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Ned Kock & Murad Moqbel

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Social Networking Site Use, Positive Emotions, and Job Performance

Ned Kock[a] and Murad Moqbel[b]

[a]Texas A&M International University, Laredo, TX, USA; [b]University of Texas Rio Grande Valley, Edinburg, TX, USA

ABSTRACT

With the increasing use of social networking sites, within and outside work hours, it is reasonable to ask whether that use has any impact on job performance and why. This study draws on the technology acceptance model and theory of positive emotions to develop an extended theoretical model centered on social networking site use. We focus on use, but not excessive use, recognizing that negative outcomes may result from social networking site addiction. The model incorporates predictors of social networking site use as well as organizational effects of this use, including its effect on job performance. To conduct an initial test of the model we collected and analyzed data from 178 Facebook users. While we investigated Facebook use in general, within and outside work hours, our results control for the existence of policies limiting social network site use at work. The analysis employed factor-based structural equation modeling using the software WarpPLS. The results suggest that positive emotions related to the use of social networking sites, in terms of increased job satisfaction and organizational commitment, are associated with increased job performance.

KEYWORDS

Social networking sites; broaden-and-build theory of positive emotions; job satisfaction; organizational commitment; job performance; structural equation modeling

Introduction

Social networking sites employed primarily for personal enjoyment, such as Facebook, are widely used by hundreds of millions of individuals worldwide.[1–10] A user of such a social networking site typically logs in to his or her account to share stories, photos and opinions, ask questions of personal interest and provide answers to similar questions from others, or post comments and share them with their social network of friends, relatives, and acquaintances. These sites are mechanisms for individuals to stay connected with others who may live and work nearby or reside in other geographical regions.[2,6,7,11–13]

Given that the positive emotions associated with social networking site use are not switched on and off depending on location and time of use, it is possible that using those sites could impact individuals in myriad ways, often indirectly.[3,14–16] However, while the impact of social networking sites on entertainment is clear, less is known about the impact, if any, of these information technologies on work. To address this gap, this study seeks to inform the information systems literature by examining predictors and impacts of social networking site use on work-related constructs associated with positive emotions, specifically job satisfaction and organizational commitment, which are recognized as key antecedents of individual-level job performance.

This study draws on Fredrickson's[17] theory of positive emotions to trace the path from social networking site use to job performance. Here we focus on use but not excessive use, recognizing that negative outcomes may result from social networking site addiction.[13,18] The findings of this study are highly relevant for academics who aim to better understand the complexity of social networking sites as tools that increasingly permeate the various facets of life, including the workplace; as well as for managers who oversee employees who increasingly draw upon their online social networks for social support and consider them to be part of their social identity.

In the following sections, we summarize our theoretical foundations and develop our research model, step-by-step, starting with the antecedents of social networking site use and progressing to the antecedents of job performance, which is the study's main outcome of interest. We acknowledge that antecedents of technology usage have been studied extensively in the past (e.g.,[19]). However, for completeness of the model and to provide an integrated view of antecedents and consequences of social networking site use, we advance hypotheses regarding those antecedents, before proceeding to discuss hypotheses concerning the web of relationships through which social networking site use affects job performance.

Theoretical foundations

Figure 1 summarizes the theoretical perspective that informs this study. Social networking site use is assumed to have antecedents and consequences.[20–24] The antecedents are the causes, or predictors, of social networking site use. The consequences, within the scope of our investigation, take the form of positive emotions, which ultimately impact job performance. This latter theoretical construct, job performance, is the main dependent construct of interest here. The antecedents, or predictors, of social networking site use are derived from Davis's[19] technology acceptance model. The consequences of social networking

CONTACT Ned Kock nedkock@gmail.com Division of International Business and Technology Studies, Texas A&M International University, 5201 University Boulevard, Laredo, TX 78041, USA

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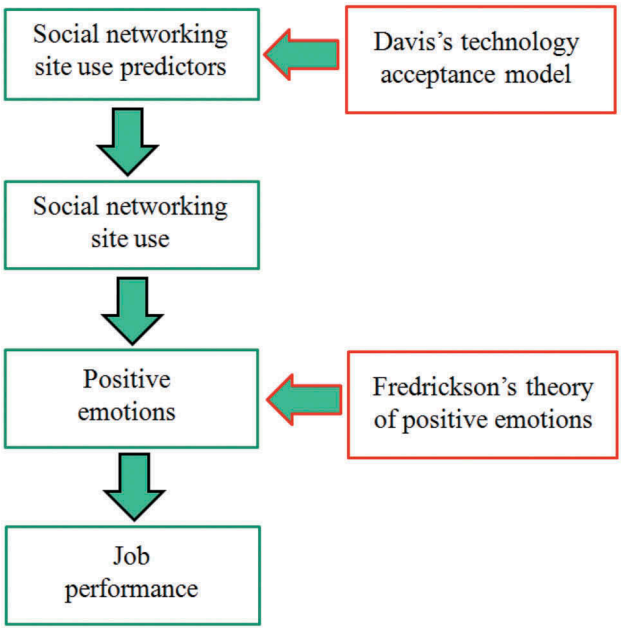

Figure 1. Theoretical foundations.

site use are derived from Fredrickson's[25] theory of positive emotions, also known as broaden-and-build theory of positive emotions.

