Continuity of Using Social Networking Sites and the Expectation Disconfirmation Theory

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Abstract: *Expectation Disconfirmation Theory was initially widely used on the discipline of assessing customer satisfaction. After a decade of being introduced on marketing discipline, now EDT is being also used as an IS (information systems) research tool. The primary purpose of this study is to apply the EDT model to assess social media users' satisfaction with their respective social networking sites (e.g., Facebook, Twitter, Myspace, Google+, etc.). The basic EDT model consists of four constructs; (a) Expectations, (2) Perceived Usefulness, (c) Disconfirmation of belief, and (b) Satisfaction. The hypothesis, which is empirically tested on this research, is expectations and perceptions of social media users have negative and positive impact on disconfirmation, respectively, and this relation will ultimately lead to the positive or negative status of the users' intention to continuous usage of social media. A structured questionnaire-based survey was conducted, and 318 respondents' data are analyzed by using the statistical model of Partial Least Square – Structural Equation Modeling. PLS-SEM analysis results signifies acceptance of the hypothesized relations statistically. Findings of that research will bring a better understanding about the psychological issues of the social media users.*

Keywords: *Expectation Disconfirmation Theory, Social Networking Sites, Intention of Continuity in Using Social Media.*

1. Introduction

Social media is known as the Web 2.0 technology which have flourished during the last decade in terms of the number of users. Nowadays, people are more likely to share information on social networking sites. Statistical data regarding the number of users and its growth rate during the last couple of years on the most commonly used social media like Facebook, Myspace, Google+, LinkedIn, etc. have justified the previous statement. Only the Facebook had 1.94 billion active users by the end of March 2017 (Facebook, 2017), whereas 293,000 status, 136,000 photos, and 510,000 comments are uploaded per minute (Zephoria, 2017). YouTube, the largest video sharing site in the internet, has over one billion subscribers and more than 300 hours of videos are being uploaded on YouTube per 60 seconds (YouTube, 2017; Fortunelords, 2017). In fact, 3.25 billion hours

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of videos are being watched on YouTube each month (Statistics Brain, 2016). On another popular social networking site, Twitter, the number of active users per month on the first quarter of 2017 were 328 million (Statista, 2017) and 500 million of tweets were tweeted each day (Aslam, 2017). So, these numbers are not negligible by any means. But this situation demands the answer of a very specific question that "Why people are being so crazy about theses social media?" Literary works conducted on this domain have tried to address this issue and identified some possible answers like meeting new people, keeping themselves in touch with their friends and obviously for enjoyment (Brandtzæg & Heim, 2009; Lin & Lu, 2011). But, the previously conducted researches rarely discussed the rational behavioral aspects of the users of social networks. Here rational behavioral aspects of the users mean how their expectations, perceptions, and trustworthiness regarding any social medium shape their usage pattern and continuity or re-use. More specifically, how are the expectations and perceptions about the costs and benefits of self-disclosing personal information on SNSs that lead to the state of continuous intention to share personal facts? Through an explorative study on the SNS users in Bangladesh, this research intends to find out how expectations and perceptions of the social media users influence their continuous intention to share personal facts on SNSs. The Expectation Confirmation Theory (ECT model) or alternatively known as Expectation Disconfirmation Theory is used in this study. Based on this model, the research questions going to be addressed on this study are as the followings:

(1)   How are expectations of the users before going to disclose or share any personal facts or opinions in SNSs affecting their intention of continuous usage of social media?

(2)   How are perceptions of the users after disclosing or sharing any personal facts or opinions in SNSs affecting their intention of continuous usage of social media?

The last thing which is needed to be addressed on this introductory part is about the rationality or scope of this research work, because anyone can raise a question about the author's expected outcomes and implications of the findings. The primary intention of the author on this paper is to apply the Expectation Disconfirmation Theory to assess social media users' satisfaction, whereas this EDT model is basically known as a customer satisfaction measurement model. Besides, the expected outcome of this research work will unveil a new dimension thinking about the social structure and people's way behaving with or without rationality. Because, anyone will be able to realize how the expectation and experience work together to determine users' psychological decision to avoid or be with their social media. More importantly, if the fact of trustworthiness or privacy have any impact on that psychological process, then it will be exposed to everyone.

