

Journal of Management Sciences

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Manuscript Information

Submission Date: July 16, 2021

Reviews Completed: October 19, 2021

Acceptance Date: October 31, 2021

Publication Date: November 07, 2021

Citation in APA Style:

Abbas, A., & Mehmood, K. (2021). Understanding Digital Marketing Adoption in India: Integrated by Technology Acceptance Model (TAM) and Theory of Planned Behaviour (TPB) Framework, *Journal of Management Sciences*, 8(2), 70-87.

DOI: <https://doi.org/10.20547/jms.2014.2108206>





Understanding Digital Marketing Adoption in India: Integrated by Technology Acceptance Model (TAM) and Theory of Planned Behaviour (TPB) Framework

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Abstract: Start-ups although small, are great contributors in any economy. Marketing being essential function for their survival, this study aims to examine the use of digital marketing by start-up companies in India using two models TPB and TAM. The Proposed conceptual theoretical model is being tested empirically using a data comprised of 282 founders/owners of start-up companies, collected through structured questionnaire. Confirmatory factor analysis (CFA) is carried out for model fitness and structural equation modeling for path regression analysis. The results of the study suggest that perceived usefulness of digital marketing, attitude towards digital marketing, and perceived behavioral control of the founders/owners of startups significantly positively impact their intentions to use digital marketing and digital marketing adoption. The suggestions will help start-ups for adoption of digital marketing for their businesses and will give some meaningful in sights to the strategy formulation for marketing by start-ups. This study makes valuable contribution towards the theoretical aspect of digital marketing, specifically with respect to start-ups.

Keywords: Adoption intention, Digital marketing, Start-ups, Theory of Planned behaviour (TPB), Technology acceptance model (TAM).

Introduction

Start-ups although small in size have a significant role to play in economic growth of a country through job creation and generating employments. India is experiencing a wave of knowledge economy through start-ups. New entrepreneurs with innovative ideas through start-ups contribute towards stimulating innovation. Start-ups have attracted increased attention over the past years. Entrepreneurs are attracted to develop start-ups to capture new business opportunities. India being a culturally diverse country, entrepreneurs need to be created by providing resources so that it may lead to the success of their businesses (Dana, Sharma, & Acharya, 2020).

'Start-up India is the initiative through Department of Promotion of Industry and Internal Trade (DIPP) of government of India, which was launched in 2016. As per the def-

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initiation by DIPP, a start-up is: “For coverage and eligibility under the scheme, an entity shall be considered as a ‘Start-up’; a) Up to five years from the date of its incorporation / registration; b) If its turnover for any of the financial years has not exceeded Rupees 25 crore and; c) It is working towards innovation, development, deployment or commercialization of new products, processes or services driven by technology or intellectual property”. With addition of more than 1,300 start-ups at the end of year 2019, India is established as having third largest start-up ecosystem in the world. According to the report, India stands third in start-up eco-system. In India 753 start-ups raised \$10.25 Bn across 1,072 deals between 2014 and 2018 at growth stage (Report by Datalabs, 2019).

The ‘Start-up India’ action plan announced by the government addresses the various aspects of the start-up ecosystem (dipp.gov.in). For the survival of small businesses like start-ups, marketing is one of the most important activities, although sometimes neglected. Mainly the emphasis is given on various funding and investors options, there is hardly any magnitude given to marketing. In a report Grant Thornton and Associates (2016) given on government portal/website (startupindia.gov.in), financing life cycle of a start-up is demonstrated. According to this financial cycle initial or first stage start-ups get funding from either angel investors or seed funding, sometimes by government sources. At the next stage (venture capital) start-ups aim for their establishment at local as well as broader markets. In third stage they expand towards public markets and therefore a more aggressive approach for marketing is needed at this point of time. Public markets have capacity to provide liquid funds and margins with involvement of customers. Therefore appropriate marketing strategies are to be adopted for attracting and acquiring customers, and hence for survival of start-up companies. Use of digital platforms is being increasingly adopted by start-ups and therefore they should analyse the various options before opting for a particular technology. Having lower resources and financial limitations they can’t afford to be committing mistakes and wrong choices.

Rationale of the study: Indian perspective

Sharifi and Hossein (2015) talked about the financial challenges dealt by the start-up as well as problems in initial stages. Any start-up should have a robust marketing idea to succeed. For implementing digital marketing there exists need to recognize the antecedents which may influence the technology adoption (Hall & Khan, 2003).

Patel and Chugan (2018) identified digital inbound marketing an effective medium to drive the success of start-ups in India. Using the internet, web 2.0, and interactive technologies for marketing purposes offer many benefits such as, smooth two-way communications, wider approach ability to customers, fast communication of offerings, and improve business performance. Start-ups can develop close relationships with potential as well as already existing customers directly and this may lead to the added competitive advantage (Harrigan, Ramsey, & Ibbotson, 2011).

According to Nasscom and Zinnov (2019), to enable revenue generation Indian start-ups may have to tap into global markets as they have almost similar access to global markets like their peers in established hubs. These measures open up the expanding targetable market opportunities. Use of digital technologies can lead to extend this reach

to global markets. Internet is transforming business activities as a main stream marketing tool.

