

The Impact of Innovative Value in the Product on Achieving Competitive Advantage for the Electronic Industrial Institution

A Study of a Sample of Consumers of APPLE Products

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Abstract:

This study aims to demonstrate the impact of innovative value in the product on achieving competitive advantage for the electronic industrial institution Apple. We relied on the questionnaire to achieve the objectives of the study. The research reached a set of results, the most important is that the innovative value of the product has an impact on the electronic industrial institution's ability to achieve a competitive advantage. This is because innovation in the product's design and essence improves the product's ability to achieve a competitive advantage by raising its quality, efficiency, and responsiveness to customer needs.

Keywords: Innovation, innovative value in the product, Competitive Advantage.

Jel Classification Codes : O31; E23; D42

Introduction:

Today's business environment is characterized by uncertainty, intense competition, and continuous change due to the rapid pace of technological advancement, swift shifts in consumer preferences, and short product life cycles. As a result, electronic manufacturing institutions face numerous challenges, primarily survival, meeting the ever-growing needs and expectations of the market and customers, and achieving leadership. Consequently, these companies are seeking new ways to offer products that distinguish them from their competitors, thereby gaining a competitive advantage that ensures their survival and enhances their market position. For this reason, electronic manufacturing companies are placing significant emphasis on innovation as a strategic choice that allows them to introduce new products with innovative value that meet consumer aspirations. They are also focusing on new production technologies and innovative marketing methods, enabling them to achieve and sustain a competitive edge over their rivals.

Study Problem:

In a business environment characterized by competition and market challenges, it has become essential to emphasize the importance of innovative value in the product as a mechanism that allows the company to achieve a competitive advantage. Apple has relied on a product innovation strategy due to the competition it faces from electronic companies.

The Problematic:

In order to address the subject of the study, it is essential to answer the central question that revolves around the following fundamental inquiry:

What is the impact of the innovative value of the product on achieving a competitive advantage for the electronic manufacturing institution Apple?

Study Hypotheses:

To answer the study's central question and the sub-questions, **the following hypotheses** have been formulated:

1- The innovative value of the product affects the achievement of competitive advantage for the electronic manufacturing company at a statistical significance level of $\alpha \leq 0.05$.

2- There is a statistically significant effect of innovation in the core products of Apple on achieving competitive advantage for the electronic company at a significance level of $\alpha \leq 0.05$.

3- There is a statistically significant effect of innovation in the design of Apple products on achieving competitive advantage for the electronic company at a significance level of $\alpha \leq 0.05$.

Study Objectives:

The following are some of the goals this study seeks to accomplish:

- To investigate various theoretical notions concerning inventive value in products and competitive advantage.
- To determine how creating creative value into products affects gaining a competitive edge.
- To offer suggestions to organizations involved in the electronic industrial sector that will help them to gain a competitive edge by incorporating unique value into their goods.

The study methodology:

The study variables were described using the descriptive technique. By looking over a number of earlier investigations, data and information were gathered. Furthermore, an electronic questionnaire was used to obtain results on the study's practical aspect using the analytical approach.

I- Fundamental concepts about product's innovative value and competitive advantage

In this section, we'll talk about the concepts of competitive advantage and inventive value in a product, as well as how these two concepts relate to gaining an advantage in the electronic industrial sector.

I-1- Innovative product concept:

An innovative product is defined as the process of introducing items to the market without prior consumer or organizational experience with this product. It may take the form of adding new uses for the product, changing packaging and branding, or altering the product name (عبد السلام ا.، 2001، صفحة 25)

An innovative product is one that has not been previously offered by the organization. (الصميدعي ج.، 2004، صفحة 47)

In product innovation, the goal is to modify and improve the current product, add new features to it, or introduce a new product to the market in order to achieve the organization's objectives and quickly respond to consumer expectations.

I-2- The dimensions of product innovation

The dimensions of product innovation include:

I-2-1- Innovating the Essence of the Product:

This is a reference to changing the product or production methods fundamentally, which calls for fresh and in-depth scientific understanding. The objective is to offer novel, necessary advantages.

