



Enterprise Resource Planning Systems Implementation in Online Travel Agencies

Vinay Chauhan* , Jasvinder Singh**

Abstract Enterprise Resource Planning (ERP) is one of the Information Technology (IT) tool which has drawn the attention of leading business strategists across the globe due to its capacity to offer strategic and operational benefits. Enterprise Resource Planning Systems (ERPS) ensure effective integrated application systems to support accurate and reliable information networks. In fact, there are many advantages of implementing an ERP systems namely streamlining of the different processes and workflows, data storage and sharing, improved efficiency and productivity levels, better tracking and forecasting, lower costs, improved customer service etc. (Garg and Venkitakrishnan, 1999). An ERP system supports the business system that maintains a single database for a variety of business functions such as Manufacturing, Supply Chain Management, Financials, Projects, Human Resources and Customer Relationship Management. ERPS have become the de facto standard for large and mid-sized organizations to run all their major functional and process operations. The present paper is to conduct a study on understanding the relevance and applications of the ERP systems implementations in online travel agencies from the supply side perspective incorporating the opinions of the decision makers/managers representing the key online travel organizations having higher applications of ERP systems. The study finally measures the level of Enterprise Resource Planning systems implementation and explores its factors in online Travel Agencies.

Keywords: Enterprise Resource Planning Systems, Online Travel Agencies, Supply Chain Management and Customer Relationship Management

INTRODUCTION

Enterprise Resource Planning (ERP) is one of the Information Technology (IT) tool which has drawn the attention of leading business strategists across the globe due to its capacity to offer strategic and operational benefits. Enterprise Resource Planning Systems (ERPS) ensure effective integrated application systems to support accurate and reliable information networks. In fact, there are many advantages of implementing an ERP systems namely streamlining of the different processes and workflows, data storage and sharing, improved efficiency and productivity levels, better tracking and forecasting, lower costs, improved customer service etc. (Garg and Venkitakrishnan, 1999). An ERP system supports the business system that maintains a single database for a variety of business functions such as Manufacturing, Supply Chain Management, Financials, Projects, Human Resources and Customer Relationship

Management. ERPS have become the de facto standard for large and mid-sized organizations to run all their major functional and process operations.

In the present era, Enterprise Resource Planning (ERP) systems implementation is one of the fastest growing segments in the Information technology industry. ERP system is an enterprise-wide information system designed to coordinate all the resources, information, and activities needed to complete business processes. An ERP system supports the business system that maintains a single database for a variety of business functions such as Manufacturing, Supply Chain Management, Financials, Projects, Human Resources and Customer Relationship Management. Enterprise Resource Planning systems have become the de facto standard for large and mid-sized organizations to run all their major functional and process operations. Infact, ERP systems consist of a series of functional modules that are integrated through standard business processes and include

* Professor, The Business School, University of Jammu, Jammu & Kashmir, India. Email: chauhan_vinay1@rediffmail.com

** Ph.D Research Scholar, The Business School, University of Jammu, Jammu & Kashmir, India. Email: issajjassi@gmail.com

all the data and information about vendors, customers, employees and products. The most common modules include accounting, sales and marketing, logistics, purchasing, manufacturing, human resources, and inventory (Peslak, 2006). The key parts of ERP systems are integrated modules that allow business process across the business operated functional areas; one large real-time database that allows for a single entry and repository for information across business functions; and seamless business transactions across business functions (Miller, 2003). Further, Okrent and Vokurka (2004) note six core processes that are streamlined in ERP systems: quote to cash, procure to pay, plan to perform, manufacturing operations, product life cycle and financial management. As per McAdam and Galloway (2005) ERP systems allow standardizing business processes, ensuring integrity of data, and removing the number, complexity, and expense surrounding old independent legacy systems.

