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## Supply Chain Management in the Light of Enterprise Resource Planning (Selected Criteria: Services and Satisfaction)

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### ABSTRACT

Enterprise resource planning can influence the supply chain management in Ceramic and Tile industry. By exploring the literature review and the main variable indicators, the enterprise resources planning is on the supply chain management which its subsidiary hypotheses such as system, satisfaction, agency information, services and task force were investigated. The population included Tile and Ceramic experts of Yazd province (Iran). Sampling was done based on snowball method and a questionnaire was used for data collection. Inferential statistics (factor analysis, path analysis, and structural equation) was used for data analysis via SPSS and PLS software. The results of data analysis showed that the hypotheses of satisfaction and services were approved. Consequently, some suggestions were offered about Tile and Ceramic industry.

*Keywords:* Enterprise Resource Planning (ERP), Tile and Ceramic Supply Chain Satisfaction, Services

### Introduction

The purpose of Enterprise resource planning (ERP) is to improve the efficiency of the inside of the enterprise by integrating the different sections in an enterprise while the supply chain is on the foreign relations with the commercial companies in the supply chain. In fact, with the development of enterprise resource planning system, companies have to provide the communication and information flow among the supply chain agents and dominate on the natural borders. Therefore, the ERP integration and supply chain is a natural and necessary process in managerial and strategic considerations. From the technical point of view, ERP is considered as a backbone of supply chain

because their two types rely on the very similar framework. For example, internet, intranet, extranet and electronic data transformation and ERP system providers have increased their products by inserting the seller automation system, data retention, documents management and after – sales services and support from the production process. Today, the most important trend is supply chain integration, the future of ERP, supply chain improvement and move cooperation among the different enterprises (Cohen et al., 1990). The core of ERP is a complex of integrated requests which relates the back office operations to each other for example production, financial and distribution, and creates a wider subsection from the enterprise business system. ERP expands in transportation, wave house, seller automation and beyond this in the designing engineering by computer and data management system (Adam et al., 1997). It is practical for integrating these two technologies. In this regard, the ERPS application not only relates the back office requests, but also should develop beyond its local performance including seller automation, data storage, document management and after-sales services with supply chain for efficiently increasing key clients (Agus & Abdullah, 2000).

As the competition is being made among the chain supplies, the supply chain management in the company leads to answering to the requests and customers' expectations. In 1990s and with the advancement of global market, the existence of structure and flexible enterprise seems necessary in order to respond to the diverse customers and market rapid development. In this decade, improvement in production process by the use of engineering patterns a large group of industries managers realized by continuum of their presence in market place, the local processes and being flexible in company capabilities is not enough, the components and materials suppliers should produce high quality and with the lowest price and products distributors should have a close relationship with the producers market development politics. Having such a viewpoint, the supply chain approach and its management come into the existence. The planning process, control and execution of operations in relation to the supply chain at very best, supply chain management includes all the displacements and raw materials storage, inventory during doing business and actual cost from the starting point to the finishing line of consumption. Supply chain management is an integrating approach for planning and control of materials and data which flows from the suppliers to clients as this approach circulates in the different tasks of enterprise. It relates the inventory management to the data analysis of industrial enterprise by focusing on operation management. During the recent years, this field has been accentuated. Supply chain management tasks are managing and coordinating its different currents (Christy et al., 1994). Therefore, the objective of this study was to investigate the effect of services and satisfaction in ERP on supply chain management.

## **Theoretical foundation and Research hypotheses**

### **ERP systems**

#### *Application software*

Pocket is a complex of integrated cells that have been designed, engineered earlier and are ready for commissioning. It covers all of the enterprise commercial processes. American society of product and inventory control defines the ERP as follows: A method for planning and effective

control of necessary resources for receive, production, delivery and responding to the customers' needs in the manufacturing, distribution, and services company (Chine, 1998). ERP is commercial software. It aims at data integration, flow and information among the diverse sections of an enterprise including financial, accounting, human resources and supply chain and customers management. ERP system is a variable data system and can be regulated which integrates the data and processes based on enterprise data in the enterprise units and among them (Munoz Edrisi et al., 2015). ERP represents computer systems which are designed for enterprise transactions processing and their purpose is to facilitate planning, production and on time responding to customers in an integrated environment (Akkermans et al., 2003). ERP system is a tool for gathering and integrating data and managerial skills which are applied for the whole of enterprise in a data base for example from financial affairs to human resources according to the supply chain elements and connection of production to purchase and sale.

