



# Studying the components status of the competitive advantage variable in the importer companies of the network products (HP Company) and its relation with demographic variables

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Received:25.06.2015

Revised:15.07.2015

Accepted:25.07.2015

## Abstract

The purpose of this article is to study the components status of the competitive advantage variable in the importer companies of the network products (HP Company) and its relation with demographic variables. Current research in terms of purpose is applicable and it was done with descriptive-survey method. The statistical population of this research includes all customers of HP network products in AfzarPardazBatis Company in Tehran and they are 120 persons. Due to the limited number of the statistical population, census method was used in order to determine the sample size. In order to collect the data, standard questionnaire of Hill & Jones (2010) was used. The face and content validity of the questionnaire was confirmed by using of some professors'opinions. Cronbach's alpha coefficient of the questionnaire was obtained higher than 0.7 which indicates the internal coordination of the items and acceptable reliability of the questionnaire. In order to study the research hypotheses, single sample t-test, independent t-test and ANOVA with application of spss software were used. According to the results, the amount of t-statistic was more than critical amount of 1.96; and it was in the critical area of the test and in other words, the average difference from figure 3 was meaningful. Therefore the assessment averageof the components status of competitive advantage variable was higher than the assumed average (3) and this indicates that accountability to the customers, services quality, innovation in presenting the services and superior efficiency as the competitive advantage components from the perspective of the intended customers had proper status. The other results of the research indicated that women, men and customers with different education and ages assess the competitive advantage of the company equally, but according to the results obtained, whatever the customers purchase record from this company is more, their perspective will be improved about the importer company of HP products and their assessment of competitive advantage will be higher.

*Keywords:competitive advantage, accountability, services quality, efficiency, network products, demographic*

## Introduction

Competitive advantage is one of the significant concepts in international business which determines the competitive status of the organization and gives the ability of creating thedefensive status to the organization against its competitors (Makoczy L. & Goldberg, 306: 1995). When an organization creates high value for its customers compared with competitor organizations, can achieve the competitive advantage. Certainly, there are two separated kinds of competitive advantage. First one is the cost advantage namely the organizations present their products and services with a low cost and this is in relation with low costs of production, provision, distribution, etc; and second one is the distinct advantage namely the customers observe the significant difference in the product and

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organization features compared with competitors, in fact the competitive advantage is the amount of understanding the competitive strategy trough low cost or distinction through creating the value (Foss N.J. & Klein, 57:2008).Competitive advantage is defined as the company capability in better performance than the industry in which works. A company that its profit rate is higher than the average of industry is called a company which has competitive advantage. The profit rate is usually stated by some ratios like return on sale or assets. A company which has competitive advantage attracts the customers better than the competitors and tries to retain them against the competitive forces (Miller, 34:1998).There are the factors which give the abilities to the institution compared with competitors and therefore the institution strategy is compiled according to them (Pierce & Robinson, 241:2001). The advantages are the important cases



that the organization has more than the competitors. Such advantages allow the organization that can obtain more values than its competitors in similar market. The competitive advantage is a distinct method that a business or company is positioned in the market in order to achieve more advantage than the competitors; this act causes that the company to be placed higher than the average of the industry in keeping the constancy levels in terms of profitability (Campbell *et al*, 126:1997). There are many bases for competitive advantage, such as: the development of a product which becomes the industry standard, the production of the market product, presenting the best services to the consumers, achieving less costs than other competitors in industry, having very proper geographical status in the market, development of specialized technology and features of new methods through accountability to the further and merged tendencies of purchasers, more technological expertise than other competitors, excellent competences in customary techniques of massive production development, doing the job and duty of the value chain management, making a better and more known brand and mark and attracting the purchasers who consider more value for the money. Generally we can conclude that a combination of good quality and services and suitable price can be the base of the competitive advantage (Miller, 35:1998). In recent years, competitive advantage has been placed in the center of competitive strategies discussion and many discussions have been proposed about competitive advantage; and nowadays the competition and customer-orientation have been increased and also the companies of information technology domain like HP Company have to operate in such environment. Therefore the companies should continue their work with competitive vision so that can increase their share in internal and external markets and find various markets for their new products supply. With these details, the purpose of this article is to study the components status of the competitive advantage variable in importer companies of network products (HP companies) and its relation with demographic variables.

