The Role of Customer Relationship Management Dimensions in Enhancing Marketing Knowledge: A Study of a Sample of Commercial Banks in Guelma Province Using Smart

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Abstract

This study aimed to explore the impact of Customer Relationship Management (CRM) dimensions on enhancing marketing knowledge, employing a descriptive-analytical approach. It targeted employees from commercial banks in Guelma province, totaling 116, who were surveyed with a 26-statement questionnaire. Data was analyzed using structural equation modeling based on partial least squares (Smart PLS). The study found a very high level of customer satisfaction and high levels of customer attraction and loyalty, along with a high level of marketing knowledge within the commercial banks in Guelma province.

It concluded that CRM dimensions such as customer attraction, satisfaction, and loyalty can significantly explain changes in marketing knowledge in these banks. The study recommends focusing more on customer satisfaction through service chain simplification and attention to employee job satisfaction, which is vital for enhancing customer satisfaction.

Keywords: Customer Relationship Management Dimensions; Marketing Knowledge; Commercial Banks; Structural Equation Modeling.

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1. Introduction:

The evolving economic structure and intensifying competition, coupled with rapid advancements in technology and information systems, have led organizations to increasingly focus on the customer. This focus is based on the understanding that marketing efforts depend on both current and potential customers and their response to the services offered by banks.

The customer has become the central focus in any commercial or service-oriented business. To enhance and expand the customer base and ensure its continuity, it is necessary to establish a relationship with the customer. This requires identifying each customer and segmenting them into homogeneous groups, focusing on those contributing significantly to the bank's capital.

Customer Relationship Management (CRM) fills the knowledge gap between the bank and its customers, thereby enhancing the marketing knowledge of the banks. CRM is generally relied upon by organizations, especially banks, as it contributes directly to improving the banks' performance and achieving their set goals. It also enables banks to understand how to provide services, whether by developing existing ones or creating new services, in alignment with the needs and perceptions of current and potential customers by listening to their voices.

Given that CRM is a contemporary concept relied upon by banks in their modern approach, and its dimensions are part of their comprehensive information system due to its field-specific nature, the following main question can be posed:

1.1 Main Problem:
- What role do the dimensions of Customer Relationship Management play in enhancing marketing knowledge in commercial banks in Guelma province?

Based on the main problem, the following sub-questions can be raised:
- Is there a statistically significant relationship at the significance level ($\alpha \geq 0.05$) between customer attraction and marketing knowledge in commercial banks in Guelma province?
- Is there a statistically significant relationship at the significance level ($\alpha \geq 0.05$) between customer satisfaction and marketing knowledge in commercial banks in Guelma province?
- Is there a statistically significant relationship at the significance level ($\alpha \geq 0.05$) between customer loyalty and marketing knowledge in commercial banks in Guelma province?

1.2 Study Hypotheses:
- There is a statistically significant relationship at the significance level ($\alpha \geq 0.05$) between customer attraction and marketing knowledge in commercial banks in Guelma province.
- There is a statistically significant relationship at the significance level ($\alpha \geq 0.05$) between customer satisfaction and marketing knowledge in commercial banks in Guelma province.
- There is a statistically significant relationship at the significance level ($\alpha \geq 0.05$) between customer loyalty and marketing knowledge in commercial banks in Guelma province.

1.3 Objective of the Study:
The study aims to reveal the direct relationships between the dimensions of Customer Relationship Management (CRM) - attraction, satisfaction, and loyalty - and marketing knowledge among a sample of commercial banks in Guelma province.

1.4 Importance of the Study:
This study derives its significance from the importance of customer relationships in the banking sector, a key contributor to economic stability and growth. The study endeavors to:

- Highlight the concept of Customer Relationship Management from a diverse perspective.
- Investigate the relationship between its dimensions and the enhancement of marketing knowledge.
- Analyze the relationship between CRM dimensions and marketing knowledge.
- Provide a field framework to understand the reality of Algerian banks concerning the use of CRM and marketing knowledge in service delivery.

2. Literature Review :

Most studies reviewed focus on the role of marketing knowledge management in supporting customer relationship management. However, few studies have examined the relationship from another perspective - the role of CRM in supporting or enhancing marketing knowledge.

2.1 Study by Helmos (2016):

This study aimed to understand the role of marketing knowledge management in achieving a competitive advantage through customer relationship strategy. It examined a group of Algerian banks active in Djelfa province and found a strong relationship between marketing knowledge management and CRM in achieving competitive advantage through customer knowledge.

