
Factors influencing Algerian Consumers usage of Mobile Apps: A study Based on UTAUT2 framework

Hnanae Fathi*

Islamic Financial Studies and Sustainable

Development,

Centre Universitaire Tipaza - Algeria

Fathi.hanane@cu-tipaza.dz

Received: 22/11/2024

Mouloud Houas

Université Alger 03

houlas.md@univ-alger3.dz

Accepted: 27/11/2024

Lazhar Chine

Université de Boumerdes - Algeria

l.chine@univ-boumerdes.dz

Published: 15/12/2024

Abstract

The purpose of this study was to examine and identify the elements influencing Algerian consumers' use of mobile applications using the theoretical model of acceptance and use of expanding technology. UTAUT2 was conducted by examining a sample of 131 persons who used the application "djezzy App." It was examined using the Smartpls4 software, and the study indicated that habit is the most important factor on the intention to use the "djezzy App" application, followed by expected performance, which had a weak influence, and expected effort, which had a weak negative effect, while the remaining UTAUT2 components had no effect. In terms of absolute application usage, the habit factor had a significant impact, as did the desire to use, but no effect was observed for enabling conditions.

Keywords: Mobile commerce; Smart Apps; Djezzy App; UTAUT2; SmartPls

Jel Classification Codes:L81.

*Corresponding author.

1. Introduction

Currently, global trade is transitioning towards mobile commerce, or "m-commerce," which constitutes 60 percent of total e-commerce sales due to the pervasive usage of smartphones and their integration into contemporary society worldwide. Intelligent applications serve as the primary catalyst for this trade by enhancing user experience through the elimination of temporal and spatial constraints, facilitating various daily tasks such as product searches, price comparisons, and seamless transactions with minimal exertion.

They are essential to the consumer's everyday. Despite the significant disparity in technology adoption between developed and developing nations, attributed to variations in economic, social, and technological advancement, there has been a notable surge in consumer interest in smart applications in developing countries, particularly Algeria, following the Covid-19 crisis. However, these regions continue to experience a substantial deficiency in research and studies on this subject. Most contemporary research focuses on industrialized markets, resulting in a deficiency in comprehending these dynamics within local settings.

Enhancing research in this domain may facilitate the formulation of successful local initiatives that promote digital transformation and more adequately address the demands of Algerian consumers. The "Djezzy App" in Algeria exemplifies these transformations, having been downloaded over 5 million times, rendering it an appropriate subject for analysis through the Unified Theory of Acceptance and Use of Technology (UTAUT2), the most comprehensive model of technology acceptance, applicable across diverse technologies, participants, and contexts, particularly in consumerism. Employing contemporary data analysis technologies like SmartPLS4 to ascertain the primary elements influencing Algerian customers' adoption of smart apps.

1.1. Research issue

What Factors influence consumer acceptance Algerian equivalent for the "Djezzy App"?

1.2. Research sub-questions

- In what manner do UTAUT2 factors influence the intention of Algerian customers to use the "Djezzy App"?
- To what degree do the intention to use, habit, and facilitating condition influence the actual consumption patterns of Algerian consumers regarding the "Djezzy App"?

1.3. Hypothesis

- **H1** : A statistically significant impact exists at the 1% level for "intention to use" the Djezzy App on "actual use".
- **H2** : A statistically significant impact exists at the 1% level for "Performance Expectancy" on "intention to use" the Djezzy App
- **H3** : A statistically significant impact exists at the 1% level for "Effort Expectancy" on "intention to use" the Djezzy App

- **H4:** A statistically significant impact exists at the 1% level for "Social Influence" on "intention to use" the Djazzy App
- **H5:** A statistically significant impact exists at the 1% level for "Facilitating Condition" on "intention to use" the Djazzy App
- **H6:** A statistically significant impact exists at the 1% level for "Facilitating Condition" on "actual usage." the Djazzy App
- **H7:** A statistically significant impact exists at the 1% level for "Hedonic Motivation" on "intention to use" the Djazzy App
- **H8:** A statistically significant impact exists at the 1% level for "Price Value" on "intention to use" the Djazzy App
- **H9:** A statistically significant impact exists at the 1% level for "Habit" on "intention to use" the Djazzy App
- **H10:** A statistically significant impact exists at the 1% level for "Habit" on "actual usage."

