E-satisfaction as a mediator between consumer loyalty and E-CRM: The context of Lebanese e-commerce

Joumana A. Younis[1*], Hameed Al-Shammari[2], Hussin Jose Hejase[3], Mazen Massoud[4], Ale Jose Hejase[5]

[1]*ICL, Junia, Université Catholique de Lille, LITL, F-59000 Lille, France, Faculty of Business Administration, Jinan University, Tripoli, Lebanon.*
[2,4]*Faculty of Business Administration, Jinan University, Tripoli, Lebanon.*
[3]*Business Administration, Al Maaref University, Beirut, Lebanon.*
[5]*Adnan Kassar School of Business, Lebanese American University, Beirut, Lebanon.*

Corresponding author: Joumana A. Younis (*Email: joumana.younis@univ-catholille.fr*)

Abstract

This article's purpose is to assess the influence of E-CRM on consumer loyalty through satisfaction. Electronic customer relationship management E-CRM is a marketing tool used to manage consumer loyalty. However, the adoption of outdated E-CRM strategies increases dissatisfaction and attrition rates. That is, to assess the effect of perceived quality online, online customization, and customer trust on loyalty from online shoppers' perspectives. This quantitative explanatory study begins with an exploratory factor analysis to simplify the concept's dimensions. A questionnaire was distributed to a sample of Lebanese customers as a measurement instrument. Data analysis used factor analysis, followed by confirmatory factor analysis (CFA) using a structural model, and later regression. EFA is a fundamental prerequisite to CFA. Then, principal factor analysis (PCA) verified items for each construct dimension. The removal of items with low contributions improved the value of the KMO test, variance explained, and internal reliability measured with Cronbach's alpha, which increased to 0.865. PCA extracted factors by restoring a minimum of 50% of the variance. The CFA relies on normed indices, sustaining the adjustment of the theoretical structure. Absolute fit criteria are highlighted: the RMSEA, GFI, and AGFI. Findings supported the idea that E-CRM strategies concentrating on online service quality, online presence, customization, and customer trust develop e-satisfaction and loyalty. Effective E-CRM satisfies customers and increases their e-satisfaction, leading to higher levels of loyalty. These outcomes increase awareness about the strategic value of E-CRM to businesses, and the paper serves as an eye-opener for future researchers and marketing experts.

Keywords: Customer trust, E-Commerce, E-CRM, Loyalty, Online customization, Perceived quality online, Word-of-mouth.

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1. Introduction

The evolution of Internet users led to an "e-commerce boom." This progression raises the need for organizations to specialize in marketing activities. Marketers are measuring customer perceptions to satisfy their needs and wants. Advances in technology have extended the scope of CRM. CRM is the tool for managing all phases of customer life, from conquest to loyalty [1]. E-commerce's survival, evolution, and cost-effectiveness depend on its ability to attract and retain loyal consumers. Indeed, customer acquisitions cost more than keeping loyal customers [2].

Furthermore, the profitability of devoted customers exceeds that of infrequent ones. Loyalty secures stability and represents a source of positive word-of-mouth. According to Kiang [3] and Obednikovska and Ilieska [4], loyalty is a profound commitment to purchase a product or service. Loyal consumers patronize their favorite stores despite situational factors and competitors' marketing efforts that may cause a change in buying behavior. E-commerce and cyberspace helped change CRM and the relationship between organizations and customers. Customers communicate with businesses through e-commerce by seeking customer support or purchasing online. The E-CRM was therefore created to meet the growing organization's needs for creating and managing web-based communications and enhancing their customer support services [5].

E-commerce is experiencing a profound change in data collection, notably after implementing new online regulations. These regulations provide an opportunity to rationalize the relationship. Organizations with online strategies should systematically obtain customers' consent before collecting their personal information. E-commerce must show transparency by saving data and building customers' values [6].

Consequently, adopting insufficient or outdated E-CRM strategies determines its failure and influence. The adoption process and the financial deficiencies represent crucial problems for its implementation. The tactical perspective is restrictive. Januszewski and Krupcała [7] and Nurjannah, et al. [8] considered CRM as a specific computer application allowing the automation of marketing activities. However, Goranda, et al. [9] perceived E-CRM as a marketing strategy to satisfy customers' desires. Eelen, et al. [10] insisted that E-CRM is a tactic to personalize products and retain profitable consumers. CRM based on technology refers to the implementation of customer-centric solutions. Implementing an Enterprise Resource Planning (ERP) mission is part of this technological approach [11].

Loyal customers increase organizational benefits. Studies have focused on the mediating role of e-satisfaction, translating satisfied customers into loyal consumers and then into brand ambassadors. According to Fernandes [12] and Gelderman, et al. [13], e-satisfaction results from effective marketing strategies. CRM is broken down into four sequences: Satisfaction with service quality is increasing customer e-satisfaction. The latter leverage loyalty and therefore affect organizational profitability. Marketing is the source of customer data, and CRM is the destination. Marketers and sales representatives collect, analyze, and exploit centralized data to transform customers into loyal consumers [14].

Marketing and CRM are two critical components of a successful customer relationship. Customer data centralized and structured in an online CRM represents the raw material for sales and marketing tactics. Therefore, it isn't easy to forecast and visualize an online marketing strategy without implementing CRM software and applications [15].

E-CRM captures data through information technology (I.T.) systems. It integrates them into various marketing processes and other operating departments. E-CRM helps e-commerce tailor products and services to reach customers' e-satisfaction. The electronic strategies create a personalized experience to make customers comfortable. It increases customers' feelings of belonging. It opens up new marketing opportunities based on customer history and expectations [16]. Besides, the personalization potentials target and segment market shares based on collected data through marketing research.

CRM concept is a process of acquiring profitable and loyal customers [17]. Electronic customer relationship management defines the procedures enabling an organization to create, manage, and track customer relationships and communications [18].

CRM software is essential for marketers to manage customer relations. In this case, the e-CRM can be characterized by the online CRM solution. Sales representatives are converting customers into e-commerce site online shoppers. To ensure this transformation, these representatives are personalizing customers' experiences to compensate for the lack of exchanges compared to physical store services [19]. However, even though brick-and-mortar stores provide more intimacy, social media offers proximity to visitors. It reduces travel expenses. Online shoppers can compare and buy products from international stores with several clicks. Online platforms are privileged shopping methods for brands. Social media are platforms for followers to exchange information easily with prospects [20]. However, social network use requires e-commerce responsiveness to customers. The latter expect quick and personalized responses. Social media is a significant source of information for customers when detecting needs for products and services [21].

Studying consumer behavior is a preferred approach to improving their knowledge. It collects data concerning prospects' tastes, buying process, and consulted websites. Data personalize customers' purchasing journeys. It satisfies loyal customers' tastes and maximizes their purchases [22].

E-CRM is a loyalty tool centralizing purchaser data [23]. It offers a history of exchanges. Electronic software and tools record and historicize purchasers' information. These data include surnames, first names, emails, and histories. E-CRM allows organizations to build a customer database [24, 25]. However, these data record systems are also a problem affecting online shoppers. The latter perceive online risks relating to online fraud. It jeopardizes customers' data. Unsafe websites are straightforward to hack. Hence, customers' data can be stolen.

Customers are faced with vast choices and options. With the growth in internet accessibility and ease of use, customers are better informed and more intelligent. Online shoppers can compare and choose among alternatives easily. The availability of choices gave rise to fierce competition. Hence, knowledgeable customers are grim in their e-satisfaction.

