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Reciprocal Relationship between Subjective Well-Being, Social Media Engagement and Compulsive Buying Behavior

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ABSTRACT

This study aimed to investigate the interplay between subjective well-being (SWB), social media engagement (SME), and compulsive buying behavior (CBB). It explored long-term and reciprocal connections among these factors using a longitudinal design with a 2-wave investigation of 226 employees from various sectors in Jakarta, Indonesia. Partial Least Squares Structural Equation Modeling (PLS-SEM) cross-lagged analysis found that SWB at Time 1/Time 2 negatively predicted SME and CBB at the same times, indicating long-term influences. Additionally, SME at Time 1 and CBB at Time 2 significantly predicted SWB at Time 2. The study also found a positive relationship between SME and CBB at both times. This research contributes to the literature by empirically examining the reciprocal relationship among SWB, SME, and CBB, focusing on the association between SWB and CBB.

Keyword: compulsive buying behavior; reciprocal relationship; social media engagement; subjective well-being; longitudinal

INTRODUCTION

Advances in digital marketing, especially the internet and mobile devices, have made access to online platforms easier and faster. This ease and speed in accessing various sites and online purchasing platforms have driven dramatic changes in consumer behavior. Now, consumers can order and buy products online anytime and anywhere. Because of its convenience, consumers are sometimes trapped in various advertisements and social influences which encourage compulsive transaction behavior. In contrast to impulsive buying behavior, which leads to unplanned purchases, compulsive buying is more interpreted as a shopping disorder (Müller et al., 2021), in which consumers make repeated and excessive product purchases (O'Guinn & Faber, 1989). Although it has attracted much interest from researchers over the last two decades (Tarka et al., 2022), compulsive behavior has received relatively less attention than impulsive behavior. Hence, this study explores the antecedents of compulsive buying behavior based on subjective well-being and social media engagement.

Previous studies have extensively studied compulsive buying behavior based on psychological factors, including self-esteem, self-control, self-image, and hedonic traits (Moon et al., 2022; Mulyono & Rusdarti, 2020; Olsen et al., 2022; Tarka et al., 2022). Other factors include emotion, well-being, stress, and depression (Orsolini et al., 2022; Wolfers & Utz, 2022). Another approach to studying compulsive behavior is through external stimulus factors, including the intensity of internet use, including social media, internet, and smartphone addiction (Maccarrone-Eaglen & Schofield, 2023; Mason et al., 2022; She et al., 2021; Suresh & Biswas, 2020). The present study aimed to develop internal (subjective well-being) and external factors (social media engagement) models to investigate their influence on compulsive buying behavior (CBB). In particular, we explore the role of subjective well-being (SWB) as an antecedent and outcome of social media engagement (SME) and compulsive buying simultaneously.

Previous work has shown that well-being and social media engagement are interrelated, but their cross roles as antecedents and outcomes are equally supported empirically. For example, some researchers examine the role of subjective well-being as an essential antecedent of the intensity of social media use (Przybylski et al., 2013; Reer et al., 2019). However, at the same time, other studies have found that the use of social media affects decreasing well-being (Agarwal & Mewafarosh, 2021; Barry et al., 2022; Orben & Przybylski, 2019; Wheatley & Buglass, 2019; Wolfers & Utz, 2022). Considering these differences, we are interested in examining the reciprocal relationship between SWB and SME as a bridge to explain the cross roles of the two simultaneously. In the same vein, previous studies have also confirmed the role of subjective well-being as a determinant of compulsive buying (Ortiz Alvarado et al., 2020), as well as an outcome of compulsive buying (She et al., 2021). Apparently, previous works only directed a one-way relationship and did not consider the follow-up effect. Hence, in the present study, we propose a reciprocal relationship, where subjective well-being at the initial point can affect compulsive buying, and then compulsive buying behavior also affects subjective well-being in the future.

As presented in Figure 1, the present study aimed to extend the previous study and made three key contributions to the consumer behavior literature. First, we aimed to test the relationship between subjective well-being, social media engagement, and compulsive buying behavior using two different times. Hence, the consistency of the relationship between these three variables will be evaluated based on two time periods: during and after the COVID-19 pandemic. Second, we aimed to test long-term relationships between subjective well-being, social media engagement, and compulsive buying behavior. Drawing 3P Model (Durayappah, 2011; Su et al., 2021) as a theoretical basis for consistency over time in SWB. Furthermore, the long-term effects of SWB on SME and CBB were also evaluated. Third, we address the relevant issue of the directionality of associations between SWB, SWE, and CBB at the same and different time points. The justification for these assertions will be elaborated upon in the following sections.

