

Determinants of Facebook adoption and use within the workspace in Catholic University of Central Africa

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Abstract. Given new and innovative services brought about by Information and communication technologies (ICTs) including social media, they have become vital tools and channels for both individual users and organizations. Thanks to social media, people and institutions are being given the possibility to automate and improve the performance of their activities, to take advantage of rapid electronic diffusion processes to guarantee a better information sharing between users, inter alia. This study focuses on the Facebook social media network and attempts to identify and analyze the factors that influence the usage of this tool in the Cameroonian professional environment. To test our proposed model, data were collected from 142 social media users from Cameroonian universities. Findings have shown that the perception of connectivity and the attitude toward using Facebook have significant influence on the intention to use Facebook at the workplace.

Keywords. Social media, perceived connectivity, use and adoption.

1 Introduction

Since their introduction in the early 2000s, social media (e.g., Twitter, Facebook) have steadily progressed to become today the most used media [1], sharing the limelight with and even overcoming traditional media platforms. First developed to facilitate communication in a network of friends using images, videos, and sharing everyday experiences, social media are increasingly gaining ground in all domains including professional activities [2]. For example, they provide companies with the means to acquire and retain new customers [3], improve communication with its partners [4], facilitate sharing of knowledge between companies, improve the process of merchandising and purchasing through the Internet [5]. Culnan & al. [6] believe that the use of social networks creates value for internal communication with customers or suppliers.

This paper will specifically examine the use that is made of Facebook in professional environments in a Cameroon, a developing economy with limited access

to Internet, the connection being of low bandwidth and costly while there are great opportunities through mobile phones and strong growth of cheap Smartphones. To achieve our research objective, the study uses the innovation and adoption of IT theories (IDT) [7] and the Technology of Acceptance Model (TAM) developed by Davis[8].

2 Research model and hypotheses

The proposed research model is based on the combination of TAM and IDT to which we added other variables to assess feedback related to the use of Facebook.

Perceived Feedback Received (PFR). Facebook is used by many people because of the perception they have of this social network. Like other social media platforms, Facebook has increasingly become a privileged social media network for information interchange within specific groups. In terms of affordance, this platform enables its users to post photos, videos and make comments on the publications made. But, at the same time, the visuals posted can be modified images, especially selfies and memes, with a variable standard of expression and amenity. In return, the users can receive the comments of other users on their publications (texts, photos and videos) in the form of comments and 'likes'. The quality of these comments will greatly determine the intention to use this social media platform. Therefore, we suggest the following hypotheses:

H1: PFR has a significant positive effect on the intention to use Facebook within workplace environments.

H2: PFR has a significant positive effect on PFS within workplace environments.

Perceived Feedback Sent (PFS). Unlike the perceived feedback comments made by Facebook users to other users are generally related to the postings being made. Comments made are in response to the postings of relatives, friends, colleagues and other virtual and non-virtual acquaintances, who all form one's Facebook 'Friends'. The quality of these comments depends tremendously on the quality of other Facebook members' comments and therefore can influence the intention to use the said social media. So, we can propose this hypothesis:

H3: PFS has a significant positive effect on the intention to use Facebook within workplace environments.

Perceived Usefulness (PU). is defined as the degree to which a person believes that using Facebook would enhance his or her job performance [8]. Several recent studies have examined the correlation between perceived usefulness and the attitude and behavioral intention, when evaluating consumer acceptance of an innovative product [9]. Based on prior research, the following hypotheses were proposed:

H4: PU has a significant positive effect on the intention to use Facebook within workplace environments.

H5: PU has a significant positive effect on PFR within workplace environments.

H6: PU has a significant positive effect on PFS within workplace environments.

H7: PU has a significant positive effect on PEoU within workplace environments.

Compatibility (COMP) is defined as the degree to which an innovation is perceived as consistent with existing values, norms, social practices and user past experiences [10]. Agarwal & Prasad [11] argue that the relationship between individual's prior compatible experiences and the new information technology acceptance is positive [12]. Based on prior research, the following hypotheses are proposed:

H8: COMP has a significant positive effect on the intention to use Facebook within workplace environments.

