



The Impact of Quality, Cost, and Lead Time on Competitive

Advantage:

Case of SMEs Operating in Iraq

Manaf B. Raewf*

Department of Banking and
Financial Sciences, Cihan University-
Erbil, Kurdistan Region, Iraq

Manaf.basil@cihanuniversity.edu.iq

Sid Ahmed Hadj Aissa

Faculty of Economics, University of
Blida 02, Blida, Algeria

s.hadj_aissa@live.fr

Thabit H. Thabit

Department of Computer Engineering
and Info., College of Electronics
Engineering, Ninevah University,
Mosul, Iraq

Thabit.thbait@uoninevah.edu.iq

Abstract ;

The objective of the study is to identify the impact on sharing of quality, cost, and lead time on competitive advantage. Although previous studies have identified a range of elements affecting competitive advantage, further research is needed to understand the factors driving competitive advantage, particularly among SMEs in Iraq. In addition, a survey has been conducted to collect the required data and researchers received 118 valid questionnaire. In order to analyze the data, researchers used SMART PLS3. However, two steps of analysis have been done; the first step, measurement model to check the reliability and validity of questionnaire. While the second step was structural model, to find out the relations among constructs. The finding of the study concluded that quality, cost, and lead time significantly effect on competitive advantage. At the end researchers, recommended that companies have to improve their products or services quality as well as, companies have to manage to reduce costs in order to be able to provide the product with lower prices to the consumer. Lastly, companies should be able to control time in order to provide the required product to the consumer at the right time.

Article info

Received 14/08/2021
Accepted 11/10/2021

Keyword:

- ✓ Quality
- ✓ Cost
- ✓ Lead Time
- ✓ Competitive Advantage
- ✓ SMART PLS

* Corresponding author

1. Introduction

Companies are struggling to compete in the market due to the availability of different types of competitors with those competitors providing similar products or substitution products. In addition, consumers nowadays are becoming more critical in term of their needs and wants. Therefore, the competition is getting harder day after day. Moreover, with so much variety of products and services companies have to give more attention on getting the required competitive advantage (Raewf et al., 2021), (Hadj Aissa & Thabit, 2019).

Competitive advantage is about how the company is trying to compete in the market. Therefore, it is the determination of the benefits that the company is going to be able to deliver for its consumers while others are not (Thabit & Raewf, 2018). However, some studies have identified some factors that may effect on the competitive advantage of companies such as the provided quality, cost reduction, delivering time, innovation, and flexibility to do changes on products or services whenever it is needed. Accordingly, selling the product or service with lower price than the competitors or selling products or services with higher quality than others' products and services will create a good competitive advantage for the company (Raewf & Thabit, 2015).

However, researchers have identified the factors that may effect on the competitive advantage but the impact of these factors on the competitive advantage is still need to be examined. Therefore, the researchers in this study is trying to examine the impact of quality, cost, and time on the competitive advantage.

2. Literature Review and Hypotheses Development

2.1 Quality and Competitive Advantage

Many businesses emphasize quality as the most important consumer value and consider it as a crucial success factor in attaining competitiveness. Therefore, we can see some companies are getting higher profits than others. Quality of products or services has gained an important attention by previous researchers and it has been defined by many researchers as a form of attitude, related but not equivalent to satisfaction because usually consumers compare between their expectation and the perceived value. However, if the perceived value was higher than their expectation they will feel satisfied and vice versa (Raewf & Thabit, 2018), (Hadj Aissa et al., 2018).