Related to SWB, Durapayyah (2011) introduced the 3P Model (present, past, and prospect) to study the consistency of individual evaluations of their lives over time. Furthermore, He argues that it is essential to consider general evaluations of the present, the past, and the future to understand SWB. In other words, present happiness is likely to have been caused in the past, and therefore SWB is related to time (Durayappah, 2011). Evaluation of SWB over time is also highly recommended by previous studies (Diener et al., 1999). Responding to the importance of understanding SWB in a time frame, we suspect that the

SWB in this study will be consistent over time, considering that observation periods 1 and 2. Hence, the hypothesis we propose:

H1: SWB at Time 1 is positively related to SWB at Time 2

Based on the assumptions of social comparison theory (Festinger, 1954), individuals with low well-being may be more likely to engage in social media activities to seek comparisons and social validation. On the other hand, a person can be highly involved in social media activities to seek social support, reduce loneliness, cope with stress or out of habit (Mason et al., 2022; Przybylski et al., 2013; Reer et al., 2019). For example, Reer et al. (2017) examine three dimensions to measure well-being (loneliness, depression, and anxiety); their study found that people with low psychological well-being tend to be more involved in social media to cope with stress (Mason et al., 2022). Another assumption comes from social support motives. SWB is closely related to social support in the context of interactions between humans (Cheng et al., 2022; Kong et al., 2021; Su et al., 2021). Thus, individuals who feel they do not get social support in the real world will likely look for alternatives to seek such support on social media to fulfill a sense of connectedness and support.

H2: SWB at Time 1 is negatively related to SME at Time 1

H3: SWB at Time 2 is negatively related to SME at Time 2

Theoretically, subjective well-being has been confirmed to vary over time based on certain situational factors (Diener et al., 1999; Durayappah, 2011; Lee, 2022), and its effect also can changes over time (Soons et al., 2009). According to social comparison theory (Festinger, 1954), individuals compare themselves to others on social media platforms, which can impact their self-perceptions and well-being. Individuals with higher subjective well-being may engage in upward social comparisons, seeking inspiration or motivation from others' positive experiences, leading to continued and sustained social media engagement over time. Moreover, the long-term effects of subjective well-being on social media engagement can be explained through the lens of the 3P Model (Durayappah, 2011), which posits that subjective well-being influences individuals' perceptions, priorities, and practices over time. As individuals experience changes in their subjective well-being, such as fluctuations in mood, life satisfaction, or emotional states, these shifts can impact their attitudes and behaviors toward social media engagement in the long run. For example, individuals with higher levels of subjective well-being may be more inclined to engage with social media platforms to share positive experiences, seek social support, or maintain connections with others. On the contrary, individuals experiencing lower levels of well-being may use social media as a coping mechanism, seeking validation or distraction from negative emotions.

H4: SWB at Time 1 is negatively related to SME at Time 2 (long-term)

The present study also examine the reciprocal relationship between SWB and compulsive buying to clarify the dual roles of SWB and compulsive buying. Previous studies have also found that the two can influence each other (Ortiz Alvarado et al., 2020; She et al., 2021). For example, CBB is often associated with lower well-being in general (Ortiz Alvarado et al., 2020), and on the other hand, researchers also found the effect of CBB on SWB (She et al., 2021). Thus, we are taking a step forward by exploring the reciprocal relationship across time between SME and compulsive buying that has not been explored before. Drawing the 3P Model (present, past, and prospect), subjective well-being can be temporary (Durayappah, 2011), so it is crucial to investigate its effect on attitudes and other behaviors in different time frames. This study also intended to cover the limitations of prior work (Orsolini et al., 2022; Reer et al., 2019; Wolfers & Utz, 2022) that has typically examined the link between SWB,

SME, and compulsive buying behavior in a cross-sectional approach. In the same vein, previous studies have consistently found a negative effect of the use of social media on decreasing well-being (Agarwal & Mewafarosh, 2021; Barry et al., 2022; Orben & Przybylski, 2019; Wheatley & Buglass, 2019; Wolfers & Utz, 2022). Accordingly, we propose that the relationship pattern between SWB and SME is reciprocal, in which low SWB can trigger SME, and SME will also affect SWB in the future.

