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The effect of external service quality on customer's loyalty in hotel's industry supply chain (Case Study: Persian Hotels)

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CHRONICLE	Abstract
	Service quality is a factor for measuring customer satisfaction in hotel industry. Therefore, in order to achieve competitive advantage and maintain customers, improving service quality has become an important tool in hotel industry to achieve customer satisfaction which is lead to customer loyalty. Because companies are developing close relationships with suppliers and customers. Since then the role of suppliers and their impact on the external services quality cannot be forgotten, in this research, the effect of external services quality are examined on internal service quality and customer loyalty in the supply chain of hotel industry. After reviewing the literature of the study and identifying the variables, the standard questionnaire Parkshash (2011) was distributed among 265 experts of the Parsian hotels complex then were analyzed by Structural Equation Modeling (SEM) and LISREL8. Ultimately finding showed that there is a positive relationship between external service quality and internal service quality and customer loyalty.
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1. Introduction

In recent years, service, is being as a vital component of the global economy and also service economy, has become a driving force for economic growth in the developed states.(Won Cho.et al,2012,805) The service is a kind of an economic activity that makes the intangible product (with Value Added).Quality is as one of the most important measures of service quality assessment, as follows, Broad concept that different parts of the organization are committed to it and its purpose is to enhance the organization total efficiency with minimum cost and to increase the competitiveness whereby the

whole of that set adapt to defined customers features. (Feizy & Tatari, 2004, 84)

Service is a very important aspect of the hotel industry. A growing number of international tourist hotels are expected to build a differential competitive advantage by providing professional services.(Chen, 2013, 155)

Parasuraman et al. (1985) pointed out that the manifestations of service quality would influence customer satisfaction. Disconfirmation is the element that decides the quality of the services provided. In the service industry, service quality is an important prerequisite to achieve customer satisfaction.(Gronin and Taylor, 1992)

Service quality is regarded as a core element influencing customer satisfaction and loyalty (Hansen and Bush, 1999). Anderson et al. (1994) pointed out that improvements to service quality would improve the satisfaction of service recipients that may help improve the repurchase intents or possibilities. (Lee and Cheng. 2018, 35)Today, the most important factor for success in the competitive market is to meet the needs of customers. For improving performance, they need to improve performance from suppliers and meet the customers' demands (Ahmadi Kohhnali, 1999).

So it is necessary to make deeper and more comprehensive studies of all operations related to the delivery of goods and services (supplier performance). Suppliers are critical team members that help in designing the product and development of proposals, technology support, continuous development and quality assurance preferences. Some leading supplier companies help them to improve product and service quality, reduce the cost of product development, and accelerate the speed of new product development.

identifying the dimensions of the quality of external services in the supply chain will lead to a better understanding of the relationships and interactions between suppliers and can be used to increase profitability. By reviewing resources, there are significant research work on the service quality on customer loyalty, but less studies have been done on the effect of the quality of external services on customer loyalty. However, fewer empirical research has focused on the impact of the external service quality on customer loyalty.

In this study has investigated the effect of external and internal service quality on customer loyalty in hotel industry.(Prakas, 2011, 368)

2-Research Literature

Previous studies show that organizations that have external service quality require employees (internal customers) who are committed to the goals and vision of the company as well as customer-oriented behaviors and suitable internal service quality (satisfaction of other organizational units). By expressing the concept of internal service quality, the role of internal customers (employees) and the satisfaction of other organizational units have been cleared the concept of external service quality. Though so far, many studies have focused on the external service quality, the interaction between the quality of external and internal service should be considered. (Amiri.et al. 2008.8)

In other words most research has focused on quality service on customer, and there are only few studies that have been conducted on the applicability of quality in the supply chain. (Khatee.et al. 2008.19)

Also some studies have been done in the field of service quality in the supply chain, procurement or distribution activities have focused on the research they have considered only one-sided view. Mutual sided studies (impact of service quality on the distributor-supplier, suppliers and organization) can provide a win-win situation and may help in achieving the main objectives of the supply chain. The role of internal service quality (level of service of an employee to another), is less clear to achieve external service quality. To

measure mutual service quality at first it need to understand how to work and what the interaction between parts of supplier and customer is. (Brooks. 1995.15)

