

Exploring the extent of Fintech adoption Intentions in Setif: A Study from Bank Customers' Perspectives.

استكشاف مدى نية تبني التكنولوجيا المالية في ولاية سطيف: دراسة من وجهة
نظر زبائن البنوك.

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Abstract:

This study mainly aims to explore the perspective of Setif's bank customers regarding adopting financial technology. We aim to investigate how perceived factors, including usefulness, ease of use, benefit, risk, trust, and social influence, impact our study sample's intention to adopt fintech. To achieve the objectives of our study, we relied on the descriptive analytical approach and distributed an electronic questionnaire to a sample of 104 bank customers in Setif. One of the most important results we reached through analyzing the data and processing it statistically using SPSS (V.27) is that perceived usefulness, perceived benefit ease of use, and perceived benefit have a medium impact on the intention of the study sample members to adopt financial technology. In contrast, the rest of the factors have no effect.

Keywords: Fintech; Fintech adoption; Fintech adoption intention; Perceived factors; Bank customers; Setif.

Jel Classification Codes: G20; G23; O33.

المخلص:

تهدف هذه الدراسة بشكل أساسي إلى استكشاف نية تبني التكنولوجيا المالية من وجهة نظر زبائن بنوك ولاية سطيف. وذلك لمعرفة مدى تأثير العوامل المتصورة التالية: منفعة الاستخدام، سهولة الاستخدام، الفائدة، المخاطر، الثقة والتأثير الاجتماعي على نية عينة الدراسة لاعتماد التكنولوجيا المالية. ولتحقيق أهداف دراستنا، اعتمدنا على المنهج الوصفي ذي الطابع التحليلي، وقمنا بتوزيع استبيان إلكتروني على عينة من 104 أفراد من زبائن بنوك ولاية سطيف. ومن أهم النتائج التي توصلنا إليها من خلال تحليلنا للبيانات ومعالجتها إحصائياً باستخدام برنامج SPSS (V.27) هي أن الفائدة وسهولة الاستخدام والأمانة المتصورة لها تأثير متوسط على نية أفراد عينة الدراسة لاعتماد التكنولوجيا المالية. في المقابل، فإن العوامل المتبقية ليس لها أي تأثير.

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الكلمات المفتاحية: التكنولوجيا المالية، تبني التكنولوجيا المالية، نية تبني التكنولوجيا المالية، العوامل المتصورة، زبائن البنوك، سطيف.

Jel Classification Codes: G20; G23; O33.

Introduction:

The introduction of technological innovation into the evolution dynamics in finance has led to redefining the traditional banking concept towards modern financial technologies called “financial technology” (FinTech). This integration produced solutions that increased efficiency and availability, causing fintech to become a global revolution of financial services. Exploring how technology affects finance commences by understanding how fintech transforms conventional banking practices involving applications like mob banking alongside blockchain solutions. Across the globe, fintech solutions provide cross-border transactions that change financial behaviors globally. These international landscapes reveal different ways of adopting the digitalization of financial services across countries and regions. There is an unmistakable wave of interest in fintech adoption as one zooms into Algeria, a North African country. Understanding what drives fintech adoption as Algeria deals with technology problems and chances becomes essential in this context. Exploring the basis for delving into fintech adoption intentions in Algeria yields insightful knowledge into the future of financial service markets in the area.

Based on what is mentioned above, the problem of this research has been formulated in the following central question:

Does perceived factors significantly and positively influence fintech adoption intentions from the perspective of bank customers in Setif?

This central question has the following sub-questions:

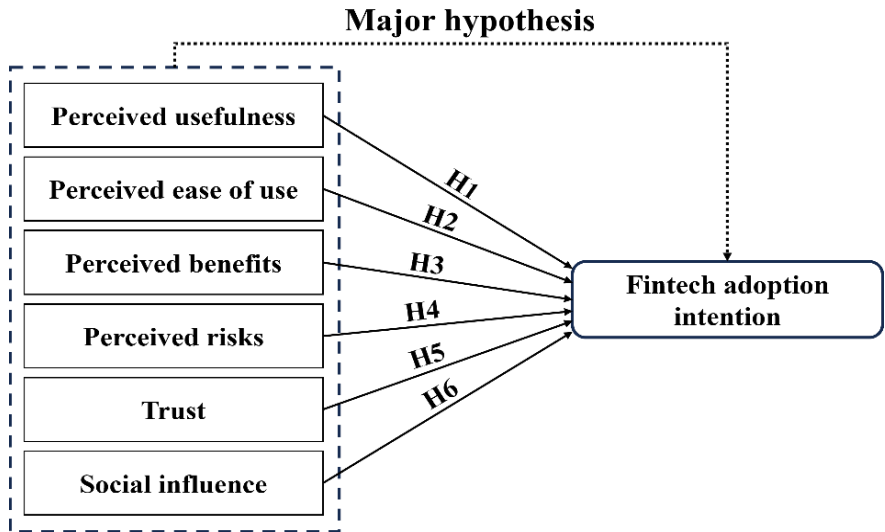
1. Does perceived usefulness significantly influence fintech adoption intentions from the perspective of bank customers in Setif?
2. Does perceived ease of use significantly influence fintech adoption intentions from the perspective of bank customers in Setif?
3. Do perceived benefits significantly influence fintech adoption intentions from the perspective of bank customers in Setif?
4. Do perceived risks significantly influence fintech adoption intentions from the perspective of bank customers in Setif?
5. Does trust significantly influence fintech adoption intentions from the perspective of bank customers in Setif?
6. Does social influence significantly influence fintech adoption intentions from the perspective of bank customers in Setif?

