

## The impact of customer value elements in building customer life value - study of convenient sample of smartphone users in algeria.

تأثير عناصر قيمة الزبون في بناء قيمة حياة الزبون - دراسة عينة ملائمة من مستعملي الهواتف الذكية في الجزائر.

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### Abstract:

The key purpose of this study is to determine the impact of customer value with its components (Functional value, Price and cost, Symbolic value and Experiential value) on the customer life value construction.

Basing on existing literature about customer relationship management (CRM), the study tried to give more understanding to the CRM philosophy by testing the effects of the CRM components on the construction of the CLV element, also testing the correlation between these variables. The data were collected through a questionnaire survey consisting of a convenient sample of 153 smart phone consumers.

The study has concluded that all CRM components (Functional value, Price and cost, Symbolic value and Experiential value) have a significant statistical effect on the construction of the CLV, and it explains 57.4% of its variability. The results also have proved a statistically significant correlation between these CRM components and CLV, but these correlations are not high.

**Keywords:** Functional value, Price and cost, Symbolic value, Experiential value, Customer life value, Customer value.

**JEL Classification :** M30, M31.

ملخص:

تمثل الهدف الأساسي لهذه الدراسة في تحديد تأثير قيمة العميل بمكوناتها (القيمة الوظيفية، السعر والتكلفة، القيمة الرمزية، القيمة التجريبية) في بناء قيمة حياة الزبون.

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استنادًا إلى الأدبيات المقدمة حول إدارة علاقات الزبون (CRM)، حاولت الدراسة إعطاء المزيد من الفهم لهذه الفلسفة التسويقية وكذا اختبار تأثيرات مكوناتها على بناء قيمة حياة الزبون، وكذلك اختبار الارتباط بين مختلف هذه المتغيرات، وقد تم جمع بيانات الدراسة من خلال طريقة الاستقصاء عبر الاستبيان من خلال دراسة عينة ملائمة مكونة من 153 مستهلك للهواتف الذكية.

خلصت الدراسة إلى أن جميع عناصر إدارة علاقات الزبون (القيمة الوظيفية، السعر والتكلفة، القيمة الرمزية والقيمة التجريبية) لها تأثير إحصائي معنوي على قيمة عنصر حياة الزبون، وتوضح أنها تفسر 57.4% من تباينها. كما أثبتت النتائج وجود علاقة ارتباط ذات دلالة إحصائية بين عناصر إدارة علاقة الزبائن المدروسة وقيمة حياة الزبون غير أنها ليست عالية.

**كلمات مفتاحية:** القيمة الوظيفية، السعر والتكلفة، القيمة الرمزية، القيمة التجريبية، قيمة الزبون؛ قيمة حياة الزبون.

**تصنيفات JEL:** M30، M31.

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## 1. INTRODUCTION

Many companies adopt the notion of Customer Relationship Marketing CRM as a tool or doctrine to set their plans of marketing, if we have a look with the language of numbers we see that the global spending on CRM in 2018 was estimated by 48.2 billion dollar (*Worldwide Customer Experience and Relationship Management Software Market Grew*, n.d.), and estimated to be 80 B \$ by 2025 (Gabriel, n.d.).

### 1.1. Problematic of the study:

When a company decide to apply the CRM philosophy, there are many things to treat and must take more important interesting, among this element we find the customer value (CV) and the customer life value (CLV), throw this study we have tried to treat and answer the following question:

Are there a significant positive Relationship between the four dimensions of Customer value (functional value, price and cost, symbolic value, experiential value) and customer life value? And are there a significant effect of these four dimensions of Customer Value in the Customer Life Value of the smartphone's customers or users?