Davis's[19] technology acceptance model has found widespread application by researchers to explain and predict the use of information technologies. Traditionally, the technology acceptance model has argued that the use of an information technology is strongly influenced by its perceived ease of use, or the degree to which the technology is perceived to be user-friendly; and its perceived usefulness, or the degree to which a technology's features are perceived as facilitating the execution of a task or a set of related tasks. A more modern view of the technology acceptance model, extended to technology realms where user enjoyment is a major target, includes perceived enjoyment in the use of the technology as a strong influence behind its use.[26] Because the use of social networking sites is frequently more strongly motivated by pleasure-seeking behavior than many other information technologies, perceived enjoyment is a key element of the theoretical perspective that we employ here.

Perceived enjoyment is assumed by us to elicit actual enjoyment as a result of social networking site use, which in turn leads to the development of specific positive emotions that have an influence on job performance. Given this, we use Fredrickson's[25] theory of positive emotions to hypothesize that social networking site use in general, within and outside business hours, has a positive influence on one's overall satisfaction with one's job and on one's commitment to the organization that employs him or her. Both of these are proposed as positive emotions elicited by social networking site use. Job satisfaction is also hypothesized to positively influence organization commitment. Finally, job satisfaction and organizational commitment are both hypothesized to positively influence job performance.

The theoretical perspective summarized above provides an integrated view of social networking site use in general, including predictors of use and its organizational effects. This perspective is significantly broader than one in which social networking site use would enable interaction only with co-workers. From our theoretical perspective, social networking site use for positive interaction with one's family members in another country outside business hours, for example, would elicit positive emotions that would positively influence one's performance at work. Our theoretical perspective addresses use, but not excessive use, as we recognize that negative outcomes are likely to result from social networking site addiction.[13,18,27]

This view is in some ways similar to that proposed by Erfani et al.[28], who theorized and demonstrated that social networking site use improves the psychological well-being of cancer patients. We would expect, based on our theoretical perspective, that the same type of interaction during business hours would have a similar effect; as long as it is done in moderation[29] to allow enough time for completion of work-related tasks. In this sense, social networking site use is viewed as akin to certain activities that are not, strictly speaking, work-related, such as weekend relaxation,[30] regular meditation,[31] and physical exercise.[32]

Research background and hypothetical model

While targeted empirical research has been somewhat lacking, there has been growing interest in the idea that social networking site use in general can be associated with enhanced performance at work.[20,21,23,24,33,34] However, the mechanisms whereby social networking site use can be promoted are still unclear, chiefly due to a lack of work-related research on the antecedents of that use, particularly in a way that positively affects job performance. Elucidating these mechanisms, with a focus on the positive emotions of work satisfaction and organizational attachment, is the main goal of this study.

Social networking sites are in part "hedonic" systems,[2,35] whose adoption is partially influenced by their intrinsic personal enjoyment value. This view may lead to the expectation that social networking site use is either unrelated, or even detrimental, to job performance. Building primarily on the technology acceptance model[19] and the broaden-and-build theory of positive emotions,[25] as well as drawing on related theoretical frameworks and past empirical studies, we develop an extended theoretical model that challenges such an expectation. Our model, outlined below, predicts that social networking site use in general is likely to be associated with enhanced job performance.

The technology acceptance model, developed by Davis,[19] has been widely utilized to explain and predict the acceptance and adoption of information technologies. This model follows from the theory of reasoned action,[36] whose main tenets are that beliefs influence attitudes, which in turn lead to intentions, which then engender behavior. The original technology acceptance model, applied to the context of social networking site use,[1,3,4,6–9] posits that intention to use a technology can be explained by two main perception-related constructs, namely, ease of use and usefulness,[37,38] as outlined in the hypotheses below:

Hypothesis H1: *Ease of use is positively associated with social networking site use.*

Hypothesis H2: *Usefulness is positively associated with social networking site use.*

An important perception-related construct that was not part of the original technology acceptance model is enjoyment, which refers to the extent to which using a technology is perceived as a "fun" activity. This construct has been incorporated into more modern perspectives of the technology acceptance model, which see perceived enjoyment as a strong influence behind its use.[26] This view is consistent with, and augmented by, theoretical perspectives that can be seen as related to Fredrickson's[25] theory of positive emotions. Notably, it is reasonable to predict, based on Deci's[39] motivation theory (see, also,[40]), that individuals will tend to adopt a social networking site if its use is perceived as enjoyable, and that this perception will also be influenced by ease of use and usefulness.[41–44]

Moreover, Teo et al.[45] showed that enjoyment is significantly and positively related to frequency of Internet usage, and most social networking sites are Internet-based. Prior to that, Davis et al.[41] concluded that enjoyment is a significant and positive predictor of the intention to use computers in general. Other studies have led to similar findings.[46,47] Therefore, we incorporate enjoyment into our hypothetical model,[38,48] as a mediator of the relationship between social networking site use and the original technology acceptance model constructs of ease of use and usefulness. This is formalized through the hypotheses below:

Hypothesis H3: *Ease of use is positively associated with enjoyment in the context of social networking site use.*

Hypothesis H4: *Usefulness is positively associated with enjoyment in the context of social networking site use.*

Hypothesis H5: *Enjoyment is positively associated with social networking site use.*

Given the strong link between social interactions and positive emotions,[49] and recognizing the primary role of social networking sites in creating and maintaining social networks,[6] this study also draws on the broaden-and-build theory of positive emotions[17,25,50] as a theoretical framework. The theory posits that external stimuli can produce positive emotions (e.g., joy, contentment, and interest), which in turn produce durable personal resources, including social and intellectual resources. Experiencing positive emotions prompts individuals to follow innovative ways of thought and actions, thus broadening their thought-action repertoires.[25]

