Examining Social Networking Sites Users' Benefits Using the DeLone and McLean Information System Success Model

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ABSTRACT

In the modern era of technological and communication amelioration, social networking sites (SNSs) open the door, not only in industrial sectors but also as a platform which mostly aims attention at easing the formation of social correspondence among people. On the basis of the DeLone and McLean model of information system success (2003), this study develops a modified IS model to examine the individual merits (i.e., enjoyment, expected relationships, and reputation) obtained from using SNSs. Structural equation modeling is used to investigate the above issues, and an online survey questionnaire technique is conducted with 421 respondents from the United States, and several interesting results are observed. System quality significantly affects both satisfaction and use intention, whereas information and service quality have a large impact on satisfaction but not on use intention. Individual benefits (such as enjoyment, expected relationships, reputation, and use intention) are all positively impacted by satisfaction. In addition, use intention acts as an intermediate construct and has positive effects on individual benefits. SNS practitioners should focus on awareness-raising initiatives regarding the personal benefits enabled by SNS use, as well as educational programs to encourage SNS usage at the user level, by identifying and addressing the specific individual benefits.

Keywords: information system success model, social networking sites, service quality, enjoyment, expected relationships, reputation

1. INTRODUCTION

Social networking sites (SNSs) such as Twitter, Instagram, Facebook, Google+, and Myspace permit individuals to create profiles in view of sharing photographs, personal information, and joining friends' groups (Hew, 2011; Ortiz et al., 2023), and can be viewed as a place of acquiring social benefit (Hoque & Hossain, 2023; Lee, 2024). According to Ibáñez-Sánchez et al. (2022), SNSs are utilized not only for transmitting messages and creating content but also for leisure, communication, and people-finding purposes. They are emerging as one of the most popular media of online social interaction and emotion sharing (Hoadley et al., 2010), and managing friendships as well. Mainly, the design of SNSs is to simplify communication and content sharing within networks of users, who via an individual network share ideas, interests, activities, or events on a virtual platform (Chen et al., 2012).

Statista (2024) report that SNS usage worldwide has surpassed 60%, and the highest penetration rates were found in 2023 in Northern and Western Europe, followed by Eastern Asia and Southern Europe. Globally, there were over 4.6 billion SNSs users in 2022, and that number is expected to rise to over 5.8 billion by 2027, a 26% growth in only five years. Facebook, which has the largest market size, had 2.96 billion active monthly users as of 2023, and its parent company, Meta, recorded 116.6 billion US dollars in revenue in 2022, which is more than double that of 2018 (Statista, 2024). Due to the critical function that these websites serve in increasing global communication, removing barriers between people, and facilitating conversation on a public platform, SNSs are currently the most popular communication route among educated youngsters. These websites serve as a conduit for these people to connect with friends and widen their social network (Dong et al., 2014).

Internet services such as social networking services, emailing, portal services, or other groundbreaking Internet services, are effortlessly available, providing various benefits in ubiquitous environments, and van der Heijden (2004) argue that there is a strong relationship between services and new information technologies. In addition, understanding the reasons behind people's actions and their level of engagement and stickiness with SNSs requires an understanding of the gratification that users of these platforms derive from their use (Silveira et al., 2022). Yet, despite the increasing necessity to understand the specific individual benefits a person can obtain using a certain SNS at a more insightful level, research in

this facet still remains less studied. Prior research review reveals that several studies were conducted in the SNS area regarding post adoption (Chang & Zhu, 2012; Lin & Lu, 2011), and continuance usage (Mouakket, 2015), with even less research in the setting of net individual benefits. It is worth noting that teenagers love SNSs, and cases of cyberbullying frequently occur on these sites as well.

Hence, the primary objectives of this research are to offer a thorough understanding of the benefits that individuals can derive from using SNSs and how to utilize them responsibly. The authors feel that there is a growing need to comprehend the unique advantages that each user of a SNS may derive from using it, as these platforms have become popular means of connection with the intention of receiving reciprocal favors. Over the past ten years or so, the global netizen population, especially of social media, has grown geometrically due to the rising popularity of the Internet among youths. Every day, new people for a variety of reasons from all ages enter cyberspace. In light of this, the topic of comprehending the personal net benefits of utilizing SNSs has garnered interest and is logically sound.

Therefore, to fill the research gap, this current study develops a research framework applying the modified DeLone & McLean information system (D&M IS) success model (DeLone & McLean, 2003) to investigate specific individual impacts obtained using SNSs. The DeLone and McLean (2003) model focuses mainly on measuring the success of e-commerce and net paybacks achieved from using IS. Thus, the model is considered one of the most well-known frameworks for explaining individual net benefit expectations of IS (DeLone & McLean, 2003). It is becoming popular among researchers adopting it for IS success scenarios such as knowledge management systems (Kulkarni et al., 2006), online learning systems (Lin, 2007), e-commerce (DeLone & McLean, 2004), and e-government systems (Wang & Liao, 2007) by specifying different constructs aiming to make the D&M model more comprehensive and usable in different contexts. This model also acts as the underpinning for investigation in the domain of SNS contexts. However, limited research has applied the D&M IS success model within an individual benefits setting. As a result, the current study primarily builds upon D&M's IS model with some extensions, suggesting that when the quality is sufficient, users become content and increase their intention to use, which in turn influences how much they believe they have gained (e.g., enjoyment, expected relationship, and reputation). Thus, we contribute a theoretical extension of D&M's IS success

model to examine empirically the effect of computer systems on use and satisfaction, and how continuance usage and user satisfaction can create net benefits represented by relationship formation, information sharing, and social presence.