1.4. The aim of the research

- This research seeks to elucidate the degree of acceptability of mobile apps among Algerian consumers by identifying the elements that impact their adoption, therefore enhancing the understanding of local behaviors and preferences.
- Proposing and finding appropriate theoretical models for technology adoption in the Algerian setting, which may vary from those used in Western or worldwide contexts.
- Offering actionable advice to application developers and mobile service providers for enhancing their products and boosting adoption rates among Algerian customers.

1.5. The significance of the research

- This work is significant since it addresses a contemporary issue that requires more research emphasizes the use of consumer technology, a sector valued in the billions of dollars.
- Assisting enterprises in aligning their marketing and promotional strategies for their apps with the demands and tastes of Algerian consumers.
- Enhancing user experience by offering advice to refine the design and development of apps, hence increasing their appeal and usability for the Algerian consumer.
- Fostering the local economy by promoting innovation and technological use, hence augmenting economic growth and advancing the technology sector in Algeria.

1.6. Methodology

This study used the descriptive-analytical approach, a crucial research method in the Humanities and social sciences, particularly in investigations necessitating profound comprehension. To analyze the correlations among various variables, incremental stages were undertaken after the identification of the research issue.

Data was gathered using a questionnaire instrument and then processed and extracted utilizing the SmartPLS4 software, the primary findings and their analysis, followed by the presentation of suggestions.

2. Theoretical Framework of the Research

2.1. The notion of a mobile application

It is an application intended for cellphones, obtainable via app stores. Global telecommunications firms provide users with interaction capabilities based on the device's operating system (iOS or Android) via a designed interface, which provides a range of services, both complimentary and premium (Nadjwa, Nihahl, & Douaa, 2023)

2.2. The Significance of Implementing a Mobile Application for the organization

- Enhances the formation of a positive mental representation of the institution and influences clients' perceptions about its alignment with technology advancements.
- Enhance conversion rates to the organization's website using the application, hence improving its search engine ranking.
- Access to an extensive consumer base, both existing and prospective, therefore enhancing sales and profitability while acquiring a greater market share.
- The application enhances communication and connection with consumers, enabling the company to anticipate their wants and preferences by gathering their feedback on product evaluations.
- The program offers the firm a valuable chance to establish a client database that facilitates the identification of consumer traits and purchase behaviors, hence enabling the formulation of successful marketing plans and strategies. (Narimene, 2024)

2.3. The Unified Theory of Acceptance and Use of Extended Technology (UTAUT2)

UTAUT is regarded as a pivotal approach for comprehending individual acceptance and use of technology. it was formulated by Venkatech and colleagues in 2003, subsequent to an exhaustive examination of the eight most significant theories in technology adoption: TRA, TAM, TPB, the integration of TPB and TAM, DIT, MPCU, MM, and SCT (Kuttimani, Nipondra, & Samuel, 2021)

This aims to provide a cohesive and thorough framework for examining user technology adoption and addressing the challenges researchers have when selecting among many theories. The idea offers a robust explanation that forecasts humans' acceptance of technology usage with about 70% accuracy. This model posits

that the actual utilization of technology within an organizational context is influenced by the intention to use or attitude towards usage, which is further shaped by four fundamental constructs: perceived usefulness, perceived ease of use, social influence, and facilitating conditions, alongside moderating variables such as age, gender, experience, and voluntariness of use (Haitham, 2017).

The emergence of consumer technologies required the adaptation of the UTAUT model to the consumer context, necessitating the inclusion of three primary constructs: hedonic motivation, which highlights utility; price value, which can influence consumer decisions; and habit, which is essential in the technology usage decision and competes with behavioral intention. (Venkatesh & Tong, 2012).

