

Investigating the Impact of Service Quality on Competitive Advantage: The Mediating Role of Customer Satisfaction An Applied Study at the Algerian Company "COSIDER Alrem"

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Summary: This research aims to demonstrate the impact of service quality on a firm's competitiveness through the mediating role of customer satisfaction. The research was conducted as a case study on "COSIDER Alrem" a firm specializing in maintenance, engine repair, and public works services. A descriptive methodology was adopted to address the research problem and test the hypotheses. A simple random sample of 250 individuals was drawn from a population of 392. After a screening process, 218 valid questionnaires were obtained, constituting the final sample for the empirical study. The data were statistically analyzed using Structural Equation Modeling (SEM) in AMOS v.24 software. The results concluded that quality has a positive impact on competitiveness, with customer satisfaction acting as a partial mediator in this relationship.

Keywords: Service Quality, Competitiveness, Customer Satisfaction

JEL Classification Codes : L15; D41; M39

I. Introduction

Today's business world is undergoing major changes that force companies to rethink their strategic plans. Service quality is essential for establishing sustainable competitive advantages [1]. In this dynamic landscape, Outstanding service is fundamental to ensuring customer satisfaction, fostering loyalty, and establishing a solid foothold in the market [2].

There has been a significant evolution in the concept of service quality since early marketing studies. Initially, researchers focused mainly on the physical aspects of services that customers could see and touch. Over time, this view expanded to include comprehensive approaches that consider the psychological and social elements of customer interactions [3]. This development is best seen in advanced measurement tools defined by the SERVQUAL model, namely: Trustworthiness, Tangibles, Response, Assurance, and Sympathy [4].

Recent research indicates that companies dealing with post-pandemic business conditions face unique challenges in maintaining excellent service while trying to stand out from competitors [5]. The rapid adoption of digital technologies and changing customer expectations have transformed how service quality is measured and delivered across different industries [6]. Furthermore, The importance of customer satisfaction as a bridge between service quality and competitiveness has gained more attention from researchers, as companies try to understand how providing exceptional service creates long-lasting market advantages [7]. important gaps in our knowledge of quality still exist. First, there isn't enough concrete evidence about how different aspects of service quality specifically impact competitive positioning in construction and infrastructure companies, particularly in developing countries like Algeria [8]. Second, we still need to better understand how effective it is in business-to-business settings, where relationships between companies often work differently than in consumer markets [9]. Third, Service delivery can be very complex, especially in project-based industries [10].

Most current studies focus on traditional service industries such as banking, hospitality, and retail. Construction companies haven't received much attention, even though their service quality includes both delivering actual project results and managing ongoing relationships with clients [11].

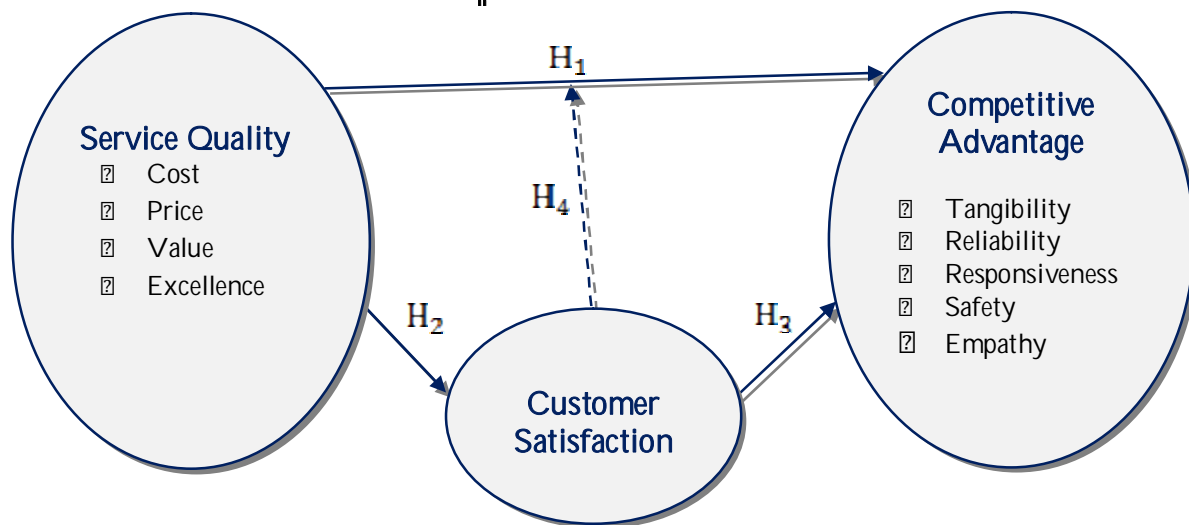
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The construction industry is unique because it involves intensive customer interaction, complex networks of stakeholders, and significant economic impact. These characteristics mean that construction companies need specialized theoretical and practical research to manage service quality effectively [12].

