DIGITAL MARKETING ADOPTION FACTORS IN ALGERIAN SMALL AND MEDIUM ENTERPRISES: A TAM APPROACH

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Abstract:
The aim of this research work is to identify the determinants that influence the adoption of digital marketing in SMEs in Algeria. To achieve this aim and to test the conceptual model proposed in this research work which summarizes the relationships between all the variables, a quantitative approach was adopted. In order to test the research hypotheses, the researcher has adopted structural equation modeling with PLS approach. The results obtained indicate that accessibility indirectly influences the use of digital marketing through the two factors the perceived usefulness and the perceived ease of use. Besides, the cost of access and the saving time influence the use through the perceived usefulness factor; and subjective norms as a significant determinant influencing perceived ease of use. In contrast, the results of this study support technology acceptance theory (TAM) to explain the willingness to adopt digital marketing in SMEs.

Keywords: digital marketing, adoption of new technologies, perceived usefulness, perceived ease of use, actual use.

1. Introduction

In recent years, digital marketing has become an increasingly popular medium for business and consumer engagement. In this way, marketing professionals have used different media to provide customer service and promote services/products. Digital marketing has fostered the development of trusting relationships between business and consumer (BtoC) and also between business and business (BtoB), making it an increasingly important medium to use to maximize business loyalty.

These modern marketing tools have all integrated information and communication technologies (ICT) into companies advertising strategies to enable them to compete in the new 4.0 markets (García, Lizcano, MQ Ramos, & Nelson, 2019).

It is worth mentioning that there is a bulk of research on the factors influencing the adoption of digital marketing in SMEs in different regions of the world which have proven that there is a direct relationship between the adoption of digital marketing by SMEs and their impact on performance and productivity. Under the same wave, and with the emergence of the Algerian market, SMEs are to some extent dependent on supply from inside and outside the country, a thing which necessitates an intensive use of digital marketing tools to facilitate business communications not only with business partners but with customers too.

According to (Al-Qirim, 2007), the choice of digital marketing adoption for the majority of SMEs depends on the specific underlying digital marketing adoption strategies and business opportunities available to them. Consequently, this research work tries to highlight the findings of previous investigations on the adoption of new technologies and seeks to find out to what extents SMEs in Algeria are using digital marketing as the adoption of different digital marketing tools is an important source of competitive advantage for small and medium enterprises in Algeria.

In this regard, the study of digital marketing adoption in SMEs has become our research track; we pose our research question as follows: What are the determinants of the adoption of digital marketing in small and medium-sized enterprises in Algeria?

It is worth mentioning that due to the lack of information on the adoption of digital marketing particularly in Algeria, this study relied on some of the theories and models of new technology adoption developed to explain the determinants of digital marketing adoption.

2. Literature Review

In the mid-1990s, adoption has gained a considerable importance as a research area. Indeed, investigations in this field have provided important information to explain the success or failure of new services.

To predict the adoption of digital marketing tools, it is necessary to examine adoption and usage decisions as a combined process. In this sense, a set of theoretical models have been developed to explain the behavior of individuals and/or organizations when using new information and communication technologies. These models refer to theories based on studies in social psychology. Among these, one can cite the task-technology fit model (Goodhue & Thompson, 1995), a model based on the theory of reasoned action TRA (Fishbein & Ajzen, 1975), which suggests that an individual's intention to adopt a technology is defined by two basic factors: personal interest and social influence (Avin, 2015). The TRA entails two main factors; the first factor which is Self-interest refers to realistic attitudes that lead the user to evaluate, whether favorably or unfavorably, the adoption of information technology (Avin, 2015, p. 48). On the contrary of this, the second factor, i.e, social influence, is considered as a subjective norm and refers to people perception of what is expected from them.

In the same way, Ajzen and Madden (1986) developed the Theory of Planned Behavior (TPB)- which is an extension of the Theory of Reasoned Action (TRA)- to explain and predict human behavior (Ross-Plourde, 2016). After the Model of Reasoned Action (Fishbein & Ajzen, 1975), and the Model of Planned Behavior

(Ajzen & Madden, 1986), Davis in 1986 developed the Technology Acceptance Model (TAM) to consolidate the two previous models, by adding external variables in the modeling of the user's behavior; and showing how these variables act on the two types of beliefs, i.e, perceived usefulness and perceived ease of use (Avin, 2015). Thus, according to Davis (1986), beliefs influence attitudes, and this leads to intentions, which in turn generate behavior. TAM then adapted this belief-attitude-intention-behavior relationship to the user acceptance model of computing (Azizah, Ramayah, Lim Bee, Osman, & Malliga, 2011).