2.4.Component of UTAUT2

- **Performance Expectancy (PE) :** The advantage that a customer gains from participating in certain activities using technology serves as the most robust and often used metric for forecasting technology adoption (Saumell, Colly, & Garcia, 2019). Our research indicates the extent to which Algerian consumers perceive that using the Djazzy App would enhance their everyday life and provide access to a diverse array of services and information.
- **Effort Expectancy (EE) :** This variable delineates the extent of convenience experienced by customers in using technology. Consumers are more inclined to accept a new system or technology when its usability is straightforward (Talaat & Sayed, 2022). This variable elucidates the extent to which Algerian users see the Djazzy App as user-friendly and simple to use.
- **Social Influence (SI) :** Social influence is defined as the extent to which a person feels that significant individuals in their life advocate for the adoption of new technologies. It indicates the degree to which the views of users' friends, relatives, and coworkers influence their behavior (Mohamed & Hella, 2023). In the context of our research, this word denotes the extent to which Algerian consumers consider that those affecting their behavior advocate for the use of the Djazzy application.
- **Facilitating Conditions (FC) :** The extent to which a person perceives the existence of an organizational and technological infrastructure that facilitates system use (Venkatesh, Moris, & David, 2003). In our research, technology refers to the Algerian consumer's opinion of the existing infrastructure and regulations to enhance the application's usability.
- **Hedonic Motivation (HM) :** The pleasure motive serves as an indicator of the intention to engage with technology and is a crucial determinant of its acceptance, reflecting the enjoyment or amusement derived from its use without any supplementary benefits (Maria, Sarinto, & José). This reflects the degree of the Algerian consumer's sentiments and satisfaction when using the program.

- **Price Value (PV)** : The price value is a differential process between the advantages of using technology and the corresponding expenses, wherein the price value increases as the perceived benefits of technology surpass the incurred costs (Fuad, 2022). We evaluate the expense of using the Djazzy app in relation to the advantages derived from its use.
- **Habit (HB)** : Habit is characterized by the extent to which people engage in automatic activities as a result of learning. It is a habitual action that transpires involuntarily, devoid of conscious deliberation (Saumell, Colly, & Garcia, 2019). In the realm of technology adoption, habit significantly influences the degree to which people use and persist in using technological applications, making it a vital determinant of successful technology adoption. This study will evaluate the degree to which Algerian customers are familiar with the Djazzy App and its influence on real use.
- **Behavioral Intention (BI)** : Refers to the extent to which an individual is inclined to formulate deliberate plans to engage in a certain future activity (Ammar & Mohhamed, 2020), I indicates the probability of Algerian consumers use the Djazzy App in our survey.

3. The pragmatic dimension of the research

3.1. Data Collection Instrument

An electronic questionnaire was developed using the "Google Forms" function, based on the UTAUT2 dimensions, to swiftly and effectively gather data and maximize consumer reach. The questions for each component of the theory were meticulously chosen to represent the study variables after an examination of prior research and their adaptation to the attributes of the Djazzy App. The five-point Likert scale, the most used method for assessing attitudes, was utilized. Upon completion and approval, the questionnaire was disseminated electronically via social media sites and email.

3.2. Study Population and Sample

The research population comprises all mobile application users in Algeria, particularly those using the Djazzy App, including a diverse range of ages and socio-economic and geographical origins. The research sample used a non-random or purposive strategy, targeting users of the Djazzy App, resulting in 131 completed surveys, all deemed valid for analysis.

3.3. The Employed Statistical Methods

To precisely examine the research data and evaluate the validity of our hypotheses, we used the most successful statistical approach in the social and behavioral sciences, Partial Least Squares Structural Equation Modeling (PLS-SEM).

The SmartPls4 application is optimal for evaluating causal linkages between variables and testing theoretical models, particularly in structural path analysis, and is capable of managing increasingly complicated models and multidimensional data.

4. Results and discussion

4.1 Analysis of the Measurement Model

Referred to as the external model, its objective is to assess the quality of the study model indicators by validating their reliability and the stability of the observed variables, as well as elucidating their relationships with the latent variables through the evaluation of the subsequent indicators :

- **Convergent validity:** It assesses the degree of consistency and convergence among observable variables for interpretation latent variables, , are evaluated using Factor Loading, which must be at least 0.6, and Composite Reliability (CR), which should not go below 0.7. The Average Variance Extracted (AVE) is deemed significant when its value is 0.5 or above (Hair, Sartetd, & Ringle, 2012). The findings of this investigation are shown in Table No. 01.