2.2 Study by Rezki & Jamil (2020):

This study sought to understand the relationship between marketing knowledge management and the support of customer relations management in business organizations. It concluded that there is an interactive relationship between marketing knowledge management and CRM through organizations' marketing studies to gather information about their customers to understand their needs.

2.3 Study by Al-Hamami (2021):

An Iraqi study aimed to understand the role of CRM dimensions in enhancing marketing knowledge among Iraqi banks. By studying a sample of employees, it found a significant relationship between CRM dimensions and marketing knowledge. It emphasized the importance of focusing more on the customer's voice by enhancing its role.

3. Theoretical Framework of the Study:

3.1 Customer Relationship Management (CRM):

Traditional methods of attracting customers are no longer effective for current business organizations, especially in a highly competitive environment. Understanding the customer well (motives, behaviors, costs, profitability) is a crucial step in improving business performance.

CRM can be defined as a management activity and customer data processing (P.Kotler & G, 2013, p. 13) that helps the organization communicate with customers through technology (Butler & Stan, 2015, p. 16). It is at the heart of business strategy by integrating internal processes and internet functions to create value for the targeted customer and is designed to improve profitability, revenue, and customer satisfaction (Soltani, I, & Navmipour, 2016) using current information for greater interaction at all relationship stages (attraction, value enhancement, and retention) (C, Lamb, Hair, & Macmill, 2004, p. 36).

3.1.1 Importance of CRM:

The customer is considered the most important source of information as they contribute through their kenowledge and perspective towards the organization, service, and competitors. Hence, they are one of the most important sources of intellectual capital for the organization and should be

activated with other knowledge possessed by the organization. Especially with recent developments in information and communication technologies providing customers with information and benefiting from experiences, it contributes to developing their knowledge about the product or service they purchase, thereby imposing themselves on the organization and making it more concerned with managing its knowledge through CRM and relying on it to build value (Abdelrezak, 2016). To achieve optimal results in general business, the organization should build a CRM philosophy through the convergence of three elements:

- Understanding the purchasing behavior of customers for better targeting.
- Dissemination of customer information within the organization allows individuals and those directly related to customers to deal effectively with them.
- Creating greater efficiency in the organization's scientific activities to reduce expenses.

3.1.2 Dimensions of Customer Relationship Management (CRM):

Marketing literature varies in defining specific dimensions of Customer Relationship Management. Some consider it to encompass customer knowledge, customer value, customer interaction, and customer satisfaction. Haddadin (2014) focused on customer attraction, relationship organization, customer knowledge management, and technology in his study.

Al-Hakeem and Zawain (2009) took it further by including dimensions such as the voice of the customer, strategy and supporting systems, information and technologies, customer satisfaction, customer loyalty, and customer value in their study.

Based on these studies, for the purpose of this research, the following dimensions were adopted: customer attraction, customer satisfaction, and customer loyalty, analyzing and studying them in a group of active Algerian banks in the Algerian market.

- **Customer Attraction:**

The process of attracting customers is one of the most fundamental aspects to ensure the success and continuity of any project and to enhance trust in organizations. It enables an organization to devise a clearer plan tailored to the customers it primarily seeks to attract and satisfy.

Customer attraction refers to acquiring new customers through market development or market penetration by winning over competitors' customers (Lehman, Donald, Winer, & Russels, 2008), based on known or discovered characteristics. Every organization needs continuous customer attraction to compensate for customers who have ended their relationship for one reason or another, making it a core activity within the scope of maintaining the total number of customers and enhancing their profitability (Blois, 2000; Hassan & bin-nashvan, 2017, p. 87).

- **Customer Satisfaction:**

Customer satisfaction is the pleasure felt by a customer when their desired satisfaction is achieved (Kumar, V, & Remartez, 2018, p. 178). It is measured through the comparison of what customers expect to receive and what they actually get (Buttler & maklan, 2015, p. 343). It is an emotional response to experiences related to purchased products or services, represented by the customer's reaction resulting from the evaluation and cognitive perception of what they believed they would receive (David & Williams, 2014, p. 151). Satisfaction is also defined as the customer's response and assessment of a product or service from a psychological perspective, based on their expectations and consumption experiences (Nguyhn, Tran, Hue, & Thi Thu, 2020).

- **Customer Loyalty:**

Customer loyalty must begin with the initial stage of customer satisfaction. Loyalty cannot exist without prior satisfaction with the service or product used. With repeated satisfactory experiences, a customer develops a preference to repeat the same product or service, which is loyalty (Sofi, 2015, p. 14). Loyalty is also seen as a deep internal commitment to continuously repurchase a brand or service in the future, leading to repeat purchases despite marketing efforts that could influence behavior change (Ashny & Kaplan, 2020, p. 405).

