Investigating the intention to adopt smartphone apps among the entrepreneurs of a developing country

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Abstract

Purpose – Nowadays, in mobile communication, smartphone is one of the modern progress and emergent phenomena for business as well as social networking. The purpose of this paper is to investigate an intention to adopt smartphone apps among the entrepreneurs of a developing country.
Design/methodology/approach – The quantitative methods based on cross-section data are employed for examining an intention towards adopting smartphone apps. The data are collected through a survey questionnaire. In the initial stage, 500 questionnaires were randomly distributed among the businessmen of a developing context. The value of the return samples is 280. The response rate has remained at 56 per cent.
Findings – By applying the Statistical Package for Social Sciences, Pearson's correlation and multiple regression show a positive and significant relationship of perceived usefulness, ease of use, perceived enjoyment and satisfaction with an intention to adopt smartphone apps. On the other hand, a positive and non-significant relationship between social needs and the intention to adopt smartphone apps is investigated.
Practical implications – The present study may provide valuable insights into the use pattern of smartphones among entrepreneurs and contribute for nurturing an intention to adopt smartphone apps in the developing context. Moreover, such a study may contribute to the literature of the developing country context, especially in the perspective of developing an intention and attitude towards smartphone apps.
Originality/value – This paper offers the factors which may be supportive of the actual usage of smartphone applications. The study is original containing data from a developing country.

Keywords Entrepreneurs, Developing country, Ease of use, Mobile technology, Intention to adopt smartphone apps

Paper type Research paper

Introduction

Today, the circulation of mobile technology has been increased (Butt and Phillips, 2008; Ladd *et al.*, 2010; Chung *et al.*, 2012; Koo and Kim, 2015). Such circulation happened due to a particular combination of technologies by which individuals are effectively communicating with their organizations, groups and societies (Ladd *et al.*, 2010). In mobile computing technology, the smartphone is one of the modern progresses among others. The smartphone is regarded as an emergent phenomenon for business and personal voices such as social networking communications, data, e-mails as well as sharing of applications through access of the internet (Oulasvirta *et al.*, 2012). In addition to it, smartphones are also offering a

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variety of technologies like digital cameras, digital content, location tracking and music. From a business point of view, the smartphone can be useful for the businessmen through the revolutionary operation. There is no need for individuals to look upon the desktop computers the whole day. On the roads, on account of festivals, the smartphone individuals could easily check e-mails, listen to fresh (breaking) news as well as make themselves aware of the office activities. In other words, smartphones have been reduced by a distance, no matter where one is. It may be easily within reach (touch). In addition to it, an individual could run a business better and efficiently by applying the different apps through the iPhone or an Android phone. The "Smartphones are the devices that can perform a dual function, i.e. mobile telephone and handheld computer" (Verkasalo *et al.*, 2010). For that, we investigate the intention to adopt smartphone apps (applications), and what are the factors that may be responsible for diverting the intention of individuals towards adopting the smartphone app particularly in a developing context? However, there is still a lack of the empirical evidence for examining the individuals' intention to adopt smartphones (Chiem *et al.*, 2010; Persaud and Azhar, 2012; Wells *et al.*, 2012; Salo *et al.*, 2013).

Keeping in views with such a pressing need, the present study tries to investigate the intention to adopt smartphone apps among the businessmen of a developing context. This study also aims to examine how mechanisms of the service are offered by smartphone apps that would encourage consumers' intention for using the apps. In this regard, the factors such as the perceived enjoyment, social needs, the perceived ease of use, perceived usefulness and satisfaction were examined to judge the consumers' intention for future adoption in a good way.

A study may be proven as useful for the smartphone developers and the pertinent service providers for deciding which features are more significant lengthways in the phases of the information technology implementation procedure. The present study may provide valuable insights into the use pattern of smartphones among potential entrepreneurs of a developing country where the entrepreneurs use smartphone application for different purposes. Furthermore, this study may contribute to the literature on a smartphone, especially in the developing country context.