TAM is an intention model developed specifically to explain and/or predict the users and or organizations acceptance and adoption of information technology and their willingness to use it in the future (Davis, Bagozzi, & Warshaw, 1989). This model states that the adoption of a technology is explained by the perceived usefulness of the products and/or services by consumers or businesses and the perception by individuals or businesses that the product and/or service is easy to use (Dauphin-Pierre , 2011). Finally, based on the Technology Acceptance Theory (TAM), researchers Venkatesh, Morris, Davis and Davis Fred (2003) developed the Unified Theory of Acceptance and Use of Technology (UTAUT) model to comprehensively predict individual acceptance of information technology, i.e. intention and behavior. In the UTAUT model, four key variables are highlighted: expected performance refers to the usefulness of the tool; expected effort refers to the ease of use of the tool; social influence refers to the influence of social members; and the construction of enabling conditions refers to the technological support (Venkatesh, Morris et al, 2003). According to the same researchers, if the values of the four variables are higher, the value of the behavioral intention to use the tool is higher. In other words, the behavioral intention of individuals determines their acceptance of the technology (Hsiao-Hui, 2012). These models are used to clarify the acceptance and use of new technologies. They aim to distinguish certain factors from intentions in order to clarify and predict the behavior of individuals in the use of technologies.

3. Research objectives

We are interested in a study context where digital marketing is already adopted in small and medium sized enterprises in the Algerian country, and we will choose the most comprehensive and detailed model possible. Thus, the main objective of this research is to identify the determinants of digital marketing adoption in SMEs in Algeria. So, to answer our research problem, we turn to Davis' (1986) Technology Acceptance Model (TAM).

3.1 Specification of the conceptual research model

The TAM model includes external variables that can influence the two main variables, i.e, perceived usefulness and perceived ease of use, in order to adopt a new technology. Indeed, the external variables represent "the factors that are explicitly included in the model and that have an expected impact on behavioral intention and behavioral use through the mediation of perceived usefulness and perceived ease of use" (Davis, Bagozzi et al, 1989, p. 987).

The external variables can also include several characteristics (Tarhini, Hassouna, Abbasi, & Orozco, 2015), such as organizational characteristics, information and communication technology (ICT) characteristics, personal characteristics and so forth. As for the present research work, results showed that

there are five important external variables which might have an impact on SMEs in Algeria in order to adopt digital marketing. These include: accessibility, cost of access, time saving, subjective norms, and facilitating conditions (see Figure 1).

3.1.1 Accessibility (ACCES)

Accessibility refers to the extent to which an individual may have access to the system and to the ability of this individual to retrieve the desired information from this system (Djamasbi, et al., 2006). As for this study, investigations are mainly focused on accessibility which refers to the extent to which the different digital marketing tools are accessible for the SMEs and/or for the consumers. Indeed, this study considers accessibility as an external variable which indirectly influences the use of digital marketing through perceived usefulness and perceived ease of use. Therefore, the following hypotheses are suggested:

- H1a: Accessibility has a significant influence on the Perceived Usefulness of digital marketing.
- H1b: Accessibility has a significant influence on the Perceived Ease of Use of digital marketing.

3.1.2 Cost of Access (COA)

Cost of Access is an important factor in the use of digital marketing by SMEs, as it represents a cost saving feature. In this sense, most SMEs that adopt digital marketing look for digital tools that have relatively low cost of access to services. Yousafzai, Foxall et al. (2007) considered costs of access as a characteristic of ICT that influences both Perceived Ease of Use and Perceived Usefulness.

Considering that this study investigates the indirect influence of the cost of access variable on the use of digital marketing, by influencing both perceived usefulness and perceived ease of use, the following hypotheses are proposed:

- H2a: Cost of Access has a significant influence on the Perceived Usefulness of digital marketing.
- H2b: Cost of Access has a significant influence on the Perceived Ease of Use of digital marketing.

3.1.3 Time Saving (TS)

Time Saving variable means the reallocation of time between activities to achieve greater efficiency (Berry, Seiders, & Grewal, 2002). According to Hamadi (2008), this variable allows company workers to perform their tasks quickly and comfortably whether from the office or from home. In fact, in our model the time saving variable acts on both variables, i.e, Perceived Usefulness and Perceived Ease of Use. In general, the higher the time savings associated with the use of a digital marketing tool, the more SMEs perceive digital marketing as useful and easy. Starting from this assumption, the following hypotheses are highlighted:

- H3a: Time saving has a significant influence on the Perceived Usefulness of digital marketing.
- H3b: Time saving has a significant influence on the Perceived Ease of Use of digital marketing.