H5: SME at Time 1 is negatively related to SWB at Time 2

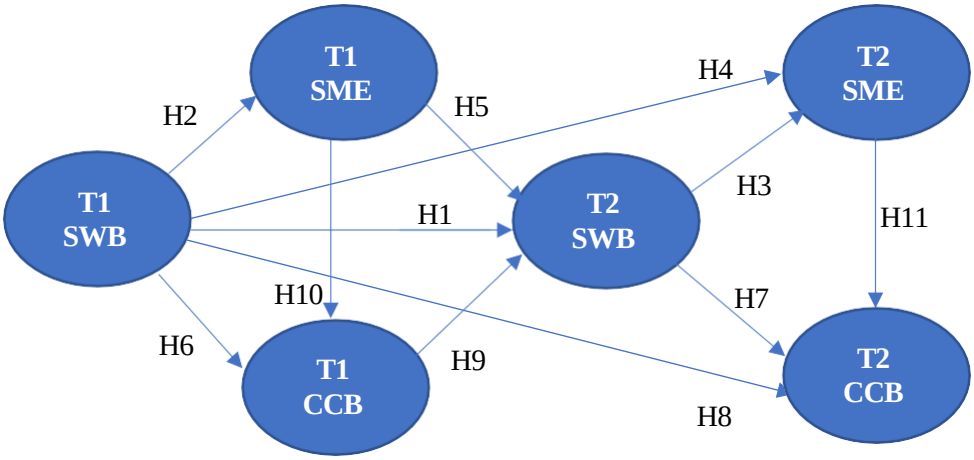

Figure 1. The hypothesized full cross-lagged model.
Source: Hypothetical model compiled by the author, 2023
Note. SWB = subjective well-being; SME=Social media engagement; CBB= Compulsive buying behavior; T1 and T2 = Time period data collecting.

Compulsive buying behavior, also known as compulsive shopping or shopping addiction, refers to a pattern of excessive, repetitive, and uncontrollable purchasing of goods or services. As deviant behavior, CBB often results in negative consequences such as financial problems, emotional distress, and well-being (Moon et al., 2022; Nanda & Banerjee, 2021; She et al., 2021). Compulsive buying behavior leads to repetitive and excessive buying behavior as a response to negative emotions experienced by individuals (Aydin et al., 2021; Müller et al., 2015). Researchers believe CBB is not related to product needs and functions but to emotions and moods. The individual with problematic behavior of compulsive purchasers is characterized by a lack of financial control, a sensation of satisfaction and release after the purchase, and a nonsensical and item-unrelated repeating of this behavior (Mason et al., 2022). Compulsive buying behavior also appears as an attempt to fill an emotional void or fulfill an unmet psychological need. Individuals who experience low well-being, such as depression or anxiety (Zhang et al., 2017). Thus, individuals with low well-being (e.g., characterized by high levels of depression and anxiety) may seek temporary gratification or diversion by making impulse purchases. Accordingly, low well-being is often associated with higher stress levels. To reduce stress, individuals may use compulsive buying as a form of coping (Aydin et al., 2021; Ortiz Alvarado et al., 2020). Empirically, CBB is often associated with lower well-being in general (Ortiz Alvarado et al., 2020). On the other hand, researchers

also found the effect of CBB on SWB (She et al., 2021). Referring to the two-way relationship, in our study, we propose that SWB is negatively related to CBB and vice versa, CBB can also cause SWB. Hence, our hypothesis:

H6: SWB at Time 1 is negatively related to CBB at Time 1
H7: SWB at Time 2 is negatively related to CBB at Time 2
H8: SWB at Time 1 is negatively related to CBB at Time 2
H9: CBB at Time 1 is negatively related to SWB at Time 2

Finally, drawing social comparison theory (Festinger, 1954), this study explores the relationship between SMEs and compulsive buying. Since social media has become one of marketers' most popular advertising media in the last five years, it is vital to investigate how individual involvement in social media influences purchase behavior. Researchers previously used various similar concepts, including social media addiction, smartphone addiction, use of networking sites, internet addiction, and social media celebrities' posts (Maccarrone-Eaglen & Schofield, 2023; Mason et al., 2022; She et al., 2021; Suresh & Biswas, 2020; Zafar et al., 2021). Hence, our study provides new insights into compulsive buying as a response to consumers' social media engagement. In particular, the relationship between social media engagement and compulsive buying has not been explored. A prior study linked more compulsive buying based on different factors, including social media addiction (Maccarrone-Eaglen & Schofield, 2023), smartphone addiction (Mason et al., 2022), internet addiction (Suresh & Biswas, 2020), use of networking sites (She et al., 2021), and social media celebrities' posts (Zafar et al., 2021). On the other hand, social media is generally confirmed to affect impulse buying (Aragoncillo & Orus, 2018; Korkmaz & Seyhan, 2021; Szymkowiak et al., 2021). Hence, the proposed hypothesis:

H10: SME at Time 1 is positively related to CBB at Time 1
H11: SME at Time 2 is positively related to CBB at Time 2

METHODS

This research is part of a collaborative project of three universities in Jakarta, involving two lecturers each as representatives in the data collection process. The target respondents were students with employee status in the undergraduate management study program. A purposive method was used in selecting the sample, namely, students who have an average frequency of online purchases twice a month and have taken marketing management courses. Each lecturer representative collects data (ID, email, and phone number) and asks for the respondent's willingness to participate in the questionnaire voluntarily. This study uses a longitudinal approach collected through two waves in 2022-2023. A time-lag data collecting method or repeated collecting at the same respondents separated by a certain period is commonly used in consumer behavior research, especially when researchers want to reduce common method bias (Podsakoff et al., 2012), or when the research is aimed at determining temporary/long-term effects or relationship models reciprocal (i.e., Du et al., 2021; Yang & Ha, 2023).