I-2-2- Innovating Product Design:

This involves creating and implementing new and innovative ideas, processes, and solutions in product design to address challenges and improve product functionality. Innovative design improves practical performance and ensures user-friendliness for the client by going beyond the purely aesthetic elements of traditional design.

I-3- Characteristics of the Innovative Product:

The innovative product possesses a number of characteristics, which are summed up as follows :

- Relative Advantage:

This refers to how much the product stands out from competing products from the consumer's perspective (price, size, color, distribution channels). The more significant the relative advantage, the more likely the consumer is to adopt the product (Decoeur, 2015, p. 98).

- Product Compatibility:

This refers to the degree to which the consumer feels that the quality they perceive in the product aligns with the quality they expect from it.

- Degree of Technical Complexity:

This refers to the complexity of the product's technical features. The greater the complexity of the innovative product, the longer it may take for consumers in the target market to accept it due to difficulties in using it (Koenig G., 2004, p. 86).

- Trialability: This refers to the consumer's ability to try the innovative product to assess its added value, which encourages them to consider purchasing it.

- Observability:

This refers to how visible, clear, describable, and perceptible the innovative values in the product are, and this is positively related to the rate of adoption by consumers.

I-4- The conceptual significance of competitive advantage:

I-4-1- The Concept of Corporate Competitiveness:

Corporate competitiveness is the capacity of an organization to grow its market share and profits while providing superior customer service. This can be achieved through non-price competition, which involves offering better ancillary services or higher-quality products that make the product non-substitutable, or through price competition, which is based on competitors' lower production costs.

Corporate competitiveness results from a combination of forces both inside and outside the organization that shape its activities, meaning it represents the organization's ability to withstand its competitors to achieve objectives of profitability, growth, stability, and innovation (النجار ف، 2008، صفحة 35).

Djimasra emphasized two key findings: first, competitiveness is relative and cannot be assessed without being compared to the competitiveness of at least one other organization; second, competitiveness is not a static and stable state (Djimasra, 2009, p. 54).

From the foregoing, it can be concluded that corporate competitiveness refers to an organization's capacity to provide unique marketing propositions in contrast to those of its rivals, allowing it to effectively satisfy the demands and ambitions of customers while achieving superior performance and growth rates in a market that is competitive.

I-4-2-The competitive advantage

The Stratégor group defines competitive advantage as the state in which an organization is in a better position compared to its competitors due to possessing specific capabilities that lead to the organization having success factors related to its sector of activity (Stratégor, 2001, p. 69).

Additionally, M. Porter believes that competitive advantage arises when an organization discovers new ways that can be implemented effectively, surpassing what its competitors offer. He also sees competitive advantage as representing the value that the organization seeks to provide to its customers, such as offering low product prices or unique benefits. (Porter, p. 21)

Thus a competitive advantage can refer to a unique set of abilities, methods, or resources that an organization uses to differentiate itself from the competition and add value and benefits for its clients.

I-5 The dimensions of the competitive advantage

These aspects provide the organization with a competitive advantage:

- Quality:

Quality represents the distinctive characteristics of the product, aimed at convincing the customer to purchase it (غالب، 2011، صفحة 65). An organization that focuses on providing higher-quality products than its competitors, sometimes even exceeding customer expectations, can achieve a competitive edge in the market and ensure customer satisfaction and loyalty.

- Innovation:

Innovation is one of the most important sources of competitive advantage (Charles & Gareth, 2006, p. 19). The organization utilizes various skills and resources to innovate new technologies, products, and strategies, allowing it to excel, differentiate, and meet the needs of its customers.

- Competence:

Competence is achieved at all levels of the production, financial, and organizational institutions by focusing on two essential elements: resources and skills (Michael G., 2003, p. 28). The institution must prioritize improving worker productivity in order to produce unique value outputs compared to its competitors in the market.

- Appropriate response to customer needs:

To achieve an appropriate response to customer needs, the institution must be able to identify the ever-changing and evolving needs and desires of its customers better than its competitors (Bordigoni, Détermination du rôle de l'énergie dans la compétitivité de l'industrie manufacturière, 2012, p. 71).