3.1.4 Subjective Norms (SN)

Venkatesh, Morris et al. (2003) defined subjective norms as "*The person's perception that most people who are important to him think he should or should not perform the behavior in question*". According to Lu and Viehland (2008), subjective norm factor is similar to social influence factor; it is described as the degree to which an individual perceives that important others believe they should use the new system. Yet, in this research work, emphasis is put on subjective norms that reflect

the effect of environmental factors such as the influence of customers, competitors and work superiors on SMEs to adopt digital marketing tools. This variable is considered as an external factor in our conceptual model, as it influences indirectly the use of digital marketing and through the two variables, perceived usefulness and perceived ease of use. This assumption leads to the following hypotheses:

- H4a: Subjective Norms have a significant effect on the Perceived Usefulness of digital marketing.
- H4b: Subjective Norms have a significant effect on the Perceived Ease of Use of digital marketing.

3.1.5 Facilitating Conditions (FC)

According to Venkatesh, Morris et al. (2003, p. 453), facilitating conditions are defined as "*the degree to which a person believes that an organizational and technical infrastructure exists to support the use of the system*". In this study, we assess the facilitating conditions through the perception of being able to access the necessary resources, in addition to gathering knowledge, necessary operational skills and support in SMEs to use digital marketing tools. Indeed, if the company believes that the barriers had to be removed, the facilitating conditions would have an indirect impact on the adoption of digital marketing by influencing the two variables, perceived usefulness and perceived ease of use. As a result, the following hypotheses are formulated:

- H5a: Facilitating Conditions have a significant influence on the Perceived Usefulness of digital marketing.
- H5b: Facilitating Conditions have a significant influence on the Perceived Ease of Use of digital marketing.

3.1.6 Perceived Usefulness (PU)

Perceived Usefulness is an important variable in the TAM that affects the acceptance of a new technology. Davis and Davis Fred (1989, p. 320) define perceived usefulness in the TAM as "*the extent to which a person believes that the use of a particular system would improve his or her job performance*". This variable is used to measure the extent to which SMEs believe that the use of digital marketing would improve their business performance, while investigating its effect on SMEs' attitudes towards the use of digital marketing. In this sense, SMEs that perceive greater usefulness of digital marketing have a stronger adoption attitude (Liao, Tsou, & Huang, 2007). Consequently, the following hypothesis is highlighted:

- H6: Perceived Usefulness has a significant influence on the Attitude towards the Use of digital marketing.

3.1.7 Perceived Ease of Use (PEOU)

According to the TAM, Perceived Ease of Use is a major factor affecting the acceptance of a new technology (Davis & Davis Fred, 1989). This variable refers to " *the degree to which a person believes that using a particular system would be free of effort* ". Through this variable we aim to measure how the perceived ease of use of digital marketing can influence the attitude towards use and behavioral intention constructs that are presented in the TAM to adopt digital marketing. Indeed, companies may adopt a positive attitude towards digital marketing when they perceive its ease of use. To this end, we hypothesize that:

- H7a: Perceived Ease of Use has a significant influence on the Attitude towards the Use of digital marketing.
- H7b: Perceived Ease of Use has a significant influence on Behavioral Intention.

As stated in the TAM, we consider perceived ease of use as a determinant influencing directly the behavioral intention and influencing the perceived usefulness of digital marketing; many previous studies have shown that perceived ease of use influences the perceived usefulness of technology (Davis, Bagozzi et al, 1989), (Venkatesh & Davis, 2000), (Schillewaert, Ahearne, Frambach, & Moenaert, 2005). Indeed, the less SME's make efforts to use digital marketing tools, the more the perception of their usefulness will increase. Consequently, the following hypothesis is proposed:

- H7c: Perceived Ease of Use has a significant influence on the Perceived Usefulness.

3.1.8 Attitude Towards the Use (ATU)

Davis (1993, p. 476) defines Attitude towards the Use as "*the degree of evaluation that an individual associate with the use of a target technology in his or her work"*. It is defined by a favorable or unfavorable degree of organization towards a behavior. Indeed, in this study the Attitude towards the Use will be either positive or negative towards the adoption of digital marketing in SMEs. We will test empirically the possible causal link between SME attitude and behavioral intention towards the use of digital marketing in SMEs. SMEs with a more positive attitude towards new technologies will be more motivated to use digital marketing channels and its different activities. Starting from this, the following hypothesis is formulated:

- H8: Attitude towards the Use of digital marketing has a significant influence on Behavioral Intention.

