



## ERP Services and Service Quality in ITES Companies: A Cross-Section Study

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### ABSTRACT

The most extensive information system (IS) software packages and enterprise resource planning (ERP) solutions are used by several organizations to increase employee productivity and obtain a competitive edge. This study aimed to determine the variables contributing to end-user loyalty and the success of ERP systems at ITES Companies in Chennai City. This study developed a conceptual model to examine the ERP system's success by using Delone and McLean's paradigm. The methodology used was a direct survey of the 125 clients of ITES Companies that use ERP services. The study results revealed that information quality, tangibility, reliability, assurance, empathy, and client satisfaction positively impact clients' loyalty toward ERP system services. The implications of this study suggest that ERP vendors should concentrate their efforts on improving attitude aspects of service quality rather than technical aspects.

**Keywords:** Information Quality, Tangibility, Reliability, Assurance, Empathy and Client Loyalty

### 1. INTRODUCTION

The business environment rapidly evolves as organizations face increased competition, expanded markets, and greater customer demands. To remain competitive, enterprises must lower total supply chain costs, shorten throughput times, reduce inventories, expand product offerings, provide dependable delivery, enhance customer service, improve quality, and better coordinate demand, supply, and production. To attain these goals, businesses must strengthen their internal procedures and operational processes. This entails sharing internal information with suppliers, distributors, and customers. Many companies now rely on enterprise resource planning (ERP) systems for timely communication and accurate information. These enterprise-wide, online interactive solutions assist cross-functional operations and provide seamless integration, allowing timely responses to client needs. ERP systems enable enterprises to effectively plan, manage, and integrate their entire resource base. An effective ERP system can assist a company in lowering operating costs, generating more accurate demand predictions, accelerating manufacturing cycles, and improving customer service. Several studies have been commenced over the last few decades to investigate clients' opinions and satisfaction with ERP systems in India. In the sample region, there is still a need to identify the function of service quality in ERP systems. With this in mind, the purpose of this study is to highlight the current status of the literature on ERP systems, with a specific focus on ERP quality aspects such as System Quality, Information Quality, and Service Quality. This research evaluates the impact of enterprise resource planning (ERP) on increasing service quality in ITES enterprises in Chennai.

### 2. LITERATURE REVIEW

**Almajali (2022)** examined the success of implementing enterprise resource planning (ERP) in a corporate context and assessed ERP performance within the framework of publicly traded enterprises in Jordan. Data were gathered for this quantitative investigation using questionnaires and the DeLone and McLean success model. Three hundred fifty-eight valid questionnaires were assessed using structural equation modeling (SEM) after the surveys were delivered to 388 CEOs and CIOs. Manager satisfaction, also referred to as user satisfaction, was positively impacted by information quality, system quality, training quality, and simplicity of use. In contrast, user satisfaction had an impact on ERP success. The system's effectiveness, the quality of the training, and the strategic alignment between IT and business all impacted ERP performance. The findings indicate that user satisfaction was not significantly affected by service quality. Moreover, a mediation role for user satisfaction was observed in the association between ERP success and training quality. Nevertheless, user pleasure did not mediate the association between ERP success and simplicity of use. The fallouts of this study will assist managers and practitioners in comprehending the factors that impact ERP success in Jordanian-listed companies.

**Owusu (2021)** deals with the interrelationships between the various quality constructs of information systems (IS) and then investigates the connection between the quality of IS and individual effect based on the theoretical underpinnings of the DeLone and McLean IS success model. The authors employed partial least squares, a structural equation modeling technique, as an additional data evaluation and analysis tool. According to the results, individual IS

success strongly correlates with tax administrative ERP system quality, information quality, and service quality. The building of high-quality information systems (IS) is also positively correlated.

**Hermawan (2019)** investigated the attributes influencing the effective deployment of Enterprise Resource Planning at PT Agung Sedayu Group. Measuring the success of ERP deployment was required to determine which success factors influence the implementation process. The DeLone and McLean success model was utilized as a measurement method with respondents who were active users of the ERP system. The research approach employed was descriptive quantitative, using questionnaires as data collection techniques and indicators based on the DeLone and McLean model. The questionnaire was compiled from 350 PT Agung Sedayu Group user population systems. Questionnaire data were analyzed using the SPSS tool to determine validity and reliability, followed by linear regression to test the hypothesis. According to the study's findings, all criteria, such as system quality, information quality, service quality, utilization, user happiness, and net benefits, influence the effective deployment of ERP at PT Agung Sedayu Group. The result states that user satisfaction, supported by a degree of usage, system quality, information quality, and service quality, significantly impacts ERP adoption success.