In addition, competitive advantage can be achieved by two ways; the first way is by applying value creating strategy which should be not applied by other competitors, while the second way is by superior applying of competitors' strategy. Furthermore, providing products or services with unique

quality will help the organization to gain its competitive advantage (Lagoudis & Theotokas, 2007), (Thabit et al., 2016). Based on the above we hypothesize the following:

H₁: *Quality significantly affects competitive advantage*

2.2 Costs and Competitive Advantage

Consumers are influenced considerably by pricing, since it has the potential to entice or repel them. Therefore, companies should not price their products and services higher than their competitors. Consequently, for the purpose of gaining a competitive advantage through the price, companies have to reduce the cost. Cost reduction requires actions that specifically reduce costs to a level lower than competitors which generally requires the scale economies that come with large market share in a growing market (Lakhal, 2009). Therefore, we hypothesize the following:

H₂: *Costs significantly affects competitive advantage*

2.2 Lead Time and Competitive Advantage:

The competition is highly based on time. Companies have to perform better than competitors in order to deliver the products and services to consumers faster than others. Wasting time is one of the issues that management facing and it is highly undesirable (Mahmood et al., 2019), (Thabit & Jasim, 2017). However, if the management can control this issue it will inevitably enhances the performance as well as, gaining a competitive advantage through delivering the product or service to the consumer at the right time (Raewf & Mahmood, 2021). Additionally, based on what stated earlier we hypothesized the following:

H₃: *Lead time significantly affects competitive advantage*

3. Methodology

3.1 Sampling

This research aims to investigate the impact of quality, cost, and lead time on the competitive advantage of SMEs operating in Iraq. Three hypotheses were developed in order to examine the impact of independent variables (Quality, Costs, and Time Lead) on the dependent variable (Competitive Advantage). A survey has been conducted and a number of 220 questionnaires were distributed on employees of SMEs while the valid questionnaires were 118 only.

3.2 Instruments Development

The developed questionnaire is consisting of two sections; the first section is about demographic data while the second is regarding questions about the research items. Most of the items were adopted from previous studies (Tersine & Hummingbird, 1995; Lakhal, 2009; Raewf & Thabit, 2015; Al-Salamin & Al-Hasan, 2016; Thabit & Raewf, 2017).

4. Data Analysis and Results

The results of the first section showed that 59.3% of the respondents were male while 40.7% were female. Additionally, respondents' majority (77.9%) were between 25 and 45 years old and almost 85 % of them had university degree. In terms of experience, (63.5%) of them were between 5 and 15 years of working experience.

To analyze the data SMART PLS3 was used. However, to check the reliability and validity of the scales measurement model has applied and structural model to present the relationships among constructs.

4.1 Measurement Model

According to (Hair et al., 2017) reliability, convergent, and discriminant validity should all be validated before evaluating the measurement model. Cronbach's Alpha and composite reliability (CR) should be higher than 0.7 where (AVE) Average Variance Extracted should be higher than 0.5. Table 1 shows that reliability and convergent were validated because all values exceeded the required value. In addition, Fornel – Larcker criterion was used for assessing the discriminant validity (Fornell & Larcker, 1981) and it was validated as well as shown in Table 2, which indicates the latent variable that explains its indicators better than other latent variables. Therefore, we can proceed to evaluate the structural model.

Table 1. Measurement model results

Constructs	Items	Factor Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Competitive Advantage	C1	0.774	0.861	0.896	0.591
	C2	0.75			
	C3	0.754			
	C4	0.755			
Cost	CA1	0.768	0.755	0.844	0.575
	CA2	0.743			
	CA3	0.814			
	CA4	0.767			
	CA5	0.765			

	CA6	0.753			
Lead Time	LT1	0.831	0.78	0.858	0.603
	LT2	0.753			
	LT3	0.746			
	LT4	0.773			
Quality	Q1	0.745	0.739	0.835	0.559
	Q2	0.744			
	Q3	0.768			
	Q4	0.734			