Dissatisfied customers spread negative word-of-mouth. In addition, the impact of this problem is reflected from two central angles. First, the customer may shop around dissatisfied if marketers do not measure the e-satisfaction degree (good or bad perception of E-CRM) [26]. Secondly, if the organization does not assess consumer loyalty and e-satisfaction, it loses the opportunity to improve its service quality. Consequently, potential sales are aborted. The Internet is both a challenge in integrating this data into CRM tools and a challenging source of new information to be aggregated. Detailed analysis of site traffic, behavioral data, knowledge of the origin of users, their navigation on the site, and their purchases [27].

Researchers in marketing refer to CRM as relationship marketing in the academic world. It enriches contemporary theories of marketing [28]. The study of E-CRM updates the review and progress of the change from traditional CRM to the online version. Practically, it offers new relational possibilities and better customer knowledge. CRM launches, advances, and sustains prolific relationships [29]. Customer relationship management is adopting a technological approach. E-CRM follows a consumer-oriented tactic [30]. It reorganizes organizational strategies around customers. It is grounded online to attract, maintain, and strengthen the organization and customer relationship. Organizations perceive increasing customer contact opportunities at a lower cost. It advances product personalization strategies. The latter contributes to improved organizational performance [31].

The objective of this article is to measure the influence of E-CRM on customer loyalty with the mediating role of e-satisfaction. The primary purpose is to demonstrate the effect of perceived quality online, online customization, and customer trust on loyalty from online shoppers' perspectives. Hence, the aim of this article is to measure customers' perceptions of E-CRM in e-commerce. It seeks to assess the influence of E-CRM strategies on customer e-satisfaction and loyalty, respectively. This article is assembled on a valid measurement instrument. The adopted measurement scale from Hendriyani and Raharja [32];Wilson and Alim [33] and Kumar and Mokha [34] is reliable and applicable in the Lebanese context.

Customer satisfaction requires knowledge and factor identification in their purchasing decisions. Therefore, gauging perceptions of perceived quality online, online interaction, online customization, and customer trust reflect customers' e-satisfaction degree and loyalty. This article is a summarized reminder for marketers to obtain essential information concerning E-CRM and loyalty. This comprehensive article can contribute to enriching the marketing library. It can be considered a supporting source of information and reference for students.

This article is an encouraging, simple reminder for sales representatives to enhance their online service quality to enhance customer e-satisfaction. It should motivate them to concentrate on their online marketing strategies. Moreover, this article can be convenient for marketers to consider implementing E-CRM.

1.1. Research Questions

Researchers, as discussed in the abovementioned paragraphs, presented their findings, stressing the importance of customer relations, the enabling power of information technology manifested by CRM tools, and the benefits of building a loyal customer base to finally mitigate errors in customer-organization relations. However, the aforementioned presents more of a tactical view of how CRM supports customer loyalty, thereby not addressing the mediating role of e-satisfaction. Capitalizing on that, the following research questions are formulated to mitigate gaps in the transformation of CRM to E-CRM and the strategic value of such a transformation taking into account the mediating role of customer e-satisfaction.

Q1: How does perceived quality online influence customer e-satisfaction positively?

Q2: Does online customization influence customer e-satisfaction positively?

Q3: How does customer trust influence customer e-satisfaction positively?

Q4: Is there a positive influence of customer e-satisfaction on customer loyalty?

Q5: Does customer e-satisfaction mediate the relationship between E-CRM approaches and customer loyalty?

These research questions are later addressed to support the formulation of adequate hypotheses to statistically test the determinants of customer e-satisfaction based on ECRM and the mediating role of achieving customer loyalty. This paper is made up of five parts. The introduction, or first part, provides a better understanding of customer loyalty, E-CRM, and e-satisfaction. It sheds light on the perceptions of online service quality, online customization, and online trust. In the second part, covering the theoretical basis, existing concepts were relied on to define variables. It constructed hypotheses and a conceptual framework. The third part offers a synthesis of the research methodology incorporated concerning objectives, sampling, and defining the sample. This part also presented the motives for the questionnaire used. The practical case validated the quantitative tool. Part four discussed the results. It introduced the EFA and CFA and analyzed the results. Finally, in the fifth part, the conclusion, the results were summarized. This article concluded the implications and limitations.

2. Literature Review

Sustaining loyal customers is critical to ensuring organizational sustainability [35]. Indeed, loyal customers have longer "lifetime value." It amortizes the cost of customer acquisition and multiple sales. E-CRM identifies loyal consumers. Loyalty means higher purchase volume. Therefore, loyal consumers are profitable. Indeed, loyal customers are committed to brands and become ambassadors. E-commerce adopts customer loyalty tools [36]. CRM is one of the most effective online solutions. E-CRM boosts commercial performance, maintains brand image, and sustains customer relations. This article embraces the critical variables explained, respectively.

2.1. Consumers Loyalty

Consumer loyalty is a permanent, privileged commitment attaching customers to an organization or brand. Three dimensions influence loyalty in consumer behavior: affective (emotions, familiarity, and intimacy), cognitive (preference), and conative (purchasing behavior). It is measured as a behavior related to the purchase's frequency [37]. In e-commerce, loyalty is related to sharing information concerning brands on social media. Loyalty is expressed through consumption behaviors. It is explained as consumers' favorable attitudes towards services and products. In other words, consumer loyalty is a deep commitment to change prospects purchasing behavior [38].

Loyalty for organizations is a structural and recurring need for offering products and services to renew them according to prospects' desires. Loyalty is an objective method of considering effective behavior (purchasing behavior). Marketers are interested in accurate loyalty because it demonstrates customers' needs. Loyalty is a behavioral approach focusing on repeated customer purchases. Customer loyalty is transactional [39]. Price and benefits have an impact on it. Therefore, customer loyalty programs and reward-based incentives have gained popularity. The latter has generated repeated purchases. Brand loyalty is encouraged through rewards and incentives. The attitudinal approach highlights the intentional nature of purchasing behavior. On a website, attitudinal loyalty is expressed by the intention to revisit the site, buy it, or recommend it Saini and Singh [40].

2.2. Online Customer Satisfaction

Satisfaction is the outcome of a service experience with the consumption of goods. Marketers define satisfaction as the pleasure or displeasure of comparing expectations and a consumption experience [41]. Satisfaction is a pleasant, transient cognitive and emotional state. Satisfaction, as a consumer behavior phenomenon, is not directly observed. It results from an overall evaluative judgment about a consumption experience [42].

Customer e-satisfaction measures shoppers' pleasure and gratification with a product, service, or experience. This feelings analysis is founded on judgment, engagement, and emotions [43]. E-commerce can measure survey e-satisfaction using questions, rating scales, and collection methods. It is impossible to identify dissatisfied customers without measuring their e-satisfaction rate [44]. Unhappy customers terminate business relationships, and no business will be able to survive and stand out in the market if it has a high attrition rate. Therefore, the perpetual appraisal of e-satisfaction assesses the potential loss rate [45]. The business will go bankrupt if the attrition rate exceeds the customer acquisition rate. Closing this gap is essential to controlling the churn rate [35], highlighting improvement needs. Customer e-satisfaction is tremendously imperative to organizational financial health. Consequently, e-commerce should implement innovative measurement strategies and programs for developing customer e-satisfaction and loyalty [46]. Online customer purchasing is an ex-post appraisal of their experience, resulting in a positive, neutral, or negative feeling. Truong, et al. [47];Raza, et al. [48] and Restuputri, et al. [49] define e-satisfaction as "an evaluation of the product acquisition and the experience resulting from its consumption. In e-commerce, Teeroovengadum [50] and Agyei, et al. [51] identified a positive link between design, reliability, security/privacy, and customer service as websites and e-satisfaction dimensions. Therefore, the website's dimensions and its service quality contribute to satisfying online shoppers. Finding the expected product at a fair price is an essential criterion of customer satisfaction[52].