Understanding this premise ERP systems are being adopted by various organizations as part of their business growth strategies which has made ERPS implementation as one of the fastest growing functional tool in the information technology industry that intend to utilize ERP complementary technologies to extend the functionality of enterprise applications, including the Internet and telecommunications technologies to integrate technology system through the strategic partnership of ERP vendors. Major vendors in the ERP market include SAP, PeopleSoft, Baan, Oracle, Microsoft dynamic and J.D. Edwards that are the major competitors to provide effective integrated application system. In fact the strategic partnership of the ERP vendors play an important role for small scale and large scale industries across divers the sectors comprising both the manufacturing and service domains to run all their major functional and process operations (Batada and Rahman, 2012). Extending its scope from the production to service scopes its application have now been extended and found to be more useful across to the diverse services sectors such as Banking and financial services, Educations, Health services and Tourism and hospitality services. This argument valid for the two reasons that services has a more economic relevance besides key role of information centric networks for delivering value to the customers. This has led the service organizations to adopt and invest considerable resources in the implementation of Enterprise Resource Planning (ERP) systems to improve efficiency, cost effectiveness and quality of service operations thereby to enhance Business performance.

Of the difference service sets, online travel industry is one which because of its perishability in nature is highly depended on integrated information network that plays a critical success factor in strategic inventory sales management. ERP systems support and addresses this challenge as it serves a single comprehensive database for the entire industry, with real

time connectivity between different functions and complete integration of front, mid and back office in the Tourism Industry. The integrated ERP systems enables a control and reduced losses due to inefficient reconciliation, duplication of work, and possible delays that finally enhances the overall performances of the services to the consumers.

LITERATURE REVIEW

Enterprise Resource Planning systems has been described as business strategies and enabling software that integrate manufacturing, financial and distribution functions to dynamically balance and optimize enterprise resources. ERP can enable enterprises to optimize their business processes and analysis capabilities for improved speed and efficiency (Gartner, 2004). ERP systems integrate inventory data with financial, sales, and human resources data, allowing organizations to price products, produce financial statements, and manage human, materials and financial resources (Markus, Tanis and Van Fenema, 1999; Vogt, 2002).

Enterprise Resource Planning (ERP) systems have become a common feature of life in organizations and address the problem of fragmentation of information allowing managers to make timely decisions (Muscatello and Parente, 2006). ERP implementation is influenced by existing internal and external factors. Otieno (2010) in the research study found that Enterprise Resource Planning systems implementation varies across the public and the private sectors in Kenya. Similarly, Singla (2005) studied the impact of ERP systems in mid-sized Indian public sector organization and found that Enterprise Resource Planning systems implementation varies across the public sector organization. Additionally, ERP adopters are consistently higher in performance across a wide variety of measures than non-adopters. Similarly, Ondrej and Zach (2012) presented a study of Enterprise Resource Planning (ERP) system implementation in small and medium-sized enterprises (SMEs) and indicated that SMEs should emphasize a thorough business process analysis and increase their attention to outcome evaluation of the ERP system.

ERP systems play an important role for small scale and large scale industries to run all their major functional and process operations (Batada & Rahman, 2012). The ERP system is implemented by different industries across the world both in production and service domains. For example, in Construction industry ERP systems play a significant role as it is needed to communicate on a large scale with other related businesses such as material and equipment suppliers, vendors, subcontractors and clients. ERP systems are being used by construction companies to improve responsiveness with regards to customers, strengthen supply chain partnerships, enhance organizational flexibility,

improve decision making capabilities and reduce project completion time and lower costs (Ahmed, et al., 2003). Similarly, ERP has wide applications in banking industries as a wide variety of services that deals with all sorts of financial transactions and investments. Enterprise Resource Planning (ERP) systems play a vital role in assisting and supporting the current banking industry. Nowadays, banks have grown, and as a result, redefined their business model to expand their services beyond the safekeeping of monetary notes and valuables. As a result of the important roles that banks play in their respective countries financial system and overall economic state and all this is possible by the active and constant support by various forms of IT integration and ERP (Dutk, et al., 2011). Recently, service organizations have invested considerable resources in the implementation of Enterprise Resource Planning (ERP) systems to improve efficiency, cost effectiveness and quality of service operations of the various service industries.