Not only do positive emotions help build new personal resources, they also make them accessible in later moments.[17] Social resources gained through positive emotions can enhance the attachment and social bonds among social networking site users and lead to improvements in social support.[17,50] Such social support can, in turn, enhance work-related outcomes.[51] Furthermore, positive emotions have been shown to spark cognitive and intellectual resources by facilitating learning and mastery of skills that can expand individuals' knowledge bases and foster enhanced job performance.[25,52] Anecdotal evidence supports the notion that positive emotions stimulated through an internal social networking site can provide employees with enhanced personal resources.[53]

Accordingly, our study draws on the broaden-and-build theory of positive emotions to examine the relationship between social networking site use by organizational members, positive emotions, and job performance. In the following paragraphs, we propose a network of effects from social networking site use to job performance via two key positive emotion paths within the organization, one via job satisfaction and the other via organizational commitment.[22]

Social networking sites are becoming acceptable vehicles for communicating with friends and family,[6] sharing with them work and nonwork experiences. Based on the broaden-and-build theory of positive emotions,[25] it can be expected that, in today's nomadic work environment, employees who use social networking sites to a greater extent – that is, strongly identify with their online social networks and tightly integrate them into their everyday life – will receive greater nonwork social support and thus exhibit greater job satisfaction (compared with their less social networking site-active counterparts). Hence, we can hypothesize that:

Hypothesis H6: *Social networking site use is positively associated with job satisfaction.*

Affective commitment may be seen as a type of positive emotion that can be expressed toward an organization.[54–56] In this context, this type of positive emotion has been found in past research to be strongly linked to social support.[57] In fact, social support has been found to be a strong predictor of organizational commitment in numerous contexts and under various scenarios (see, e.g.,[58,59]) In line with the preceding discussion based on the broaden-and-build theory of positive emotions,[25] in which a link between social networking site use and social support was made in the context of an increasingly nomadic workforce, we also advance the following hypothesis:

Hypothesis H7: *Social networking site use is positively associated with organizational commitment.*

Job satisfaction and organizational commitment are nonredundant constructs that are related to each other. In past research, job satisfaction has been found to be strongly correlated with organizational commitment.[60] A similar result was reported by Igbaria and Greenhaus[61] in a study of information systems professionals. While the causal direction has not been conclusively resolved, more evidence seems to support a view in which job satisfaction determines, rather than being determined by, organizational commitment.[51,62] Therefore, we hypothesize that:

Hypothesis H8: *Job satisfaction is positively associated with organizational commitment.*

Again drawing on the broaden-and-build theory of positive emotions, we identify a clear path from the positive emotions of job satisfaction and organizational commitment to job performance. The theoretical foundations underlying the theory of positive emotions suggest that positive emotions can

broaden an individual's mindset, help her see the "big picture," promote a wider and more varied thought-action repertoire, as well as making the individual more creative, flexible and open to information.[25,52,63] These are characteristics that are expected to enhance job performance.

Positive emotions help individuals first broaden their capacity for creativity, learning, and thinking flexibly – both holistically and unconventionally.[17,64] This in turn can be used to build more durable skills that are of value to organizational members. Positive emotions can enhance an individual's cognitive ability, thus improving her understanding of complex issues.[63] Taken together, the preceding ideas suggest a positive impact of the positive emotions, associated with job satisfaction and organizational commitment, on an individual's job performance. Accordingly, we propose the following hypotheses:

Hypothesis H9: *Job satisfaction is positively associated with job performance.*

Hypothesis H10: *Organizational commitment is positively associated with job performance.*

It should be noted that hypotheses H8, H9, and H10 refer to relationships that involve generic organizational behavioral constructs. They are important in the context of our investigation because they address relationships that are material from a business perspective, both with and without social networking site use. Moreover, they allow for the test of various mediating relationships, leading to downstream effects on the main dependent variable in the model – job performance. One would not expect social networking site use per se, without mediation, to have a positive effect on job performance.

A causal model summarizing the hypotheses above is provided in Figure 2. Each hypothesis is indicated through an arrow connecting a pair of constructs, one construct being the hypothesized predictor (cause) and the other the criterion (effect). Because all of the hypotheses refer to positive associations, each link indicates that increases in a measure of the predictor are hypothesized to lead to increases in a measure of the criterion. The acronyms below each construct name (e.g., "EOU") will be used in references to the constructs in tables and other places where short-forms are needed.

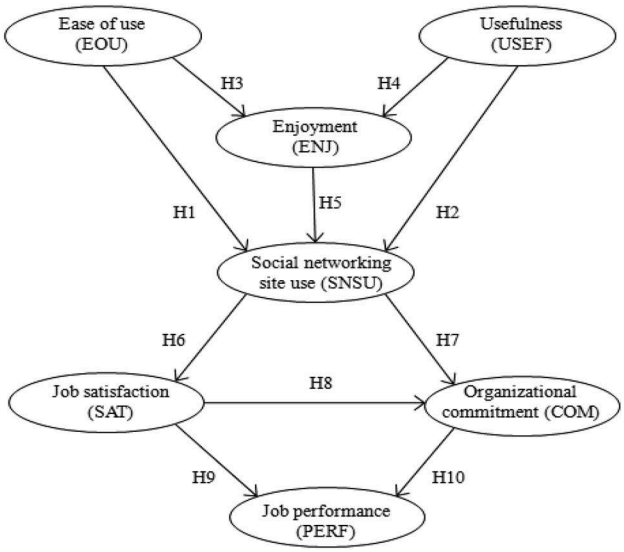

Figure 2. Hypothetical model.