Kotler defines it as a sincere commitment from the customer to repurchase a favorite product or service in the future, despite situational influences, and that achieving customer loyalty depends on delivering high value to them (Kotler & Manseau, 2015, p. 145). It includes the customer's desire to continue dealing with the service provider and convincing their acquaintances to deal with the same supplier, known as bias towards a specific brand (Thompson, 2004, p. 89).

- **Marketing Knowledge:**

Talking about marketing knowledge, it is a significant part intertwined with the organization's overall knowledge but closely linked to marketing, as it is focused on understanding and comprehending market variables or structures that affect the organization's activities. It represents various information and knowledge acquired and accumulated by marketing managers about the organization's marketing environment (Natour & Saudi, 2016, p. 633).

It is one of the organization's skills in acquiring, creating, retaining, sharing diverse knowledge, and transferring that knowledge to improve performance or innovate in products and services (Bali & Ben Jeloul, 2020, p. 723). It is a vital part of the organization's knowledge that provides new possibilities for offering knowledge about its surroundings (Achour & Hamdani, 2021, p. 265).

P. Kotler defines marketing knowledge as gathering information related to the market and analyzing it to obtain significant data on market size, growth rates, competition size and nature, and customers' desires and orientations to adapt the service or product to their needs (Kotler P., 2000, p. 398).

3.2 Dimensions of Marketing Knowledge:

It can be said that marketing knowledge represents the extent to which an organization understands the fundamental elements of the market (customer, product, competitor) for achieving a competitive advantage. The comprehensive concept of marketing knowledge dimensions offers several aspects, but this study will discuss those directly related to customer relationships and their impact. Therefore, aspects such as the customer, product and competitor, and supplier were taken into account.

- ✓ **Customer Knowledge:**

Marketing success requires directing all efforts towards identifying consumer needs and desires and evaluating products that customers need. Customer knowledge is the most important link in the market, serving as a renewable source for understanding product development needs (Kohlbacher, 2008, p. 622).

The more an organization can interact with the customer environment, the faster its response and the better its knowledge improvement, becoming more future-oriented and understanding.

Customer knowledge facilitates understanding customers and their needs through interaction. Technological advancements have eased the processes of interaction and data collection (Serrano, Pilar, Sergio, Cristina, & José, 2020, p. 3). It is essential to distinguish between four dimensions of customer knowledge, which play a significant role in the interaction between the organization and its customers (Aechit, 2014, p. 161):

- **Knowledge of the Customer:** Involves personal data, leading to an understanding of details and orientations, thus providing a comprehensive view of the customers.
- **Knowledge for the Customer:** Refers to the knowledge provided and created by the organization for its customers, aiding in expanding their perspective about the organization.
- **Knowledge from Customers***:* Can be considered as feedback to the organization, accessing the knowledge that customers have about it as a result of their experiences and dealings, thus improving its activities and innovations.
- **Knowledge about the Customer**: Encompasses all knowledge that can inform the organization about its customers or deliver knowledge to them.

  ✓ **Product (Service) Knowledge:**

Knowledge of the product or service is considered from the customer's perspective. It can be defined as "the technical performance and specifications of proposed and current goods and services" (Al-Thabit & Samir, 2021, p. 513). This includes knowledge of the characteristics and specifications of the products to avoid any false claims. It clearly encompasses the product features desired by the customer and those the organization aims to provide to satisfy customer needs and market demands. This is achieved through the organization's ownership of such knowledge (Al-Bakri & Ahmed, 2006, p. 10).

  - Detailed description of the product from the customer's perspective.
  - Information related to its life cycle.
  - Research and development activities.

  ✓ **Competitor Knowledge:**

Knowledge of competitors involves understanding entities that offer similar services in the same markets at comparable prices, constantly striving to better meet customer needs (C.Granroos & H, 2012, p. 4). It includes every party that competes with an organization to acquire the resources or finances that customers spend to obtain competent services. This knowledge depends on various competitive strengths, as outlined by Farhat (2011, p. 3):

- **Threats from New Entrants:** Awareness of potential new competitors entering the market.
- **Bargaining Power of Buyers:** Understanding the influence that buyers have over the market and service terms.
- **Bargaining Power of Suppliers:** Recognizing the impact that suppliers have on costs and service quality.
- **Threats from Substitute Goods:** Identifying alternative products or services that could replace or diminish the need for the organization's offerings.
- **Competition Among Existing Organizations:** Understanding the dynamics of rivalry and competitive strategies among current market players.