To answer our main question and its sub-questions, the following hypothesis was adopted:

Primary hypothesis: Perceived factors strongly impact the intention to adopt fintech from the point of view of bank customers in Setif.

- H.1. Perceived usefulness significantly impacts the intention to adopt fintech from the point of view of bank customers in Setif.
- H.2. Perceived ease of use significantly impacts the intention to adopt fintech from the point of view of bank customers in Setif.
- H.3. Perceived benefits significantly impact the intention to adopt fintech from the point of view of bank customers in Setif.
- H.4. Perceived risks significantly impact the intention to adopt fintech from the point of view of bank customers in Setif.
- H.5. Trust significantly impacts the intention to adopt fintech from the point of view of bank customers in Setif.
- H.6. Social influence significantly impacts the intention to adopt fintech from the point of view of bank customers in Setif.

Figure (01): Conceptual research model



Source: prepared by the two researchers.

Research importance:

We can summarise the importance of our research in the following two points:

▪ **Scientific Importance:**

This study advances our understanding of fintech adoption by dissecting the complex factors that mold bank customers' intentions. A comprehensive exploration of perceived usefulness, ease of use, benefits, risks, trust, and social influence enriches both bank marketing and technology adoption theoretical frameworks. The context-specific insights from Setif contribute to a deeper grasp of the interplay between

traditional banking and technological advancements, shedding light on consumer behaviour dynamics.

▪ **Practical Importance:**

From a practical perspective, this study is vital in providing operational guidelines on how banks should devise new strategies and products based on their customers' needs. This creates an opportunity for increased customer engagement, higher customer satisfaction, and better competitive positioning within the high-tech industry. Policymakers may use the report's findings in making informed policy regulations. This will help ensure that citizens' rights and financial safety are not compromised as the industry integrates these technologies. Additionally, the area's economy has a favorable prognosis, contributing to increased financial inclusion, entrepreneurship, and investment. It directs decision-making in the banking industry and affects policy forming beyond theories.

Research objectives:

This research paper pursues the following key objectives:

- ✓ A survey that will help assess a high degree of intention among bank users in Setif towards adopting fintech services.
- ✓ To determine the influence of perceived usefulness on the willingness to use fintech.
- ✓ To explore the impact of perceived ease of use on fintech adoption intentions.
- ✓ To examine the association between perceived benefits and intentions of adopting fintech.
- ✓ To investigate how risks are perceived to influence intentions for adopting fintech.
- ✓ Evaluating Trust and Customer Intention towards Fintech Adoption.
- ✓ This study explores the impact of social influence on the intentions of adopting fintech.

Research methodology:

This research uses an analytical descriptive method to analyze the problem, identifying critical variables thoroughly. A study of this nature used an empirical survey whereby a questionnaire sought participants' views and attitudes toward FinTech banking adoption.

Literature of previous studies:

1. Study by (Bouteraa et al., 2023) a paper titled: **“Understanding Consumers’ Barriers to Use Fintech Services in the United Arab Emirates: Mixed-Methods Research Approach.”** The study also intended to add extra UTAUT variables and improve this theory. The ultimate goal was to develop a

comprehensive framework that addresses the prevalent low usage of fintech in the UAE. The study's outcomes revealed several significant insights: A noteworthy correlation exists between consumer awareness and their intention to use fintech services. The influence of personal innovativeness and social impact on consumers' intention to adopt fintech services was also observed.

2. A study by (Abdul-Rahim et al., 2022) titled: **“Benefit-Risk Perceptions of Fintech Adoption for Sustainability from Bank Consumers’ Perspective: The Moderating Role of Fear of COVID-19”** examined the influence of perceived benefits and risks, COVID-19 fear on fintech adoption, and its potential impact on sustainability. The study's outcomes unveiled noteworthy insights: Perceived benefits emerged as a significant influencer of fintech adoption, while perceived risks did not exhibit a significant impact. Moreover, the study found that the fear of COVID-19 is a moderator in the relationship between perceived benefits and fintech adoption, and it also fully mediates the relationship between perceived risks and fintech adoption. Furthermore, the findings indicated that fintech adoption significantly enhances sustainability within the financial landscape.
3. Study by (Chuang et al., 2016) a paper titled: **“The Adoption of Fintech Service: TAM Perspective”** This study aimed to examine consumer behavioral intentions regarding the adoption of fintech services using the (TAM) model as a framework. Additionally, the study integrated brand and service trust considerations to explore their influence on behavioral intention. Through the application of convenience sampling, a total of 440 valid consumer samples were collected. The study highlighted brand and service trust significantly and positively impact attitudes toward utilizing fintech services. Furthermore, perceived usefulness was found to have a notably positive effect on attitudes toward usage, while perceived ease of use exhibited a similar significant positive impact on moods. The study demonstrated that positive attitudes toward usage significantly influence the behavioral intention to adopt and use fintech services.

What sets this research apart is its distinct emphasis on comprehending the breadth of fintech adoption intentions among bank customers in Setif. This approach guarantees a focused and specialized perspective. Unlike prior studies, my investigation is meticulously tailored to a precise geographical area, namely Setif. As a result, this study offers unparalleled insights into the intricacies of fintech adoption within this specific context, clearly distinguishing it from previous research endeavors.