2. Literature Review

2.1 Expectancy Disconfirmation Theory. Modifications, and Applications

Expectation Disconfirmation Theory was first introduced by Richard L. Oliver through two papers in 1977 and 1980. Initially, this theory was applied in psychology and marketing fields, but nowadays it is being adopted in various fields specially in consumer behavior research and information system research. EDT consists of four fundamental constructs and these are expectations, perceived performance, disconfirmation of beliefs, and satisfaction (Oliver, 1977). In EDT "expectations" construct means the attributes or characteristics that the individual people predict from technology or information systems, product or service and this expectation has direct influence on both disconfirmation of beliefs and perceptions of performance (Oliver, 1977; Oliver, 1980). Besides, this expectation has also indirect influence on satisfaction construct of EDT. The second construct of EDT is "perceived performance" that means people's experience about actual performance derived from using a technology or information systems, product or service. Next construct is "disconfirmation of beliefs" which indicates the decisions or assessments that individuals takes with respect to a technology, product or service, whereas this evaluation takes place based on the expectations and perceptions of the individuals. Finally, the "satisfaction" construct that means an individual people is satisfied or gratified with technology or information systems, product or service after having experience of usage or interaction (Oliver, 1980). In earlier times, the EDT model was applied in marketing and consumer behavior discipline but now it is being used to explain the behavioral aspects regarding technology adoption, human-computer interaction, or satisfaction of the users with any information systems which will ultimately lead them to decide whether keep the continuity of using of that particular system or not (Bhattacherjee A., 2001; Preamkumar, 2004; Lankton & McKnight, 2006). In their research works "trust on technology" was considered as a set of expectations and how this trust influence on satisfaction was measured and they found significant positive relationship. Hui-Min-Lai, et al., (2016) have done a meta-analysis on several research papers, whereas these papers have concentrated on the usage of EDT model to explain the continuity of using information systems by the users. On that meta-analysis, the authors have reviewed 46 journal articles and 19 conference papers published during 2005 to 2014. They have tested and found another construct named as "Habit of the Users" to have significant contribution on the original EDT model. Many other researchers have also used EDT model and termed this model in another name of Expectation Confirmation Theory (ECT model) (Bhattacherjee A., 2001). For example, Lin, et al., (2012) have been used ECT with value-based adoption model to understand the continuous uses IP (Internet Protocol) television service. In addition, Lin, et al., (2005) have also used this theory to investigate users' intention of continuous usage of web portal. Larsen, et al., (2009) have done their research by combining Task-technology

Fit Theory (TFT) with ECT model to assess the users' IS re-use intention. Another study, conducted on 1826 mobile data service users, have found the significance of ECT model with the R-square value 0f 67% (Se-Joon-Hong, James Y. L. Thong, & Tam, 2005). Furthermore, other research works of Cronin, et al., (2000) and Shih-Wei-Chou, et al., (2010) have applied the EDT model to explain users' intention to participate on the knowledge creation system (also known as "Knowledge Management Systems"). They have also validated a new construct on the main model termed as "Perceived Identity Verification" and combined the EDT model with the Social Cognitive Theory. Likewise, Bhattacherjee, et al., (2008) have emphasized and accomodated the constructs of "Self-efficacy" and "Facilitating Conditions" on the original EDT model. In another extent, Brown, et al., (2012) have brought the dimensions of Gap Model to analyze the assimilation or contrast between perceived and expected usefulness of a system. A list of other researcher's work on EDT model is provided on the following portion.

Table 1: Contextual Modifications and Applications of EDT Model in IS Research

Authors	Description
Spreng, et. al., (1996)	The authors have made the contextual modifications of the "Disconfirmation of Expectations" model by incorporating two more constructs of desire and impact of marketing communication to make the expectancy disconfirmation model more comprehensive in predicting consumer satisfaction. The authors have hypothesized that congruency in desires and expectations are having a positive impact on consumer satisfaction through the construct of information satisfaction by the consumers but failed to draw proper distinctions between desires and expectations because both constructs are having overlapping parameters.
Szajna, et. al., (1993)	Unrealistically high, moderate, and low expectations of users are considered here to assess their impact on system performance and users' experience.
Thong, et. al., (2006)	Perceived ease of use and enjoyment are considered on this study with the Expectation-confirmation theory to predict the continued IT usage intention of the users.
Lin, et. al., (2005)	The original model of Expectation-confirmation Theory is modified here through accommodating another construct of "Perceived Playfulness" (i.e., perceived easiness of use) to explain the factors determining the usage of web portal.
Lowry, et. al., (2015)	Multi-motive Information Systems Continuance Model (MISC) is proposed here to ensure better explanation of the users' satisfaction which is developed based the concept of EDT model.

