



## ENHANCING CUSTOMER SATISFACTION THROUGH AGILE APPROACH: CASE STUDY IN A TELECOM COMPANY IN ALGERIA

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**Abstract:** *There is a growing demand for modern development methodologies that prioritize flexibility in accommodating changes in customer requirements. Agile project management has emerged as a solution to address these evolving demands by placing customer satisfaction at the core of its principles. This study aims to identify the factors that influence customer satisfaction within agile projects. A quantitative approach was employed, utilizing a questionnaire survey distributed to 42 experienced employees at Ooredoo, a telecommunications operator in Algeria. The findings revealed that collaboration and quality improvement are the primary factors enhancing customer satisfaction in agile project management. However, the results indicated no statistically significant relationship between prioritizing value creation and customer satisfaction.*

*This study highlights how the agile approach enhances customer satisfaction, beyond just measuring its effects. Practically, agility helps organizations thrive in dynamic, competitive settings, boosting customer satisfaction and securing a sustainable edge. However, success depends on cultivating an adaptive mindset to effectively integrate and maximize agile methodologies.*

**Keywords:** *Customer satisfaction; Agile approach; Telecom company; Algeria; Customer collaboration; Quality; Value creation*

**JEL Classification:** *M00, M30*

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### 1. INTRODUCTION

The success of any organization is largely determined by the level of customer satisfaction, as the cost of acquiring a new customer is five times higher than retaining an existing one (Alzoubi, Alshurideh, Al Kurdi, & Inairat, Do perceived service value,

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quality, price fairness and service recovery shape customer satisfaction and delight? A practical study in the service telecommunication context, 2020).

In the realm of project management, customer satisfaction is not only a critical factor for success but also a cornerstone of organizational sustainability, especially in volatile and uncertain environments. As a result, the implementation of customer-centric approaches has become imperative. In today's competitive landscape, marked by volatility, uncertainty, complexity, and ambiguity (Eilers, Peters, & Leimeister, 2022), traditional project management methods are increasingly inadequate for meeting the demands of modern development (Huang, 2022). Organizations must therefore adopt innovative methodologies that prioritize flexibility and adaptability (Žužek, Gosar, Kušar, & Berlec, 2020).

Agile methodology, originally developed for software development, has expanded into various disciplines, including project management (Radhakrishnan, Zaveri, David, & Davis, 2022). This approach emphasizes iterative development, collaboration, and the ability to respond swiftly to change (Fowler & Highsmith, 2001).

While existing studies often compare the impact of agile and traditional methods on customer satisfaction, this research seeks to explore how the agile approach contributes to customer satisfaction. The research question is formulated as follows:

***How does the agile approach contribute to customer satisfaction?***

To address this question, and drawing on the research of (Radhakrishnan, Zaveri, David, & Davis, 2022), (Cartaxo, Araujo, Barreto, & Soares, 2013), (Sambinelli & Borges, 2022), (Barraood, Mohd, & Baharom, 2021), the following hypotheses were proposed:

- **H1:** *"The agile approach contributes to customer satisfaction through customer collaboration"*. This implies that agile methodologies foster customer collaboration by actively involving customers in iterative development cycles. Such involvement ensures that the service evolves in alignment with user needs, minimizing misunderstandings and enhancing the alignment of deliverables with customer expectations.
- **H2:** *"The agile approach contributes to customer satisfaction through quality improvement"*. This is achieved by implementing continuous testing, early defect detection, and frequent refinements throughout the development process. These practices result in a more stable, reliable, and user-friendly product, ultimately leading to higher levels of customer satisfaction.
- **H3:** *"The agile approach contributes to customer satisfaction through prioritizing value creation"*. By focusing development efforts on features that deliver the highest value to customers, agile methodologies ensure that user-centric functionalities are continuously adapted and prioritized. This approach

enhances customer satisfaction by consistently delivering outcomes that align with user priorities.

To test these hypotheses, a quantitative research method was employed. This approach involved the design and distribution of a structured questionnaire to collect relevant data from employees at the company Ooredoo Algeria. The data gathered through this survey were analyzed to evaluate the relationship between agile practices and customer satisfaction.