2.3. Electronic Customer Relationship (E-CRM)

The democratization of internet access has added a new dimension to customer relations and new challenges. E-CRM has been an explosion and permanent renovation. Customer data is a valuable tool for customer retention and the profitability of the business. E-CRM is a relationship marketing strategy that cannot be derogated. Online purchases are growing and surpassing traditional customer purchases [53]. E-commerce is paying attention to integrating and updating websites. Online marketers try to convince shoppers to increase their online purchasing frequency by giving them switching incentives. E-CRM relies on multi-channel marketing while focusing on web channels. It focuses on associating with a (potential) customer [54].Online customer relationship management depends on technology to recognize customers and process their requests. Hence, it allows organizations to enter into a direct relationship with target markets. E-CRM assembles three characteristics compared to other information technologies: relationship personalization, channel interactivity, and remote customer processing [55].

CRM differs from E-CRM. The difference is marked by the adopted technology and its users and system interfaces. E-CRM provides customers with browser-based and self-service windows. It checks order status, follows up on additional product requests, and sends feedback emails. These features remove the restrictions of time and location. It gives them freedom of contact [56]. Customers are no longer limited to contacting organizations during office hours. Besides, customers' direct contact for basic requests is extended online. Traditional CRM systems and applications are operated on centralized servers. A conventional Enterprise Resource Planning (ERP) system interfaces front-end operations with back-end operations[57]. Sales representatives benefit from CRM applications. It gives them access to customers' information and effective customer service. E-CRM applications are consumer-oriented programs that provide a total web-based experience [58]. E-CRM is based on three perspectives positioned on a continuum, from tactical visualization, passing by technological vision, to strategic exposure [59]. E-CRM is a retention strategy for customers grounded in online channels, leveraging consumers' online interactions.

2.4. E-CRM Approaches

CRM aims to distinguish and placate customers' expectations as an organizational approach. It is grounded in a lasting relationship based on online service quality. E-CRM identifies profit potential through contact channels [60]. This

definition highlights the following elements: an organizational approach, customers' knowledge, and total e-satisfaction [61, 62].

E-CRM is an organizational strategy aiming to understand, anticipate, and manage the needs of current and future customers. Electronically, it is founded on an infrastructure to establish a lasting relationship, emphasizing perceived quality online. The infrastructure removes barriers between e-commerce and customers. It highlights customers' trust. E-CRM constitutes a real revolution in customization strategies. It influences critical primary functions not limited to marketing, the IT department, customer service, and production. E-CRM strategic framework effectiveness and success result from cross-functional coordination of processes and activities [63]. E-CRM processes include value creation, perceived quality information, online customization, building customers' trust, and information management. E-CRM and e-satisfaction work harmoniously to ensure loyalty [53].

2.4.1. Perceived Quality Online

E-commerce accurately and precisely measures the perception of online quality services. Perceived online quality of service is an analytical tool influencing marketing and decision-making [64]. The perceived quality affects sales and is measured through customer surveys. A drop in sales and customer complaints are negative indicators. Online quality integrates values and contributes to innovation, representing the image and brand equity. Those factors build customer loyalty. When observed online, the navigability of a website can be referred to as quality. Information (updating and relevancy) is at its core. A third approach uses measures integrating the quality of navigation and data [65].

Perceived quality is an evaluative judgment. Online quality indices include facets observed by customers. Quality attributes form customers' actual wants and experiences. Quality indices are defined as informational stimuli relating to product or service quality. These indices are influenced by the expected quality before consumption [64]. Online service quality comprises pre- and post-service experience elements with the website. It epitomizes the evaluation of effectiveness and efficiency in facilitating shopping, purchasing, and product or service delivery. Hannola [66] defines it as customer judgments concerning electronic services and their degree of excellence.

Perceived service quality is an inclusive judgment concerning the superiority or excellence of online services. Perceived quality and objective quality are distinct constructs. Accurate quality refers to the technical and measurable superiority of the service [67]. The objective quality evaluation is based on criteria related to the physical characteristics associated with the service (the Serv-Qual system). The ease of website navigation and use are antecedents of customers' perceptions. Online transactions seem too complex for some shoppers. Difficult websites can intimidate many customers. Website usability is emerging as an essential dimension of electronic service quality. Usability refers, in the physical world, to store layout, design, and ease of navigation in the store [68].

2.4.2. Online Customization

Customer expectations have changed. Nowadays, brands must offer an experience that goes beyond a simple transaction. Customers have an improved shopping experience. Customization in e-commerce is defined as the use of data to offer a relevant and engaging customer experience across channels. Customization satisfies both e-commerce and customers [69]. It increases the organization's conversion rate, average basket, and loyalty. Offered possibilities by websites databases facilitate customization. Web content and channel interactivity make it possible. Communication that is timely, mutually controllable, and responsive enables online customization. Customization has transformed e-commerce by placing the customer at the heart of the marketing equation. It re-evaluates the customer relationship in the purchasing process [70].

Customization targets customers' needs by offering a tailor-made message and offers. It corresponds to consumers' behavior; it is defined through website navigation. Online service personalization increases customer e-satisfaction. The goal of customization is to create an optimized customer journey. It helps build consumer loyalty and theoretically increases the conversion rate. Online customization is another "customer-centric" model, engaging customers at the center of the strategy [35, 71].

2.4.3. Customers Trust

Customers' trust is a set of brand beliefs. It goes upstream with purchasing intention. Trust as a consumer behavior concept is distinct from reliability expectations towards brands. In e-commerce, trust is essential to having the correct information to understand the contribution of digital products and services in decision-making [72]. Security is a prerequisite for building trust. Jih [73] and Hwang [74] pointed out that trust depends on online security and privacy. More clearly, an insecure site will immediately arouse customer mistrust. On the other hand, the fact that a site is secure will only have a marginal impact on trust. Trust in customer-business exchanges reveals four entities: customer trust, brand trust, e-seller trust, and product trust [75].

2.5. Hypotheses

Astuti and Indriastuti [56];Aldaihani and Ali [57];Kaur [58] and Al-Hawary and Alhajri [59] have verified the positive influence of E-CRM approaches on e-satisfaction and loyalty. Eskafi, et al. [76];Ibrahim, et al. [77] and Reinartz and Kumar [78] agreed on the positive link between the three constructs. Kumar and Mokha [34] emphasized the direct effect of E-CRM as one dimension of customer loyalty. Al-Radaideh and Al-Talafih [79] and Lam, et al. [80] detailed and examined the literature, verifying that perceived quality online enhances e-satisfaction and commitment. Within the same line, online trust and customization influence customer loyalty as dimensions of E-CRM.

2.5.1. Perceived Quality Online and CustomersE-Satisfaction

E-service values are perceived in the advantages, expectations, and sacrifice ratio for end users. In other words, it is measured based on the customer's evaluation of the benefits of procuring quality products and shopping pleasure. The perceived value of buying online includes reducing costs, maximizing access to information, time-saving, and shopping security. Lai, et al. [81] and Atulkar and Singh [82] identified two types of deals in online purchases. Utility value comprises price savings, quality of service, and time savings. Experiential value embraces entertainment, visual, escape, and interaction dimensions [83]. As Supriadi and Yusuf [84] and Leonnard [85] stated, the website's ease of use and flexibility establish trust and loyalty. Pandjaitan, et al. [86]; Pham, et al. [87] and Kamal, et al. [88] revealed that designing an easy-to-understand website as perceived quality online creates consumer loyalty. The awareness of online service quality depends on other dimensions, namely the pleasure of visiting the site and interactivity. This last dimension is vital in online service. The totality of these dimensions' constructs consumer loyalty. Indeed, auto-reply can provide information and clarification to customers. It reduces perceived risk. The quality of navigation, access, and use of a website impact e-satisfaction and loyalty. Based on the above, the first hypothesis is formulated.