Source: prepared by authors

Table 2. Fornell – Larcker Criterion Discriminant Validity

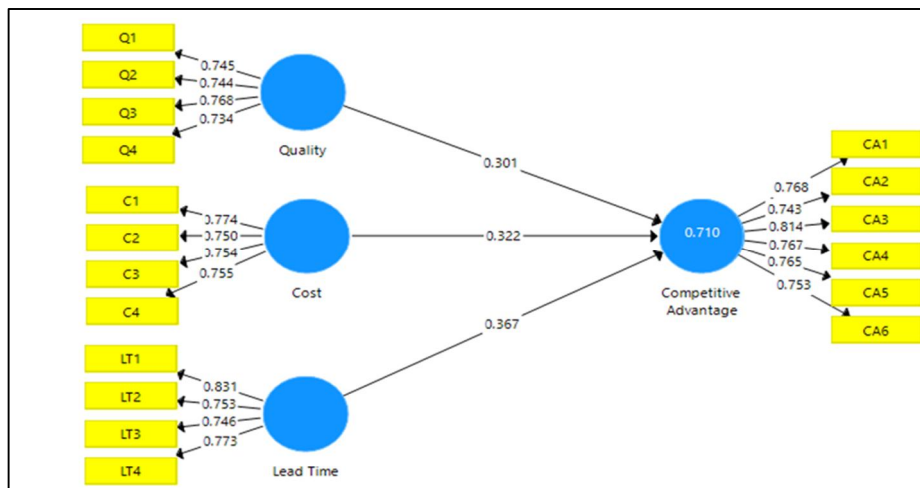
	Competitive Advantage	Cost	Lead Time	Quality
Competitive Advantage	0.769			
Cost	0.75	0.758		
Lead Time	0.714	0.631	0.776	
Quality	0.687	0.654	0.479	0.748

Source: prepared by authors

4.2 Structural Model

The structural model examines the overall explanatory power (R^2), path coefficients (β) and significance level. However, figure 1 shows that R^2 value is 0.710 which it means that 71% of competitive advantage can be explained by quality, cost, and lead time. In addition, to identify the overall influence we found the Q^2 where the value of Q^2 should be higher than zero (Henseler et al., 2009). However, in our study the value of Q^2 was 0.407 which is acceptable.

Fig. 1. Structural Model



Source: prepared by authors

Furthermore, to test the hypotheses the T-statistics should be higher than 1.96 to be accepted at 5% error and P –value is less than 0.05. However as shown in Table 3 all of our hypotheses were accepted.

Table 3. Result of hypotheses

	β	Sample Mean	Standard Deviation	T Statistics	P Values	Decision
Cost -> Competitive Advantage	0.322	0.326	0.071	4.526	0	Supported
Lead Time -> Competitive Advantage	0.367	0.366	0.063	5.848	0	Supported
Quality -> Competitive Advantage	0.301	0.299	0.073	4.138	0	Supported

Source: prepared by authors

5. Discussion and implications:

The empirical findings indicate that quality, cost, and lead time significantly affect competitive advantage. Quality of products or services, cost reduction, and lead time is presenting 71% of competitive advantage of SMEs operating in Iraq and significantly affects on competitive position of SMEs in the market and industry. The findings showed that there is a direct impact of quality on competitive advantage which is agreed with (Lakhal, 2009; Raewf et al., 2021). Further, the study of (Lagoudis & Theotokas, 2007) identified that cost reduction is significantly effects on the competitive advantage of companies which is agreed with our study. Lastly, the study of (Tersine & Hummingbird, 1995) agreed with our study that lead time significantly effects on the competitive advantage.

However, it is highly recommended that companies should take into their considerations keep improving their products' quality as well as, finding ways to reduce the cost of production. In addition, companies have to avoid wasting time because if they will not respond to the needs and wants of consumers at the right time other competitors will do which will lead consumers to shift for those competitors.

6. CONCLUSION

This study examines the impact of quality, cost, and lead time on competitive advantage of SMEs in Iraq. Researchers used quantitative approach and a survey has been conducted where SMART PLS3 was used to analyze the collected data. The findings showed that there is a significant impact of quality, cost, and lead time on competitive advantage which was agreed with some previous studies.

Regardless of the significance of this study, there are some limitations such as the sample and applicability. The sample was 118 employees working in SMEs operating in Iraq therefore the results cannot be generalized on other countries.