#### **Empirical background of the research**

Tabarsa *et al* (2011) did a research entitled «designing and explaining the competitive advantage model based on organizational

intelligence in the knowledge-based organizations». The analysis of findings obtained from the structural part of the model indicates that 66 percent of competitive advantage in knowledge-based organizations and 61 percent of it are explained through human intelligence structure and structural intelligence respectively. Also knowledge strategies with recognition coefficient of 40 and 48 percent are accounted as the most important effective indexes on structural intelligence and human intelligence. Khodamoradi *et al* (2011) did a research entitled « a model for studying the industries competitiveness by using of five forces model of Porter according to the Fuzzy logic: applying the Herfindahl-Hirschman index for measurement of monopoly power». In this research, in order to grade the industries according to the competitiveness index, a model based on five forces model of Porter by using of Fuzzy Topsis was presented. In this research, competitiveness was analyzed as the integrated dimension and the analyzed data were collected through questionnaire and processed with Fuzzy decision-making method. The results obtained from this research indicate the above grading that shows the pharmaceutical industry in terms of quintet dimensions of competitiveness as the superior industry; and also other industries are visible in order. These results can state their competitive status and position. Farzin and Nade Alipour (2010) have done a research with the purpose of studying and prioritizing the effective factors on competitive advantage of Chabahar region in terms of tourism. The results indicate that among 5 indexes in mentioned model, in order planning, destination policy, destination management, axial attractions, supporter resources and strengthening factors have priority. Also Chabahar region in terms of factors like climate, beautiful perspectives, security, ... is in desired status, and this region in terms of factors like visitors management, criticism management, recreational centers, marketing ... is in undesired status. Sharma and Fisher (2000) have studied the role of functional strategies of efficiency, research and development, technology, marketing, human, organizational and financial sources on competitiveness of production companies in Australia. The results indicate that holistic approach which makes the functional strategies integrated in order to implement a business strategy successfully



is the most proper method for the production companies. Nuka & Fransis (2009) did a research entitled « competitive intelligence and its relation with marketing effectiveness of large companies in Nigeria. Five variables (market opportunities, competitors threats, competitors risks, axial hypotheses, key vulnerability) have been defined for competitive intelligence and also five variables (customers satisfaction, marketing information, integrated activities of marketing, strategic orientation and operational efficiency) have been defined for marketing effectiveness. The statistical population of this research includes 108 companies of large companies in Nigeria stock exchange. The research results indicate there is positive and meaningful relation between competitive intelligence and marketing effectiveness of large companies (quoted by Muller, 2009).

Trong Tuan (2013) in a research entitled “movement toward competitive learning and intelligence” indicated the effects of the social responsibility of the organization and emotional intelligence on upward useful organizational behaviors and in his belief, this issue causes the organizational learning. Also after that, learning in the organization will act as a motive for competitive intelligence.

**The research hypotheses**

**First hypothesis:** accountability to the customers as one of the competitive advantage components from the customers' perspective of the importer companies of HP network products is higher than average.

**Second hypothesis:** The presented services quality as one of the competitive advantage components from the customers' perspective of importer companies of HP network products is higher than average.

**Third hypothesis:** innovation in presenting the services as one of the competitive advantage components from the customers' perspective of importer companies of HP network products is higher than average.

**Fourth hypothesis:** superior efficiency as one of the competitive advantage components from the customers' perspective of importer companies of HP network products is higher than average.

**Fifth hypothesis:** competitive advantage of importer companies of HP network products with regard to the customers gender is different.

**Sixth hypothesis:** competitive advantage of importer companies of HP network products with regard to the customers age is different.

**Seventh hypothesis:** competitive advantage of importer companies of HP network products with regard to the customers purchase record is different.

**Eighth hypothesis:** competitive advantage of importer companies of HP network products with regard to the customers education level is different.

**Methodology**

Current research in terms of purpose is applicable and it was done with descriptive-survey method. The statistical population of this research includes all customers of HP network products in Afzar Pardaz Batis Company in Tehran that were 120 persons. Due to the limited number of the statistical population, census method was used in order to determine the sample size. In order to collect the data, standard questionnaire of Hill & Jones (2010) was used in which four dimensions of accountability to the customers (5 questions), quality (4 questions), innovation (4 questions) and efficiency (3 questions) have been considered for obtaining the competitive advantage. This questionnaire has been compiled in the form of 5-degree Likert spectrum from very high score of 5 to very low score of 1. The face and content validity of the questionnaire was confirmed by using of some professors' opinions. Cronbach's alpha coefficient was obtained higher than 0.7 which states the internal coordination of the items and acceptable reliability of the questionnaire. In order to study the research hypotheses, single sample t-test, independent t-test and ANOVA with application of spss software were used.