This study addresses these research gaps by examining how various aspects of service quality influence competitiveness through the mediating role of customer satisfaction at the "Cosider Al-Rim" organization. This leads us to pose the following research question:

To what extent does service quality affect the organization's competitiveness, considering the mediating role of customer satisfaction at the "COSIDER Alrem" corporation ?

Figure 01: " The theoretical model of the study



Source: Prepared by researchers

Figure 01 above illustrates the study's theoretical model, which will be tested in the empirical part. This model proposes four hypotheses:

- Service quality has a direct impact on competitive advantage.
- Service quality has a direct impact on customer satisfaction.
- Customer satisfaction has a direct impact on competitive advantage.
- Service quality has an indirect impact on competitive advantage, mediated by customer satisfaction.

II. Literature Review and Theoretical Framework

Service quality has developed into a sophisticated concept that measures how well companies meet or exceed what their customers expect. Recent academic work has grown significantly in this area, particularly when examining how service quality helps build sustainable competitive advantages [13]. The SERVQUAL measurement framework remains the most widely used tool for assessment, bringing together five core elements that collectively influence how customers perceive service quality [14].

II.1 Service Quality Components: Service quality serves as the foundation for competitive differentiation in modern business. The well-established SERVQUAL model includes five key components. Tangibility refers to the physical evidence customers can observe, including facilities, equipment, and how staff present themselves [15].

Reliability emerges as the most critical factor across different industries. It describes whether organizations can deliver their promised services consistently and accurately, since customers expect dependable service delivery [16]. Responsiveness shows important in digital environments where people expect immediate responses [17]. Assurance encompasses employee knowledge and

professionalism in building customer trust and confidence, which becomes especially crucial in specialized service environments [18]. Empathy involves providing personalized, caring attention to customers, which significantly influences their emotional responses and loyalty development [19]. Beyond these traditional five dimensions, other important factors include cost-efficiency – the ability to deliver excellent service quality while maintaining competitive pricing. How customers perceive pricing and value significantly impacts their overall assessments, as they constantly evaluate service quality against the costs they pay and benefits they receive [20]. Service delivery excellence represents the highest performance levels, characterized by consistently providing outstanding experiences that exceed expectations [21].

II.2 Customer Satisfaction: it reflects the outcomes of service quality and helps predict future customer behavior. Current studies emphasize how essential customer satisfaction is for business profitability by generating repeat purchases and fostering loyalty, especially in post-pandemic contexts where customer expectations have changed dramatically [22]. Empirical findings consistently demonstrate strong positive connections between quality, customers, and competitive advantage [23]. Recent studies have also highlighted customer satisfaction's role in connecting AI-enhanced customer service with loyalty, reflecting how service delivery methods continue to evolve [24].

II.3 Competitive Advantage: minimizing costs, implementing differentiation strategies, and developing customer retention approaches. Current research confirms that service quality serves as a fundamental source of competitive advantage. Organizations that demonstrate service excellence typically achieve better financial results through enhanced loyalty, the ability to charge premium prices, and improved operational effectiveness [25].