H9: COMP has a significant positive effect on PU within workplace environments.

Attitude towards using Facebook (ATU). The attitude toward an innovation is a critical variable in the innovation adoption decision [10]. Thus, the attitude toward a specific information technology is conceptualized as a potential user's assessment of the desirability of using that technology and predicts an individual's use of technology according to TAM. Hence the following hypothesis:

H10: ATU has a significant positive effect on the intention to use Facebook within workplace environments.

Perceived Ease of Use (PEoU). TAM suggests that PEoU has a positive effect on the behavioral intention of a potential adopter of an IT technology. Moreover, Luo & al.[13] reported that the PEoU has a positive impact on PE, PU and the intention to use instant messaging in the enterprise. Therefore, the following hypotheses are proposed:

H11: PEoU has a significant positive effect on the intention to use Facebook within workplace environments.

H12: PEoU has a significant positive effect on PU within workplace environments.

H13: PEoU has a significant positive effect on ATU within workplace environments.

H14: PEoU has a significant positive effect on PE within workplace environments.

Perceived Connectivity (PC). Luo & al. [13] found that PC is an important determinant of IT adoption, especially for interactive technologies such as Internet, enterprise instant messaging and social media. Therefore, we formulate the following hypotheses:

H15: PC has a significant influence on the intention to use Facebook within workplace environments.

H16: PC has a significant positive effect on ATU within workplace environments.

H17: PC has a significant positive effect on PEoU within workplace environments.

Perceived Enjoyment (PE) and Perceived Playfulness (PP). Davis [8], when studying the role of intrinsic motivation, introduced the constructs of 'perceived enjoyment' and 'perceived playfulness'. They are considered factors influencing user acceptance of technology [14]. Prior studies have found strong evidence of relationships between PP and PE and the behavioural intention to adopt and use ITs. For example, Luo & al.[13], in their study of IM acceptance, found that perceived enjoyment had a strong positive relationship with the adoption intention. Therefore, we suggest the following hypotheses:

H18: PE has a significant positive effect on the intention to use Facebook within workplace environments.

H19: PE has a significant positive effect on PP within workplace environments.

H20: PP has a significant positive effect on the intention to use Facebook within workplace environments.

3 Methodology

In this study, we used a quantitative approach. This approach is based on instruments or quantitative research techniques for data collection. It results in figures that make descriptive analyzes, tables and graphs, statistical analysis of research links between the variables or factors, correlation analysis and association[15]. This approach allowed us to gather clear and observable data to test the assumptions of our theoretical model. This study was conducted in November 2014 in Cameroon.

We used a questionnaire to collect data. All items in our questionnaire were assessed on a Likert scale with seven levels[16]. Our target consisted of 142 people who use Facebook in the workplace, particularly within the Catholic University of Central Africa in Yaoundé. A delay of one week was given to the participants to fill out questionnaires. At the end of the week, we received 142 questionnaires and all were usable. The investigation began on November 15 and ended on December 18, 2014; so it lasted 34 days. For the analysis and processing of collected data, we used mainly two programs: SPSS (version 22) was used for data encoding and implementing the descriptive statistics of our sample, while the SmartPLS software (version 3) allowed us to assess the adequacy of the theoretical model and to verify its hypotheses.