The overall purpose of the study is to examine the net benefits users can obtain from using SNSs by applying the updated DeLone and McLean updated model (2003) in the SNS context. Particular attention is paid to the following research questions (RQs) in this paper.

RQ1: What elements will have an impact on individual net benefits in the IS success model?

RQ2: What notable individual net benefits do SNS users experience?

The current study makes the following contributions. Firstly, by illuminating the distinct dynamics of users' relationships with social media, it will offer insights into the various aspects of SNS quality that influence users' satisfaction and intention to use the platform. Secondly, this study will contribute to a deeper comprehension of the fundamental benefits and advantages that support users' intentions to utilize SNSs. Thirdly, in order to effectively interact with and support users in the digital age, academics, practitioners, educators, and policymakers will find these insights to be highly beneficial. Fourthly, knowing what increases SNS usage might help marketers adjust their approach to successfully attract and retain digital consumers. Finally, by applying these ideas, platform designers can create user interfaces that customize SNSs to each user's preferences and needs, increasing their allure and intrigue.

2. THEORETICAL BACKGROUND

With regard to contributing an overall and inclusive meaning of IS success that reconciles information systems assessment from multiple perspectives, DeLone and McLean (2002) revised the current model and its measures and separated them into six leading sorts. Consequently, they provided a framework that can be used from multidimensional perspectives and which has interdependencies among constructs. Reviewing all the modifications and empirical studies, DeLone and McLean (2003) updated their original model accordingly, revealing a rationalized framework of IS success pertaining to these newly added dimensions. The six paradigms of the updated model include information quality, service quality, system quality, user satisfaction, intension to use, and net benefits.

DeLone and McLean (2002) argue that user satisfaction is a critical indicator of computer system success. *Satisfaction* refers to the comparison between perceived performance and expectations. The attitudes of users toward computer systems within their surroundings are a key component of user satisfaction. According to DeLone and McLean (2003), one of the most important quality factors for determining a system's success is system or information quality. The following criteria were used to assess *system quality*: importance, flexibility, accessibility, dependability, ease of use, and integration. It is anticipated that improved system quality will increase user satisfaction and usage, which will boost personal productivity. On the other hand, the accuracy, context, relevancy, timeliness, completeness, and accessibility of the information were the metrics used to gauge *information quality*. The objectivity of a website or information system is increased by great information quality (Dong et al., 2014).

Furthermore, regardless of whether the assistance is given to an Internet service provider, a new structural unit, or an IS department, service quality is a full support process offered by its provider. According to Grönroos (1984), *service quality* is defined as the general assessment and opinion of customers regarding the performance of a service provider, that has significant impacts on customer satisfaction in the SNS context. Due to the fact that users are now customers rather than employees, bad user assistance results in lost sales and funds, which is a crucial aspect in an e-commerce setting (DeLone & McLean, 2004). Additionally, service quality in e-commerce gauges the entire assistance provided by the website. The ability for a user to simply add people to a list of friends who are known to him or her, and to communicate with other users, are the most crucial features offered in an SNS setting. According to DeLone and McLean (2002), user satisfaction, which considers how users perceive computers in the context of their surroundings, is essential to the success of computer systems. Recently, user information pleasure has taken the place of model of information systems success and effectiveness (DeLone & McLean, 2003). User satisfaction was identified in this current study as the primary indicator of an information system's success. In the D&M model, user happiness has been expanded to include any web service that enables online communication, including email or instant messaging.

The current study extends the D&M IS success model by adding particular benefit constructs for a number of

causes. First, DeLone & McLean suggested in the conclusion of their study that a number of research works should conduct investigating and incorporation to measure net benefits. Seddon (1997) clearly argued that different stakeholders may have dissimilar views about what brings them benefit. Therefore, researchers must carefully and precisely specify the stakeholders and the setting in which they calculate the net advantages of an IS (DeLone & McLean, 2003). This result was backed up by Yuthas and Young (1998), who emphasized that examining usage and satisfaction metrics is insufficient as a substitute for accurately assessing performance or net benefits. Progress should be made in developing and testing net benefit measures on individual, group, industry, firm, and national levels (DeLone & McLean, 2003). In particular, this present study proposes to expand net benefits on an individual level basis.

First, Mouakket (2015) has pointed out that the use of SNSs should include the construct of enjoyment as an important factor that motivates users to keep using SNSs. According to Li (2011), *enjoyment* is "the extent to which the activity of using information technology is perceived to be enjoyable." Lin and Lu (2011) mentioned that perception of enjoyment is a vital factor in using any SNS. In other words, the individual adopts information technology as he/she perceives the chances of getting enjoyment from it. Second, *expected relationship* refers to the closeness or strength of the relationship that is predicted to increase consumer loyalty (Hennig-Thurau, 2000). Wilson et al. (2012) emphasize that crystallizing ephemeral relationships are advantageous in SNSs in order to retain strong and weak ties binding people. On the other hand, as Hennig-Thurau et al. (2010) report, SNSs have become a tool for users to create and maintain relationships with friends, family, and other people. Furthermore, Dunne et al. (2010) mentioned that maintaining relationships is a

key driver of using SNSs.

