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Article

Social media paradox: Utilizing social media technology for creating better value for better social outcomes: Case of developing countries

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INFORMATION & TECHNOLOGY MANAGEMENT | RESEARCH ARTICLE

Social media paradox: Utilizing social media technology for creating better value for better social outcomes: Case of developing countries

Binesh Sarwar^{1,2*}, Arslan Sarwar³, Waleed Mugahed Al-Rahmi^{4*}, Abeer S Almogren⁵, Said Salloum⁶ and Mohammad Habes⁷

Abstract: This study presents a research framework based on the underlying richness of social media capacity (usefulness) at the individual level of youngsters regarding their contribution to building social capital and civic engagement, which significantly leads towards better social outcomes. Using structural equation modeling (SEM) technique, analysis of model accorded an examination of the impact of social media use for literacy and socialization on the perceived value in terms of social capital and civic engagement; resulting in greater cognitive and social well-being of young participants. By considering the social facets of social media technology, which can also mainly influence the value developed from the online social network, the authors also examined the moderating role of individual social technology fit in the fitting paradigms. The results support all proposed hypotheses in the model except one. This study concludes that social media tools as an interactive and productive mechanism can progressively enhance youth participation in public affairs for overall cognitive and social well-being. The positive sense of involvement is more satisfied by having an appropriate fit between individuals' social needs and social technology.

Subjects: Technology; Management of Technology; Education - Social Sciences

Keywords: Social media; social capital; civic engagement; social-technology fit; cognitive well-being; social well-being

1. Introduction

The opinion of the general population, especially, in developing countries regarding the impact of internet is largely positive-stating internet to have a “good influence on learning and personal development” (pewglobal.org/2015). Social media platforms, such as Facebook, Myspace, Snapchat, LinkedIn, and Twitter have also progressively changed people’s lives in recent years. Facebook and Twitter are presently the most broadly utilized social media sites, mostly in developing countries (Williams et al., 2012). These social media platforms have brought the entire globe closer together in terms of connectivity and increased the exchange of thoughts and helped in knowledge development through constant updates on current happenings in the world (Alamri et al., 2020a; Castellacci & Tveito, 2018). Subsequently, internet sources in general and social media in particular have become an inevitable part of our lives being fundamental connectivity



modes among people for the propagation of information, as a promoter for social causes, and as a facilitator of discussion forums (Gurban & Almogren, 2022).

Study Rationale: The world is making steady advancements towards a better future every day, which requires addressing and trying to find solutions to societal issues, which can directly or indirectly challenge people's wellbeing and survival in society. Civic participation at the gross level of the community as a vital representative of a healthy society is fundamental in devising strategies to highlight, discuss, and sort out such issues. Together, committed citizens can organize collective actions for people's wellbeing. Social media platforms may have a strong potential in bringing people together to discuss such pivotal issues and solve these problems through knowledge sharing and floating novel ideas among communities. Youth participation in constructive discussions on societal issues on such platforms, along with their aspiration may have a substantial positive impact on society (Almulla & Al-Rahmi, 2023). Hence, the present study seeks to further explore the social media-rich capability as a collaborative communication tool and discussion forum, which can develop the level of public discourse on social issues and increase public involvement in civic affairs, especially in developing countries (Putnam, 2004).

Problem Statement: Previous studies have also investigated the potential of online social networking individually with its relation to executing social capital (Ahmad et al., 2016), civic volunteerism (D. Shah et al., 2009; Zain et al., 2016), political participation (Valenzuela, 2013), creative performance through cognitive processing (Kassim et al., 2014), education sustainability (Al-Rahmi et al., 2020), consumer welfare benefits, and subjective wellbeing (Munzel et al., 2017). However, because social media platforms are a relatively novel phenomenon, limited research has been done to assess their potential impact of cognitive well-being individually as well as collectively. Hence, it is essential to identify key factors that may positively influence individuals' cognitive and social betterment.

For this purpose, this study presents a new research model to test with first-hand data (Figure 1). This study hypothesizes that the use of social networks allows the younger generation to become more connected and refined, enabling them to find common grounds for social and cognitive wellbeing. This study also aims to assess the nature and strength of the relationship between the use of social networks and socialization, social capital, and civic engagement with the moderating effect of individual social-technology fit. That is still an unexplored area, as the social needs and individual motivation are significant considerations for better prospect behavior (Zolkepli & Kamarulzaman, 2015). It also seems worthwhile to research how an individual's perception of mental wellbeing affects the group level of the social system towards which he/she belongs (Munzel et al., 2017).

2. Theoretical background

2.1. Social cognitive theory

Within the context of Bandura's (1986) "Social Cognitive Theory", this study extends previous research to a broader variety of populations and considers new explanatory variables. The theory states that cognitive learning takes place in a social setting along with a more energetic and shared interaction of people, environment, media influence, and behavior (Bandura, 1989). Social networking sites bring more significant opportunities for individuals to participate in collaborative activities (Sarwar et al., 2019). The basic notion is that social interaction and social participation play an essential part in the formation of human cognition and virtual society. Learning first occurs through having interfaces within society and then integrated into the cognitive level of individuals. The social cognitive perception of social media users originating from Bandura's notion is compatible with prospective gratification measures. The expected outcomes produce superior predictions of optimistic internet users (Al-Rahmi et al., 2020).