### **Supply chain management**

A supply chain includes all the facilities or members and activities that are involved in production and delivery of a good or service from suppliers to customers and supply chain management is managing these tasks in supply chain. Supply chain elements includes three parts (Gocer et al., 2011):

1. Upstream, materials, supply services by the suppliers
2. Internal processes: tasks inside the enterprise for supplying end product
3. Downstream: distribution and delivery of products to the customers.

Supply chain management is looking for integrating the organizational units along the supply chain and coordinating materials flow, data and financial flows for fulfilling the customer's demands with the aim of competitiveness of supply chain. In the chain supply, all of the tasks in relation to the goods flow and materials conversion include the preliminary production to the end product delivery to the customers. Supply chain management is an integrating process of supply chain tasks and its related information flows which results from the improvement and task coordinating in the production and delivery of goods. According to the Ladan et al. (2004), supply chain includes all of the related tasks of materials flow and goods conversion from the raw material to delivery to the end consumers and its related data flows (Van hoek et al., 2010). Supply chain includes all of the tasks related to the flow and goods conversion from the raw materials (mining) to delivery to the end consumers and its related data flows (Pakmaram et al., 2015).

In general, supply chain is a chain that involves all of the related tasks according to the goods flow and material conversion from the preliminary production to the delivery of end product to the consumers. In the goods flow, two another flows are involved. One is the data flow and the other is financial resources and credits flow. Today, supply chain management is an infrastructure discussion in electronic business implementation in the world. In the world competitions in this era, all of the diverse products should be accessible according to the customer demands. Requests for high quality products and instant giving services existed the pressures that we never faced with such a thing before. As a result, companies cannot afford these tasks alone (Sarmad et al., 2015).

### **ERP integration and supply chain reasoning result from past surveys, observations, concentrations, objectives and supply chain systems performance and ERP.**

From the global point of view, the business companies develop their foreign activity range in order to find new opportunities around the world while the rapid effects and the dynamic foreign environment bear great pressure on the company performance and decisions. The way of rapid reaction to the foreign changes and competition in the global environment is a determining outcome. Different enterprise demand integrated information system which provides the data transfer from one border to the other. Besides, the enterprise seeks to establish a relationship between customers, the central office and local unit even in a district the companies demand the same functions by the way of effective coordination of different departments with each other. In short, it is the need to apply the simple and influential business process. As a result, they can intensify the relationship and coordination in the performance sections. In order to attain these goals, there is a need to the performance integration (Khanleri et al., 2014). Therefore, it can be said that (The main hypothesis) ERP has a significantly positive effect on supply chain management.

### **Services and satisfaction in the supply chain**

Today, supply chain management is an infrastructure discussion in electronic business implementation in the world. In the competitions in the world in this era, all of the diverse products should be in access according to the customers' demands. Requests for high quality products and instant giving services existed the pressures that we never faced with such a thing before. As a result, the companies cannot afford these tasks alone. In the competition market, commercial and product units in addition to paying attention to the enterprise and internal resources, there is a need for the management and control resources and their related elements out of the enterprise. It is because of attaining the advantage or competitive advantages by the goal of getting a larger share from the market. Based on these cases, activities like supply and demand planning, providing materials ,production and product planning, goods storage opportunity, inventory control, distribution and delivery, service to the customers which were done at the corporate level before, have been transformed to the supply chain level. The key issue in the supply chain is to coordinate management and control all these activities. Supply chain management is a phenomenon that does this task in a way that customers could receive rapid and reliable services with high quality products and lowest cost (Sarmad et al., 2015). According to what mentioned above, the following hypotheses have been mentioned so as to achieve the research objectives:

*Hypothesis (1): satisfaction on supply chain management has a significantly positive effect.*

*Hypothesis (2): services have a significantly positive effect on supply chain management.*

### **Literature review of local research**

Mohammad Reza dalvi Esfahani et al. (2014) wrote an article with the title of investigating the marketing strategies alignment and the impact of these on supply chain and enterprise performance. The aim of this research is alignment effect of marketing on supply chain and enterprise performance in the industrial group of selection. The results of this study show that there is a positive and meaningful relationship between marketing strategy alignment and supply chain with supply chain performance. Also, there is a positive and meaningful relationship between supply chain and enterprise performance. According to the importance of supply chain performance to the enterprise knowledge, education and acknowledgement program in enterprise about supply chain could be a strong tool for communicating the integrated supply chain advantages. Supply chain partners should share the information, define the responsibilities, and assign them and align the incentives. Mosakhani et al. (2014) conducted a study titled “presenting a template for measuring the planning project requirements of enterprise resources (case study of Qazvin Azad University)” and mentioned that this survey is being presented with the aim of presenting a modal for investigating the proceedings and essential requirements of ERP system in an enterprise. The results of the model test showed that the university has the appropriate platforms from the technical, economic and operational point of view in order to apply a simple system of ERP with the minimal standards for ERP development. In spite of appropriate program related technology development, human resources readiness is below the average level.