## 2. LITERATURE REVIEW

### 2.1. Agile approach

The agile approach started with software development and has gained significant interest due to its benefits, making it applicable to other types of projects. It is considered a learning-oriented approach (Žužek, Gosar, Kušar, & Berlec, 2020). Agile methods can be described as "*lightweight processes that employ short iterative cycles, actively involve users to establish, prioritize, and verify requirements, and rely on tacit knowledge within a team as opposed to documentation*" (Buresh, 2008).

Agile project management is defined as "*an approach based on a set of principles, whose goal is to render the process of project management simpler, more flexible, and iterative to achieve better performance (cost, time, and quality) with less management effort and higher levels of innovation and added value for the customer*" (Žužek, Gosar, Kušar, & Berlec, 2020).

There are many agile methods, each consisting of practices that support agile values and principles (Al-Saqqa, Sawalha, & Abdelnabi, 2020). According to the (Report State of Agile, 2022), the most used agile frameworks are Scrum (87%) and Kanban (56%), while SAFe is the leading method in the scaled framework category (53%):

- Scrum is an incremental and iterative method applicable to projects of all sizes. Sprints typically last up to four weeks, with teams consisting of fewer than ten members (Akhtar, Bakhtawar, & Akhtar, 2022). It offers numerous benefits, including simplicity, productivity, and transparency (Al-Saqqa, Sawalha, & Abdelnabi, 2020).
- Kanban was first introduced in 1947 at Toyota. It is a visual management system that incorporates the just-in-time delivery approach while managing knowledge and work. Its core principles include limiting work in progress (WIP) and visualizing workflows using tools such as agile boards. The

Kanban method enhances visibility, understanding, and control over workflows (Alaidaros, Omar, & Romli, 2021).

- SAFe (Scaled Agile Framework) is a scaling agile method designed for large environments. It integrates agile and lean practices and is structured into three levels: portfolio, program, and team. The SAFe team, referred to as ScrumXP, resembles the Scrum team but may be specialized and not always cross-functional (Almeida & Espinheira, 2021).

Implementing agile methodologies offers numerous advantages, including improved quality, enhanced customer satisfaction, reduced costs, and greater adaptability to change (Hirner, Lavicka, Schefer-Wenzl, & Miladinovic, 2019). (Dong, Dacre, Baxter, & Ceylan, 2022) further emphasize benefits such as risk reduction, shorter delivery times, and increased team productivity. (Žužek, Gosar, Kušar, & Berlec, 2020) highlights additional advantages, such as increased flexibility, improved communication, and the promotion of effective problem-solving skills. (Eilers, Peters, & Leimeister, 2022) identify continuous learning as one of the most significant benefits of agile practices.

However, transitioning from plan-driven methods to agile is not without challenges. Common obstacles include resistance to change, a lack of understanding, and insufficient management participation (Dong, Dacre, Baxter, & Ceylan, 2022). According to (Marnada, Raharjo, Hardian, & Prasetyo, 2021), ensuring coordination and maintaining effective communication with both the team and stakeholders is one of the most critical challenges in an agile environment. (Hirner, Lavicka, Schefer-Wenzl, & Miladinovic, 2019) emphasizes that top management engagement and adapting agile methods to fit the organizational structure are key success factors for agile implementation. (Eilers, Peters, & Leimeister, 2022) underscore the importance of an agile mindset in today's business environment. Using a mixed-method approach, including 15 interviews and a survey of 499 participants in Switzerland, they found that an agile mindset is a distinct way of thinking associated with factors such as a learning spirit, collaborative exchange, and customer value creation. This mindset enhances strategic agility and positively impacts organizational performance.

## 2.2. Customer satisfaction

Customer satisfaction is defined as *“the personal feelings of customers, which could be pleasure or disappointment toward a product or service, based on the comparison between their expectations and the perceived performance of the service provider”* (Abdullah, Prabhu, & Othman, 2022). In other words, customer satisfaction represents an emotional response to a product or service experience after a purchase,

determined by the discrepancy between the actual performance of the product or service and the customer's expectations (Altangerel & Munkhnasan, 2019).