With 560 million internet users, India is the second largest online market in the world, which may rise up to 600 million by 2021 (Statista, 2020). As per internet and mobile association of India (IAMAI) in year, 2018 internet penetration in India is 829 million. Total number of social network users in India at the end of 2019 is 376.1 million. According to financial express (2017) connectivity is going to play a major role. Indian telecom industry enjoys a huge subscriber base of almost 100 crore including urban as well as rural subscribers. Data charges are reducing day by day which is resulting in wider reach with smart phones. Through digital medium, start-ups can tap markets with ease. With increasing internet penetration, expanding technology access, and improving ease with online transactions, more entrepreneurs are expected to utilize its benefits and explore markets (Nasscom and Zinnov, 2019).

In India, despite having a robust start-up ecosystem, 90 percent of start-ups fail within a short duration of five years of its starting (IBM, 2016). Amongst various other reasons of funding or lack of innovation, a vital yet less explored is marketing. To stand the aggressive market competition usually start-ups burn out their revenues in hiring the marketing without understanding the marketing and scaling up. The key to a successful marketing campaign for competitiveness of small firms is the ability to utilize digital marketing techniques. Although majority of the start-ups registered with the DIPP and start-up India have their own websites, most of the small start-up firms still hesitate to adopt and therefore under-utilize the potential of digital marketing. India being a developing economy and hence the role of start-ups is huge; their success is needed to give a boost to economy. Therefore researcher decided to take up this study aims at understanding the digital marketing adoption intention of Indian start-ups.

The aim of this study is to understand the use of digital marketing by start-up companies in India with the help of two models namely, technology acceptance model (TAM) and theory of planned behaviour (TPB). The paper starts with the introduction to the start-ups, digital marketing, and its role in marketing of small businesses. Literature review section compiles there Levant literature on digital marketing, discusses the need of this study in Indian context by identifying the research gaps, and concludes with positing the research questions. Model development section deals with the existing prominent studies on the topic and as an outcome of this section a conceptual model is proposed. This model is tested with empirical data using confirmatory factor analysis (CFA) and structural equation modeling (SEM), which is presented in the data analysis section. The results and discussions are presented further. The paper in end presents the future research directions.

Literature review

Digital marketing (DM): An overview

Marketing is “an activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large” (American Market Association (AMA), 2013). As per [Chaffey and Smith \(2005\)](#) “Achieving marketing objectives through applying digital technologies”. It is “the promotion of goods and services using digital technologies, mainly on the Internet, but also including mobile phones, display advertising, and any other digital medium”. Digital marketing is effective medium to reach customers and target markets for achieving business growth through sales, customer engagement, branding, and customer acquisitions.

Digital marketing for small businesses and start-ups

Small businesses face challenges like technological changes, global competition, and local competitors; therefore marketing is vital for their survival. Along with their resources, they have to face the challenge of a small customer base and limited reach in markets ([Carson, 1985](#)). Use of internet can lead to reduced cost of marketing and can facilitate the enhanced communication with the customers ([Eriksson, Hultman, & Naldi, 2008](#)).

The digital marketing is cost effective medium for small businesses, which has affected consumer behaviour ([Kaplan & Haenlein, 2010](#)). This can help businesses in planning, analysis, and implementation of customer centric marketing activities. Internet and digital marketing offers various benefits such as new sales opportunities, wider reach to customers, exploration of new markets, reduced cost, and reduced time for customer response. Use of e-marketing tools has a significant on small sales and marketing activities and business profitability. Every start-up has to go through the life cycle phases starting from ideation / concept, Start-up, growth, and expansion; as well as the financial stages of seed funding, venture capital, and public markets ([Grant Thornton and Assocham, 2016](#)). In both of these cases the last stages i.e. expansion and public markets needs the marketing efforts by the owners. Some of the challenges here include managing business within tense competitive environment and maintaining a sustainable business. Present dynamic business environment demands companies to have an institutional website or an online store for their active online presence.

Marketing activity of start-ups is entirely different from that of large businesses and should be treated accordingly ([Hill, 2001](#)). Based on disruptive business models and innovation; therefore for their products and services, they have to tap new customers and new investors. There as ones behind this is limitations faced by start-ups in terms of resources, budget, time, and knowledge about marketing. Social media being low cost and big audience reach makes it ideal for small businesses ([Weinberg, 2009](#)).

Effective marketing is the key to the survival, growth and success of small ventures like start-ups. Internet can be the smart choice with its benefits like cost effectiveness and greater reach to the customers. Even companies can target global audience for their

product and services. Hence maximum attention can be given to digital marketing for obtaining competitive advantages and communication with stakeholders. The adoption of digital marketing by start-ups can be beneficial for its low cost and lower risk.

Literature gap and research questions

Small businesses and start-ups face problems of financial limitations as well as managerial resources than bigger businesses with digital marketing in place (Harrigan et al., 2011). Although the benefits of using internet for promotions is known and most of the literature is focused on digital marketing by large businesses, little is known about start-ups' adoption of digital marketing as scarcity in dedicated literature for the same.

Ritz, Wolf, and McQuitty (2019) addressed the adoption of digital marketing techniques in context of small businesses using TAM and do it yourself (DIY) models through an integrated approach. Sharma and Goyal (2019) addressed the mobile marketing adoption for start-ups using TOE model. Teixeira et al. (2018) also carried an exploratory qualitative study for start-ups with online focus groups to identify the factors studied the social media potential in context of start-up through a conceptual study.