Abdolvand, Tarani (2014) conducted a study titled “the acceptance factors of cloud ERP system in the small and medium-sized enterprise in Iran” and mentioned that ERP system is in under the focus of big enterprise because of a great deal of advantages. Statistical population of this research included 200 IT managers in small and medium-sized enterprise. As mentioned before, according to the competitiveness of business environment, the enterprises have to use ERP system. As the ERP comprises of a great scale of enterprise, their install, implementation storage are time consuming and costly. As these systems need a lot of hardware, their implementation could be challenging and risky. Therefore, they may experience high failure – rate. Maleki and Hekmatian (2014) presented their paper with this title “the investigation of knowledge management impact on supply chain management”. Case study of this paper is about clothing industry. The data of this paper is from 500 turkey great companies and 15 companies of six provinces as a face to face meeting. Then, these data were investigated by an analytical network process. According to the results, knowledge management elements have positive impact on clothing supply chain performance. According to the investigation knowledge production is a remarkable criterion for clothing companies. They should apply correct management and strategy in order to compete and dominate on market. The results showed that applying it is so important for managers. In the clothing companies, the most important strategy for managers is correct supply chain management and more competition among supply chain.

Khanlari, Kafaie (2014) represented in their paper that in spite of acceptance of applying ERP system by enterprises, most of them could not attain the expected results by establishment of this system. The findings of this research suggested that each of the structural dimensions of

concentration, formality, personnel ratios, specialism by impact on five – fold system dimensions are influential in the success of applying it after establishment phase and explains its impact in a separate dimensions. This research investigated enterprise structure impact on ERP system success and finding optimal structural characteristic for successful applying of this system. For this, the relationship between the different dimensions of enterprise structure and ERP success system was investigated. Ghorbanpour Dabagh (2014) in his paper “ERP establishment effectiveness in internal auditing performance of north west sugar factories” stated that today enterprise designing is regarded as a tool applying it accompanies with more corollary including transparency, costs and workforce fatigue reduction, providing an appropriate environment, improvement in personnel’s job skills and management, correction in the way of doing work. The results showed that the companies which had established ERP system could control the internal weakness in a better way in comparison with the companies with less internal weakness control which did not have such a system. We get to these results by fitting the Probit regression model which includes diverse control variable associated with internal weakness control.

Hamidi (2015) in his paper “presentation of a network analysis structure for ERP system selection in fuzzy environment” stated that ERP system of enterprise resources makes the enterprise more efficient by business processes integration in an information system infrastructure selection of an appropriate ERP system is a vital issue in supplying the commercial strategies and company purpose. The results suggested that ignoring the criterions interaction may lead to wrong decisions. First, based on companies’ requirements and executive requests, the ERP criterions were defined. Then, the ERP choices and their suggestions were investigated and the best choice of ERP system was selected from the fuzzy analytical process by considering the decision making process ambiguity. Chandrakumar et al. (2015) referred to the package size estimation of special pockets of ERP investigation by package scores. In his paper “an approach for ERP package size estimation by package score”, the suggested method became valid by the data gathered from the 14 ERP projects of the same company. There was a positive correlation between packaging the scores and the effort of these projects. These results showed the feasibility of our suggested method and positive atmosphere for beneficial use of this method by project managers in future ERP projects. Eventually, we investigate the meaning of these results in the future investigation of scope of practice.