Figure 1. Results of Hypothesis testing.

Note: ** $P \leq .01$, *** $P \leq .001$, ns=non-significant

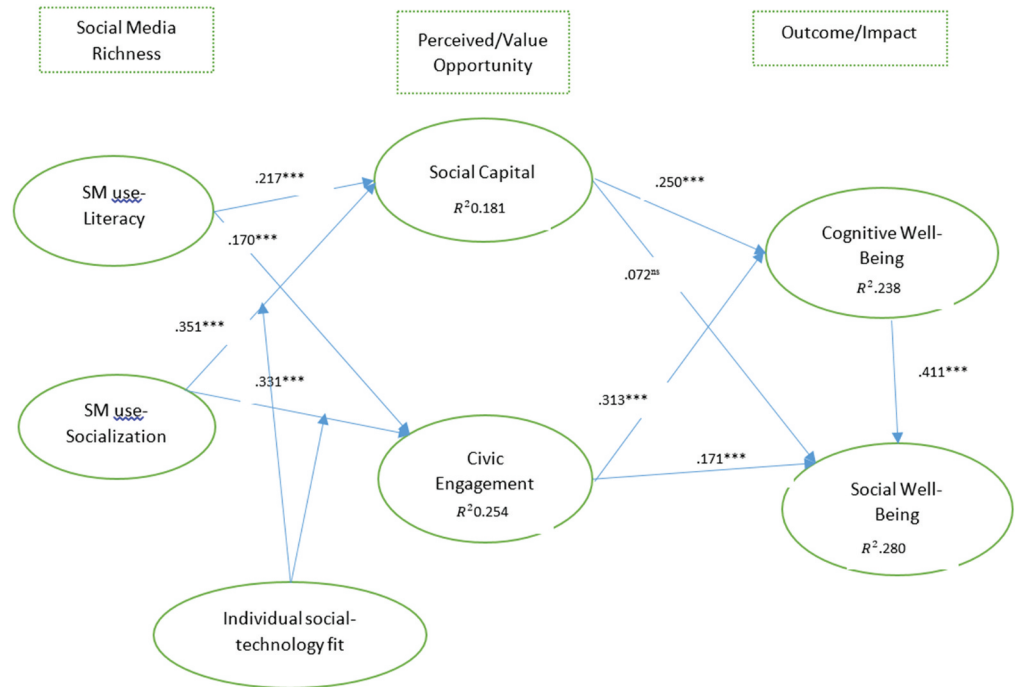


Figure 2. Moderating impact of social-technology fit on the relationship between social media-socialization and social capital.

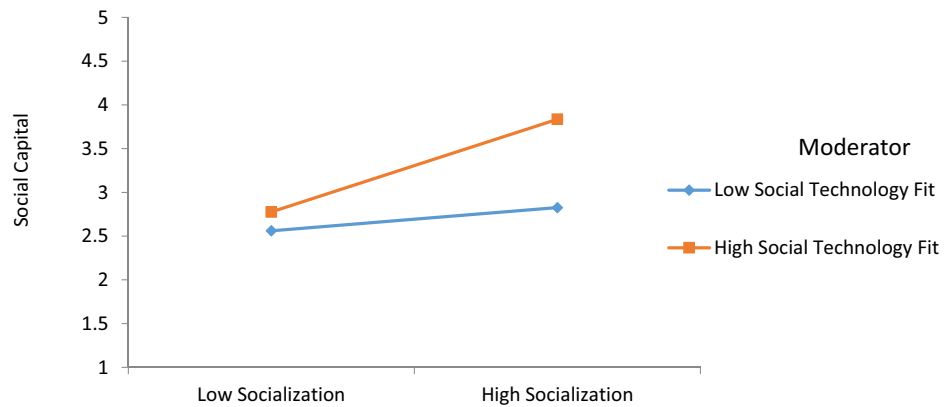
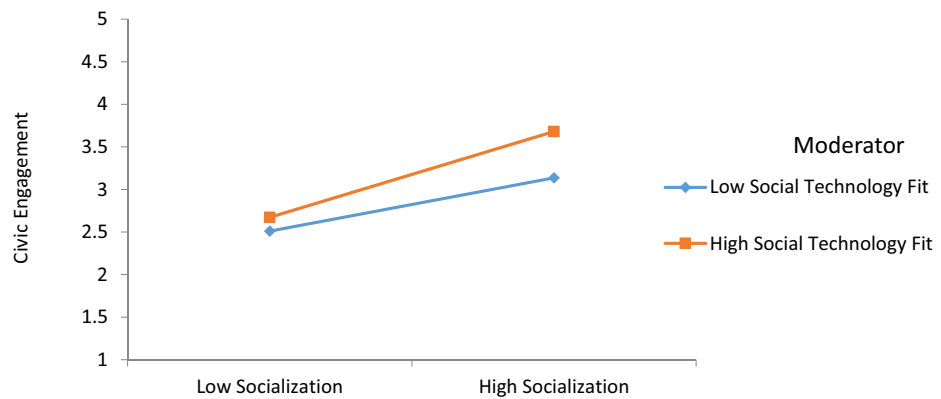


Figure 3. Moderating impact of individual social-technology fit on the relationship between social media-socialization and civic engagement.