3.3 Relationship between CRM Dimensions and Enhancing Marketing Knowledge in Commercial Banks in Guelma Province:

The practical aspect of this study aims to understand the relationship between the dimensions of CRM and marketing knowledge and how they contribute to its enhancement, applying this relationship to the level of commercial banks active in Guelma province.

4. Study Methodology:

This study utilized a questionnaire containing an introduction and sections with 26 statements, including a message directed at the sample individuals (employees of the studied banks). The questionnaire was divided into three axes:

- **First Axis:** Contains information related to personal data of the sample (gender, age, educational level, occupation).
- **Second Axis:** Contains sections related to CRM dimensions, consisting of 18 statements divided according to each dimension of CRM: customer attraction (06 statements), customer satisfaction (07 statements), and customer loyalty (05 statements).
- **Third Axis:** Contains sections related to marketing knowledge, consisting of 08 statements.

4.1 Study Population:

The study population consists of commercial banks operating in Guelma province through their branches distributed across the region, represented by banks such as BNA, BEA, BDL, BADR, CPA, and AGB.

4.2 Study Sample:

The study sample includes employees working in commercial banks in Guelma province, totaling 116 employees, distributed according to the personal characteristics shown in the following table:

Table 1: Distribution of Sample Members by Personal Characteristics

Variables	Categories	Frequencies	Percentage
Gender	Male	66	56.9%
	Female	50	43.1%
Age	20-40 years	69	59.5%
	41-60 years	46	39.7%
	Over 60 years	1	0.90%
Educational Level	Secondary	10	8.6%
	University	77	66.4%
	Postgraduate	11	9.5%
	Other Certificates	18	15.5%
Occupation	Branch Manager	8	6.9%
	Department Head	9	7.8%
	Branch Chief	12	10.3%
	Customer Service	25	21.6%
	Teller	10	8.6%
	Other	52	44.8%
Experience	Less than 5 years	21	18.1%
	5 to 15 years	54	46.6%
	15 to 25 years	27	23.3%
	More than 25 years	14	12.1%

Source: Compiled by researchers based on SPSS program results.

Table 1 indicates the distribution of employees in public banks in Guelma province, with males constituting 56.9% and females 43.1%. The majority of the sample falls within the age range of 20 to 40 years (59.5%), followed by 41 to 60 years (39.7%) and over 60 years (0.90%). As for educational level, the majority are university graduates (66.4%), followed by other certificates (15.5%), postgraduate studies (9.5%), and secondary level (8.6%). Regarding occupation, approximately half of the sample hold various positions (44.8%), with other significant proportions in customer service (21.6%), branch chief (10.3%), teller (8.6%), and department head (7.8%).

The least represented are branch managers (6.9%). In terms of experience, nearly half of the employees have 5 to 15 years of experience (46.6%), followed by 15 to 25 years (23.3%), less than 5 years (18.1%), and more than 25 years (12.1%).

4.3 Study Scale:

4.3.1 Study Questionnaire:

The study collected data using a questionnaire, as shown in the following table:

Table 2: Distribution of Statements Across Dimensions and Axes of the Study

Axes	Dimensions	Statements
CRM Dimensions	Customer Attraction	1-2-3-4-5-6
	Customer Satisfaction	7-8-9-10-11-12-13
	Customer Loyalty	14-15-16-17-18
Marketing Knowledge	-	19-20-21-22-23-24-25-26

Source: Prepared by researchers.

Table 2 indicates that the questionnaire consisted of 26 statements distributed across three dimensions in the CRM axis and the marketing knowledge axis, reflecting the study's main variables.

4.3.2 Scale Used in the Questionnaire:

The study used a five-point Likert scale to measure the sample's response to the questionnaire statements. This scale is the most commonly used and consists of five options, as illustrated in the following table:

Table 3: Options Comprising the Five-Point Likert Scale

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Score	5	4	3	2	1

Source: Prepared by the researcher.

The scale was divided into five ranges to determine the degree of agreement, as shown in the following table:

Table 4: Weighted Mean Value and Agreement Levels for the Study Sample

Ranges	Very Weak	Weak	Medium	High	Very High
Weighted Mean	1 to <1.8	1.8 to <2.6	2.6 to <3.4	3.4 to <4.2	4.2 to 5

Source: Prepared by the researcher.