Finally, an online user's *reputation* refers to how their peers in the virtual community perceive them as valuable members (Lin et al., 2017). According to Madden and Smith (2010), 71 percent of SNS users are between the ages of 18 and 29 and have modified their privacy settings to prevent others from viewing their online activity. This data shows that SNS users are concerned about their online reputation. Reputation is not built on sight; rather, users spend extensive time to share their status, information, and images, aiming to build self-reputation. This demonstrates a long-lasting relationship with individual SNS usage behavior; however, reputation has not been examined as an antecedent of continued SNS use behavior. Therefore, this study perceives reputation as an important individual benefit achieved by continuously using SNSs. In particular, this study includes enjoyment, expected relationships, and reputation as antecedents of user satisfaction and use intention in SNSs.

Based on these discussions, the current study offers a comprehensive and multidimensional research model (Fig. 1) for measuring the net individual benefits of using SNSs, where the information, system, and service quality of any SNS is allegedly the key to satisfaction and use intention, ultimately providing benefits including enjoyment, expected relationships, and reputation.

3. HYPOTHESES DEVELOPMENT

3.1. Information, System, and Service Quality to Satisfaction and Use Intention

Previous researchers have shown that user perceptions of quality, such as information quality, system quality, and service quality are prerequisites for user satisfaction and intention to use any SNS (Dong et al., 2014; Wang et al., 2014). In this regard, Zheng et al. (2013) mentioned that
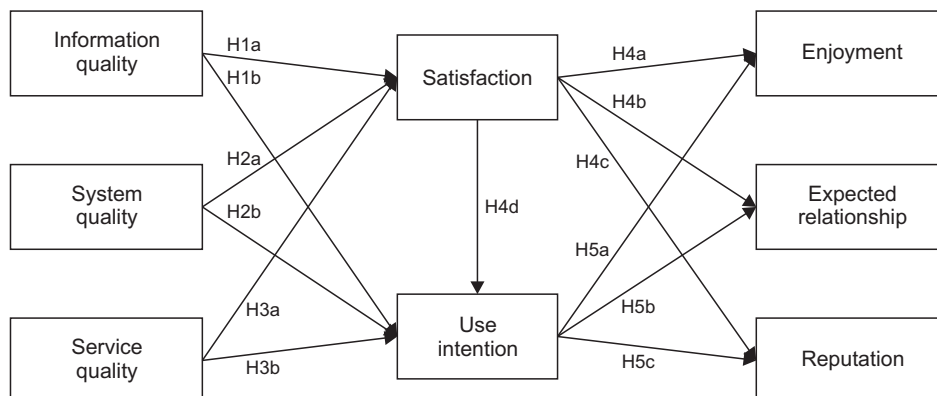

Fig. 1. The proposed framework.

system and information quality have a positive impact on satisfaction and use intention in the virtual community information sharing perspective. In particular, considering information, system, and service quality as an example, if a website is easy to use, the content is accurate, and the service is trustable, the use and satisfaction of SNSs will increase. Thus, this paper proposes the following hypotheses:

H1: Information quality has a positive influence on (a) satisfaction and (b) use in the context of SNSs.

H2: System quality has a positive influence on (a) satisfaction and (b) use in the context of SNSs.

H3: Service quality has a positive influence on (a) satisfaction and (b) use in the context of SNSs.

3.2. Satisfaction, Net Individual Benefits (Enjoyment, Expected Relationships, and Reputation) and Use Intention

In the D&M IS success model, satisfaction is identified as a direct determinant of net welfare (DeLone & McLean, 2003). Zheng et al. (2013) identified the significant positive relationship with user satisfaction and net benefits in the situation of information sharing in virtual communities. Lin et al. (2017) found that enjoyment has a significant positive impact on the satisfaction of using SNSs. Furthermore, Lee and Chung (2009) discovered positive disconfirmations in the case of keeping offline contacts. They noted that information and entertainment have a major impact on Facebook user satisfaction, which in turn has a strong impact on user desire to stick with Facebook.

However, the D&M paradigm only has a tenuous relationship between utilization and user satisfaction. The greater the user happiness, the greater the likelihood that they will use it (DeLone & McLean, 2003). According to Zheng et al. (2013), Dong et al. (2014), and Wang et al. (2014), contentment in the context of SNSs significantly affects use. A substantial positive association between satisfaction and ongoing SNS use was also discovered by Lin et al. (2014). Thus, this paper proposes the following hypothesis:

H4: Satisfaction has a positive relationship with (a) enjoyment, (b) expected relationship, (c) reputation, and (d) use intention.

3.3. Use Intention and Net Individual Benefits (Enjoyment, Expected Relationships, and Reputation)

Use is acknowledged as a direct cause of net benefits in the D&M IS success model (DeLone & McLean, 1992; 2003). Enjoyment is a crucial factor in determining the use intention of SNSs, according to Lin and Lu (2011). Reputation has been identified as an important construct and has a favorable impact on the intention to use SNSs in Lin et al. (2017)'s study. Higher individual advantages in particular (enjoyment, anticipated relationships, and reputation) raise users' expectations, which can persuade them to keep using the SNS. Therefore, this paper also tests the following hypotheses:

H5: The use intention of SNSs will lead to attaining more (a) enjoyment, (b) expected relationships, and (c) reputation in the SNS context.

4. RESEARCH METHODOLOGY

4.1. Research Design

This study is a quantitative one in which several hypotheses are formed to validate the relationships among variables. In accordance with the purpose of the study, we chose the United States, since the users there are among the most technologically savvy, varied, and fast-paced people in the world. As per the report of Singh (2024), there are 302.35 million social media users in the USA, and by 2024, that figure was expected to rise to 313 million, and 90% of Americans use social media regularly. Overall, a total of 302 million SNS users are the population of this study. Thus, the current study gathered data from American SNS users, which should result in more accurate and representative statistics overall, especially for SNSs.