Stage one (Time 1) was conducted using an online questionnaire (February 2022). Each respondent is given a unique code to identify the respondent's name and their class. At this stage, respondents were asked to answer questions regarding subjective well-being, social media engagement, and compulsive buying behavior. Stage 2 (Time 2) took the same

respondents as used a paper-pencil questionnaire in class (February 2023). After checking the quality and completeness of the data at Times 1 and 2, the final data of this study amounted to 226 pairs of responses, consisting of 59 percent women and 41 percent men.

The scale used is an adaptation with minor revisions to suit the context of the present study. First, subjective well-being was adopted from the WHO-5. Examples of items are "Last week, I felt cheerful and in good spirits" and "Last week, I felt calm and relaxed" (Topp et al., 2015). Respondents were asked to give a rating of 1 = strongly disagree to 5 = strongly agree. Second, social media engagement is measured using five items regarding the frequency of using social media daily (Przybylski et al., 2013); this scale has good validity and reliability by Mariano et al. (2019). For example items: "How often have you accessed social media such as Twitter, Facebook, and Instagram in the last week." Respondents were asked to answer at five ratings from 1 = 'Never' to 5 = 'Every day.' Finally, compulsive buying behavior adapts a 3-item scale (Ridgway et al., 2008) with minor revisions. Examples of items are "many of the things I buy have not been opened from shopping bags" and "I sometimes buy things I do not use." Respondents were asked to answer 5-rating points: 1 = strongly disagree to 5 = strongly agree.

Data were analyzed using the PLS-SEM cross-lagged approach with the SMART PLS ver 3.6 programs. Following the guidelines of Hair et al. (2019), the analysis was carried out through two stages: evaluation of the measurement and structural models. Furthermore, this study follows previous studies (Khan et al., 2022; Prati et al., 2016), which used SEM techniques to estimate reciprocal models. In addition, because data on the same variables were collected at two different points in time, an invariance analysis was used to test differences between times (Khan et al., 2022; Podsakoff et al., 2003). To test the hypothesis, the study employed bootstrapping by generating 5000 subsamples of the PLS-SEM model, following Hair's (2019) recommendation.

RESULT AND DISCUSSION

Measurement invariance is applied with the measurement invariance of composite models (MICOM) recommended by Henseler et al. (2016) by comparing the results at Times 1 and 2. MICOM analysis consists of three stages, where a first stage is a non-statistical approach that will automatically be fulfilled when the configuration is done on the model. Stage 2 is assessed by comparing the original correlation with the permutation correlation, where compositional invariance is declared established if the permutation p-value > .05. As shown in Table 1, the p-values are all > 0.05, indicating the composite does not differ in both groups (T1 and T2). Furthermore, in stage 3, the mean and variance differences between groups will be tested. The results of the analysis show that both the mean and variance differences have p-values > .05, indicating that full measurement invariance has been established (Henseler et al., 2016).

Table 1. MICOM analysis results

Step		Original Correlation	Correlation Permutation	5.00%	p-Values	
2	CBB	1.00	.99	.99	.67	
	SWB	1.00	.99	.99	.85	
	SME	1.00	.99	.99	.59	
		Mean Difference	Permutation Difference	2.50%	97.50%	p-Values
3A	CBB	.04	.00	-.19	.16	.63
	SWB	-.12	.00	-.17	.19	.17
	SME	-.06	.00	-.20	.17	.53
		Variance Difference	Permutation Difference	2.50%	97.50%	p-Values
3B	CBB	-.09	.00	-.22	.19	.38
	SWB	-.03	.00	-.20	.17	.75
	SME	-.07	.00	-.19	.18	.49

Source: Data is processed using SMART PLS, 2023

Notes: SWB = subjective well-being; CBB = compulsive buying behavior; SME = social media engagement.

Table 2. Indicator reliability, internal consistency, and convergent validity

Indicator	Mean		VIF		Loading		CA	CR	AVE
	T1	T2	T1	T2	T1	T2			
SWB1	3.35	3.42	2.59	2.36	18.00	31.00	T1=0.90	T1=0.92	T1=0.71
SWB2	3.41	3.54	2.42	1.99	19.00	32.00	T2=0.90	T2=0.93	T2=0.72
SWB3	3.33	3.58	2.12	2.58	20.00	33.00			
SWB4	3.43	3.56	2.39	2.42	21.00	34.00			
SWB5	3.54	3.62	2.06	2.72	22.00	35.00			
SME1	2.84	3.03	2.81	2.49	26.00	39.00	T1=0.90	T1=0.93	T1=0.72
SME2	2.82	3.00	2.34	2.55	27.00	40.00	T2=0.91	T2=0.93	T2=0.73
SME3	2.68	2.87	2.33	2.38	28.00	41.00			
SME4	2.74	2.94	2.15	2.95	29.00	42.00			
SME5	2.79	3.03	2.41	2.10	30.00	43.00			
CBB1	2.67	2.62	2.47	1.84	23.00	36.00	T1=0.83	T1=0.90	T1=0.75
CBB2	2.73	2.62	1.63	1.93	24.00	37.00	T2=0.83	T2=0.90	T2=0.75
CBB3	2.67	2.68	2.10	2.09	25.00	38.00			