The top part of the model, above *social networking site use* (SNSU), summarizes our extended technology acceptance model including *enjoyment* (ENJ) as a mediator of the relationship between *social networking site use* (SNSU) and the original technology acceptance model constructs of *ease of use* (EOU) and *usefulness* (USEF). The bottom part of the model, below *social networking site use* (SNSU), summarizes our perspective on the broaden-and-build theory of positive emotions with respect to the relationships among *job satisfaction* (SAT), *organizational commitment* (COM), and *job performance* (PERF).

Our research model can be seen as a new theory of social networking site use and job performance. This new theory could be characterized as an information systems theory whose scope is narrower than those of the theories on which it builds – namely Davis's[19] technology acceptance model and Fredrickson's[25] theory of positive emotions. Nevertheless, this new theory is arguably broader than theories that may focus on social networking site use at work; e.g., a theory in which social networking site use would enable enhanced electronic collaboration among co-workers. Our new theory, outlined through our research model, views social networking site use as analogous to certain performance-enhancing activities that are not necessarily work-related. Some examples, mentioned earlier, would be activities associated with weekend relaxation,[30] regular meditation,[31] and physical exercise.[32]

Research method

The theoretical constructs in our model were implemented as reflective latent variables. Measures for *ease of use* (EOU), *usefulness* (USEF), and *social networking site use* (SNSU) were adapted from[19] and[21] Measures for *enjoyment* (ENJ) were adapted from[65] and[41] *Job satisfaction* (SAT), *organizational commitment* (COM), and *job performance* (PERF) measures were adapted from[66] and[67]. See Appendix A for the measurement instrument used in this study.

The measurement instrument for *job performance* (PERF) was validated against actual performance evaluation scores received from immediate supervisors. This was done following the approach discussed by Kock,[68] whose conclusion was that anonymous self-evaluations of job performance are better measures than official annual performance evaluation scores produced by supervisors, largely because the former are anonymous while the latter are not. Our validation was consistent with this conclusion. Therefore, as recommended by Kock,[68] we used our question-statements in Appendix A for job performance measurement.

In addition to the latent variables in the model, several demographic control variables were included to rule out rival hypotheses due to confounding effects. These control variables included: sex (male/female), full-time/part-time employment status, ethnicity, education level (high school … doctorate), existence/absence of social network site use policy at work, and age in years. The data for this study was collected via

printed as well as online questionnaires, therefore, collection mode (online/offline) was also included as a control variable.

The data was collected from Facebook users who identified themselves online as working professionals, who were employed part-time or full-time, and who provided their contact information upon request to participate in our study. They were contacted online and by mail, and asked to complete a questionnaire. Usable responses were received from 77 online and 101 mail questionnaires from a total of 178 online and 160 mail requests; yielding response rates of 43 percent for online participants and 63 percent for offline participants.

Of the 178 responses obtained for this study, 93 were male (52 percent) and 85 were female (48 percent). The average age was 27, with a 7.78 standard deviation. Full-time employees made up 57 percent of the respondents, with the other 43 percent being employed part-time. In terms of attained education level, the respondents were distributed as follows: 14.6 percent had high school degrees, 12.4 percent had a two-year degree, 42 percent had a four-year college degree, 24.7 percent had a master's degree, and 5.1 percent had a doctoral degree. On average, the respondents had 5.2 years of work experience, with a 5.3 standard deviation.

We conducted a prospective statistical power analysis[69,70] via Monte Carlo simulations[71] to establish the minimum sample size required for our analysis to achieve a power of .8. According to this statistical power analysis, our sample size of 178 is greater than the minimum sample size of 146 necessary to achieve a power of .8, with the minimum significant absolute path coefficient in the model being at least .197[72,73] As it will be seen in our results, the minimum significant absolute path coefficient in the model was in fact .251, retrospectively suggesting that a sample size of 85 would have been large enough.

The hypothesized model was evaluated using structural equation modeling employing the partial least squares (PLS) method,[74,75] implemented with the software WarpPLS 5.0[76] In line with recent studies employing sophisticated elements of this method,[77,78] this software was chosen due to some of its advanced features that were needed in our study, such as outputs enabling multivariate normality, multicollinearity, common-method bias, and predictive validity tests. In particular, the multivariate normality tests available supported our choice of nonparametric multivariate analysis method,[79] as the PLS-based structural equation modeling method is generally recommended when the requirement of multivariate normality is not met in a dataset.[80,81] The software also enabled the assessment of direct and indirect effects, which we used in supplemental analyses to complement our main analyses, as well as provided six global model fit and quality indices that allowed to assess the model as a whole[76]; such indices are not usually provided in other software tools implementing PLS-based structural equation modeling. Finally, the software enabled us to take measurement error into account for the estimation of coefficients by conducting a factor-based PLS analysis.[82,83]

Measurement validation

In models where multiple hypothesized relationships are tested simultaneously, particularly when latent variables are used,[84] it is important to ascertain whether problems with the measurement instrument may bias the results. If this is not done, type I and/or II errors (i.e., false positives and/or false negatives) may be made in connection with hypothesized effects.[80,85]

This section summarizes our validation of the measurement instrument, which included: confirmatory factor analyses, reliability assessment, convergent and discriminant validity testing, predictive validity assessment, vertical and full collinearity analyses, and common method bias assessment.