### 1.2. Hypotheses of the study:

This study aimed to test the relationship between the elements of the customer value (functional value, price and cost, symbolic value, experiential value) and the customer life value, and studying the impact of

these elements as independent variables can improve the CLV as dependent variable, a hypothesis have developed as follows:

**H<sub>1</sub>: There is positive significant Relationship between the four dimensions of Customer value and customer life value.**

H<sub>1.1</sub>: There is positive significant Relationship between the *functional value* and the CLV of smartphone customers;

H<sub>1.2</sub>: There is positive significant Relationship between *price and cost* and CLV of smartphone customers;

H<sub>1.3</sub>: There is positive significant Relationship between *symbolic value* and CLV of smartphone customers;

H<sub>1.4</sub>: There is positive significant Relationship between *experiential value* and CLV of smartphone customers;

**H<sub>2</sub>: There is a significant effect to the four dimensions of Customer Value on the Customer Life Value to the smartphone's customers.**

H<sub>2.1</sub>: *Functional value* has a significant effect on CLV;

H<sub>2.2</sub>: *Price and cost* has a significant effect on CLV;

H<sub>2.3</sub>: *Symbolic value* has a significant effect on CLV;

H<sub>2.4</sub>: *Experiential value* has a significant effect on CLV;

### **1.3. The purpose of the study:**

We look by this study to clarify the concept of the customer relationship management (CRM), we will discuss also its main components which are the Customer Value (CV) and the Customer Life Value (CLV) and their importance, we will look also by this paper to contribute in the existing knowledge of the field of CRM by testing the relation between the CV and CLV in the industry of smartphone.

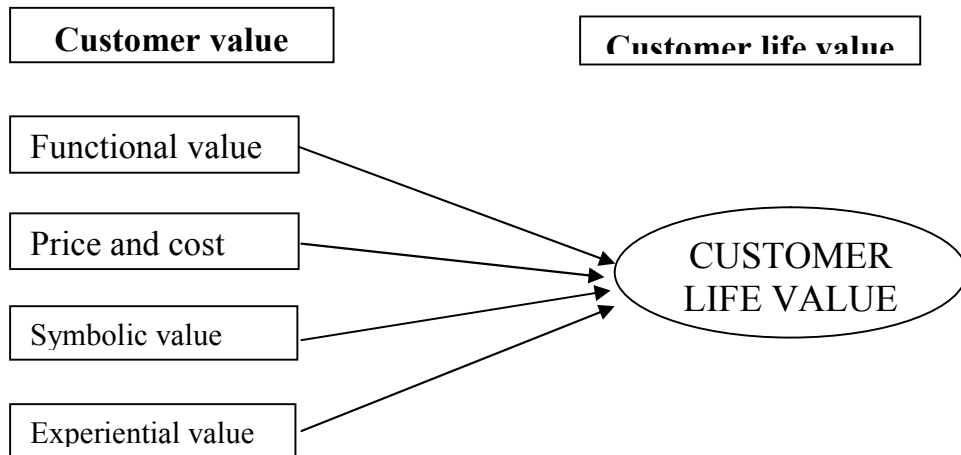
### **1.4. Importance of the study:**

This study takes its importance from the importance of the CRM and how companies keep their customers satisfied, and how improve the customer life value by using the components of the customer value.

### **1.5. The model of the study:**

As presented in the next figure, the model of the study shows two variables, the first exogenous (customer value) represented by four sub-variables (functional value, price and cost, symbolic value, experiential value), and the second endogenous (customer life value).

**Fig.1.** Model of the study



**1.6. Methodology of study:**

For the present study, the authors have required to analytical and descriptive methodology, analyzing with statistical tools the impact of customer value elements in building customer life value, the study has supported by study of a convenient sample of smartphone users in Algeria.

**1.7. Period and place of the study.**

The data collection and survey were conducted by the first May to the end of Jun 2020, the population of the study was determined by all adult persons owning and using a smartphone in Algeria.

**1.8. The structure of study**

The study has been divided into tow parts, at the first we have tried to clarify the concept of customer relationship management and the concept of customer value by referring to important studies in this field, the second part was devoted to data analysis, hypothesis test and the results discussion.

**2. conceptual foundation and clarification**

When we look to the term CRM, we refer to a wide notion like information technology, internet, bigdata, databases...etc., all these notions and terms refer to the field of IT, this view saw the CRM as a skill of software and hardware using in retention and keeping customer.

CRM based on multifunction starting with understanding customers' terms and arriving at the stage of loyalty with vision based on segmenting customer to a multiple categories with purpose to serve each segment according to its profitability, CRM also seek the best ways to acquiring and retaining the most profitable customers, and try how deliver to them a superior value .