From the above paragraph, it can be analysed that there does not exist any study on digital marketing adoption intention by start-ups by using TAM and TPB in general and in Indian context in particular. A recent concept like digital marketing demands studies focusing on its adoption by start-ups, to have an understanding of its factors for adoption and obstacles and determinants. There is need to address the gap through an empirical investigation and the present study has taken this, through an integrated approach by using TAM and TPB together.

Hypothesized model development

Existing literature on technology adoption involves various information technology adoption models. Several theories or models are proposed and adopted for tracking the pace of diffusion of any innovation. Amongst these models and theories, TPB and TAM are adopted by various researchers in their investigations, which have been adopted in the present study also.

TAM is being used to adopt technology as explained by researchers (Davis, 1989; Venkatesh, Morris, Davis, & Davis, 2003). Four constructs of TAM are "perceived usefulness, perceived ease of use, intentions, and actual technology adoption". TPB by Ajzen (1991) is grounded on the assertion that, the three determinants "attitude toward outcomes of the behaviour, subjective / social norms, and perceived behavioral control", do directly provide the motivation for an intention, which may lead to certain behaviour. Various researchers have adopted TPB in entrepreneurial studies, as well as technology adoption contexts (Brown & Venkatesh, 2005; Gentry & Calantone, 2002). In the present study researcher adopted the integrated TAB and TAM for the development of conceptual model.

Integrated TPB and TAM approach

To explore start-up founders and owners' intentions to undertake digital marketing, the two popular models (TPB and TAM) are applied in integrated fashion to study the factors affecting the digital marketing adoption by start-ups founders. In-fact there are evidences in literature about adoption of the TAM and TPB together for the technology adoption research studies (Chang et al., 2015). Yang and Zhou (2011) adopted these two models together to understand mobile viral marketing.

As per Blankson and Stokes (2002) small business marketing is "unplanned activities that are based on the intuition and energy of the owners to decide it". Capabilities of owners to convey these tasks smoothly and successfully impacts the performance of these small businesses (McGowan & Durkin, 2002). In small business like start-up founders and managers responsibilities may also could include implementation of e-marketing activities. For start-ups the owner often looks after various business activities and sales/marketing aspects, individual decision-making behaviors are to be considered.

Therefore the applicability of the behavioral model TPB is appropriate for implementation in the present study along with the TAM. As there is scarcity of studies dedicated to digital marketing in start-ups the literature review for hypotheses development has also included studies on digital marketing in small businesses as well as SMEs because of certain similarities among them, mainly of the size.

Perceived usefulness (PU)

PU defined as "the extent to which a person believes that using the system will enhance his/her job performance" (Venkatesh & Davis, 2000). According to Grandon and Pearson (2004), perceived usefulness of internet marketing by the user has an effect on internet marketing adoption. As per El-Gohary (2012) the usefulness impacts e-marketing adoption by small organizations. Kanchanatane, Suwanno, and Jarernvonggrayab (2014) examined the perceived usefulness intention to use e-marketing. Shoter, Bataineh, and Salhab (2016) in context of mobile marketing suggested the effect of perceived usefulness. In this regard first hypothesis is:

H₁: The PU impacts intention to use digital marketing.

Perceived ease of use (PEU)

The definition of perceived ease of use is "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989). According to El-Gohary (2012) in their study on small businesses finds PEU impacts e-marketing adoption. Dlodlo and Dhurup (2013) insist that PEU affects e-marketing adoption. Kanchanatane et al. (2014) noted the effects of attitude towards PEU on intention to use e-marketing. Venkatesh and Davis (2000) assert that perceived ease of use has direct and positive impact on perceived usefulness of e-marketing technologies. Therefore the following hypothesis is taken up:

H₂: The PEU affects intention to use digital marketing.

H₃: The PEU affects perceived usefulness.

Attitude towards digital marketing

Attitude is defined as “the degree to which an individual evaluates the behaviour as positive or negative and attitude can be based on instrumental beliefs and experiential or affective beliefs of performing the behaviour” (Ajzen, 1991). In this study attitude will be considered towards start-up owners’ evaluation (positive or negative) towards the usage of digital marketing. Digital marketing enhances incoherent and unpremeditated marketing activities along with a strong sales orientation. The owner’s knowledge, skills, attitudes, and motivations towards digital technologies can be viewed as factors affecting the digital marketing adoption (Sanders & Galloway, 2013). The hypothesis is suggested:

H₄: The attitude towards digital marketing impacts intention to use digital marketing.

Subjective norms

Social norms are the people influence on decision making for adopting and using a new product. Subjective norms are “An individual’s perception that other individuals who are important to him/she consider if he/she could perform behaviour” (Fishbein & Ajzen, 1975). Social influences play a major role in adoption behaviour which can be both external and internal. Previous studies have noted influence of subjective norms on intention. Therefore following hypothesis is promulgated:

H₅: The subjective norms impacts intention to use digital marketing.