According to (Ikramuddin & Mariyudi, 2021), perceived value significantly influences customer satisfaction and brand trust. Telecom service providers must consistently deliver services that meet or exceed customer expectations to enhance satisfaction and trust. Their study, based on a quantitative analysis of 304 telecom service users in Indonesia, also revealed a strong reciprocal relationship between customer satisfaction and brand loyalty. A quantitative study conducted by (Alzoubi, Alshurideh, Al Kurdi, & Inairat, 2020) involved distributing a questionnaire to 420 customers of Etisalat in the UAE to analyze factors influencing customer satisfaction and delight. The results indicated that customer satisfaction can be measured through perceived value, price fairness, and service quality, which are identified as key success factors in the telecom sector. (Diputra & Yasa, 2021) examined the role of brand trust, brand image, and product quality on customer satisfaction through a quantitative study involving 185 Samsung smartphone users in Indonesia. The findings revealed that brand loyalty is a direct outcome of increased customer satisfaction, primarily driven by product quality.

### **2.3. Impact of agile approach on customer satisfaction**

Several studies (Dong, Dacre, Baxter, & Ceylan, 2022); (Charef, 2022); (Eilers, Peters, & Leimeister, 2022); (Hirner, Lavicka, Schefer-Wenzl, & Miladinovic, 2019) have highlighted that agile methodologies significantly improve quality and enhance customer satisfaction. This is achieved through early, rapid, and continuous product delivery (Sambinelli & Borges, 2022), direct interaction between customers and developers (Al-Saqqa, Sawalha, & Abdelnabi, 2020), the incorporation of customer input (Buresh, 2008), and the creation of customer value (Loiroa & al., 2019).

Customer involvement entails close collaboration with customers throughout all stages of a project (Siddique & Hussein, 2019). A study conducted in Norway, involving 24 interviews with practitioners, investigated the factors influencing customer involvement. The findings revealed that building trust and transparency, being forthcoming, understanding customer perceptions, and establishing effective communication are key enablers for successful customer collaboration. It is further confirmed by (Sambinelli & Borges, 2022) that creating customer value leads to higher levels of customer satisfaction and loyalty. Customer value is defined as the ability to respond to changes in customer requirements through the use of agile methods.

Customer collaboration is crucial to the success of an agile project (Žužek, Gosar, Kušar, & Berlec, 2020). The results of a cross-sectional survey conducted by

(Radhakrishnan, Zaveri, David, & Davis, 2022), covering 292 agile projects, indicate that project agility has a positive relationship with project team autonomy, team diversity, and client collaboration. Similarly, a qualitative study involving 27 case studies at a Danish service provider (Ciriello, Glud, & Hansen-Schwartz, 2022), revealed that effective customer collaboration requires a mutually beneficial relationship based on trust and flexibility. The study concluded that awareness of each other's influence is a key factor in achieving project agility.

The importance of customer collaboration lies in building a product that delivers specific benefits to the customer by involving them in the early phases, which enhances customer satisfaction (Siddique & Hussein, 2019). However, (Buresh, 2008) found no significant difference in customer satisfaction between agile and traditional project management methods, based on a quantitative study of 185 projects. (Cartaxo, Araujo, Barreto, & Soares, 2013) support this finding, stating that using Scrum does not lead to higher customer satisfaction compared to traditional approaches. Their conclusion was based on a cross-sectional survey of 19 Brazilian software development projects, which identified seven factors affecting customer satisfaction: time, goals, quality, communication, transparency, agility, innovation, and benchmarking.

In contrast, a literature review by (Amirova, Khomyakov, Mirgalimova, & Sillitti, 2019), analyzing 34 references, found that the application of agile methodologies is a significant factor influencing customer satisfaction, primarily due to the active involvement of customers throughout the process. (Bambauer-Sachse & Helbling, 2021) further argue that agile approaches result in higher customer satisfaction than plan-driven approaches, based on a survey analyzing the experiences of 361 customers in Switzerland.

In summary, the agile approach is characterized by iterative development, customer collaboration, and adaptability to change (Fowler & Highsmith, 2001). Based on the literature and current trends, agile methodologies and customer satisfaction have garnered significant interest. The Agile Manifesto emphasizes customer involvement and satisfaction, as reflected in its third core value, "*Customer collaboration over contract negotiation*," and its first principle, "*Our highest priority is to satisfy the customer through early and continuous delivery of valuable software*" (Kent Beck, 2001-2022).