Combined loadings and cross-loadings, obtained from a confirmatory factor analysis, are shown in Appendix B. All loadings were found to be significant at the $P < .001$ level, with the lowest loading being .758. Combined, these results suggest that the measurement model used for the latent variables in this study presents acceptable convergent validity.[80,85]

Correlations among latent variables and square roots of their average variances extracted (in shaded cells) are shown in Appendix C. Square roots of the average variances extracted for all latent variables are greater than the correlations involving each latent variable, suggesting that the measurement instrument has acceptable discriminant validity in the context of this study.[80,86]

Several latent variable coefficients and test results are also provided in Appendix C. Composite reliability and Cronbach's alpha coefficients are all equal to or greater than .859, suggesting that the measurement instrument used for latent variable measurement has acceptable reliability in the context of this study.[80,86–88] All Q^2 coefficients are greater than zero, suggesting that all sets of predictors-criteria blocks, where predictor latent variables point at endogenous latent variables, present acceptable predictive validity.[76]

All of the full collinearity variance inflation factors are equal to or lower than 2.911, suggesting that the measurement model is free from multicollinearity and common method bias.[79,85,89] Skewness and excess kurtosis were calculated and used as inputs for two tests of normality: the classic Jarque-Bera test and the robust variation of this test.[76] The results of these normality tests suggest that the majority of the latent variables were not normally distributed, supporting our decision to employ PLS-based structural equation modeling.

Results and discussion

Global model fit and quality indices can help researchers establish the degree of fit between model and data, as well as the degree of model-wide collinearity, in PLS-based structural equation modeling studies.[80,90] Table 1 shows six global model fit and quality indices[76,80] for our study: average path coefficient (APC), average R^2 (ARS), average adjusted R^2 (AARS), average block variance inflation factor (AVIF), average full collinearity VIF (AFVIF), and Tenenhaus GoF (GoF). Significance levels (in the form of P values) are provided for the APC, ARS, and AARS indices. Interpretation criteria are provided for the AVIF, AFVIF, and GoF indices.

The APC, ARS, and AARS indices reached values whose probabilities of being obtained by chance were lower than one-tenth of a percent, suggesting a good fit between the model and the data. The AVIF and AFVIF indices suggest absence of multicollinearity at the latent variable block level

Table 1. Model fit and quality indices.

Index	Value	Interpretation
Average path coefficient (APC)	.224	P < .001
Average R^2 (ARS)	.323	P < .001
Average adjusted R^2 (AARS)	.312	P < .001
Average block VIF (AVIF)	1.581	Acceptable if ≤ 5, ideally ≤ 3.3
Average full collinearity VIF (AFVIF)	2.208	Acceptable if ≤ 5, ideally ≤ 3.3
Tenenhaus GoF (GoF)	.539	Small ≥ .1, medium ≥ .25, large ≥ .36

(AVIF) and in the model as a whole (AFVIF). Finally, the GoF index suggests that the overall goodness-of-fit level between model and data is large.

Figure 3 shows the path coefficients associated with each of the hypothesized direct effects in our model, along with the respective significance levels (* P < .01; ** P < .001). Table 2 summarizes the support, or lack thereof, for the hypotheses based on results presented in the figure.

Ease of use (EOU) was not significantly associated with *social networking site use* (SNSU), not supporting **H1**. *Usefulness* (USEF) was positively and significantly ($\beta = .251$, P < .001) associated with *social networking site use* (SNSU), supporting **H2**. *Ease of use* (EOU) was positively and significantly ($\beta = .608$, P < .001) associated with *enjoyment* (ENJ), supporting **H3**. *Usefulness* (USEF) was positively and significantly ($\beta = .280$, P < .001) associated with *enjoyment* (ENJ), supporting **H4**. *Enjoyment* (ENJ) was positively and significantly ($\beta = .523$, P < .001) associated with *social networking site use* (SNSU), supporting **H5**.

Social networking site use (SNSU) was positively and significantly ($\beta = .234$, P < .001) associated with *job satisfaction* (SAT), supporting **H6**. *Social networking site use* (SNSU) was not significantly associated with *organizational commitment* (COM), not supporting **H7**. *Job satisfaction* (SAT) was positively and significantly ($\beta = .729$, P < .001) associated with *organizational commitment* (COM), supporting **H8**. *Job satisfaction* (SAT) was positively and significantly ($\beta = .288$, P < .001) associated with *job performance* (PERF), supporting **H9**. Finally, *organizational commitment* (COM) was positively and significantly ($\beta = .296$, P < .001) with *job performance* (PERF), supporting **H10**.

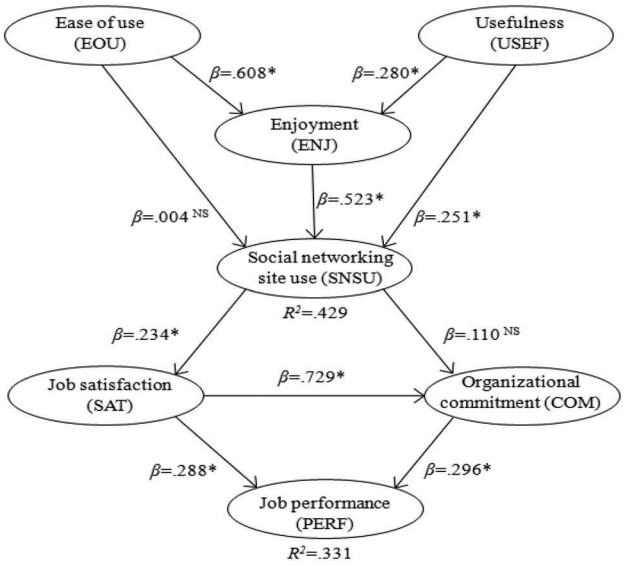

Figure 3. Results. * P < .001; NS not significant.