The intangible nature of service quality makes it particularly valuable for sustainable competitive differentiation. Providing exceptional service requires sophisticated organizational capabilities that competitors find difficult to replicate. The construction industry presents unique challenges for managing service quality, involving complex project relationships, extensive customer participation, and a combination of tangible and intangible service elements. Industry studies shows that good services significantly influence competitive positioning, though the specific mechanisms need further exploration in developing market contexts [25].

III. Applied Framework of the Study

III.1. Methods and Materials

The research was conducted within the Algerian economic sector, specifically at the "COSIDER Alrem" establishment located in the city of M'Sila. This company specializes in the maintenance and repair of engines, mechanical shaping and fabrication, rental of public works and transportation equipment, as well as providing training for heavy equipment operators and maintenance staff. The study population comprised all 392 employees of the establishment. To achieve the research objectives, a sample of 250 employees, After sorting, we obtained 218 questionnaires, which constituted the final study sample.

The primary data collection instrument was a structured questionnaire designed based on established theoretical frameworks.

III.2. Study Instruments: A questionnaire was designed in accordance on the details Contained in Table 01, which outlines the general structure of the observed variables, their coding systems, and the latent variables corresponding to the study's variables.

Table 01: Design of the Study Instrument and Coding of Variables

	Latent variables	Coding	Observed variables	Number
Service Quality (SQ)	Tangibility	Ta	Ta 1 – Ta 5	5
	Reliability	Re	Re 1 – Re 5	5
	Responsiveness	Rp	Rp 1 – Rp 5	5
	Safety	Sa	Sa 1 – Sa 5	5

Competitive Advantage (CA)	Empathy	Em	Em 1 – Em 5	5
	Customer Satisfaction (CS)		CS 1 – CS 7	7
	Cost	Co	Co 1 – Co 5	5
	Price	Pr	Pr 1 – Pr 5	5
	Value	Va	Va 1 – Va 5	5
	Excellence	Ex	Ex 1 – Ex 5	5

Source: Prepared by researchers

III.3. Assumptions of Confirmatory Factor Analysis (CFA):

III.3.1 Face Validity of the Study Instrument:

Face validity was established comprehensive review and revision by experienced professors and reviewers in research methodology, strategic management, and leadership. Their feedback and suggestions were incorporated into the necessary revisions to enhance the instrument's clarity and comprehensiveness.

III.3.2 The Multivariate Normal Distribution for Data

Table 02: Mardia's Coefficient

	N° of variables	Multivariate	c.r
SQ	5	3.012	0.446
CS	1	-1.224	-1.002
CA	4	6.901	0.095

Source: AMOS.V24 results

Table 02 above displays the critical values for Mardia's coefficient. The analysis revealed that all critical ratios (c.r) were less than the assumed value of ± 1.96 , leading to acceptance of the null, thereby satisfying the requirements for subsequent structural equation modeling analyses.

III.3.3 Reliability of the Study Instrument:

Table No. 03: Results of the “McDonald’s Omega” factor for the study tool

Variable	Dimension	Ferries	ω	Variable	Dimension	Ferries	Ω
Service Quality (SQ)	Ta	5	85.1	Competitive Advantage (CA)	Co	4	88.2
	Re	5	86.3		Pr	4	81.1
	Rp	5	70.5		Va	4	77.4
	Sa	5	88.4		Ex	4	71.6
	Em	5	73.2				
Customer Satisfaction (CS)					CS	7	79.2