1. Theoretical background:

1.1. Fintech

The acceleration of financial digitization during the last decade of the twentieth century, notably with the establishment of online banks, makes it quite evident. Hence, adopting the term "fintech" comes as no surprise. (Mosteanu & Faccia, 2021, p. 2) Fintech is an abbreviation for “financial technology.” This concept traces its roots to

1866. Its evolutionary stages can be outlined as follows: The initial phase (1866–1967) was marked by the advent of transatlantic cabling and the telegraph's integration as a mode of financial communication. The subsequent stage (1967–2008) witnessed the rise of online banking and ATMs. The current location (2008 onwards) is defined by emerging market players' application of advanced technologies, challenging traditional financial institutions (Lavrinenko et al., 2023, pp. 1–2).

In scientific literature, the definition of fintech is diverse. (Arner et al., 2015) illustrate fintech's ongoing development as a symbiotic evolution of finance and technology. This evolution has sparked various progressive and game-changing innovations, encompassing Internet banking, mobile payments, crowdfunding, peer-to-peer lending, Robo-Advisory, online identification, and more. According to (Xiang et al., 2021, p. 1591), Fintech signifies the convergence of finance and contemporary technology within financial services. It denotes utilizing cutting-edge technologies such as big data, cloud computing, and mobile internet to reshape traditional financial activities like lending, payments, and data analysis, as per McKinsey & Company and the Financial Stability Board (FSB). FinTech involves startups and tech-driven entities transforming financial services. It impacts how consumers handle finances and can shape future business models and services. (Boubidi, 2022, pp. 522–523) Based on the earlier explanations, it can be asserted that financial technology (fintech) includes any novel invention or innovation that utilizes contemporary technologies within the financial industry to offer solutions and enhance convenience for customers. According to (Kagan, 2023) FinTech is pivotal for revolutionizing the financial sector through tech advancements, transforming traditional banking with AI, cloud services, and more. Its impact extends to various sectors like education, retail, and cryptocurrencies.

The characteristics of fintech include the availability of financial services, financing through the local equity market, ease of access to loans, venture capital availability, and financial market development. Fintech also involves trustworthiness and confidence as high-risk factors. Additionally, fintech encompasses advanced technology, funding, and financial capacity. These factors are measured through variables such as the availability of the latest technology, firm-level technology absorption, FDI and technology transfer, innovation, and innovation and sophistication factors. (Ezzat et al., 2016)

Fintech emerges as a promising sector in Algeria, displaying considerable growth potential. Nevertheless, the sector encounters obstacles, particularly in Digital Financial Services (DFS), which can enhance transaction speed, security, transparency, and affordability. The prioritization of digital transformation in Algeria aligns with the developmental agenda, recognizing the significance of accessible financial services in reducing poverty, fostering economic growth, and promoting resilience. Nonetheless, challenges endure, as DFS usage remains limited among

Algerian adults, disproportionately affecting women, thereby underscoring the necessity for heightened awareness and adoption. Endeavors promoting fintech and DFS should educate the general public about their extensive benefits, facilitating their widespread adoption in Algeria (Dorothee & Isabelle, 2021; Youssef & Said Redouane, 2021).

1.2. Fintech adoption

Fintech adoption integrates financial technology into diverse industries such as banking, payments, and investment management. This involves leveraging sophisticated technologies like artificial intelligence, cloud services, and virtual and augmented reality to automate financial processes and enhance financial management (Dubey et al., 2021). According to (Abdul-Rahim et al., 2022), the process that results in the introduction and the use of a process, practice, or product. The rise of technological advancements and the demand for streamlined and accessible financial services have propelled fintech adoption. Additionally, the influence of influencers, artists, and content creators and the focus on financial inclusion for marginalized communities have played a significant role in this trajectory (Dubey et al., 2021). Fintech adoption has experienced considerable growth, especially in the post-pandemic era, positioning itself as a digital substitute for conventional financial systems. (Bajakić & Božina Beroš, 2021)

Adoption of fintech should be embraced as it can foster positive market results. Financial inclusion is essential as economically disadvantaged groups are deprived of these resources, contributing to overall development. Moreover, Fintech simplifies financial operations and decreases customers' and companies' expenditures. Innovative by nature helps promote competition in finance, leading to better product quality and pricing. Moreover, fintech adoption also promotes entrepreneurship and provides money for economic development. To summarize, fintech adoption fosters fiscal inclusion, productivity, competition, and economic development as fundamental determinants of improvement in the fiscal environment. (Feyen et al., 2023)

The fintech adoption process embodies individuals accepting and utilizing fintech services, involving a meticulous assessment of their utility and security aspects. This evaluation shapes personal perceptions and can influence broader social acceptance. Crucially, digital behavior, encompassing internet familiarity and awareness, and demographic features like age and gender, can be significant moderators in the complex relationship between adoption, behavior, and technology attributes. Fintech service providers aim to optimize their offerings by comprehensively understanding and integrating these factors into their service design, enhancing utility and security features to cater to a diverse spectrum of users (Singh et al., 2020). The fintech adoption process encompasses several crucial phases. It starts with technology acceptance, where factors like perceived usefulness and ease of use play a pivotal role. Given the virtual nature of fintech interactions, trust is another

crucial aspect for building lasting customer relationships. Additionally, customer behaviour evolves with fintech advancements, necessitating ongoing research to align with changing trends and behaviours in the fintech landscape. (Firmansyah et al., 2022)