It should then work to satisfy these needs in the preferred manner and at the right time, thereby earning their satisfaction and loyalty.

I-6- Innovative value in the product's relationship to competitive advantage:

To meet the challenges posed by shifting marketing conditions and stay ahead of the competition, organizations have placed a high value on innovation. According to Porter (Duriev F., 2000, p. 49), who claimed that firms obtain competitive advantage through innovation, this is regarded as a winning hand in these situations.

Innovative value in the product plays a role in enhancing the competitive advantage of the organization.

I-6-1- The relationship of innovative value in the product to improving quality:

Innovation in the product affects quality and product value by reducing defects that may occur during the production process. This is achieved through innovative features, designs, and new technical methods. Therefore, innovative value in the product contributes to ensuring the product quality, which helps the organization to maintain a competitive advantage for a longer period of time.

I-6-2-Innovation in product is related to increasing the efficiency of the organization:

The more efficient the organization is, the more it focuses on enhancing the innovative capabilities of its employees, encouraging them to propose new and unique ideas that have not been previously presented. These ideas are then transformed into innovative products, ultimately leading to increased organizational efficiency and the utilization of available resources to achieve valuable and highly efficient outputs.

I-6-3- The contribution of product innovation to increasing the speed of response to customer needs:

The dynamic nature of markets requires organizations to focus on customers by accurately perceiving and understanding their changing needs and desires. Organizations are increasingly striving to meet their customers' aspirations by offering products that provide innovative value and have unique features compared to competitors, responding quickly to customer needs, and employing unique marketing strategies.

I-7- Determinants of Innovative Value in Products to Maintain Competitive Advantage:

An organization can achieve competitive advantage through innovative activities if the following determinants are present:

- The adopted innovation should not be easily imitated, making it difficult for competing organizations to replicate, thus ensuring the organization's uniqueness and distinction compared to its competitors.
- This innovation must reflect and respond to real consumer needs, ensuring its sustainability due to the profits it generates. This requires a thorough study of consumer demands and investment in research and development activities.
- The innovation should enable the organization to leverage the right timing to enter the market or apply distinctive marketing strategies, allowing it to offer products with innovative value that ensure a stronger and more influential reputation and brand among consumers, fostering loyalty and increasing their inclination to purchase its products, which leads to an increase in the organization's market share.
- The innovation should be based on technological, knowledge, financial capabilities and resources available to the organization but not to its competitors, allowing it to achieve uniqueness and distinction by enhancing its research and development efforts.

II-The Practical Aspect of the Study:

II- 1- Study Methodology:

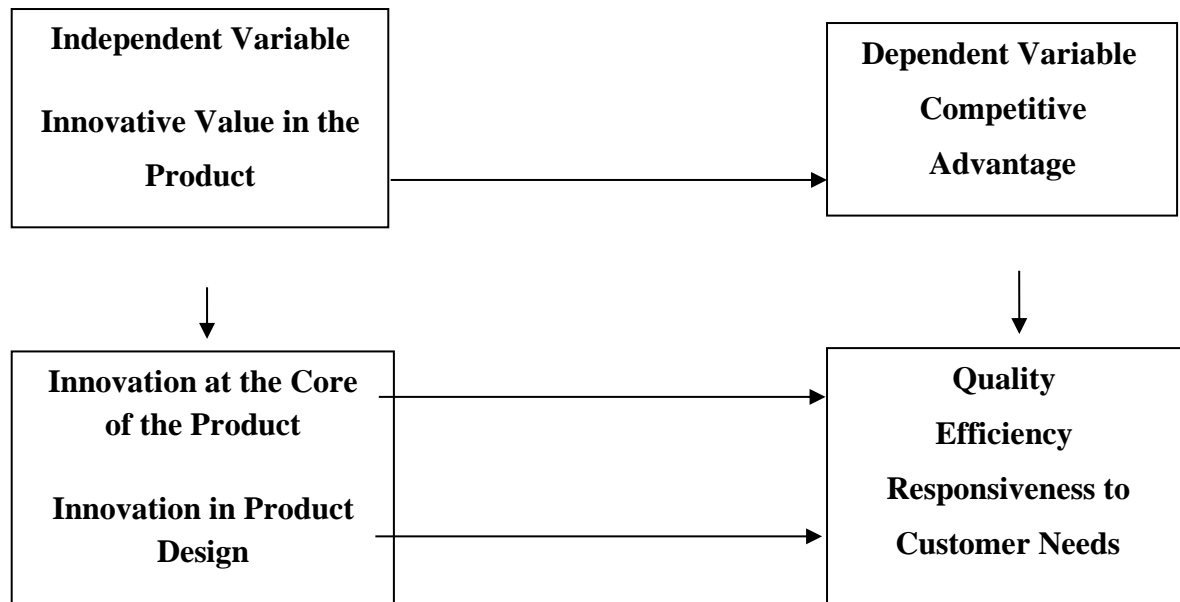
This part of the study presents and discusses: study model, study population and sample, research instrument, statistical approaches, validity, and reliability of the questionnaire.