Table N°1: Results of the Convergent Validity Assessment

Performance Expectancy PE	AVE Average Variance Extracted	0.508
	CR (rho_c) Composite Reliability	0.837
	The Djezzy application allows me to view all the services provided by the institution (EP1)	0.680
	The Djezzy app helps me to know the available offers and choose the one that suits me (EP2)	0.793
	Thanks to the notifications I receive through the app, I can get everything new in time (EP3)	0.713
	Through the application, I can control my credit consumption from calls and the Internet(EP4)	0.717
	I can get free credit for calls and internet by participating in the SCAN & WIN game (EP5)	0.654
Effort Expectancy EE	AVE Average Variance Extracted	0.627
	CR (rho_c) Composite Reliability	0.834
	Allow me The application allows you to recharge your balance or pay your consumption bill via electronic payment without going to points of sale (EE1)	0.732
	Thanks to the application, I can communicate with service providers without the need for accredited agencies (EE2).	0.890
Social Influence SI	The application guides me to the location of the nearest authorized agency via GPS.(EE3)	0.744
	AVE Average Variance Extracted	0.845
	CR (rho_c) Composite Reliability	0.942
	People who matter to me think I should use the Djezzy app. (SI1)	0.888
	People who influence my behavior think I should use the Djezzy app. (SI2)	0.930
Facilitating conditions FC	I prefer people whose opinions I value. Using the Djezzy app (SI3)	0.940
	AVE Average Variance Extracted	0.653
	CR (rho_c) Composite Reliability	0.849
	Djezzy covers most areas of the country with high quality. (FC1)	0.819
	The method of downloading the application is easy and fast (FC2)	0.712
	The application interface is attractive and more comfortable, providing a great browsing experience. (FC3)	0.885

Hedonic Motivation HM	AVE Average Variance Extracted	0.777
	CR (rho_c) Composite Reliability	0.913
	I have a great time reading books and magazines provided by the Djezzy app on the Youscribe library. (HM1)	0.844
	I enjoy listening to a variety of music freely on Anghami. (HM2)	0.893
	unlimited and ad- free mobile games that the app provides. (HM3)	0.907
Price value PV	AVE Average Variance Extracted	0.530
	CR (rho_c) Composite Reliability	0.818
	Download the app for free (PV1)	0.639
	Subscribing to the services provided by the application, such as learning English, reading books, downloading games, and other services, is of good value compared to its price (PV2)	0.777
	The price of transferring credit from calls and the Internet to other people is reasonable. (PV3)	0.705
	The application allows me to get free credit by participating in some games. (PV4)	0.782
Hait HB	AVE Average Variance Extracted	0.810
	CR (rho_c) Composite Reliability	0.928
	Using the app has become a habit for me. (HB1)	0.929
	I became addicted to using the app. (HB2)	0.884
	Using the app has become second nature to me. (HB3)	0.886
behavioral intention BI	AVE Average Variance Extracted	0.820
	CR (rho_c) Composite Reliability	0.932
	I intend to continue using the application (BI1).	0.908
	I will always try to use the app to get my daily needs . (BI2)	0.924
	I will recommend all my close friends to use the application and benefit from its feature (BI3)	0.884
Use behavior UB	AVE Average Variance Extracted	0.788
	CR (rho_c) Composite Reliability	0.937
	I spend a lot of time browsing the app. (UB1)	0.875
	I complete all my transactions with Djezzy using the app. (UB2)	0.887
	Take advantage of all the services provided by the application (UB3)	0.880
	Make sure to use the app frequently. (UB4)	0.908

Source: Prepared by the researchers, extracted from SMARTPLS4

The results shown in Table No. 01 indicate that the study indicators and their variables have exceeded all prior criteria, hence affirming the validity and reliability of the research instrument.

- **Discriminant Validity** : This indicator quantifies the extent of divergence and dissimilarity among the research variables,. It was assessed using the Fornell-Larcker criteria, which is satisfied when the square root of the AVE for each variable exceeds the correlations between that latent variable and every other latent variable in the model (Hair, Sartetd, & Ringle, 2012). Table 02 delineates the findings of this criteria relevant to our investigation.

Table 02: Fornell-Larcker criterion

	BI	EE	EP	FC	HB	HM	PV	SI	UB
BI	0,905								
EE	0,270	0,792							
EP	0,540	0,581	0,713						
FC	0,488	0,385	0,463	0,808					
HB	0,724	0,466	0,499	0,522	0,900				
HM	0,480	0,538	0,554	0,559	0,604	0,882			
PV	0,445	0,537	0,461	0,575	0,584	0,677	0,728		
SI	0,648	0,426	0,500	0,587	0,712	0,629	0,492	0,919	
UB	0,766	0,458	0,585	0,455	0,793	0,663	0,655	0,702	0,888

Source : Prepared by the researchers, extracted from SMARTPLS4

Table No. 02 illustrates that the square root of the (AVE) for each variable exceeds the correlation coefficients with other latent variables, confirming the fulfillment of this requirement and demonstrating robust discriminant validity within the model.