The current research targets respondents who are users of multiple SNSs in the United States on a random sampling basis. An online survey was conducted for collecting data, where SNS users are taken into consideration and data were collected through random sampling from respondents within the United States. The survey was conducted using Amazon Mechanical Turk; MTurk (a research wing of Amazon.com), and respondents were paid $0.40 per completed response. There were two phases: (1) choosing specific SNS that they had ever used, (2) and then answering questions according to it. The survey was created using the authors' email address in a Google Doc, and afterwards the link was posted on the MTurk web-

Table 1. Constructs, formal definitions, and items

Construct	Code	Measurement item
Information quality (Dong et al., 2014)	IQ1	SNS provides me with all the up-to-date information for my purpose (deleted)
	IQ2	SNS provides me with all the information I need
	IQ3	SNS provides accurate information
	IQ4	SNS provides comprehensive information
	IQ6	The information content in the SNS meets my needs
System quality (Dong et al., 2014)	SQ1	SNS allows information to be readily accessible to me (deleted)
	SQ2	SNS is easy to use
	SQ3	SNS enables me to get on to it quickly
	SQ4	SNS interface is user friendly
	SQ5	SNS function is reliable
Service quality (Wang et al., 2014)	SeQ1	My SNS provides me with a higher level of online support and explanation
	SeQ2	My SNS service provider interacts extensively with users
	SeQ3	My SNS service provider provides high availability for consultation
	SeQ4	My SNS provides satisfactory support to users
	SeQ5	My SNS provides more worthy support than typical friends (deleted)
Use (Dong et al., 2014)	USE1	I intend to continue using the SNS in the future
	USE2	I will frequently use SNS in the future
	USE3	I expect my use of the SNS to continue in the future
	USE4	I will recommend others to use SNS (deleted)
	USE5	My intention is to continue using SNS rather than use any alternative means
Satisfaction (Dong et al., 2014)	SAT1	I am pleased with the experience of using the SNS
	SAT2	I am very satisfied with the SNS effectiveness and efficiency
	SAT3	I am happy with the use of SNS (deleted)
	SAT4	My overall experience of Facebook use was very pleasant
	SAT5	Using SNS was the best decision for me (deleted)
Enjoyment (Lin & Lu, 2011)	EJ1	I spend some enjoyable time using SNS
	EJ2	I derive fun and pleasure
	EJ3	It entertains and cheers up my mind
	EJ4	It helps to pass the time away when feel bored
	EJ5	I spend relaxing time using SNS (deleted)
Expected relationships	ER1	Participation in the SNS enables me to get connected with my old friends (deleted)
	ER2	Participation in the SNS can enable me to become familiar with new members
	ER3	Participation in the SNS can expand the scope of my association with other members
	ER4	The SNS helps strengthen my connections with other members
	ER5	Participation in the SNS can create new relationships with new friends
Reputation (Lin et al., 2017)	RP1	Participating in SNS can improve my value to others (deleted)
	RP2	Participating in SNS can improve my status
	RP3	I participate in the SNS to improve my reputation in the field
	RP4	Using SNS improves my image
	RP5	Participation improves other members' recognition towards me in the SNS community

Source: literature survey.
SNS, social networking site.

site, giving prospective responders the choice to accept or decline the invitation to participate. Following the review of a few qualifying questions, potential respondents took part in this survey. A pilot survey was done with 25 samples prior to the final survey. Based on the findings of the pilot study, we made minor modifications to the survey items and questions before moving forward with the final survey operation.

Initially, 455 data were collected, and after data cleansing and removal of invalid responses, 421 valid samples were kept for further analysis. Given that numerous other distinguished scholars have employed samples in their research in manners akin to our own, we believe the final sample size we chose to be standard. For instance, Mouakket (2015) used 397 samples, Lin and Lu (2011) used 402 samples, Dong et al. (2014) used 346 samples, and Zheng et al. (2013) used 281 samples. In addition, structural equation modeling (SEM) requires a sample size with at least 10 times the largest number of indicators of the construct in the model (Wixom & Watson, 2001), and our sample size is far larger than this cutoff.

The online survey was operationalized from July 22-31, 2022. SEM was employed for data analysis using IBM SPSS Statistics 24 (IBM Co., Armonk, NY, USA). This study utilized confirmatory factor analysis (CFA), which is a two-step process for constructing an effective measurement model, as recommended by Anderson and Gerbing (1988). First, CFA evaluated the measurement model to determine the validity and reliability of the constructs. The relations of the hypotheses in the conceptual research model were then analyzed by looking at the structural model.

4.2. Instrument Development

The questionnaire was made while keeping an eye on previous literatures, and items taken into consideration are given in Table 1 (Dong et al., 2014; Lin & Lu, 2011; Lin et al., 2017; Wang et al., 2014). Therefore, some items are adopted from previous literature, whereas some others are modified. The survey's questionnaire was written in English, and responses were graded on a 7-point Likert scale (1 being the strongest disagreement, 7 the strongest agreement, and 4 being neutral).