Table 4 shows that the means are the dividing line between response levels in the study tool based on the average response to a dimension or axis.

4.4 Statistical Methods Used in the Study:

The study relied on SPSS software for describing the sample through frequencies and percentages, performing normal distribution tests for the data, and descriptive analysis tests for the study variables using the arithmetic mean and standard deviation. The study also used various

statistical tests to evaluate the measurement and structural models within the framework of testing study hypotheses, using SMART PLS software.

4.5 Normal Distribution Test:

The study used the Kolmogorov-Smirnov test to verify the normal distribution in justifying the study of variance-based structural equation modeling (SEM-PLS), which does not require assumptions about normal data distribution, as shown in the following table:

Table 5: Normal Distribution Test

Study Variables	Statistical Value of Test	Probability Value
Customer Attraction	0.1490	0.0000
Customer Satisfaction	0.1280	0.0000
Customer Loyalty	0.0980	0.0080
Marketing Knowledge	0.1390	0.0000

Source: Prepared by the researcher based on SPSS 26 results.

Table 5 indicates that the Kolmogorov-Smirnov test for all study variables yielded a probability value less than 0.05, indicating that the study sample does not follow a normal distribution.

5. Analysis of Study Results:

5.1 Descriptive Analysis of the CRM Dimensions Axis:

The study described the three dimensions of CRM (Customer Relationship Management) based on arithmetic means, standard deviations, and agreement levels, as shown in the following table:

Table 6: Statistical Indicators for Describing CRM Dimensions

No.	Dimensions	Arithmetic Mean	Standard Deviation	Ranking	Agreement Level
1	Customer Attraction	3.91	0.5610	2	High
2	Customer Satisfaction	4.24	0.5780	1	Very High
3	Customer Loyalty	3.78	0.5550	3	High
	Overall CRM Axis	3.98	0.3820	-	High

Source: Prepared by the researcher based on SPSS 26 results.

Table 6 indicates that respondents rated the CRM dimensions as very high and high. The dimensions were ranked according to their arithmetic means and agreement levels as follows:

Customer satisfaction had an arithmetic mean of 4.24 with a very high agreement level, indicating a very high level of customer satisfaction in the commercial banks of Guelma province.

- Customer attraction had an arithmetic mean of 3.91 with a high agreement level, indicating a high level of customer attraction.
- Customer loyalty had an arithmetic mean of 3.78 with a high agreement level, indicating a high level of customer loyalty. The overall CRM axis had an arithmetic mean of 3.98 with a high agreement level, suggesting a high level of CRM in commercial banks in Guelma province. The standard deviation was 0.3820, indicating a consensus among respondents.

5.2 Descriptive Analysis of the Marketing Knowledge Axis:

The study described the marketing knowledge axis based on arithmetic means, standard deviations, and agreement levels, as shown in the following table:

Table 7: Statistical Indicators for Describing the Marketing Knowledge Axis

Axis	Arithmetic Mean	Standard Deviation	Ranking	Agreement Level
Marketing Knowledge	3.91	0.5780	-	High

Source: Prepared by the researchers based on SPSS results.

Table 7 shows that the arithmetic mean for the marketing knowledge axis is 3.91 with a high agreement level, indicating a high level of marketing knowledge among commercial banks in Guelma province. The standard deviation is 0.5780, showing consistency in responses.

6. Testing of Study Hypotheses:

Before discussing hypothesis testing, it is necessary to define the proposed study model to evaluate the measurement model and then the structural model, which reveals the validity of the study hypotheses.

6.1 Defining the Proposed Study Model:

Based on the study topic and a review of various literatures, the researcher proposes the following model:

Figure 1: Proposed Study Model
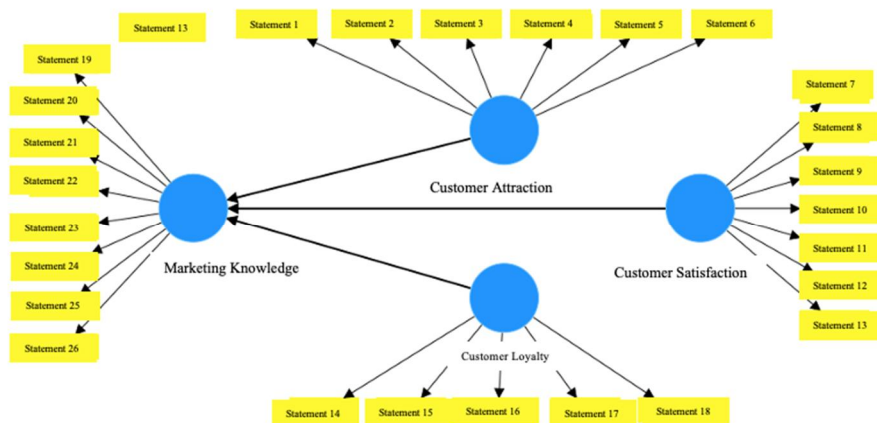
Source: Prepared by the researcher based on Smart PLS results.