## 2.4. Field study model

In line with the above points, Figure 1 illustrates the study model, highlighting the dependent and independent variables, as well as the relationships between them that will be tested:

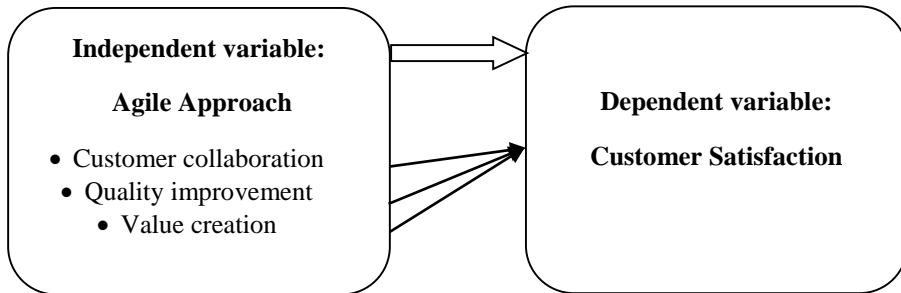


Figure 1. Field study model (Source: Own)

## 3. RESEARCH METHODOLOGY

In this research, a quantitative method was employed, as it is the most suitable approach for large samples, numerical data, and hypothesis testing (Apuke, 2017). For the analysis and generalization of results, statistical and mathematical tools are essential (Queirós, Faria, & Almeida, 2017). Accordingly, a questionnaire was designed and disseminated within the company to all personnel relevant to our study.

### 3.1. Data collection

In order to conduct our research, and test the hypothesis, a questionnaire was elaborated based on the studies of (Radhakrishnan, Zaveri, David, & Davis, 2022), (Lautert, Neto, & Kozievitch, 2019) (Cartaxo, Araujo, Barreto, & Soares, 2013), (Dong, Dacre, Baxter, & Ceylan, 2022) (Amirova, Khomyakov, Mirgalimova, & Sillitti, 2019) and (Barraood, Mohd, & Baharom, 2021) using Google forms.

The questionnaire is divided into seven (7) sections with fourteen (14) questions in total. The structure of the questionnaire is described as follows:

- A brief presentation, which aimed to describe the purpose of the survey and to inform the respondents that the answers will be treated confidentially, only for academic purposes;
- The first section contained general information about the respondent (experience, role in an agile team, etc.) using various question forms such as multiple-choice questions, checklists, rating scales, and Likert scale questions;

- The second section was about agile benefits and success factors, divided into two questions that express the degree of agreement using a Likert scale (from 1 to 5);
- The third, fourth, and fifth sections aimed to verify whether customer collaboration, improved quality, and value prioritization contribute to customer satisfaction, using Likert scale questions;
- The sixth section aimed to discover which factor was the most impactful in enhancing customer satisfaction and the advantages of satisfying customers, using a checklist and Likert scale question;
- The last section contained the profile of respondents (gender, age, and department).

In our study, most of the questionnaire items were designed using a 5-point Likert-type scale, which enabled us to compute mean scores for the various constructs under investigation. This approach assumes that the Likert scale can be treated as an interval scale for the purposes of statistical analysis. Furthermore, in order to examine the relationships between the studied variables, we employed Pearson's correlation coefficient, which is appropriate for detecting linear associations between variables measured at the interval or ratio level

### **3.2. Sampling and questionnaire administration**

The population of our study consists of employees at the company Ooredoo Algeria who have experience with the agile methodology. To determine the sample size, a non-probabilistic method was used, as the sample was not selected randomly (Kim, 2022), due to the lack of accurate information about the size of the population.

The questionnaire was distributed using the snowball sampling technique, where respondents could refer the researcher to others. This method is particularly useful when the population is difficult to identify (Showkat & Parveen, 2017) .

### **3.3. Data analysis**

The data analysis process was conducted using Microsoft Excel for creating graphs and performing descriptive analysis, and IBM SPSS for carrying out statistical tests and multivariate analysis

## **4. RESEARCH RESULTS**

### **4.1. Sample description**

Table (1) below shows the number and rates of the gender, age, and affiliation structure of the respondents. Most of the respondents are between 25 and 34 years

old, with 31 of them being male and 11 being female. 35.7% of the respondents are currently working in the commercial department, 31% in the technology department, while the remaining 33.3% are working in other departments (strategy, quality, supply chain, human resources, legal, and audit).