3.1.9 Behavioral Intention (BI)

Behavioral Intention was introduced by Fishbein and Ajzen (1975, p. 288) who defined this variable as "*the subjective probability of the individual that he may perform a specific behavior*". This variable was modeled by NiiBoi and Addo (2014) as a significant determinant on the use of ICT provided by students for learning purposes. Furthermore, behavioral intention was validated by Venkatesh, Morris et al. (2003) in the UTAUT model as a significant determinant that affects usage. In fact, as this study focuses on the behavioral intention of SME managers towards the estimated use of digital marketing related tools, the following hypothesis is proposed:

- H9: Behavioral Intention has a significant influence on the Effective Use of digital marketing.

3.1.10 Effective Use (EU)

Effective Use variable has been included in all models of adoption and evaluation of the use of new technologies, notably in the two phases of adoption (pre- or post-adoption) and in their extensions; model of technology acceptance TAM of Davis (1986), TAM 2 of Venkatesh and Davis (2000), TAM 3 of Venkatesh and Bala (2008), as well as UTAUT model of Venkatesh, Morris et al. (2003).

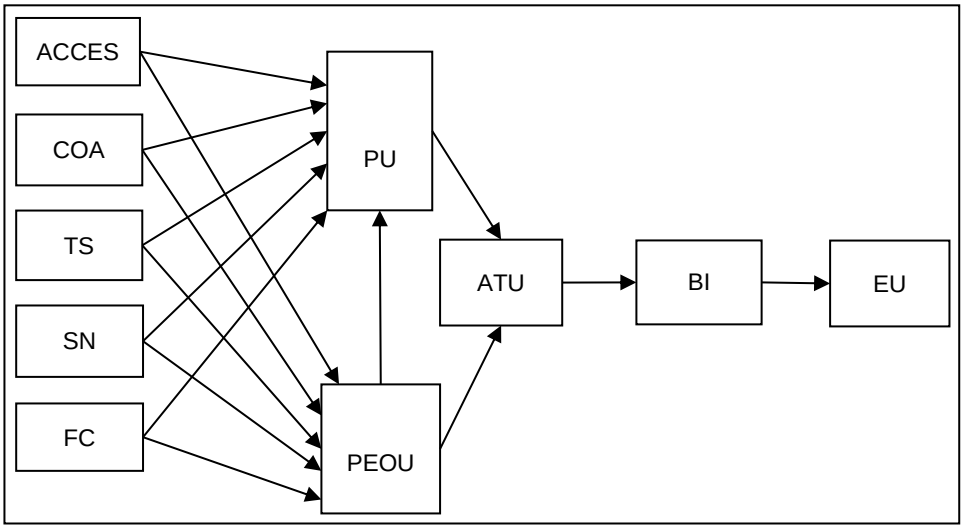

Figure 1. The conceptual model of research
Source: Prepared by the authors

3.2 Methodology of research

To conduct this study, a structured questionnaire based on scales from previous Anglo-Saxon studies was used to achieve the research objectives. The questionnaire contained 41 items related to the Technology Acceptance Model (TAM). Besides, a translation of the measurement items was made, while adapting them to the study context.

Data Collected in this study was obtained from Algerian SMEs and targeted directors, managers and heads of departments of SMEs who used digital marketing to conduct their daily business. This sample of population was chosen because of their knowledge of the use of online platforms. Indeed, we opted for the service sectors because they are the information-intensive sectors that were suitable for digital adoption in Algeria. Therefore, the sample was selected using a non-probability sampling method, as the SMEs to be interviewed were selected using the purposive sampling technique, in order to select the SMEs that were useful and relevant to our research. In purposive sampling (judgmental), participants are selected subjectively by using the judgment of the interviewers (Öztas , 2011). We collected data from a sample of 157 Algerian SMEs.

In order to check the research hypotheses and answer the research questions of this study, we opted for PLS-SEM as a more appropriate technique.

PLS-SEM is one of the multiple linear regression modeling techniques (SmartPLS, WarpPLS, PLS Graph). It relies on maximizing the explained variance of the dependent variables when examining the model and it is suitable for exploratory studies (Ali, Murad, Badghish, & Baazeem, 2018). Indeed, the PLS path model is formally defined by two sets of linear equations: the inner (structural) model and the outer (measurement) model. The inner model specifies the relationship between the independent and dependent or unobserved latent variables, while the outer model specifies the relationship between the latent variables and their

observed indicators or manifest variables (Henseler, 2010). We also used SPSS18 statistical analysis software to perform a descriptive analysis of the data.