1.3. The determinants of fintech adoption

Fintech adoption determinants encompass the factors influencing individuals' or organizations' choice to utilize fintech services (Firmansyah et al., 2022, p. 26). On the other side, fintech adoption intention refers to the preparedness and commitment of bank users to embrace and employ fintech services. This encompasses a decision-making process in which users evaluate fintech services' benefits, risks, and associated aspects before deciding to adopt. Various factors contribute to this intention, including user innovativeness, government support, brand perception, perceived risk, and trust in fintech services (Hu et al., 2019). As for our paper, we selected the following determinants:

- **Perceived usefulness** is a key determinant of fintech adoption and technology acceptance (Harun et al., 2021, p. 487). It refers to the degree to which an individual believes that using a particular system or technology, such as fintech services, would enhance their job performance or benefit them (Samarasekara et al., 2023, pp. 509–510). The elements of perceived usefulness can be found in the TAM; These factors involve task performance, efficiency, management commitment, relative advantage, compatibility, complexity, and visibility. Together, these elements shape the perception of a technology's effectiveness in enhancing job or life performance. (Benbasat & Barki, 2007; Lee et al., 2003)
- **Perceived ease of use:** as defined by Davis (1989) and elaborated by Venkatesh and Davis (2000), refers to the degree to which mobile banking is perceived as effortless. It is the opinion of an individual's assessment of the effort utilized for using technology (Raza et al., 2017, p. 49). If an application proves challenging for users, it will likely be discontinued. Generally, a system that is easier to use becomes more valuable for its users (Nangin et al., 2020, p. 127). Additionally, security involves managing the personal data of fintech users, encompassing the aspects of maintaining confidentiality and instilling confidence in security guarantees (Abdullatif et al., 2020).
- **Perceived benefits:** are defined as “a user's perception of the potential that fintech use will result in a positive outcome (H. S. Ryu, 2018b, p. 10)”. Customer's intention to use fintech systems is significantly influenced by their perceptions of the system's usefulness and ease of use. The advantages encompass decreased costs associated with financial transactions, heightened efficacy, improved availability of financial services, enhanced customer satisfaction, and the opportunity to access a broader range of financial products and services (Saal et al., 2017, p. 2).

Consequently, numerous research findings indicate that the perceived benefits positively influence customers' inclination to utilize fintech applications, such as mobile payment and Bitcoin. (Al Nawayseh, 2020, p. 14)

The distinction lies between Perceived Usefulness, which pertains to the extent a person believes a system will enhance their job performance or achieve a specific behavior, (Oyibo & Vassileva, 2020) and Perceived Benefits, which encompass the positive impacts or advantages a system offers to users (Januar & M, 2021).

- **Perceived risk:** an individual's subjective evaluation or conviction concerning the possible adverse effects or uncertainties linked to embracing or utilizing a specific system or technology, such as financial technology services. (Samarasekara et al., 2023, p. 510). This is one of the most significant obstacles to the adoption of fintech. Perceived risk comprises different dimensions of which financial risk is included. It relates to monetary loss from hackers or transaction errors (Lee & Shin, 2018, p. 45). Privacy risk arises from apprehensions regarding data privacy and confidentiality in fintech usage (Aldás-Manzano et al., 2009, p. 56). Performance risk involves concerns that the fintech may not function as anticipated, potentially causing disruptions in financial activities (Wang et al., 2003). Psychological risks encompass anxiety related to the learning process associated with using fintech effectively. (Oliveira et al., 2016)
- **Trust:** In fintech adoption, trust involves a party's willingness to be vulnerable based on the expectation that the other party will perform a specific action necessary to the trustor, regardless of the ability to monitor or control that party. This trust is a critical factor shaping consumers' adoption of fintech services. Fintech adoption trust is determined by competence, which reflects the provider's ability and expertise (Hanafizadeh et al., 2014, p. 68). Benevolence trust is the belief that the provider prioritizes the consumer's best interests (Shaikh & Karjaluoto, 2015). Integrity trust involves perceptions of the provider adhering to moral principles like honesty and promise-keeping (Oliveira et al., 2016). Technology trust concerns the reliability of fintech systems and processes for safe and secure functioning. (Lee & Shin, 2018)
- **Social influence:** In fintech adoption, social trust signifies the impact of consumers' attitudes and intentions, shaped by the beliefs, opinions, and actions within their social networks and environment. The crucial elements of social influence encompass subjective norms, denoting the perceived social pressure from influential individuals or groups to adopt the fintech product or service (Slade et al., 2015, p. 862). Image pertains to enhancing social status by adopting fintech innovation (Shaikh & Karjaluoto, 2015). Result demonstrability involves communicating and observing the benefits within one's social circle (Wang et al., 2003). Critical mass involves observing peers adopting and using the fintech, serving as cues for similar actions. (Oliveira et al., 2016)

2. Data analysis

2.1. Sample and data collection:

The research focuses on the adoption of fintech services by Algerian banks, focusing on customers familiar with and engaged with at least one of these services. The study uses a snowball sampling technique to investigate the adoption intention of various Algerian banks towards unfamiliar fintech services not currently offered by Algerian banks but available in other countries. The e-questionnaire was developed to collect data from 104 respondents online and divided into two sections: demographic information and research questions measuring determinants of fintech adoption. The questionnaire was distributed between November 4 and December 11, 2023, in English and Arabic and divided into two sections, evaluating perceived usefulness, ease of use, benefit, risk, trust, social influence, and fintech adoption intention measurement. The data was statistically analyzed using SPSS V.27, using methods such as a simple Linear Correlation Matrix for the Study of Constructive Honesty, the alpha de Cronbach coefficient for questionnaire stability, descriptive statistics metrics to describe the study sample answers, and skewness and kurtosis coefficients to verify the moderate distribution. The hypothesis test was based on the Multiple Linear Regression Test.