Badvi et al. (2016) mentioned to the new angle for understanding this success by project management theory combination with institutional theory by neo – institutional theory view point in the paper “The sovereignty effect of enterprise project interests management on ERP project success”. According to the neo – institutional theory, the higher the use of project management and interest management as a sovereignty and action in an enterprise, the higher use of them in ERP projections. As a result, they transformed to a part of enterprise logic in projections management. It is supposed that ERP investing success relates to the enterprise projections and institutional logics of enterprise interests management. After the analysis of 130 questionnaires by the use of structural equations modeling, it was found that this hypothesis is confirmed. Furthermore, the enterprises which have both logics have a better performance in comparison to

the other enterprises. This research showed that the cause of investment project success is project management. This responsibility makes changes in business. Mat Yatin et al. (2015) in his paper “ERP system execution interests in telecommunication” investigated the relationship between information quality, system quality, service quality, consumer’s satisfaction, and ERP net profit. The findings showed that service quality in the most effective factor in net income while the other two factors were not significant. It seems that adding an intermediate, consumer satisfaction has low effect on the relation of the two other dimensions and net income. Service quality is a factor with highest efficiency in a telecommunication company. An effective ERP is a system which can be supported in business intelligence business in a company.

Chanyong et al. (2010) in their paper “structural equation model for analyzing the ERP impact on supply chain management” investigated data collection in order to apply the ERP system and its impact on company capability in supply chain. ERP and supply chain management are important choices for IT investment for doing business or IT managers and their potential capabilities have been admired in business performance improvement and University research. Operational interests, business trend and strategic planning interest intensity the supply chain company abilities in operational merger of process, customer and communication integration, planning and process integration control. Kafman et al. (2014) in their paper “statistical power of structural equation models in supply chain management research” investigated the other domains of supply chain management that the power size is not enough. This finding is worrying because the statistical power influences directly on conclusion meaningfulness based on covariance structural equations model. In 86 percent of application investigation, covariance power level of structural equations model is not documented well. Furthermore, in 32 percent of 988 covariance of structural equation model, the statistical power is very low, 43 percent of the other 988 application the statistical power level is nearly 100. Kafman et al. (2015) in the paper “Investigation of partial least squares structural equation modeling (PL–SEM) in supply chain management research” investigated using PLS in 75 papers in prominent journals of structural equations model. Also, most of the researchers comprehend the traditional techniques based on structural equations model, but they are not familiar with PLS–SEM a lot.

Lotfi et al. (2013) in the paper “Sharing information in supply chain management” explored the sharing impact on information supply chain management for rising efficiency of enterprise performance in production sector. Sharing information has remarkable benefits for production sector. For example, inventory reduction and efficient inventory management, lowering the cost (substantial reduction of Uncertainty), remove of substantial reduction in Bullwhip effect, using the improved resources, increasing productivity, enterprise productivity, service improvement and strengthening the social bonds, recognition the primary problem, rapid reaction, decreasing the cycle time from offer to delivery, tracing and even in a better way, rapid entrance to market, advanced network and using the optimized capacity. However, sharing information has its own obstacles. As was discussed before, the production sector should use the advanced IT in order to share the information in supply chain in an efficient way to increase the competitive advantage for maintaining its positive is global economy.

**Research method**

This study is an applied descriptive research. The objective of this study is to expand the applied knowledge in a special field.

***Population and sample***

The population of this research included experts and elites who were aware of ERP in supply chain in the Tile and Ceramic factories of Yazd province. The snowball method was applied in the research. The sample included 40 elites who were aware of supply chain.

***Data collection***

According to the research topic and its variables, data was collected by a questionnaire during the winter (2015) to September of (2016) for testing the hypothesis. The responds should be given based on five–point likert scale. Data collection was done by taking notes in a library method and could be applied in data gathering by a field method and questionnaire tool. Questionnaires are one of the most common tools for data collection in survey studies. In this research, the following methods are used according to the required data. A) underlying data collection method by primary source: having interviews with managers and ERP and supply chain experts, Using questionnaire which the resulting information is the bases of impact and refuting the hypothesis. B) Data collection method by secondary resources the experts theories about ERP and supply chain. Applying the research and publications of organizations works about ERP and supply chain. In different centers, using books, papers and magazines from the credit sites using the University papers.

***Data analysis***

Descriptive and inferential statistics were used for data analysis. Descriptive statistics included Frequency tables, mean, standard deviation and so on. In the inferential level, the structural equations model was used by confirmatory factor analysis and path analysis. For factor analysis and hypothesis confirmation (factor and confirmatory path and structural equations) the PLS and SPSS software were used, respectively.

**Findings**

In this research, the structural equation modeling was applied by PLS–SEM for testing the hypotheses and model verification. This method is used in cases that the sample is small or the distribution of variables is not normal. In PLS models, two models are being tested. External model is equivalent to the measurement model and internal model is similar to the structural equations models. The external model indicates the factor loading variables that has been observed.