H_1: *Perceived quality online influences customers satisfaction positively.*

2.5.2. Online Customization and CustomersE-Satisfaction

Real-time customization is emerging as a relevant solution to meet the demands of online customers. Website customization is an exciting strategy for generating revenue and improving the customer experience. It is noticed during online navigation. Through marketing customization, e-commerce can stand out and offer quality experiences on their website. It consists of individualizing experiences, messages, and offers. This practice is then based on data analysis. Data collection on visitors is a pillar for effective strategy implementation [89, 90]. These data are collected during customers' navigation.

Online customization tailor-made experience. Online customization exceeds traditional marketing and segmentation. Brands are offering different experiences following expectations and needs [20]. The latter influences customers e-satisfactions. Kim and Lee [91]; He, et al. [92] and Xiang [93] insisted that online customization improves loyalty through satisfaction. Applying marketing customization increases the average basket, conversion rate, and overall profit. These indicators are critical facets of customer loyalty. Hypothesis two, to be tested, is as follows:

H_2: *Online customization influences customerse-satisfaction positively.*

2.5.3. Customers Trust andCustomersE-Satisfaction

The online trust focuses on a dynamic understanding of website usage. Trust appears as a concept that is built, strengthened, maintained, or deteriorated. Online trust generally has three phases: launch, validation, and maintenance. The insecurity of payments and the risk of hackers hacking accounts and debit cards discourage customers and block e-commerce development. Informed customers fear the dissemination of private information. Kim and Peterson [94] and Nguyen and Khoa [95] showed a positive and significant association between customer trust in e-commerce and e-satisfaction. Therefore, establishing trust is imperative for e-commerce. Moreover, loyalty to a site is a complex strategy to be launched and maintained. Trust is an antecedent of loyalty. It is the foundation of competitive advantage. Nguyen and Khoa [96]; Kooli, et al. [97] and Stouthuysen [98] listed that payment security, personal data confidentiality, and information credibility influence consumers' loyalty.Tanwar, et al. [99] and Johnson and Joseph [100] retained payment security and respect for privacy (confidentiality) as antecedents for e-satisfaction and loyalty. Consequent to the above, hypothesis three is proposed.

H_3: *Customers' trust influences customers-satisfaction positively.*

2.5.4. Customers' E-Satisfaction (Mediating Variable)

The relationship between customer e-satisfaction and loyalty is complex. If e-satisfaction is a loyalty lever, there are dissatisfied and loyal consumers and, conversely, satisfied and unfaithful customers. This causal link between E-CRM approaches and E-satisfaction on the one hand and loyalty on the other finds its arguments in the work of Kaur [58] and Al-Hawary and Alhajri [59]. Besides, the results ofKaya, et al. [101]; Amin [102] and Suariedewi and Suprapti [103] affirmed that perceived service quality, online customization, and customer trust affect satisfaction. Online shoppers assess these dimensions. As a result, strengthening these approaches results in a positive influence on customer satisfaction and loyalty in a respective manner. Suariedewi and Suprapti [103]; Juwaini, et al. [104] and Rodríguez, et al. [105] showed that E-CRM and its approaches are antecedents to satisfaction. The latter is an antecedent to loyalty. Therefore, based on the above hypotheses, four and five are formulated.

H_4: *Customers e-satisfaction influences consumer loyalty positively.*

H_5: *Customers e-satisfaction mediates the relationship between E-CRM approaches and consumer loyalty.*

2.6. Conceptual Framework

The conceptual framework is constructed based on the above five hypotheses (Figure 1). The latter revolves around E-CRM approaches and their influence on e-satisfaction and loyalty.
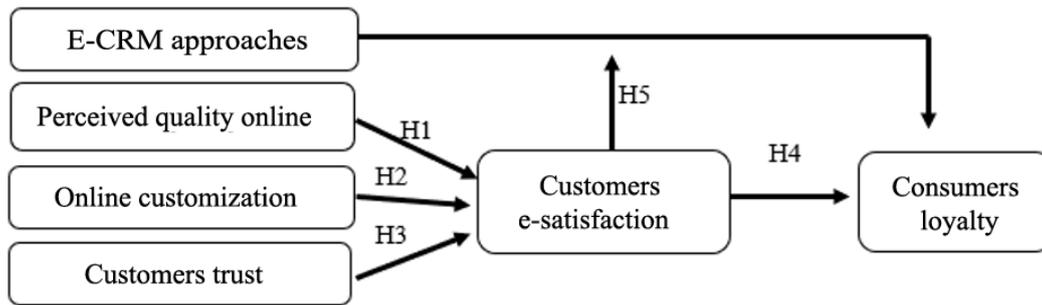
Figure 1.
Proposed conceptual framework.

3. Research Methodology

The research methodology depends on the problems facing the implementation of E-CRM and its influence on customer satisfaction and loyalty. This quantitative study begins with explanatory factor analysis (EFA) to refine the scale. It simplifies the concept's dimensions. The EFA is a fundamental prerequisite to the CFA [106]. According to Trendafilov and Hirose [107] EFA identifies a small number of non-observable variables (i.e., common factors), which best capture the range of the data. Finding the ideal number of these factors is a crucial component of EFA. The factors are interpreted based on the magnitudes of their coefficients (weights or loadings). After the factors are translated to a new rotational coordinate system where the loadings are simpler to understand, their interpretation is frequently facilitated. Its research demonstrates statistically whether the hypotheses are valid or not. This article has a descriptive and analytical nature. It aims to test proposed hypotheses statistically with the collected information.

E-CRM, customer satisfaction, and loyalty resulted from the theoretical reality of relational marketing. Furthermore, a hypothetico-deductive methodological approach [108] is chosen to better respond to the issue raised in this article. Hence, it applies the positivist philosophy to its beliefs.

Dimensions are operationalized using constructed items. Its assessment benefited from the 5-point Likert scale ranging from (1) "totally disagree" to (5) "totally agree." It facilitated the task of the respondents. The survey questionnaire was prepared in two phases. A pre-test was carried out with 35 participants before data collection. The latter ensured that the respondents understood the items correctly.

Consequently, data were collected from June to July 2022 by administering a questionnaire to Lebanese customers. Three hundred seventy-two valid questionnaires were later statistically processed. Nevertheless, to have a clear idea about the reliability of the sample size, the researchers reviewed [109] published resources on the subject. Following the approach used by Hashem, et al. [110]; Hejase, et al. [111]; Masoudi and Hejase [112] and El Takach, et al. [113], and according to Hardwick, in the case of a population size of ~ 10000, a confidence level of 95% [α=5%], and seeking acceptable reliability of 5% ± 1%, the sample size would be between 300 and 400. Therefore, the resultant sample size of 372 would be about ± 5% at the 95% confidence level. Surveying with such a sample would mean that in 95 out of 100 repetitions of the survey, the results would not vary more than ± 5%. Such reliability would be acceptable in quantitative and exploratory research like this one.

The sample retained remains heterogeneous. Results were analyzed using Statistical Product and Service Solutions [114] and IBM SPSS concerning descriptive statistics. Then, the confirmatory factor analysis (CFA) used the structural equations by mobilizing AMOS [115].

A principal factor analysis and a confirmatory phase were conducted based on 372 valid questionnaires. Given the conceptual framework tested, the structural equation model using path analysis was chosen as an analysis method. Structural equations allow the use of latent variables while simultaneously studying the variables' measurement and their relationships. The CFA is applied to test measurement scales and structural models (research hypotheses). The estimation procedure used corresponds to the CFA. It has the advantage of comparing the model according to fit indices.