Literature review

In the present era, a circulation of mobile technology has been increased (Butt and Phillips, 2008; Ladd *et al.*, 2010; Chung *et al.*, 2012; Koo and Kim, 2015). This circulation happens due to a particular combination of technologies by which individuals are effectively communicating with their organizations, groups and societies. Mostly, the smartphone apps are using for the purpose of richness, intelligence and the power. The smartphones can gather accurate and impartial data from many people concerning their attitudes, performances and involvements without enquiring them to work out in the skilful labs (Raento *et al.*, 2009; Dufau *et al.*, 2011; Rachuri and Mascolo, 2011). In recent studies, smartphone apps are regarded as an innovative media for business communication which is frequently extended (Lee and Raghu, 2011). As compared with the traditional transactions of a physical store, mobile networks offer customers sufficiently exclusive charges like no time-based and longitudinal restriction, and obtainability of data. These features of smartphones have brought a lot of essential communication instruments in our lives. According to Liang and Wei (2004), concerning the fast development of the service of smartphone apps, m-commerce is predictable to remain the next tendency after e-commerce related to internet transaction. Currently, people regarding smartphones assume that the smartphone apps are everything due to their enlargement (Accenture, 2012). According to Wagner (2011, p. 28), "While the global smartphone market is overgrowing; a little is known about how consumers make use of smartphones". In this way, it is indispensable to judge consumer behaviour towards smartphone apps and recognize why and how consumers are using them. Lee *et al.* (2012) strongly recommended that the presence of marketplaces and platform application programming interfaces has prepared them more

good-looking and attractive for some software developers to contrivance apps for practice on the changed operating system platforms of computers and mobile devices rather than on appliance comprehensive web-based services. These apps are offered free and paid for downloading from websites which are termed as app stores.

In such a field, many smartphone apps appeared without the development of deliberations that how and why people felt the scarcity to avail them later, without an awareness of consumer acknowledgement of using the value of apps. According to Chen and Mort (2007), a technology (apps) is a volunteer to use, and the supposed value has a positive influence on technology willingness. In other words, the application for an individual should be comfortable or its ease of use, usefulness, social needs and enjoyment. The social influence and social needs positively and significantly affect students' dependence on smartphones (Suki, 2013). The use of smartphone-banking services provides a positive and significant correlation with their perceived usefulness, security, trust and user satisfaction. Satisfaction and self-efficacy also significantly influence continuance use intention (Susanto *et al.*, 2016). According to Kervenoael *et al.* (2017), consumption anecdotes of smartphone games, indeed when the play is inadequate, lead to the association of three cognitive structures through which primary coping means work: the market-generated, social being and citizen frames.

In the same dimension, Yi *et al.* (2016) conducted a study from college students at South Korea to investigate the influence of a smartphone on college students' perceived academic performance and smartphone use by identifying the task–technology fit (TTF) of smartphones. The outcomes of such a study revealed that the TTF of smartphones has a direct influence on students' perceptions of performance. While there was an indirect influence on smartphone use through a predecessor of operation, like facilitating conditions, attitude towards smartphone use and social norms. The findings of Hsiao (2013) highlight that the influence of the factors on the intention of the mobile internet users and non-users was different. Astonishingly, the effect of design aesthetics was not significant in all of the groups. Male users were found to be more likely to read e-books on their smartphones, as are people with higher personal incomes. Among the Mexican millennials, it was found that two-thirds of respondents are skipping the ads when carrying out a mobile search from their smartphones (Murillo, 2017). Elali and Al-Yacoub (2016) strongly recommended that self-efficacy, risk tolerance, social networking and the need for achievement serve as good predictors of entrepreneurial intentions among the nationals of Kuwait. Similarly, significant predictors of smartphone app usage intention comprised social influence, price saving, performance expectancy, perceived risk, perceived trust and prior usage habits. Usage behaviour was largely mediated by usage intention, except in the case of habits. Opposing to the expectation, factors such as hedonistic motivation, facilitating conditions or effort expectancy did not impact usage intention or behaviour (Gupta *et al.*, 2018).

In the literature, various scholars like Vargo and Lusch (2004, 2008) and Edvardsson *et al.* (2005) claimed that the value is shaped during practice, thus termed value-in-use. However, value-in-use depends on consumption. Hassan *et al.* (2014) found a positive and significant relationship among perceived usefulness, ease of use, social need and intention to adopt smartphones. Similarly, Koo and Kim (2015) highlighted a positive and significant relationship between explorative use and exploitative usage.