The lack of support for **H1** and **H7** should be qualified as referring only to direct effects, as hypothesized, when relevant competing effects were controlled for. In the case of **H1**, *ease of use* (EOU) was not significantly associated with *social networking site use* (SNSU), when the effect of *usefulness* (USEF) on *social networking site use* (SNSU) was controlled for. Similarly, in the case of **H7**, *social networking site use* (SNSU) was not significantly associated with *organizational commitment* (COM), when the effect of *job satisfaction* (SAT) on *organizational commitment* (COM) was controlled for.

In both cases, **H1** and **H7**, the combination of the direct and indirect effects may have been significant, which led us to conduct additional analyses. These analyses confirmed our expectations. The combined effect of *ease of use* (EOU) on *social networking site use* (SNSU) via direct and indirect paths was positive and significant ($\beta = .394$, P < .001). Analogously, the combined effect of *social networking site use* (SNSU) on *organizational commitment* (COM) via direct and indirect paths was also positive and significant ($\beta = .281$, P < .001).

Conclusion

Can the use of "hedonic" social networking sites such as Facebook have a positive effect on job performance? This is an important question as social networking sites are being increasingly used by working professionals, even when policies prevent (or aim to prevent) their use during business hours. In fact, in the past several years, we have seen a dramatic increase in the use of social networking sites.[1,33,91] The implications of this increasing use, in organizations and society in general, are only beginning to be explored in targeted and task-specific ways.[91–93]

This study draws primarily on the technology acceptance model[19] and the broaden-and-build theory of positive emotions,[25] and also builds on related theoretical frameworks and past empirical studies to develop an extended theoretical model that allows us to answer our research question. The results support both the technology acceptance model and the theory of positive emotions. They suggest that the use of social networking sites may significantly increase job performance, primarily via intermediate effects on two positive emotions – job satisfaction and organizational commitment. These are results of a study that focuses on use of social networking sites, but not excessive use, as past results suggest that negative outcomes may result from social networking site addiction.[13,18] Our model is robust in terms of its explanatory potential; it explained 42.9 percent of the variance in social networking site use and 33.1 percent of the variance in job performance.

Our study makes a theoretical contribution anchored on the broaden-and-build theory of positive emotions that can be useful in informing future research, by proposing a path from social networking site use to job performance that passes through the positive emotions of job satisfaction and organizational commitment. The study suggests that hedonic social networking sites can produce positive emotions that broaden employee's resourcefulness and make them feel attached to

Table 2. Support for the hypotheses based on results.

Hypothesis	Supported?
H1: Ease of use is positively associated with social networking site use.	No
H2: Usefulness is positively associated with social networking site use.	Yes
H3: Ease of use is positively associated with enjoyment in the context of social networking site use.	Yes
H4: Usefulness is positively associated with enjoyment in the context of social networking site use.	Yes
H5: Enjoyment is positively associated with social networking site use.	Yes
H6: Social networking site use is positively associated with job satisfaction.	Yes
H7: Social networking site use is positively associated with organizational commitment.	No
H8: Job satisfaction is positively associated with organizational commitment.	Yes
H9: Job satisfaction is positively associated with job performance.	Yes
H10: Organizational commitment is positively associated with job performance.	Yes

their organizations, ultimately improving their work-related performance.

Our theoretical perspective points at social networking site use being analogous to certain performance-improvement activities that, while having work-related effects, are not necessarily work-related activities. Examples of such performance-improvement activities analogous to social networking site use are weekend relaxation, regular meditation, and physical exercise. To our knowledge, no existing theoretical model proposes such a broad and innovative view of social networking site use.