4.3. Data

The sex distribution of the respondents is well balanced, as shown in Table 2. 27.3% of respondents are between 26-30 years old, followed by 21.1% who are over 40 years old. The majority of the participants have at least a

Table 2. Demographic details of the respondents

Demographic	Frequency	Percentage (%)
Sex		
Female	201	47.7
Male	220	52.3
Age (yr)		
Under 20	5	1.2
21-25	72	17.1
26-30	115	27.3
31-35	72	17.1
36-40	68	16.2
Over 40	89	21.1
Educational level		
Bachelor degree	212	50.4
College degree	78	18.5
High school degree	55	13.1
Master's degree	69	16.4
Ph.D/more	7	1.7
Position		
Student	42	10.0
Government employee	48	11.4
Private employee	230	54.6
Businessman	53	12.6
Others	48	11.4
Mostly used SNS		
Facebook	181	42.9
Twitter	59	14.0
Instagram	53	12.6
Reddit	19	4.5
LinkedIn	13	3.1
TikTok	11	2.6
Others	85	20.2
How long have you been using the SNS?		
Less than 6 mo	28	6.7
6-12 mo	33	7.8
1-3 yr	43	10.2
3-5 yr	81	19.2
More than 5 yr	236	56.1

Table 2. Continued

Demographic	Frequency	Percentage (%)
How long you use SNS every day?		
Less than 10 min	37	8.8
10-30 min	95	22.6
30 min-1 hr	112	26.6
1-2 hr	118	28.0
More	59	14.0

Source: survey findings.
SNS, social networking site.

Fig. 2. Measurement model.

bachelor degree (50.4%), and 18.5% and 16.4% of respondents have a college or master's degree, respectively, and the dominant respondents are private employees (54.6%). In this study, respondents with different SNSs comprised, in particular, users of Facebook 42.9%, Twitter 14.0%, Instagram 12.6%, Reddit 4.5%, and other SNSs including TikTok, Snapchat, WeChat, and YouTube. Most of the respondents have been on these SNSs for more than 5 years and around 56.1% of them use the SNS for 30 minutes to two hours per day.

4.4. Common Method Bias Test

When data are acquired from the same source at the same time, method bias is a prevalent problem. First, to evaluate the method bias, this study used the Harman's Single Factor Test suggested by Podsakoff et al. (2003). If the majority of the variance is explained by one component, all indicators would likely fall under it, which would be a problem. The principle axis factoring approach using the none rotation and fixed number of factors was tested. Results show that the first factor and some other factors with more than one eigenvalue were found to account for 45 percent of the variance, demonstrating that the method was not biased. Second, this study applied Pavlou et al. (2007)'s suggestions to assess systematic bias in data. Systematic bias may arise if the correlation value exceeds 0.90; however, the measurement model shows that correlation values exceeding 0.90 were not detected. This further revealed that there was no systematic bias in the data. Therefore, it is established that the data are unlikely to be compromised by major biases.
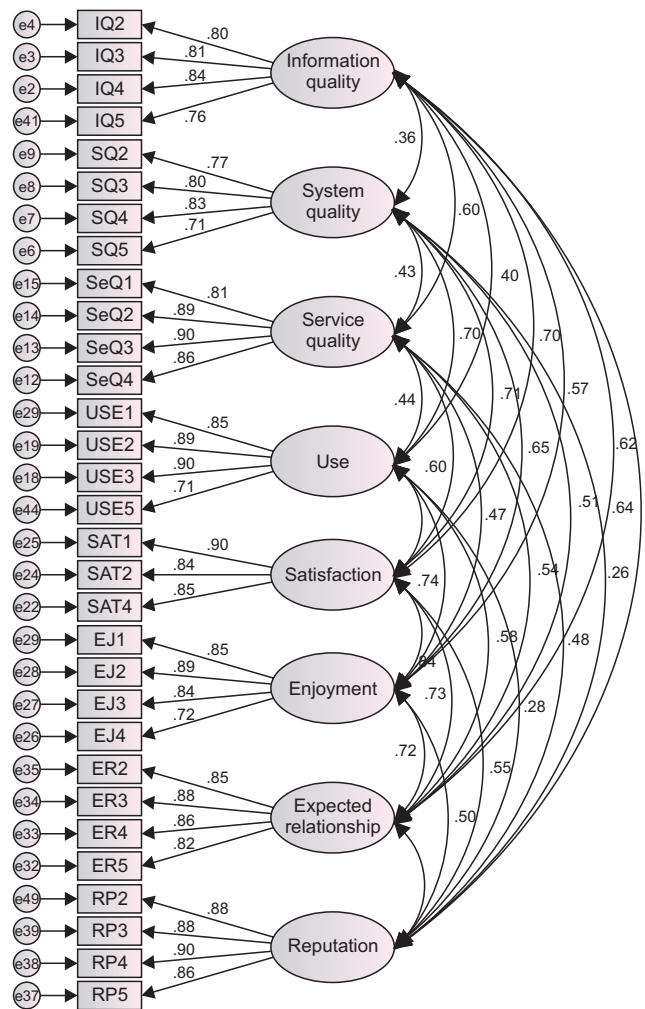
5. EMPIRICAL RESULTS

5.1. Measurement Model

5.1.1. Convergent Validity

A measurement model output is shown in Fig. 2, showing that the CFA factor loads with their respective constructs surpass the 0.70 threshold value; this represents that the data are highly loaded and enabled to generate higher reliability and validity (Hair et al., 2010). However, a few items of some constructs are removed due to being below the loading of 0.70. To retain consistency, our eight-construct model had five questions for each construct. Information quality, system quality, service quality, use of SNSs, enjoyment, expected relationship, and reputation all had one item removed. Additionally, two items were removed from the satisfaction variables.