After initial screening, the demographic profile of the responders is presented in Table (1). The most significant percentage, 56.7%, comprises males, while 43.3% are females. This discrepancy is attributed to men being more involved in banking activities, handling responsibilities related to home support, spending, saving, and household purchases. Regarding age, the majority, 58.7%, falls within the 18 to 28 age group, with the next group, 31.7%, ranging from 29 to 39 years. The remaining respondents are distributed across the 40 to 50 age group and those above 50. This variation is influenced by the sample type and the inclination of younger individuals to engage with banks, particularly amid technological advancements. Regarding employment status, the majority, 64.4%, are employees in both the public and private sectors, explaining the frequent interaction with banks, especially among the 18 to 39 age group. The remaining sample is divided into 10.6% non-employees and 25% self-employed. Concerning monthly income, the most significant proportion falls within the 20,000 DZD to 50,000 DZD range, with 36.5% having an income exceeding 50,000 DZD. This variation reflects the diverse income levels, considering the study's inclusion of non-working individuals and some self-employed reporting income below 20,000 DZD, in line with the basic wage in Algeria. When respondents were questioned about their awareness of financial technology services, the majority, approximately 81.7%, indicated familiarity with the "Online payment to pay invoices or purchase goods and services." service. Conversely, only 18.3% of respondents knew the "Obtaining loans or personal finance services online" service. The remaining services were recognized by respondents at rates ranging from 54.8% to 68.3%.

Table (01): Sample characteristics

Demographic Variable and Category			Frequency	Percentage
Gender	Male		59	56,7%
	Female		45	43,3%
Age	18-28 yo		61	58,7%
	29-39 yo		33	31,7%
	40-50 yo		6	5,8%
	Over 50 yo		4	3,8%
Employment status	Employed		67	64,4%
	Un-employed		11	10,6%
	Self-employed		26	25%
Income per month	Under 20000 DZD		21	20,2%
	50000-20000 DZD		45	43,3%
	Over 50000 DZD		38	36,5%
What fintech services do you know?	Use online banking to access and manage your bank account.	Yes	71	68,3%
		No	33	31,7%
	Use applications to follow your account or make calculations.	Yes	77	74%
		No	27	26%
	Online payment to pay invoices or purchase goods and services.	Yes	85	81,7%
		No	19	18,3%
	Electronic transfer services for transferring funds between financial accounts.	Yes	64	61,5%
		No	40	38,5%
	Receive alerts and notifications from the Bank about your financial activities and transactions.	Yes	57	54,8%
		No	47	45,2%
	Obtaining loans or personal finance services online.	Yes	19	18,3%
		No	85	81,7%

Source: prepared by the two researchers using SPSS V.27.

2.2. Instrument development

In designing the questionnaire, we referred to various sources and prior studies with similar themes, as depicted in Table 2. Questions for the first dimension, "**Perceived usefulness**," were drawn from the studies of (Hoang et al., 2021) and (Chuang et al., 2016). Phrases for the second dimension, "**Perceived ease of use**," were borrowed from the studies of (Chuang et al., 2016) and (Hassan et al., 2022). The "**Perceived benefit**" dimension utilized phrases from the study of (Abdul-Rahim et al., 2022), while those for the "**Perceived risk**" dimension were derived from the studies of (Abdul-Rahim et al., 2022) and (Putritama, 2019). the dimensions after "**trust**" were sourced from various studies, with the first from (Hoang et al., 2021), the second from (Rajan et al., 2022), and the third from (Chuang et al., 2016). The four phrases after "**social influence**" were obtained from the study (Bouteraa et al., 2023). Questions related to "**Fintech adoption intention**" were drawn from my study (H.-S. Ryu, 2018) and the study by (Hoang et al., 2021).