Source: Data is processed using SMART PLS, 2023

Notes: SWB = subjective well-being; CBB = compulsive buying behavior; SME = social media engagement; T1 and T2 = Time period data collecting

The evaluation of the measurement model as recommended by Hair et al. (2019), covers reliability indicators, internal consistency, convergent validity, and discriminant validity. The study examined loading indicators in Table 2, all exceeding 0.70, indicating reliable measurement of intended constructs. Internal consistency, assessed through Cronbach Alpha and composite reliability, exceeded 0.70 for all constructs, ensuring consistent measurement within each construct. Convergent validity, evaluated via average variance extracted (AVE), confirmed all constructs met AVE > 0.50, indicating effective capture of

construct variance and surpassing measurement error variance. These results collectively validate the reliability, internal consistency, and convergent validity of the measurement model, ensuring the accuracy and robustness of the constructs studied.

Moreover, the assessment of discriminant validity in the measurement model is based on two criteria (see Table 3). Firstly, according to the Fornell-Lacker criterion, all Average Variance Extracted (AVE) root values exceed the correlations among latent variables. Second, the HTMT ratio compares the correlations between different constructs (heterotrait) with the correlations within the same construct (monotrait). A value of less than 0.90 for the HTMT ratio suggests that the constructs are quite distinct from each other, supporting discriminant validity (see Table 3). Therefore, the confirmation of discriminant validity in the measurement model is supported by these two evaluation parameters (Hair et al., 2020).

Table 3. Discriminant validity evaluation

	T1 CBB	T1 SME	T1 SWB	T2 CBB	T2 SME	T2 SWB
Fornell-Larcker Criterion						
T1 CBB	0.86					
T1 SME	0.64	0.85				
T1 SWB	-0.70	-0.64	0.84			
T2 CBB	0.66	0.50	-0.63	0.87		
T2 SME	0.59	0.60	-0.57	0.49	0.85	
T2 SWB	-0.62	-0.59	0.73	-0.58	-0.55	0.85
	T1 CBB	T1 SME	T1 SWB	T2 CBB	T2 SME	T2 SWB
Heterotrait-Monotrait Ratio (HTMT)						
T1 CBB						
T1 SME	0.74					
T1 SWB	0.81	0.72				
T2 CBB	0.79	0.58	0.73			
T2 SME	0.68	0.66	0.63	0.56		
T2 SWB	0.72	0.65	0.81	0.66	0.60	

Source: Data is processed using SMART PLS, 2023

Notes: SWB = subjective well-being; CBB = compulsive buying behavior; SME = social media engagement; T1 and T2 = Time period data collecting

The structural model is evaluated after ensuring that the measurement model meets validity and reliability. The first stage examines multicollinearity based on the variance inflation factor (VIF), then proceeds with R square, f square, and Q square values (Hair et al., 2019). As shown in Table 2, VIF values range from 1.63– 2.95 (less than 3), indicating that the data does not have a collinearity problem. Second, the evaluation on R square shows that two model (T2 CBB and T1 CBB and T2 SWB) are at a moderate level (R square raging 0.50 – 0.74), and four another models are at the weak level (R square raging 0.25 – 0.49). Third, the evaluation of effect size (f square) shows that one relationship falls into the category of large effect size (f2 > .35): T1 SWB - T1 SME. Two relationships (T1 SWB -> T2 SWB and T1 SWB - T1 CBB) are at a moderate level (f2 .15 – .34), and the rest are at a weak level (f2 0.02 – 0.14). From the evaluation of this effect size, it appears that only one pathway has a

significant effect size; two paths are moderate, and the other pathways are at a weak level (Hair et al., 2019). Next, evaluate Q2 to assess predictive power. As shown in Table 5, the Q square values are all at a high level (Q2 ranging from 0.25 – 0.49), indicating that, in general, the predictive power of all models presented is at a moderate level.

Table 4. The reciprocal relationship between subjective well-being, social media engagement, and compulsive buying behavior

No	Relationship	*b*	*SE*	*p-value*	f^2
H1	T1 SWB -> T2 SWB	0.52	0.07	0.00	0.28
H2	T1 SWB -> T1 SME	-0.64	0.04	0.00	0.71
H3	T2 SWB -> T2 SME	-0.27	0.09	0.00	0.06
H4	T1 SWB -> T2 SME	-0.37	0.09	0.00	0.10
H5	T1 SME -> T2 SWB	-0.15	0.07	0.03	0.03
H6	T1 SWB -> T1 CBB	-0.48	0.07	0.00	0.30
H7	T2 SWB -> T2 CBB	-0.21	0.09	0.02	0.04
H8	T1 SWB -> T2 CBB	-0.39	0.09	0.00	0.12
H9	T1 CBB -> T2 SWB	-0.17	0.07	0.02	0.03
H10	T1 SME -> T1 CBB	0.33	0.08	0.00	0.14
H11	T2 SME -> T2 CBB	0.15	0.07	0.02	0.03
No	Model	R Sqr	Adj. R Sqr	Q^2	
1	T1 CBB	0.55	0.55	0.40	
4	T1 SME	0.42	0.41	0.29	
5	T2 CBB	0.45	0.44	0.32	
6	T2 SME	0.36	0.36	0.26	
7	T2 SWB	0.57	0.57	0.40	