Kim B., (2010)	Expectation-confirmation model is used to predict the continuous usage of mobile data service by the subscribers. But the author has also adopted the model of "Theory of Planned Behavior" along with Expectation-confirmation model. Constructs regarding social norm and perceived behavioral control are adopted from TPB model and accommodated on the conventional Expectation-conformation model to predict the continuance of mobile data service through predicting users' satisfaction.
Spreng, et al., (2003)	This paper focuses on different dimension of the EDT model, whereas the operational definition and the parameters of the construct of "Disconfirmation" is rigorously studied to have a better understanding which is useful for further research on this area.
Lankton, et al., (2012)	Assimilation and asymmetry between perception and expectation of IT system users are thoroughly analyzed on this research work for improving the literary field of IS research methodology.
Staples, et al., (2002)	In this study Disconfirmation Theory is applied from a different perspective. Focal point of that study was to analyze how unrealistic expectations of the system users can undermine their realizations regarding the perceived benefits of the systems. Moreover, the author has categorized expectation into six ways among which three (i.e., ease of use, usefulness, and information quality) found to be statistically significant.
Lee, (2010)	Intention to continuous usage of e-learning technology is predicted here by using a synthesized model based on the constructs imported from Expectation-confirmation model, Theory of Planned Behavior model, and Technology Acceptance model.
Au, et al., (2002)	This paper critically analyzed more than 50 other research papers related to the analysis of end-user's satisfaction with a information system. The outcome of that analysis has indicated that expectation disconfirmation theory is widely used by the researchers to analyze users' satisfaction with the systems. Furthermore, the authors have also proposed a more extensive model by accommodating the equity theory on the EDT model whereas equity implies a fair status between users' effort towards an information system and their achievements from that system.
Khalifa, et al., (2004)	This research initiative has addressed the issue of how marketing theories developed for measuring customer satisfaction are being gradually used for measuring information system usage satisfaction by the IS researchers.

Suh, et al., (1994)	Minimum discrepancy between end-user's expectations and their perceived actual performance of the information system is found to have significant impact on the overall satisfaction of the users regarding their interaction with the system.
Deng, et al., (2010)	Users' experience with the information systems is considered to have impact on expectation disconfirmation and satisfaction with the system. For reflecting this issue, the authors have introduced a new construct of "Cognitive Absorption" on the EDT model.
McKinney, et al., (2002)	The EDT model with the constructs like system, information, and web quality from IS Success Model or Delone and McLean Model (Delone & McLean, 2003) is applied to assess web-customers' satisfaction.
Lankton, et al., (2007)	On this research work EDT model is used to measure e-Health service users' satisfaction.
Doong, et al., (2008)	E-negotiation system users were the sampling units of that research work, whereas their satisfaction with the system was assessed through using EDT model.
Erevelles, et al., (2003)	Satisfaction of the customers of ISP or Internet Service Providers is measured here by using Expectation Disconfirmation Theory.
Tang, et al., (2010)	The experiential value is accommodated on the EDT model to study continuous usage of weblog sites.
Brown, et al., (2008)	Expectation Disconfirmation Theory, Technology Acceptance Model, and Ideal Point Model are combined and compared here with respect to the construct of satisfaction of the technology users.
Hsu, et al., (2004)	Social Cognitive Theory and Expectation Disconfirmation Theory is combined to create a model for explaining continued usage of WWW services.

2.2 Other Relevant Models and Variables

Many other researchers have tried to explain human behavior of using social media from the perspectives of different models and theories. A brief description of these research works is as the followings.

Table 2: Research Papers Focusing on the Usage Pattern of Social Media

Authors	Description
Cheung, et al., (2011)	This research work was mainly conducted on the students and tried to find what factor leading them to use Facebook. Purposive value, self-discovery, interpersonal connection, social enhancement and entertainment were found as the most contributing factors.
Kim, et al., (2011)	The authors have identified how subjective wellbeing is grown through number of Facebook friends and self-presentation, whereas this subjective wellbeing is largely influenced by perceived social support, positive self-presentation, number of friends, quadratic term of number of friends and honest self-presentation.
Zimmer, et al., (2010)	Constructs like trust, risk, and relevance are found to have significant impact on the self-disclosure behavior of the social media users.
Li D., (2011)	This researcher has largely acknowledged perceived enjoyment and social influence as the primary determinants behind the intention of continuous usage of any social media.
Zhou, (2011)	Compliance with the requirements, social identity, and group norm are claimed to influence the participatory intention of the social media users.
Krasnova, et al., (2010)	Enjoyment, self-presentation, relationship building, convenience, and privacy risk are considered here as the determinants of self-disclosure on social media.
Lin, et al., (2011)	Perceived benefits and enjoyment derived from using social media are influenced by number of members, number of peers and perceived complementarity.
Park, et al., (2011)	In their research study, they showed people get motivated to disclose personal information because of they want to maintain relationship, eager to initiate relationship and they seek affiliation also.
Sheldon, (2009)	The author has identified that self-disclosure, social attraction, predictability, and trust have significant positive impact on the intention to build up Facebook relationships.
Hsu, et al., (2008)	Technology acceptance factors like perceived ease of use and perceived enjoyment have significant impact and perceived usefulness has insignificant impact on attitude toward using blog.