## **2.1. THE CRM BENEFITS:**

The CRM vision look to concretize some crucial goals and purposes on the marketing strategy, we summarize some of its important one:

Customer acquisition: the CRM always on first time tries to build an asset of selective customers, basing on a number of criteria,

Customer retention: the second option of the CRM that we have to respect is the retention of the selected customer, because this is the main purpose and the main point of the CRM strategy to minimize the cost, because the studies have proved that the cost of acquiring new customers can be five times the cost of keeping the current one(P Kotler, 1997).

When we talk about customer retention, we have to mention the notion of loyalty, because the loyal customer provides free advertising(F. F. Reichheld & Sasser, 1990).

Customer profitability: as we have mentioned above, the cost of retention of customers in any way is lower than its acquisition, studies have proved that organizations can augment their profit by 25% if they can augment their retention rate by 5%(F. Reichheld, 2001).

The profitability issued from each customer can be calculated by simple way, the difference between income and expenses, and more that, the customer can be an indirect generator of profit if he is more loyal to the brand.

## **2.2. THE CUSTOMER VALUE**

The marketing has defined by Kotler as "the science and art of exploring, creating, and delivering value to satisfy the needs of a target market at a profit" (Philip & Gary, 2011) and he also gives this definition: " Marketing is the social process by which individuals and groups obtain what they need and want through creating and exchanging products and value with others» (Philip Kotler, 1994).

We understand from the definition above that the marketing is about creating and delivering value at first place, because the consumer seeks to satisfy his needs and wants by the goods and services that deserve the money and efforts spending, for this reason the first job of a marketer is about providing value to customers(Gruen et al., 2006).

There isn't a clear and specific definition of the customer value and the cause becoming from the complexity and the different visions of this marketing basic notion.

The customer value was defined as "a customer's perceived preference for, and evaluation of, those product attributes, attribute performances, and

consequences arising from use that facilitates (or blocks) achieving the customer's goals and purposes in use situations"(Woodruff, 1997, p141), and defined also as " a ratio of benefits received versus burdens endured by the customer" (Ulaga, 2001).

The customer value can be viewed into the relation buyer – seller as the an ability to deliver a fundamental value to a customer by a firm (Parasuraman et al., 1991), and can be viewed also as benefits perceived and received by the customer from the firm in relation to the cost to get those benefits(Zeithaml, 1988).

The customer value can be grouped into three models: value components, utilitarian or benefits/cost ratio and means-ends models (Khalifa, 2004).

Many authors have been trying to describe and make a typology of customer value, we have tried to summarize the most important in the following table:

**Table 1.** Type of value by authors

<b>Authors</b>	<b>Type of value</b>
Park, Jawarski and MacInn (1986)	functional value, symbolic value, experiential value
Sheth, Newman, and Gross (1991)	functional value, social value, emotional value, epistemic value, conditional value
Ulaga (2003)	product quality, delivery, time to market, direct product costs (price), process costs, personal interaction, supplier know-how, and service support
Woodall (2003)	net VC (balance of benefits and sacrifices), derived VC (use/experience outcomes), marketing VC (perceived product attributes), sale VC (value as a reduction in sacrifice or cost), rational VC (assessment of fairness in the benefit-sacrifice relative comparison
Holbrook	efficiency, excellence, status, esteem, play, aesthetics, ethics, and spirituality
Heard (1993)	product characteristics, delivered orders, and transaction experiences

**Source:** Adapted from (Smith & Colgate, 2007).

We can understand that the customer value is about what the customer receives and perceive from aside, and about what he spends and pay from the other side, and the value for him is a mix of tangible (functional value, product characteristic value...) and intangible benefits (social value, symbolic value...).

for this reason, the "customer value is created when the perceptions of benefits received from a transaction exceed the costs of ownership "(Christopher, 1996). This idea can formulate as Christopher concluded by this ratio:

$$\text{Customer value} = (\text{Perceptions of benefits} / \text{Total cost of ownership})$$

The customer or the consumer sees the product as valuable thing can satisfy his needs and wants, for this reason, the company must seek the best way to create the valuable product and the valuable mix marketing.