Source: Data is processed using SMART PLS, 2023

Notes: SWB = subjective well-being; CBB = compulsive buying behavior; SME = social media engagement; T indicates the period of data collection

All hypothesis testing is shown in Table 4 and Figure 2. First, the hypothesis regarding the consistency of measurement over time: between SWB at Time 1 and SWB at Time 2 has been supported (β= .52, p-value < .01). The second hypothesis regarding the relationship between SWB at Time 1 and SME at Time 1 was successfully supported (β= -.64, p-value < .01), also consistent with the T2 SWB to T2 SME path (β= -.27, p-value < .01) in hypothesis 3. Furthermore, the long-term relationship at T1 SWB to T2 SME is also supported (β= -.37, p-value < .05). The results of the analysis also provide support for hypothesis 5 regarding a reciprocal relationship, where T1 SME is negatively related to T2 SME (β= -.15, p-value < .01).

Hypotheses 6-9 focus on the SWB and CBB relationship and how the temporal and reciprocal relationship exists between the two. As shown in Table 5, all hypotheses are supported. T1 SWB is negatively related to T1 CBB (β= -.48, p-value < .01), as well as path T2 SWB to T2 CBB (β=--.21, p-value < .05), thus, H6 and H7 is supported. Next, the long-term effect of T1 SWB on T2 CBB is also supported (β=-.39, p-value < .01), confirming hypothesis 8. The reciprocal relationship between SWB and CBB is also successfully

supported, namely the T1 CBB to T2 SWB pathway (β=- .17, p-value < .01). The last two hypotheses (H10 and H11) regarding the relationship between SME and CBB are both supported. At Time 1, SME has been positively related to CBB (β=.33, p-value < .01), and in line with Time 2 β=.15, p-value < .05). Hence, the relationship between SME and CBB has been consistently demonstrated across the two observation periods.

This study highlights the subjective effects of well-being on social media engagement and compulsive buying over time and is reciprocal. Based on the two-wave data collection, our findings reveal that SWB has a negative effect on SME over time and vice versa; SME is also shown to have a negative effect on SWB in the future. As expected, the SWB effect on compulsive buying is supported over time, as well as the reciprocal relationship, whereby CBB also has a negative effect on SWB in the future. We also found a consistent positive effect of SME on CBB at two different times. Next, the theoretical and practical implications based on the findings of this study are described below.

First hyphotesis, we confirmed the 3P Model (Durayappah, 2011) in SWB, where the results provide consistency over time in SWB. Compared to the study (e.g., Su et al., 2021) on the stability of SWB in the three observation periods finding a correlation of .38 (T1 to T2) and .41 (T2 to T3), our study provides higher stability by finding the effect of SWB at Time 1 on SWB at Time 2 of .52. Hence, in addition to contributing to the 3P model, this study provides more recent empirical evidence to clarify how individuals' perceptions of their well-being at one point in time can be influenced by experiences of previous periods.

Second, the hypothesis regarding the relationship between SWB and SME (H2-H4). This study found that SWB negatively affects social media engagement and is consistent at two points. At Time 1, SWB had a -.64 effect on SME, while at Time 2, the effect was reduced to -.27; apparently, the observation period in this study largely determines how strong the relationship between the two is. This study was conducted at two substantially different times; where Time 1 was carried out while social restrictions were still in place due to COVID-19, while Time 2 was carried out after the Indonesian government declared the pandemic over. Thus, we argue that social media was more intense when social restrictions were still enforced because people could not freely carry out physical activities. This reason is also in line with the long-term effect of SWB at Time 1 on SME at Time 2 is -.37, much lower than the effect on SME at Time 1. In other words, individuals who feel happier and more satisfied with their lives are less likely to engage in excessive social media activity.

In contrast, someone who experiences low levels of well-being (e.g., depression, loneliness, stress, or emotional difficulties) may tend to spend more time on social media on social media to seek social support and relieve their distress (Worsley et al., 2018). This study's results align with the assumptions made by previous studies regarding the relationship between depression and the use of social media as a coping strategy (Orsolini et al., 2022; Wolfers & Utz, 2022). Specifically, the results of this study provide empirical support in a different way from previous studies (Reer et al., 2019), which revealed that a low level of well-being (marked by high levels of depression, anxiety, and loneliness) could increase social media engagement.