Hakim and Hakim (2009) introduced the strategic model for evaluation and selection of the ERP system by Iranian companies and concluded that it is absolutely essential for Bahman to implement the ERP system in the long run in order to remain competitive in the Auto Industry. Shakir (2011) highlighted the key trends in the ERP implementation systems in the Middle Eastern Gulf region. The key trends discussed here include consolidation of the ERP market, diversification of the ERP product, new modes for ERP application delivery, ERP and new technologies, changing ERP pricing structures, ERP support operations, growing demands for ERP vertical solutions, demanding ERP customers, inter-organizational ERP solutions and regional adaptations for ERP products. In another study, Ahmed et al. (2003) studied the suitability and the implementation status of ERP systems in contractor firms and found that the majority of contractor firms have awareness about the ERP systems and the implementation of these ERP systems is varied across the organizations.

Moohebat, Asemi and Jazi (2010) aimed at understanding any difference between ERP implementation in developed and developing countries and found that there exists a difference between ERP implementations in developed and developing countries. The result also showed that in developed and developing countries change management was most important factor and in developed countries Country-related functional requirements factor was less important factor and Fit between ERP and business/process was the least cited factor among developing nations. ERP technology solutions can help hospitality and entertainment enterprises reduce costs, increase operational efficiency, increase customer loyalty, and coordinate supply chains (Panorama Consulting Group, Report 2009). ERP system

impact hotel organization, each hotel organization must take on its own implementation strategy based on its specific organizational needs, goals and a great source of real time information to enhance the service operation (Beldona, Beck and Qu, 2001). Therefore, Enterprise Resource Planning systems is implemented by different organizations across the world, Data from IS studies and industry reports show that several thousand business organizations large and small around the world have adopted (and are still adopting) such technologies (van Everdingen et al., 2000; Klaus et al., 2000; Somers et al., 2000; Mabert et al., 2003; AMR Research, 1999; 2005).

It can be generalized that ERP systems implementation enables organizations to become more efficient and competitive in the process performance and service performance of the organizations. Further, strategies usage of ERP systems for enhancing organization effectiveness in term of reduced transaction costs, communication, collaboration, information access, decision making, quality control, data management and knowledge. Thus from the above literature review the following assumption is postulated:

H1: Enterprise Resource Planning systems implementation varies across the organization under study.

RESEARCH GAP AND RESEARCH PROBLEM

A large number of research studies on Enterprise Resource Planning systems have been conducted in banking, telecom, and health and education sector besides many on manufacturing sectors. Rather a less emphasis from the research perspectives has been focused on Enterprise Resource Planning systems in tourism and hospitality industry. An empirical underpinning in this area shows that there are very few research studies which have been conducted on the relationship between Enterprise Resource Planning systems and process performance and few studies have focused on impact of Enterprise Resource Planning systems on service performance. Moreover, all the research studies on ERP systems have been conducted in the developed economies (Genoulaz, 2005) and very less number of research studies has been conducted in the developing economies like India. Therefore an attempt through this research has been made to study the relevance and application Enterprise Resource Planning systems in Tourism and Hospitality Industry. Moreover, the study also aims to understand the role of Enterprise Resource Planning systems in business performance.

OBJECTIVES OF THE STUDY

An understanding of the above proposition has led the researcher to conduct a study on understanding the relevance and applications of the ERP systems in online travel agencies from the supply side perspective incorporating the opinions of the decision makers/managers representing the key online travel organizations having higher applications of ERP systems. The study finally measures the level of Enterprise Resource Planning systems implementation and explores its factors in online Travel Agencies.

RESEARCH METHODOLOGY

The present research is empirical in nature where in detailed attempt is made to study the level of Enterprise Resource planning systems implementation and explore its factors. The three online travel service agencies namely Makemytrip.com, yatra.com and Cleartrip.com operating in select cities of north India have been taken as the representatives of the tourism industry due to the fact that investments on ERP systems in these organizations is found to be relatively higher than the other travel companies. The selection of these companies is also justified on the basis of higher applicability of ERP systems and the higher market share of these travel companies. The employees shall be the respondents of the organizations.