*Table 1.* Distribution of respondents by gender, age, and affiliation structure

Characteristics	Specifications	Number	Rate
<b>Gender</b>	Male	31	73.8%
	Female	11	26.2%
<b>Age</b>	From 25 to 34	22	52.4%
	From 35 to 44	12	28.6%
	45 and above	8	19%
<b>Department</b>	ERM & Quality	3	7.1%
	Commercial	15	35.7%
	Strategy	5	11.9%
	Audit	1	2.4%
	Technology	13	31%
	Legal and regulatory	1	2.4%
	Human resources	2	4.8%
	Supply chain	2	4.8%

*Source:* Own

Table (2) below presents the number of years of experience and the roles of the respondents in agile team.

Most of the respondents have one to two years of experience, 14 of them have less than one year, 8 have three to four years, while 8 have five years or more. As for the roles in agile team, 35.7% are team members, 28.6% represent the support staff, 2.4% are stakeholders, while product owners and team leaders represent 14.3% and 19%, respectively.

*Table 2.* Distribution of respondents by experience & roles

Characteristics	Specifications	Number	Rate
<b>Number of years of experience</b>	Less than one year	14	33.3%
	From 1 to 2 years	15	35.7%
	From 3 to 4 years	8	19%
	Five years and above	5	11.9%
<b>Roles in agile team</b>	Product owner	6	14.3%
	Team leader	8	19%
	Team member	15	35.7%
	Stakeholder	1	2.4%
	Support cast	12	28.6%

*Source:* Own

### 4.2. Descriptive analysis

Figure (2) represents the most used agile frameworks:

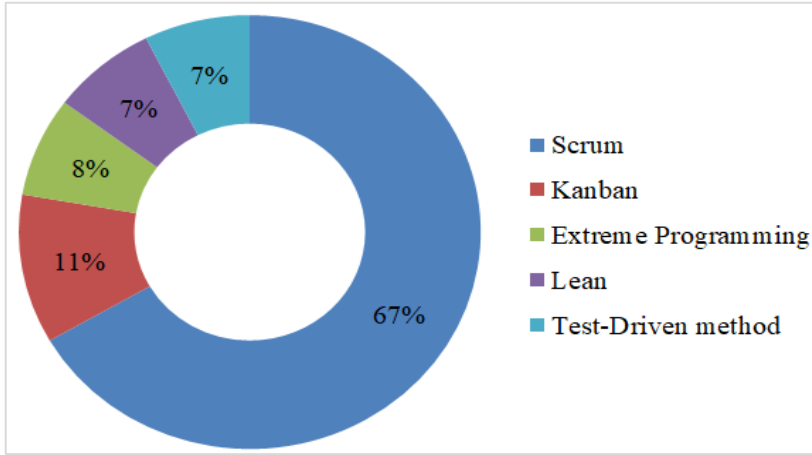


Figure 2. Agile frameworks

Source: Own

According to the figure 1, Scrum is the most used agile framework, followed by Kanban, Extreme Programming, Lean, and the Test-Driven method. The respondents do not have experience with SAFe and the Feature-Driven method.

Figure (3) presents the level of agreement with the benefits of agile approach:

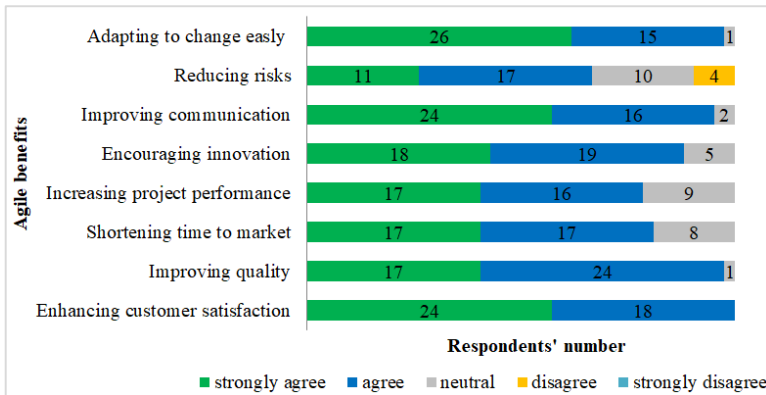


Figure 3. Agile benefits

Source: Own

Based on the figure 3, the agile approach has benefits mostly in terms of adapting to changes easily, improving communication, and enhancing customer satisfaction. It also helps with shortening time to market, increasing project performance, encouraging innovation, and, lastly, reducing risks.