II- 2- Study Model:

A conceptual model was created to show the logical relationships between the study variables and outline the suggested solutions to address the research questions. This model was based on the content of the study problem, its objectives,

and hypotheses, as well as on prior research and literature pertaining to the study topic. The model utilized in this investigation is depicted in Figure1.

Figure 01: Study Model



Source: Prepared by the researchers based on the outputs of the SPSS program.

II- 3- Study Community and Sample:

The study community consists of consumers of Apple products. The study employed a random sampling method due to the challenges of comprehensive enumeration, limiting the sample size to 384 individuals.

II-4- Study Tool:

To achieve the study's objectives, address its questions, and test its hypotheses, we utilized a questionnaire consisting of 37 statements divided into three parts:

- **Part One:** Contains users' personal information about Apple products.
- **Part Two:** deals with the product's innovative value, which is the independent variable. It includes both the innovative aspect found in the core of Apple products and the innovative aspect found in their design.
- **Part Three:** covers the dependent variable, competitive advantage, with its dimensions of quality, efficiency, and responsiveness to consumer needs.

The Statistical Package for the Social Sciences (SPSS.V.26) was also used for data entry and analysis.

II-5- The Reliability of the Questionnaire Using Cronbach's alpha:

We used Cronbach's alpha to confirm the validity and reliability of the questionnaire; this is shown in the following table:

Table Number (01) : Shows the validity and reliability of the questionnaire using Cronbach's Alpha

Number	Axis Title	Correlation Coefficient Value
01	Customer Relationship WITH the Institution	0.94
02	Innovative Value in the Product	0.88
03	Competitive Advantage	0.93
Overall Questionnaire		0.95

Source: Prepared by the researchers based on the outputs of the SPSS program.

Through Table No. 01, we notice that the Cronbach's alpha values for the three axes of the questionnaire: customer-institution relationship, innovative value in the product, competitive advantage, and the questionnaire as a whole are: 0.94, 0.88, 0.93, and 0.95, respectively. This indicates that the study questionnaire has a high reliability coefficient, confirming its acceptability for use in the study.

II-6-Presentation and Analysis of the Study Questionnaire Results:

II-7 - Presentation and Analysis of the Personal Data Section Results:

Table No (02): Shows the presentation and analysis of the results of the personal data section

Personal Data		Frequencies	Percentage (%)
Gender	Male	124	32.30
	Female	260	67.70
Age	Under 18 years	30	7.80
	20-40 years	324	83.30
	41-60 years	34	8.90

Educational Level	Secondary	30	7.80
	University	305	79.40
	Postgraduate Studies	49	12.80
Occupation	Student	60	15.60
	Unemployed	18	4.70
	Employee	116	30.20
	Self-employed	190	49.50
Income (DA)	Less than 18,000 Algerian Dinars	78	20.30
	From 18,000 DA to 30,000 DA	32	8.30
	From 31,000 DA to 43,000 DA	38	9.90
	From 44,000 DA to 56,000 DA	52	13.50
	More than 56,000 DA	184	47.90