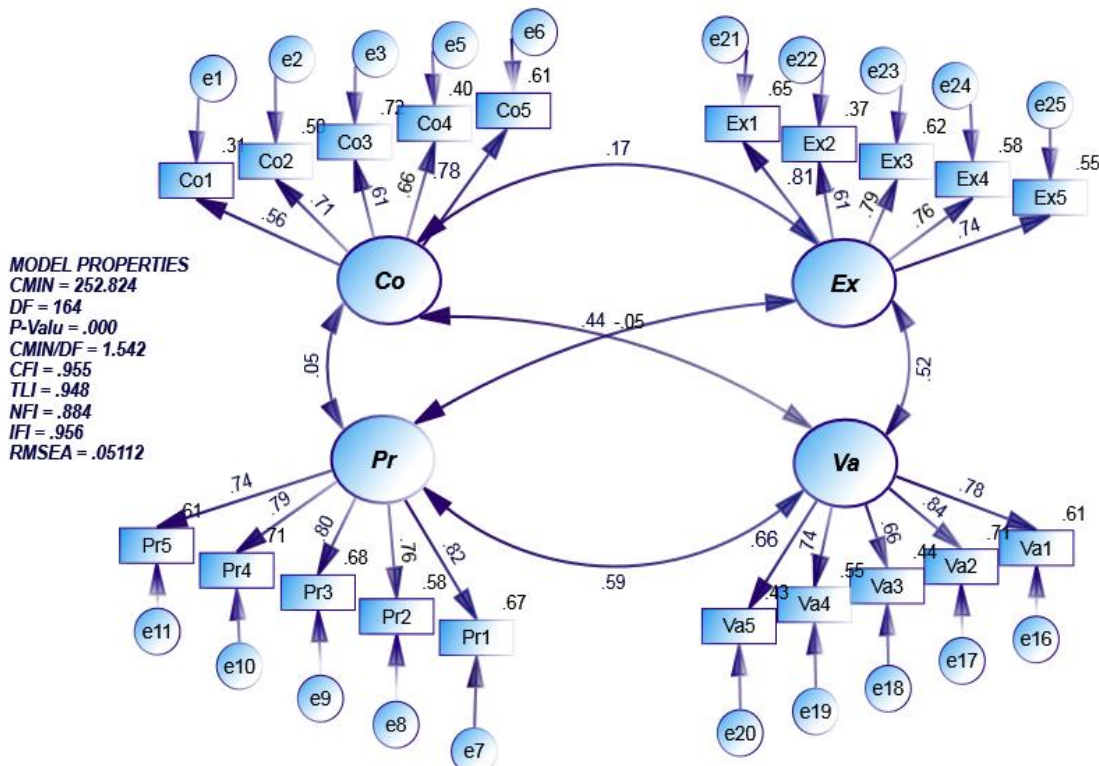
Source: MACRO-OMEGA outputs.

Reliability assessment was conducted using McDonald's Omega coefficient, utilizing AMOS v24 software. As shown in Table 03, the reliability coefficient (ω) for all study variables ranged from 70.5 to 88.2%, indicating statistically acceptable and high reliability levels that exceed the standard threshold of 70%. This confirmed that the instrument was reliable and could be confidently used for the field study and subsequent confirmatory factor analysis procedures.

Table 04 provides a summary of the assessment of the most important goodness-of-fit indices adopted by the researchers. The standardized chi-square value (CMIN/df) reached 1.890, which is statistically indicative of the model's adequacy as it falls within the acceptable range. As for (CFI), which measures the relative reduction in misfit, its value was 0.909. This is a very high value within the good acceptance range. This is followed directly by (TLI), whose value was 0.899, which is good and indicative of the relative improvement resulting from the hypothesized model's degrees of freedom compared to the independence model (null model). Similarly, the Incremental Fit Index (IFI) reached a good level (0.910), indicating the superiority of the hypothesized model over the independence model in fitting the data. Meanwhile, the NFI index value was 0.827, which is at an acceptable level within the minimum acceptance range.

Regarding the last index (RMSEA), It corrects for the chi-square index's tendency to reject a model. The value of this index was 0.065, which is a very reasonable value compared to the good acceptance range (less than 0.08). Therefore, we can conclude that the independent variable model (service quality) is very adequate and fits the data well.