Cronbach's alpha (α), composite reliability (CR), average variance extracted (AVE), and coefficients are all displayed in Table 3 (Browne & Cudeck, 1993; Doll et al., 1994; Hair et al., 2010) for each summed scale. Cronbach's alpha, which quantifies internal consistency reliability, ranges from 0.86 to 0.93, exceeding the cutoff point of 0.7 and suppressing higher internal consistency (Hair et al., 2010). The CR and AVE values should be in the 0.70 and 0.50 ranges, respectively, or higher (Fornell & Larcker, 1981). The study's findings reveal that the CR value varies from 0.86 to 0.93 and the AVE varied between 0.61 and 0.77, showing higher measuring instrument validity.

5.1.2. Discriminant Validity

The results of the analysis demonstrate that the square correlations for each construct are less than the variance that each construct's indicators have recovered. Additionally, values of the variance inflation factor that are within its cutoff value of 10 show the model's achieved discriminant validity. Based on the aforementioned validity and reliability, it can be said that the measurement model has reached acceptable convergent and discriminant validity.

5.1.3. Model Fitness Test

To have a suitably great model fit for the measurement model, the overall model fit was evaluated in terms of the goodness-of-fit index (GFI), adjusted GFI (AGFI), comparative fit index (CFI), and the root mean square error of approximation (RMSEA). As demonstrated in Table 3 (Browne & Cudeck, 1993; Doll et al., 1994; Hair et al., 2010)'s lower panel, all of the model fit indices fall within their respective recommended ranges, indicating that the suggested model fits the sample data well.

5.2. Structural Model

In the structural model, the relationships between latent variables are taken into consideration to test the hypotheses, where the values of the causal paths are shown in Fig. 3. The structural model also produced good model fit indices (e.g., the ratio of chi-square to degrees of freedom=3.31, GFI=0.824, AGFI=0.793, CFI=0.911, incremental fit index=0.911, and RMSEA=0.074). Variance explained by use, satisfaction, enjoyment, expected relationship, and reputation were at 71%, 66%, 69%, 60%, and 52% respectively, representing that the model has good explanatory power.

Table 3. Reliability and validity statistics

Construct	α	CR	AVE	IQ	SQ	SeQ	USE	SAT	EJ	ER	RP
IQ	0.88	0.88	0.66	0.81[a]							
SQ	0.86	0.86	0.61	0.36	0.78[a]						
SeQ	0.92	0.92	0.75	0.60	0.42	0.87[a]					
USE	0.90	0.91	0.71	0.40	0.69	0.44	0.84[a]				
SAT	0.89	0.90	0.75	0.69	0.71	0.59	0.77	0.87[a]			
EJ	0.89	0.90	0.70	0.57	0.65	0.47	0.74	0.82	0.83[a]		
ER	0.91	0.92	0.73	0.61	0.50	0.54	0.58	0.72	0.71	0.85[a]	
RP	0.93	0.93	0.77	0.64	0.26	0.47	0.27	0.55	0.50	0.72	0.88[a]

Model fit indices	Obtained value	Recommended value	Reference
CMIN/DF	2.546	≤3	Hair et al. (2010)
CFI	0.942	≥0.90	Hair et al. (2010)
AGFI	0.828	≥0.80	Doll et al. (1994)
NFI	0.909	≥0.90	Hair et al. (2010)
GFI	0.859	≥0.80	Doll et al. (1994)
RMSEA	0.061	≤0.08	Browne & Cudeck (1993)

α, Cronbach's alpha; CR, composite reliability; AVE, average variance extracted; IQ, information quality; SQ, system quality; SeQ, service quality; USE, use of social networking site; SAT, satisfaction; EJ, enjoyment; ER, expected relationships; RP, reputation; CMIN/DF, the ratio of chi-square to degrees of freedom; CFI, comparative fit index; AGFI, adjusted GFI; NFI, normalized fit index; GFI, goodness-of-fit index; RMSEA, root mean square error of approximation.
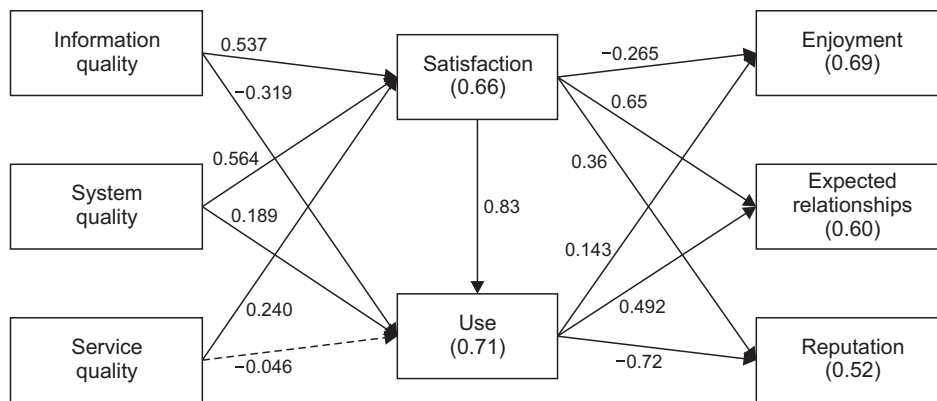[a]The values in the diagonal line are average variance extracted.

Fig. 3. Structural model. Straight line, significant paths; dash line, non-significant path.