Source: Prepared by the researchers based on the outputs of the SPSS program

- Sample distribution based on the gender variable: Based on Table 02, we can see that 32.30% of consumers are men and 67.70% of consumers are women.
- Distribution of the sample according to the age variable: From the table (02), we see that 83.30% of consumers are aged between 20 and 40 years, while 8.90% are aged between 41 and 60 years, and 7.80% are under 18 years old.
- Distribution of the sample according to the educational level variable: From the table (02), we find that 79.70% of consumers have a university education, while 12.80% have postgraduate degrees, and 7.80% have completed secondary education.
- Sample distribution based on the profession variable: According to table (02), 44.40% of consumers are self-employed, 30.20% are employed, and 15.60% are college students. The smallest group, 4.70%, is not employed.
- Sample distribution based on the income variable: Table (02) shows that 20.30% of customers earn less than 18,000 DA, 13.50% earn between 44,000 and 56,000 DA, and 47.90% of consumers earn more than 56,000 DA. Furthermore,

the lowest percentage, 8.30%, earns between 18,000 and 30,000 DA, while 9.90% earns between 31,000 and 43,000 DA.

II-8 Testing the Study Hypotheses

II-8 -1Presentation of the Normal Distribution Results of the Research Variables:

To select the appropriate method for testing the study hypotheses and confirm the distribution nature of the sample responses, we conducted the Kolmogorov-Smirnov normality test:

Table No (03): Shows the nature of the research data distribution

Axis	Value Calculated Kolmogorov-Smirnov	Probability Kolmogorov-Smirnov Sig
Innovative value in the product	0.96	0.93
Competitive advantage	0.94	0.42
Overall questionnaire	0.97	0.82

Source: Prepared by the researchers based on the outputs of the SPSS program

Table No. 03 shows that the innovative value in the product, competitive advantage, and total questionnaire have Kolmogorov-Smirnov probability of 0.93, 0.42, and 0.82, respectively, which are higher than the 0.05 error rate. This indicates that they are valid for the study and that they are regularly distributed. For this reason, one-way analysis of variance (ANOVA) is used to test hypotheses.

II-8 -2Testing the Third Hypothesis: - First Hypothesis: The product's innovative value influences the achievement of competitive advantage for the electronic company Apple at a significance level of $\alpha \leq 0.05$.

Table No (04): Shows the results of the one-way ANOVA test for the effect of the product's innovative value on achieving competitive advantage for the electronic company Apple.

independent Variable	Regression Coefficient	Beta	t Value	Significance Level (sig)	Correlation Coefficient (R)	Determination Coefficient	f Value	Significance Level
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Constant	-0.37	0.96	-5.19	0.000	0.96	0.92	4487.58	(sig) 0.000
Innovative Value in Product	1.06		66.99	0.000				

Source: Prepared by the researchers based on the outputs of the SPSS program.

Through the table (04) we observe that the value of the coefficient of determination (R square) reached 0.92, indicating that the innovation value of the product explains 92% of the variance in the dependent variable represented by competitive advantage. The remaining 8% is attributed to other factors and variables not included in the table, as well as random sampling estimation errors. Overall, we conclude that the value of (F) for the simple linear regression analysis is significant, with a significance level of 0.000, which is below the error rate of 0.05. This supports the main hypothesis that: "There is a statistically significant effect of the innovation value of the product on achieving the competitive advantage of the electronic industrial entity Apple."

II-8 -3Testing - Second Hypothesis: There is a statistically significant effect of innovation in the core products of Apple on achieving competitive advantage for the electronic company at a significance level of $\alpha \leq 0.05$

Table No(05): Shows the results of the one-way ANOVA test regarding the effect of innovation in the core products of Apple on achieving the competitive advantage of the electronic industrial institution .

independent Variable	Regression Coefficient	Beta	t Value	Significance Level (sig)	Correlation Coefficient (R)	Determination Coefficient (R ²)	f Value	Significance Level (sig)
Constant	-0.57	0.96	-7.13	0.000	0.95	0.91	3890	0.000
Innovative Value in the core of Apple's products.	0.95		62.37	0.000				

Source: Prepared by the researchers based on the outputs of the SPSS program.