Figure 03: Standard Model of Competitive Advantage



Source: AMOS.V24 results

We observe from the results listed in Figure 03 that all loading factor values related to the dimensions of the dependent variable (Competitive Advantage) are generally good, ranging between 0.61 and 0.84 (greater than 60%). Furthermore, all C.R are not less than ±1.96, meaning that all indicators or questions are capable of explaining their latent variables.

Table 05 also provides a summary of the most important Conformity indicators for the Competitive Advantage variable.

Table 05: Evaluation of Goodness-of-Fit Indicators

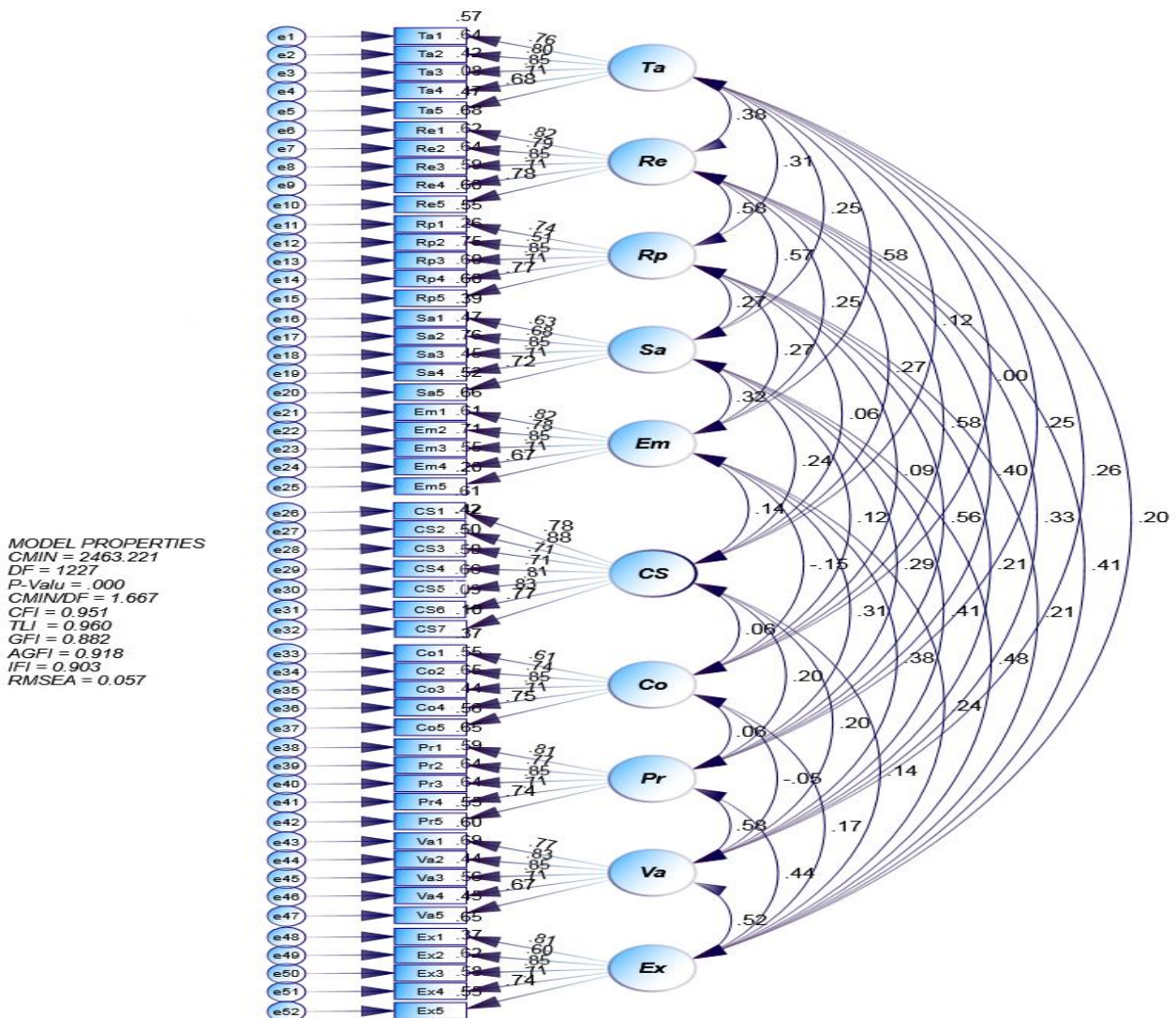
Indicator	Model results	decision
CMIN/DF	1.542	Good