A company must insist to deliver the higher value to their customers, for this reason it must understand what their customers expect, and try to exceed those expectations, because they are the basis of customer loyalty(Slater & Narver, 1994), and try to improve the communication of value to customer on three levels : product features, customer benefits and benefits in accordance with customer needs (Hinterhuber, 2008).

We set-out from the definitions above that the CRM is a strategy based on the first step to select a specific segment of highly profitable customers, and concentrate at keeping them loyal, but to achieve this purpose, it must deliver to this segment the value they look for or more, for this reason we state that the value is great problem to establish and install the CRM system, and because the value as we see it is a complex concept and has different meanings and types, we conclude also that the CRM confronts a serious problem if the value can't be clearer to understand by the customer .

### **2.3. THE CUSTOMER LIFE VALUE (CLV).**

One of the important elements of the CRM strategy that we must take care, is the period that keeps the customer loyal to the brand or the company, because even that customer stay in relation with the company than the CRM achieve their main goals, and as Peppers and Rogers proposed that it was better for a company to try to sell many products to one customer over a long period of time than to concentrate in selling one product to many customers(Peppers & Rogers, 1993).

The term customer lifetime value is defined as the "net present value of a single customer's value" (Richards & Jones, 2008), and as "The present value of all future profits generated from a customer"(Gupta & Lehmann, 2003), and as " the sum of the revenues gained from a company's customers over the lifetime of transactions after the deduction of the total cost of attracting, selling, and servicing customers, taking into account the time value of money"(Sohrabi & Khanlari, 2007).

From these definitions we understand that the CLV is the direct and indirect profits that can be generated the relation between the company and the customer during a gap or a lap of time.

The direct profit can be the direct benefit generated from the customer itself, and the indirect profit can be any way of attracting new customer as the word of mouth.

When we talk about CLV, we refer to terms like Customer Equity (CE) or Customer Profitability (CP), but we must pay attention because we often use those terms in the field of management, accounting or financial literature when we use also terms like shareholder value or stakeholder value.

The shareholder values in the financial analysis as stated "comes from profitable customer relationships, not from the stock exchange"(Grönroos, 2000), and that clarify the relation between the notion of shareholder value and customer value.

We find also that the term customer profitability was defined as " the difference between the revenues earned from and the costs associated with the customer relationship during a specified period" (Pfeifer et al., 2004), and the term Customer Lifetime Value CLV was defined as " the present value of the future cash flows attributed to the customer relationship"(Pfeifer et al., 2004), the statement of these two definitions is that the term CLV is related more to the field of financing and the term CP to field of accounting, but in the marketing literature it has been used as interchangeable terms by many marketing authors .

The customer life value as we have seen present the barometer to judge the customer and its profitability, it is one of the most important criteria of the market segmentation in the CRM implementation, because we have mentioned that the CRM doesn't take care of all the customers but a select segment of them, this segment must be characterized by a good profitable customer and of course a good CLV.

#### **2.4. RELATIONSHIP BETWEEN CV AND CLV.**

The first link between customer CV and CLV is that the first is about the value of a customer and the second is about the value of the customer(Graf & Maas, 2008), the CV and CLV are both processes of value creation for the customer and for the firm(Boulding et al., 2005), few studies have tried to switch the CV to the CLV by integrating some attribute of CV as quality, price, etc. into the CLV concept(Graf & Maas, 2008).



**3. RESEARCH METHODOLOGY.**

**3.1. Questionnaire and data collecting.**

We have based on collecting primary data on a questionnaire which has distributed to a convenient sample of customers. The variables of the questionnaire was developed on the Likert’s scale 5 degrees.

The target and the population of this research was the consumers of smartphones in Algeria, a sample of 180 consumers was contacted, 161 out of 180 of them received back. The final analyses have been done on 153 completed questionnaires.