Figure 1 presents the proposed study model according to SEM-PLS modeling, showing the relationships between the variables in the structural and measurement models, as follows:

- The primary independent variable is CRM dimensions, consisting of three sub-variables: customer attraction with six statements, customer satisfaction with seven statements, and customer loyalty with five statements.
- The dependent variable is marketing knowledge, consisting of eight statements.

6.2 Evaluation of the Measurement Model of the Study:

The evaluation of the measurement model involves ensuring the reliability of indicators (outer loadings) and composite reliability, as well as the average variance extracted (AVE) for convergent validity assessment, in addition to discriminant validity.

6.2.1 **Reliability and Convergent Validity**

Table 8: Evaluation of Reliability and Convergent Validity

Latent Variables	Indicators (Statements)	Reliability		Convergent Validity	
		Indicator Reliability	Composite Reliability (CR)	Average Variance Extracted (AVE)	
Customer Attraction	Statement 1	0.849	0.820	0.606	
	Statement 2	0.797			
	Statement 3	0.679			
Customer Satisfaction	Statement 8	0.769	0.862	0.612	
	Statement 9	0.821			
	Statement 10	0.835			
	Statement 13	0.695			
Customer Loyalty	Statement 15	0.690	0.823	0.538	
	Statement 16	0.728			
	Statement 17	0.734			
	Statement 18	0.779			
Marketing Knowledge	Statement 22	0.777	0.773	0.532	
	Statement 23	0.675			
	Statement 26	0.733			

Source: Prepared by the researcher based on Smart PLS results.

Table 8 indicates that three statements from the Customer Attraction dimension, three from Customer Satisfaction, one from Customer Loyalty, and five from the Marketing Knowledge axis were removed due to lower cross-loadings than measurement error.

The remaining statements have outer loadings between 0.675 and 0.849, which are reliable for measurement. The CR values for the variables range from 0.773 to 0.862, indicating high internal consistency reliability. AVE values range from 0.532 to 0.612, which is acceptable for convergent validity, thus fulfilling the reliability and validity criteria for the variables and their indicators.

6.2.2 Discriminant Validity:

The study used the cross-loadings matrix to ensure that the loadings of statements on their respective latent variables are greater than their loadings on other variables. The Fornell-Larcker criterion was also used to confirm the distinctiveness of the variables.

✓ **Cross Loadings Matrix:**

Table 9: Cross Loadings Matrix

Statement	Customer Attraction	Customer Satisfaction	Customer Loyalty	Marketing Knowledge
Statement 1	0.849	0.053	0.315	0.420
Statement 2	0.797	0.029	0.187	0.357
Statement 3	0.679	0.379	0.169	0.321
Statement 8	0.182	0.769	0.118	0.248
Statement 9	0.164	0.821	0.166	0.229
Statement 10	0.151	0.835	0.304	0.321
Statement 13	0.041	0.695	0.008	0.179
Statement 15	0.204	0.037	0.690	0.245
Statement 16	0.315	0.168	0.728	0.321
Statement 17	0.181	0.029	0.734	0.293
Statement 18	0.173	0.364	0.779	0.388
Statement 22	0.429	0.035	0.490	0.777
Statement 23	0.189	0.451	0.285	0.675
Statement 26	0.402	0.275	0.132	0.733

Source: Compiled by the researcher based on results from the Smart PLS program.

The matrix shows that all statements measuring latent variables are independent and do not measure any other latent variable. This is evident from the correlation values, confirming the independence of statements and aligning with the study model.

✓ **Fornell-Larcker Criterion:**

Table 10: Fornell-Larcker Criterion

Variables	Customer Attraction	Customer Satisfaction	Customer Loyalty	Marketing Knowledge
Customer Attraction	0.778	-	-	-
Customer Satisfaction	0.180	0.782	-	-
Customer Loyalty	0.295	0.212	0.733	-
Marketing Knowledge	0.473	0.323	0.434	0.729

**Source: Compiled by the researcher based on results from the Smart PLS program.**

This table shows that the correlation value of each variable with itself is greater than its correlation with other latent variables, indicating that the variables are independent of each other.