The path analysis showed that the information quality has a significant positive effect on satisfaction (β=0.537, p<0.001) and negative effect on use intention (β=-0.319, p<0.001), thus accepting H1a and rejecting H1b. System quality has a significant impact on satisfaction (β=0.564, p<0.001) and use (β=0.189, p<0.001), supporting H2a and H2b. Despite having a significant impact on satisfaction (β=0.240, p<0.001), service quality had a negligible effect on use intention (β=-0.046, p>0.001), hence showing accepting H3a and rejecting H3b.

Satisfaction was found to have a substantial negative influence on enjoyment (β=-0.265, p<0.001), but a positive influence on expected relationships (β=0.65, p<0.001), reputation (β=0.36, p<0.001), and use intention (β=0.83, p<0.001), thereby rejecting H4a and supporting H4b, H4c, and H4d. Furthermore, use intention was found to have a noteworthy positive influence on enjoyment (β=0.143, p<0.001) and expected relationship (β=0.492, p<0.001), but negative on reputation (β=-0.72, p<0.001), providing support for H5a, H5b, and rejecting H5c.

6. DISCUSSION

Examining SNS success determinants and understanding the user benefits which can be gained through continuous use intension and satisfaction were this study's primary goals. The study findings are consistent with the notion that user satisfaction and use intention are mostly determined by the three system success dimensions of SNSs, namely, information quality, system quality, and service quality. Again, satisfaction and use intention were found to have a significant impact on user benefits. Overall, our study demonstrated flawless prediction capabilities with a higher variance explained in use, satisfaction, enjoyment, expected relationship, and reputation (71%,

66%, 69%, 60%, and 52%, respectively).

The study discovered the considerable impact of information quality on satisfaction and a negligible detrimental effect on use intention, which reveal the fact that user psychological acceptance and a favorable attitude, such as satisfaction, is largely generated by the information shared in SNSs. These findings are in line with the findings of Dong et al. (2014) and Zheng et al. (2013), who found that the virtual world values information quality when it comes to sharing knowledge. Thus, it is widely accepted that valid, reliable, need-based, and problem-solving information are the building blocks for achieving SNS users' satisfaction. However, the present study finds a negative relationship between information quality and use intention. Our data indicate negligible influences, contrary to Wang et al. (2014) who report a beneficial impact of information quality on use intention. The possible reasons could be explained as aggressive information sharing in different SNSs nowadays, such as self-promotional news by various parties, repetitive promotions and commercials for numerous unpopular products and services, and huge numbers of unimportant viral messages hampering user comfortability, thus creating users' disinterest.

This study interestingly finds a significant positive effect of system quality on satisfaction and use intention, consistent with the findings of Wang et al. (2014) and Dong et al. (2014). They regarded system quality as a requirement for the SNS platform, suggesting the fact that users seeking online platform engagement have strongly focused on usability, functionality, ease of use, and many others technical features of the system. Reliable, trusted, and secured systems in the virtual world are the top priority of users. Again, service quality appeared to be a substantial predictor of satisfaction, which is consistent with Mouakket (2015). Nonetheless, it was discovered

that the impact of service quality on usage intention was negligible, which does not corroborate Dong et al. (2014). The findings imply that service quality, associated with the actual outcome received by users from SNSs and the conditions under which the service is rendered, are the significant predictors of satisfaction. Another possible explanation could be that the way users interact with service providers is the prime dimension and constitutes a crucial factor in the development of user attitude. However, excessively misleading information, uninteresting viral news, fear of loss of privacy, and lack of direct interaction with service providers may be the causes of the negligible impact of service quality on usage intention.

The satisfaction of SNS users is a powerful factor in establishing expected relationships, reputation, and use intention. These results are similar to the findings of Lin et al. (2017), DeLone and McLean (2003), and Zheng et al. (2013). According to their arguments, when it comes to information sharing on SNSs, individuals are primarily concerned with their own happiness and thereby achieve individual benefits. Individuals perceive that joining an SNS will enable them to connect with new users, make friendships with them, strengthen the relationship, build their social status, and cultivate a positive self-image, which ultimately results in continued use of the SNS (Jahan & Kim, 2021). These findings reveal that as much as users are satisfied with a particular SNS, they perceive that they have benefited personally, socially, and that they will continue to use the SNS as they can.

However, satisfaction does not show a positive impact on enjoyment benefit, because users may find enjoyment from different sources rather than an SNS, or as the SNS industry matures, users may not think it is as enjoyable as perceived. On the other hand, use intention works as a powerhouse of enjoyment and expected relationship benefits, but not reputation. In line with our result, Lin and Lu (2011) noted that a major motivator for using SNSs is enjoyment. However, Lin et al. (2017) contended that reputation is a key component of SNS use, which runs counter to our findings. A user may exhibit greater enjoyment, feel engaged, expect strong relationships with other users, and be open to forming mutually beneficial relationships on SNSs, and as a result spend much more time on that SNS. Although users may spend much more time on an SNS, they do not feel credible merely because of their enrolment in an SNS, but rather for doing something contributory to other users or to the community.