Consequently, the literature highlighted various factors such as perceived enjoyment, perceived usefulness, social needs, perceived ease of use and an exploitative and explorative method for predicting the intention towards smartphones in different contexts (Chen and Mort, 2007; Hassan *et al.*, 2014; Koo and Kim, 2015). The researchers mainly focussed on smartphone-banking services, e-commerce and the general banking context (Casalo *et al.*, 2007; Kim, 2008; Susanto *et al.*, 2016).

Interestingly, for a present study, the researchers were able to find two significant gaps in the existing literature. For the first time, this type of research has conceptualized in which

the predictors such as social needs, perceived enjoyment, perceived ease of use and perceived usefulness were integrated with satisfaction to predict the intention to adopt smartphone apps. Second, in the developing context, among the businessmen, no one has conducted such a study earlier in which the above factors predict individuals' intention to adopt smartphone apps in a connected way.

Conceptual framework and hypotheses development

In the present day, smartphone apps have become a significant and innovative media of business communication which is frequently extending (Lee and Raghu, 2011). It offers customers wide varieties of the facilities of mobile networks, longitudinal and time-based restrictions and an easy way to reach the market through the internet without physically moving towards such markets.

In the literature, various scholars like Vargo and Lusch (2004, 2008) and Edvardsson *et al.* (2005) strongly underlined that the value is shaped during practice, thus termed value-in-use. A positive and significant relationship among perceived usefulness, ease of use, social need and intention to adopt smartphones is highlighted by Hassan *et al.* (2014). Similarly, Koo and Kim (2015) emphasized a positive and significant relationship between explorative use and exploitative usage. Regarding technological adoption, different models such as Task–Technology Fitting Model and Innovation Model were applied (Goodhue and Thompson, 1995). In common, the Technology Acceptance Model (TAM) seemed as a parsimonious framework, which extensively remained effective to clarify the different behaviours about technological adoption. Furthermore, Davis (1989) strongly recommended that TAM provides the capability in explaining the most influential mediator in most of the user behaviour cases, i.e. perceived ease of use and perceived usefulness. The core and fundamental assumption of TAM highlights the interrelationship between behavioural intention, the perceived practical consequences and actual usage.

As a result, the related literature pointed out the various factors such as perceived enjoyment, perceived usefulness, social needs, perceived ease of use and an exploitative and explorative method for predicting the intention towards smartphones in different contexts (Chen and Mort, 2007; Hassan *et al.*, 2014). Koo and Kim (2015) highlighted a positive and significant relationship between explorative use and exploitative usage.

From the rigorous literature review, the researchers claim that perceived usefulness, ease of use, perceived enjoyment, social needs and satisfaction have a significant impact on developing the intention to adopt smartphone applications. Based on such predictors, the researchers developed the conceptual model (Figure 1) for an investigation of the intention to adopt smartphone apps among the entrepreneurs of a developing country.

The perceived usefulness mentions "the degree to which a person believes that using a particular system would enhance individuals' performance" (Davis, 1989, p. 320). In a simple sense, it may signify a user's confidence that specific technology structures donate to developments in his or her performance. The perceived usefulness is connected with the perception of performance and outcome prospects (Ventatesh and Morris, 2000). There is a

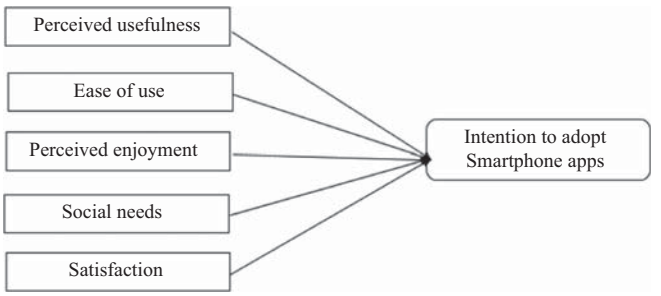

Figure 1.
Conceptual model developed by the researchers

substantial impact of usefulness on user intentions to accomplish general tasks. According to the definition of Davis (1989) about applicable adaptation perspective, perceived usefulness mentions how consumers use the app store through a smartphone. In the literature, various studies revealed a positive and significant relationship between perceived usefulness and behavioural intentions, particularly in the context of technology (Taylor and Todd, 1995; Fenech, 1998; Moon and Kim, 2001).

