand established by the distributor using ERP, the manufacturer creates orders for the manufacturer. The manufacturer follows the distributor's and manufacturer's shared goals for filling rates and transaction costs throughout this procedure. Numerous studies have been done on ERP and the benefits of its implementation.

In order for the system to produce long-term benefits over time, our main goal is to emphasize how crucial it is to incorporate ERP throughout the entire system. ERP implementation has a big bang effect that alters the activity of the entire organization, so it is crucial that all members of the organization understand it and work together to implement it. Although people are adaptable, a change as significant as an ERP implementation is not something that people will readily accept.

As a result, we demonstrate how ERP may be useful in more general contexts, such as organizational decision-making and effective supply chain management. Our primary objective is to demonstrate how ERP may help reduce ordering costs, particularly when it comes to SCM.

Literature Review

ERP and Accounting & Finance

The three key elements that encouraged the adoption of ERP were the increased need for actual time information, the requirement for information production for decision-making, and the requirement for

application integrate. The most significant accounting benefits of ERP implementation included increased information generation flexibility, increased accounting application integration, improved report quality (statement of different reports), better decisions based on accurate timing and a shorter time for annual account closing. One of the main advantages of ERP in accounting is that it gives you greater authority and control over your company. You get real-time visibility into how choices and events affect your financial situation. You can gain knowledge and enhance your decision-making in order to cut costs, boost profitability, and promote growth.

H1 The ERP system has a positive impact on accounting and financial performance.

Relationship between IT accounting and accounting & finance

According to research on the benefits of adopting ERP, improvements in the decision-making process and enterprise integration are often observed after the implementation of these systems Additional benefits of using ERP include better account service in accounting tasks and more correct reports and accounts statement. ERP deployment appears to reduce reporting issues. ERP software eliminates double data entry and ensures consistency by integrating traditional business activities like accounting, manufacturing, distribution, and sales based on a shared database. According to them, the implementation of ERP enhances the integration of corporate operations and processes as well as the accuracy of the data.

H2 The effect of IT accounting on accounting & finance performance is positive.

Relationship between managerial accounting and accounting & finance:

It was discovered that ERP systems are capable of supporting new accounting practices and serve as data sources for those practices. ERP systems seem to be beneficial for data collection and the organizational depth of management accounting. These systems promote the adoption of top management accounting practices and expert accountants to handle large databases more quickly, complete routine tasks more quickly, and submit reports with greater flexibility and timeliness provided additional support for this.

H3 The effect of managerial accounting on accounting & finance performance is positive.

Relationship between organizational accounting and accounting & finance

According to their research, the biggest advantage of software related to accounting was increased processing of documents, which gives top management accountants more time to focus on analysis and business support operations. Despite the growing interdependence of accountants and technology, such as ERP, further shown that accountants continue to use their position to redefine and advance their professional knowledge.

H4 The effect of organizational accounting on accounting & finance performance is positive.

Relationship between operational accounting (time) and accounting & finance:

O'Leary (2004) made an effort to analyze, quantify, and ascertain whether or not the benefits of ERP systems vary depending on the industry. His use of a benefits list and acceptance of a Deloitte Consulting (1998) study-based division of benefits into tangible and intangible ones. Some of the advantages under investigation included decreased inventory, shortened financial closing cycles, staff reductions, management improvements, IT cost savings, real-time delivery, information, integration, flexibility, decision making, financial controls, and new reports - reporting capability.

H5 The effect of operational accounting (time) on accounting & finance performance is positive.

ERP and SCM

Various benefits come from utilizing an ERP supply chain management program or platform with ERP and SCM traits. To maintain organization for your raw materials and other items, use a supply chain ERP platform. To prevent stockouts, several programs let you regulate stock quantities with minimum values and receive notifications when objects reach certain values. Use an ERP SCM platform to consolidate tasks and improve communication with manufacturers, suppliers, stakeholders, and others to keep everyone informed. Additionally, you can assign or receive up-to-date information on deadlines, tasks, personnel, and other changes.