The table (05) reveals that the R square (coefficient of determination) is 0.91. This means that 91% of the variance in the dependent variable, which is competitive advantage, can be explained by innovation in Apple's core products. The remaining 9% is ascribed to random estimating errors of the sample and other variables and factors not included in the table. Generally, with a significance level of 0.000, which is less than the error rate of 0.05, we infer that the (F) result of the basic linear regression analysis is significant. This provides credence to the second hypothesis, which holds that "Apple's core product innovation has a statistically significant impact on achieving competitive advantage for the electronic manufacturing institution."

II-8 -4TestingThird Hypothesis: There is a statistically significant effect of innovation in the design of Apple products on achieving competitive advantage for the electronic company at a significance level of $\alpha \leq 0.05$

Table (06) presents the findings from a one-way ANOVA test that illustrate the effect of of innovation in the design of Apple products on achieving competitive advantage for the electronic manufacturing institution.

independent Variable	Regression Coefficient	Beta	t Value	Significance Level (sig)	Correlation Coefficient (R)	Determin ation Coefficie nt (R ²)	f Value	Significa nce Level (sig)
Constant	-0.14	0.96	-2.08	0.04	0.96	0.92	4562.19	0.000
Innovative Value in design of Apple's products.	1.02		67.54	0.000				

Source: Prepared by the researchers based on the outputs of the SPSS program.

The table (06) shows that the coefficient of determination (R square) was found to be 0.92, indicating that innovation in the design of Apple Inc. products accounts for 92% of the variance in the dependent variable, which is competitive advantage. The remaining 8% is attributed to other factors and variables not listed in the table, as well as random sampling estimation errors. In summary, we deduce that the value of (F) in the simple linear regression analysis is significant, as the test's significance level is 0.000, which is less than the 0.05 error rate. This provides credence to the third hypothesis, which reads as follows: **"There is a statistically significant effect of innovation in the design of**

Apple products on achieving competitive advantage for the electronic company at a significance level of $\alpha \leq 0.05$ "

Conclusion:

The research aimed to investigate the following question: Is there a statistically significant effect of innovative value in the product on achieving competitive advantage for Apple? We discovered that, when it comes to Smartphone and software development, Apple is among the most significant and prosperous leading technology and computer organizations in the world. The company uses product innovation as a strategic technique to gain and maintain a competitive advantage.

Our research led us to a number of conclusions, which are summed up as follows:

- The research concluded that the main hypothesis is accepted, which states that there is a statistically significant effect of innovative value in the product on achieving competitive advantage for Apple. The study confirmed in the practical section that innovative value in the product influences the competitive advantage of Apple through the dimensions adopted and applied by the company, represented in innovation in both the core products and their design.

The second hypothesis was approved, according to which innovation in Apple Inc.'s core products has a statistically significant impact on the company's ability to gain a competitive advantage for the electronic industrial company. This is because Apple creates innovative value in its products by offering significant advantages and benefits that make them hard for competitors to copy.

- Furthermore, the third hypothesis was accepted, indicating that there is a statistically significant effect of innovation in the design of Apple products on achieving competitive advantage. Apple focuses on renewing and innovating product designs from functional, technical, and aesthetic perspectives in line with customer aspirations, providing personalization and customization features according to their desires.

The results clearly demonstrate the effect of innovative value in the product on achieving competitive advantage for Apple.

Several recommendations can be made in light of these findings.

- Apple is a shining example of a successful and leading companies that can be referenced in the field of innovative product value, contributing to its competitive advantage

- Companies aiming for competitive advantages should prioritize research and development activities along with marketing innovation.

- Innovation should be prioritized, with a focus on personalizing and customizing products to fulfill client expectations, rather than just from the company's point of view.

- It is necessary to emphasize the importance of encouraging and motivating talents to think innovatively, fostering positive change within the company culture to achieve competitive advantage in a competitive environment.

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