In contrast to it, numerous smartphone features are regarded as extremely significant in defining users' perceived usefulness in app-oriented business perspectives (Venkatesh and Davis, 2003; Yang, 2005). The above literature highlights that there is a positive and significant association between usefulness and adoption intention for smartphone apps. Based on positive relationships, we expect the positive results from a developing context:

H1. Perceived usefulness has a positive and significant relationship with the intention to adopt smartphone apps.

Concerning ease of use referred to as "individuals' believe that using a particular product/service would be free from effort" (Davis, 1989, p. 321). According to Davis (1989), as a crucial determinant factor, it may affect users' intention of technology adoption. Chong *et al.* (2012) revealed that the practicality of technology (ease of use) has a significant influence on the user's intention of early steadiness or adoption. The previous literature highlights that there is a positive and significant relationship between the subjective type of technology and product, adoption behaviour and ease of use (Dishaw and Strong, 1999; Gefen and Straub, 2004; Kulviwat *et al.*, 2007).

However, some scholars argued that in the mobile service framework, perceived ease of use is an essential factor for predicting the users' acceptance (Cheong and Park, 2005; Snowden and Spafford, 2006). In contrast, Gefen and Straub (2004) strongly suggested the negative affiliation between behavioural intention and perceived ease of use. Their negative results were also supported by various scholars such as Hong *et al.* (2006) and Mouakket (2009) in the field of technological easiness. From the above discussions, we developed the following hypothesis for investigation properly:

H2. Ease of use has a positive and significant relationship with the intention to adopt smartphone apps.

The perceived enjoyment is an essential factor due to an association with the emotions (Moon and Kim, 2001; Pagani, 2004). According to Kim *et al.* (2007), perceived enjoyment is a primary factor which makes the concentration towards gaining the tasks. In a simple sense, it is a non-seeming motive which strongly affects the users to create an action. On the other hand, Pagani (2004) and Yang and Jolly (2008) strongly stressed that enjoyment, playfulness and fun are the significant achievements which could be gained from such technology.

The previous literature suggests that users get enjoyment from different sources such as e-commerce and website usage. Such favourable usages are developing the positive attitudes of consumers towards the effective use of technology (Novak, 2003; Kulviwat *et al.*, 2007). The perceived enjoyment is the strongest catalyst of consumers' attitude as compared with ease of use and usefulness (Kulviwat *et al.*, 2007). From the marketing point of views, smartphones are becoming a valuable source of entertainment as compared with business-oriented ones. Therefore, to observe the enjoyment of the entrepreneurs' intention to adopt smartphone apps, the following hypothesis was formulated:

H3. Perceived enjoyment has a positive and significant relationship with the intention to adopt smartphone apps.

In the current era, people's way of living has been changed dramatically and connected with the world through the use of smartphone apps (Goldman, 2010). According to the perception

of Carayannis *et al.* (2012), there is no geographical difference between the communication of the individuals due to various technical apps of smartphones.

Smartphones also fulfil social needs such as affection, love and belongingness (Schiffman *et al.*, 2009). Smartphones offer communication software i.e. resolution screens. Such screens deliver consumers through a marvellous collection of features such as e-mail, mobile web browsing, direct messaging, picture messaging, GPS, games, a video camera, audio and video replay, editing of audio and video and many more (Goldman, 2010). Nearly, three-quarter students underlined the unlimited access to the internet service through a smartphone that is sufficient for fulfilling the needs (Peterson and Low, 2011). According to Suki (2013), social influence and social needs positively and significantly affect students' dependence on smartphones. Based on positive literature support, the following hypothesis was developed:

H4. Social needs have a positive and significant relationship with the intention to adopt smartphone apps.

The apps of smartphones provide perceived business-related assistance (satisfaction) and work needs through different features (Thatcher *et al.*, 2011). According to DeLone and McLean (2003), in a long term, smartphones upsurge the users' satisfaction which develops as an intention to usage. Coursaris and Sung (2012) conducted an ATM-based study and found as an attitude towards technology as a protagonist predictor of technology usage. Furthermore, a study also found that there is a substantial impact of satisfaction on the behavioural intention of the users for using a mobile device for wireless data services.