H6 The performance of SCM is positively impacted by the ERP system.

Relationship between operational process and SCM:

In order to change the organizational structure of local and foreign market activities, several firms across most countries have expressed interest in investing significantly in IT. Order input and production planning are two business processes that this system is specifically designed to same with and improve as effectively as possible across the entire organization or firm. Large-scale investments in IT systems have enabled companies to share data and information with partners in the supply chain, facilitating actual-time collaboration and enhancing distribution and inventory control.

H7 Operational process will be positively affected by SCM.

Relationship between planning and control & SCM:

ERP supports the processing and transfer of data and information, which, according to certain academics, is required for synchronous decision-making and SCM competencies. Numerous companies utilizing ERP have also expanded the system's scope to include their clients and suppliers in order to provide more e-business or e-commerce services and to enhance supply chain functionality.

H8 Planning & Control process will be positively affected by SCM.

Relationship between customer & relationship and SCM:

Customer relationship management is a key element of supply chain management since it adds value to the supply chain. By increasing customer loyalty, contentment, and retention, profit margins can be increased. CRM helps companies grow their revenue and sales by optimizing the supply chain. It provides a way to enhance sales and marketing's effectiveness and targeting. Using an ERP program to handle your customer relationships is no longer challenging. Using contemporary tools, you will be able to collect and compile all of the information about your customers and market trends.

H9 Customer & relationship will be positively affected by SCM.

Relationship between Enterprise Resource Planning and Organizational Performance

In today's fast-paced world, it is difficult to keep track of every resource and effectively employ it. The majority of small and medium-sized firms struggle with various aspects of their operations, including accounting, inventory control, and operations. To overcome these obstacles and enhance corporate performance, we need a solution. ERP will manage your company, but it will also boost its performance in a number of areas. ERP is quickly taking over as the foundation of every successful company. Because the firm's organizational structure changed after the ERP system was implemented, starting ERP installations

in business sectors can assist achieve scale economies that restrict new labor costs, selling costs, and general and administrative expenses.

H10 ERP systems will have a positive impact on organizational performance.

Relationship between ERP and Organizational Performance will be moderated by Business Users':

When a new system is implemented in a business, it is crucial that the staff members feel at ease utilizing it. Furthermore, having a strong and contemporary platform is useless if the end consumers are unable to use it. Additionally, to causing employee annoyance and discontent, this jeopardizes the productivity and efficiency of the business. It is crucial to look for a user-friendly alternative if you are thinking about using ERP software for this reason.

H11 The relationship between ERP system and organizational performance will be moderated by business users is positive.