Perceived behaviour control (PBC)

PBC is “an individual’s perception of the ease or difficulty of performing the particular behaviour” (Ajzen, 1987). According to Yang and Zhou (2011) perceived behaviour control affects the intention to use mobile viral marketing. As per Khan and Allil (2010), PBC impacts social media intentions of SMEs. Yakasai and Jusoh (2015) identified that perceived behavioral control influences intention to use digital coupons. Goh (2015) concluded the impact of e-word of mouth using online platforms on intentions. With these discussions the hypothesis is suggested as:

H₆: The perceived behaviour impacts intention to use digital marketing.

Digital marketing Intentions and adoption

Behavioral intent can be defined as “the strength of one’s intention to perform a specified behavior” (Fishbein & Ajzen, 1975). Rogers (1983) defines adoption as “a decision

to make a full use of an innovation". In the present research, this definition is adopted for the digital marketing. Davis (1989) suggests that intention to use and attitude toward using are the factors that influence adoption of technology, which influence the actual behaviour. As per Venkatesh and Davis (2000) personal experiences using technology affects the adoption. Nysveen, Pedersen, and Thorbjørnsen (2005) identifies intention of the adoption of mobile services. On this basis following hypothesis is promulgated:

H₇: Intentions to use digital marketing has positive impact on digital marketing adoption.

Perceived Value

There searcher in previous studies proposed that digital marketing offers efficient communication, cost efficiency, and superior targeting of customers. Isohella, Oikarinen, Saarela, Muhos, and Nikunen (2017) suggested the perception of digital marketing. Therefore it would be interesting to explore the mediating role of perceived value and hence this hypothesis is formulated:

H₈: The perceived value by digital marketing plays a mediating role between Intentions and adoption of digital marketing.

The above hypotheses along with the moderating variable are exhibited in the proposed conceptual theoretical model integrating widely adopted TPB and TAM models in context of digital marketing developed through literature review (Figure 1). The relationship variables used in the conceptual model are present here. The variables are measured with a number of items and with a Likert's scale.

Dependent variable:

There are two dependent variables, which are intention to use and adoption of digital marketing.

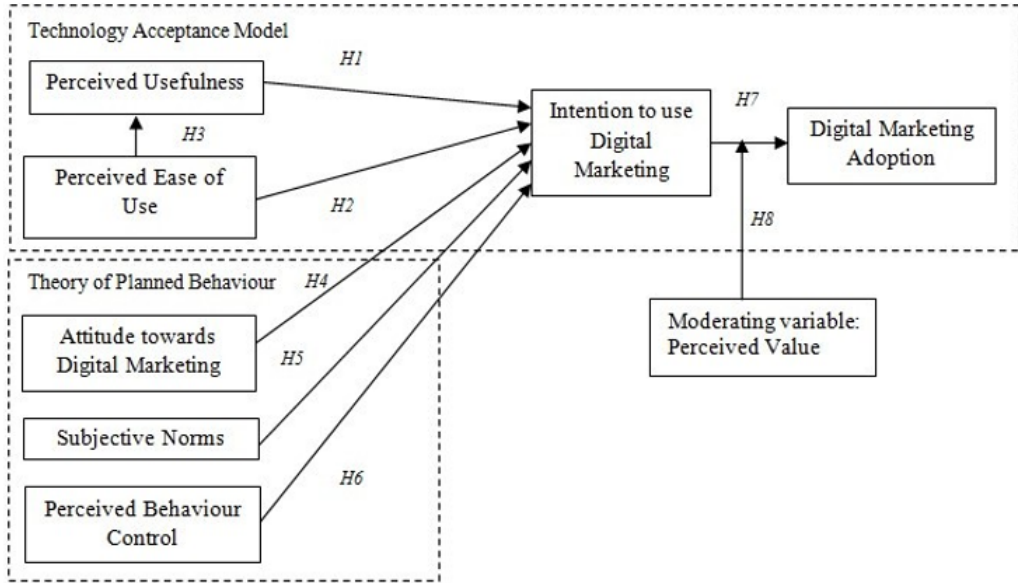
Independent variables:

Five independent variables namely PEU, PU, attitude, subjective norms, and PBC are included in the proposed conceptual model. Study aims to analyze the impact of these variables on intentions to use digital marketing. Perceived usefulness is dependent as well as independent variable.

Moderating variables:

Role of perceived value is being tested as moderating variable between intention and adoption of digital marketing in the study. The moderating variable is measured as categorical variables.

Figure 1
Integrated hypothesized conceptual model



Research Methodology

Research method adopted is quantitative for the empirical investigation of the proposed theoretical model derived from the extensive literature review.

Research population and sampling

The research is on adoption of digital marketing by Indian start-up companies, and as discussed in the previous sections, marketing is done by owners / founders in small businesses and start-ups; therefore they are the respondents for the study. The start-ups having two or more years of age of inception are selected because these are in later stages of their lifecycle and can think about marketing and other related activities. The sectoral perspective as not considered for the study. Start-ups functioning in Pune, which is an urban city in western India are included as sample. List of recognized start-ups by DIPP is taken from official website of 'Start-up India' portal (start-upindia.gov.in), which comprises of contact details, website, and e-mail. Convenience sampling method is used. Pilot survey was conducted on 30 respondents and questionnaire was modified as per the responses. The questionnaire was sent through e-mail to the start-up owners and 314 responses were recorded. After checking the completeness 282 responses are included in the study for further examination. The demographics are presented in the Table 1.