ORCID

Murad Moqbel http://orcid.org/0000-0003-4123-560X

References

1. Arora A, Arora AS, Palvia S. Social media index valuation: impact of technological, social, economic, and ethical dimensions. J Promotion Manage. 2014;20(3):328–44. doi:10.1080/10496491.2014.908803.
2. Ayalon O, Toch E. Not even past: information aging and temporal privacy in online social networks. Hum Comput Interact. 2017;32(2):73–102. doi:10.1080/07370024.2016.1203791.
3. Guo H, Pathak P, Cheng HK. Estimating social influences from social networking sites—articulated friendships versus communication interactions. Decis Sci. 2015;46(1):135–63. doi:10.1111/deci.2015.46.issue-1.
4. Kraemer J. Friend or freund: social media and transnational connections in Berlin. Hum Comput Interact. 2014;29(1):53–77. doi:10.1080/07370024.2013.823821.
5. Krasnova H, Veltri NF, Günther O. Self-disclosure and privacy calculus on social networking sites: the role of culture. Bus Inf Syst Eng. 2012;4(3):127–35. doi:10.1007/s12599-012-0216-6.
6. Kreps D. My social networking profile: copy, resemblance, or simulacrum? A poststructuralist interpretation of social information systems. Eur J Inf Syst. 2010;19(1):104–15. doi:10.1057/ejis.2009.46.
7. Lorenzo-Romero C, Alarcon-del-Amo M-D-C, Gomez-Borja M-A. Do you have social profile? Users and non-users of social networking sites in the Web 2.0. Rev Bus Inf Syst. 2011;15(5):41–49. doi:10.19030/rbis.v15i5.6017.
8. Smith KH, Méndez Mediavilla FA, White GL. The impact of online training on facebook privacy. J Comput Inf Syst. 2018;58(3):244–52. doi:10.1080/08874417.2016.1233001.
9. Wisniewski P, Xu H, Lipford H, Bello-Ogunu E. Facebook apps and tagging: the trade-off between personal privacy and engaging with friends. J Assoc Inf Sci Technol. 2015;66(9):1883–96. doi:10.1002/asi.23299.
10. Yang T. The decision behavior of Facebook users. J Comput Inf Syst. 2012;52:50–59.
11. Kügler M, Dittes S, Smolnik S, Richter A. Connect me! Antecedents and impact of social connectedness in enterprise social software. Bus Inf Syst Eng. 2015;57(3):181–96. doi:10.1007/s12599-015-0379-z.
12. Richter D, Riemer K, Vom Brocke J. Internet social networking. Wirtschaftsinformatik. 2011;53(2):89–103. doi:10.1007/s11576-011-0265-3.
13. Turel O. An empirical examination of the "vicious cycle" of Facebook addiction. J Comput Inf Syst. 2015;55(3):83–91. doi:10.1080/08874417.2015.11645775.
14. Détienne F, Cahour B, Legout MC, Gourvennec B, Relieu M, Coppin G. Interactive frames constructed in second life meetings: a study in educational and professional settings. Cogn Technol Work. 2013;15(4):445–55. doi:10.1007/s10111-012-0230-y.
15. Liu W, Pasman G, Taal-Fokker J, Stappers PJ. Exploring 'Generation Y'interaction qualities at home and at work. Cogn Technol Work. 2014;16(3):405–15. doi:10.1007/s10111-013-0269-4.
16. Rodriguez RG, Pattini A. An online tool to identify white-collar worker profiles in relation to their ICT skills and mental strain. Cogn Technol Work. 2011;13(2):81–91. doi:10.1007/s10111-010-0156-1.
17. Fredrickson BL. The value of positive emotions: the emerging science of positive psychology is coming to understand why it's good to feel good. Am Sci. 2003;91(4):330–35. doi:10.1511/2003.4.330.
18. Moqbel M, Kock N. Unveiling the dark side of social networking sites: personal and work-related consequences of social networking site addiction. Inf Manage. 2018;55(1):109–19. doi:10.1016/j.im.2017.05.001.
19. Davis FD. Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Q. 1989;13(3):319–40. doi:10.2307/249008.
20. Baehr C, Alex-Brown K. Assessing the value of corporate blogs: a social capital perspective. IEEE Trans Prof Commun. 2010;53(4):358–69. doi:10.1109/TPC.2010.2077491.
21. Moqbel M. Understanding workplace adoption of social networking sites: employers' perspective. Stud Bus Econ. 2012;16:37–54.
22. Moqbel M, Nevo S, Kock N. Organizational members' use of social networking sites and job performance: an exploratory study. Inf Technol People. 2013;26(3):240–64. doi:10.1108/ITP-10-2012-0110.
23. Pitt LF, Parent M, Steyn PG, Berthon P, Money A. The social media release as a corporate communication tool for bloggers. IEEE Trans Prof Commun. 2011;54(2):122–32. doi:10.1109/TPC.2011.2121610.
24. Ransbotham S, Kane GC. Membership turnover and collaboration success in online communities: explaining rises and falls from grace in Wikipedia. MIS Q. 2011;35(3):613–27. doi:10.2307/23042799.
25. Fredrickson BL. What good are positive emotions? Rev Gen Psychol. 1998;2(3):300–19. doi:10.1037/1089-2680.2.3.300.
26. Mun YY, Hwang Y. Predicting the use of web-based information systems: self-efficacy, enjoyment, learning goal orientation, and the technology acceptance model. Int J Hum Comput Stud. 2003;59(4):431–49. doi:10.1016/S1071-5819(03)00114-9.
27. Turel O, Serenko A. The benefits and dangers of enjoyment with social networking websites. Eur J Inf Syst. 2012;21(5):512–28. doi:10.1057/ejis.2012.1.