4. Findings and Interpretations

The sample (N) comprises 372 shoppers with previous shopping experiences online. The objective of the descriptive analysis is to depict a simplified picture of reality based on indicators for a first understanding of the data structure. These indicators include the mean, standard deviation, maximum, and minimum. The skewness, kurtosis, and collinearity statistics are also incorporated. This section also contains the results of the EFA and the CFA.

Table 1.
Descriptive statistics.

Research variables	Minimum	Maximum	Mean	Std. deviation	Skewness	Kurtosis
Online customization	1.00	5.00	2.827	0.741	-0.207	-0.051
Customers trust	1.00	5.00	3.077	0.713	-0.397	0.071
Perceived quality online	1.00	5.00	3.692	0.710	-0.773	0.970
Customers E-satisfaction	1.00	4.75	2.922	0.720	-0.279	0.041
Consumers loyalty	1.00	5.00	3.054	0.724	-0.408	0.089

Table1denotes that the five points of the Likert scale were used in the evaluation process. This table exhibits skewness and kurtosis to highlight the normal distribution. Values range between 00.2 and 0.9, verifying that the data is normally distributed.

4.1. Descriptive Statistics

Table 1 depicts the descriptive statistics of the independent variables. Results show that the mean of the variables varies between 2.8 for online customization and 3.6 for perceived quality online. The standard deviation values, being a measure of observed dispersion around the mean, vary between 0.7096 and 0.7407 and show a low dispersion. The data are concentrated around the mean and, therefore, relatively homogeneous. The minimum represents the minimum observation, while the highest in the distribution is 5.

Observation values should be distributed around the mean to follow the common law. The distribution of observations is fair around the standard. Its absolute values are less than 1.0. Their tolerated differences vary between (-1 and +1). Therefore, calculating the (Skewness) and (Kurtosis) is obligatory.

Table 2.
Collinearity statistics.

Research variables		Tolerance	VIF
IV's	Online customization	0.557	1.796
	Customers trust	0.530	1.888
	Perceived quality online	0.765	1.307
	Customers E-satisfaction	0.487	1.055
DV's	Consumers loyalty	0.429	1.778

Note: Independent variables (IV), Dependent variable (DP).

Table 2 exhibits the outcomes of the collinearity statistics. Multicollinearity is an undesirable situation where VIF values are higher than 3. The Variance Inflation Factor (VIF) is 1/Tolerance, and it is always greater than or equal to 1. The VIF values from Table 2 show that these do not exceed 2, indicating no multicollinearity. According to Chehimi, et al. [116] "there is no correlation or bidirectional relationship among the predictor variables, and all the predictor or explanatory variables are suitable to form a causal relationship using regression" (p. 1911). Hence, the model is robust.

Table 3.
Correlations.

Research variables		Online customization	Customers trust	Perceived quality online	Customers E-satisfaction	Consumers loyalty
Online customization	Pearson correlation	1	0.533**	0.372**	0.632**	0.587**
	Sig. (2-tailed)	-	0.000	0.000	0.000	0.000
	N	372	372	372	372	372
Customers trust	Pearson correlation	0.533**	1	0.461**	0.622**	0.650**
	Sig. (2-tailed)	0.000	-	0.000	0.000	0.000
	N	372	372	372	372	372
Perceived quality online	Pearson correlation	0.372**	0.461**	1	0.351**	0.423**
	Sig. (2-tailed)	0.000	0.000	-	0.000	0.000
	N	372	372	372	372	372
Customers E-satisfaction	Pearson correlation	0.632**	0.622**	0.351**	1	0.742**
	Sig. (2-tailed)	0.000	0.000	0.000	-	0.000
	N	372	372	372	372	372
Consumers loyalty	Pearson correlation	0.587**	0.650**	0.423**	0.742**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	-
	N	372	372	372	372	372

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

Table 3 presents the correlation matrix, emphasizing the Pearson's correlation coefficients between the studied variables. The Pearson correlation coefficient measured the linear association between CRM approaches, customer e-satisfaction, and consumer loyalty, respectively. Table 3 verifies that these variables are perfectly correlated without any indication of multicollinearity. For instance, the correlation between online customization and customer e-satisfaction is positive, with a p-value of 0.6 and a sig. <0.00.

4.2. Exploratory Factor Analysis

The purpose of exploratory factor analysis is to eliminate items with low communalities (unsatisfactory psychometric qualities). The statistical treatments carried out are the principal component factor analysis (PCA), the Kaiser Mayer Olkin (validity), and Cronbach's alpha coefficient (reliability). The scales' internal consistency is studied to test its reliability and determine its underlying structure. The (PCA) ensured that the scale measures were precisely and exclusively constructed.

The PCA revealed if the construct is one-dimensional or multi-dimensional construct. It verified items for each dimension of the construct. The removal of items with low extraction improved the value of the KMO test, variance explained, and Cronbach's alpha rose to 0.865. Table 4 presents the KMO, Sig. P, and chi-square results before outlining the exploratory factor analysis's guiding principles.

Table 4.
Constructs validity.

Research variables	Sig.	Chi-square	Kaiser-Meyer-Olkin
Electronic customer relationship management	0.000	1678.985	0.869
Online customization	0.000	572.615	0.810
Customers trust	0.000	410.648	0.795
Perceived quality online	0.000	304.655	0.711
Customers E-satisfaction	0.000	365.654	0.747
Consumers loyalty	0.000	1164.953	0.888

Table 4 presents the validity and reliability of measurement scales. PCA extracted factors by restoring a minimum of 50% of the variance. Kaiser-Meyer-Olkin (KMO) values test measures the sample precision. The KMO after the item's (element's) reduction is between 0.7 and 0.8, representing excellent factorial solutions. These tests are significant. The significance of the Bartlett test in inspecting the null hypothesis of the correlation of the variables is closely equal to 0. All factor contributions are substantial. The PCA is conducted for each set of variables independently.

Table 5.
Total variance explained.

Component	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	4.979	35.568	35.568	4.979	35.568	35.568
2	1.651	11.790	47.358	1.651	11.790	47.358
3	1.305	9.324	56.681	1.305	9.324	56.681

Table 5 denotes the total variance explained by TVE for the E-CRM approaches. The TVE for the three approaches forming E-CRM factors explains around 57% of the initial data. PCA with Varimax rotation test shows that electronic customer relationship management and its measurement scales are multi-dimensional of the analytical capacity measurement scale. The rotated component matrix shows the distribution of retained elements for each construct. Three factors resulted. The solution returns 56.68% of variances.

Table 6.
Rotated component matrix.

Selected questionnaire elements	Online customization	Customers trust	Perceived quality online
The company considers a more significant number of preferences, and the recommendations are relevant.	0.771		
Successful personalization involves adapting a website's content or email marketing according to customer expectations.	0.733		
the content of a website will be automatically loaded with relevant content for the person browsing	0.732		
personalization will be a driver of revenue growth but represents a significant increase in the productivity of marketing departments	0.705		
The most lucrative personalization technique today is retargeting, which offers Internet users the results of their past searches.	0.599		
Most consumers consider entrusting their data to a company to receive a more relevant offer.		0.761	
Agents provide trusted information regarding services/ Product details.		0.742	
The ease of navigation reinforces my trust in the website.		0.656	
Transparency of sales conditions increases my trust when purchasing online.		0.643	
I trust purchasing sites when the possibility of contacting a sales associate for a product return is available.		0.530	
The sites deal with all their customers fairly and transparently.			0.772
Websites provide an adequate amount of information about the products they offer.			0.757
I feel delighted and comfortable when purchasing from websites.			0.690
I prefer shopping from websites for their speed and quality of service.			0.579

Table 6 embraces the Rotated component matrix using the varimax rotation. This rotation sustains items with high contributions,verifying that the E-CRM includes three factors. Factor (1) included five elements representing online customization. Factor (2) constitutes five elements defining customers' trust toward E-CRM. Finally, Factor (3) comprises four elements forming perceived quality online. Values rotate around 07.