Table 1
Demographics

Item	Count	Percentage
Age of start-up (in years)		
02-Apr	159	57
04-Jun	123	43
Size of Firm(Number of employees)		
0-10	33	12
Oct-20	142	50
20-50	89	32
More than 50	18	6
Sector		
Education	24	9
IT Services	34	12
Automotive	13	5
Marketing	57	20
Food and beverages	56	20
Robotics	2	1
Security solutions	12	4
Renewable energy	4	1
Sports	11	4
Telecom and networking	35	12
Media and entertainment	25	9
Other	9	3
Founder Education		
Upto 10	45	16
Graduation	176	62
Post-Graduation	61	22
Founder age (in years)		
20-30	128	45
30-40	98	34
Morethan40	56	19

Survey instrument

To empirically test the proposed model and analyze hypotheses a survey is initiated. The researcher could not find any relevant and suitable questionnaire, which could have been used to capture responses for digital marketing adoptions. Hence a self-designed questionnaire, which was designed based on earlier similar researches (Davis, 1989; Kleijnen, De Ruyter, & Wetzels, 2007), was adapted for the study. The adapted items were modified as per the present study and suitability of the respondents included in the research. The views of two experts were taken and further it was modified based on their suggestions. The questionnaire consists of two sections; first section records the demographic characteristics of respondents including age of the start-up, stage of the start-up, and other details presented in Table 1 of demographics. One question for mediating variable perceived value is also recorded as categorical variable. The second part includes 27 items/questions to measure the proposed model's seven variables in context of start-ups. These responses in these questions are captured based on Likert's 7 point scale. This developed questionnaire was pre-tested on a sample of 30 respondents. The questionnaire was further modified based on the responses.

Data Analysis

Analysis of the collected data is carried in two stages using software IBM AMOS 20.0 and SPSS 22.0. In first stage confirmatory factor analysis (CFA) is carried out for model fit indices and construct validity. In the second stage structural equation modeling (SEM) is applied for path analysis and hypotheses testing. Content validity deals with the methodology followed for developing questionnaire (Churchill, Brown, & Suter, 1996), which includes (a) conducting a rigorous literature review for examination on the previous studies on digital marketing adoption, which may also include the use of TAM and TPB models; (b) Pilot research before starting the field work. Also views of two academicians and experts were taken on questionnaire.

Confirmatory factor analysis(CFA)

IBM AMOS 20.0 software is used for the first order CFA, and then model fit indices are examined for the proposed model based on its results. These values are then compared with the standard recommended ranges and values, and is presented in Table 2.

Table 2
Measurement model

Measure/item	Range	Values obtained	Observation
CMIN/df	<5	1.387	Goodfit
CFI	>0.95	0.944	Goodfit
TLI	>0.95	0.935	Goodfit
RMSEA	<0.10	0.074	Goodfit

Convergent and Discriminant Validity

The constructs were tested through CFA to obtain the overall measurement model. The outcomes of CFA are used for reliability and convergent validity of the measured items. Table 3 shows the results of the overall measurement model. According to Sekaran and Bougie (2016), a value of more than 0.8 for Cronbach's alpha is considered as good degree of reliability. Therefore, researcher can assert that for all the constructs of the model it is more than 0.8. Reliability of a construct can be measured by Composite reliability (CR) in the measurement model (Jöreskog, 1990). Convergent validity presents the extent to which indicators of a construct converge and they have a high quantity of variance in common (Hair et al., 2010). The calculated values of CR should be more than 0.7 which is achieved for all constructs of the model. Hence all the constructs in measurement model possess a good reliability. Average variance explained (AVE) > 0.5, is there for all the constructs. Also CR > AVE for all the constructs, hence it can be concluded that the convergent validity of the model is confirmed (see Table 3).

Table 4 shows the Discriminant validity of the model with the correlation matrix and roots of AVEs. For all constructs the values of AVE are greater than values of average share variance (ASV). AVE > MSV for all constructs therefore discriminant validity seems to be satisfied at construct level.

Table 3
Measurement model

Variables and Code	Item Code	Factor loadings	AVE	CR	CA	ASV
Perceived Usefulness (PU)	PU1	0.820	0.803	0.942	0.942	0.106
	PU2	0.910				
	PU3	0.920				
	PU4	0.930				
Perceived Ease of Use (PEU)	PEU1	0.960	0.861	0.961	0.959	0.001
	PEU2	0.960				
	PEU3	0.910				
	PEU4	0.880				
Intention to Use (IU)	IU1	0.870	0.820	0.948	0.949	0.108
	IU2	0.900				
	IU3	0.960				
	IU4	0.890				
Attitude (AT)	AT1	0.800	0.688	0.897	0.885	0.008
	AT2	0.900				
	AT3	0.900				
	AT4	0.700				
Subjective Norms (SN)	SN1	0.960	0.915	0.970	0.969	0.003
	SN2	0.960				
	SN3	0.950				
Perceived Behaviour Control (PBC)	PBC1	0.830	0.591	0.851	0.851	0.112
	PBC2	0.85				
	PBC3	0.69				
	PBC4	0.69				
Digital Marketing Adoption (DMA)	DMA1	0.920	0.857	0.960	0.949	0.127
	DMA2	0.880				
	DMA3	0.960				
	DMA4	0.940				