### 3. RESEARCH GAP

Organizations constantly face difficulties that force them to reevaluate and modify their structures, goals, procedures, and technology to remain competitive. They must take rapid action and use the changes to maintain their lead over the competition. To enhance the performance of their businesses, companies want a practical planning and control system that can facilitate the coordinated planning of all processes within the organization. A significant number of companies have implemented enterprise resource planning (ERP) systems to improve their ability to function in a dynamic business climate, as well as to facilitate allied adjustments and become more flexible. Enterprise resource planning is a highly sophisticated and cross-functional information system that eliminates work and data duplication and streamlines business operations to increase competitiveness and performance. Many ERP implementation projects fail to achieve their goals within the established limits. This research aimed to find solutions to all the challenges listed above, particularly emphasizing user happiness and user adaption to ERP systems. Therefore, this study aimed to investigate the service quality provided by ERP systems to customers, specifically ITES Companies in the Chennai Region. The DeLone and McLean Information Systems success prototypical, which aims to provide an understanding of relationships between critical dimensions of success along which information quality systems quality is commonly evaluated, acknowledged the significance of service quality by counting it as a third pillar in the model.

### 4. OBJECTIVE OF THE STUDY

- To analyze the profile of the clients and their response towards the IT services of ITES Companies.
- To evaluate the significant difference in the mean system and information quality score among the respondents towards the ERP services at ITES Companies
- To determine the factors contributing to ERP service quality and its impact on the client's loyalty at ITES Companies in Chennai City.

### 5. RESEARCH METHODOLOGY

The research strategy implemented in this study is descriptive, and quota sampling was utilized to collect data from 125 existing clients that use the ERP System that the company provides from ITES Companies. The Likert scale, which ranges from strongly disagreeing to strongly agreeing, was used in conjunction with the construction of the structured questionnaire, and the SPSS was utilized to examine the hypotheses for the study. The alpha coefficient for 45 items is 0.964, which indicates that the variables are fairly consistent internally and externally.

### 6. DATA ANALYSIS AND RESULTS

**Table 1. Profile of ERP Clients**

Clients Characteristics	Per cent
Size of the firm	Small firm -16.0%
	Medium firm -60.8%
	Large firm -23.2%
Nature of the firm	IT Consulting-20.8%
	Pharmaceutical consulting-8.0%
	HR consulting-8.8%
	ITES consulting-62.4%

Annual Income of the firm	30 lakhs-17.6%
	31-35 lakhs- 16.8%
	36-40 lakhs-54.4%
	Above 40 Lakhs-11.2%

Table 1 represents the majority of the firms (60.8%) are classified as medium-sized, followed by large firms (23.2%) and small firms (16.0%). Similarly, in terms of the nature of the firm, ITES consulting dominates the distribution with 62.4%, while other categories like IT consulting, pharmaceutical consulting, and HR consulting have lower percentages. In addition, regarding annual Income, the majority of the firms (54.4%) fall into the income bracket of 36-40 lakhs, followed by 30 lakhs (17.6%), 31-35 lakhs (16.8%), and above 40 lakhs (11.2%).

#### Friedman Test

Ho: There is no significant difference between the mean rank of services at ITES Companies.

**Table 2. Mean Ranks of ITES Services**

SERVICES	MEAN RANK	CHI-SQUARE VALUE	P VALUE
Enterprise Application Service	3.25		
Technology Consulting	3.09		
Digital Transformation	2.80		
Staff Augmentation	3.96	(68.897)	(0.000)
AI & Machine Learning	3.60		
BI & Analytics	4.29		

The Friedman test exposed that the observed ( $P = 0.000$ ) is less than 0.05, implying a strong and significant difference between the mean rank of services at ITES Companies, as shown in Table 2. Finally, it was concluded that the Null hypothesis was rejected at a 5% significance level. Based on the mean rank, BI and analytics (4.29) is the most dominating service among the clients at ITES Companies.

#### Paired t-test

Ho: There is no significant difference in the mean system and information quality score among the respondents regarding ERP services at ITES Companies.

**Table 3. Significance Difference in the ERP Services**

ERP Services	Mean	N	Std. Deviation	Std. Error Mean	Correlation	Sig.	T value
System Quality	20.37	125	3.104	.278			
Information Quality	20.14	125	3.339	.299	.752	.000	1.138

The result of the paired T-test revealed that  $P (0.000)$  is less than 0.05, as shown in Table 3. Hence, the hypothesis is rejected at a five % Level of significance. Therefore, it was concluded that there is a significant difference in the mean score of system quality and information quality among the respondents regarding ERP services at ITES Companies.

#### Multiple Regression Analysis

Table 4 shows these factors are System Quality (X1), Information Quality (X2), Tangibility (X3)Reliability, (X4)Responsiveness, (X5)Assurance, (X6)Empathy, (X7)Client Satisfaction (X8) influencing the client's loyalty at ERP services of ITES Companies.