Kang, et al., (2013)	In their research they showed that the predictors of continued usage are continuance intention and self-image congruity, where habit of using information systems has moderating effect on that relation.
Lu, et al., (2007)	This research has showed the impact of knowledge self-efficacy, personal outcome expectation, subjective norms and feedback on the continuous intention to update blogs.
Bateman, et. al., (2011)	According to that research, SNS self-disclosure amount and SNS self-disclosure depth depends on the perceived publicness of the given social network.
Dinev, (2006)	Privacy Calculus Model is used here to show how the increase of perceived risk discourages the users' tendency to reveal personal facts on any e-commerce sites, which consequently affects the sales volume.
Liao, et al., (2011); Dwyer, et al., (2007)	Moreover, result of this research shows that perceived risk leads to the privacy concerns and trust issues regarding the security of information.
Venkatesh, (2000)	Perceived usefulness and the perceived ease of use is interlinked in determining the intention to use any given system or technology.
Tan, et al., (2012)	In this research, the above theory is applied in the context of using of social media.
Li, et al., (2010)	Perceived cost of sharing information on social media influences behavioral pattern of the users.
Sun, et al., (2012); Park, et al., (2011)	Dimensions of human behavioral traits like introversion, agreeableness, and conscientiousness are considered and analyzed here to show how these variables are responsible for shaping users' intention to re-use their SNS profiles.
Greenwood, et al., (2016)	Asymmetry between people's perceived cost and benefits of sharing personal facts on social media may also have the impact on their willingness to share more information on social media.

3. Theoretical Framework and Hypotheses

Based on the rigorous analysis of relevant literature and personal intuition, a theoretical framework is adopted directly from the original EDT model which is supposed to be empirically validated on this research work in different context of Bangladesh and social media users on this country.

Figure 1: Theoretical Framework of the Study
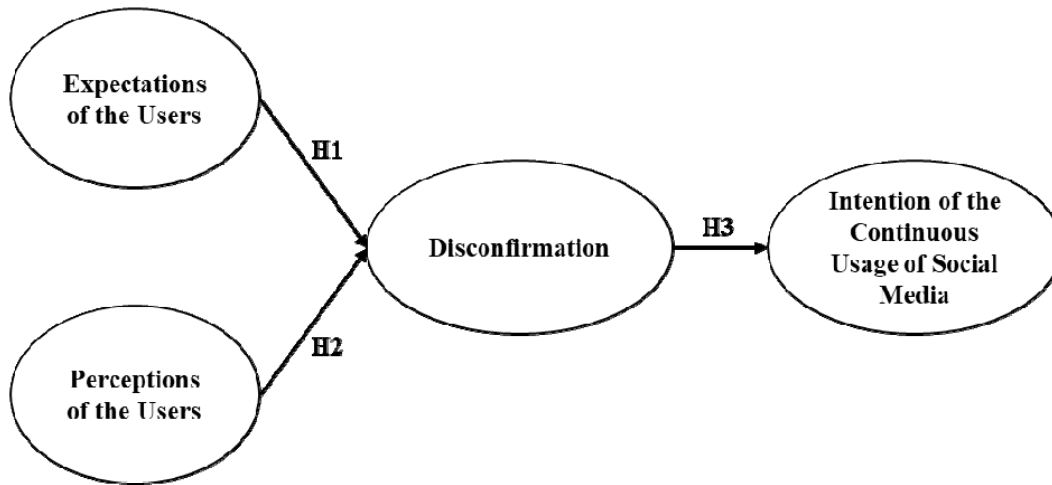
Hypothesis 1: Expectations of the Users →Disconfirmation

The first hypothesis of this study is that there is a negative impact of expectations of the users on disconfirmation.