Hotels are parts of the tourism industry, including large businesses in the world. (Moatmeni & Jafari .2009. 55) In some hotels, managers must understand that it is possible to achieve quality by external stimulations, yet the internal stimulations are crucial to achieve a higher overall interest and quality improvement tools. Results show that hotels with more concern for the internal dynamics make use of a wide range of quality tools. (Jose´ Tarı´.et al.2013. 26)

Thus, the desired level of quality service is defined by the main organization (internal service quality). Internal service is mentioned as services provided to units or individuals within the organization and is the prerequisite for overall company performance. Every employee and unit is both a service provider and utilizer and that internal service quality greatly impacts the service quality to external customers (Chen. 2013.155) And the quality that supplier does with increases of the level of service quality call external service quality. (Prakash. 2011.365)

Many organizations gradually consider the importance of competition as part of a supply chain against other supply chains to respond quickly to the changing needs of customers.(Manzin.et al. 2010.20) Identification and maintenance of customer loyalty by supply chain members have been created as a competitive advantage. Customer loyalty has attracted little attention in the study of supply chain.

We assume that the capabilities of a supplier stimulate customer loyalty by creating customer dependencies. Dependence is a factor which is really important in the successful customer-supplier relationships. Customer Dependencies represent a new opportunity to improve and develop services to understand customer needs. (Prakash. 2011.365)

Loyalty is an index of effective improvement and contingency measured of customer desire that cause supplier performance results. Identifying and maintaining customer loyalty can be a key distinguisher through which supply chain members can set sustainable competitive advantage. (Scheer.et al. 2010, 98)

Customer loyalty is a complex construct due to the different coexisting perspectives in its conceptualization. The general definition of loyalty is a commitment to repurchase a preferred product or service in such a way as to promote its repeated purchase. Loyal customers repurchase from the same service suppliers whenever possible, recommend those suppliers, and maintain a positive attitude toward them (Kandampully & Suhartanto, 2000,50 & Chang, Yeh, 2017, 40)

Customer loyalty can attract little attention of research in field of the supply chain.(Lee, 2004, 118) We believe that the capabilities of a supplier, stimulate customer loyalty by creating dependency on the clients it means company's need to maintain a relationship with a partner exchange to achieve their desired goals.(Ellram.et al,2007,58) Dependence will appear on the successful supplier-customer communication.(Scheer.et al, 2010, 98) It is essential to establish stronger links of the supply chain.(Ellram.et al, 2004, 26) Customer dependence, provide a window of opportunity to service improvement, expansion and deepen links between individual and take advantage from person's special knowledge to realize customer needs.(Sampson, 2000,352) Customer Loyalty, indicates successful service industries, especially in the hotel industry.(Azar & Mohamadlou,2010,36) However, customer satisfaction is a critical element in the hotel industry, But customer loyalty is more valuable than customer satisfaction: because loyal customers lead to customer return to buy again and Mouth-to-mouth marketing.(Ellram .et al,2007,58 & Scheer.et al, 2010, 98)

Customer satisfaction leads to repeat purchase which in return causes loyalty. Customer loyalty leads to profitability and higher quality brands. (Ellram.et al, 2007, 58) Knowledge of supply chain structure in service businesses is still low. (Lee, 2004, 118)And the concept and application of service supply chain in the early stages of their growth. Some researchers have tried in very little understanding and have created service supply chains through adapting of existing supply chain management states.(Ellram.et al,2007,58) Studies have focused on the issue of how the traditional functions of the supply chain can be defined in services.(Ellram.et al, 2004, 25) And can be concentrated and investigated on the dual relationship between the service provider and the end-consumer.(Sampson, 2000,352)

A summary of the literature in this field is given below: Some of the leading suppliers help companies in improving product and service quality, reduce product development costs, and accelerate the pace of new product. Substantial numbers of suppliers are assessing their function themselves only; on the other hand the traditional view of quality is discussed from the view of final customer. This study proposes the dual approach to the quality. As the focal company expects from a supplier in the supply chain, supplier expects from the focal company, and what it will take to improve supply chain performance, understanding the expectations of the supply chain ingredients and efforts to attain it. (Azar & Mohamadlou, 2010, 36) As the companies diagnose the importance of supplier and customer involvement in product development and service, the role of supplier and customer participation in the field of competitive advantage is increased. (Sampson, 2000, 352) The impact of service quality on customer loyalty has been the subject of a large number of empirical studies. These include definitions of dimensions and indicators of service quality and loyalty, and ways of measuring

them. Following studies in this field can be mentioned here, Rahimnia et.al. (1391) with "impact on the quality relationship of customer perceived quality and customer loyalty: five star hotels in Mashhad Metropolis" with structural equation modeling and studying.