The primary data have been collected with the help of a specifically designed questionnaire developed on the

basis of extant literature (Demitrios, Maditinos, Dimitrios Chatzoudes & Charalampos Tsairidis, 2006, Wang & Chen 2006; Chang 2004; Finney and Corbett 2007, Wang et al., 2007; Wang & Chen 2006; Bingi et al., 1999, Wang & Chen, 2006, Tsai, Ping Chen, Hwang & Ling Hsu 2010). The questionnaire has been further modified after reviewing the existing literature to add new items identified in the Indian literature to make it suitable in the context of online travel agencies employees in north India. The questionnaire was finalized after conducting a pilot survey to ensure its reliability and validity. The questionnaire comprised of two sections. The section A of the questionnaire was concerned about the profile of the employees where employees were asked about gender, educational qualification, level in the organization and work experiences. The section B of the questionnaire was concerned about Enterprise Resource Planning System implementation level in the select online travel agencies. The employees were asked to rate the thirty six statements that best describe Enterprise Resource Planning System implementation level in the select online travel agencies. The responses of the employees were measured by using the five point Likert scale ranging from Strongly Agree 'to Strongly Disagree'. Data was collected using a self-structured questionnaire, using a convenience sampling technique. A convenience sampling technique was used to directly engage people who were working in online travel agencies. A total of 342 respondents who were working online travel agencies services as depicted in the Table 1. Thus, the sample size was 342.

Table 1: ERP System Implementation on the Basis of Respondents Profile

S. No.	Variables	N	Mean	SD	F/t Test Value	Sig.
Online Travel Agencies						
1	Makemytrip.com	124	3.86	.25	13.159	.000
	Yatra.com	129	3.83	.25		
	Cleartrip.com	89	3.82	.20		
Gender						
2	Male	193	3.81	.25	1.240	.216
	Female	149	3.85	.21		
Position in the Organization						
3	Lower Mgmt	180	3.88	.24	19.787	.000
	Middle Mgmt	148	3.79	.23		
	Top Mgmt	14	3.91	.18		
Work Experiences						
4	Less than 1 yrs	34	3.86	.25	7.022	.000
	1 yrs to 5 yrs	174	3.78	.24		
	6 yrs to 10 yrs	98	3.88	.24		
	11 yrs to 15 yrs	34	3.97	.13		
	15 yrs to 20 yrs	2	3.91	.17		

DATA ANALYSIS AND FINDINGS

Factor analysis is a data reduction technique which is used in identifying a smaller number of factors underlying a large number of observed variables. Variables that have a high correlation with each other and are largely independent of other subsets of variables are combined into factors. High KMO value (0.836) revealed required adequacy of the data for factor analysis as depicted in the Table 2. The result exceeds 0.60 the lower limit of acceptability (Hair et al., 2009). The technique of Exploratory Factor Analysis

has been used through Statistical Package for Social Sciences (SPSS, 21 Version) with Principal Component Analysis along with varimax rotation for summarisation of the total data in to minimum meaningful factors. The items having factor loading less than 0.5 and eigen values less than 1 were ignored for the subsequent analysis (Hair et al., 2009). With the application of factor analysis, ERP system scale comprising of total 36 statements has been reduced to 20 statements that converged to six factors with 60.390% of variance explained as per Table 2.

Table 2: EFA: ERP System Implementation Factor Influencing ERP System Implementation in Online Travel Agencies

Factors	Variables	VM	SD	FL	C	MF	EV	VE	CA
Individual Effectiveness (F1)	Do more work than before.	4.05	.712	.577	.611	3.97	7.414	10.12	.756
	My work quickly by using ERP system.	3.97	.684	.531	.394				
	Work effectively with my co-worker.	4.02	.704	.661	.452				
	Tackle my problems effectively.	3.83	.716	.616	.452				
Organizational Structure (F2)	Changed to enhance employee empowerment.	4.13	.718	.550	.554	3.99	1.835	10.02	.742
	Changed to focus on CRM activities.	3.97	.674	.681	.657				
	Adjusted for new business practices.	3.88	.749	.650	.503				
	Changed to enable inters department (cross function) integration.	3.99	.708	.589	.558				
Executive Support (F3)	Believes ERP system is right for the organization.	4.16	.633	.653	.570	4.15	1.664	9.03	.721
	Defined clear objectives for ERP system.	4.16	.701	.693	.564				
	Identify easily which departments require attention.	4.13	.649	.707	.568				
Strategic Alignment (F4)	Supported corporate strategies that help in reducing operational cost.	4.14	.757	.695	.592	4.14	1.550	7.95	.826
	Supported business strategies to improve process management.	4.15	.644	.621	.576				
	Created strategic opportunities to generate incremental revenue.	4.13	.662	.611	.568				
Perceive Benefit (F5)	Generating innovative ideas to work effectively.	3.92	.693	.647	.548	3.94	1.475	7.17	.748
	Adopt ERP applications for my work.	3.90	.651	.684	.540				
	Restructured for taking decision for the future.	3.99	.733	.573	.547				
ERP Infrastructure (F6)	Allocated a generous budget for developing ERP system.	4.18	.600	.654	.569	4.14	1.418	7.08	.798
	Provided sufficient training while implementing ERP system.	4.10	.676	.510	.376				
	Managed ongoing challenges such as securities.	4.13	.607	.681	.591				