6.2.3 Evaluation of the Structural Model of the Study:

After confirming the validity of the measurement model, the structural model results can be evaluated to reveal the direct effect relationships between variables and the predictive capabilities of the model, as follows:

✓ **Pathways of Relationships between Variables in the Structural Model:**

Figure (2): Pathways of Direct Effect Relationships between Variables in the Structural Model
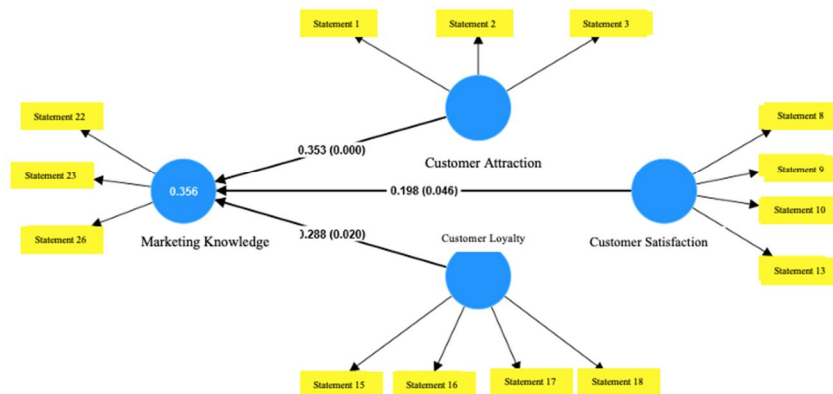
Source: Prepared by the researchers based on Smart PLS results.

6.2.4 Evaluating the Multicollinearity among Variables in the Structural Model of the Study:

After illustrating the relationship pathways, it's crucial to ensure that there is no multicollinearity issue among the main variables in the structural model, as shown in the following table:

Table 11: Test for Multicollinearity Issue among Variables in the Structural Model

Study Variables	Marketing Knowledge
Customer Attraction	1.113
Customer Satisfaction	1.064
Customer Loyalty	1.127

Source: Prepared by the researcher based on Smart PLS results.

Table 11 indicates that the Variance Inflation Factor (VIF) values for all variables are less than 5, confirming that multicollinearity does not pose a problem in the structural model.

6.2.5 Evaluating Path Coefficients in the Structural Model:

After ensuring the absence of any issues in the structural model, the direct effect path coefficients can be evaluated to validate the hypotheses, as shown in the following table:

Table 12: Path Coefficient Values in the Structural Model

Effect Type	Study Variables	Path Coefficients	T-Value	Significance	Result
Direct Effects	Customer Attraction -> Marketing Knowledge	0.353	3.672	0.000	Significant
	Customer Satisfaction -> Marketing Knowledge	0.198	1.999	0.046	Significant
	Customer Loyalty -> Marketing Knowledge	0.288	2.325	0.020	Significant

Source: Prepared by the researcher based on Smart PLS results.

Table 12 shows the path coefficients for direct effect relationships in the structural model. The hypotheses are statistically significant at a 0.05 significance level, confirming the direct relationships between Customer Attraction, Customer Satisfaction, Customer Loyalty, and Marketing Knowledge in commercial banks in Guelma Province.

The table (12) indicates the path coefficients for the direct effect relationships in the structural model used to verify the following hypotheses:

✓ **Verification of the First Hypothesis:**

The path coefficient (B) reached a value of 0.353 for the direct effect relationship between customer attraction and marketing knowledge. The calculated T-value was 3.672 with a significance value of 0.000, which is statistically significant at a 0.05 level of significance. Therefore, the null hypothesis (H0) is rejected, and the alternative hypothesis (H1) is accepted, stating that **"There is a statistically significant effect relationship at a significance level of (0.05≥α) for customer attraction on marketing knowledge in commercial banks in Guelma Province."**

✓ **Verification of the Second Hypothesis:**

The path coefficient (B) reached a value of 0.198 for the direct effect relationship between customer satisfaction and marketing knowledge. The calculated T-value was 1.999 with a significance value of 0.046, which is statistically significant at a 0.05 level of significance. Therefore, the null hypothesis (H0) is rejected, and the alternative hypothesis (H1) is accepted, stating that **"There is a statistically significant effect relationship at a significance level of (0.05≥α) for customer satisfaction on marketing knowledge in commercial banks in Guelma Province."**