Alame et.al. (1389) examined the impact of service quality on customer loyalty in a set of four and five star hotels, Gilbert et al (2013) to study the quality of service, customer satisfaction and loyalty among power consumption General industrial customers in Malawi. Shieer et.al (2010), in their empirical research investigated capabilities of supplier and industrial customer loyalty.

There is considerable research on the evaluation of service quality on customer loyalty, but there is little research about the effect of external service quality on customer loyalty that is completed. However, little empirical research paid abroad on the impact of service quality on customer loyalty, Therefore, the researcher seeks to find the influence of "external service quality" on "customer loyalty" and action-related components in the hotel industry (as a service industry) and respond the assumptions.

Different models have been created to evaluate the quality of the supply chain for example White & Schneider (2004) believed that internal service quality is a kind of services quality which offered to employees and external services is a kind of services which is provided to customers is taken into account. Therefore, the quality of internal (employees) influenced external service quality for (consumers). Parkash (2011), demonstrated the mutual relationship between the internal and external service quality. He considered internal service quality (organization and staff) and external service quality (the suppliers).

Lpavara Luria (2013) in his dissertation examines the internal and external service quality in the automotive industry. In this study, the internal service quality, staff and

external service quality, customers were considered. He showed his model, internal service quality has a direct impact on customer satisfaction. [Adapted from the internal and external service quality.(1998,2004)]

Orwell and Kara (2013), investigated the impact of service quality on customer satisfaction and loyalty.

According to the records done in practice, it is observed that there is less attention to the external services quality in the supply chain, and the impact it has on customer loyalty. And, ultimately, the proposed research model is presented.

2.1. External Service Quality Dimensions:

1.Agility: Description of the supplier's ability to respond quickly and sudden changes in the supply chain, demand, and external disturbances (Lee,2004) and included in time and quick services toward the focal organization.(Mersha and Adlakha,1992)

2. Relationship: The ability to attach importance to human health and behavioral aspects. (Haywood-Farmer, 1988) This item is retained by the supplier in the operations and processes. (Parasuraman et.al, 1985) The respect and courtesy to the focal organization. (Haywood-Farmer, 1988)

3. Alignment: Ability to comply with the schedules (Lee, 2004) It includes flexibility to change the time and supplier effort against the requirements of organization. (Mehrsha, Adkhala, 1992: de Carvolho and Leite, 1999)

4. Credibility: The ability to provide honest services dependent on the focal organization. (Parasuraman, 1988: Ghobadian, 1994: Gronroz, 1988)

5.Adaptability:The ability to adapt to changing environments and conditions (Lee,2004) It includes a willingness and desire to correct the errors in the given services and products to organizations.(Mehrsha,Adkhala,1992) The ability to understand the needs of the Department of Correction and at different levels of the supply chain.(Parasuraman, 1985: Ghobadian, 1994)

6. Service competence: The ability to perform specified duties and responsibilities and delivery services promised to the focal organization. (Johnston, 1985: Parasuraman, 1985: Ghobadian, 1994)

7. Service reliability: Ability to perform the promised service to customers so that they are a reliable and accuracy. (Feizy & Tatari, 2004, 60)
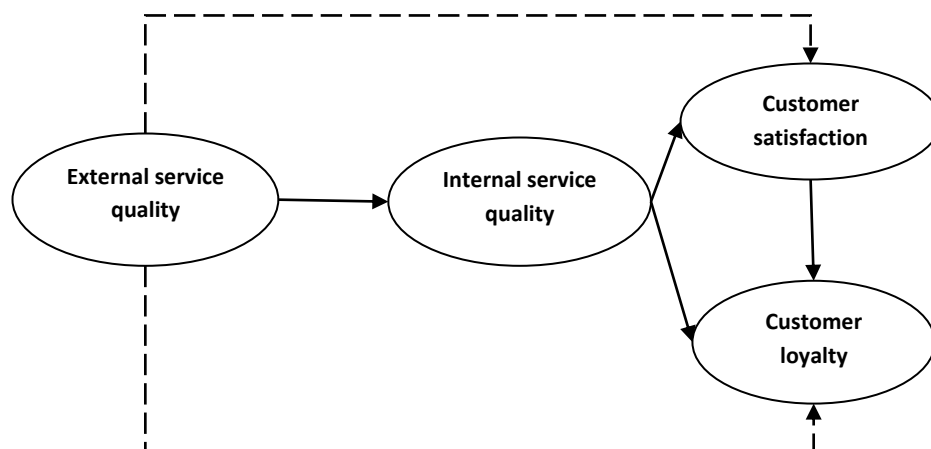