Third, the reciprocal relationship between SME at Time 1 and SWB at Time 2; this relationship has been supported (H5). In other words, in addition to providing support for the direction of the relationship of SWB to SMEs (Mason et al., 2022; Przybylski et al., 2013; Reer et al., 2019) and the negative effect of SMEs to SWB (Agarwal & Mewafarosh, 2021; Barry et al., 2022; Orben & Przybylski, 2019; Wheatley & Buglass, 2019; Wolfers & Utz,

2022) simultaneously. This study is the first to explore the mutual effects of SWB and SMEs. In line with social comparison theory, our research confirms that individuals who experience SWB at low levels deal with it by engaging more intensely in social media activities. Furthermore, high social media engagement leads to lower future well-being (Orben & Przybylski, 2019; Wheatley & Buglass, 2019).

Fourth, the relationship between SWB and CBB at the same time (H6-H9). A path models revealed that SWB at Time 1 has negatively related to compulsive buying behavior at Time 1 ($\beta = -.48$, $p < .01$), as well as at Time 2 ($\beta = -.21$, $p < 05$). Interestingly, Time 1 is more dominant than Time 2; hence, two periods of data collection that have different situations (pandemic and post-pandemic) give a difference in the strength of the relationship. It can be interpreted that compulsive buying behavior is more intense during the pandemic to cover deficiencies in well-being. Furthermore, the results of this study also provide that the long-term effect of SWB at Time 1 on CBB at Time 2 is also supported, but the effect is lower when tested simultaneously. Another interesting finding, we were able to prove a reciprocal relationship between SWB and CBB, providing support on two sides: well-being on compulsive buying (Ortiz Alvarado et al., 2020) and compulsive buying on well-being (She et al., 2021).

Moreover, the results of this study provide additional insight into the effect of well-being on compulsive buying, which was previously studied in different variables. For example, Ortiz Alvarado et al. (2020) uses the emotional well-being construct as a driver of impulsive buying using a qualitative approach to a sample of female consumers in Mexican and Spanish. Older research (e.g., Silvera et al., 2008) states that negative psychology can drive impulsive buying behavior. In other words, individuals with a high level of subjective well-being are likelier to have low compulsive behavior tendencies than those with lower subjective well-being. Hence, this study also adds empirical evidence to the S-O-R model, which places the psychological aspect as a mechanism for forming compulsive behavior (Darrat et al., 2023; Mason et al., 2022; Min & Tan, 2022). Thus, this study provides new insights into efforts to understand the reciprocal relationship between compulsive behavior and subjective well-being.

Finally, SME and CBB relationship (H10-H11). The results of this study confirm the positive effect of social media use on compulsive buying behavior. Interestingly, social media engagement at Time 1 and Time 2 was significantly related to compulsive buying behavior Time 1 and 2; emphasized that the relationship between the two was consistent in the two observation periods. Several previous studies have investigated compulsive buying based on different factors, for example, social media addiction (Maccarrone-Eaglen & Schofield, 2023), smartphone addiction (Mason et al., 2022), internet addiction (Suresh & Biswas, 2020), use of networking sites (She et al., 2021), and social media celebrities' posts (Zafar et al., 2021). On the other hand, social media is more often directed at influencing impulse buying (Aragoncillo & Orus, 2018; Korkmaz & Seyhan, 2021; Szymkowiak et al., 2021). Hence, this study provides the first empirical evidence of a relationship between social media engagement and compulsive buying behavior.

Although it has never been explored, we argue that SME as online activity on social media affects CB behavior for two reasons: first, drawing social comparison theory, individuals tend to compare themselves with others to evaluate themselves. Through social media, individuals can be exposed to perfect or idealistic images of other people's lives, especially in possession of goods or luxurious lifestyles. Hence, this situation can trigger

feelings of inferiority or a desire to meet the standards displayed by others, which then encourages compulsive buying behavior. Second, compulsive behavior related to internet use is often explained using the stimulus–organism–response (SOR) model (Mehrabian & Russell, 1974). Stimulus factors can come from the external environment (exposure to advertisements, recommendations, and posts on social media). Exposure to advertisements, posts, and information obtained from social media (stimuli) can trigger compulsive buying behavior in which the user feels tempted (organism) to buy something without considering it thoroughly (response). The S-O-R model is an appropriate framework for explaining how information technology influences buying behavior (Mason et al., 2022). Within this theoretical framework, social media content represents a stimulus that triggers the formation of affective and cognitive states in consumers and ultimately leads to specific behavioral responses. Thus, the current research argues that those with an attachment to social media will receive more stimulative input. They may feel pressured to buy things others think are popular or want, even though they do not need them.