**Findings**

According to the table-1, with regard to this issue that the research variables have normal distribution, therefore in order to test the research hypotheses, single sample parametric T-test has been used.

Variable	Kolmogorov-Smirnov test	Meaningfulness
Constant competitive advantage	1.296	0.069
Accountability	1.52	0.019
Quality	1.26	0.082
Innovation	0.99	0.28
Efficiency	1.42	0.063



**Table 1- statistics of Kolmogorov-Smirnov test for studying the normality of the variable**

According to the table 2, the amount of meaningfulness level of single sample t-test for studying the first hypothesis of the research which has assessed the meaningful statistical difference between two real and assumed averages of the accountability to the customers is less than 0.05, therefore the null hypothesis according to this point that the amount of the variable average is equal to 3, isn't confirmed. Totally, the analysis results of the data average indicate that the amount of t-statistic is more than the critical amount of 1.96 and it is in the critical area of the test and in other words the average difference from figure 3 is meaningful, therefore the assessment average of the accountability to the customers is higher than the assumed average (3) and the first hypothesis of the research was confirmed and this indicates that accountability to the customers as one of the competitive advantage components from the perspective of the intended customers has had proper status.

According to the table 2, the amount of meaningfulness level of single sample t-test for studying the second hypothesis of the research which has assessed the meaningful statistical difference between two real and assumed averages of the presented services quality variable, is less than 0.05, therefore the null hypothesis according to this issue that the amount of the variable average is equal to 3, isn't confirmed. Totally the analysis results of the data average indicate that the amount of t-statistic is more than the critical amount of 1.96 and it is in the critical area of the test and in other words the average difference from figure 3 is meaningful, therefore the assessment average of the presented services quality status is higher than the assumed average (3) and the second hypothesis of the research was confirmed and this indicates that the presented services quality as one of the competitive advantage components from the perspective of the intended customers has had proper status. According to the table 2, the amount of the meaningfulness level of single sample t-test for studying the third hypothesis of the research which has assessed the meaningful statistical difference between two real and assumed averages of innovation variable in presenting the services, is less than 0.05, therefore the null hypothesis

according to this point that the amount of the variable average is equal to 3, isn't confirmed. Totally the analysis results of the data average indicate that the amount of t-statistic, is more than the critical amount of 1.96 and it is in the critical area and in other words the average difference from figure 3 is meaningful, therefore the assessment average of innovation status in presenting the services is higher than the assumed average (3) and the third hypothesis was confirmed and this indicates that innovation in presenting the services as one of the competitive advantage components from the perspective of the intended customers has had proper status.

According to the table 2, the amount of the meaningfulness level of single sample t-test for studying the fourth hypothesis of the research which has assessed the meaningful statistical difference between two real and assumed averages of superior efficiency variable, is less than 0.05, therefore the null hypothesis according to this issue that the amount of the variable average is equal to 3, isn't confirmed. Totally the analysis results of the data average indicate that the amount of t-statistic is more than the critical amount of 1.96 and it is in the critical area and in other words the average difference from figure 3 is meaningful, therefore the assessment average of the superior efficiency status is higher than the assumed average (3) and the fourth hypothesis of the research was confirmed and this indicates that superior efficiency as one of the competitive advantage components from the perspective of the intended customers has had proper status.

**Fifth hypothesis:** the competitive advantage of the importer companies of HP network products with regard to the customers gender is different.

According to the table 3, in order to test the variances equality, Levenetest was used, because p-amount (meaningfulness) is equal to 0.701 and it is more than the meaningfulness level of  $\alpha=0.05$ ; therefore in this level, the null hypothesis isn't rejected and consequently we can say the groups variances are equal with each other and the parametric test can be implemented. Comparing the scores average of competitive advantage in importer companies of HP network products with regard to the customers gender through independent t- test indicates that p-amount is equal to 0.917 and it is more than the meaningfulness level of  $\alpha=0.05$ ,



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consequently the null hypothesis isn't rejected, thus men have assessed the competitive advantage of the there isn't meaningful difference between two importer companies of HP network products groups. Consequently we can say the women and equally.