Figure1. Structure of proposed model

3. Hypothesis of the study

1. There is a positive relationship between external service quality and customer's loyalty. (By internal service quality as mediator variable)
2. There is a positive relationship between external service quality and customer's satisfaction. (By internal service quality as mediator variable)
3. There is a positive relationship between external service quality and internal service quality.
4. There is a positive relationship between internal service quality and customer's satisfaction.
5. There is a positive relationship between internal service quality and customer's loyalty.
6. There is a positive relationship between customer's satisfaction and customer's loyalty.

4. Methodology

This study is applied in terms of purpose and descriptive-correlation with regard to methodology. The population was 270 employees and experts of Parsian hotels. In this study 265 employees were selected as statistical sample. Parkash (2011) external service quality on customer's loyalty questionnaires were used as tools which their validity were approved by several experts. The validity of questionnaires was estimated by Cronbach's alpha coefficient. This coefficient was 0.80 for questionnaire. In order to analyze data, descriptive methods, Pearson correlation coefficient and structural equation modeling (Lisrel 8.0) were used.

5. Data analysis

The questionnaire includes two sections, in the first of which comprised items on service quality in the supply chain, and section II sought details of the respondent's profile. Data have been collected from five branches of Parsian hotels and their suppliers. Hotels are situated in Iran, Tehran. Summary of data source is presented in Table 1. In order to reach respondents who were information-rich and willing to participate in the survey, a snowball sampling approach has been followed. 270 persons have been approached and data has been elicited from 265 respondents (Feizy & Tatari, 2004, 85), that is a response rate of 98 % was achieved. This high rate of response may be attributed to involvement and commitment of respondents. SPSS18 and LISREL8 have been used for data analysis.

Table1. Summary of data source (n=265)

requency	type	variable
157	female	gender
108	male	
69	Less than 5 years	Job experience
117	5to 10 years	
59	11to 20 years	
20	More than 21	
60	Younger than 25	age
108	25 to 35	
61	36 to 45	
36	Older than 46	
73	diploma	education
69	Higher diploma	
96	bachelor	
27	Higher than bachelor	
203	officer	Job position
39	expert	
23	manager	

Structural equation modeling (SEM) has been used to analyze the model of the study. SEM expresses the linear causal relationship between two independent sets of latent constructs termed as exogenous and endogenous constructs. Exogenous constructs are treated as independent variables while endogenous constructs are treated as dependent variables and these are related through linear regression equations. The coefficients of these relationships termed as path coefficient are free or fixed at particular values and the independence or covariance of variables is specified. The relationship among the observed variables is characterized by the co-variances among

those variables, and is decomposed by a model that assumes that observed variables are generating the pattern or structure among the observed variables (Long, 1983). Non-standardized coefficients are used for analysis because Non-standardized coefficients are much more readily estimated with accuracy and are less sensitive to differences in the variances of variables across samples (Graceand Bollen, 2005). The results of analyzing are showed in table2.

Table2. Correlation Matrix Of Variables

4	3	2	1	variables	
			—	External service quality	1
		—	0.27**	Internal service quality	2
	—	0.13**	0.18**	Customer satisfaction	3
—	0.21**	0.18**	0.34**	Customer loyalty	4
*p<0.05, **p<0.01					

According to Table 2, correlation coefficient between customer loyalty behavior and internal service quality (r =0.34) in the level of 0.01 is significant, external service quality(r=0.18), Customer satisfaction(r=0.21). And the relation of Customer satisfaction with external service quality (0.13), internal service quality (0.18) in the level of 0.01 is significant, also the relationship between external and internal service quality is (r=0.27). According to positive numbers in Table2 it means that the relationship is increasing.

In this study external service quality is an exogenous structure of model and internal service quality, satisfaction and customer loyalty are endogenous structures.