Hypothesis 2: Perceptions of the Users →Disconfirmation

The second hypothesis of this study is that there is a positive impact of perceptions of the users on disconfirmation.

Hypothesis 3: Disconfirmation →Intention of the Continuous Usage of Social Media

The third hypothesis of this study is that the disconfirmation score has positive influence on the users' intention to continue their journey with their social media.

The operational definitions of the constructs and proper justifications of these hypothesized relations are provided on the following table.

Table 3: Operations Definitions of the Constructs and Hypotheses

Constructs	Definitions
Expectations	Before going to share any personal facts, comments, media contents, or any other things on a profile in any social media (e.g., Facebook, Twitter, Myspace, Google+, etc.) what is being expected by that user must be reflected on this construct of "Expectations of the Users" (Oliver, A., 1980; Yi, 1990). Higher expectations cause negative disconfirmation which will lead to negative satisfaction of the users (Bhattacherjee A., 2001).

Perceptions	After sharing any personal facts, comments, media contents, or any other things on a profile in any social media (e.g., Facebook, Twitter, Myspace, Google+, etc.) what is being perceived by that user must be reflected on this construct of "Perceptions of the Users" (Oliver, A., 1980; Yi, 1990). Higher values of perceptions cause positive disconfirmation which will lead to positive satisfaction of the users (Bhattacherjee A., 2001).
Disconfirmation	Discrepancy between expectations and perceptions generates the score for the construct of "Disconfirmation" (Spreng, MacKenzie, & Olshavsky, 1996). Higher expectations compared to the perceived benefits lead to the negative disconfirmation, whereas higher perceived benefits than expectations cause to have positive disconfirmation score (Jiang, Klein, & Crampton, 2007). Positive or negative disconfirmation score has positive impact on the satisfaction of the users (Parasuraman, Zeithaml, & Berry, 1994).
Satisfaction	Satisfaction is literally termed here as "Intention of the Continuous Usage of Social Media", which ultimately means users' satisfaction with what are they doing and what service they are getting from social media.

4. Methodological Approach

The sampling units of this study are the students of University of Dhaka. The honest reasons behind the action of focusing on the students of University of Dhaka as the participants of this study are as the followings.

(1) This study was financed by the author himself, no other sources of fund were applied to conduct this research initiative. So, the scope of the data collection and experimentation phases were very limited.

(2) It was assumed by the author that the graduate level students of the University of Dhaka are the conscious users of social media, which is very important to get the expected outcomes of this study. Without being a conscious and responsible user of social media, it is difficult assess the impact of expectations and perceptions on the intention of continuous usage of social media.

There are more than twenty thousand regular students on this University studying at the undergraduate and post-graduate level concentrating on different disciplines. The proportion of this population using Facebook is unknown here. So according to the rule of thumb technique, the value for the proportion using social media (i.e., Facebook, LinkedIn, Google+, etc.) representing the success factor (p) is assumed to be 50% (Daniel, 1999; Dattalo, 2008). Furthermore, variability and optimal sample size will be

maximum whenever the values of *p* and *q* are equal. Therefore, for being safe in terms of ensuring propoer representation of the population, the sample size calculation technique used on this research is as the following.

$$n = \frac{NX}{X+N-1}; \text{ Whereas, } X = p\,(1-p)\left(\frac{Z_{a/2}}{e}\right)^2 \quad \text{(Daniel, 1999; Dattalo, 2008)}$$

Here,

- ✓ *p* (Success or sample proportion) = 0.50

- ✓ $Z_{a/2}$ is the critical value for the normal distribution with $a/2$, where for 95% confidence level a is 0.05 and the critical value is 1.96.

- ✓ e is the margin of error which is set to 0.05 (5%)

- ✓ Finally, *N* is the population size, which is approximated to 20,000 students.

Based on this formula, the calculated sample size of that is 377. List of the regular students is collected from the University admission office and used as a sample frame. From that sample frame, 377 sample units or students are selected by using absolutely systematic random sampling technique. As the determined sample size is 377 and the population size is 20000, therefore we have selected each 52nd position student from the sample frame to have our 384 sample units. A structured questionnaire of 33 questions reflecting the thirty-three measurement variables of three constructs (See: Figure 1) is prepared, pre-tested, and disseminated to the 384 respondents through online (i.e., Google Form or Email) for the collecting of primary data. 326 responses are collected from the respondents which causes the non-response error of 15% within the tolerable level (Daniel, 1999; Dattalo, 2008). For erroneous response, 8 observations are discarded from the final analysis, as a result 318 observations are entered into the model for final analysis. The demographic description and social media usage pattern of the respondents are given on the following table.