Table (02): Measurement instruments

Variables	Measurement Items	Sources
Perceived usefulness (PU)	Using Fintech services helps me save time in transactions.	(Hoang et al., 2021)
	Fintech products increase transaction efficiency compared to traditional banking products.	
	I think I can rapidly obtain information using the Fintech Service.	(Chuang et al., 2016)
	I think using Fintech Service can make life more convenient.	
Perceived ease of use (PE)	I think it is accessible to learn Fintech Services without spending too much time.	(Chuang et al., 2016)
	I think it is effortless to complete transactions using the Fintech Service.	
	It is easy to have a device to use Fintech services.	(Hassan et al., 2022a)
	I find fintech apps to be flexible to interact with.	
Perceived benefit (PB)	Using FinTech allows me to use financial services anywhere and anytime.	(Abdul-Rahim et al., 2022)
	Using FinTech enables me to use financial services more quickly.	
	Using FinTech is more convenient than traditional financial services.	
Perceived risk (PR)	Using FinTech makes me worried that other people might steal my account information.	(Abdul-Rahim et al., 2022)
	Financial losses are likely when I use Fintech.	(Putritama, 2019)
	It is not easy to use Fintech due to government regulations.	
Trust (TR)	Fintech services keep personal information secure.	(Hoang et al., 2021)
	Customers feel confident when using FinTech services.	(Rajan et al., 2022)
	I believe the transaction process and results of Fintech services are correct.	(Chuang et al., 2016)
Social influence (SI)	People who are important to me think that I should use fintech services.	(Bouteraa et al., 2023)
	People who are familiar with me think that I should use fintech services.	
	People who influence my behaviour think that I should use fintech services.	
	It is trendy to use fintech services.	
Fintech adoption intention (FAI)	I would positively consider Fintech in my choice set.	(H.-S. Ryu, 2018)
	I would prefer Fintech.	
	I will use Fintech in the future.	
	I will recommend my friends to use Fintech services.	(Hoang et al., 2021)

Source: prepared by the two researchers using SPSS V.27.

3. Results and discussion

3.1. Scale Validity and Reliability

To assess the reliability of the study tool, we computed Cronbach's Alpha transactions and correlations of the study dimensions with the overall questionnaire, presented in Table 3. The sincerity of the tool was confirmed through vital Pearson correlation transactions between study dimensions and the entire questionnaire, indicating their consistency. Questions related to trust demonstrated an intermediate level of correlation with dimensions and the tool as a whole. However, perceived risks showed weak correlation results with other dimensions and the questionnaire. Regarding questionnaire stability, all values, including overall resolution and individual dimensions, fell within the range of 0.667 to 0.864, exceeding the standard

limit of 0.6, affirming the questionnaire's good consistency and reliability. In conclusion, the study tool is honest and consistent across its sections, providing reliable results.

Table (03): Reliability and validity measures

Dimensions	Items	Cronbach's Alpha	Pearson's correlation
Perceived usefulness	4	0,848	0,778**
Perceived ease of use	4	0,694	0,811**
Perceived benefit	3	0,758	0,718**
Perceived risk	3	0,667	0,218*
Trust	3	0,734	0,464**
Social influence	4	0,730	0,534**
Fintech adoption intention	4	0,864	0,813**
Combined scale	25	0,862	1

Source: prepared by the two researchers using SPSS V.27.

3.2. Hypotheses Testing

Before conducting the Multiple Linear Regression test to verify the validity of the study hypotheses and in order to achieve its objectives, it is necessary first to ascertain the terms of this test, namely the moderate distribution of all study variables tracking normal distribution, that the study variables should be independent and not overlap between (Multicollinearity) and finally that each variable must be associated with itself to a higher degree than with other (Correlations).

3.2.1. Normality test:

Our study had 104 respondents, allowing us to meet the requirement of a sample size exceeding 30 comfortably. Despite this, we took extra steps to ensure the normal distribution of study variables. We measured skewness and kurtosis values, in which skewness transactions should be within the -1 to 1 range and kurtosis transactions at -3 to 3 for a variable to be regarded as normally distributed. From Table 4, it comes out that all variables except perceived usefulness do not conform.

Table (04): Test for normality using the Skewness-Kurtosis test

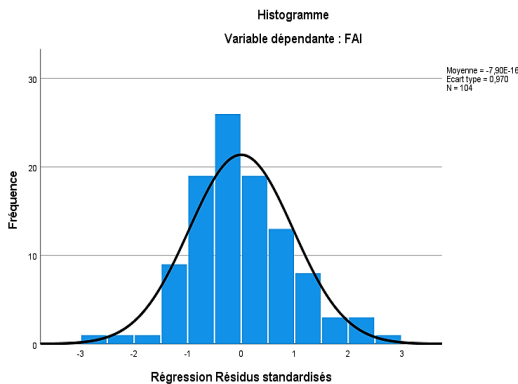
Dimensions	Skewness value	Kurtosis value
Perceived usefulness	-1,115	1,828
Perceived ease of use	-0,382	0,859
Perceived benefit	-0,504	0,887
Perceived risk	-0,241	0,040
Trust	-0,271	0,961
Social influence	0,006	-0,212
Fintech adoption intention	-0,357	1,081

Source: prepared by the two researchers using SPSS V.27.

Additionally, we employed the normality plot of regression standardized residuals to confirm the condition of a moderate distribution further. Figure 2 illustrates the fulfilment of the normality assumption, with all standardized residual values falling within the acceptable range between -3 and +3, as evident in the histogram of

regression standardized residuals. This comprehensive approach ensures that the normal distribution condition is reliably met.

Figure (02): Regression Standardized Residual’s Histogram



Source: prepared by the two researchers using SPSS V.27.

3.2.2. Multicollinearity test:

The second test condition is that the study variables are independent. We checked this condition's respective statistical data of the Tolerance and Variance Inflation Rate. Tolerance values must be more than 0,2, and the VIF values must be lower than 10. Table No. The final results are indicated as 5. All of these are considered normal limits. This proves that the study variables are independent of one another.