**3.2. RELIABILITY OF THE MEASUREMENT TOOL.**

To examine the reliability of the measurement tool, we have used the Cronbach’s Alpha analysis, the results are presented is this table:

**Table 2.** Cronbach’s Alpha test

Variable	Cronbach’s Alpha	Number of items
Functional value	0.855	04
Price and cost	0.761	05
Symbolic value	0.875	05
Experiential value	0.832	04
Customer life value	0.788	05

The results of the Cronbach’s Alfa Coefficient are all more than the critical value 0.60, which means that the measurement tool is stable and capable to measure the studied phenomenon.

**4. RESULT AND ANALYSIS.**

**4.1. DEMOGRAPHIC RESULTS**

The following table recapitulates the descriptive demographic data of the sample’s study:

**Table 3.** demographic results

Sex	Ni	%	Education level	Ni	%	Brand	Ni	%
Male	69	45.1	Secondary or less	03	02	condor	19	12.4
Female	84	54.9	Bachelor	64	41	Samsung	50	32.7
Sum	153	100	Master or higher	86	56.2	Oppo	35	22.9
Function	Ni	%	Sum	153	100	Lg	08	05.2
Employee	64	41.8	Age(years)	Ni	%	Huawei	19	12.4
Liberal	05	03.3	18-25	45	29.4	Xiaomi	07	4.6
Student	66	43.1	25-40	85	55.6			
Retired	03	02	40-55	19	12.4	iPhone	01	0.7
Others	15	9.8	+55 years old	04	02.6	Others	14	9.2
Sum	153	100	Sum	153	100	Sum	153	100

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

The table indicates that the sample contains a majority of female (54.9%), while (45.1) male, the sample contains a majority of students (43.1%) and employees (41.8%), the education level is dominated by bachelor’s degrees (41%) and master’s degrees (56.2%), the ages of the majority of respondents is between 25 and 40 years old (55.6%), the results show also a several brands of smart phones owned by respondents, but we conclude that Samsung is the first (32.7%), followed by Oppo (22.9%), Condor (12.4%), and Huawei (12.4%) .

**4.2. ANALYSIS OF THE STUDY VARIABLES.**

**4.2.1. Analysis of the functional value variable.**

**Table 4.** function value analysis

N <sup>0</sup>	Paragraph	Mean	Std deviation	ranking	Relative importance
01	The product is useful for me	4,1634	,68304	01	High
02	The attributes of product are correct and accurate	3,9150	,76904	04	High
03	The product has superior performances	3,9542	,92722	02	High
04	The outcomes of product are appropriate	3,9542	,82987	02	High
Variable paragraphs combined		<b>3.9976</b>	<b>0.67375</b>	//	High

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

From the table above, we conclude that all the means of function value variable paragraphs are plus than the hypothetical mean ( $\bar{X}_0 = 03$ ), this result confirms that all these paragraphs are clear to the sample individuals.

We conclude also that there is a high agrees with the first paragraph ( $\bar{X} = 4.16$ ), which means that the products (smartphone) are very useful for the sample individuals.

the value of standard deviation  $\sigma_x = 0.67$  seem very small witch mean a high coherent on the responses of the sample individuals.

**4.2.2. Analysis of the price and cost variable.**

**Table 5. Cost and price analysis**

	Paragraph	Mean	Std deviation	ranking	Relative importance
01	the product offers me an economic value	3,5882	,94958	03	High
02	The product minimizes my psychological efforts (ease of use, ease of doing business, simple, available, accessible)	3,8562	,95572	01	High
03	The product minimizes my personal investment (time, effort, energy)	3,5948	1,02237	02	High
04	The product minimizes risks (personal, technological, strategic)	3,2941	,91682	05	Medium
05	The activity/resource allocation is consistent with cost/sacrifice	3,5163	1,10086	04	High
Variable paragraphs combined		<b>3.5699</b>	<b>0.70888</b>	//	High

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

By analyzing the means and Std deviation of price and cost variable, we state a high agree indicated by the mean ( $\bar{X}=3.5699$ ), which is mentioning that cost and price has a high function of the construction of the customer value among the individuals' sample. The Std deviation ( $\sigma_x=0.70888$ ) by its low value indicated a highly coherent in the responses of the individuals' sample.