4. Results and discussion

We present the results of the descriptive data analysis related to the general characteristics of our study sample as well as to the multiple choice questions. More specifically, we present the different general information on the respondents and on the characteristics of the SMEs surveyed.

Over a total of 157 usable questionnaires. Of the 157 respondents, more than 71% were men and only 28.66% were women why specifying the gender if it has no influence on the results. The majority (49.04%) of the respondents were aged between 30 and 40 years, while 57 (36.31%) of the respondents were aged between 20 and 30 years. We also find that 98% of the respondents are either directors, managers or heads of department, of which 44.59% of them are general managers, while 24.84% are marketing managers (see Table 1).

Table 1. Profile of respondents

		Number	Frequency (%)
Gender	Male	112	71.34%
	Female	45	28.66%
Age	Between 20 and 30 years old	57	36.31%
	Between 30 and 40 years old	77	49.04%
	Between 40 and 50 years old	19	12.10%
	Between 50 and 60 years old	3	1.91%
	Over 60 years old	1	0.64%
Hierarchical position	Director	82	52.23%
	Manager	57	36.31%
	Head of department	15	9.55%
	Other	3	1.91%
Primary function	General management	70	44.59%
	IT	17	10.83%
	Marketing	39	24.84%
	Operations	12	7.64%
	Commercial	19	12.10%

Source: Prepared by the authors

The results relating to the profiles of the small and medium-sized enterprises interviewed in this study are presented in Table 2. Following the results of the descriptive analysis, most of the SMEs (106) have 01 to 09 employees with more than 67%, while other enterprises contain 10 to 49 employees and 50 to 250 employees, which is relatively more than 22% and 9.55%. We also find that 153 SMEs are private with 97.45%, while only 2.55% of SMEs are public. Thus, 84 (53.50%) of the SMEs were created between 1 and 4 years ago, while 21.02% of the SMEs have been in existence for less than a year, and others for 5 to 9 years, representing a frequency of 16.56%.

Table 2. Profile of sample (SMEs)

		Number	Frequency (%)
The number of employees	From 01 to 09	106	67.52%
	From 10 to 49	36	22.93%
	From 50 to 250	15	9.55%
Year of existence of the company	Less than 1 year	33	21.02%
	Between 1 and 4 years	84	53.50%
	Between 5 and 9 years	26	16.56%
	Between 10 and 50 years	13	8.28%
	More than de 50 years	1	0.64%
Type of enterprise	Public enterprise	153	97.45%
	Private enterprise	4	2.55%

Source: Prepared by the authors

4.1 Analysis of Measurement Model

The measurement model has been purified by checking the values of the outer loadings of the constructs, and the measured items that have a value below the suggested threshold of 0.7 have been eliminated (Hair, Hult, Ringle, & Sarstedt, 2017). Thus, over 41 items (as shown in Appendix 01, only 23 items have been retained. The results of the construct validity indicate that all items of the reflective constructs are well above the recommended threshold value of 0.70 (Table 3).

The next step in assessing convergent validity was to assess the internal consistency reliability of the construct measures. This reliability measure takes into account the different external loadings of the indicator variables, and subsequently the CR value must be equal to or greater than the minimum threshold of 0.70 (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). Consequently, results of the assessments of the internal consistency reliability of the constructs' measurements which is represented by the calculation of the composite reliability (CR) values indicated that all the reflective constructs had high levels of internal consistency reliability according to the CR values which were also well above the recommended minimum threshold of 0.70, testifying to a good reliability of the measurements. Table 3 below shows the results of the composite reliability (CR) values of the constructs in this study's model.

Fornell and Larcker (1981) recommend an AVE value equal to or greater than (≥) 0.50, which indicates that on average the construct explains 50% or more of the variance of its indicators and should be taken into account. Therefore, Table 3 represents the results of the calculation of the average variance extracted (AVE) values, which show that the AVE value of all the constructs of the model are found to be well above the threshold of 0.5. The assessment of the reliability and validity of the constructs through three conducted tests indicates that the results obtained imply a convergent validity for all the measurement model constructs.