Table 4
Correlation matrix and roots of AVEs for discriminant validity

	MSV	MaxR(H)	DMA	PU	PEU	IU	AT	SN	PBC
DMA	0.738	0.967	0.927						
PU	0.738	0.950	0.859	0.897					
PEU	0.222	0.970	-0.058	-0.131	0.928				
IU	0.671	0.957	0.819	0.671	-0.100	0.905			
AT	0.165	0.918	-0.028	0.056	-0.077	-0.039	0.828		
SN	0.222	0.970	-0.121	-0.201	0.471	-0.120	0.112	0.956	
PBC	0.404	0.870	0.503	0.560	-0.095	0.636	0.406	0.060	0.770

Note: Diagonals represent square root of AVE and off-diagonal values represent correlations among the constructs

Path analysis with Structural equation modeling (SEM)

SEM is conducted on the present model using software IBM AMOS 20.0. Figure 3 exhibits the path diagram showing variables of the model. The results of this model are used to test the seven hypotheses of the proposed model (H1-H7) given in Table 5. The results show the hypothesis H1, H4, H6 and H7 are accepted and hypotheses H2, H3, and H5 are rejected.

Table 5
Hypotheses testing

Hypothesis	R ² (Path Coefficient)	Accepted/rejected
H1:Perceived Usefulness->Intention to use Digital Marketing	.38**	Accepted
H2:Perceived ease of use->Intention to use Digital Marketing	0.01	Rejected
H3:Perceived ease of use->Perceived Usefulness	0.14	Rejected
H4:Attitude->Intention to use Digital Marketing	.37**	Accepted
H5:Subjective Norms->Intention to use Digital Marketing	-0.07	Rejected
H6:Perceived Behaviour Control->Intention to use Digital Marketing	.72**	Accepted
H7:Intention to use Digital Marketing ->Digital Marketing adoption	.81**	Accepted

Moderating role of perceived value

The study aims to see the moderating effect the variable perceived value (which is measured as categorical variable) between intention to use digital marketing and adoption of digital marketing for start-up companies. Moderating effect can be seen as a multivariate analysis. The equation for moderating impact can be written as:

$$\text{Digital marketing adoption} = a + b_{\text{Value-yes}} (\text{Intention to use})$$

$$\text{Digital marketing adoption} = a + b_{\text{Value-no}} (\text{Intention to use})$$

Where a is intercept and b is regression coefficient of independent variable. The hypothesis for thesis:

H0: $b_{\text{Value-yes}} = b_{\text{Value-no}}$ the decision rule for hypothesis is if $Z < 1.96$, H0 can be accepted. It can be interpreted that there is no difference between perceived value by the founders as far as intention of use digital marketing and its actual usage. The calculations of Z values are presented in Table 6. The value of Z comes out to be .109 which is less than 1.96 therefore it can be stated that there does not exist any role of perceived value on adoption of digital marketing. Therefore hypothesis H7 can't be accepted.

Table 6
Calculations of Z values

Perceived value	B(yes)	B(No)	Standard error (yes)	Standard error(no)	Z value
Intention to use Digital marketing	0.868	0.883	0.103	0.091	0.109

Results and discussions

The findings specify that PU extends a significant and positive and impact on intention to use digital marketing by start-ups as in previous studies (Davis, 1989; Ritz et al., 2019) which had vacated the same. Hypothesis H2 and H3 are being rejected in the present study as findings indicate that perceived ease of use doesn't have any significant impact of intentions to use digital marketing. These results may not be same as with other studies there do exist the theoretical evidence for its negative impact. Most of the start-ups are innovations and technology based, and therefore founders may be well versed with the

technology and hence they may not find the ease of use as an impact furless on to adopt digital marketing. The hypothesis H3 is also being rejected which indicates that PEU has no significant impact on perceived usefulness. This is not supporting the studies, but is consistent with some of them (Yang & Zhou, 2011). The hypothesis H4 is accepted as per the findings, and it is in line with the earlier studies (Noor, Sreenivasan, & Ismail, 2013; Yakasai & Jusoh, 2015). As H5 is rejected, it implies that the people don't make much effect on the founder's decision to adopt digital marketing. Although it is not consistent with the studies (Ajzen, 1991; Noor et al., 2013). This finding is coherent with some of the earlier studies (Shoter et al., 2016), which indicated the negative impact. H6 hypothesis is being accepted and it is rational with previous similar studies; although some study talks about its insignificant impact. H7 hypothesis is being accepted; therefore intention to use digital marketing affects the adoption intention. This is supported by previous studies. The rejection of H8 indicates that perceived value of digital marketing by the founders of start-ups doesn't make any difference on adoption intention of the digital marketing for their business. This finding opposes the previous studies (Isohella et al., 2017; Teixeira et al., 2018).