Figure (4) represents the success factors for agile adoption:

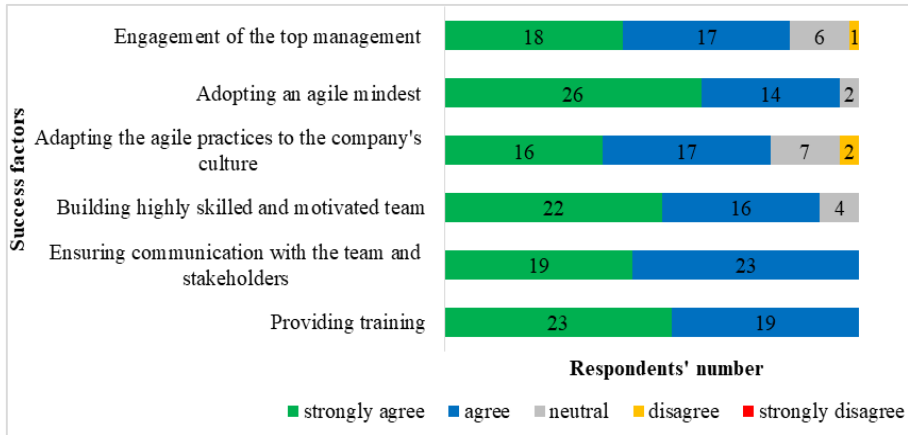


Figure 4. Success factors of agile

Source: Own

Based on the figure 4 shown above, adopting an agile mindset is the main success factor for adopting agile, followed by providing training and ensuring communication with the team and stakeholders. Meanwhile, adapting the agile practices to the company’s culture is the least agreed-upon among the other benefits.

Figure (5) presents customer satisfaction benefits:

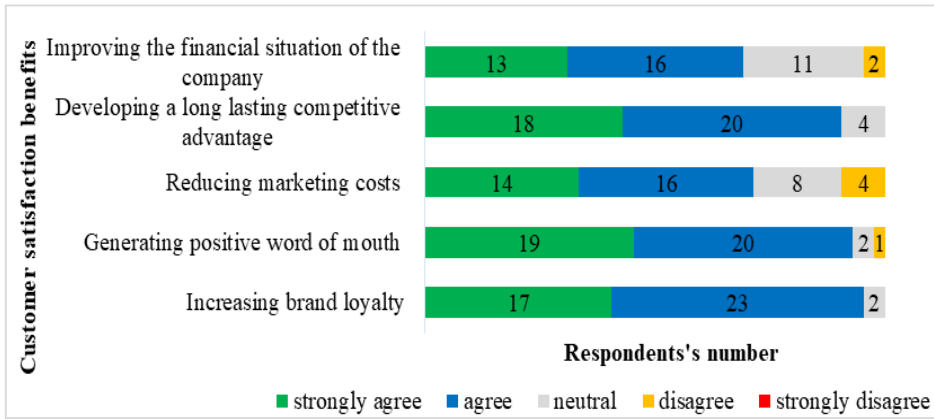


Figure 5. Customer satisfaction benefits

Source: Own

According to the figure 5, the most agreed-upon benefits of satisfied customers are their loyalty toward the brand, generating positive word of mouth, and developing a long-lasting competitive advantage. However, reducing marketing

costs and improving the financial situation of the company are the least agreed-upon benefits of satisfied customers.

Figure (6) shows the frequency of collaboration between respondents and their customers:

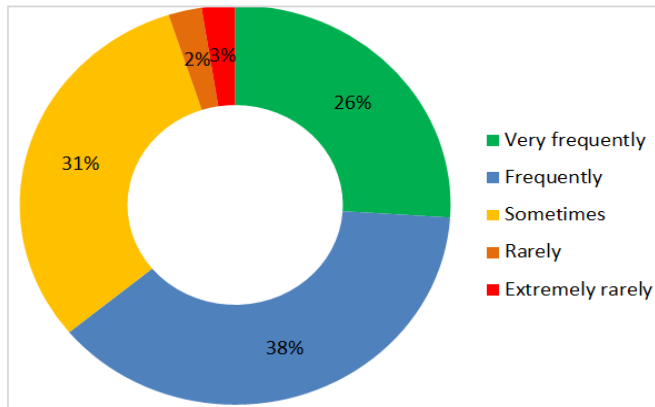


Figure 6. Frequency of collaboration

Source: Own

Based on the figure 6, the respondents collaborate frequently with their customers, with a percentage of 38.10%, 26.19% collaborate very frequently, while 30.95% sometimes collaborate.