4.2. Evaluation of Structural Models

- **Coefficient of determination (R^2):** It articulates the model's explanatory capacity, since it assesses the extent to which the combined independent variables elucidate the variation in the dependent variables. The number ranges from (0) to (1), indicating negligible explanatory power if $R^2 < 0.02$, poor explanatory power if $0.02 \leq R^2 < 0.12$, and high explanatory power if $0.12 \leq R^2 < 0.25$. If R^2 is between 0.25 and 1, it signifies a high and robust explanatory power (Hair, Sartedt, & Ringle, 2012)
- **Effect size f^2 :** It elucidates the capacity of each independent variable to independently account for the dependent variable. $f^2 < 0.02$ signify no impact, $0.02 \leq f^2 < 0.15$ suggest a mild influence, $0.15 \leq f^2 < 0.35$ denote a moderate effect, and $0.35 \leq f^2 < 1$ represent a substantial effect. Table 06 displays the coefficient of determination findings for the dependent variables and the effect size of the independent factors in our research.

Table No. 03 Explanation coefficient and effect size

Path	f-square	Result	R-square		Result
BI → UB	0,255	Medium impact	BI	0,631	Strong Impact
EE → BI	0,097	weak effect			
EP → BI	0,143	weak effect			
FC → BI	0,004	Very weak effect			
FC → UB	0,000	No effect.			
HB → BI	0,298	Medium impact	UB	0,707	Strong Impact
HB → UB	0,378	great impact			
HM → BI	0,004	Very weak effect			
PV → BI	0,002	Very weak effect			
SI → BI	0,051	Very weak effect			

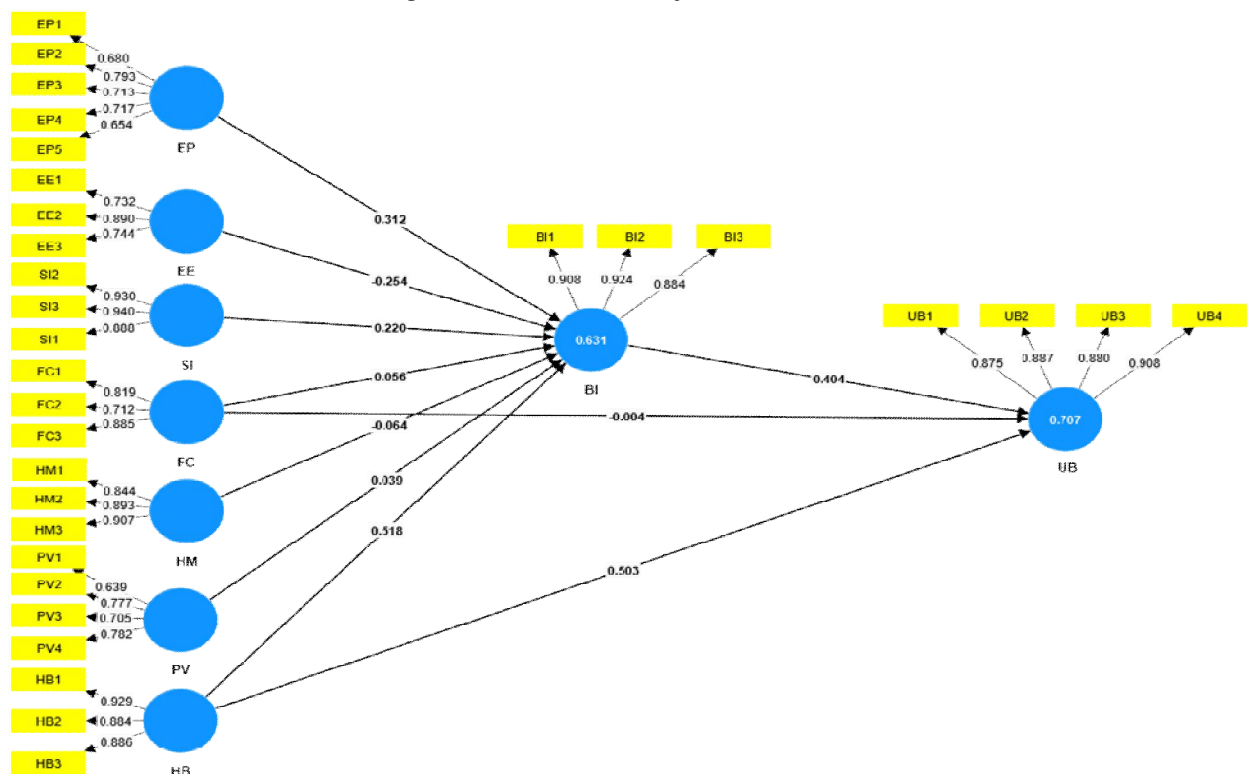
Source : Prepared by the researchers, extracted from SMARTPLS4