The social learning theoretical framework is also based on constructivism among all participants over a social system or social network. The overall development moves towards the active learning and social application of the acquired knowledge for better social wellbeing (Almogren & Aljammaz, 2022). Lam, Kraus, & Ahearne (2010) also provided three mutually influencing mechanisms characterized as cognition, environment, and behavior; which provide the basis of this study to indulge in social media use, civic engagement, and wellbeing as output. Social activities facilitate the participants to develop their understanding with their companions in a way that they follow different tasks through various discussions that may also stimulate new considerations (Alamri et al., 2020a). So, this study attempts to explore more on the basis of social cognitive theory to learn for individual and collective well-being (Whiting & Williams, 2013).

2.2. Social media richness

The widespread reputation of social media sites shows their degree of success and perceived richness in the lives of the public from multiple perspectives (Rauniar et al., 2014). Social media richness refers to potential opportunities for mobilising people very quickly for positive tenacity. For this study, authors have considered the possible utilization of social media richness taking in account two main perspectives: a) Social media use for literacy using social media sites and networks to fulfill the informative and learning needs and also to stay informed about current happenings/news (Gil de Zúñiga et al., 2012); b) social media use for socialization – exchanging and aggregating participants' experiences and obtaining social-intensive support through communication and interaction with others (Shang et al., 2017).

2.2.1. Social media for literacy

Social media are usually valuable tools to transform education and learning practices in a more open and socially collaborative networking environment (Manca & Ranieri, 2017; Mostafa, 2015). Using social media for literacy regarding obtaining knowledge and current information or updates also adds a collaborative dimension to the learning process (Mostafa, 2015). Authors believe that social media use for news/literacy is a major source for interactive discussions among users' networks, providing additional settings for learning and spur participation for joint issues (Bennett & Segerberg, 2011; W. Eveland, 2004). Research shows that through participation in new media technologies, youth can develop essential literacy skills and civic involvement (Al-Rahmi et al., 2019; Lim et al., 2013). Social media applications do not only allow youngsters to connect and retrieve information, but also offer opportunities for them to be a content creator (Munzel et al., 2017). It also tends to become the habitual behavior of users to adopt social media for learning activities about their current undertakings (Limayem & Hirt, 2003; Y. -L. Wu et al., 2016). In this regard, social media can encourage users' joint actions by creating connections, access to current news, and facilitate the conditions of demonstrations for society welfare (Bennett & Segerberg, 2011; Gil de Zúñiga et al., 2012).

2.2.2. Social media for socialization

Social networking is a powerful source of social assistance for youth as active members of society (Weller, 2016). With its continuous connectivity, social media tools help people stay in touch all the time. As reported in one study, students and also faculty are adopting these emerging technologies and influential platforms in all aspects of their daily lives (Boyd, 2014; Chen & Bryer, 2012). The social needs of online groups or individuals strengthen social bonding and attachment by providing constant connections over various social networks (Park et al., 2009). It is perceived that online environments have the potential to build groups of people with mutual interest, which can lead towards offline joint action (Ballew et al., 2015). As social media provides a platform to interact and communicate through online and offline web tools, it also serves as a medium to fulfill the psychological needs of users in terms of shared goals and social connections (Wei & Gao, 2017). This communication capability further fosters user participation towards building the habit of social learning (Wu et al., 2016) and trustworthy relationships among them (Gilbert & Karahalios, 2009).

2.3. Social capital

Social capital represents the sum of actual and prospective resources an individual or a group of people obtains through its relationship network (Coleman, 1988; Nahapiet & Ghoshal, 1998). It is surrounded by the associated relationships or interactions between entities and different social communities (Chang & Chuang, 2011). Social media sites provide support for individuals to engage in various activities to develop and enhance relationships through providing a wide-range of social association (Ellison et al., 2007, 2014). The patterns to new media use related to knowledge acquisition, community interaction, and entertainment are positively related to the individuals' production level of social capital (Gil de Zúñiga et al., 2012; Manca & Ranieri, 2017). Alserhan et al. (2023) also found that individuals with high internet indispensability in their daily lives are more motivated to create and maintain online social capital, which in turn has been linked to a variety of social outcomes in terms of social stability, robust economy, and a more participatory democracy (Simons et al., 2019; Zhang & Chia, 2006). Few studies also state that most of the human creativity occurs from healthy activities that take place in the form of social bonding and collaboration of youth (Fischer et al., 2004).