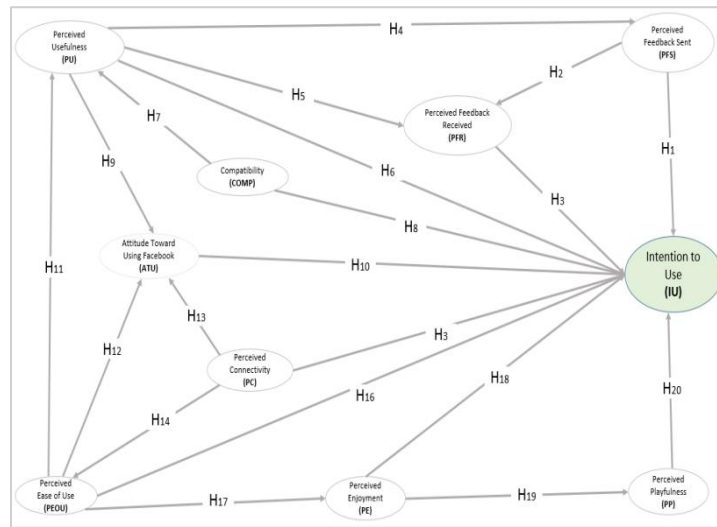


Figure 1: Research model

4 Results and discussions

According to the demographic profile of our 142 respondents, 56.3% are men and 43.7% women. Approximately 83.8% of respondents have a bachelor’s degree and 12.7% have master’s degree. Most of the respondents live in the city (83.1%), and a

small percentage live in rural areas (3.5%). A total of 35.9% of respondents have more than 10 years' experience in the use of the computer, against only 0.7% for those with little experience in using computer. Respondents who are students and non-teaching staff account for 65.5%. In terms of Internet use, 45.1% of respondents use the Internet several times a day.

Table 1 presents the number of items, mean, standard deviations (SD), Cronbach's alpha, composite reliability (CR) and average variance extracted (AVE) of each construct of the overall model. All reported values (Cronbach's alpha, CR, AVE) in the table meet the acceptable threshold values – respectively, 0.7; 0.7; 0.5 [17] – and thus justify the use of all our constructs. Table 2 presents the results of hypothesis testing of the specific research model. For a probability p less than 0.05 and a Student statistic below the 1.96 threshold, a hypothesis is accepted [18].

Table 1. Numbers of items, Mean, SD, Cronbach's alpha, CR and AVE

Latent variable	Numbers of Items	Mean	SD	Cronbach's alpha	CR	AVE
ATU	4	5.195	1.085	0.796	0.867	0.622
COMP	3	4.076	1.347	0.772	0.868	0.687
IU	4	4.915	1.344	0.774	0.856	0.598
PC	4	5.527	0.972	0.718	0.825	0.544
PEoU	3	5.916	1.001	0.728	0.844	0.644
PE	3	5.226	1.25	0.883	0.927	0.810
PFR	4	5.377	1.169	0.873	0.914	0.726
PRS	4	4.89	1.305	0.838	0.893	0.679
PP	2	5.16	1.238	0.794	0.906	0.828
PU	5	3.146	1.315	0.796	0.876	0.610

There are strong relationships between the following: ATU and IU; PC and IU; PFR and PFS; PFU and PFS; PFU and PFR; PFU and ATU; PC and ATU; PC and PEoU; PEoU and PE; and finally PE and PP. Our results clearly indicate that only two constructs (ATU and PC) have a positive influence on the intention to use the technology.

Table 2. Results of the structural model

Hypothesis	Path coefficient	T (Observed Value)	P-Value	Conclusion	
H1	PFR -> IU	0.012	0.123	0.902	Rejected
H2	PFR -> PFS	0.525	7.185	0.000	Accepted
H3	PFS -> IU	0.133	1.208	0.228	Rejected
H4	PU -> IU	0.087	1.102	0.271	Rejected
H5	PU -> PFR	0.199	2.349	0.019	Accepted
H6	PU -> PFS	0.230	3.775	0.000	Accepted
H7	PU -> ATU	0.341	4.096	0.000	Accepted
H8	COMP -> IU	0.127	1.373	0.170	Rejected
H9	COMP -> PU	0.531	8.991	0.000	Accepted
H10	ATU -> IU	0.236	2.268	0.024	Accepted
H11	PEoU -> IU	0.040	0.438	0.662	Rejected
H12	PEoU -> PU	-0.018	0.175	0.861	Rejected
H13	PEoU -> ATU	0.145	1.705	0.089	Rejected