Table 7.
Total variance explained.

Component	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	2.347	58.674	58.674	2.347	58.674	58.674

Table 7 presents the total variance explained for e-satisfaction. This table verifies that e-satisfaction is unidimensional, having a TVE of 58.6%. PCA with varimax rotation tests shows that e-satisfaction and measurement are grouped in one dimension. The solution returns 58.67% of variances.

Table 8.
Component matrix.

Selected questionnaire elements	Component 1
Online service agents are courteous, attentive, and caring	0.782
Online services/ Products exceeded my expectations	0.777
I'm satisfied with the speed and accuracy of received information online	0.765
I'm delighted with the product quality of the products bought from social media	0.739

Table 8 exhibits the retained items for e-satisfaction. This table verifies that e-satisfaction is composed of one component.An exploratory factor analysis (EFA) with Varimax rotation was carried out on six (6) elements to verify e-satisfaction. However, only four (4) elements were subject to statistical treatment. The component matrix illustrated that e-satisfaction is a one-dimensional construct. Retained elements possess excellent indicators, and data adequacy was also verified. Bartlett's test is significant (sig. 0.00). The KMO resulted in a value of 0.747.

Table 9.
Total variance explained.

Component	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	4.097	51.218	51.218	4.097	51.218	51.218

Table 9 presents the total variance explained for e-satisfaction. Its variance was restored to 51.2%. Therefore, the variance is higher than 50%. All items were retained for customers' e-satisfaction.

Table 10.
Component matrix.

Selected questionnaire elements	Weights
I have high intention to buy from the same website due to their personalized offers	0.843
I possess an emotional bond and attachment to the website I purchase from	0.843
The attractiveness of the brand's website is crucial for me as an online buyer	0.733
I will continue to buy from the same website even if prices increase slightly	0.704
Products/services are the best-fit choices for me as a customer	0.667
I don't have the intention to switch to a competitor website even if I had a problem with a product	0.667
I always recommend my favorite websites for people seeking my advice	0.628
I always defend my favorite brands with positive comments	0.599

Table 10 presents the component matrix for customer loyalty. This table denotes eight items forming its measurementscale.Customer loyalty was constructed with EFA performed on (8) elements. This dependent construct verified that customer loyalty is a one-dimensional variable. Items hold excellent indicators. The Cronbach alpha has perfect internal consistency, possessing a value of 0.859. Bartlett's test is significant (sig.: 0.00). KMO resulted in a value of 0.888.

Table 11 presents construct reliability after the EFA. This table highlights the Cronbach alpha as a statistical method for measuring each construct's reliability after item elimination. Cronbach's alpha test resulted in satisfactory to excellent indices. It varied between 0.72 and 0.85. To summarize the EFA, 14 items out of 21 measuring the E-CRM survived the CFA test. Four out of six things measure customer e-satisfaction, and eight form the customer loyalty scale.

Table 11.
Construct's reliability.

Research variables	Sig.	Cronbach alpha	Items kept	Original items
Electronic customer relationship management	0.000	0.801	14	21
Online customization	0.000	0.809	5	8
Customerstrust	0.000	0.776	5	6
Perceived quality online	0.000	0.720	4	7
Customers E-satisfaction	0.000	0.764	4	6
Consumersloyalty	0.000	0.859	8	8

4.3. Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) estimated and specified the relationships between estimated latent variables and their observed indicators. This analysis determined the fit of the hypothetical factor model. The maximum likelihood method estimates the model parameters from the covariance matrix. The CFA relies on normed indices, sustaining the adjustment of the theoretical structure. Absolute fit criteria are highlighted and include the Chi-square test, RMSEA (Root Mean Square Error of Approximation), GFI (Goodness of Fit), and AGFI (Adjusted Goodness of Fit). Incremental indices are crucial in the analysis to compare the tested model with a null alternative. These indices are NFI (Normed Fit Index), CFI (Comparative Fit Index), and TLI (Tucker-Lewis's index). The following table shows the values considered satisfactory for each index.
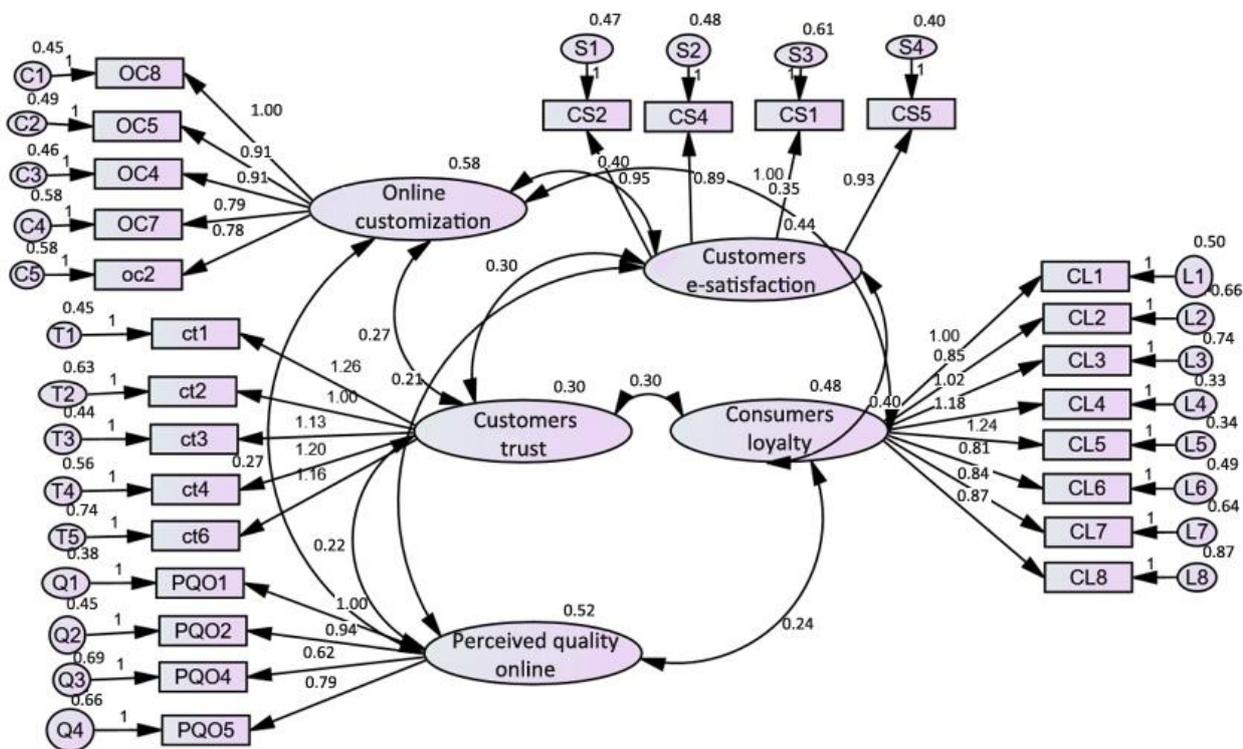

Figure 2.
Structural modeling for E-CRM (baseline model).

Figure 2 records the standardized estimates. Correlations between factors in the CFA model are below the upper limit (0.6). It is due to the discriminant's validity. Excessively large or small standard errors are also absent. All estimates of unstandardized regression weights are significant at 0.05.

Table 12 presents the regression weights for the endogenous and exogenous variables in the baseline model. This statistical model represents the formal hypotheses derived from the theory. The factors and indicators retained in the final model are well described. As a result, the scale that this model's arrows create has some degree of validity among the measurement variables.