CFI	.959	Excellent
TLI	.948	Excellent
NFI	.884	Workable
IFI	.956	Excellent
RMSEA	.0511	Good

Source: AMOS.V24 output

We observe from Table 05 that all goodness-of-fit indices fall within their acceptable range to a good degree when compared to the previous standard values for each index. Therefore, we can accept the hypothesized model for Competitive Advantage and confirm its suitability for the provided data.

Figure 04: Design of the standard model for the study using



Source: AMOS.V24 output

Figure 04 illustrates the standard model for the study in the presence of the mediator variable. This model indicates that the items (observed variables) load well onto their respective latent variables (dimensions), All loadings fell within the acceptable range of 0.61 to 0.88, which demonstrates the ability of all items to effectively explain the dimensions they represent.

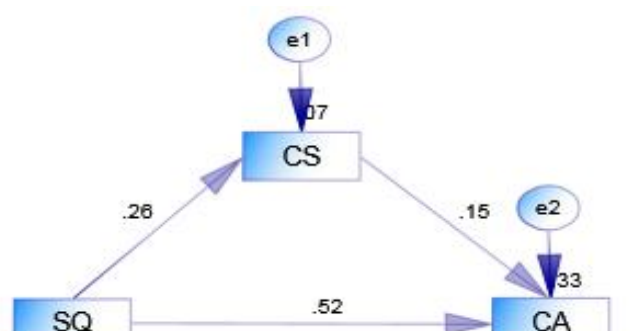
To test the overall model's goodness-of-fit, we examined the fit indices presented in the same figure. The normed χ^2 Value ($1 < 1.667 < 2$) falls within the acceptable threshold, indicating a statistically acceptable fit. Furthermore, the other indices show a good fit, with the exception of Indicator (GFI = 0.882), which is below the desired level for a good fit; however, it remains at a moderately acceptable level.

Overall, the measurement model is validated and demonstrates, thereby allowing progression to the structural model for hypothesis testing.

III.5 Hypothesis Testing and Interpretation of Results

To simultaneously test the direct and indirect effects between study variables simultaneously, Path Analysis should be employed using the Baron and Kenny methodology for predictive modeling. This method tests three paths, as illustrated in Figure 05.

Figure 05: Path Analysis Model of Study Variables



Source: AMOS.V24 output

The regression coefficient values for the three paths shown in Figure 05 indicate a direct effect of The quality (SQ) on both the competitiveness of the institution (CA) and the mediator (CS). Additionally, they indicate a direct effect from the latter on the competitive advantage, as evidenced by the positive values of all coefficients (0.26, 0.52, 0.15).

Furthermore, the values above the dependent and mediator variables (0.07 and 0.33) represent the squared correlations (coefficients of determination), which are considered good as they fall within the [0.20, 0.70] range. To determine the statistical significance and explanatory power of these effects, we refer to Table 06.