To assess the discriminating validity, three approaches have been commonly used. Firstly, results of the cross loading showed that all constructs were loaded with a higher value with their respective constructs than with the other constructs and the values of the cross loadings were much higher than the recommended threshold of 0.10 (Gefen & Straub, 2005), especially for the accessibility construct which shared higher values with their items ACCES1, ACCES2, ACCES3 which are respectively 0.777, 0.753 and 0.754. Thus, these cross loading values were higher than the other values shared with the other constructs. Similarly, the perceived ease of use

construct shared values of 0.874 and 0.747 with their respective constructs PEOU3, PEOU5, yet, these latter were higher than the values shared with the other constructs. Indeed, results indicated that there was a discriminating validity between all constructs.

Table 3. The results of the convergent validity analysis

Constructs	Items	Outer Loadings	Composite reliability	AVE
ACCES	ACCES1	0.777	0.805	0. 580
	ACCES2	0.753		
	ACCES3	0.754		
ATU	ATU1	0.881	0.850	0.740
	ATU3	0.838		
FC	FC2	1.000	1.000	1.000
COA	COA1	0.871	0.889	0.810
	COA3	0.918		
PEOU	PEOU3	0.874	0.795	0.661
	PEOU5	0.747		
TS	TS1	0.868	0.895	0.810
	TS3	0.931		
BI	BI1	0.789	0.835	0. 627
	BI2	0.781		
	BI3	0.806		
SN	SN1	0.738	0.868	0.624
	SN2	0.713		
	SN3	0.842		
	SN4	0.856		
EU	EU2	1.000	1.000	1.000
PU	PU4	0.780	0.832	0.622
	PU5	0.783		
	PU6	0.803		

Source: SmartPLS3

Secondly, the square root of the AVE of each construct (ACCES, ATU, FC, COA, PEOU, TS, SN, BI, EU, PU) was greater than the absolute value of their correlation. Subsequently, the results of the Fornell-Larcker criterion analysis indicated that all constructs in the model shared more variance with their indicators than with all other constructs.

Thirdly, the results of the Heterotrait-Monotrait Correlation Ratio (HTMT) confirmed that all HTMT values were below the threshold of 0.90 suggested by Henseler, Ringle and Sarstedt (2015), including the ratio of facilitating conditions to accessibility of 0.447 above the threshold of 0.90. The ratio of time savings to attitude towards use was 0.698, and the ratio of actual use to behavioral intention was 0.779 below 0.90. Thus, the relationship of perceived ease of use with the constructs accessibility, attitude towards use and facilitating conditions were respectively 0.322, 0.534 and 0.154, a thing which is below the suggested threshold of 0.90. In addition,

the HTMT ratio values of BI with the constructs ACCES, ATU, FC, COA, PEOU, TS and SN were all below the recommended threshold.

4.2 Analysis of Structural Model

An evaluation of path coefficients shows the hypothesis test and the structural relationships. Indeed, the T-values help to identify the significance levels of the relationships. According to Hair, Sarstedt et al. (2014), when the T-value is above the critical value of 1.64, this means that that the coefficient is significant to indicate the importance of the relationship. Most researchers use p-values to assess significance levels (Hair, Sarstedt et al, 2014). The p-value is the probability of erroneously rejecting a true null hypothesis (i.e. assuming a significant path coefficient when in fact it is not significant).

The hypothesis testing results of this study show that some direct effects are significant and confirmed, while others are not significant. After applying the Bootstrap method on the measurement and structural model, the results showed that the direct paths from ACCES to PU (H1a) display a T-value of 1.997 above the recommended threshold of 1.64, and a T-value equal to 2.452 from ACCES to PEOU (H1b), which means that these two hypotheses (H1a and H1b) are positive and significant. Contrary to this, the COA factor exerts a direct positive influence on PU (H2a) by displaying a T-value of 2.701. However, there is no influence of the COA factor on PEOU (H2b) because the T-value displayed is equal to 1.411 which is lower than the suggested threshold of 1.64.

In the same path, the TS factor positively influences the PU (H3a) with a T-value of 2.412. In contrast the hypothesis (H3b) indicates that there is no influence between the TS factor and PEOU factor due to a T-value below the recommended threshold (0.375<1.64), however the SN factor does not influence PU (H4a) with a T-value of 1.628; and therefore both hypotheses (H3b), (H4a) are rejected.

In contrast to this, the direct relationship between the SN factor and PEOU was significantly positive (H4b) as the T-value (2.008) was above the threshold of 1.64. FC for digital marketing adoption have no influence neither on PU (H5a) nor on PEOU (H5b) due to the displayed T-values of 0.071 and 0.859 respectively below the threshold of 1.64. This shows that this variable has no importance in Algerian SMEs when adopting digital marketing.