### External model (measurement model)

In methodology of structural equations model, at first, it is necessary for resident to study the construct reliability in order to specify the selected items for assessing the variables in a more accurate way. For this purpose, confirmatory factor analysis was used. If factor loadings of an item with its variable be T-value of higher than 1/96, this item has the essential accuracy for assessing that construct or latent factors. In the following tables, the value of factor loading is presented for every item of latent factor.

Table 1. Confirmatory factor analysis (factor loading value and T-value) for every satisfaction variable

Variable	Item	Factor loading	<i>T - statics</i>
Satisfaction	K6	0/710	14 / 748
	K7	0/563	5/926
	K8	0/704	10/171
	K9	0/879	30/056
	K10	0/697	12/460

All of the items have a greater than 1/96 value. According to the tables, all of the variables in their items are being confirmed and have a larger share in assessing their related variable the indicated which has a smaller coefficient, has a small roll in assessing the related construct.

Table 2. Confirmatory factor analysis (factor loading value and T-value) for service variable

variable	Items	Factor loading	T – statistics
Service	K22	0/859	33/075
	K23	0/813	12/300
	K24	0/882	37/028

Table 3. Confirmatory factor analysis (factor loading value and T-value) for every supply chain variable

Variable	Item	Factor loading	T - statistics
Supply chain	K32	0/653	11/842
	K33	0/794	11/945
	K34	0/727	16/748
	K35	0/731	24/420
	K36	0/738	14/713
	K37	0/727	15/471
	K38	0/879	16/868
	K39	0/881	40/764
	K40	0/781	25/885
	K41	0/883	10/758

## External model fitting assessment

### Construct validity

Construct validity in structural equations model in addition to the construct validity that were applied for exploring the selected items importance for measuring variables, the validity discriminant is intended. In other words, every variable item regards an appropriate separation for measuring the other modal variables. This process is defined by variance mean indicator. The mean variance coefficients show that what percent of structure variance or model variable is explained by a separate item. Structures or model variables have mean variance of higher than 0/5 standard index which were introduced by bagouzi and yay. It is concluded that items can explain variance variables of research model. In assessing model, the internal model coordinate or reliability is assessed by composite reliability. Reliability coefficients are presented in the following table. In the model, all model structures have composite reliability and higher than the standard index of 0/6 the composite reliability indicates high the internal reliability of research data. Also Cronbach's alpha of higher than 0/7 shows the desired reliability.

Table 4. The mean value and reliability coefficients

Coefficient of determination	Cronbach Alpha	Composite reliability	Mean variance	variable
0 / 810841	0/759087	0/838992	0/515255	satisfaction
	0/812455	0/888275	0/726266	service
	0/911545	0/926482	0/559267	Supply chain

### Construct reliability

The construct reliability is measured by two methods: one is the mutual factor loadings which compare the correlation of one construct with another. The method is the farfel and larker standard which have been applied in this research.

Table 5. Coefficients determination of construct reliability

	satisfaction	service	Supply chain
satisfaction	10000		
service	0/521310	10000	
Supply chain	0/734539	0/583577	10000

The mean square of variance in the latent factors in the present research which are located in the matrice main diagonal in the existed home are greater in comparison with the correlation value among them, respectively in the left and bottom homes. It is noted that this standard is acceptable for all of the variable and could confirm the appropriate construct reliability for the model.

### Model externals (path coefficient and t –statistics)

According to the internal model, the hypothesis can be investigated. By comparing the value of every path coefficient, the research hypothesis may be confirmed or rejected. If the absolute value

of t-statistics is greater than  $1/96$ , at confidence level of 95 percent and t-statistics value of more than  $2/58$ , the path coefficient in 99 percent significant level is significant. Conceptual model test results at confidence level of coefficient have been shown in the following figure. The path numbers indicates the T-value for investigating the path coefficient meaningfulness, it is necessary the t-value of every path be higher than  $1/96$ . In this analysis t-value did not confirmed the meaningfulness of all path and accept the hypothesis which are under the investigation except the institution and information path.

### External model (structural model)

The hypotheses were explored by internal model and structural model path evaluated every path corresponds to one of the hypothesis. Every hypothesis test is done by exploring the sign, size and statistical significance of path coefficient (Beta) between the latent factor and dependent variable. Therefore, the totality of research hypothesis is observed in the following table.

### *Model in a path coefficient state model test in the path*

Coefficient state, resulted to this output. According to it, the coefficient path in this research forms the hypothesis.