Conclusion

This research study was aimed to ward exploring the digital marketing strategies that start-ups use to cater for their businesses in India. The findings in this study shed light on understanding how start-up see and use digital marketing and their intention to use and adopt digital marketing for the growth of their start-ups using TAM and TPB. The findings suggest that perceived usefulness significantly affects intentions to use digital marketing and subsequently adoption of digital marketing by the start-ups. Perceived ease of use is found to have no significant effects on intentions to use digital marketing. One possible reason can be the expertise of start-ups in using recent technological advancements. A positive attitude toward digital marketing and perceived behavioral control of start-up founders/managers significantly affects the usage and adoption intentions of digital marketing for the development and growth of their start-ups. This study further explores that how perceived value of digital marketing moderates the relationship between intentions to use digital marketing and adoption of digital marketing by the start-ups.

Research Contribution

Theoretical Implications

This research contributes to the digital marketing literature. Considering the academic point of view, this is the first research which attempts to develop a framework for digital marketing adoption intentions by the start-up companies. There is no such study which used the integrated approach of TAM and TPB models in general and in Indian context in particular. Also there are ample studies on larger businesses and SMEs, but rarely on

start-ups. The present empirical study takes forward, the existing literature on digital marketing adoptions.

Practical Implications

Talking about the practical implications of research. Survival of start-ups being important for developing economies like India, This research examines the factors affecting the digital marketing adoption and which can lead to the successful marketing campaign by start-ups. This study outlines the views of start-up founders and their marketing strategies with respect to digital marketing. This will motivate them to adopt the digital marketing techniques for improvement in their business. In a business era, where digital marketing has received enormous attention by the big companies due to its efficacy and granularity, this research outlines the key factors that affect the adoption intentions of founders/owners of startups. Specifically, this research addresses to digital marketing companies. Digital marketing companies needs to remain vigilant that the starts ups will only adopt the digital marketing if they find digital marketing more useful than the traditional marketing tools. Moreover, digital marketing firms need to give more control of the execution of digital marketing strategies to the starts ups so they can execute or modify or change according to their specific marketing conditions e.g. target market, competitors etc. This research hopes to establish a valuable addition to the research line in the field of digital marketing, specifically for start-ups.

Limitations and talking about future

This study may have certain limitations such as the study is not conducted at the pan India level, therefore the findings cannot be generalized. Sartorial perspective is not considered in the study. Some of the sector specific issues are not addressed. The most of the participating start-ups in the study are urban start-ups; the rural start-ups may have a different view. Exploratory study on antecedents of digital marketing adoption can be carried out with qualitative research. The other limitation is that data of actual adoptions is not collected which limits the managerial significance of the study. Further study can be taken up with actual intentions. Some qualitative studies can be taken up where the researcher may to concentrate on individual entrepreneurs.

References

- Ajzen, I. (1987). Attitudes, traits, and actions: Dispositional prediction of behavior in personality and social psychology. *Advances in Experimental Social Psychology*, 20, 1–63.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Blankson, C., & Stokes, D. (2002). Marketing practices in the UK small business sector. *Marketing Intelligence & Planning*, 20(1), 49–61.
- Brown, S. A., & Venkatesh, V. (2005). Model of adoption of technology in households: A baseline model test and extension incorporating household life cycle. *MIS Quarterly*, 399–426.
- Carson, D. J. (1985). The evolution of marketing in small firms. *European Journal of Marketing*, 19(5), 7–16.
- Chaffey, D., & Smith, P. (2005). *e-Marketing excellence: at the heart of e-Business*. Butterworth-Heinemann.
- Chang, Y.-Z., Ko, C.-Y., Hsiao, C.-J., Chen, R.-J., Yu, C.-W., Cheng, Y.-W., ... Chao, C.-M. (2015). Understanding the determinants of implementing telehealth systems: A combined model of the theory of planned behavior and the technology acceptance model. *Journal of Applied Sciences*, 15(2), 277–282.
- Churchill, G. A., Brown, T. J., & Suter, T. A. (1996). *Basic marketing research*. Dryden Press Orlando, FL.
- Dana, L.-p., Sharma, N., & Acharya, S. R. (2020). Organising entrepreneurship and MSMEs across India. *International Journal of Entrepreneurship and Small Business*, 2(1), 79–88.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 319–340.
- Dlodlo, N., & Dhurup, M. (2013). Drivers of e-marketing adoption among small and medium enterprises (SMEs) and variations with age of business owners. *Mediterranean Journal of Social Sciences*, 4(14), 53–53.
- El-Gohary, H. (2012). Factors affecting e-marketing adoption and implementation in tourism firms: An empirical investigation of egyptian small tourism organisations. *Tourism Management*, 33(5), 1256–1269.
- Eriksson, L. T., Hultman, J., & Naldi, L. (2008). Small business e-commerce development in Sweden—an empirical survey. *Journal of Small Business and Enterprise Development*, 15(3), 555–570.
- Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behaviour: An introduction to theory and research. addison-wesley pub. co.(reading, mass).
- Gentry, L., & Calantone, R. (2002). A comparison of three models to explain shop-bot use on the web. *Psychology & Marketing*, 19(11), 945–956.
- Goh, S.-K. (2015). The effect of electronic word of mouth on intention to book accommodation via online peer-to-peer platform: Investigation of theory of planned behaviour. *The Journal of Internet Banking and Commerce*, 1(2), 1–7.