**Table 4. Client Loyalty MRA Summary**

MRA Summary	
Dependent Variable	Client Loyalty (Y)
Independent Variables	System Quality (X1) Information Quality (X2) Tangibility (X3)

	Reliability (X4) Responsiveness (X5) Assurance (X6) Empathy (X7) Client Satisfaction (X8)
Multiple R-value	0.927
R Square value	0.859
F value	88.396
P value	0.000

Table 5. Variables in Multiple Regression Analysis

Variables	Unstandardized co-efficient (B)	SE of B	Standardized co-efficient (Beta)	t value	P value
Constant	.465	.892		.521	.603
X <sub>1</sub>	-.301	.091	-.281	-3.305	.001
X <sub>2</sub>	.120	.073	.121	1.651	.101
X <sub>3</sub>	.111	.088	.103	1.256	.212
X <sub>4</sub>	.368	.070	.390	5.221	.000
X <sub>5</sub>	-.013	.090	-.011	-.139	.890
X <sub>6</sub>	.303	.098	.291	3.106	.002
X <sub>7</sub>	.113	.081	.113	1.387	.168
X <sub>8</sub>	.295	.090	.280	3.278	.001

The coefficient of **X<sub>4</sub>** is **0.368**, representing the partial effect of **Reliability** on **Client loyalty**, holding the other variables as constant as shown in Table 5. The estimated positive sign implies that such an effect is positive, that client loyalty would increase by 0.368 for every unit increase in reliability, and that this coefficient value is significant at a 1% level. Besides, the coefficient of **X<sub>6</sub>** is **0.303**, representing the partial effect of **Assurance** on **Client loyalty**, holding the other variables as constant. The estimated positive sign implies that such an effect is positive, that client loyalty would increase by 0.303 for every unit increase in assurance, and that this coefficient value is significant at a 1% level. Moreover, the coefficient of **X<sub>8</sub>** is **0.295**, which represents the partial effect of client satisfaction on client loyalty, holding the other variables constant. The estimated positive sign implies that such an effect is positive that **Client loyalty** would increase by **0.295** for every unit increase in **Client Satisfaction** and this coefficient value is significant at a 1% level. The multiple regression equation is

$$Y = 0.465 - 0.301X_1 + 0.120X_2 + 0.111X_3 + 0.368X_4 - 0.013X_5 + 0.303X_6 + 0.113X_7 + 0.295X_8$$

## 7. DISCUSSION AND CONCLUSIONS

The Enterprise Resource Planning system is a highly technical cross-functional information system that aims to boost organizational performance and competitiveness by optimizing business operations and minimizing work and data duplication. ERP system installations provide real benefits such as cost savings, reduced operational time, and a leaner company. In contrast, intangible benefits of ERP include information integration, improved information quality, and higher customer satisfaction. Because of the increasing investment in ERP systems and the continual improvement and upgrades of ERP systems, research on the relationship between ERP implementations and performance is required. This study sought to determine the aspects contributing to the ERP system's success and end-user loyalty at Ciranta IT Services Private Limited. This study adopted Delone and McLean's paradigm and presented a conceptual model to examine ERP system success. According to the study's findings, information quality, tangibility, reliability, assurance, empathy, and customer satisfaction all benefit client loyalty to ERP System services. The findings of this study imply that ERP providers should focus their efforts on increasing attitudes toward service quality rather than technical issues.