Figure2. Path coefficient of model

Chi-Square=382.83, df=131,Pvalue=0.000,RMSEA=0.054
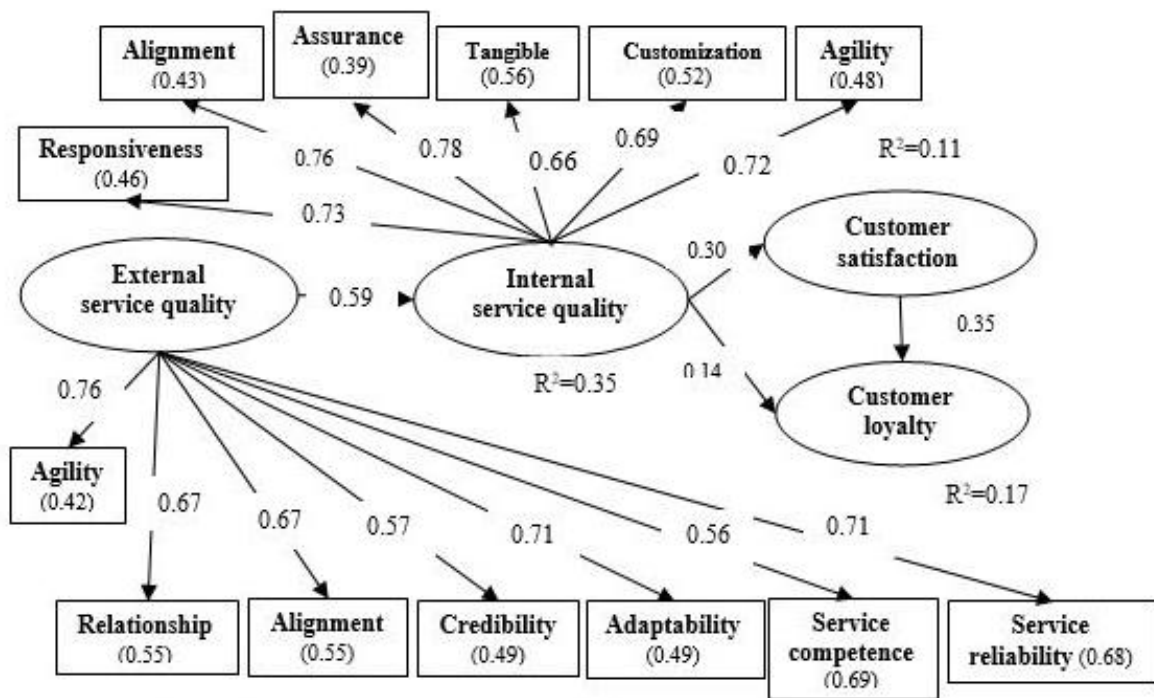
Direct effects:

According to Figure 2 the most impact is related to direct effect of external service quality on internal service quality (0.59) in the level of 0.01 is significant. In the tested model in Figure 2 showed that which variables are more important in external and internal service quality. Agility (0.76) and Service competence (0.56) respectively are the most and least important factor on external service quality and assurance (0.78) and tangible (0.66) respectively are the most and least important factor on internal service quality.

According to Table3 with increasing levels of internal service quality, satisfaction and customer loyalty increase. And also the higher quality of external services will increase the internal services quality.

Table3.Coefficients of the direct effects

Significant level	T	Path Coefficients	Variables
			The effect of external service quality
0.001	7.78	0.59	Internal service quality
			The effect of Internal service quality
0.001	3.37	0.14	Customer loyalty
0.001	4.30	0.30	satisfaction loyalty
			The effect of Customer satisfaction
0.001	4.21	0.35	Customer loyalty

Indirect effects:

According to the findings, the indirect effect of external service quality on customer satisfaction (0.18) in the significant level of 0.001 has the highest effect. This effect must be mentioned by mediator variable as internal service quality. Additionally the indirect effect of external service quality on customer loyalty (0.14) is significant in the level of 0.001. When the external service quality is high, the internal service quality as well

as increased customer satisfaction, and increase internal service quality and customer satisfaction and increase customer loyalty as well.

Table4.Coefficients of the indirect effects

Significant level	T	Path Coefficients	Variables
			The effect of external service quality
0.001	3.96	0.18	satisfaction loyalty
0.001	3.20	0.14	Customer loyalty
			The effect of internal service quality
0.001	3.10	0.10	Customer loyalty

Total effect:

The sum of direct and indirect effects is total effect. Table5 shows the total effect of external service quality on customer loyalty.