Table (3) represents the factors that influence customer satisfaction:

Table 3 Factors influencing customer satisfaction

Variable	Statements	Important	Neutral	Not important
<b>Customer collaboration</b>	-Customer feedback about the increment.	100%	0%	0%
	-The direct interaction with costumers.	95.2%	4.8%	0%
	-The participation of customers during the testing process.	88.1%	11.9%	0%
	-Effective communication between the customers and the team.	78.6%	21.4%	0%
<b>Improved quality</b>	-Understanding the customer’s needs.	100%	0%	0%
	-Incorporating the customers feedback into the product development process.	100%	0%	0%
	-Continuously testing the deliverable et the end of each sprint.	95.2%	4.8%	0%
	-Resolving defects early	73.8%	23.3%	2.4%

Variable	Statements	Important	Neutral	Not important
<b>Prioritize value creation</b>	-Defining value from customer perspective.	90.5%	7.1%	2.4%
	-The early delivery of value through the prioritized product backlog.	81%	19%	0%
	-The continuous delivery of value through the iterative development.	81%	16.7%	2.4%
	-Responding to customers' requirements changes.	97.6%	2.4%	0%

Source: Own

Table 3 shows that customer feedback about the increment is the most important factor for customer collaboration, followed by direct interaction with customers, the participation of customers during the testing process, and effective communication, respectively.

As for improved quality, understanding the customer's needs and incorporating the customer's feedback into the product development process are 100% important, continuously testing the deliverable is 95% important, while resolving defects early is the least important factor, with a percentage of 73.8%.

Responding to customers' requirement changes is 97% important, followed by defining value from their perspective and the early and continuous delivery of value.

### 4.3. Multivariate analysis

#### 4.3.1. Regression analysis

The following tables demonstrate the relationship between dependent and independent variables of the study:

Table 4. Linear regression: Customer satisfaction- Customer collaboration

Independent variable	Dependent variable	R2	R2 adjusted	A	$\beta$	t	Sig
<b>Customer collaboration</b>	<b>Customer satisfaction</b>	.119	.097	.389	.345	2.328	.025

Source: Own from SPSS results

Table 4 demonstrates the presence of a significant relationship between customer satisfaction and customer collaboration (sig value= 0.025 < 0.05).

Table 5. Linear regression: Customer satisfaction- Improving quality

Independent variable	Dependent variable	R2	R2 adjusted	A	$\beta$	t	Sig
Quality improvement	Customer satisfaction	.114	.092	.425	.338	2.273	.028

Source: Own from SPSS results

Table 5 demonstrates the presence of a significant relationship between customer satisfaction and quality improvement (sig value= 0.028 < 0.05).

Table 6. Linear regression: Customer satisfaction- Prioritizing value creation

Independent variable	Dependent variable	R2	R2 adjusted	A	$\beta$	t	Sig
Prioritizing value creation	Customer satisfaction	.037	.013	.219	.135	1.247	.220

Source: Own from SPSS results

Table 6 demonstrates the absence of a significant relationship between customer satisfaction and prioritizing value creation (sig value= 0.220 > 0.05).

#### 4.3.2. Correlation analysis

Table 7 below presents the correlations among the independent variables.

The correlation tests indicate a significant relationship between agile success factors and customer satisfaction. Specifically, the more a company commits to agile practices, provides training, and ensures effective communication, the higher the level of customer satisfaction. On the other hand, customer collaboration is strongly tied to value creation and quality improvement. In other words, customer feedback, interactions, and active participation are closely linked to delivering value, enhancing flexibility, and driving continuous improvement by better understanding customer needs and conducting regular testing.

Table 7. Correlation: Customer collaboration, Improving quality &amp; Value creation

		Customer collaboration	Quality improvement	Value creation
Pearson Correlation	Customer collaboration	1	,398**	,453**
	Quality improvement	,398**	1	,343**
	Value creation	,453**	,343**	1
Significance	Customer collaboration		,009	,000
	Quality improvement	,009		,026
	Value creation	,000	,026	

Source: Own from SPSS results

## 5. DISCUSSION

Based on the descriptive analysis, Scrum emerged as the most widely used agile framework, followed by Kanban, a finding consistent with the (Report State of Agile, 2022). Furthermore, the results highlight that the most significant advantages of adopting agile methodologies include enhanced flexibility, improved communication, and higher quality. These findings align with prior studies by (Žužek, Gosar, Kušar, & Berlec, 2020), (Dong, Dacre, Baxter, & Ceylan, 2022) (Hirner, Lavicka, Schefer-Wenzl, & Miladinovic, 2019), respectively.