2.4. Civic engagement

Civic engagement refers to “the individual or collective participation of citizens for addressing the social issues in the community or society” (Gil de Zúñiga et al., 2012). The concept of civic engagement is used in the literature in the form of multiple terms, such as civic virtue, civic participation, and civic activism (Kikuchi & Coleman, 2012). Previous authors have also mainly considered civic engagement a significant output of social media usage in terms of individual or mutual participation aimed at prevailing social issues (Putnam, 2004; Zain et al., 2016). The most common types of civic activities involve participating in communities and social movements, voluntarily help, contributing ideas for social causes, to help shape the future of society (R. Adler & Goggin, 2005), fundraising for charity, contacting public officials for public welfare, etc. (Dhavan, 1998; Zain et al., 2016). Citizens in general and youngsters in particular are considered as meaningful societal contributors and powerful assets as a significant strength of society (Nicotera, 2008). In this regard, social media has demonstrated considerable potential by providing new ways of learning opportunities for civic participation (Lee & Horsley, 2017) and citizen development through the creation of virtual communities, which also diminishes the cost of collective actions (Pang, 2018).

About the social media richness (its capacity in terms of literacy and socialization) with perceived value (Social capital and Civic Engagement), we posit the following hypotheses to test:

H1a: Social media use for literacy is positively related to social capital.

H1b: Social media use for literacy is positively related to civic engagement.

H2a: Social media use for socialization is positively related to social capital.

H2b: Social media use for socialization is positively related to civic engagement.

In addition to the contribution of social media sites that are used for, their richness and perceived opportunities, the current study also explores the impact of these prospects on the cognitive and social wellbeing of young participants.

2.5. Cognitive wellbeing

Well-Being or wellness is a general term used for the condition of an individual or group regarding the judgment of one's satisfaction with life as a whole (Diener et al., 1985). For this study, cognitive well-being is considered to be measured in terms of one's need satisfaction, goal attainment, and degree of self-esteem through moving into collaborative social networks (P. M. Valkenburg et al.,

2006). Individual wellness and also learning can take place well through more social participation, attempting to solve a problem, and therefore occurs more successfully during activity. Researchers also posited that education or literacy also serves as a mechanism for social taxonomy and positively correlates with an individual's status, leading to more social participation engagement (Homero & Valenzuela, 2011). Some previous studies also cite the significant association of individual's mental wellbeing with social integration and a network of social support regarding friends, family, and peer involvement (Munzel et al., 2017; P. M. Valkenburg et al., 2006; Weiser, 2001). Participation in associational activities also provides young individuals with the opportunities to develop the resources necessary to participate in primary social settings (Pulido et al., 2020). Therefore, one's well-being and quality of life are considered as positive spinoffs of social capital (Park et al., 2009).

2.6. Social well-being

Social wellbeing refers to the perception of people about their positive state of relationships, the social stability, and social peace in society. This is further related to the context of social capital, social connectedness, and social networks (Helliwell et al., 2004). People are social beings who are mutually dependent, and also depend on others for their wellbeing, just as they rely on themselves. Therefore, relationships are considered as essential elements of social development especially for young individuals (Steinfeld et al., 2008). Active engagement into web-based social networks can increase commitment to a community, and the capacity to mobilize the collective actions. A significant study conducted by Keyes (1998) described social wellbeing as an appraisal of ones' circumstances and functioning in society. The author conferred that educational fulfillment and social stratifications affect substantial resources and positive self-conceptions toward society wellbeing. The authors argued that providing physical spaces to endorse citizen's wellbeing can easily be renovated into a virtual area through social media (Munzel et al., 2017). The concept of social enrichment suggests that online social connectedness and engagement in participatory activities heighten society's social wellbeing (P. Valkenburg & Peter, 2007). Likewise, social integration, being close to others, and driving comfort from the involvement in the community, bring positive feelings in the individuals as surviving in a healthy society (Bryer & Zavattaro, 2011; Keyes, 1998). It frequently connects the members of society to find opportunities to work for social virtue and mutual benefits (Clark et al., 2018).

Based on the above discussion in section 2.5 and 2.6, the authors posit the following hypotheses to test:

H3a: There is a significant positive relationship between social capital and cognitive wellbeing.

H3b: There is a significant positive relationship between social capital and social wellbeing.

H4a: There is a significant positive relationship between civic engagement and cognitive wellbeing.

H4b: There is a significant positive relationship between civic engagement and social wellbeing.

H5: There is a significant positive relationship between cognitive wellbeing and social wellbeing.

2.7. Moderating effect- individual social-technology fit

Lu and Yang (2014) first introduced the concept of social-technology fit in their study as an extension of task-technology fit towards understanding the behavioral intentions of social networking technologies. The idea of social-technology fit is defined as "the degree to which a technology is fit for user's social needs". The rationale behind incorporating social factors as a social-technology fit is that it may more expose the predictive ability of social media technology (Lu & Yang, 2014). These social factors can be categorized either in the form of individual social

characteristics or individual social needs. Social needs are defined as the requirements of connecting, interacting with people, maintaining and utilizing social connections (C. Wu et al., 2015) for the fulfillment of their related tasks and personal satisfaction. Few researchers have also reported social connections and task-technology fit as the primary factors influencing user's intentions to use social media sites in their studies (Alamri et al., 2020b; Kietzmann et al., 2011). Through online social involvement, individuals can work together to resolve the issues by sharing different ideas and satisfying their inner need for social participation (C. Wu et al., 2015). The fitness of social media technology can produce a fertile simulated environment through enabling the progress of participation and shared frugality with societal value. Young individuals become more motivated to use social technologies when they find it more relevant to their social needs, such as social utility (Fulk, 1993), social significance, and information consistency (C. Wu et al., 2015). So we may argue:

H6a: Individual social-technology fit positively moderates the relationship between social media use for socialization and social capital.