Table (05): Testing the independence of variables (Multicollinearity)

Dimensions	Tolerance	VIF
Perceived usefulness	0,494	2,026
Perceived ease of use	0,488	2,050
Perceived benefit	0,514	1,947
Perceived risk	0,854	1,171
Trust	0,741	1,349
Social influence	0,831	1,203
Fintech adoption intention	0,494	2,026

Source: prepared by the two researchers using SPSS V.27.

3.2.3. Correlations test:

Conditions include a check to ensure no overlapping points between each study dimension; one must not be redundant about this or that. Pearson correlation coefficients cannot exceed 80 percentage points. Table 6 shows the correlation transactions and results of this test. As for his interference with the rest of the variables, this is what that matrix represents. Specifically, it gives us the correlation value between each A variable and all other variables. The digit datasheet shows such words. We can now do the multiple regression test and trust its results from the preceding conditions after the three conditions have been met.

Table (06): Pearson correlation coefficient test

	ALL_Scale	PU	PE	PB	PR	TR	SI	FAI
ALL_Scale	1	0,778**	0,811**	0,718**	0,218*	0,464**	0,534**	0,813**
PU	0,778**	1	0,641**	0,605**	0,125	0,209*	0,164	0,607**
PE	0,811**	0,641**	1	0,577**	0,111	0,210*	0,310**	0,652**
PB	0,718**	0,605**	0,577**	1	-0,079	0,353**	0,136	0,612**
PR	0,218*	0,125	0,111	-0,079	1	-0,289**	0,019	0,110
TR	0,464**	0,209*	0,210*	0,353**	-0,289**	1	0,291**	0,299**
SI	0,534**	0,164	0,310**	0,136	0,019	0,291**	1	0,259**
FAI	0,813**	0,607**	0,652**	0,612**	0,110	0,299**	0,259**	1

** The correlation is significant at the 0.01 level (two-tailed).

* The correlation is significant at the 0.05 level (two-tailed).

Source: prepared by the two researchers using SPSS V.27.

3.2.4. Multiple Linear Regression Test:

To verify the validity of the central hypothesis, i.e., to validate the null hypothesis or alternative hypothesis, we tested the multiple linear regression to determine the extent to which perceived factors affect the intention for fintech adoption. Through Table 7, which shows the Model summary, we note that the values of R^2 adjusted were estimated at 0.523, meaning that the model explains that 52.3% of the changes occurring in Fintech adoption intention are due to the perceived factors studied and the rest of the changes are due to other reasons.

Table (07): Model summary

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	0,742 ^a	0,551	0,523	0,38110

a. Predictors: (Constant), SI, PR, PB, TR, PU, PE

b. Dependent variable: FAI

Source: prepared by the two researchers using SPSS V.27.

Table 8, the ANOVA table, shows that the value of Fischer (F) was 19,835 at an indicative level of 0.000, which is less than the indicative level imposed in the study or less than 0.05, indicating a statistically significant correlation between the perceived factors studied and the intention to adopt fintech. We reject the null hypothesis and accept the alternative hypothesis: "Perceived factors strongly impact the intention to adopt fintech from the point of view of bank customers in Setif."

Table (08): ANOVA table

Model	Sum of squares	ddl	Mean square	F	Sig
1 Regression	17,285	6	2,881	19,835	,000 ^b
Student	14,088	97	0,145		
Total	31,373	103			

a. Predictors: (Constant), SI, PR, PB, TR, PU, PE

b. Dependent variable: FAI

Source: prepared by the two researchers using SPSS V.27.

Based on the analysis of the transaction schedule described in Table 9, the model is statistically significant and shows that both perceived usefulness, Perceived ease of use, and Perceived benefit contribute to and affect individually the intention to

adopt financial technology. We found that perceived risk, trust, and social influence neither contribute to nor affect the intention to adopt Fintech. This result has been achieved given the statistical indicator level shown in the table below and compared with the statistical indicator level.

Table (09): Parametric evaluation
Coefficients^a

Model		Unstandardized Coef		Standardized Coef	T	Sig
		B	Std. Error	Beta		
1	(Constant)	0,353	0,415		0,850	0,397
	PU	0,174	0,087	0,192	1,988	0,050
	PE	0,317	0,097	0,319	3,273	0,001
	PB	0,250	0,087	0,274	2,888	0,005
	PR	0,087	0,063	0,102	1,380	0,171
	TR	0,092	0,068	0,107	1,360	0,177
	SI	0,050	0,065	0,058	0,775	0,440

a. Dependent variable: FAI

Source: prepared by the two researchers using SPSS V.27.

Based on the table below and the statistically significant t values, the values for perceived usefulness, ease of use, and benefit are 1,988, 3,273, and 2,888. These values indicate the direction of the relationship between these variables and the intention to adopt fintech where there is a positive statistical impact. From Table 10, the perceived ease of use variable came first, explaining 42% of the variability in the intention to adopt fintech, and then entering after perceived benefit and explaining 51% of the changes in the dependent variable, eventually entering after Perceived usefulness and explaining 52% of the changes in the intention to adopt fintech.

In the end, we can say that the sub-hypotheses of the study were partially realized, as H1, H2, and H3 were achieved, which provided for "Perceived usefulness & perceived ease of use & perceived benefit significantly impacts the intention to adopt fintech" Any effect of these voting factors on the intention to adopt fintech in the opinion of our research sample. Hypotheses H4, H5, and H6, which read "Perceived risk & trust & social influence significantly impact the intention to adopt financial technology", were not fulfilled. That is, it does not affect the intention to adopt fintech based on the views of the study sample.