Several factors were identified as critical to the successful implementation of agile methodologies. According to respondents, adopting an agile mindset is the most crucial factor for successful adoption, as supported by (Alliance, 2017) (Eilers, Peters, & Leimeister, 2022). Additionally, focusing on skills and competencies by building highly skilled teams and providing targeted training was identified as another key success factor, as evidenced by (Noteboom, Ofori, Sutrave, & El-Gayar, 2021); (Marnada, Raharjo, Hardian, & Prasetyo, 2021).

The hypothesis analysis revealed that customer feedback on product increments and direct interaction with customers are the most significant factors in the customer collaboration process, as highlighted by (Radhakrishnan, Zaveri, David, & Davis, 2022); (Siddique & Hussein, 2019). Regarding quality improvement, understanding customer needs and incorporating their feedback into the development process were identified as the most critical factors.

Lastly, responding to changes in customer requirements and defining value from their perspective were found to be essential for prioritizing value creation, as emphasized by (Sambinelli & Borges, 2022).

To test the hypotheses, a linear regression analysis was conducted. The following table summarizes whether each hypothesis was validated or rejected:

*Table 8.* Hypothesis testing

<b>Hypothesis</b>	<b>Checking</b>
H1: The agile approach contributes to customer satisfaction through customer collaboration	Validated
H2: The agile approach contributes to customer satisfaction through quality improvement	Validated
H3: The agile approach contributes to customer satisfaction through prioritizing value creation	Rejected

*Source:* Own

Therefore, the results of this study conclude that the agile approach contributes to customer satisfaction through customer collaboration and improved quality.

## 6. CONCLUSIONS

Based on the responses of 42 experienced employees, the first hypothesis was confirmed, which posits that the agile approach enhances customer satisfaction through customer collaboration. This includes customer feedback, interaction, participation during testing, and communication. The second hypothesis was also validated, indicating that improving quality within an agile project contributes to customer satisfaction. Quality improvement involves understanding customer needs, continuously testing deliverables, incorporating feedback into the development process, and resolving defects early.

However, the third hypothesis, related to value creation, was rejected based on regression analysis. Thus, within the context of this case study, customer collaboration and quality improvement are the primary factors contributing to customer satisfaction in agile project management.

This research offers both theoretical and practical contributions. While previous studies have predominantly compared agile and traditional methods in terms of customer satisfaction, this study advances the literature by highlighting how the agile approach enhances customer satisfaction, rather than merely measuring its impact. Agility aligns with today's highly competitive and dynamic environment, fostering higher levels of customer satisfaction and, consequently, a sustainable competitive advantage. However, achieving this requires adopting an agile mindset, which facilitates the seamless implementation of agile practices and maximizes their potential benefits.

To achieve project outcomes, satisfy stakeholders, and address constantly changing requirements, project managers must develop an agile mindset and consider agility as a solution to these challenges.

As limitations of this study, Agile Project Management (APM) is considered a modern approach in project management but remains relatively new in the Algerian context. The primary limitation of this study is the small sample size, as the survey was distributed exclusively to employees of Ooredoo Algeria with prior experience in agile practices. Additionally, the lack of accurate information about the study population and the adoption of a hybrid working strategy further complicated the data collection process. Moreover, all respondents belong to the same host company, which could influence the spontaneity and objectivity of their responses. This potential bias is further reinforced by the use of the snowball sampling technique, which tends to produce homogeneous groups of respondents, as participants are likely to refer individuals who are similar to themselves.

To ensure continuity and build upon this research, the following studies are suggested:

- Agile and Customer Satisfaction: To add value to this research, a qualitative study could be conducted to further explore and validate the findings of this study;
- Agile and Quality: Given the strong interrelation between agile practices and quality, a study focusing on the relationship between agile methodologies and quality assurance is recommended;
- Agile Approach in Start-ups: It would be interesting to investigate the application of agile methodologies in start-ups, as their dynamic nature often requires high levels of agility and flexibility.

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