H6b: Individual social-technology fit positively moderates the relationship between social media use for socialization and civic engagement.

3. Research methods

The study used a quantitative approach based on a large-scale survey to test the suggested research hypotheses. The measurement items used to operationalize the constructs in this study were adapted from the previously recognized scales in the literature. The medium of language was English for the convenience of international students. Three postgraduate research scholars studying at a University Center in China were requested to study and to provide their opinions to ensure the validity of research items. Moreover, a pilot study was conducted to ensure that questionnaire items are easy to grasp and clear (Mostafa, 2015). For this purpose, 25 self-administered questionnaires were filled out from students of one public sector university in Pakistan. Table 1 presents the demographic information of respondents including age, gender, and education. Few screening questions were also asked to filter the responses regarding use of social media sites, frequency of usage, and reason to use. Snowball sampling was best suited for this kind of study because it uses a small pool of primary informants to suggest or refer to through their social networks. The target subjects were those having adequate knowledge about the social media networks and their usage. Hence, we aimed to focus on individuals who have been a part of at least one of the most famous social media networks. We also took help from an NGOs working there as they must have strong associations, with citizens working voluntarily for social development and community participation.

The study took place during studies in a University Center in China. Due to time and budget constraints, most of the data was collected online from a random sample of young adults from three major universities in China with young international students from developing countries. After eliminating incomplete questionnaires, the final sample size was 495 respondents to meet the statistical sample requirement recommended by previous studies of at least 5 to 10 observations for each variable (Hair et al., 2010). The study included international students from developing countries like Pakistan, Ghana (Africa), and Bangladesh. Among these students, few were also related to visual art as they are more familiar with various features of social networking sites and use of creative artwork that reveals the experiences of social networking users and the impact of it on daily life.

Out of 495 sample size, the total number of Pakistani students were 215, Africans were 155, and Bangalis were 125. These countries were specifically chosen among developing countries because firstly, according to a recent report by UNESCO, the literacy rate in these countries is now improving as reported by Institute for Statistics 2015 (Ghana = 76.6%; Bangladesh = 72.8%; Pakistan = 58%), and secondly, the rate of internet adoption is also rising at a fast pace in these countries. These countries and youngsters were chosen for data collection because youth participation in

Table 1. Descriptive Information

| Measures | Frequency | Percentage |
|---------------------|-----------|------------|
| Age | | |
| 20 or less | 47 | 9.4 |
| 21–25 | 298 | 60.2 |
| 26–30 | 125 | 25.2 |
| 30 or above | 25 | 5.05 |
| Gender | | |
| Male | 297 | 60 |
| Female | 198 | 40 |
| Schooling | | |
| Visual Art Students | 95 | 19.2 |
| Undergraduate | 163 | 32.9 |
| Graduate | 237 | 47.8 |

constructive societal issues is a core concept for their individual and collective wellbeing. Another reason to choose specific countries is that promoting democratic values for the various common good is necessary for developing countries due to political instability and low economic growth.

3.1. Study Measures

SM use-Literacy: to measure SML in this study, we adopted 5-item scale based on the study by (Jan, 2017) and (Gil de Zúñiga et al., 2012). Two sample items include “social networking sites offer various opportunities to fulfill informative needs” “social media provide the extent to get information about current news, actions, and public affairs”.

SM use-Socialization: to measure SMS, we adopted 5-item scale developed by (Hughes et al., 2012). The sample items include “I use social media to connect with friends and family” “I use SNSs to express my feelings, to share my thoughts and experiences”.

Social Capital: to measure SC, we adopted 5-item scale developed by (June et al., 2013) and (Gupta & Govindarajan, 2000). The sample items include “By using SNS, I viewed myself as a member of a group or community through interaction with other participants” “I can maintain close relationships with different community members”.

Individual Social-technology fit: to measure STF, we adopted 3-item scale developed by (Lu & Yang, 2011) and (Junglas et al., 2008). The sample items include “SNS are convenient to participate in society” “SNS are fit for the needs of my social interaction”.

Civic Engagement: to measure CE, the study adopted 5-item measurement scale developed by (Gil de Zúñiga et al., 2012). A sample item includes “Social media sites motivate me to participate in voluntary work for non-political groups”.

Cognitive Wellbeing: to measure CWB, the study used 3-item scale developed by (Munzel et al., 2017) and (Ellison et al., 2007). The sample items include “I feel like a person of value or at least on an equal level with others” “It makes a difference in my life by moving into social engagements”.

Social Wellbeing: to measure SWB, the study used 4-item scale developed by (Keyes, 1998). The sample items include “This society is a creative place for people to live in” “My work has a positive influence on other individuals in my community”.