VM = Variable Mean, SD = Standard Deviation, FL = Factor Loading, C = commonalities, MF = Mean of Factor, EV = Eigen Value, VE = Variance Explained and CA = Cronbach Alpha

The six factors that emerged are Individual Effectiveness (F1), Organizational Structure (F2), Executive Support (F3), Strategic Alignment (F4), Perceived Benefits (F5) and ERP Infrastructure (F6). The first round of data purification of ERP System Implementation scale resulted in to the deletion of 16 items because of factor loading below 0.5. The findings from the research also show that concept of ERP system has found to be highly relevant in online travel agencies from the perspective of the managers representing these select organizations. The application part of the ERP has also shown higher degree of applicability with regard to customer data base, problem identification, better employee software interface, real time information, on time delivery of services, process improvisation, better product development, decision making, inter-departmental communication, data accuracy, system accuracy, response time, revenue and profit management etc. Infact, the managers were found to be highly satisfied with the ERP support systems in performing their roles and they highlighted that ERP systems have enhances their productivity. To measure the level of ERP System implementation, respondents have been classified into three categories on the basis of Online travel agencies namely makemytrip.com (37.5%), Yatra.com (36.5%) and Cleartrip.com (26%). To find out the mean difference among

different online travel agencies groups regarding ERP System Implementation, Univariate Analysis of Variance has been applied.

Table 3

Sources of Variations	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1424.211	3	474.737	13.159	.000
Within Groups	12194.408	338	36.078		
Total	13618.620	341			

On the whole, ANOVA reveals significant mean difference of ERP System Implementation among the respondents belonging to different online travel agencies groups (F = 13.159: Sig. = .000). Thus, the hypothesis stands accepted. Further, individual factor wise analysis also discloses significant mean difference in four factors out of six factors, viz., F3 (F3: Sig. = .005), F4 (F4: Sig. = .025), F5 (F5: Sig. = .004), F6 (F6: Sig. = .003). Only two factors F1 (F1: Sig. =.514) and F2 (F2: Sig. = .080) has insignificant difference regarding ERP system Implementation among respondents belonging to different Online Travel Agencies as depicted in the Table 4.

Table 4: ANOVA: ERP System Implementation on the Basis of Online Travel Agencies

Factors	Sources of Variations	Sum of Squares	Df	Mean Squares	F	Sig.
Individual Effectiveness (F1)	Between Groups	4.699	3	1.566	.766	.514
	Within Groups	691.290	338	2.045		
	Total	695.988	341			
Organizational Structure (F2)	Between Groups	10.915	3	3.638	2.277	.080
	Within Groups	540.126	338	1.598		
	Total	551.041	341			
Executive support (F3)	Between Groups	30.943	3	10.314	4.409	.005
	Within Groups	790.729	338	2.339		
	Total	821.673	341			
Strategic Alignment (F4)	Between Groups	15.115	3	5.038	3.154	.025
	Within Groups	539.964	338	1.598		
	Total	555.079	341			
Perceived Benefits (F5)	Between Groups	28.819	3	9.606	4.832	.003
	Within Groups	671.933	338	1.988		
	Total	700.751	341			
ERP Infrastructure (F6)	Between Groups	29.174	3	9.725	4.510	.004
	Within Groups	728.779	338	2.156		
	Total	757.953	341			

RESEARCH LIMITATION

The study focuses on study the level of Enterprise Resource Planning systems implementation selecting only three

online-travel agencies operating in North India only. But where as there are many other online travel agencies, airlines, and hotels etc. which limits the scope of the study. The study area confined to the select cities of north India

along with the limited sample size is another limiting factor of the study. Thus generalization of the results needs special considerations due to the above discussed limitations.