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**Reference**


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- Akrong, G. B., Shao, Y., & Owusu, E. (2021). Assessing the impact of system quality, information quality, and service quality on enterprise resource planning systems. *International Journal of Enterprise Information Systems (IJEIS)*, 17(4), 69-84.
- Albashrawi, M. A., Turner, L., & Balasubramanian, S. 2020. Adoption of Mobile Erp in Educational Environment: Computer Self-Efficacy and System Security. *International Journal of Enterprise Information Systems*, 16(4), 184-200.
- Almajali, D. A., Omar, F., Alsokkar, A., Alshrideh, A. A. S., Masa'Deh, R. E., & Dahalin, Z. (2022). Enterprise resource planning success in Jordan from the perspective of IT-Business strategic alignment. *Cogent Social Sciences*, 8(1), 2062095.
- Almajali, D. A., Omar, F., Alsokkar, A., Alshrideh, A. S., Masadeh, R., & Dahalin, Z. 2022. Enterprise Resource Planning Success in Jordan from the Perspective of it-Business Strategic Alignment. *Cogent Social Sciences*, 8(1)
- Alzoubi, M. M., & Snider, D. H. 2020. Comparison of Factors Affecting Enterprise Resource Planning System Success in the Middle East. *International Journal of Enterprise Information Systems*, 16(4), 17-38.
- Arnety, Makokha, N., Musiega, D., & Juma, S. 2013. Implementation of Enterprise Resource Planning Systems in Kenyan Public Universities, a Case of Masinde Muliro University of Science and Technology. *Research Journal of Finance and Accounting*, 4(6), 26-34.
- Barna, L.-E.-L., Ionescu, B.-Ştefan, & Haralambie, M.-M. P. 2021. Using Erp Systems for a Green Company. *Proceedings of the International Conference on Business Excellence*, 15(1), 280-291.
- Chauhan, V., & Singh, J. 2017. An Enterprise Resource Planning Systems for Service Performance in Tourism and Hospitality Industry. *International Journal of Hospitality and Tourism Systems*, 10(1), 57-62.
- F, W., & U, T. V. 2021. The Evaluation of Enterprise Resource Planning Application Using Information Systems Success Model. *Journal of Management Information and Decision Sciences*, 24(5)
- Fadelelmoula, A. A. 2018. The Impacts of the Quality Dimensions of the Erp System on the Realization of the Fundamental Business Objectives and Perceived Usefulness. *International Journal of Enterprise Information Systems*, 14(4), 89-107.
- Fasileem, M., & Rajapakse, B. 2022. Exploring Causes for Underutilization of the Xyz Cloud Erp System for Effective Strategic Decision-Making: A Case from Abc (Pvt.) Ltd.—Sri Lanka. *Open Journal of Business and Management*, 10(4), 1811-1833.
- Fiaz, M., Ikram, A., & Ilyas, A. 2018. Enterprise Resource Planning Systems: Digitization of Healthcare Service Quality. *Administrative Sciences*, 8(3), e38.
- Ghosh, A., & Gope, A. 2012. ERP System: The New Challenge for Management Accountants. *Management Accountant*, 47(12), 1422.
- Hasibuan, Z. A., & Dantes, G. R. 2012. Priority of Key Success Factors (KSFS) on Enterprise Resource Planning (ERP) System Implementation Life Cycle. *Journal of Enterprise Resource Planning Studies*, 2012, 15.
- Hatzithomas, L., Stamelos, I., Fotiadis, T., & Mylonakis, J. 2007. Quality and Effectiveness of Enterprise Resource Planning – Customer Relationship Management Systems: Implications for Information Systems Marketing Strategies. *Journal of Applied Business Research*, 23(3)
- Hermawan, H. (2019). Successful implementation of enterprise resource planning. *The Winners*, 20(1), 19-31.
- Hsiung, H.-H., & Wang, J.-L. 2014. Factors of Affecting Internal Control Benefits under Erp System An Empirical Study in Taiwan. *International Business Research*, 7(4), 31.
- Hung, W.-H., Chang, L.-M., Yen, D. C., Ho, C.-T., & Chiang, M.-C. 2011. ERP Success in the SMEs: The Perspectives of Service Quality and Social Cognitive Theory. *Asia Pacific Management Review*, 16(4), 503.
- Mallik, B. B. 2022. Impact of E-Commerce in the Management of Supply Chain. *Journal of Exclusive Management Science*, 11(1)
- Markanthony, I. O., Auya, A. A., & Grace, A. O. 2022. Analysis of Transaction Support Technology and Service Delivery of Selected Supermarkets in FCT, Abuja, Nigeria. *IRE Journals*, 6(5), 1-11.
- Mukti, S. K., Tripathi, P., & Rawani, A. M. 2014. Identification of Factors and Indicators for Success Measurement of ERP System. *International Proceedings of Economics Development and Research*, 75, 117.
- Owusu, E., Akrong, G. B., & Shao, Y. 2021. Assessing the Impact of System Quality, Information Quality, and Service Quality on Enterprise Resource Planning (ERP) Systems. *International Journal of Enterprise Information Systems*, 17(4), 69-84.
- P, A. S., & M, S. M. 2020. Enterprise Resource Planning (ERP) as a Potential Tool for Organizational Effectiveness. *Webology*, 17(2), 317-327.
- Sagnak, M., & Kazancoglu, Y. 2019. Integrafuzzy Analytic Network Process and 0-1 Goal Programming Technique for Enterprise Resource Planning (Erp) Software Selection. *Ege Academic Review*, 19(1), 75-88.

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- Smadi, Z. M. A. 2016. The Operational Benefits of Enterprise Resource Planning (ERP): A Case Study on Food Processing and Manufacturing Companies in Jordan. *International Journal of Business and Social Science*, 7(2)
  - Taghipour, M., Shabrang, M., Machiani, H. H., & Shamami, N. 2020. Assessment and Analysis of Risk Associated with the Implementation of Enterprise Resource Planning (ERP) Project Using Fmea Technique. *Management*, 3(2), 16-33.
  - Theebah, Z. A. H. A., AL-Mubaydeen, T. H., & Ismael, M. F. 2018. The Effect of Applying the Organization Enterprise Resource Planning System (ERP) in the Quality of Internal Audit: A Case of Jordanian Commercial Banks. *International Journal of Economics and Finance*, 10(5), 96.