Table 13 presents the baseline model's parsimonious, incremental, and absolute indices. The chi-square is $0.002 < 2$, with a p-value of 0.000. This probability is less than 0.5. The GFI is 0.98, and the AGFI is 0.96. The NFI is 0.98, and the CFI is 0.98. The RMSEA goes to 0.08. The GFI goes to 0.98 and the AGFI to 0.97. These indices confirm an excellent fit for the data. The squared multiple correlations are more significant than 0.4 for all the items.

Table 12.
Regression weights.

Correlations between factors	Estimate	S.E.	C.R.	P
OC8<---Online customization	1.000	-	-	-
OC5<---Online customization	0.908	0.072	12.624	0.00
OC4<---Online customization	0.912	0.071	12.855	0.00
OC7<---Online customization	0.792	0.071	11.149	0.00
OC2<---Online customization	0.778	0.070	11.035	0.00
CT1<---Customers trust	1.262	0.127	9.910	0.00
CT2<---Customers trust	1.000	-	-	-
CT3<---Customers trust	1.128	0.117	9.616	0.00
CT4<---Customers trust	1.201	0.127	9.423	0.00
CT6<---Customers trust	1.158	0.132	8.770	0.00
PQO1<---Perceived quality online	1.000	-	-	-
PQO2<---Perceived quality online	0.936	0.085	10.980	0.00
PQO4<---Perceived quality online	0.623	0.079	7.936	0.00
PQO5<---Perceived quality online	0.791	0.084	9.422	0.00
CS2<---Customers e-satisfaction	0.952	0.085	11.136	0.00
CS4<---Customers e-satisfaction	0.889	0.083	10.741	0.00
CS1<---Customers e-satisfaction	1.000	-	-	-
CS5<---Customers e-satisfaction	0.928	0.081	11.441	0.00
CL1<---Consumers loyalty	1.000	-	-	-
CL2<---Consumers loyalty	0.864	0.081	10.711	0.00
CL3<---Consumers loyalty	1.015	0.089	11.422	0.00
CL4<---Consumers loyalty	1.178	0.081	14.590	0.00
CL5<---Consumers loyalty	1.236	0.084	14.694	0.00
CL6<---Consumers loyalty	0.806	0.072	11.262	0.00
CL7<---Consumers loyalty	0.844	0.079	10.695	0.00
CL8<---Consumers loyalty	0.865	0.088	9.819	0.00

Table 13.
Fit indices.

Parsimonious		Incremental			Absolut		
P close	X^2	CFI	TLI	NFI	RMSEA	GFI	AGFI
0.000	0.002	0.987	0.973	0.988	0.08	0.987	0.966

Note: Model fit indices: Comparative fit index (CFI), Tucker-Lewis index (TLI), Normed fit index (NFI), Root mean square error of approximation (RMSEA), Goodness-of-fit index (GFI), and Adjusted goodness-of-fit index (AGFI).
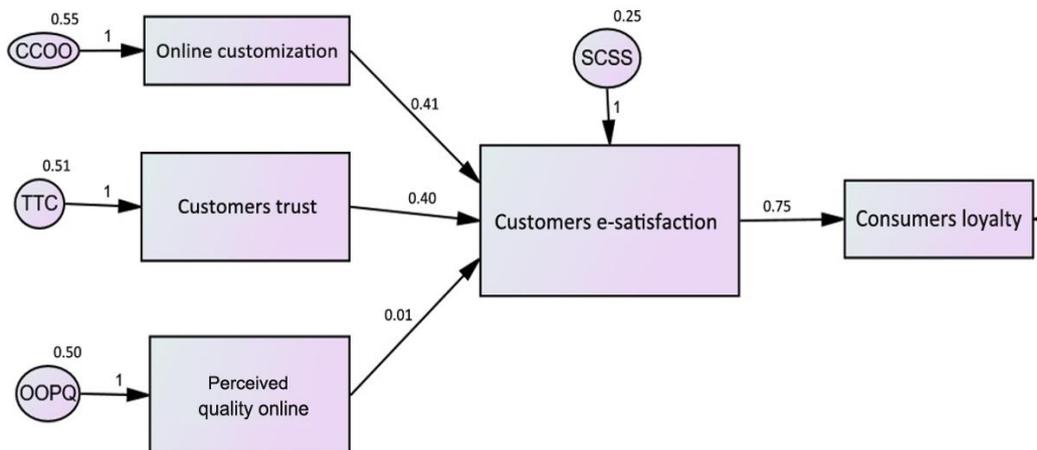

Figure 3.
Research structured equation model (SEM).

Figure 3 depicts the final structural equation model demonstrating how customer e-satisfaction mediates the relationship between E-CRM (represented by three factors) and consumer loyalty. Results support the model's fitness, where the value of the RMSEA is above the recommended ideal threshold: RMSEA < 0.05. Results are justified because the model presents many interrelationships acting between latent variables composing it. Each of these variables is measured using multiple

items dispersed throughout the questionnaire. Those items do not represent any multicollinearity. The global model has the advantage of satisfactorily predicting most of the predetermined variables to be explained.

Table 14.
Regression weights.

The mediating role of customers satisfaction	Estimate	S.E.	C.R.	P
Customers e-satisfaction <--- Online customization	0.406	0.035	11.547	0.00
Customers e-satisfaction <--- Customers trust	0.396	0.037	10.833	0.00
Customers e-satisfaction <--- Perceived quality online	0.314	0.037	8.388	0.00
Consumers loyalty <--- Customers e-satisfaction	0.746	0.039	19.247	0.00

Table 14 presents the regression weights between variables. It highlights the critical ratio (CR) and the p-value. The relationship among exogenous variables is validated with a p-value of 0.00, less than 0.01. Constructs are correlated in absolute value. Therefore, values differ from 1, confirming discriminant validity between each construct. The estimated model has an acceptable fit. The adjustment indices have values above the minimum threshold retained (0.90). The value of RMSEA is below the recommended threshold of 0.08.

Table 15.
Fit indices.

Parsimonious		Incremental			Absolut		
P close	X^2	CFI	TLI	IFI	RMSEA	GFI	AGFI
0.000	0.001	0.962	0.943	0.964	0.03	0.940	0.951

Table 15 presents the model parsimonious, incremental, and Absolut indices. The model fits the data. Values of incremental fit measured CFI (0.962), IFI (0.964), and TLI (0.943) > 0.9. The RMSEA value for the model is within 0.05. These indices indicate a good fit of the model to the data. The chi-square is 0.001 < 2, with a probability p-value of 0.00. This probability is less than 0.5. Results presented in (Tables 14 and 15) and their explanations conclude that convergent validity verified the fitness of the measurement instruments. Each construct's composite reliability (C.R., critical ratio) is significant and has a value higher than 0.7. Factorial contributions (loadings) are statistically significant and more outstanding than the accepted threshold.

Based on the estimated parameters, the hypotheses formulated are supported and verified (Table 15). The latter validates the following hypotheses:

H_1: *Perceived quality online influences customer e-satisfaction positively.*

H_2: *Online customization influences customer e-satisfaction positively.*

H_3: *Customers trust influences customer e-satisfaction positively.*

H_4: *Customer e-satisfaction influences consumer loyalty positively.*

H_5: *Customer e-satisfaction mediates the relationship between E-CRM approaches and consumer loyalty.*

4.4. Interpretations

Each set of constructs was assessed after exploratory factor analysis. The PCA was carried out with a Varimax rotation. This rotation provided highly readable results. The dimensions are correlated with each other. The internal consistency verified by Cronbach alpha is excellent. The adequacy of the analyzed data was confirmed by reviewing the following results: The Bartlett test is significant (sig.: 0.00), and the KMO had excellent results. The percentage of variance restored for the three variables is above 50%. All items eliminated had a commonality lower than 0.5, and items saved had saturation on a single factor (factorial contribution > 0.5). Factor analysis on 24 items shows that a 3-dimensional factor structure emerges. The quality of the item representation is excellent.