Table 06 indicates that the variance in the intention to use behavior R^2 has attained 63%, signifying that the independent factors specified in the research model substantially elucidate the variation in the intention of Algerian consumers to use the Djezzy App. This percentage is deemed robust and exceeds the proportion in the original UTAUT2 model (52%).

The variation in real behavioral use was roughly 70.7% for R^2 , closely aligning with the initial UTAUT2 model result of 74%. This little discrepancy may result from the omission of moderating factors (gender, age, and experience) and the limited sample size. Nonetheless, it demonstrates a significant predictive capacity of the research model variables in elucidating the variation in Algerian customers' use of the Djezzy App.

However, the substantial explanatory power is not uniformly applicable to all research variables, but rather contingent upon the effect size f^2 , the table indicates that behavioral intention (BI) is mostly affected by performance expectations and habitual tendencies, the impact of other elements are minimal or negligible. The actual behavior usage (UB) is considerably affected by habit and modestly by the desire to engage in the activity, while the accessible facilities have no discernible effect.

Fig N° 1: Estimated Study Model Results



Source : Prepared by the researchers, extracted from SMARTPLS4

4.3. Analysis of pathways and evaluation of research hypotheses

To analyze the trajectory of the study variables and ascertain the strength and direction of the relationship between independent and dependent variables, it is essential to establish the values of β , which range from -1 to

1; negative values signify an inverse relationship, while positive values denote a direct relationship. The association intensifies as it approaches the absolute value of one and diminishes as it nears zero.

To assess the correctness and validity of the hypotheses and ascertain the importance of the link between the variables, we compute both T values and the P value, using the T value accordingly to evaluate the regression coefficient (β), a T value over 0.258 at a significance threshold of 0.01 indicates a more substantial link. The P Value is used to assess the significance of the statistical test results, If P is less than 0.01, the link is deemed statistically significant at a 99% confidence level (Hair, Sartetd, & Ringle, 2012). Table 07 delineates the outcomes of evaluating the study's assumptions.

Table No. 07: Determining the study path and testing hypotheses

Hypothesis	The path	Strd β	T-Value	P-Value	decision
H1	BI $\rightarrow$ UB	0.404	4.022	0.000	Support the hypothesis
H2	EP $\rightarrow$ BI	0.312	3.632	0.000	Support the hypothesis
H3	EE $\rightarrow$ BI	-0.254	3,280	0.001	Support the hypothesis
H4	SI $\rightarrow$ BI	0.220	1.877	0.061	Reject the hypothesis
H5	FC $\rightarrow$ BI	0.056	0.706	0.481	Reject the hypothesis
H6	FC $\rightarrow$ UB	-0.004	0.068	0.946	Reject the hypothesis
H7	HM $\rightarrow$ BI	-0.064	0.621	0.535	Reject the hypothesis
H8	PV $\rightarrow$ BI	0.039	0.368	0.713	Reject the hypothesis
H9	HB $\rightarrow$ BI	0.518	4.558	0.000	Support the hypothesis
H10	HB $\rightarrow$ UB	0.503	5.952	0.000	Support the hypothesis

Source :Prepared by the researchers, extracted from SMARTPLS4

The data shown in the table above allow us to understand and evaluate our study's findings and evaluate its hypotheses as follows:

(H1) : Table No. 07 indicates a positive and significant correlation between the "intention to use the Djezzy App" and the "actual use of the Djezzy App," with a path coefficient of ($\beta = 0.404$), T value of 4.022, and P value of 0.000. This demonstrates the presence of a statistically significant effect at a significance level of 0.01, so allowing us to accept and endorse the initial hypothesis H1.