- Grandon, E. E., & Pearson, J. M. (2004). Electronic commerce adoption: an empirical study of small and medium us businesses. *Information & Management*, 42(1), 197–216.
- Grant Thornton and Assocham. (2016). *Indian tech start-up ecosystem: Leading tech in the 20s*. Retrieved from <http://10000startups.com/frontend/images/Indian-Tech-Start-up-Ecosystem-2019-report.pdf>
- Hall, B. H., & Khan, B. (2003). *Adoption of new technology*. National bureau of economic research Cambridge, Mass., USA.
- Harrigan, P., Ramsey, E., & Ibbotson, P. (2011). Critical factors underpinning the e-CRM activities of SMEs. *Journal of Marketing Management*, 27(5-6), 503–529.
- Hill, J. (2001). A multidimensional study of the key determinants of effective SME marketing activity: Part 1. *International Journal of Entrepreneurial Behaviour & Research*, 7(5), 171–204.
- Isohella, L., Oikarinen, E.-L., Saarela, M., Muhos, M., & Nikunen, T. (2017). Perceptions of digital marketing tools in new microenterprises. In *Management challenges in a network economy: Proceedings of the MakeLearn and TIIM International Conference* (pp. 85–95).
- Kanchanatane, K., Suwanno, N., & Jarernvonggrayab, A. (2014). Factors affecting the intention to use e-marketing of small and medium sized businesses in the three southern border provinces of Thailand. *International Journal of Business and Social Science*, 6(3), 1–13.
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! the challenges and opportunities of social media. *Business Horizons*, 53(1), 59–68.
- Khan, M. N., & Allil, K. (2010). Determinants of mobile advertising adoption: A cross-country comparison of India and Syria. *International Journal of Mobile Marketing*, 5(1), 41–59.
- Kleijnen, M., De Ruyter, K., & Wetzels, M. (2007). An assessment of value creation in mobile service delivery and the moderating role of time consciousness. *Journal of Retailing*, 83(1), 33–46.
- McGowan, P., & Durkin, M. G. (2002). Toward an understanding of internet adoption at the marketing/entrepreneurship interface. *Journal of Marketing Management*, 18(3-4), 361–377.
- Nasscom and Zinnov. (2019). *Indian tech start-up ecosystem: Leading tech in the 20s*. Retrieved from <http://10000startups.com/frontend/images/Indian-Tech-Start-up-Ecosystem-2019-report.pdf>
- Noor, M. N. M., Sreenivasan, J., & Ismail, H. (2013). Malaysian consumers attitude towards mobile advertising, the role of permission and its impact on purchase intention: a structural equation modeling approach. *Asian Social Science*, 9(5), 135–153.
- Nysveen, H., Pedersen, P. E., & Thorbjørnsen, H. (2005). Intentions to use mobile services: Antecedents and cross-service comparisons. *Journal of the Academy of Marketing Science*, 33(3), 330–346.
- Patel, C., & Chugan, P. (2018). Digital inbound marketing to drive the success of startups. *International Journal of Family Business and Management*, 2(1), 1–6.
- Ritz, W., Wolf, M., & McQuitty, S. (2019). Digital marketing adoption and success for small businesses: The application of the do-it-yourself and technology acceptance

- models. *Journal of Research in Interactive Marketing*, 14(2), 179-203.
- Rogers, E. M. (1983). *Diffusion of innovations*. The free press, New York.
- Sanders, J., & Galloway, L. (2013). Rural small firms' website quality in transition and market economies. *Journal of Small Business and Enterprise Development*, 20(4), 788-806.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.
- Sharifi, O., & Hossein, B. K. (2015). Understanding the financing challenges faced by startups in India. *International Journal of Science Technology and Management*, 4(1), 264-272.
- Sharma, S., & Goyal, D. (2019). Mobile marketing adoption intention by startup companies in India: a technological-organisational-environmental framework-based approach. *International Journal of Indian Culture and Business Management*, 18(4), 458-474.
- Shoter, A. M., Bataineh, A. Q., & Salhab, H. A. (2016). Building a model for determining the factors affecting mobile marketing acceptance and adoption. *IRMBR-International Review of Management and Business Research*, 5, 22.
- Statista. (2020). 'Internet usage in India - Statistics & Facts'. Retrieved from <https://www.statista.com/topics/2157/internet-usage-in-india/>
- Teixeira, S., Branco, F., Martins, J., Au-Yong-Oliveira, M., Moreira, F., Gonçalves, R., ... Jorge, F. (2018). Main factors in the adoption of digital marketing in startups an online focus group analysis. In *13th Iberian Conference on Information Systems and Technologies (CISTI)* (pp. 1-5).
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 425-478.
- Weinberg, T. (2009). *The new community rules: Marketing on the social web*. O'Reilly Sebastopol, CA.
- Yakasai, A. B. M., & Jusoh, W. J. W. (2015). Testing the theory of planned behavior in determining intention to use digital coupon among university students. *Procedia Economics and Finance*, 31, 186-193.
- Yang, H. C., & Zhou, L. (2011). Extending tpb and tam to mobile viral marketing: An exploratory study on American young consumers' mobile viral marketing attitude, intent and behavior. *Journal of Targeting, Measurement and Analysis for Marketing*, 19(2), 85-98.