Smartphone usage and user satisfaction affects the explorative and exploitative usage. The above relevant literature confirms that the satisfaction was inspected in the different contexts except in the developing context (Goldman, 2010; Thatcher *et al.*, 2011; Coursaris and Sung, 2012). To fill such lack, the researchers proposed the following hypothesis for investigation among people in the business:

H5. Satisfaction has a positive and significant relationship with the intention to adopt smartphone apps.

Research methodology

The nature of the present study is quantitative. From the time horizon, it is a cross-sectional study for which a random technique for data collection is used appropriately. We used the Statistical Package for Social Sciences (SPSS) version 24.0 as the central tool for data analysis.

Context of research and questionnaires' distribution

The present study focussed on a developing country where the response was collected from the entrepreneurs who are doing business as traders, transporters, hotel owners, commercial proprietors, textile product exporters, sugar industrialists, etc. In the initial stage, 500 questionnaires were randomly distributed among the entrepreneurs of a developing country. The size of the return samples was 280. The response rate is noted as 56 per cent.

Survey instrument and verification

The survey instrument (questionnaire) is used as a standard tool for data collection. All items of their respective factors were adapted from the domain literature. We decided to launch the questionnaire in the English language because the businessmen are qualified and focussing on the English language to enhance and communicate in their companies. Before initiation of the survey for a full-scale study, a pilot study was conducted to confirm the validity and reliability of the instrument to prevent the wastage of money, energy and time (Blaxter *et al.*, 1996), particularly in the field of social sciences. The validity was verified by experts (university professors). The experts confirmed the language, design and the relation of items with the objective of the study.

Moreover, the internal consistency (reliability) among the items was assured through Cronbach's α. It was noted as above the acceptable range of 0.60 (Field, 2006). Therefore, after ensuring both valuable perspectives (validity and reliability) of the questionnaire, it was promoted for the main study.

The distribution practice and ethical etiquette

We visited and distributed the surveys personally handed over to the respondents. Before getting a response, the permission about the voluntary participation and willingness to take part in the study were guaranteed correctly. After attaining a real comeback, each participant was provided with a survey questionnaire, in which a proper consent form and a covering letter illuminating the purpose of the study, and guidelines about how to fill the survey instrument were attached. The respondents were informed that any time they could be restrained from the survey without declaring the reason for withdrawal. Moreover, they were also guaranteed about their privacy and confidentiality of the response (information) which they have been provided.

Study variables and measures

The study is based on the predictor variables such as ease of use, perceived enjoyment, perceived usefulness, social needs and satisfaction along with a dependent variable (the intention to adopt smartphone apps). The required items of the survey questionnaire were adapted from the related literature. The Likert scale was applied to get measures such as the items. The options of the Likert scale were strongly agree, agree, neutral, disagree and strongly disagree.

Data analysis and results

Descriptive statistics and reliability assessment

The SPSS version 24.0 for windows was used for the data analysis. In the initial stage, the range of the Likert scale was assured through descriptive statistics (mean and standard deviation). The range of the mean for all the variables was noticed between 2.012 and 3.962, whereas the range of the scores of standard deviation remained 1.075–2.088 (Table I). Moreover, Cronbach's α reliability was applied for confirming the internal consistency among the items. The overall consistency (reliability) was noted as 0.856, while the reliability for the individuals' factor remained as satisfactory (Table I).

Hypotheses testing

The hypotheses were tested by imputing the variables in SPSS. We applied Pearson's correlation and multiple regression analysis for the confirmation of the proposed hypotheses.