Table5. Coefficients of the total effects

Significant level	T	Path Coefficients	Variables
			The effect of external service quality
0.001	3.38	0.24	Customer loyalty

6. Discussion and conclusions

Today, in the advanced and developed countries, customer is mentioned as a key factor in organizations and the orientation of all goals, strategies and resources is attracting and keeping profitable customers. Therefore, customer loyalty is something that has important effects on the organization, especially in terms of profitability. As the results show:

H_1: Based on Table 4 and path coefficient: external service quality on customer loyalty is significant in term of statistic in 0.99 confidence level. (T=3.2, B=0.14, P=0.001). So, there is a positive relationship between external service quality and customer loyalty. As an increase in external service quality lead to

0.34 customer's loyalty increase. (Parkash, 2011)

H₂: According to Table 4 and path coefficient: external service quality on customer satisfaction is significant in term of statistic in 0.99 confidence level. (T=3.96, B=0.18, P=0.001). So, there is a positive relationship between external service quality and customer satisfaction. As an increase in external service quality lead to 0.18 customer's satisfaction increase. (Parkash, 2011)

H₃: As shown in Table 3, according to path coefficient: external service quality on internal service quality is significant in term of statistic in 0.99 confidence level. (T=7.78, B=0.59, P=0.001).So, there is a positive relationship between external service quality and internal service quality. As an increase in external service quality lead to 0.27 internal service quality increase. (Brooks(1995),Amiri et.al(2008),Parkash(2011))

H₄: As shown in Table 3, according to path coefficient: internal service quality on customer's satisfaction is significant in term of statistic in 0.99 confidence level. (T=4.30, B=0.30, P=0.001). So, there is a positive relationship between internal service quality and customer's satisfaction. As an increase in internal service quality lead to 0.13 customer's satisfaction increase. (Parkash(2011), Mentzer(2001))

H₅: As shown in Table 3, according to path coefficient: internal service quality on customer's loyalty is significant in term of statistic in 0.99 confidence level. (T=3.33, B=0.14, P=0.001). So, there is a positive relationship between internal service quality and customer's loyalty. As an increase in internal service quality lead to 0.18 customer's loyalty increase. (Mentzer(2001), Kandampully and Hu (2007))

H₆: Based on Table 3 and path coefficient: customers satisfaction and customer's loyalty is significant in term of statistic in 0.99 confidence level. (T=4.21, B=0.35, P=0.001). So, there is a

positive relationship between customer's satisfaction and customer's loyalty. As an increase in service quality lead to 0.21 customer's loyalty increase. (Parasuraman (1988), Orel and Kara (2013))

Also, according to the results, effective indicators of external service quality respectively are: agility, consistency and credibility, relationships and alignment, service reliability and service competence, moreover assurance, alignment, responsiveness, agility, customization and tangible respectively are the most important factors of internal services quality. According to the results, the relations between Parsian hotels and their suppliers should be kept and improved to accelerate the business procedure. Also, hotel managers should pay more attention to the human dimensions rather than physical, sincere services to clients, friendly behavior with respect to clients.

7. Recommendation

In order to increase customer satisfaction and loyalty, and according to the results of structural equation modeling, suggestions on the external services quality dimensions are presented as below:

Agility: The ability of suppliers to rapidly and suddenly change in the supply chain of hotel industry is determined by the organization. And provide timely and prompt delivery to the original organization by providers.

Credibility: The services of the Parsian Hotels provide honestly and this ability be improved.

To improve credibility suggest:

1. The efforts of hotels is being punctuated, if hotels for unpredictable reasons are not able to provide services they should inform the customer earlier and apologize to them and do it a.s.a.p.

2. Creating beliefs and motivation and interest in faster services delivering by management according to compensation

systems and financial and spiritual rewards.

3. Making the belief in employees that customers are the most important surviving factor of the organization, so it must be serviced in the best way.

4. The hotel staff should inform necessary information and regulations to the customers until to not to be made unexpected expectations.

Adaptability: suppliers must adapt themselves to the environment and its changes in order to enhancing this capability. Should be active and dynamic to correct errors in the services and products in the hotel industry also has this ability to correct and understand the needs of different levels of hotel industry supply chain.

Alignment: adaption ability to the hotels scheduling and flexibility for changing whenever organization's need and increase effort in practice, by supplier among the requirements.