Future studies are suggested to extend the sample as well as trying to investigate the same variables on different business sectors and in different country in order to reach for a full understanding of the relationship among the investigated variables.

7. Bibliography List :

Al-Salamin, Hussain & Al-Hasan, Eman. (2016). ,The Impact of Pricing on Consumer Buying Behavior in Saudi Arabia: Al –Hassa Case Study, *European Journal Business and Management*, 8(12).

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement error. *Journal of Marketing Research*, 18(1), 39.

Hadj Aissa, Sid Ahmed, and Thabit, Thabit H. (2019). Modelling the Relevance between the Relationship Marketing and WOM Marketing through the Customer Satisfaction: Case Study in Algeria Telecommunications Corporation, *Tikrit Journal for Administration & Economics Sciences*, 15 (45 Part 1), 1-21.

Hadj Aissa, Sid Ahmed, Thabit, Thabit Hassan, and Hanniche Hadj (2018). The Impact of Customer Relationship Management on Customer Behavior Case Study of Ooredoo for Telecommunications, *Revue Des Sciences Commerciales*, 12(1), 67–78.

Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An Updated and Expanded Assessment of PLS-SEM in Information Systems Research, *Ind. Manag. Data Syst.*, 117(3), 442–458.

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The Use of Partial Least Squares Path Modeling in International Marketing. *Advances in International Marketing*, 20, 277–319.

- Lagoudis, I. and Theotokas, I. (2007). Competitive Advantage in the Greek Shipping Industry: A Supply Chain Management Approach, in Pallis, A. (Ed.), *Maritime Transport: The Greek Paradigm*, Research in Transportation Economics, Vol. 21, Elsevier, London, 95-120.
- Lakhal, L. 2009. Impact of Quality on Competitive Advantage and Organizational Performance. *Journal of the Operational Research Society*, 60(5), 637-645.
- Mahmood, Y. N., Raewf, M. B., & AL-Hamadany, Z. S. (2019). A Study on the Perceptual Relationship between Overtime and Output at Private Universities. *Cihan University-Erbil Journal of Humanities and Social Sciences*, 3(1), 27-31.
- Raewf, M. B., & Mahmood, Y. N. (2021). The Cultural Diversity in the Workplace. *Cihan University-Erbil Journal of Humanities and Social Sciences*, 5(1), 1-6.
- Raewf, M. B., & Thabit, T. H. (2018). *Influencing Factors on Customer Satisfaction: Study on a Sample of Arab Restaurants in Malaysia*. Germany: LAP-Lambert Academic Publisher.
- Raewf, M., & Thabit, T. (2015). The Student's Satisfaction Influential Factors at Cihan University. *International Journal of Advanced Research in Engineering and Management*, 1(2), 63-72.
- Raewf, M., Thabit, T., & Jasim, Y. (2021). The Relationship between the Elements of Marketing Mix and Consumer Behavior during Environmental Uncertainty: The Case of the COVID-19 Pandemic. *Cihan University-Erbil Journal of Humanities and Social Sciences*, 5(1), 50-55.
- Tersine, R. J. and Hummingbird, E. A. (1995). Lead-Time Reduction: the Search for Competitive Advantage. *International Journal of Operations and Production Management*, 15, 8–18.
- Thabit, T. H., & Raewf, M. B. (2018). The Evaluation of Marketing Mix Elements: A Case Study. *International Journal of Social Sciences and Educational Studies*, 4(4), 10.
- Thabit, Thabit H., and Jasim, Yaser A. (2017). *Applying IT in Accounting, Environment and Computer Science Studies*, LAP- Lambert Academic Publisher, Germany.
- Thabit, Thabit H., and Raewf, Manaf B. (2017). *Applications of Fuzzy Logic in Finance Studies*, LAP- Lambert Academic Publisher, Germany.
- Thabit, Thabit H., Hadj Aissa, Sid A., and Harjan, Sinan A. (2016). Evaluating the Role of Training Strategy in Enhancing the Training Effectiveness, *MECAS*, No.13, 4-18.