H14	PEoU -> PE	0.245	2.515	0.012	Accepted
H15	PC -> IU	0.191	2.078	0.038	Accepted
H16	PC -> ATU	0.245	2.044	0.042	Accepted
H17	PC -> PEoU	0.344	2.725	0.007	Accepted
H18	PE -> IU	0.025	0.251	0.802	Rejected
H19	PE -> PP	0.635	8.655	0.000	Accepted
H20	PP -> IU	0.186	1.587	0.113	Rejected

ATU and PC have a positive influence on IU, and this confirms the hypotheses H10 ($T=2.268$, $p=0.024$) and H11 ($T=2.078$, $p=0.038$). However, PFR, PFS, PU, COMP, PEoU, PE and PP on the intention to use Facebook (IU) do not have any significant effect. Therefore, the hypotheses H1 ($T=0.123$, $p=0.902$), H3 ($T=1.208$, $p=0.228$), H4 ($T=1.102$, $p=0.271$), H8 ($T=1.373$, $p=0.170$), H11 ($T=0.438$, $p=0.662$), H18 ($T=0.251$, $p=0.802$) and H20 ($T=1.587$, $p=0.113$) are rejected. PU and PC have a positive influence on ATU, which enables us to confirm the hypotheses H7 ($T=4.096$, $p=0.000$) and H16 ($T=2.044$, $p=0.042$). The effect of PEoU on ATU is no significant, which leads to the rejection of hypothesis H13 ($T=1.705$, $p=0.089$). Also, PC has a positive influence on PEoU, thereby confirming the veracity of hypothesis H17 ($T=2.725$, $p=0.007$). It is also the case with PEoU producing a positive influence on PE and therefore confirming the formulation of hypothesis H14 ($T=2.515$, $p=0.012$). However, the effect of PEoU on PU is no significant, and thus hypothesis H12 ($T=0.175$, $p=0.861$) is rejected. PU has a positive influence on PFS and PFR, and this confirms the hypotheses H6 ($T=3.775$, $p=0.000$) and H5 ($T=2.349$, $p=0.019$). However, the effect of COMP on PU is significant, so hypothesis H9 ($T=8.991$, $p=0.000$) is accepted. PFR has a positive influence on PFS, thereby confirming hypothesis H2 ($T=7.185$, $p=0.000$). Finally, PE has a positive influence on PP; we can confirm hypothesis H19 ($T=8.655$, $p=0.000$).

5 Conclusion, implications and future research

This paper explained factors that influence the use of social networking in the workplace. The social media platform selected as Facebook and the specific professional environment was the premises of the Catholic University of Central Africa, in Yaoundé, Cameroon. To achieve this goal, a literature review on models and theories of acceptance and diffusion of technology was conducted and a theoretical model developed. Findings have shown that the intention to use Facebook is strongly influenced by the perception of connectivity associated with the attitude toward using it. Regarding our empirical model, PEoU was not confirmed ($p=0.089$), and it appeared that PU, COMP, PFR, PFS, PE, PP, and PEoU did not influence significantly the intention of using Facebook. Finally, the intention of using this social media platform was proved to be influenced, in order of importance, by the ATU and PC. This research work indicates a strong relation between the following: PFR and PFS; PU and PFR; PU and PFS; PU and ATU; PC and ATU; PC and PEoU; COMP and PU; PEoU and PE; and PE and PP.

Theoretically, this study presents a model justifying the use of Facebook in a specific workplace: the Catholic University of Central Africa. This model may be used for

further studies, while developing a framework for factors likely to facilitate the integration and constant use of Facebook, together with other platforms to be compared with, in Cameroonian universities. In terms of information sharing, a comparative study of available social media (Facebook, Twitter, WeChat, WhatsApp, Imo, Instagram, etc.) may well be carried out in the academic milieu in Cameroon.

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