By applying Pearson's correlation and the regression results highlighted as $r = 0.461^{**}$; $\beta = 0.258$; $t = 5.324$; $p < 0.01$ (Tables II and III). Hence, *H1* was accepted. Regarding *H2*, the results of correlation and regression ($r = 0.371^{**}$; $\beta = 0.297$; $t = 6.152$; $p < 0.01$) (Tables II and III) show a positive and significant association between ease of use and the intention to adopt smartphone apps. Therefore, *H2* was accepted. In a similar manner, the Pearson's

No.	Variables	*M*	SD	α
1	Perceived usefulness	3.962	1.182	0.872
2	Ease of use	3.783	1.198	0.898
3	Perceived enjoyment	3.925	1.313	0.847
4	Social needs	2.012	2.088	0.778
5	Satisfaction	3.950	1.075	0.863
6	Intention to adopt smartphone apps	3.772	1.255	0.886

Notes: $M =$ mean; $\alpha =$ Cronbach's α reliability

Table I. Descriptive statistics and reliability assessment

Variables	1	2	3	4	5	6
1. INSP	–					
2. PEES	0.461**	–				
3. EASE	0.371**	0.532**	–			
4. PENT	0.478**	0.396**	0.380**	–		
5. SODS	0.231*	0.340**	0.120	0.293*	–	
6. SAON	0.425**	0.234*	0.376**	0.321**	0.210*	–

Notes: $n = 280$. INSP, intention to adopt smartphone apps; PEES, perceived usefulness; EASE, ease of use; PENT, perceived enjoyment; SODS, social needs; SAON, satisfaction. *,**Correlation is significant at the 0.05 and 0.01 level (two-tailed)

Table II.
Pearson's correlation

Independent and control variables	β	t-value	Sig.
Perceived usefulness	0.258	5.324	0.000
Ease of use	0.297	6.152	0.000
Perceived enjoyment	0.369	8.266	0.000
Social needs	0.070	1.190	0.235
Satisfaction	0.375	8.980	0.000
F-value	148.669		
R^2	0.628		
Adjusted R^2	0.623		

Notes: $n = 280$. Dependent variable: intention to adopt smartphone apps. *$p < 0.05$; **$p < 0.01$

Table III.
Multiple regression analysis

correlation and regression weights suggested as $r = 0.478$**; $\beta = 0.369$; $t = 8.266$; $p < 0.01$ (Tables II and III). Thus, *H3* was supported. With regard to *H4*, the scores of correlation and regression ($r = 0.231$*; $\beta = 0.070$; $t = 1.190$; $p > 0.01$) (Tables II and III) pointed out the positive but non-significant relationship between social needs and the intention to adopt smartphone apps. Therefore, *H4* was rejected. Finally, the results of *H5* show ($r = 0.425$**; $\beta = 0.375$; $t = 8.980$; $p < 0.01$) a positive and significant relationship between satisfaction and the intention to adopt smartphone apps. Hence, the final hypothesis (*H5*) was also accepted (Tables II and III). Furthermore, for a more clear understanding, a summary of the hypotheses testing is given in Table IV.

Discussion and conclusion

The purpose of the present research is to examine the intention to adopt smartphone apps among entrepreneurs of a developing context. For that, a conceptual framework was

Hypotheses	Description	Results
H1	Perceived usefulness has a positive and significant relationship with the intention to adopt smartphone apps	Accepted
H2	Ease of use has a positive and significant relationship with the intention to adopt smartphone apps	Accepted
H3	Perceived enjoyment has a positive and significant relationship with the intention to adopt smartphone apps	Accepted
H4	Social needs have a positive and significant relationship with the intention to adopt smartphone apps	Rejected
H5	Satisfaction has a positive and significant relationship with the intention to adopt smartphone apps	Accepted

Table IV.
Summary of hypotheses testing

developed from predictors (perceived usefulness, ease of use, perceived enjoyment, social needs and satisfaction) and a criterion variable (the intention to adopt smartphone apps). The survey was conducted by applying the survey questionnaire that was adapted from the related literature. SPSS version 24.0 for windows was used for the data analysis. In the initial stage, the range of the Likert scale was assured through descriptive statistics, i.e. mean and standard deviation. The range of the mean and standard deviation for all the variables was noticed within the acceptable ranges. Furthermore, internal constituency among the items (Cronbach's α reliability) was noted as 0.856, while the reliability for the individuals' factor remained as satisfactory.