(H2): The results presentin indicate a positive and significant correlation between "the expected performance from using the Djezzy App" and "the intention to use the Djezzy App," evidenced by a path coefficient ($\beta = 0.312$), T value = 3.632, and P value = 0.000. This confirms a statistically significant effect at a 0.01 significance level, thereby supporting the second hypothesis H2.

(H3) : The data presented in the table indicates a weak yet significant inverse correlation between "Effort Expectancy" and "the intention to use the Djezzy App," with a path coefficient of ($\beta = -0.254$), a T value of 3.280,

and a P value of 0.001. This substantiates a statistically significant effect at a 0.01 significance level, thereby validating the third hypothesis H3.

(H4) : Upon reviewing the results, it is evident that there exists a moderate yet statistically insignificant positive correlation between "social influences " and the "intention to use the Djezzy App," with a path coefficient of ($\beta = 0.220$), T value = 1.877, and P value = 0.061. This indicates the lack of a statistically significant impact at a significance level of 0.01, hence we reject the fourth hypothesis H4.

(H5) : The data presented in the table indicates a weak yet insignificant positive correlation between "the facilitating Condition" and "the intention to use the Djezzy App," with a path coefficient of ($\beta = 0.056$), T value of 0.706, and P value of 0.481. This signifies the absence of a statistically significant impact at a significance level of 0.01, leading to the rejection of support for the fifth hypothesis H5.

(H6): The table's results indicate a negligible and insignificant inverse correlation between "Facilitating Condition" and "the actual use of the Djezzy App," with a path coefficient of ($\beta = 0.004$), T value of 0.068, and P value of 0.946. This signifies the absence of a statistically significant impact at a 0.01 significance level, leading us to reject support for the sixth hypothesis, H6.

(H7) : Upon revisiting the findings shown in Table No. 07, it is seen that there exists a negligible and statistically insignificant inverse correlation between " Hedonic Motivation " and " intention to use the Djezzy App," characterized by a path coefficient value of ($\beta = 0.064$), a T value of 0.621, and a P value of 0.535. This signifies the absence of a statistically significant impact at a 0.01 significance level, leading to the rejection of the seventh hypothesis H7.

(H8) : The table indicates a negligible and statistically insignificant positive correlation between "the price value " and " intention to use the Djezzy App," with a path coefficient of ($\beta = 0.039$), T value of 0.368, and P value of 0.713. This signifies the absence of a statistically significant impact at a 0.01 significance level, leading to the rejection of the eighth hypothesis, H8.

(H9): According to The data presented in the table indicates a robust and significant positive correlation between the "habit " and the "intention to use the Djezzy App," evidenced by a path coefficient ($\beta = 0.518$), a T value of 4.558, and a P value of 0.000. This validates the presence of a statistically significant impact at a significance level of 0.01, so allowing us to endorse the ninth hypothesis H9.

(H10): The data shown in the table indicate a robust and substantial positive correlation between the "habit " and the "actual use of the Djezzy App," with a path coefficient of ($\beta = 0.503$), a T value of 5.952, and a P value of 0.000. This validates the presence of a statistically significant impact at a significance level of 0.01, so allowing us to endorse the tenth hypothesis H10.

4.4. Analysis of the Study Results

This research aimed to examine the determinants influencing Algerian consumers' use of smart apps by developing an extensive model based on the unified theory of acceptance and usage of technology. "UTAUT2", consisting of seven main variables without including the modifying factors (gender, age and experience), the results of the study confirmed the validity of the model and demonstrated its predictive power in explaining the intentions to use mobile phone applications and their actual use in Algeria by about 63 % and 70 % respectively, which is a high interpretation rate and very close to the rate obtained in the original study. We shall elucidate these findings as follows:

- The Habit variable is the most significant determinant of both the intention to use the application and actual usage, aligning with the original UTAUT2 study and other research in consumer technology, such as (Ramirez, Fransisco, & Martin, 2019). Frequent use of the application establishes a routine, integrating it into the user's daily life, thereby eliminating the need for conscious decision-making with each use. The "Djezzy App" released the "Walk and Win" game, which tracks users' steps and rewards them with complimentary internet access for achieving a certain step count, aiming to integrate it into consumers' everyday routines.
- The anticipated Performance exerts a minimal influence on the intention of Algerian consumers to utilize the Djezzy App, aligning partially with the original UTAUT2 study, albeit with a variance in effect magnitude. Numerous studies, pertaining to both general technology adoption and mobile application usage, have substantiated the significant role of anticipated performance in elucidating usage intention, though the degree of influence varies according to the application type or the contextual environment examined.
- The effect size of anticipated effort on the intention to utilize the application was weak relative to the original UTAUT2 study and the research by (Muhammed & Anum, 2023), which identified it as the most significant factor influencing usage intention. Conversely, other studies, such as (Alidi & Ardjano, 2022), indicated that it has no effect. The disparity in results may stem from varying levels of technological awareness among individuals, as the user's personal abilities and confidence in using technology reduce the extent to which perceived effort influences the intention to use the app.
- In contrast to the original UTAUT2 study and the research conducted by (Muhammed & Anum, 2023), which demonstrated a positive influence of the social influences variable on the intention to utilize the application, this study found no such effect. This discrepancy may be ascribed to the pervasive adoption of mobile applications within Algerian society, particularly following the Covid-19 pandemic, which could diminish the

significance of the social foundation for consumers, a conclusion supported by this study (Giacomo, Ralf, Filipe, & Fansisco) In comparing the factors influencing the adoption of electronic payment in Italy and China, it was observed that early adopters in Italy tend to rely on the opinions of others prior to usage, in contrast to Chinese consumers who are more familiar with advancements in electronic payment.

- The study established that facilitating circumstances do not influence the intention to utilize the application or its actual usage, contradicting the findings of the original study. This discrepancy may be attributed to various factors, primarily the application's effective design. The intuitive user interface facilitates ease of use and diminishes the need for facilities, while regular program use may render amenities less significant.
- While several studies have shown the primary importance of the pleasure motivation, our research demonstrated a contrary finding. This outcome may stem from the diminishing influence of the pleasure drive among Algerian consumers using the program over time, resulting from habituation and its integration into their daily routine. The rationale may also stem from the intentions behind using the program. When the objective of usage is utilitarian, the pleasure motivation diminishes in significance.
- Venkatesh included the price value component into the UTAUT2, acknowledging the consumer's sensitivity to price factors. This finding was corroborated by other research about technology usage, including a study (Ahmed, 2022) This outcome is entirely at odds with our present research, which found no influence of this component. The primary reason for this outcome is that the program is initially available for free, providing significant advantages at a little expense, along with promotional offers and discounts, mitigating the adverse impact of pricing on the intention to use the application.
- The intention to use variable is regarded as the primary predictor of behavior and directly influences the actual use of apps, as corroborated by several prior research. In our present study, the degree of influence was diminished due to the robust and direct impact of the habit variable, which fosters automatic and consistent behavior. In contrast, intention may be erratic and subject to change based on circumstances, as an individual's intention can evolve over time.

5. Recommendations

Following the prior findings, a series of suggestions were formulated to enhance the use of mobile apps in Algeria.

- Given that habit is the predominant factor affecting intent and application usage, developers should prioritize the creation of a seamless daily app experience, integrating its use with routine tasks performed by users.
- Given that anticipated performance influences use intent, it is crucial to enhance application functionality to align with users' requirements and expectations. Enhancing program performance, incorporating new features, and ensuring a seamless user experience devoid of crashes.

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- Given that the anticipated effort has a little adverse effect, it is prudent to streamline the user interface and ensure the application is user-friendly, especially for those with less technological competence. The greater the ease of use, the higher the likelihood of frequent app use.
 - App developers may contemplate how to use other aspects, such as social support or hedonic motives. For instance, they may include a functionality to disseminate use accomplishments via social media, or provide incentives for frequent utilization of the application.

6. Prospective Research

- Studying additional factors that may be influential and not included in UTAUT2. For example, examining the impact of users' trust in the protection of their data and the security of transactions through the app.
- Studying other applications and comparing them to the results of the study, to see if the affecting factors are different or similar.
- Analysis of demographic disparities (age, gender, education, income level) in app use, yielding a comprehensive knowledge of requirements and preferences.
- Future study may investigate the influence of emerging technologies (artificial intelligence, machine learning, voice user interfaces) on application use and their potential integration to improve the user experience.
- Longitudinal research: Rather than depending on a cross-sectional research that utilizes data from a certain timeframe, a longitudinal study may be executed to observe the progression of user behavior and influencing elements over time, so aiding in the comprehension of use dynamics.

This next study may address current gaps and provide a more thorough understanding of the variables that affect mobile application use in Algeria and other markets.

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