Table 6. Model test in the path coefficient state

Resampling of t-statistics			Std	Mean	Beta	Path
800	1000	1200				
3/123	3/034	3/037	0/067514	0/196984	0/205	Satisfaction supply chain
3/21	3/161	3/166	0/057900	0/183022	0/183	Service Supply chain

According to the t-value of all path except information hypothesis and institution is higher than  $1/96$  which indicates at confidence level of 95% the other path experienced the meaningful effect. According to the significance level, the hypotheses were confirmed at the level of 99%.

### General model fitting evaluation (quality indicators)

In structural equations modeling by PLS method, unlike the axis covariance, there is not an indicator for total model assessment. It is used as a yardstick for general performance of model assessment. Some researchers believe that the value of more than 60 percent is significant for this statistics. In this research, it is not significant.

Table 7. The summary of path coefficient, coefficient of Determination, T-statistics and research hypothesis results

Hypothesis result	T statistics	Coefficient of path	Hypothesis
confirmed	40 / 402	0 / 878	The ERP has a positive and meaningful effect on supply chain management

confirmed	3 / 186	0 / 205	Satisfaction has a positive and meaningful effect on supply chain management
confirmed	3 / 120	0 / 183	Services has a positive and meaningful effect on supply chain management

### Hypothesis testing

After the principle model investigation, the research model hypotheses were investigated. If the absolute value of T-statistics is lower than  $1/96$ , the null hypothesis is confirmed, but if the absolute value of T-statistic is higher than  $1/96$ , the null hypothesis is refuted. In this section, the corresponding hypothesis is tested.

*Main hypothesis: ERP has a significantly positive effect on supply chain management.*

According to the above tables, absolute value of T-statistics equals to  $40/402$  and greater than  $1/96$ . Therefore, the null hypothesis is refuted. In fact, at confidence level of 99 percent, it has a positive and significant effect on supply chain management.

*Hypothesis (1) satisfaction has a significantly positive effect on supply chain management.*

In the above table, absolute value of T-statistics equals to  $3/186$  and greater than  $1/96$ . Therefore, the null hypothesis is refuted; it means that there is a significantly positive relationship between satisfaction and supply chain management.

*Hypothesis (2): service has a significantly positive effect on supply chain management.*

According to the table, absolute value of T-statistics equals to  $3/120$  and greater than  $1/96$ . Therefore, the null hypothesis is rejected. In fact, at 99% confidence level, services have a significantly positive effect on supply chain management.

### Conclusion

According to the basic hypothesis which was presented in the beginning of research and discussed in literature review suggest and by a questionnaire the data was gathered and analyzed. The findings suggested that if the absolute value of T – statistics be lower than  $1/96$ , the null hypothesis is confirmed but if the absolute value of T – statistics be greater than  $1/96$ , the null hypothesis is rejected. In the table T-statistics of absolute value equals to  $4/402$  ad greater than  $1/96$ . Therefore, the first hypothesis was confirmed; it means that at confidence level of 99 percent, system has a significantly positive effect on supply chain management. According to the second hypothesis that was discussed and data was collected by a questionnaire and the findings shows that absolute value of T – statistics equals to  $3/186$  more than  $1/96$ . This hypothesis was confirmed. In fact, at confidence level of 99 percent, satisfaction has a significantly positive effect on supply chain management. According to the table above, the absolute value of T – statistics equals to  $3/120$  and more than  $1/96$ . Therefore, the null hypothesis is refuted. In fact, at confidence level of 99 percent, services have a significantly positive effect on supply chain management. Hence, “services” is an important and basic pillar in Tile and Ceramic supply chain.

## Suggestions

In order to have a more influential ERP, the following cases should be taken into account including selecting an appropriate system and suppliers, software localization in enterprise according to the strategy, culture and its structure, commitment and support of enterprise management from software implementation, consultants merit in its implementation, appropriate project control in the implementation process and its completion in a definite time, predicted projection and so on. Suggestions or satisfaction include responding to the consumers in an effective way, customer orientation, fairness, work discipline and legal positivism. Also, we can make suggestions about services variable appropriate suggestion for services promotion in supply chain management assure giving high quality services to the customer. We come across with limited supply chain management and supply chain performance assessment in debate service company in comparison to product company. Therefore, further studies are needed to be conducted in this field. Customer's demand for purchasing goods and high quality services, appropriate delivery, modern technology and long life result to the great competition between producers and manufactures.

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