About hypotheses testing, Pearson's correlation and multiple regression were applied for confirming the relationships and effects between the predictors and the criterion. The results of Pearson's correlation and regression for *H1* confirmed a positive and significant relationship between perceived usefulness and the intention to adopt smartphone apps. Such findings are accorded with scholars like Hassan *et al.* (2014) and Susanto *et al.* (2016) and contrary to Venkatesh and Davis (2003) and Yang (2005). The present results may happen because people in the business feel that a smartphone is a useful instrument. Similarly, Pearson's correlation and multiple regression proved that there is a positive and significant relationship between ease of use and the intention to adopt smartphone apps. Therefore, *H2* was supported. These results have consisted of the findings of Hassan *et al.* (2014) and are contrary to Venkatesh and Davis (2003) and Yang (2005). The positive results may highlight the easiness in the use of a smartphone with which people in business may be felt. The regression and correlation weights highlight a positive and significant relationship between perceived enjoyment and the intention to adopt smartphone apps. Thus, *H3* was accepted. These positive results are in contradiction with Venkatesh and Davis (2003), Yang (2005) and Aldhaban *et al.* (2016) and matching with Hassan *et al.* (2014). These events may happen because the businessmen are getting enjoyment from the different sources such as e-commerce and website usage. Such favourable usages are influencing the attitudes and intentions of the consumers towards the usage of smartphone apps positively. The businessmen observing to perceived enjoyment is the most active catalyst for entertainment. Concerned with *H4*, the results show that there is a non-significant relationship between social needs and the intention to adopt smartphone apps among the businessmen of the developing world. These non-significant results are neither supported by scholars like Venkatesh and Davis (2003) and Yang (2005) nor by Suki (2013) and Hassan *et al.* (2014). These non-significant results may be appealed due to non-fulfilment of the social needs of the developing context businesspeople. It may be the reason for non-significance that the businessmen may not be taking social pressure of friends, relatives and their family to adopt smartphone apps. The results of *H5* show that there is a positive and significant relationship between satisfaction and the intention to adopt smartphone apps. These positive results are accorded with Hassan *et al.* (2014) and Susanto *et al.* (2016) and contrary to Venkatesh and Davis (2003) and Yang (2005). The positive results may reveal that the respondents are more satisfied with the smartphone apps and updated with the current business innovations in the world.

In conclusion, the overall results indicated a positive and significant relationship of perceived usefulness, ease of use, perceived enjoyment and satisfaction with the intention to adopt smartphone apps among the entrepreneurs of a developing context. In another way, a positive but non-significant relationship was observed between social needs and the intention to adopt smartphone apps among the targeted respondents. In other words, businesspeople are satisfied with the usage of smartphone apps, which provides enjoyment and saves time due to easiness in its use. Furthermore, smartphone apps are valuable tools for enhancing and updating people in business regarding new trends and innovations in industry. "We are here in the world to change the world", it can also be concluded that smartphones, like other technologies, are here in the world to also change the world, especially in the

organizational area. There are much research work, which have been illustrating both the good and bad sides of smartphones. However, as human beings, we are the one who has control over this technology. The smartphone is a device that can potentially help people in the business world. Corporate leaders would get benefits from their employees who use smartphones for work, and employees will benefit from smartphones in terms of developing their satisfaction and engagement at work. Business leaders should use the smartphone advantage by integrating smartphone usage with workflow to increase the level of work efficiency so that leaders can develop their businesses. During this time, technology has merged with people's lives. It is impossible to eliminate technologies like smartphones, but it is possible to control negative usages and promote positive usages for businesses to be successful. Smartphones have much potential for businesses in terms of developing autonomy, relationships and knowledge-sharing, which leads to improved job satisfaction and work engagement (Thiraput, 2013), and therefore, it can boost up work efficiency. Every business leader should consider integrating smartphone usage into the workflow.

Concerning with the limitations of the study, it is restricted to only people in the business of the developing country context. The study may provide valuable insights into the use pattern of smartphones among the group of entrepreneurs of such areas. It may assist as a useful input to scholars who are concerned in the study adoption of smartphone applications, mostly in the society of the business community. Moreover, the outcomes of such a study may contribute in developing an intention to adopt smartphone apps. Finally, the relevant literature may be enriched with new insights into apps in establishing a context to upsurge an intention and attitude towards smartphone apps.

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