4. Data analysis

4.1. Stage 1

The present study adopted multiple measurement items from previous studies. Therefore, initial factor analysis was conducted through SPSS version 20 to analyze the original structure of the constructs. For this purpose, the conditions for the suitability of data were tested first by using Kaiser-Meyer-Olkin (KMO) to determine the sample's adequacy and Bartlett's sphericity test to examine the validity of the initial scale. KMO value was 0.937, which was above the benchmark value of 0.5 and BTS was also significant at 0.000. A significant result indicates that matrix is not an identity matrix, meaning that constructs adequately relate to one another to run a meaningful exploratory factor analysis (EFA). The authors used a maximum likelihood method to analyze the reliability of items. The retained factors were found to be nearly the same as the dimensions from the original scale, except for two deleted items. In the reliability test of the revised scale, Cronbach's alpha value of each variable was greater than 0.7 (Table 2), indicating good reliability (Hair et al., 2010).

4.2. Stage 2

In the second stage, this study used structural equation modeling (SEM) technique in AMOS.21 to examine the measurement and structural model analysis based on the proposed hypotheses. Convergent validity was measured first by analyzing values for factor loading, Cronbach alpha, composite reliability (CR), and average variance extracted (AVE) (Hair et al., 2013). Table 3 indicates good convergent validity, as all values meet the necessary criteria. The standard values for factor loadings, Cronbach alpha, and composite reliability should be higher than 0.7 (Hair, Anderson, Tatham, & Black, 1998). The average variance extracted with the standard value of 0.5 or higher is used to measure the overall amount of difference that is recognized in the construct about the amount of variance evident in the measurement error (Fornell & Larcker, 1981).

Further, discriminant validity was evaluated using theory relation method recommended by Fornell and Larcker (1981). Discriminant validity is considered to be acceptable when the variance shared between a factor and any other factor in the research model is less than the variance that the construct shares with its measurement items. It was assessed by matching the relationships between the correlation among constructs and the square root of the AVE of all the constructs. Table 3 displays diagonal elements in the correlation matrix are higher than the off-diagonal elements, signifying that discriminant validity is acceptable at the construction level for this study.

4.3. Model fit

A range of fit indices was used suggested by previous valid studies to find a good model fit. These indices include relative chi-square (CMIN/DF), root mean square error of approximation (RMSEA), Normed Fit Index (NFI), Comparative Fit Index (CFI), Incremental Fit Index (IFI), and Tucker-Lewis index (TLI). Table 4 shows the evidence to suggest a good fit for both measurement and structural model with the level of recommended values (McDonald & Ho, 2002; Hair, Anderson, Tatham, & Black, 1998; Miles & Shevlin, 2007) and the obtained values for the proposed research model.

4.4. Hypotheses testing

Figure 1 indicates the path analysis by using AMOS 21. The results in Figure 1 direct that social media use for literacy and socialization have a significant positive relationship with social capital and civic engagement, respectively, with a significance level of 0.001 ($\beta = 0.217$, $t = 5.976$); ($\beta = 0.351$, $t = 7.170$); ($\beta = 0.170$, $t = 4.312$); ($\beta = 0.331$, $t = 6.230$). These results support H1a, H1b, H2a, and H2b. Next, a significant positive relationship was found between social capital and cognitive wellbeing ($\beta = 0.250$, $t = 6.453$); a positive but non-significant relationship was found between social capital and social wellbeing ($\beta = 0.072$, $t = 1.717$). Hence, it supports H3a but not H3b. Civic engagement was found to be positively significant related with both cognitive wellbeing ($\beta = 0.313$, $t = 7.826$) and social wellbeing ($\beta = 0.171$, $t = 3.840$). These findings support H4a and H4b. Cognitive

Table 2. Confirmatory Factor Analysis

| Construct | Items | Factor Loadings | Cronbach Alpha | Composite Reliability(CR) | Average Variance Extracted(AVE) |
|-----------------------|-------|-----------------|----------------|---------------------------|---------------------------------|
| SM-Literacy | SML1 | .917 | .961 | 0.961 | .831 |
| | SML2 | .934 | | | |
| | SML3 | .884 | | | |
| | SML4 | .922 | | | |
| | SML5 | .900 | | | |
| SM-Socialization | SMS1 | .956 | .959 | 0.959 | .825 |
| | SMS2 | .926 | | | |
| | SMS3 | .829 | | | |
| | SMS4 | .908 | | | |
| | SMS5 | .882 | | | |
| Social Capital | SC1 | .954 | .971 | 0.972 | 0.872 |
| | SC2 | .936 | | | |
| | SC3 | .930 | | | |
| | SC4 | .918 | | | |
| | SC5 | .935 | | | |
| Civic Engagement | CE1 | .974 | .960 | 0.960 | .827 |
| | CE2 | .898 | | | |
| | CE3 | .933 | | | |
| | CE4 | .858 | | | |
| | CE5 | .870 | | | |
| Cognitive Wellbeing | CWB1 | .888 | .937 | 0.938 | .833 |
| | CWB2 | .863 | | | |
| | CWB3 | .948 | | | |
| Social Well-Being | SWB1 | .974 | .951 | 0.951 | .829 |
| | SWB2 | .879 | | | |
| | SWB3 | .909 | | | |
| | SWB4 | .858 | | | |
| Social-Technology Fit | STF1 | .865 | 0.90 | 0.902 | 0.755 |
| | STF2 | .819 | | | |
| | STF3 | .895 | | | |

wellbeing was also found to have a significant positive relationship with social wellbeing ($\beta = 0.411$, $t = 8.117$); hence, H5 is also supported.