**4.2.3. Analysis of the symbolic value variable.**

**Table 6. symbolic value analysis**

N <sup>0</sup>	Paragraph	Mean	Sdt deveation	ranking	Relative importance
01	The product creates me personal meaning.	2,9542	1,09628	04	Medium
02	The product facilitates my self-expression	3,1895	1,17401	02	Medium
03	The product helps me to create social meaning (status, prestige, image).	3,0654	1,19579	03	Medium
04	The product provides me cultural meaning, enabling me to better celebrate cultural, religious, or other holidays or event	2,7712	1,16696	05	Medium
05	The product creates me personal meaning.	3,2418	1,06392	01	Medium
Variable paragraphs combined		<b>3.0444</b>	<b>0.93082</b>	//	Medium

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

To measure the symbolic value variable, we calculate the means and Std deviations as indicated in the above table. The results estimate a

medium agree of the responses ( $\bar{X}=3.0444$ ), which means that the symbolic value has not a higher function of the construction of the customer value among the individuals' sample.

The Std deviation ( $\sigma_x=0.93$ ) with its small value confirms a homogeneity in the responses between individuals' sample..

**4.2.4. Analysis of the experiential value variable.**

**Table 7. Experience value analysis**

N <sup>0</sup>	Paragraph	Mean	Sdt deaveation	ranking	Relative importance
01	The product creates me sensory value or appealing to the senses.	3,6601	1,05857	03	High
02	The product creates me appropriate emotions (fun, pleasure, excitement, relaxation,etc	3,5621	,94472	04	High
03	The product facilitates me social relationships (bonds, attachments, togetherness)	3,9477	,95828	01	High
04	The product creates me an epistemic value (knowledge, novelty, fantasy.).	3,9150	,88814	02	High
Variable paragraphs combined		<b>3.7712</b>	<b>0.78637</b>	//	High

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

The experience value variable gives high relative importance and indicates a high agree with the responses of the sample individuals ( $\bar{X}=3.7712$ ), the Std deviation ( $\sigma_x=0.78637$ ) indicates a homogeneity in the responses between individuals' sample.

**4.2.5. Summary of exogenous variables**

As a summary of all independents we propose the following table:

**Table 8. Summary of exogenous variables**

N <sup>0</sup>	Exogenous Variables	Mean	Sdt deaveation	ranking	Relative importance
01	Functional value	3,9967	,67375	01	High
02	Price and cost	3,5699	,70888	03	High
03	Symbolic value	3,0444	,93082	04	Medium
04	Experiential value	3,7712	,78637	02	High
Exogenous variables combined		<b>3.5956</b>	<b>0.61184</b>	//	High

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

From the above table, we conclude that the independent variables combined have high relative importance and it is clear for the sample elements ( $\bar{X}=3.59$ ), We conclude also that the function value gets first in the construction of customer value variable, followed by the experience value on the second place. The price and cost get third, but also with a high relative importance, the final place is returned to the symbolic value.

**4.2.6. Analysis of the Customer life value variable.**

**Table 9. Customer life value analysis**

N <sup>0</sup>	Paragraph	Mean	Sdt deveation	ranking	Relative importance
01	If I get the product, I have the intention to use it as long as I can	3,6797	,63509	01	High
02	I have the intention to buy the other products and services of my favorite brand	3,0719	1,03939	05	Medium
03	If I have the occasion, I advise people to buy the product	3,4575	,95274	02	High
04	I don't have the intention to switch to another brand	3,1974	1,01014	04	Medium
05	I am ready to pay more efforts to get my favorite product	3,2303	1,01296	03	Medium
Variable paragraphs combined		<b>3.3303</b>	<b>0.69608</b>	//	Medium

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

From the table above, we observe that the mean of combined paragraphs of CLV variable indicates a medium relative importance ( $\bar{X} = 3.33$ ) but it exceeds the hypothetical mean ( $\bar{X}_0 = 03$ ), which means an agreed by the individuals' sample. The Std deviation ( $\sigma_x = 0.69$ ) indicates high homogeneity in the responses. The responses indicate an agreed with the paragraphs of CLV variable, but the degrees of relative importance are not high as it indicated in the most paragraphs.