Structural Model

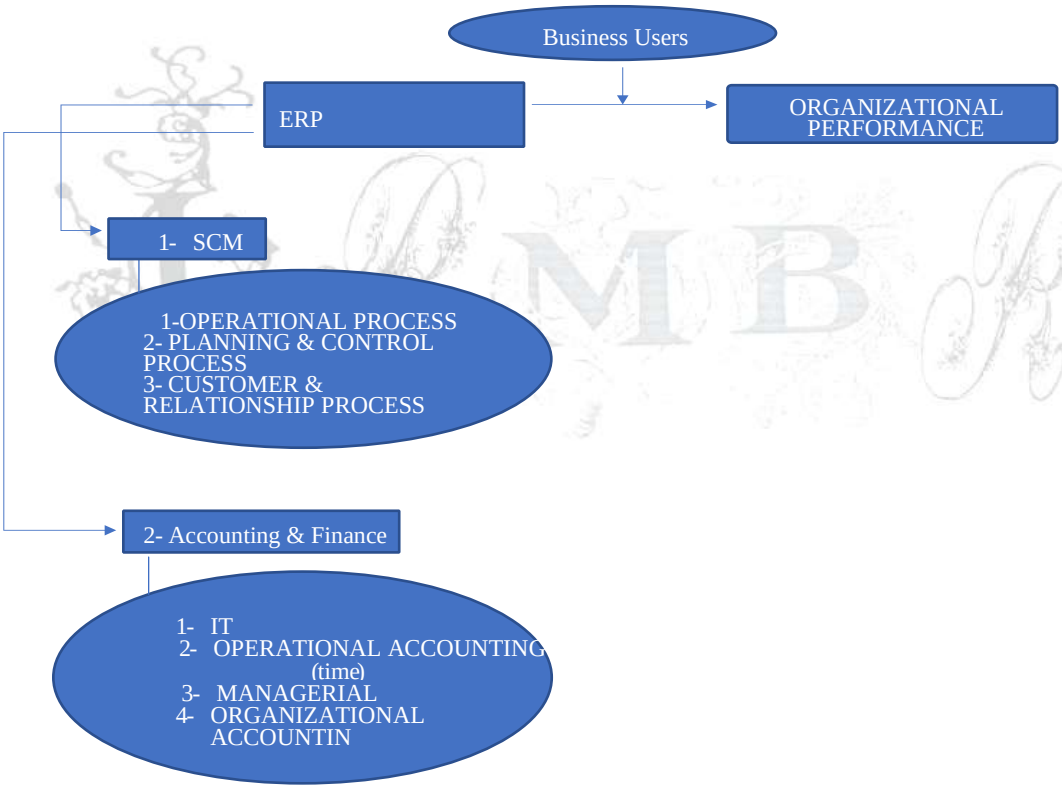

Figure No 1: Model of the Study

Methodology

Research Method

The current study's main methodology is to extrapolate conclusions from the literature on Enterprise Resource Management's (ERM) implications on Supply Chain Management, Accounting, and Finance.

This study will employ a deductive research strategy SCM & Accounting and Finance. The research study will assist in developing the empirical findings that will support both the present genre of the study's literature as well as future investigations. The research study will place more emphasis on drawing conclusions than on inferring novel conclusions based on the assumptions.

Research Instrument

A quantitative approach was adopted for the data collection and analysis. The data was collected in the primary sources. Some of the survey papers were completed in our presence and returned to us via email or by sending links. From May to October 2022, the questionnaire survey was carried out. In terms of the pilot study, some surveys were distributed and filled in front of us, while others were completed via email or other online tools.

Data Analysis

A quantitative approach for the data collection and analysis. The initial sample for questionnaire consisted of twelve businesses. We requested responses to a questionnaire from one IT specialist and one accountant from each company.

Descriptive Statistics

Tests like the Cronbach alpha and dimensions analysis were carried out to determine the validity and reliability of the Likert-scale that was acquired. The responses from SCM and ERP to accountants were compared using t-tests to identify any statistically significant differences, and regression analysis was used to identify the relationships between satisfaction and independent variables.

Sample is representative of many sectors and sample sizes. This further information in the generalizability of the study's findings. The statistical comparison of the 10 companies that reacted to the initial mailing with the 2 companies that responded to the follow-up mailing served as an additional test for generalizability. T-tests were used to do this. The demographics of the two groups were examined from an individual, organizational, and ERP project perspective. Additionally, they compared the organizational, person, and IS project characteristics amongst the respondent groups.

Table No 1: Demographic Data

Demographic	Frequency	%	Minimum	Maximum	Mean
Responses					
Firm position					
Accountant	75	27.67%			
IT	63	23.24%			
SCM	51	18.81%			
Procurement	82	30.25%			
Total firm position	271	100.00%			
Gender					
Male	195	71.2%			
Female	76	28.8%			
Total gender	271	100.00%			
Age group					
22 to 25			24	64	40.1

25 to 30			25	58	38.7
30 and above			24	64	40.9
Experience					
0 to 1			1	43	15.6
2 to 4			3	29	13.9
5 and above			1	43	16.6
Type of company					
Imtiaz Supermarket	155	57.19%			
Chase up	57	21.03%			
Chase value	58	21.40%			
Liberty book store	1	0.36%			
Total	271	100.00%			
Type of ERP					
Dynamics365	173	63.83%			
SAP	57	21.03%			
Odoo	40	14.76%			
Others	1	0.36%			
Total	271	100.00%			
How much time ERP adoption (years)			1	8	4.66