PRACTICAL IMPLICATION

The research shows the higher degree of dependence and relevance of ERP systems implementation in tourism industry. Interestingly it has been seen that ERP system implementation plays a critical role in enhancing Business performances. As pointed out by some of the managers working in these organizations those ERP support systems helps in performing their managerial roles and they highlighted that ERP systems have enhanced their productivity and operational efficiency leading the overall organizational success. Thus, the findings of the study framework can provide online travel agencies marketers with an understanding on how to make their operational strategies, especially ERP System implementation strategies effective. The results are likely to help academicians and marketers to collect information and plan appropriate process and Service Performance enhancement strategies.

REFERENCES

- Abugabah, A., & Sanzogni, L. (2010). Enterprise resource planning (ERP) system in higher education: A literature review and implications. *International Journal of Human and Social Science*, 5(6), 395-399.
- Ahmed, S. M., Ahmad, I., Azhar, S., & Mallikarjuna, S. (2003). Implementation of enterprise resource planning (ERP) system in construction industry. *Construction Research*, 125-133.
- Beldona, S., Beck, J., & Qu, H. (2001). Implementing enterprise resource planning in a hotel: Toward theory building. *Journal of Theoretical and Applied Information Technology* (Now called *Journal of Information Technology in Hospitality*), 2(1), 6-15.
- Batada, R. (2012). *Measuring system performance & user satisfaction after implementation of ERP*. Proceedings of Informing Science & IT Education Conference (InSITE).
- Chang, S.-I. (2004). *ERP life cycle implementation, management and support: Implications for practice and research*. The Proceedings of the 37th Hawaii International Conference on System Sciences (HICSS-37), Hawaii.
- Demirbag, M., Tatoglu, E., Tekinkus, M., & Zaim, S. (2006). An analysis of the relationship between TQM implementation and organizational performance: Evidence from Turkish SMEs. *Journal of Manufacturing Technology Management*, 17(6), 829-847.
- Finney, S., & Corbett, M. (2007). ERP implementation: A compilation and analysis of critical success factors. *Business Process Management Journal*, 13(3), 329-347.
- Botta-Genoulaz, V., & Millet, P.-A. (2006). An investigation into the use of ERP systems in the service sector. *International Journal of Production Economics*, 99, 202-221.
- Garg and Venkitakrishnan (1999). *Enterprise resource planning concepts and practice* (4th ed.). Prentice Hall of India Private Limited, New Delhi.
- Gartner. (2004). In *The Gartner Glossary of Information Technology Acronyms and Terms*. Edited by: Gartner (pp. 1-395).
- Hakim, A., & Hakim, H. (2009). A practical model on controlling the ERP implementation risks. *Information Systems*, 35(2), 204-214.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). *Multivariate data analysis* (6th ed.). Pearson Prentice Publishers, New Delhi.
- Mabert, V. A., Soni, A., & Venkataraman, M. (2002). Enterprise resource planning: Managing the implementation process. *European Journal of Operational Research*, 146, 302-314.
- Mabert, S., & Venkatraman, M. (2003). The impact of organizational size on enterprise resource planning (ERP) implementation in the US manufacturing sector. *Omega: International Journal of Management Science*, 31(3), 235-246.
- Markus, T., & Van Fenema, P. C. (1999). Enterprise resource planning: Multisite ERP implementations. *Communications of the ACM*, 43(4), 42-46.
- McAdam, R., & Galloway, A. (2005). Enterprise resource planning and organizational innovation: A management perspective. *Industrial Management & Data Systems*, 105(3), 280-290.
- Moohebat, M., Asemi, A., & Jazi, M. D. (2010). A comparative study of critical success factors (CSFs) in implementation of ERP in developed and developing countries. *International Journal of Advancements in Computing Technology*, 2(5), 280-90.
- Muscattello, J. R., & Parente, D. (2006). Enterprise resource planning (ERP): A post implementation cross-case analysis. *Information Resources Management Journal*, 19(3), 61-80.
- Okrent, M., & Vokurka, R. (2004). Process mapping in successful ERP implementations. *Industrial Management & Data Systems*, 104(8), 637-643.
- Otieno, O. J. (2010). *Enterprise resource planning systems implementation and upgrade*. A thesis submitted to the School of Engineering and Information Sciences, Middlesex University.
- Peslak, A. R. (2006). Enterprise resource planning success: An exploratory study of the financial executive perspective. *Industrial Management & Data Systems*, 106(9), 1288-1303.