6.1. Theoretical Implications

The empirical evidence provides supports for our proposed RQs and the model that relates SNS quality to two important attitudinal facts that can potentially allow users to derive individual benefits from SNS use, thus offering several theoretical contributions and managerial implications. The first addition this study makes to the literature on D&M IS in the context of individual benefits is theoretical. Particularly, system quality has a greater impact on SNS users' use intentions and satisfaction. User satisfaction appears to be mostly dependent on the quality of the information and services provided. In order to anticipate user satisfaction and use intention in the context of SNS, the D&M IS model with system, information, and service attributes has remarkable potential and deepens useful knowledge of the existing literature. Second, empirical evidence supports that user satisfaction of SNSs provides users with individual benefits such as enjoyment, expected relationships, and reputation, firmly contributing to continued SNS use intention. Besides this, the study finds evidence that continued use intention of SNSs notably contributed to enriching the individual benefits expected by their users. Taking note of all of these findings, the current study sees a contribution of fresh knowledge to the body of literature.

6.2. Managerial Implications

The followings are the specific applications of the current study for practitioners. First, SNS managers or practitioners may wish to increase user satisfaction to achieve a large and loyal user base. They could do so by extending special focus to the system quality of their SNS in regards to privacy, security, ease of use, and offering many more interesting features. By being aware of these elements, companies may better cater their SNS presence to the interests and tastes of users, strengthening both brand loyalty and consumer engagement. Second, managers can strengthen user satisfaction by paying special care to information shared on their board and services they offer to their users. Businesses may concentrate on encouraging trustworthiness, credibility, and transparency in their online interactions by understanding the factors that affect perceived trust on SNSs. By doing this, they can forge deeper relationships with their customers. However, caution should be applied to information and service quality in building a loyal user base, as these factors generate a negative impact on it. Third, businesses can create advertisements and content that resonate with their target market by recognizing the main features that draw customers.

This strategy will raise brand awareness and consumer happiness while also increasing marketing return on investment.

Fourth, the success of information systems depends heavily on user engagement, as demonstrated by the DeLone and McLean model. This translates for businesses into promoting active involvement, comments, and discussions on SNS platforms. Businesses can gain insightful information, handle client issues, and improve their online community by fostering user involvement. Fifth, in order to tailor their SNS interactions and content to each target market's unique cultural context, firms can use the DeLone and McLean approach to assess and personalize their online presence. As a result, their offerings may be more relevant to customers and they may develop stronger connections with them. Sixth, in dreaming toward a higher level of individual benefits and a loyal user base, managers should carefully deal with the effects of user satisfaction. Individuals in SNS platforms desire personal benefits in the form of pleasure, building reputation, and making trustworthy and mutually beneficial relationships, thus managers should critically observe how and to what extent users have received personal benefits. Finally, use intention requires special care as it means a loyal user base that potentially affects individual benefits. Managers should deliberately try to save their SNS from the adverse effects of satisfaction to enjoyment, and of use intention to reputations. Managers may screen information shared in the SNS board to make it reliable and appropriate, keeping away from any controversy or personal attacks, misleading information, or any negative issues to society. Businesses can spot possible problems or bad user experiences on SNSs with the aid of the model's insights. Businesses may stop bad comments from spreading and protect the reputation of their brand by proactively addressing these issues and promptly delivering solutions.

7. CONCLUSION

Using the updated DeLone and McLean updated model (2003) in the context of SNSs, the goal of this study was to investigate the net benefits that users can receive from using SNSs. The current study sheds light on the individual benefits highlighting the enjoyment, expected relationships, and reputation derived from the satisfaction and use intention of SNS users. This study explores the causes and effects of user satisfaction and usage intention using the D&M IS model as a theoretical foundation. In this study, the information, system, and service quality of

SNSs are primarily considered as the antecedents of user satisfaction and use intention, with system quality having the greatest impact on both. Thus, successfully addressing (RQ1), what elements will have an impact on individual net benefits in the IS success model? Our research has successfully demonstrated that the main pillars of information quality, system quality, and service quality are what enable users to use SNSs in the IS success model and thus realize personal net benefits and increase user happiness. In addition, it has been demonstrated that satisfaction and usage intention are the antecedents of enjoyment, expected relationships, and reputation. The expected relationship is the advantage that respondents reported having the most concern about, according to the survey. It answered the questions being considered regarding RQ2, what notable personal advantages do SNS users experience? Overall, our research indicates that people use SNSs mostly for fun, to fulfill expectations with other users, and to establish a reputation for themselves ahead of others.

Thus, it is important to draw the conclusion that people typically use SNSs for personal enjoyment, forming connections with others, and attempting to enhance their online identities. Accordingly, understanding the advantages of SNSs is essential for organizations looking to use these platforms for marketing, customer interaction, and general organizational performance, given that consumers continue to place a high value on SNSs.

Despite the significant contributions and implications, there are certain limitations to the current study that may provide guidance for future studies. First, it was a survey-based study, which inherently produces a few drawbacks related to actual responses and intended responses. As this study collected data using a self-administered and structured questionnaire, respondents may have faced hesitation to provide their responses, and they may have provided responses that may not be what they intended. Second, although this study produces unique evidence of SNS quality and individual benefits using the D&M IS model, other important theories may not have been considered, such as social capital, social exchange, or other factors. Third, demographic characteristics were not considered in the discussion that may indicate a lack of knowledge in this study.

Therefore, future researchers can consider the limitations of this study and validate this model in a more integrated manner. Future researchers may collect data from SNS users with an interconnected process to avoid the limitations mentioned above. Second, future trials can assess individual benefits from a social capital or social

exchange perspective, which may generate interesting insights into SNS literature. Third, the daily use of SNSs, how long users have been connected, how often users log into SNSs, etc. can be considered as an actual use intention in future studies.

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CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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