Variables	Number	Average	Standard deviation	Test amount	Average difference	T-statistic	Freedom degree	معني داري
Accountability to the customers	120	3.97	0.704	3	0.975	15.15	119	0.001
Services quality	120	3.76	0.710	3	0.760	11.72	119	0.001
Innovation in services and products	120	3.30	0.873	3	0.30	3.76	119	0.001
Efficiency	120	3.47	0.888	3	0.472	5.82	119	0.001

**Table 2- single sample t-test for studying the statistical difference between two real and assumed averages of the research variables**

Levene Statistic				Meaningfulness		
0.149				0.701		
Gender	N	M	SD	t	df	p
Man	76	3.65	0.643	-0.104	188	0.917
Woman	44	3.66	0.607			

**Table 3-T-test statistics for comparing the competitive advantage of importer companies of HP network products with regard to the customer gender**

Levene Statistic		Freedom degree 1		Freedom degree 2		Meaningfulness	
0.003		2		116		0.997	
Descriptive indexes				Life location			
Age				N	M	SD	
Less than 30 years				50	3.61	0.615	
Between 30 to 40 years				52	3.65	0.648	
Between 40 to 50 years				17	3.77	0.620	
More than 50 years				1	4.31	-	
Total				120	3.66	0.628	
Changes source		SS	df	MS	F ratio	Meaningfulness	
Intergroup		0.755	3	0.252	0.632	0.596	
Intragroup		46.143	116	0.398			
Total		46.898	119	-			

**Table 4- the test of one-way variance analysis for comparing the competitive advantage of importer companies of HP network products with regard to the customers age**



**Sixth hypothesis:** the competitive advantage of importer companies of HP network products with regard to the customers age is different.

According to the table 4, in order to test the variances equality, Levene test was used and because p-amount (meaningfulness) is equal to 0.997 and it is more than the meaningfulness level of  $\alpha$ -0.05; therefore in this level the null hypothesis isn't rejected and consequently we can say the groups variances are equal with each other and the parametric test can be implemented. Comparing the competitive advantage of the importer companies of HP network products with regard to the customers age has been obtained according to the calculations through ANOVA test and because p-amount (meaningfulness) is equal to 0.596 and it is more than the meaningfulness level of  $\alpha$ -0.05; therefore in this level, the null hypothesis isn't rejected. Consequently we can say the averages of the competitive advantage in the importer companies of HP network products with regard to the customers age aren't very different with each other; namely the customers with different ages have assessed the competitive advantage of importer companies of HP network products equally.

**Seventh hypothesis:** competitive advantage of importer companies of HP network products with regard to the customers purchase record is different.

According to the table 5, in order to test the variances equality, Leven test was used and because p-amount (meaningfulness) is equal to 0.997 and it is more than the meaningfulness level of  $\alpha$ -0.05, therefore in this level, the null hypothesis isn't rejected and consequently we can say the groups variances aren't equal with each other and the parametric test can be implemented. According to the table 8 and 9, comparing the average of competitive advantage in importer companies of HP network products with regard to the customers purchase record has been obtained according to the calculations through ANOVA test and because p-amount (meaningfulness) is equal to 0.013 and it is less than the meaningfulness level of  $\alpha$ -0.05; therefore in this level the null hypothesis is rejected. Consequently we can say the competitive advantages of importer companies of HP network products from the perspective of customers with different purchase record are different with each other meaningfully.

Levene Statistic	Freedom degree 1	Freedom degree 2	Meaningfulness	
1.686	3	116	0.174	

  

Descriptive indexes	Life location			
	Purchase record	N	M	SD
Less than 1 year		52	3.44	0.660
Between 3 to 5 years		53	3.76	0.557
Between 5 to 10 years		11	3.55	0.631
More than 10 years		4	4.44	0.385
Total		120	3.66	0.628

  

Changes source	SS	df	MS	F ratio	Meaningfulness
Intergroup	4.129	3	1.376	3.733	0.013
Intragroup	42.769	116	0.369		
Total	46.898	119	-		

**Table 5- the test of one-way variance analysis for comparing the competitive advantage of importer companies of HP network products with regard to the customers purchase record**

According to the table 6, comparing the average between the groups through Scheffe post hoc test indicates the persons that their purchase record has been more than 10 years, have assessed the

competitive advantage of some companies more than other groups and the persons that their purchase record has been less than 1 year, have assessed the competitive advantage of the company



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less than the other groups and the most difference has been between the persons who have had 10 years purchase record and the persons that their purchase record has been less than 10 years. Because the meaningfulness level of the average difference of these groups is less than 0.05, thus the difference between these two groups is meaningful. But the customers of the other groups haven't assessed the competitive advantage in importer companies of HP network products, because the meaningfulness level of the average difference between these groups is more than 0.05.