Result

Survey results are broken down into three primary components, each of which relates to a different study issue. The advantages of the ERP system implementation for accounting are examined in the first section. The second segment investigates if there are statistically significant variations in how each group rates ERP business user satisfaction and accounting benefits. It provides information from both the accounting and IT professionals' points of view. In the final section, we try to examine ERP business user satisfaction in relation to accounting benefits, used and costs.

These criteria, which were also based on the "descriptive method," clearly depict the primary accounting gains that result from ERP deployment and their impact on accounting operations. Factor analysis is adequate for this data set, according to the measure of sampling adequacy, which is high and the factors explain 66.338% of the variation. It is unlikely that the population matrix is an identity because the associated significance level is 0.

Strong factor alpha values (between 0.934 and 0.765) further demonstrate the factors' strong dependability. Due to loadings that were less than 0.5, three benefits-related items that were initially incorporated into the survey instrument were later removed. These criteria included "reduction in transaction input time" (resulting=0.542), "connection between the accounting department and other organizational departments" (resulting=0.346), and "ERP is user-friendly" (resulting=0.463).

Table No 2: Factors loading data

Characteristics	Factor loadings	Variance	Method of Cronbach's alpha
ERP and Accounting & Finance			
Factor: 1 IT accounting		18.368	0.896
ERP collects data more quickly as a result.	0.812		
Easily produce outcomes	0.80		
ERP facilitates quicker results	0.753		
ERP facilitates data gathering.	0.742		
Information system flexibility is greater with ERP	0.654		
Shortened transaction input time	0.489		
Communication between the accounting department and other organizational departments is simplified.	0.356		
Factor: 2 Operational accounting (time)		16.054	0.943
Saving time for monthly account closing	0.890		
Saving time for quarterly accounts closing	0.897		
Saving time for annually accounts closing	0.776		
Time savings when releasing financial statements	0.657		
Factor: 3 Organizational accounting		14.187	0.809
ERP increased adaptability in the creation of information	0.756		
Due to ERP, there has been a rise in accounting application integration.	0.669		
ERP system enables better decision-making based on accurate and timely information	0.564		
Increased best quality of reports and account statements	0.678		
User-friendly ERP	0.690		
Factor: 4 Managerial accounting		10.120	0.756
Improved cash flow control	0.810		
Use of financial ratio analysis has increased	0.568		
Shorter time for publishing managerial reports	0.345		
ERP & SCM			
Factor: 1 Operational Process		14.987	0.986
By using ERP system has improved the internal	0.456		
communication of the SCM.			
Enhanced the Operational fusion process with use of ERP.	0.765		
Factor: 2 Planning & Control		13.098	0.857
ERP is more flexible in Planning and forecasting.	0.765		
Increased Information management of SCM due to the use of ERP system	0.345		
Increased Sharing of Information of SCM	0.987		
Factor: 3 Customer & Relationship		15.098	0.987
Increased effective for a collaborative environment of the SCM	0.987		
ERP use to improve the Supplier management.	0.568		
Using ERP makes it easier to improved data insights from customers	0.576		
Sum of Variance		76.988	
Chi-square (Approx)	1958.590		
Difference	210		
Significance	0.00		

ERP systems have a positive impact on the SCM and accounting processes. Additionally, the entire organization benefits from these systems. This is so that not just accounting procedures but also corporate operations in general are enhanced through improved internal audit functions, higher flexibility in information generation, better judgments based on real-time and accurate information, and increased application integration.