High importance was positively and significantly associated to the direct relationship between PU and ATU (H6) when the T-value equals 6.340, in contrast to PEOU which has no importance towards ATU of digital marketing (H7a), since the T-value (0.630) is above the recommended threshold. However, the direct path from PEOU to the BI variable (H7b) was positive and significant because of a displayed T-value of 2.688. Yet, PEOU had no influence on PU of digital marketing (H7c) as it represented a T-value of 1.232 above 1.64. In addition to this, a positive and significant influence was associated to the direct relationship between ATU and BI (H8), as this latter represents a T-value of 4.538, which implies that this hypothesis is accepted.

It is also worth mentioning that the higher the behavioral intention of the surveyed SME owners to adopt digital marketing, the higher their actual use of digital marketing was, which implies that the relationship between BI and EU (H9) represents a T-value of 13.749 above the suggested threshold of 1.64, and this leads to the conclusion that the direct relationship between behavioral intention and effective use of digital marketing in Algerian SMEs was positive and significant. The

results for the path coefficients for the hypothesis testing in this study, including T-values, P-values and Standard Beta are shown in Table 4 below.

Table 4. Path coefficients and their significance

	Relation	Standard Beta	T-value	P-values	Results
H1a	ACCES ->PU	0.185	1.997	0.046	Supported*
H1b	ACCES ->PEOU	0.223	2.452	0.015	Supported *
H2a	COA ->PU	0.211	2.701	0.007	Supported **
H2b	COA ->PEOU	0.188	1.411	0.159	Not Supported
H3a	TS ->PU	0.263	2.412	0.016	Supported *
H3b	TS->PEOU	-0.040	0.375	0.708	Not Supported
H4a	SN->PU	0.157	1.628	0.104	Not Supported
H4b	SN->PEOU	0.220	2.008	0.045	Supported *
H5a	FC->PU	0.005	0.071	0.944	Not Supported
H5b	FC->PEOU	0.079	0.859	0.391	Not Supported
H6	PU ->ATU	0.566	6.340	0.000	Supported **
H7a	PEOU ->ATU	0.064	0.630	0.529	Not Supported
H7b	PEOU ->BI	0.247	2.688	0.007	Supported **
H7c	PEOU ->PU	0.101	1.232	0.219	Not Supported
H8	ATU ->BI	0.393	4.538	0.000	Supported **
H9	BI->EU	0.699	13.749	0.000	Supported **

Source: SmartPLS3

Note: P < 0.05 P** < 0.01*

5. Conclusions

Results of this study are meant to enrich both the theoretical and practical knowledge of the adoption of different digital marketing techniques within SMEs. This study took Davis (1986) theory and model of technology acceptance (TAM) as a basis for investigating the determinants of digital marketing adoption. Yet, it examined SMEs from different service sectors only, as the service sector is an information-intensive sector and may be best suited for the adoption and use of digital marketing compared to other sectors of activity in Algeria such as manufacturing sector and handicraft sector.

The results of this research clarify the relationships between ACCES and PU and also between ACCES and PEOU. In this sense, this variable seems to be important for the adoption of digital marketing in SMEs, as it directly and positively influences the two main variables of the Technology Acceptance Model (TAM), namely PU and PEOU. When SME managers perceive the ease of access to the various digital marketing tools for themselves and their current and potential customers, these tools will be perceived as useful and easy, and SMEs will be willing to use them.

SMEs in Algeria take into consideration the COA when adopting digital marketing techniques, because it represents an economic feature related to its use. Indeed, for SMEs, costs are not an issue as long as they are within their financial capacity and as long as digital marketing can meet the needs and are useful for the company. In contrast the results indicate that COA has no relation with the PEOU of digital marketing. This is probably due to the fact that SME owners do not perceive the ease of use of digital marketing tools in terms of access costs, but from their

personal efficiencies and that they become over time instrumental, as well as they improve their professional performance.

Hamadi (2008) found that TS affect positively consumers' performance of internet banking services. Similarly, this study confirmed the relationship that TS positively influences PU. In fact, SME owners consider digital marketing tools as very useful because of their characteristics of speed of completion of transactions at any time and any place. However, TS seems to have no relationship with the PEOU towards digital marketing, when the use of digital marketing tools is not easy and does not provide TS or SME managers' perceptions of their ability to use digital marketing tools.

Competitor, customer, and supervisor influence are considered as SN in research studying technology adoption such as the study by Venkatesh, Morris et al. (2003) and Ouédraogo (2011). Indeed, results showed that SN has no influence on the PU for digital marketing adoption. Contrary to this, SN is found to influence significantly and positively the PEOU of digital marketing in SMEs in Algeria. Indeed, when SME managers consider that their customers or suppliers approve and appreciate the use of digital marketing techniques, they perceive digital marketing as easy to use. So consumers become the triggers for the adoption of digital marketing, because their appreciation matters to the business.