✓ **Verification of the Third Hypothesis:**

The path coefficient (B) reached a value of 0.288 for the direct effect relationship between customer loyalty and marketing knowledge. The calculated T-value was 2.325 with a significance value of 0.020, which is statistically significant at a 0.05 level of significance. Therefore, the null hypothesis (H0) is rejected, and the alternative hypothesis (H1) is accepted, stating that **"There is a statistically significant effect relationship at a significance level of (0.05≥α) for customer loyalty on marketing knowledge in commercial banks in Guelma Province."**

6.2.6 Evaluating the Coefficient of Determination and Effect Size:

After evaluating the path coefficients, the level of the coefficient of determination and the effect size can be assessed:

✓ **Evaluating the Adjusted Coefficient of Determination (R^2):**

Table 13: Evaluation of the Adjusted Coefficient of Determination (R^2)

Variables	Adjusted Coefficient of Determination (R^2)
Marketing Knowledge	0.356

Source: Prepared by the researchers based on Smart PLS results.

Table 13 indicates that the independent variables (Customer Attraction, Customer Satisfaction, and Customer Loyalty) explain 35.6% of the variations in the dependent variable, Marketing Knowledge, among commercial banks in Guelma Province.

6.2.7 Evaluating Effect Size (f^2):

Table 14: Evaluation of Effect Size (f^2)

Variables	Effect Size (f^2)
Customer Attraction	0.174
Customer Satisfaction	0.057
Customer Loyalty	0.115

Source: Prepared by the researchers based on Smart PLS results.

Table 14 indicates that Customer Attraction has a medium effect size (0.174), Customer Satisfaction and Customer Loyalty have weak effect sizes (0.057 and 0.115, respectively), within the range of 0.02 to 0.15.

7. Conclusion:

7.1 Descriptive Analysis Results:

- A very high level of customer satisfaction in commercial banks in Guelma Province, attributed to banks' focus on improving service delivery in terms of timing, duration, first-time completion, and attention to complaint handling.
- A high level of customer attraction due to banks' emphasis on promoting new services, with modern technology and social media playing a significant role in reaching a broader customer base at lower costs.
- A high level of customer loyalty in commercial banks in Guelma Province, influenced by the banks' attention to customer feedback and complaints, as well as the competitive push from private banks highlighting the importance of customer focus and loyalty programs.
- A high level of customer relationship management in Guelma's commercial banks, where adopting a customer-oriented approach through CRM achieves better understanding of customer desires and needs, facilitates service personalization, and helps in customer retention.
- A high level of marketing knowledge in the commercial banks of Guelma Province, contributing to maintaining their market share.

7.2 Hypotheses Testing Results:

- The first hypothesis confirmed a statistically significant relationship between customer attraction and marketing knowledge, indicating that an increase in marketing knowledge is associated with the banks' ability to attract customers.
- The second hypothesis was validated, showing a significant relationship between customer satisfaction and marketing knowledge, meaning that increasing marketing knowledge is linked to the banks' ability to enhance customer satisfaction.

- The third hypothesis confirmed a statistically significant relationship between customer loyalty and marketing knowledge, implying that higher customer loyalty in the commercial banks of Guelma Province leads to increased marketing knowledge.

The results indicate that while the direct effects of customer attraction, satisfaction, and loyalty contribute to enhancing marketing knowledge, the combined effect accounts for only 35.6% of the variation, with other factors explaining the remainder.

7.3 Study Recommendations:

This study aimed to understand the reality of using customer relationship management dimensions to enhance marketing knowledge at the commercial banks in the city of Guelma. The study led to several conclusions, including:

- Despite the contribution of customer attraction, satisfaction, and loyalty in enhancing the marketing knowledge of commercial banks in the Guelma Province, the percentage is somewhat low, representing only 35.6% combined. Other factors explain the remainder.
- The results show that customer satisfaction did not play a sufficient role compared to the dimensions of customer attraction and loyalty, indicating a relative weakness in this aspect.

Based on these conclusions, the following recommendations are proposed:

- Banks should focus more on enhancing customer satisfaction through simplifying service delivery processes, ensuring employee satisfaction, and intensifying ongoing training and development.
- Banks need to pay more attention to customer loyalty by enhancing loyalty programs and engaging customers in interactive relationships.
- Banks should focus on attracting customers by establishing various communication channels that allow for a better understanding of customer needs and preferences, tailoring services to attract them.
- Emphasizing marketing knowledge is essential for banks as it is a managerial approach that improves performance and achieves sustainable competitive advantage by valuing customers.

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