**4.3. Testing the correlation between CV variables and CLV.**

The results of the Pearson correlation coefficient between all exogenous variable (CV) and endogenous variable (CLV) are calculated in the following table.

**Table 10. Testing correlations between variables.**

		Functional value	Price and cost	Symbolic value	Experiential value	Customer life value
Functional value	Pearson Correlation	1	,538**	,395**	,612**	<u>,554**</u>
	Sig. (2-tailed)		,000	,000	,000	,000
Price and cost	Pearson Correlation	,538**	1	,435**	,539**	<u>,559**</u>
	Sig. (2-tailed)	,000		,000	,000	,000
Symbolic value	Pearson Correlation	,395**	,435**	1	,489**	<u>,630**</u>
	Sig. (2-tailed)	,000	,000		,000	,000
Experiential value	Pearson Correlation	,612**	,539**	,489**	1	<u>,641**</u>
	Sig. (2-tailed)	,000	,000	,000		,000
Customer life value	<b>Pearson Correlation</b>	<u>,554**</u>	<u>,559**</u>	<u>,630**</u>	<u>,641**</u>	<b>1</b>
	Sig. (2-tailed)	,000	,000	,000	,000	

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

From the table above, we observe that there is a significant correlation between all the component of the customer value variable and the customer life value at the 0.99 level of signification (confirm H<sub>1</sub>, H<sub>1.1</sub>, H<sub>1.2</sub>, H<sub>1.3</sub>, H<sub>1.3</sub> hypothesis).

From the table above, we state also that the correlation is not very strong between each variable of the customer value variable and LCV, but it varied between  $r = 0.554$  (for functional value and CLV) and  $r = 0.641$ (for experiential value and CLV).

From the results of the Pearson coefficient of correlation between the exogenous variables, we see a also a significant correlation at the level of 0.01 varies in the range of  $r = 0.395$  and  $r = 0.612$ , which means that there aren't high correlation between them.

**4.4. Testing effects of CV variables in the CLV variable.**

To test the effect of different exogenous variables in the endogenous variable, we have used the simple linear regression.

**4.4.1. Testing effect of functional value in the CLV.**

To confirm or reject the hypothesis of “there is a significant effect of the functional value on the CLV”, we test the simple model regression using ANOVA analysis, and the results are in the following table .

**Table 11. ANOVA analysis to effect of functional value on CLV**

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	22,592	1	22,592	66,818	,000 <sup>b</sup>
	Residual	51,055	151	,338		
	Total	73,647	152			

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

The results of ANOVA analysis show a significant effect of the functional value on the CLV at the 0.01 level (confirm H<sub>2,1</sub> hypothesis).

The coefficient of determination of this model is R<sup>2</sup>= 0.307 i.e. 30.7% of the variation on the CLV can be explained by the functional value.

#### 4.4.2. Testing effect of price and cost in the CLV.

With the same method, to confirm or reject the hypothesis of “there is a significant effect of price and cost on the CLV”, we test the simple model regression using ANOVA analysis, and the results are in the following table.

**Table 12. ANOVA analysis to effect of price and cost on CLV**

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	22,991	1	22,991	68,534	,000 <sup>b</sup>
	Residual	50,656	151	,335		
	Total	73,647	152			

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

The results of ANOVA analysis show a significant effect of the price and cost’ variable on the CLV at the 0.01 level (confirm H<sub>2,2</sub> hypothesis).

The coefficient of determination of this model is R<sup>2</sup>= 0.312 i.e. 31.2% of the variation on the CLV can be explained by the price and cost. **Testing effect of symbolic value in the CLV.**

As the previous hypothesis, to confirm or reject the hypothesis of “there is a significant effect of symbolic value on the CLV”, we test the simple model regression using ANOVA analysis, and the results are in the following table:

**Table 13. ANOVA analysis to effect of symbolic value on CLV.**

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	29,258	1	29,258	99,526	,000 <sup>b</sup>
	Residual	44,390	151	,294		
	Total	73,647	152			

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

The results of ANOVA analysis show a significant effect of the symbolic value on the CLV at the 0.01 level (confirm H<sub>2,3</sub> hypothesis).