- Singla, A. R. (2005). *Impact of ERP system on small and mid-sized public sector enterprise*. Institute of Management Technology Ghaziabad, India.
- Shakir, M. (2011) ERP trends, opportunities, and challenges: A focus on the Gulf region in the Middle East. *Journal of Enterprise Information Management*, 19(1), 13-29.
- Somers, T., Nelson, K., & Regowsky, A. (2000). *Enterprise resource planning (ERP) for the next millennium: Development of an integrative framework and implications for research.*, Proceedings of the 6th Americas Conference on Information Systems (AMCIS), Long Beach.
- Tsai, W.-S., Chen, S.-P., Hwang, E. T. Y., & Hsu, J.-L. (2010). A study of the impact of business process on the ERP system effectiveness. *International Journal of Business and Management*, 5(9).
- Everdingen, Y. V., Hillegerberg, J. V., & Waarts, E. (2000). ERP adoption by European midsize companies. *Communications of the ACM*, 43(4), 27-31.
- Wang, E. T. G., & Chen, J. H. F. (2006). Effects of internal support and consultant quality on the consulting process and ERP system quality. *Decision Support Systems*, 42, 1029-1041.
- Wang, E. T. G., Lin, C. C.-L., Jiang, J. J., & Klein, G. (2007). Improving enterprise resource planning (ERP) fit to organizational process through knowledge transfer. *International Journal of Information Management*, 27, 200-212.

KEY TERMS AND DEFINITION

Customer Relationship Management (CRM): The process of carefully managing detailed information about individual and all customer “touch points” to maximize loyalty.

Enterprise Resource Planning Systems (ERP System): An ERP system generally includes all the IT systems that enable ERP software to execute and operate efficiently. An ERP system allows an organization to design, execute, operate and maintain an enterprise information system. This system

includes the software that provides business functions and processes, computing hardware for hosting and executing software applications, and back-end network architecture for data communication across and within information systems. An ERP system may provide services and solutions such as accounting information systems, financial information systems, production information systems, marketing information systems and human resource information systems. These systems are integrated within separate departments in an organization but are managed through a central administrative console for each module.

Information Technology (IT): A package of equipment and/or systems related to data and/or communication that can be used as an enabler of process reengineering.

Online Travel Agencies (OTA): An OTA is a travel website that specializes in the sale of travel products to consumers. Some agencies sell a variety of travel products including flights, hotels, car rentals, cruises, activities, and packages. Other agencies, such as Viator, GetYourGuide, BeMyGuest, and others specialize in the sale of tours and activities. In all cases, the travel agency has an agency agreement with tour or activity suppliers to resell their products where the agency takes payment from the consumer and pays net rates to the supplier.

Supply Chain Management (SCM): The use of information technology to give automated intelligence to a network of vendors, suppliers, manufacturers, distributors, retailers and a host of other trading partners. The goal is for each player in the supply chain, guiding supply chain to conduct business with the latest and best information from everyone else in the chain, guiding supply and demand into a more perfect balance. Effective management of the supply chain enables a company to move product from the point of origin to that of consumption in the latest amount of time at the smallest cost.

Tourism Industry: The people, activities, and organizations involved in providing services for people on holiday, for example hotels, restaurants, and tour guides.