Relationships: preserving and improving supplier connections and Persian hotels complex. It is imperative to keep the courtesy among Parsian Hotels staff and Suppliers.

Service competence: The ability which is promised to customers must be improved.

Reliability: Services that are promised to customers should be reliable and accurate.

References:

1. Azar,A. Mohamadlou, M.(2010). Designing Model of service quality in the supply chain, explain the concept of interactive services. Landscape Business Management,(1).23-41.

2. Amiri, M. Yazdani,H. Akram Nosratia,N. (2008). Quality of internal service quality and leverage of internal marketing in the company Tehran's gas and the relation of internal marketing activities with external service quality, Management Knowledge, (81),3-18

3. Brooks,R .(1995)..Internal service quality and its impact on external service quality, the University of Aston in Birmingham, Doctor of Philosophy.15-21

4. Brooks,R .(1995). Internal service quality and its impact on external service quality, the University Aston in Birmingham, Doctor of Philosophy.

5. Chen.W(2013). Factors influencing internal service quality at international touristhotels . International Journal of Hospitality Management .35.152–160

6. Chang,Y, Yeh,C.(2017) .Corporate social responsibility and customer loyalty in intercity bus services. Transport Policy .59.38–45

7. Chen, W. (2013), Factors influencing internal service quality at international tourist hotels, International Journal of Hospitality Management. 35,152–160

8. Demirci Orel.F, Kara.A. (2013).Supermarket self-checkout service quality, customer satisfaction, and loyalty:Empirical evidence from an emerging market. *Journal of Retailing and Consumer Services*.

9. Ellram, L.M, W.L. Tate and C. Billington. 2007. Services Supply Management: the next frontier for improved organizational performance, California Management Review, 49(4), 44-66.

10. Ellram, L.M, W.L. Tate and C. Billington. 2004. Understanding and Managing the Services Supply Chain, The Journal of Supply Chain Management A Global Review of Purchasing and Supply, 40(4), 17-32.

11. Feizy,K. Tatari,S. (2004). Service quality improvement in the company of Iran Air flights (survey based on the quality of service).Tourism studies journal.(5). 53-85

12. Jose´ Tarı´,J. Heras-Saizarbitoria.I . Dick,G. (2013). Internal and external drivers for quality certification in the service industry: Do they have different impacts on success? .Springer.21-32

13. Khatee,M. Farzin,M. Mousavi,A. (2008). Measuring the performance of hotels in Tehran, using data envelopment analysis. Economic Research Journal .8(2).1-24

14. Lee, H.L. (2004). Triple a supply chain. Harvard Business Review. 82 (10), 102-120.

15. Lee,W, Cheng,C.(2018), Discussion paper Less is more: A new insight for measuring service quality of green hotels, International Journal of Hospitality Management. 68. 32–40
Moatmeni,A. Jafari,E.(2009). Investigating the implementation of customer relationship management in the hospitality industry. Landscape Management. (30).49-65

16. Manzin,A. Dehghan,M, Akhavan noori, M, Ghorbani,D.(2010). Affecting Factors on the performance of the supply chain (case study: automotive manufacturing industry). Journal of Iran Management Sciences. 5(17).1-24

17. Mentzer.J, DeWitt.W, Keebler.J, Min.S, Nix.N, Smith.C, Zacharia.Z, (2001). Defining Supply Chain Management, *Journal of Business Logistics*, 22(2), 1–25.

18. Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), SERVQUAL: a multiple-item scale for measuring. (1999), Whence Consumer Loyalty? *Journal of Marketing*, 63 (4), 33–44.

19. Prakash,G .(2011). Service quality in supply chain: empirical evidence from Indian automotive industry. Supply chain management: an international journal. Emerald. 362-378.

20. Scheer,L.K , C. Fred Miao , Jason Garrett,J. (2010). Of the Acad. Mark. Sci. Original Empirical Research the effects of supplier capabilities on industrial customers' loyalty: the role of dependence, 38, 90–104

21. Sampson, S.E. (2000). Customer-supplier duality and bidirectional supply chains in service organizations, International Journal of Service Industry Management, 11(4), 348-364.

22. Won Cho, D. Hae Lee,W. Hwa Ahn,S. Kyu Hwang1,M. (2012) .A framework for measuring the performance of service supply chain management. Computers & Industrial Engineering, 801–818.