Table No 3: Coefficient estimate of ERP Users

Variables (Independent)	Co-efficient	t-value	Significance	Co-efficient	t-value	Significance
Constant Variables	1.673	3.151	0.003	1.796	1.997	0.048
IT Accounting	0.316	3.126	0.002	0.303	0.932	0.004
Operational Accounting (time)	0.131	1.709	0.009	0.135	0.663	0.093
Organizational Accounting	0.142	1.181	0.091	0.138	0.326	0.216
Managerial Accounting	0.108	1.465	0.239	0.114	0.314	0.138
Operational Process	0.098	1.987	0.114	0.246	0.534	0.137
Planning & Control	0.109	1.679	0.125	0.127	0.234	0.158
Customer Relationship	0.234	1.123	0.043	0.231	0.134	0.234
Model 1	−0.014	−0.328	0.745	-	-	-
Model 2	-	-	-	−0.089	−0.317	0.752

Model 1 R2=0.361	Model 2 R2=0.361
Adjusted R2=0.328	Adjusted R2=0.328
t-value=11.195	t-value=11.194
Significance=0.00	Significance=0.00

Discussion

The proposed model explains the important influence of various crucial factors that were disregarded or given only sporadic consideration in earlier studies. The discussion that follows in this part covers the key findings of this study and their consequences. The study's initial finding reveals that there is a strong and advantageous association between ERP and SCM.

The second result of the structural equation model confirms that ERP has a favorable impact on accounting and finance. Therefore, a company's A&F capabilities will considerably improve as more ERP system implementations take place in that organization. However, we discovered that the A&F is both directly and indirectly impacted by ERP in comparison to their findings.

The third discovery offers adequate empirical proof that there is a connection between OP and ERP. The evidence suggests that ERP had an impact on OP. Therefore, it may be inferred that using ERP could result in the aforementioned solution. Their research revealed a direct and favorable correlation between ERP and OP. In order to improve OP in the enterprises, this study promotes the integration of SCM into the total implemented systems.

We fourth finding data that shows how important it is for business users to act as a bridge between OP and ERP. OP and ERP have a considerable association, with the indirect influence being stronger than the direct effect, according to the available scientific evidence. Even though our analysis shows that SCM significantly contributes to the improvement of OP, the relationship between ERP and OP is therefore initiated by BU in the sense that BU functions as a "black box" or a process in which the input is ERP and the output is the better performance attained by an organization.

But it's important to keep in mind that the extent of SCM and A&F integration as well as ERP adoption may affect the conclusions about how ERP, BU, and OP relate to one another. His findings highlight the need of comprehending how SCM and ERP implementation are now being used in enterprises.

Limitation

Several of the analyzed accounting benefits were difficult for IT specialists to assess. Additionally, only Greek-based businesses took part in the current empirical study. Additionally, there were more accountants than IT experts that took part in the study. Finally, we should mention that factor loadings below the 0.5 level were removed from factor analysis. The level used in some studies is 0.6 or even 0.7. Since it is the most frequently employed level for item elimination in pertinent studies, we opt for the 0.5 level.

Future Research

In order to properly comprehend the accounting benefits that the deployment of an ERP system may produce and how they interact with business user satisfaction, it is crucial to recognize that more research is required. When it comes to investigating any potential accounting problems or negatives brought on by the installation of an ERP system, the need for research is considerably more pressing. When studies examine both the good and negative aspects of the deployment of ERP systems, the elements linked to ERP user satisfaction and accounting benefits are better understood.

Conclusion

The significance of SCM and A&F as well as the connection between ERP and OP are demonstrated by the current investigation. This study uses route analysis and structural equation modelling to look at the structure of the research and the presented hypotheses, relying on 271 genuine individuals. The results confirm that the ERP system may be viewed as a crucial input for businesses, with the BU acting as a performance moderator. There is a large direct impact of ERP on OP. However, we discovered that ERP has a larger effect on OP that is moderated by BU. As a result, in order for ERP implementation to result in OP, a business must fully integrate SCM and A&F. By focusing on how SCM and A&F contributes to an organization's overall performance, an organization's various levels of management and departments can better understand the significance of ERP on OP.

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