4.5. Moderation analysis

The “Process” procedures moderation method was used using SPSS 20 to test the moderating effect of individual social-technology fit on the impact of using social media tools in the form of social capital and civic engagement.

4.5.1. SM-Socialization—social-Technology Fit—Social Capital

The value of r-square for the model for social capital is found to be .3014, with a p-value of less than 0.001. Table 5 shows the values of coefficients of social-technology fit (moderator variable), social media socialization (independent variable), and the product of social-technology fit and social media socialization, while the outcome is social capital. The values of coefficient for social-technology fit =>social capital are .3062 ($t = 7.2941$, $p < 0.001$). The moderation analysis conducted

Table 3. Composite Reliability, AVE, and Correlation

| Sr.No | Construct | VIF | Mean(S.D) | CR | AVE | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-------|-----------------------|------|------------|-------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1. | Social-Technology Fit | 1.40 | 4.83(1.44) | .902 | .755 | .869 | | | | | | |
| 2. | Social Capital | 1.30 | 4.54(1.36) | .972 | .872 | .335 | .934 | | | | | |
| 3. | SM-Literacy | 1.34 | 5.63(1.72) | 0.961 | .831 | .344 | .340 | .911 | | | | |
| 4. | Civic Engagement | 1.49 | 4.29(1.41) | .960 | .827 | .436 | .374 | .415 | .910 | | | |
| 5. | SM-Socialization | 1.66 | 4.92(1.28) | .959 | .825 | .483 | .389 | .405 | .444 | .908 | | |
| 6. | Social Wellbeing | - | 4.81(1.36) | .951 | .829 | .388 | .321 | .371 | .398 | .496 | .911 | |
| 7. | Cognitive Wellbeing | 1.65 | 5.12(1.27) | .938 | .833 | .445 | .422 | .417 | .460 | .570 | .525 | .913 |

Table 4. Fit Indices

| Indices (Measurement Model) | CMIN/DF | RMSEA | GFI | NFI | CFI | IFI | TLI |
|-----------------------------|---------|-------|-------|-------|-------|-------|-------|
| Criteria | <3.00 | <0.08 | >0.9 | >0.9 | >0.9 | >0.9 | >0.9 |
| Values | 1.728 | 0.042 | 0.905 | 0.956 | 0.981 | 0.981 | 0.978 |
| Indices(Structural Model) | | | | | | | |
| Values | 1.985 | .048 | 0.903 | 0.955 | 0.977 | 0.977 | 0.975 |

Table 5. Model-outcome: social capital

| | Coeff | se | t | p | LLCI | ULCI |
|-----------------------|--------|-------|---------|-------|--------|--------|
| Constant | 4.7030 | .0536 | 87.6632 | .0000 | 4.5976 | 4.8085 |
| Social-technology fit | .3062 | .0420 | 7.2941 | .0000 | .2237 | .3887 |
| SM-Socialization | .3313 | .0491 | 6.7464 | .0000 | .2348 | .4278 |
| int_1 | .1986 | .0364 | 5.4510 | .0000 | .1270 | .2702 |

Product terms key: int-1= SM-socialization × Social-technology fit

supports the proposed hypothesis H6a that individual social-technology fit positively moderates (strengthens) the relationship between social media use for socialization and social capital (figure 2).

4.5.2. SM-Socialization—social-technology Fit—Civic Engagement

The value of r-square for the model for civic engagement is found to be .1892, with a p-v value of less than 0.001. Table 6 shows the values of coefficients of social-technology fit (moderator variable), social media-socialization (independent variable), and the product of social-technology fit and social media-socialization, while the outcome is civic engagement. It is shown in Table 6 that the values of the coefficient for social-technology fit =>civic engagement are .1767 ($t = 5.077$, $p < 0.001$). The moderation analysis conducted supports the proposed hypothesis H6b that individual social-technology fit positively moderates (strengthens) the relationship between social media use for socialization and civic engagement (figure 3).

5. Discussion of findings

This study is an attempt to measure the contribution of social networking sites through facilitating youth to become more informed, refined, and to find common causes to take an active part in society. The findings provide support for all hypotheses posed in the study that social media richness in the form of use for literacy and socialization has a significant positive impact on stimulating individual social capital and engaging in civic engagement behavior. The findings are somehow consistent with some previous studies conducted by researchers from the perspective of using social media as an influential source of news/information, promote connections, and for the collective participation of active users (D. Shah et al., 2001; Gil de Zúñiga et al., 2012).