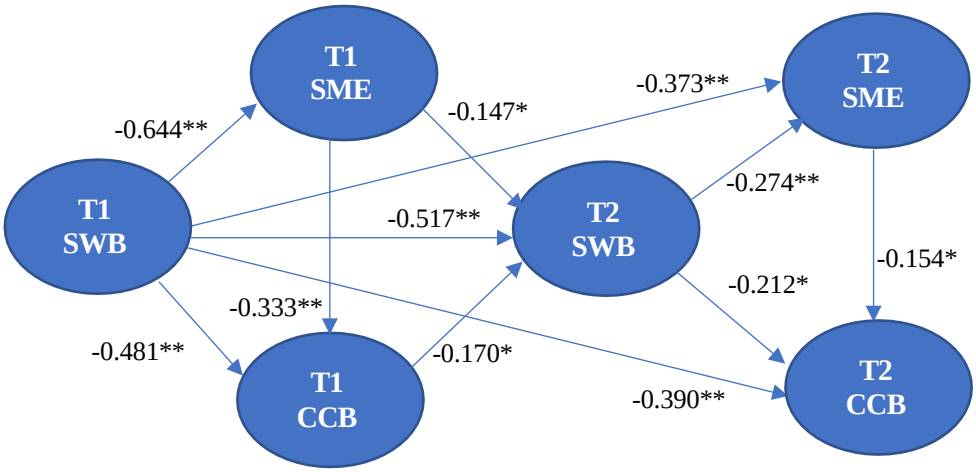

Figure 2. Model analysis results

Source: Data is processed using SMART PLS, 2023

Notes: * p-value < 0.05, ** p-value < 0.01

The implications derived from the study offer valuable insights for practical applications in addressing the relationships between subjective well-being, social media engagement, and compulsive buying behavior. Firstly, the findings suggest that individuals with lower subjective well-being are more prone to heightened social media use and compulsive buying tendencies. To mitigate these behaviors, interventions focusing on enhancing social relationships with family, friends, and the community are recommended. By fostering interactions, mutual support, and engagement in social activities, individuals can enhance their subjective well-being and potentially reduce compulsive behaviors associated with social media and buying.

Secondly, considering that the study participants were working students facing challenges in balancing personal satisfaction activities with academic and work responsibilities, universities should tailor support services to meet the unique needs of this

demographic. Implementing strategies that promote personal well-being, such as incorporating blended learning approaches to reduce student burnout (Hendryadi et al., 2022; Ramli et al., 2023), can be beneficial in enhancing the overall academic experience and mental health of working students. Lastly, collaboration between universities and workplaces is essential in raising awareness about the negative impacts of excessive social media usage. Organizing seminars involving psychological and IT experts can educate students and employees about the potential risks associated with prolonged social media engagement and provide strategies for maintaining a healthy digital lifestyle.

CONCLUSIONS

In this study, a longitudinal design was employed to investigate the relationships between subjective well-being, social media engagement, and compulsive buying behavior over time. The research yielded three significant findings. Firstly, it confirmed a consistent inter-time relationship among the three variables across two different time points, indicating a stable connection between them. Secondly, the study revealed a lasting relationship among subjective well-being, social media engagement, and compulsive buying behavior over the long term, emphasizing the enduring nature of these associations. Lastly, the research highlighted a reciprocal relationship between the variables at two distinct time points, suggesting a mutual influence among subjective well-being, social media engagement, and compulsive buying behavior. Overall, the study provided empirical evidence supporting the theoretical frameworks of the 3P Model, the stimulus–organism–response (SOR) model, and social comparison theory in explaining the intricate dynamics of these variables within the consumer context in Indonesia.

Despite the significance offered by this study, several limitations warrant attention in future research endeavors. Firstly, the research primarily focuses on the direct effects of social media engagement and compulsive buying behavior without considering potential moderating factors (Tarka & Kukar-Kinney, 2022; Xu et al., 2022) such as gender, income level, and personality traits (e.g., self-esteem, hedonic, materialism). Future studies could explore how these individual characteristics moderate the relationship between social media use and compulsive buying, providing a more nuanced understanding of the underlying mechanisms driving these behaviors. Secondly, while the study utilized longitudinal panel data collected at two-time points, the reliance on a single data source for questionnaire completion raises concerns about common method bias (Podsakoff et al., 2012). Future research could incorporate multiple data sources to assess social media engagement and compulsive buying behavior, enhancing the reliability and validity of the findings.

Thirdly, the study's findings do not conclusively establish the long-term effects of subjective well-being on social media engagement and compulsive buying behavior. Although the observed negative relationship aligns with expectations, the significance of this relationship may require validation through a larger sample size. Future research efforts could address this limitation by expanding the sample size and reexamining the relationship between subjective well-being, social media engagement, and compulsive buying behavior to provide more robust and generalizable insights. The last limitation comes from the research sample, which is student employees with employee status at two universities in Indonesia. As previous studies have shown that culture is an essential determinant of buying behavior (Tarka &

Kukar-Kinney, 2022), we call on future researchers to examine whether the results of this study can be replicated in contexts outside Indonesia.

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