**Eighth hypothesis:** the competitive advantage of importer companies of HP network products with regard to the education level of the customers is different. According to the table 7, in order to test the variances equality, Levene test was used and because p-amount (meaningfulness) is equal to 0.441 and it is more than the meaningfulness level

of  $\alpha=0.05$ ; therefore in this level, the null hypothesis isn't rejected and consequently we can say the groups variances are equal with each other and the parametric test can be implemented. Comparing the average of competitive advantage in importer companies of HP network products with regard to the education level of the customers has been obtained according to the calculations through ANOVA test and because p-amount (meaningfulness) is equal to 0.747 and it is more than the meaningfulness level of  $\alpha=0.05$ ; therefore in his level, the null hypothesis isn't rejected. Consequently we can say the averages of competitive advantage in importer companies of HP network products with regard to the education level of the customers aren't different with each other meaningfully; namely the customers with different education have assessed the competitive advantage in importer companies of HP network products equally.

	Groups compared	Averages difference	Meaningfulness
More than 10 years	Less than 1 year	-1	0.006
	Between 3 to 5 years	-0.682	0.032
	Between 5 to 10 years	-0.892	0.005

**Table 6- the statistics of Scheffe test for studying the competitive advantage difference between the persons with different purchase record**

Levene Statistic	Freedom degree 1	Freedom degree 2	Meaningfulness		
0.967	3	116	0.411		
Descriptive indexes					
Education level		Life location			
	N	M	SD		
Diploma and lower	10	3.62	0.670		
Associate degree	20	3.76	0.547		
Bachelor degree	59	3.60	0.602		
Complementary education	31	3.71	0.723		
Total	120	3.66	0.628		
Changes source	SS	df	MS	F ratio	Meaningfulness
Intergroup	0.490	3	0.163	0.409	0.747
Intragroup	46.408	116	0.400		
Total	46.898	119	-		

**Table 7- the test of the one-way variance analysis for comparing the competitive advantage in importer companies of HP network products with regard to the education level of the customers**



## Conclusion

Here, a summary of the findings is presented:

According to the results, the amount of meaningfulness level of the single sample t-test which has assessed the meaningful statistical difference between two real and assumed averages of the competitive advantage components was less than 0.05, therefore the null hypothesis according to this issue that the average amount of the competitive advantage components is equal to 3, isn't confirmed. Totally the analysis results of the data average indicate that the amount of t-statistic was more than the critical amount of 1.96 and it was in the critical area of the test and in other words, the average difference from figure 3 was meaningful, therefore the assessment average of the competitive advantage components status was higher than the assumed average (3) and this indicates that accountability to the customers, services quality, innovation in presenting the services and superior efficiency as the competitive advantage components from the perspective of the intended customers have had proper status.

Other results of the research indicated that women and men and customers with different education and ages assess the competitive advantage of the company equally, namely gender, age and education aren't important factors in assessment and understanding the competitive advantage of importer companies of HP network products; namely these three factors can't change the customers' opinions, therefore these three variables aren't effective on understanding the competitive advantage of the company by persons, but according to the results obtained, the customers who have purchase record more than 10 years have more positive opinion about the importer company of HP products than the persons who have had the purchase record less than 10 years. In other words, whatever the purchase record of customers from

this company is more, their opinion about the importer company of HP products will be improved and they assess its competitive advantage higher.

With regard to the results, the following affairs are suggested:

1. The officials of this company should be committed to the customers, the purchasers should be taught in order to use of the products better. When the products are devastated, proper services should be presented properly and quickly by the company dealers. The opinions and suggestions of the customers should be considered and the after-sale services and support should be conformed to the needs and demands of customers.

2. The products of this company in terms of quality should be promoted conformed to today knowledge and technologies and they should act with regard to the products quality of competitor companies and they should have better after-sale services than the competitors.

3. New and unique products should be produced in HP Company and presented to the market, new technologies should be used in order to produce the products, they should create specialized markets for themselves through presenting new products, the goods distribution among the dealers should be done with new and advanced method which is distinct with similar companies.

4. There should be interaction between the marketing parts of HP companies, sharing of the technology knowledge should be accomplished by the employees and customers of the company, a comprehensive notification should be accomplished about the brand. Officials and dealers should consider a high value for the research and development in the company, the safety notes about the company products should be observed and the cost of the products installation should be proper.

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