Table 06: Direct Effect Estimates Between Study Variables

VARIABLES	ESTIMATES	S.E	C.R	P
CS <--- SQ	.382	.098	3.879	***
CA <--- SQ	.513	.058	8.889	***
CA <---- CS	.198	.039	2.513	.012

0.05>0.01 , * P>0.001 , ** P>*** P

Source: AMOS.V24 results

Table 06 displays the values for the regression coefficient (β), its (S.E.), and the associated statistic (C.R. or t-statistic). Interpretation is conducted by either comparing the C.R. value to the critical threshold of 1.964 or the P-value to the ratio 0.05. A detailed explanation of the table's findings and the study's hypothesis tests is provided below:

Hypothesis 01: We observe that the beta value (β) for the first path was 0.382, which is highly significant ($p = 0.000$). Furthermore, the t-statistic's Critical Ratio (C.R. = 3.879) is also significant, as it exceeds the minimum threshold of 1.964. Therefore, we reject (H_0) and accept (H_1), which

posits a statistically significant direct effect of service quality at the Algerian company "COSIDER Alrem" on its competitive advantage. This is attributed to the significant focus the studied organization places on its services, possessing a culture that promotes excellence in service delivery and enhances its competitive value.

Hypothesis 02: Hypothesis 02: The regression coefficient for the second path ($\beta = 0.513$) indicates a direct and significant effect of the company's the quality (SQ) on customer satisfaction. This effect is statistically significant ($P < 0.05$), with a Critical Ratio of ($CR=12.142 > 1.964$), thus confirming the study's second hypothesis. This can This demonstrates the organization's commitment to the quality of its services to satisfy its customers. This includes: supporting communication channels between its employees and customers; coordinating efforts among its various units and departments to facilitate service requests at the right time and place; delivering the best possible quality at the lowest possible cost while ensuring necessary security and transparency; and adhering to ethical standards in service provision.

Hypothesis 03: The regression coefficient for the third path was 0.198 and is statistically significant ($p < 0.05$). Moreover, the Critical Ratio (C.R.) is greater than 1.964, which confirms the study's third hypothesis, positing a that customers have a positive impact on the competitive advantage of the studied organization. This is attributed to the existence of concrete practices aimed at achieving customer satisfaction and the awareness among decision-makers of the importance of these customers in enhancing the organization's competitiveness. This motivates them to focus more intently on clearly understanding customer needs and granting them greater flexibility in how they request the organization's services. In turn, this customer satisfaction prompts decision-makers to provide additional services that reinforce this mutual trust, thereby increasing the organization's competitive value.

Hypothesis 04: Table 07 summarizes the values and significance between the study variables.

Table 07: The Direct, Indirect Impact and Overall Effect of Study Variables

Path	Direct Effects	Indirect Effects	Total Effects	Conclusion
CA <---CS <--- SQ	.513**	.195**	0.708**	Partial
P-Valu	0.003	0.001	0.004	Mediation

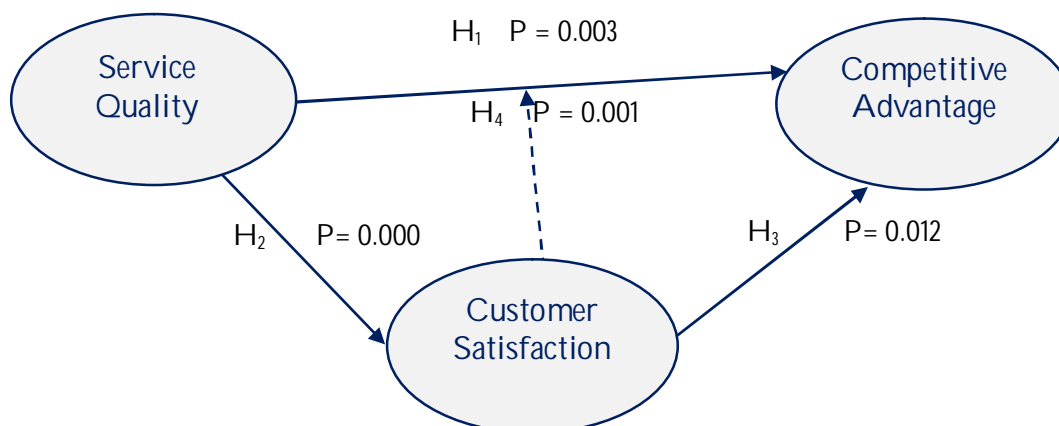
*** P>1000%, ** P>100%, * P>5%, nothing: P The effect is not significant