The CFA with normed indices has verified the relationships between construct variables. This analysis demonstrated the hypothetical model's fitness. Confirmed hypotheses had a p-value less than 0.01 and a critical ratio higher than 1.96.

E-CRM strategies concentrating on online service quality, online presence, customization, and customer trust develop e-satisfaction and loyalty in the Lebanese e-commerce context. It enhances management performance by reducing costs. Therefore, E-CRM increases Lebanese customer e-satisfaction and leverages their loyalty. Alim and Ozuem [36] obtained similar results. It contributes to loyalty and reduces churn rates (customer loss). Electronic customer relationships enhance the knowledge of the Lebanese clientele, which positively influences their loyalty. E-CRM improves Lebanese customer knowledge. Indeed, it uses the information to analyze Lebanese customers purchasing decisions and identify problems. Sommella and Sorrentino [117] produced similar arguments in their research in the context of the fashion industry. In addition, these data determine customization needs based on purchased products and services.

Customization strategies are adaptive to online shoppers' needs and expectations [10]. E-CRM helps the organization meet consumers' expectations. In other words, it offers a personalized customer experience, which increases the number of satisfied customers. Satisfied consumers are inclined to repeat purchasing acts. Hence, it is a clear indicator of loyalty.

Online strategies build brand trust [94, 118]. Customization is an axis for enhancing the online experience [91]. It is proven to enchant the purchasing path on e-commerce sites. E-CRM leverages satisfaction and loyalty.

This article contributed to understanding established relationships between E-CRM, e-satisfaction, and loyalty in the Lebanese context. The conceptual framework explained the variation in consumer loyalty based on the fundamental role of electronic customer relationship management and satisfaction. Indeed, a positive perception of online service quality constitutes an essential factor in creating CRM between e-commerce, consumer e-satisfaction, and loyalty of the latter. Furthermore, loyalty is a complex concept. Online service quality, customization, and trust determine customer satisfaction and loyalty. Muharam, et al. [119] confirmed these determinants in their research in Malaysia. E-CRM recognizes customers as individuals. And the best way to achieve these goals is by integrating E-CRM approaches into marketing strategies. E-CRM gives e-commerce a 360° customer view, an interaction log, and segmentation interests. It promotes a commercial relationship with customers that is secure and has a personalized user experience. E-CRM data prioritizes satisfaction and leads to high loyalty. Krishna, et al. [120] posit, "E-CRM features are shown to have a significant impact on online consumer loyalty."

5. Conclusion and Recommendations

E-CRM generates value for customers and targets prospects. But it is about the brand's image on social media beyond gaining new customers or even targeting [20]. Customers rely on the internet when it comes to information. E-CRM should provide accurate and honest communication. E-CRM is a monitoring tool to orient customers. It aligns customer interactions with the organizational mission. Customer relationships on the Internet added a new layer to managing customer relations. The execution of online CRM adapted to the digital era is an essential axis of customer satisfaction and loyalty. E-CRM is about listening to hyper-connected customers and knowing how to retain their loyalty. Employing Customer Relationship Management achieves three objectives: holistic management of Customer Relationships, Satisfaction, and customer loyalty. Therefore, deploying E-CRM adds value to the organization.

On an academic level, this article's theoretical scope is presented at two levels. First, even though there is a lot of research on electronic customer relationship management (E-CRM) in the literature on relationship marketing, E-CRM has only been included in models that try to explain consumer behavior during the buying process. In consumer behavior, the number of publications is somehow relatively few. Second, little research has investigated the influence of customer-related variables on online consumer loyalty. Dimensions of E-CRM based on customers' characteristics have therefore been rarely studied. Accordingly, this article supplies a new angle for E-CRM and consumer loyalty. It presents an understanding of online consumer behavior. Its objective is twofold. It clarified E-CRM conceptualization in relationship marketing. It has identified influential electronic customer relationship factors and loyalty to electronic purchases.

On a managerial level, a differentiating strategy offered by E-CRM represents the foundation of consumer loyalty. Thus, distinctive benefits between e-commerce and its rival applications must be demonstrated to retain customers. According to Kiran and Diljit [121] efficient service quality is a reliable antecedent of customer loyalty. Therefore, e-commerce must demonstrate uniqueness and individuality by changing its marketing strategy to create long-term cooperative customer relationships. Differentiation must capitalize on strengths (like price, innovation, and sense of service), expectations, and the needs of the target audience. E-commerce should provide responsive and proactive customer service in accordance with [122].

Loyalty, therefore, remains a complex concept that will always animate debates in marketing. Arguments for this research have helped shed light on some aspects. A CRM has many operational benefits but can also help build customer loyalty. Delivering a consistent and positive customer experience is much easier when all customer information and interactions are stored. E-CRM recognizes trends in customer expectations and, therefore, adapts to customer needs. Krishna, et al. [120] recommend that "a deep understanding of customers' requirements can help businesses better tailor their electronic customer relationship management (E-CRM) capabilities to match the needs of customers at each point in the purchasing process."

Launching a loyalty program should be founded on a relevant point-of-sale marketing strategy. Executing the milestones of an effective loyalty strategy that focuses on the customer's desires: personalization, recognition, and benefits is necessary. According to Gustavsson and Johansson [123] the following tips can be beneficial:
E-commerce should:

- Establish an atmosphere of mutual trust between the organization and customers.
- Revolve around fluid communication to build this relationship of trust.
- Start offering exciting benefits. Exclusive and attractive benefits, giveaways, and rewards increase consumers' buying repetition and therefore leverage loyalty.
- Consider consumers as partners. Building a partnership relationship helps to shape a strong relationship based on trust. The idea is to successfully project brand ambassadors long-term with brands and build customer loyalty through commitment.

E-commerce can benefit from relationship marketing. Building customer loyalty requires a consistent, rich, and challenging experience. Make the customer's journey an adventure within an ecosystem that reflects the brand's image. Brands can try to combine online communication tools with an online rewards marketplace. Finally, customers must recommend the used brand after purchases. According to Qualtrics [124] these testimonials, among others, endorse the quality of products and services and help expand the organization's portfolio. Such recommendations should be posted and displayed on social media platforms.

Despite the importance of these contributions, limitations are underlined. The sample size could have been much larger. The survey was conducted with a convenient (non-probabilistic) sample of participants. This sampling procedure does not allow the full generalization of the results. However, the lack of full generalization didn't affect the conclusions

and findings' effectiveness. A second limitation stems from the mode of data collection. The use of questionnaires may be debated. However, this method has measured the intended variables and presented richness in the data. The collection method is bound by the potential subjectivity of the respondents' answers. Therefore, preliminary qualitative research may be able to reduce this subjectivity.

This article has focused on satisfaction and loyalty as consumer behaviors. It has identified their perception of E-CRM approaches. Therefore, pricing was excluded for all subjects and is indirectly related to customer products. Thus, this article has dealt with precise indicators. Future studies can include these variables to extend the perception of customer loyalty. Besides, the traditional marketing mix elements could be integrated, as they can affect satisfaction directly and indirectly.

Some future research perspectives open up. First, an in-depth customer relationship management (CRM) strategy analysis could be based on a richer theoretical framework with multiple dimensions. Researchers should consider carrying out the questionnaire with a larger sample and on a longitudinal timeline. A qualitative study can expand this study through interviews with online marketing managers.

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