Table (10): Results of stepwise multiple regression analysis

Model	R	R ²	Adjusted R ²	F	Beta	T	Sig
1 PE	0,652 ^a	0,425	0,420	75,466	0,356	3,799	0,000
2 PB	0,713 ^b	0,509	0,499	52,323	0,280	3,095	0,003
3 PU	0,729 ^c	0,531	0,517	37,761	0,210	2,180	0,032

a. Dependent variable: FAI

Source: prepared by the two researchers using SPSS V.27.

3.3. Discussion:

This study examines the adoption intentions of fintech among bank customers in Setif, focusing on Muslim clients. It differs from previous research in the United Arab Emirates and Malaysia, using a Muslim sample and different demographic data. The findings offer insights into the adoption of fintech among Algerian banking customers in the study of (Chuang et al., 2016), (Bouteraa et al., 2023), (Abdul-Rahim et al., 2022), and (H.-S. Ryu, 2018), the most significant percentage of their respondents were female, while in our study, males had a more significant part. This variance can be attributed to the higher involvement of men in banking activities in Algeria. Regarding age distribution, our findings align with earlier studies, demonstrating that many fintech users in banks are young, typically aged between 18 and 30. It is worth noting an exception found in the study (H.-S. Ryu, 2018), which indicated a more significant proportion of respondents in the 40 to 49 age group. As for the level of employment, our studies were also in line with the study (Bouteraa et al., 2023) and (Abdul-Rahim et al., 2022). The most significant proportion of the study sample of employees was in different positions (government, private sector, and entrepreneurs).

Regarding the results of our hypothesis testing, our findings align with certain previous studies referenced in our research while diverging from others. Specifically, for the first hypothesis (H1) stating that **"Perceived usefulness significantly impacts the intention to adopt fintech from the point of view of bank customers in Setif,"** we observed that this hypothesis holds, and the impact is of moderate magnitude. This outcome works with the findings of studies such as (Zhang et al., 2023), (Chuang et al., 2016), and (Almashhadani et al., 2023). Specifically, the study by (Almashhadani et al., 2023) reported a moderate effect based on respondent opinions, though distinctions in the magnitude of the effect were observed in the latter two studies. The second hypothesis read, **"Perceived ease of use significantly impacts the intention to adopt fintech from the point of view of bank customers in Setif."** Which we have found to be achievable and moderate in effect. It is consistent with previous studies, even in the severity of the impact. The study (Chuang et al., 2016), (Zhang et al., 2023), and (Almashhadani et al., 2023) have also found an intermediate impact on the intention to adopt fintech, and (Hassan et al., 2022) have found a strong impact. As for the third hypothesis, which read **"Perceived benefit significantly impacts the intention to adopt fintech from the point of view of bank customers in Setif,"** our findings aligned with (H.-S. Ryu, 2018) study where, according to the sample, we found that there was a statistically significant average effect. Regarding Hypotheses 4, 5, and 6, our study presents discrepancies with prior research that indicated the presence of a statistically significant effect, whether positive or negative. For Hypothesis H4, asserting, **"Perceived risk significantly impacts the intention to adopt fintech from the point of view of bank customers in Setif,"** our study

contravened both my studies (H.-S. Ryu, 2018) and (Almashhadani et al., 2023), and we found that, according to the study sample, there is no significant impact on the adoption of financial technology. Similarly, for Hypotheses H5 and H6, stating, **"Trust & social influence significantly impact the intention to adopt fintech from the point of view of bank customers in Setif,"** our study sample views show no statistically significant impact on the intention to adopt fintech, differing from the conclusions reached by previous studies (Almashhadani et al., 2023) and (Hassan et al., 2022).

Our respondents' perspectives elucidate the study results, indicating that customers of smaller banks utilizing fintech services like electronic payment, remittances, and lending are influenced by adding new services. This influence is contingent on these services' perceived effectiveness, ease of use, and benefit, with no discernible impact from the perceived risk or trust level. Notably, respondents do not place trust in fintech services to maintain data confidentiality and error-free operations. Due to limitations, it is essential to recognize that the study that comes about is not generalizable to the broader research community. These constraints include the challenges in obtaining cooperation and responses from bank customers during the applied study. Bankers can use the results of our study if they want to add financial technology services to keep abreast of the development of other countries in this field, whether the Arab countries such as Egypt, the Gulf Cooperation Council countries, or African countries, such as Kenya and Nigeria, the National Bank of Algeria (BNA) with early 2023 on its study of the possibility of adding digital currency (Algerian digital dinar), as can focus on the customer information security element and prepare and respond to fix technical problems that constantly occur especially in ATM automated distributors.

Conclusion:

We observe that the intention to adopt fintech among Setif bank customers is median influenced by perceived usefulness, perceived ease of use, and the anticipated benefits associated with fintech services. The study indicates that considering additional financial technology services, such as enhanced transfer functionality, utilizing blockchain technology in financial transactions, and investing in digital currencies by public and private banks, could further drive adoption intentions. This suggests a unique characteristic of the sample study, where customers from banks in Setif exhibit a distinct interest and willingness to adopt these services for the perceived benefits, convenience, and user-friendliness rather than being influenced by external factors like risks or social influence.

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