Source: AMOS.V24 results

The results outlined in Table 07 highlight a total effect between quality (SQ) and the firm's competitiveness (CA), with the absence of the mediating variable, customer satisfaction (CS), at a significance level of 0.004. The analysis also establishes a direct effect of quality (SQ) on competitiveness (CA) ($p = 0.003$) and an indirect effect through the mediator (CS) at a significance level of 0.001. However, Since the direct effect (0.513) exceeding the indirect effect (0.195), This indicates that customer satisfaction partially mediates the relationship between quality and firm's competitiveness.

III.6 Final Study Model

Figure 06: " Final Study Model "



Source: Prepared by researchers

Figure 06 illustrates the final model that was empirically tested in this study, this model allowed us to examine four hypotheses. From this, we conclude the full validation of the study's main hypothesis, there is an effect of the institution's services competitive advantage by gaining customer satisfaction.

IV. Conclusion

The study examined the role of service quality in increasing the competitiveness of service organizations, mediated by customer satisfaction. The theoretical framework was based on the premise that the level of service quality generates customer satisfaction, which in turn determines an organization's competitive capabilities. Subsequently, we tested the relationships between these variables through a case study on the well-known Algerian company, "COSIDER Alrem". Based on this study and the statistical data analysis, several conclusions were drawn, which are summarized below:

Theoretical Contribution: The theoretical section of this study reveals that an organization's success in enhancing its competitive advantage is intrinsically linked with the quality of services provided. This quality, in turn, is tied to Customer loyalty and desires. This involves matching expectations with actual perceptions across the five core dimensions popularized by the most prominent models for to measure quality: Tangibility, Reliability, Responsiveness, Safety, and Empathy. We noted that numerous studies indicate a strong correlation between quality and customer, as both of them test the difference between actual perception and expectation. However, there is a debate among researchers regarding the nature of this relationship. Some argue the difference lies in how the service is evaluated, others suggest it resides in the concept of "expectations," while a third group believes it is rooted in the very definition of "satisfaction," with each perspective offering its own supporting arguments.

Applied Contribution: The empirical research conducted on the Algerian company "COSIDER Alrem" provided conclusive evidence of the dynamic interplay between the study's variables. The analytical results demonstrate that service excellence directly impacts the organization's competitive position, with customer satisfaction acting as a mediating mechanism. This supports the general hypothesis that delivering superior service is linked to enhancing competitive capabilities by winning over customers. The latter is significantly influenced by the service level; when a customer perceives high service quality, a sense of satisfaction is generated. This, in turn, fosters a commitment to the relationship with the organization and cultivates loyalty, thereby enhancing its market position and competitiveness.

During our field visits to the company's branches, we noted a weakness in the dimensions of Responsiveness and Empathy towards customers. Nevertheless, we ultimately concluded that "COSIDER Alrem" is a competent organization, capable of competing with major corporations.

Strategic Recommendations: From previous results, we put forward the following recommendations:

- Organizations should prioritize the regular measurement and evaluation of service quality levels to gauge customer satisfaction, identify areas of deficiency, and work to overcome them to enhance satisfaction rates.
- It is crucial to focus on customer-centric methods and approaches aimed at winning customers through competitive pricing mechanisms, personalized service offerings, and the strategic management of expectations.
- Emphasizing the dimensions of Responsiveness and Reliability, alongside continuous improvement initiatives and empathetic customer interaction, establishes a clear framework for achieving sustainable competitive differentiation.
- Customer complaints must be given due attention and treated as opportunities. They can be leveraged to adapt to market changes, and finding new partners.

V. References

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