Table 3: Demographic Description and Social Media Usage Pattern of the Respondents

Measure	Item	Frequency	Percentage (%)
Gender	Male	239	75.2%
	Female	79	24.8%
Year of Study	First Year	102	32.1%
	Second Year	73	23.0%

	Third Year	58	18.2%
	Fourth Year	37	11.6%
	Masters	48	15.1%
Age	17-19	105	33.0%
	20-22	130	40.9%
	23-25	57	17.9%
	Greater than 25	26	8.2%
Years of Experience in Using Social Media	Less than 1 year	26	8.2%
	Greater than 1 and Less than or Equal 2 Years	67	21.1%
	Greater than 2 and Less than or Equal 3 Years	152	47.8%
	Greater than 3 and Less than or Equal 4 Years	41	12.9%
	More than 4 years	32	10.1%
Average amount of hours spending on social media per day	Less than 60 hour	19	6.0%
	61-120 hours	137	43.1%
	121-180 hours	96	30.2%
	More than 180 hours	66	20.8%

5. Analysis

5.1 Data Analysis Tool

The primary purpose of this study is to analyze the cause-effect relationships among some constructs, so the appropriate statistical tools for that context is Structural Equation Modeling (SEM) (Hair, Jr., et. al., 2014; Vinzi, et. al., 2017; Byrne, 2013). There are two approaches of SEM, these are (1) PLS-SEM (Partial Least Square based Structural Equation Modeling), and (2) CB-SEM (Convariance based Structural Equation Modeling). Particularly for that study Partial Least Square based SEM is applied because this approach is appropriate for using an established and tested model in a different context (Hair, Jr., et. al., 2014; Vinzi, et. al., 2017; Byrne, 2013). On this research, EDT model is used on the social media users, whereas EDT model is widely used and validated in different contexts and areas. A PLS-SEM consists of two inner models, these

are (1) Structural Model, and (2) Measurement Model. Structural model explains the inter-dependency among the endogenous and exogenous constructs and validates this inter-dependency. On the other hand, measurment model shows the relaionships of the observed variables (also known as parameters of the constructs) with their corresponding constructs and validates these relations statistically. Following part will show the statistical results pertaining to these models of measurement and structural, respectively. This is to notify that the following statistical analysis results are genereated by using "sem" – package in R-programming.

5.2 Measurement Model and Validation

Table 4: Summary of the Reflective Measurement Model with Exploratory Factor Analysis

	Variables	Factor Loading	Validity and Reliability Tests	
			Indicator Reliability	
	Observed Variables for the Construct of "Perceptions of the Users"			
1	After placing any status/information I have observed that using SNSs has strengthened/strengthen my personal branding.	0.75	0.69	Composite Reliability = 0.891

Average Variance Extracted (AVE) = 0.718

Discriminant Validity = YES |
2	After placing any status/information I have observed that using SNSs has enlarged/enlarge my network of similar interest.		0.72	
3	After placing any status/information I have observed that using SNSs has connected/connects me to the people of similar profile in a distant location.	0.78	0.71	
4	After placing any status/information I have observed that using SNSs has allowed/allows people to know about my personal thoughts easily.	0.81	0.68	
5	After placing any status/information I have observed that using SNSs has enabled/enables me to keep connected to my old friends.	0.76	0.75	
6	After sharing information/status on my profile I have observed that my personal facts/information are abused.	0.74	0.68	
7	After sharing information/status on my profile I have observed that people have	0.89	0.79	

	seen my private information, which I never wanted to happen.		
8	After sharing information/status on my profile I have found that the privacy policy of SNSs that I used for sharing my personal facts are faulty.	0.88	0.76
9	After sharing information/status on my profile I have found that third parties have accessed to my personal facts data on my profile.	0.91	0.81
10	After sharing information/status on my profile I have found that people has tried to harm my personal life by using the personal facts/information.	0.87	0.73
11	After sharing information/status on my profile I have observed that SNS has improved my self-representation to the people I am connected.	0.83	0.80
12	After sharing information/status on my profile I have observed that SNS has entertained me.	0.85	0.82
13	After sharing information/status on my profile I have observed that SNS has removed my boredom.	0.79	0.77
14	After sharing information/status on my profile I have observed that SNS has enabled me to meet with new people.	0.80	0.81
15	After sharing information/status on my profile I have observed that SNS has improved my communication skills.	0.90	0.78
	Observed Variables for the Construct of "Expectation of the Users"		Composite Reliability = 0.881
16	Before placing any status or information I expect that SNSs will strengthen my personal branding.	0.93	0.77
17	Before placing any status or information I expect that SNSs will enlarge my network of similar interest of topics.	0.87	0.71
18	Before placing any status or information I expect that SNSs will connect me to the people of similar profile in a distant location.	0.86	0.76
19	Before placing any status or information I expect that SNSs will allow people to know about my personal thoughts easily.	0.90	0.72