First, in the light of various uses of social media sites, these are also a source of information hubs through providing updates on the different issues of users' interest. Users also tend to create or join different virtual groups based on the common interest and their active participation in the online social network helps to build progressive social capital (Gilbert & Karahalios, 2009). Such online tools are considered valuable by enabling useful conversations about content and problems, thus enhancing social resources' development the virtual domain for mutual benefits (Ellison et al., 2007). Online or offline discussions and more information access over social media can facilitate access to many contacts and then enable more social movements for progressive citizen development (H1a, H2b).

Second, the authors provide reasonable enlightenment to support H2a and H2b. Individuals also use social media to explore new things, build social relationships, and for amusement, which also leads

Table 6. Model-outcome: Civic Engagement

| | Coeff | se | t | p | LLCI | ULCI |
|-----------------------|--------------|-----------|----------|----------|-------------|-------------|
| Constant | 4.3140 | .0632 | 68.2927 | .0000 | 4.1898 | 4.4382 |
| Social-technology fit | .1767 | .0348 | 5.0777 | .0000 | .1083 | .2451 |
| SM-socialization | .4081 | .0499 | 9.0815 | .0000 | .3198 | .4965 |
| int_1 | .0953 | .0248 | 3.8445 | .0001 | .0466 | .1441 |

Product terms key: int-1= SM-socialization × social-technology fit

towards a positive relationship with perceived value in the form of social capital and civic engagement (Al-Rahmi et al., 2019; Homero & Valenzuela, 2011). The data also support the view of Park et al. (2009) and Mahmood et al. (2018) that users especially youngsters join online social groups to enhance their peer interactions and to seek more information about on- and off-campus issues.

Thirdly, the study findings provide the insights that social communications, social contacts with friends and peers, gaining insights into societal circumstances for civic participation - all factors instill the individuals' motivation to take part into the collective issues (Bennett & Segerberg, 2011) which can increase the wellbeing for both individual and social context (H3a, H3b, H4a, and H4b are supported). The results seem to provide evidence that social media can enable young people to more certainly organize themselves and to perceive society as a productive place to live. **Fourth**, the cognitive wellbeing of individuals also found to have a significant positive relationship with social-well-being (H5). When individuals feel mentally fit and on an equal plane with others; they also think of society as a strong continuum to contribute something. The positive sense of the members of society would, of course, increase the cohesion of the said community in the form of social wellbeing (Liao et al., 2014).

Lastly, the findings support H6a and H6b by showing the strengthening effect of moderating variable "individual social-technology fit" on the relationship between social media use (for socialization) with social capital and civic engagement. It shows that more individuals feel technology is suitable to fulfill their social needs, more positively affects social media use for socialization and the ultimate perceived value in the form of social capital and civic engagement. The finding is somehow in line with the study of Lin and Wang (2012) and (Lu & Yang, 2014) that online social networking sites use is also meaningfully related with individuals' social characteristics by considering social appropriateness as a significant factor for online community development.

6. Conclusion and future implications

The research paradigm presented in this study is based on the underlying richness of youngsters' usage of social media in terms of their contribution to fostering civic engagement and social capital, both of which have a major positive impact on social outcomes. Overall, we conclude from this study that social media tools as an interactive mechanism can progressively enhance cognitive and social wellbeing through more indulging towards social capital and civic engagement. Young individuals are making productive use of social networks for cultivating social contacts and participatory behavior, positively impacting societal wellbeing. By considering developing countries' political and economic conditions, the active engagement of educated youth can make a real difference in producing a networked society through genuinely utilizing social media as an indispensable tool. Moreover, the use of SNS can be more advantageous if Individuals acquire support from the government, unions, or other professional organizations for progressive social development/wellbeing. The cost of adverse effects can be reduced through social media capabilities regarding facilitating critical mass and a vocal sound of public concerns. Future studies can also focus specifically on visual art students to best utilize social networking sites in order to maximize their careers and professional development. This can involve looking into effective approaches to use social media to market their work, get in touch with potential customers, and connect with other creatives who share their interests.

7. Study limitations

This study has some limitations that should be considered in interpreting the findings. First, the richness or value of social media can be explored more by targeting a different audience other than only youngsters. Second, the two most frequent social networking sites were considered as rich social media tools in the selected countries - Facebook and Twitter, which can limit the generality of the study findings. Few other social networking sites, for example, WeChat (China), Mixi (Japan), Badoo (South Korea), and many others cover specific regions or countries so may have a different impact on its usage and related outcomes. Although this study mainly focused on the positive value developed through social networking sites. But the fact exists that social media can be exerted either as a great worth seeking or even as a likely threat in terms of its diverse/negative effects.

Most of the data were collected through an online survey, which could lead to sample selection biases. Future studies can be executed with different target populations over other institutional settings to make a comparison, with new value enhancing factors about the social media capacity. Also, the data used in this study were cross-sectional due to time limit constraints. There is generally no evidence of temporal or causal relationships because the exposure and outcome variables are evaluated simultaneously. Further research with longitudinal data is required to establish such relationships.

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