In addition to this, and contrary to our expectations, we found no direct causal link neither between FC and PU, nor between FC and PEOU for digital marketing adoption. This means that the adoption of digital marketing is not influenced by the necessary organizational infrastructure, or by the knowledge and techniques and not even by the capabilities that subsequently facilitate the use of digital marketing. Therefore, the results of the present research work are in line with the study of Venkatesh, Morris et al. (2003) and that of Kouassi (2015) which confirmed the insignificance of FC for the validation of the UTAUT.

This study shows the importance of the PU variable on the attitude of Algerian SME owners towards the use of digital marketing. Indeed, these latter seem to believe that the various digital marketing techniques are useful for their business to maintain relationships with suppliers and customers, especially with the current technological change and increased competition. They also believe that these techniques will not only improve their efficiency and productivity at work, but will also enable them to accomplish their tasks more quickly and easily. In fact, the usefulness is seen in the fact that digital marketing would provide SMEs in Algeria with real platforms to reach and interact with their current and potential customers.

However, it should be mentioned that while the PEOU factor is present in the basic models of Davis (1986), Venkatesh and Davis (2000), this construct did not predict ATU of digital marketing. Similarly, the study indicated the absence of a significant direct relationship between PEOU and ATU. In fact, when companies do not perceive the ease of use of digital marketing tools for their marketing activities, they are less likely to create a positive attitude towards digital marketing adoption.

In contrast, Venkatesh and Davis (2000) found that PEOU were generally significant predictors of intention to use technology. Yet, results of this study confirm the influence of PEOU on BI to adopt digital marketing as the relationship between them was found to be highly significant and positive for this research work. Thus, the findings of this investigation are consistent with the work of Davis, Bagozzi et al. (1989) and Venkatesh, Morris et al. (2003) because as SME owners perceive that using digital marketing tools in their marketing activities is effortless, their behavioral

intentions to adopt digital marketing increase, i.e, when digital marketing is perceived as useful and easy, SME owners are willing to use it.

Furthermore, this study reported the absence of a relationship between PEOU and PU, in contrast to some investigations that have confirmed the direct positive relationship between these two dimensions, notably the studies of Davis, Bagozzi et al. (1989) and Venkatesh and Davis (2000). Indeed, the respondents of the SMEs surveyed do not care neither about the flexibility of the techniques that facilitate the use of digital marketing, nor about the efforts made to use digital marketing, which implies that when SMEs do not perceive the ease of use of digital marketing, they do not perceive the usefulness of this technology, which leads SMEs not to adopt digital marketing.

Furthermore, the relationship between ATU and BI was found to be significant and positive for the adoption of digital marketing, i.e, the more favorable was the degree of attitude of SME owners towards the adoption of digital marketing, the more their behavioral intention to adopt increased. Consequently, this result is consistent with Fishbein and Ajzen's (1975) theory of reasoned action and Ajzen's (1986) theory of planned behavior which asserts that attitudes are related to behavioral intention.

Thus, the influence of BI on EU was confirmed in this research. The link between these two variables has already been approved in the work of Venkatesh, Moriss et al. (2003), NiiBoi and Addo (2014), Venkatesh and Bala (2008). Moreover, this investigation has proven that the more the intention of SME managers to adopt digital marketing increases, the more effective the use of this latter will be. Therefore, it seems that the managers of SMEs in Algeria will likely continue to use digital marketing and increase the amount of time they use it in their work.

TAM theory is extended in this study to include external factors as an additional dimension of the TAM framework to examine digital marketing adoption in SMEs. Indeed, this might be an important contribution to the existing literature on digital marketing adoption in firms as these factors have often been ignored in previous research. Consequently, such a model was empirically tested using the SEM-PLS method. Moreover, this study might contribute to existing knowledge by filling current gaps in the literature on the important role of external variables in the adoption of digital marketing in SMEs.

This study is an attempt to help SME managers recognize that the adoption of digital marketing is more an adaptive challenge than a technical one. Its findings might improve the notion of the importance of critical drivers for digital marketing adoption. This implies that SME managers/marketers need to understand the potential benefits of digital marketing by learning from other SMEs experiences. Indeed, SMEs that want to adopt digital marketing must have adequate financial, technological and human resources. It is important that executives and managers develop strategies to assess the availability of existing and required resources for digital marketing adoption.

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