Note: Rows 16 column contains additional side text: "Average Variance Extracted (AVE) = 0.768" and "Discriminant Validity = YES"

|				
20	Before placing any status or information I expect that SNSs will enable me to keep connected to my old friends.	0.78	0.80	
21	Before placing any status or information I knew that my personal facts shared on my profile can be abused.	0.79	0.81	
22	Before placing any status or information I was aware of the fact that anyone not restricted can see my private information on my profile	0.81	0.69	
23	Before placing any status or information I suspected the privacy policy of the SNSs in which I will/have shared personal facts.	0.83	0.76	
24	Before placing any status or information I suspected that unknown third parties may have access to my personal facts/data on my profile, which I am going to/want to update regularly.	0.76	0.78	
25	Before placing any status or information I expected that SNSs will help to improve my self-representation to the people with whom I am connected.	0.77	0.72	
26	Before placing any status or information I have always expected that SNSs will entertain me.	0.79	0.79	
27	Before placing any status or information I have always expected that SNSs will remove my boredom.	0.80	0.80	
28	Before using SNSs I have always expected that it will enable me to meet with the new people.	0.88	0.71	
	Observed Variables of the Construct of "Intention of the Continuous Usage of Social Media"			Composite Reliability = 0.847
29	I have intention to share personal facts on SNS continuously.	0.91	0.78	Average Variance Extracted (AVE) = 0.791
30	I have plan to share updated personal facts on SNS.	0.89	0.71	
31	I will share my daily thoughts on my SNS account regularly.	0.92	0.77	Discriminant Validity = YES
32	SNS will always be my media for sharing my personal facts.	0.90	0.73	
33	I will keep my SNS profile updated in accordance with my daily life activities.	0.91	0.76	

According to the rules of thumb, the scores of factor loadings, composite reliability, and average variance extracted should be higher than 0.70, 0.70, and 0.50, consecutively (Hair, Jr., et. al., 2014; Vinzi, et. al., 2017; Byrne, 2013). Moreover, discriminant validity is ensured whenever an indicator variable's factor loading value is higher than the cross-loading value of that indicator with other constructs (Hair, Jr., et. al., 2014; Vinzi, et. al., 2017; Byrne, 2013). In addition with this, for discrminant validity the square root of AVE of each construct should be higher than the correlation values among the constructs, which is known as Fornell-Larcker Criterion (Hair, Jr., et. al., 2014; Vinzi, et. al., 2017; Byrne, 2013).

Values of the Construct of "Disconfirmation": Values for the "Disconfirmation" construct are generated for each respondent based on their responses against the indicator variables of the constructs of "Expectations" and "Perceptions". Values of expectations are considered as negative those are added to the values of perceptions considered as positive (Parasuraman, Zeithaml, & Berry, 1994). The formula used for calculating the disconfirmation score for everyone is as: $\sum_{i=1}^{318} \sum_{j=1}^{18} P_{ij} - \sum_{i=1}^{318} \sum_{j=1}^{13} E_{ij}$.

5.3 Structural Model and Validation

Results of the structural model is depicted on the following figure.