The coefficient of determination of this model is R<sup>2</sup>= 0.397 i.e. 39.7% of the variation on the CLV can be explained by the symbolic value.

#### 4.4.5. Testing effect of experiential value cost in the CLV.

With the same method, to confirm or reject the hypothesis of “there is a significant effect of experiential value on the CLV”, we test the simple model regression using ANOVA analysis, and the results are in the following table.

**Table 14. ANOVA analysis to effect of experiential value on CLV**

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	30,254	1	30,254	105,280	,000 <sup>b</sup>
	Residual	43,393	151	,287		
	Total	73,647	152			

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

The results of ANOVA analysis show a significant effect of experiential value variable on the CLV at the 0.01 level (confirm H<sub>2,4</sub> hypothesis).

The coefficient of determination of this model is R<sup>2</sup>= 0.411 i.e. 41.1% of the variation on the CLV can be explained by the experiential value.

#### 4.4.6. Testing effect of CV in the CLV.

To test the principal hypothesis supposes that “there is a significant effect of customer value -CV- on the construction of the customer life value -CLV-”, we test the multiple model regression using ANOVA analysis, and the results are in the following table.

**Table 15. ANOVA analysis to effect of CV on CLV**

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	43,076	4	10,769	52,135	,000 <sup>b</sup>
	Residual	30,571	148	,207		
	Total	73,647	152			

a. Dependent Variable: clv

b. Predictors: (Constant), Functional value, Price and cost, Symbolic value, Experiential value

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

The results of ANOVA analysis show a significant effect of the customer value variables (Functional value, Price and cost, Symbolic value, Experiential value ) on the CLV at the 0.01 level (confirm H<sub>2</sub> hypothesis).

The adjusted coefficient of determination of this model is  $\bar{R}^2 = 0.574$  i.e. 57.4% of the variation on the CLV can be explained by (Functional value, Price and cost, Symbolic value, Experiential value) and the rest can be due to other factors.

The coefficients of the multiple model regression are all statistically significant at 0.05 level except the constant as the following table shows:



**Table 16. Multiple regression of CV variables and CLV**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	,362	,238		1,522	,130
Functional value	,151	,073	<b>,146</b>	2,069	<b>,040</b>
Price and cost	,168	,066	<b>,171</b>	2,524	<b>,013</b>
Symbolic value	,269	,047	<b>,360</b>	5,748	<b>,000</b>
Experiential value	,251	,065	<b>,284</b>	3,866	<b>,000</b>

a. Dependent Variable: CLV

**Source:** Prepared by the researchers based on the results of the SPSS.v23 program.

## 5. CONCLUSION, DISCUSSION, AND LIMITATIONS

The customer relationship management as a marketing orientation for many companies has developed a large marketing practices and notions, we have tried by this study to focus the light on two its important components which are the customer value and the customer life value, by studying the correlations and effects of the CV components with/in the CLV.

The results conclude to confirm all the hypotheses setting of this paper research, which means that:

- There is positive significant Relationship between the four dimensions of Customer value (functional value, price and cost, symbolic value and experience value) and customer life value;
- There is a significant effect to the four dimensions of Customer Value (functional value, price and cost, symbolic value and experience value) in the Customer Life Value to the smartphone's customers;

The results of this study find also:

- That the function value gets first in the construction of customer value variable, followed by the experience value on the second place. The price and cost get third, also with a high relative importance, the final place is returned to the symbolic value;
- The study has concluded a positive agree but not high by the respondents with the CLV variable

we conclude from the theoretical analysis that:

- The customer relationship management (CRM) is a complicated notion derived by the IT and ITC;
- The customer relationship management is more than marketing tools, but it is a full strategy for many company;
- The customer relationship management is a strategic tool of market segmentation;

- The CRM has many benefits with the most important are: the acquisition, the retention and the profitability of customers;

The limitation of this study are, at first, the small sample of respondents which are 153 persons, the study has taken place at a specific time of the pandemic covid-19, the data collected are specifically for the Algerian consumers, therefore the results of this study cannot generalize and are not necessary obtained if the research is conducted at another time or other areas..

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