Figure 2: Structural Model and Validation Parameters
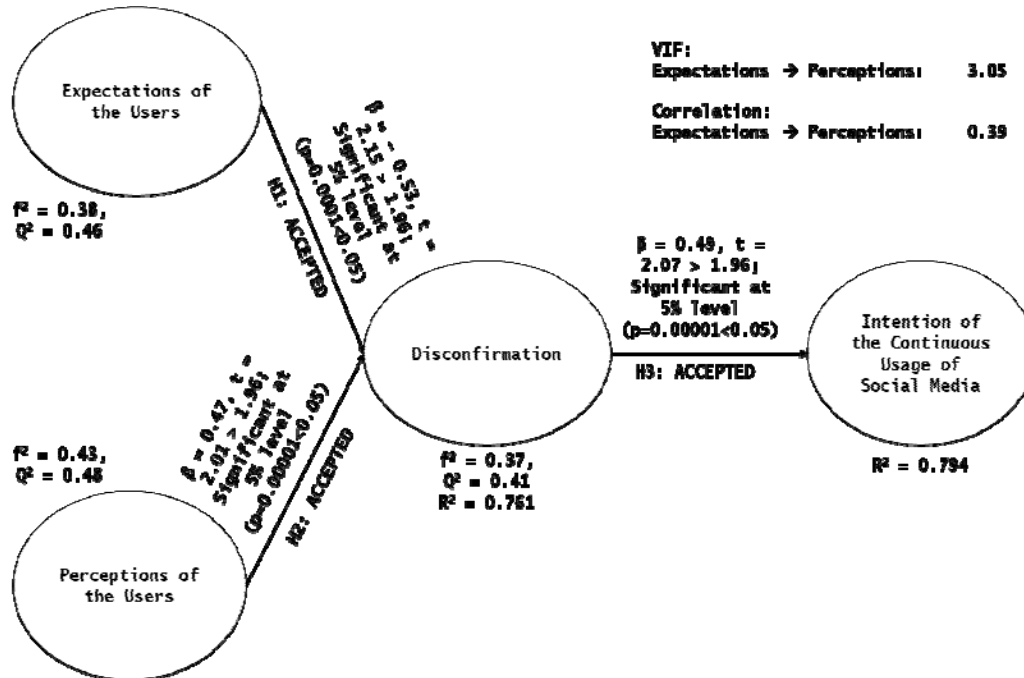
The first step of structural model analysis is to assess the multicollinearity among the exogenous (independent) constructs by using the parameters or tests of VIF (Variance Inflation Factor) and Correlation analysis. VIF value less than 5 and Correlation value less than 0.50 among the independent constructs represent that there is no multicollinearity problem. Second step is to assess the path coefficients represented as β (Beta Coefficients) and test the statistical significance of these values. All of the three path coefficient values are found statistically significant at 5% level of significance. Third step is to calculate the R^2 (R-square) values for the endogenous variables which reflects how much variance on the endogenous variables are explained by the exogenous variables considered on the model. R^2 values are found more 0.70, which is acceptable. Fourth step is to measure the effect size of the exogenous constructs on the corresponding endogenous variable's R^2 value through the parameter of f^2. F-square value more than 0.35 means the acceptable status. Fifth step is to measure the predictive relevance of exogenous constructs by the parameter of Q^2. Rules of thumb for Q^2 is same as the f^2.

6. Discussion

As from the analysis results derived on the above section, it is obvious that the constructs "Expectations" and "Perceptions" have statistically significant negative and positive impact on the construct of "Disconfirmation", respectively. Consequently, "Disconfirmation" has positive influence the construct of "Satisfaction". On the other hand, indicator variables have significant factor loading values to their corresponding constructs.

Findings of that analysis signifies the psychological behavior of the social media users in keeping their continuity of using SNSs profiles with respect to their expectations and perceived usefulness derived from using social media. The major implication of this research initiative is applicable for the social behavior theorist, which will help them to understand how social media users are behaving. Besides the social behavior theorist, the SNS service providers will have better understanding how to keep the minimum discrepancy between expectations and perceptions which will lead to the positive scores of disconfirmations and this will end-up with a higher satisfaction level of the social media users.

7. Limitations and Further Research

The major limitations of this study can be discussed from two dimensions. These are: (1) Demographic variations of the respondents are not considered on the model, and (2) Trustworthiness of social media among the users is not also considered here, which is assumed to have significant moderating effect on that model. Further research could be conducted addressing these limitations.

8. Conclusion

As the concluding remark it can be stated that the purpose of that study was to assess the implication of Expectation Disconfirmation Model in the context of social media usage pattern, which is well served here. There are two dimensions of the implication of this study. First, this study has a theoretical contribution. As it was stated before that Expectancy Disconfirmation Theory is basically used to assess consumers' satisfaction with some products and services, but the use of EDT model in assessing social media users' satisfaction and further intention to use social media is unprecedented. So, the findings of this study have added new dimension to the current literature and methodology of applying EDT model in different contexts. Second, the findings of this study have unveiled a new outlook of perceiving the behavioral patterns of the social media users. Social media service providers and receivers may get a new insight regarding the fact that how the expectations and perceptions are shaping the usage pattern of social media.

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