28. Erfani SS, Abedin B, Blount Y. The effect of social network site use on the psychological well-being of cancer patients. J Assoc Inf Sci Technol. 2017;68(5):1308–22. doi:10.1002/asi.23702.
29. Ravindran T, Kuan Y, Chua A, Hoe Lian DG. Antecedents and effects of social network fatigue. J Assoc Inf Sci Technol. 2014;65 (11):2306–20. doi:10.1002/asi.23122.
30. Binnewies C, Sonnentag S, Mojza EJ. Recovery during the weekend and fluctuations in weekly job performance: a week-level study examining intra-individual relationships. J Occup Organ Psychol. 2010;83(2):419–41. doi:10.1348/096317909X418049.
31. Shonin E, Van Gordon W, Dunn TJ, Singh NN, Griffiths MD. Meditation awareness training (MAT) for work-related wellbeing and job performance: a randomised controlled trial. Int J Ment Health Addict. 2014;12(6):806–23. doi:10.1007/s11469-014-9513-2.
32. Conn VS, Hafdahl AR, Cooper PS, Brown LM, Lusk SL. Meta-analysis of workplace physical activity interventions. Am J Prev Med. 2009;37(4):330–39. doi:10.1016/j.amepre.2009.06.008.
33. Müller KW, Dreier M, Beutel ME, Duven E, Giralt S, Wölfling K. A hidden type of internet addiction? Intense and addictive use of social networking sites in adolescents. Comput Human Behav. 2016;55:172–77. doi:10.1016/j.chb.2015.09.007.
34. Nardi BA, Whittaker S, Schwarz H. NetWORKers and their activity in intensional networks. Comput Supported Cooperative Work. 2002;11(1–2):205–42. doi:10.1023/A:1015241914483.
35. Sledgianowski D, Kulviwat S. Using social network sites: the effects of playfulness, critical mass and trust in a hedonic context. J Comput Inf Syst. 2009;49:74–83.
36. Fishbein M, Ajzen I. Belief, attitude, intention, and behavior: An introduction to theory and research. Reading (MA): Addison-Wesley; 1975.
37. Gangadharbatla H. Facebook me: collective self-esteem, need to belong, and internet self-efficacy as predictors of the Igeneration's attitudes toward social networking sites. J Interact Advertising. 2008;8(2):5–15. doi:10.1080/15252019.2008.10722138.
38. Lin KY, Lu HP. Why people use social networking sites: an empirical study integrating network externalities and motivation theory. Comput Human Behav. 2011;27(3):1152–61. doi:10.1016/j.chb.2010.12.009.
39. Deci EL. Intrinsic motivation. New York (NY): Plenum Press; 1975.
40. Beaudry A, Pinsonneault A. The other side of acceptance: studying the direct and indirect effects of emotions on information technology use. MIS Q. 2010;34(4):689–710. doi:10.2307/25750701.
41. Davis FD, Bagozzi R, Warshaw P. Extrinsic and intrinsic motivation to use computers in the workplace. J Appl Soc Psychol. 1992;22(14):1111–32. doi:10.1111/jasp.1992.22.issue-14.
42. Deci EL, Ryan RM. Intrinsic motivation and self-determination in human behavior. New York (NY): Plenum Press; 1985.
43. Naylor JC, Pritchard RD, Ilgen DR. A theory of behavior in organizations. New York (NY): Academic Press; 1980.
44. Vroom VH. Work and motivation. San Francisco (CA): Jossey-Bass Publishers; 1995.
45. Teo TSH, Lim VKG, Lai RYC. Intrinsic and extrinsic motivation in Internet usage. Omega. 1999;27(1):25–37. doi:10.1016/S0305-0483(98)00028-0.
46. Li D, Chua P, Lou H. Understanding individual adoption of instant messaging: an empirical investigation. J Assoc Inf Syst. 2005;6(4):102–29. doi:10.17705/1jais.00066.
47. van der Heijden H. User acceptance of hedonic information systems. MIS Q. 2004;28(4):695–704. doi:10.2307/25148660.
48. Tsai WHS, Men LR. Motivations and antecedents of consumer engagement with brand pages on social networking sites. J Interact Advertising. 2013;13(2):76–87. doi:10.1080/15252019.2013.826549.
49. Lawler EJ, Thye SR, Yoon J. Social exchange and micro social order. Am Sociol Rev. 2008;73(4):519–42. doi:10.1177/000312240807300401.
50. Fredrickson BL, Branigan C. Positive emotions broaden the scope of attention and thought-action repertoires. Cogn Emot. 2005;19 (3):313–32. doi:10.1080/02699930441000238.
51. Rai GS. Organizational commitment among long-term care staff. Adm Soc Work. 2012;36(1):53–66. doi:10.1080/03643107.2010.550671.
52. Isen AM, Johnson MM, Mertz E, Robinson GF. The influence of positive affect on the unusualness of word associations. J Pers Soc Psychol. 1985;48(6):1413. doi:10.1037/0022-3514.48.6.1413.
53. Koch H, Gonzalez E, Leidner D. Bridging the work/life social divide: the emotional response to organizational social networking sites. Eur J Inf Syst. 2012;21(6):699–717. doi:10.1057/ejis.2012.18.
54. Chavez CI, Méndez MJ. Mood, emotion, and affect in group performance: an experiential exercise. Organiz Manage J. 2008;5 (3):153–66. doi:10.1057/omj.2008.18.
55. Chirico F, Salvato C. Knowledge integration and dynamic organizational adaptation in family firms. Fam Bus Rev. 2008;21 (2):169–81. doi:10.1111/j.1741-6248.2008.00117.x.
56. Romani S, Grappi S, Bagozzi RP. Explaining consumer reactions to corporate social responsibility: the role of gratitude and altruistic values. J Bus Ethics. 2012;114:1–14.
57. Rhoades L, Eisenberger R. Perceived organizational support: a review of the literature. J Appl Psychol. 2002;87:698–714.
58. Carless SA. The influence of fit perceptions, equal opportunity policies, and social support network on pre-entry police officer career commitment and intentions to remain. J Crim Justice. 2005;33(4):341–52. doi:10.1016/j.jcrimjus.2005.04.004.
59. Henkin AB, Holliman SL. Urban teacher commitment exploring associations with organizational conflict, support for innovation, and participation. Urban Educ. 2009;44(2):160–80. doi:10.1177/0042085907312548.
60. Meyer JP, Paunonen SV, Gellatly IR, Goffin RD, Jackson DN. Organizational commitment and job performance: it's the nature of the commitment that counts. J Appl Psychol. 1989;74 (1):152–56. doi:10.1037/0021-9010.74.1.152.
61. Igbaria M, Greenhaus JH. The career advancement prospects of managers and professionals: are MIS employees unique? Decis Sci. 1992;23(2):478–99. doi:10.1111/deci.1992.23.issue-2.
62. Findler L, Wind LH, Barak MEM. The challenge of workforce management in a global society. Adm Soc Work. 2007;31 (3):63–94. doi:10.1300/J147v31n03_05.
63. Isen AM, Geva N. The influence of positive affect on acceptable level of risk: the person with a large canoe has a large worry. Organ Behav Hum Decis Process. 1987;39(2):145–54. doi:10.1016/0749-5978(87)90034-3.
64. Derryberry D, Reed MA. Temperament and the self-organization of personality. Dev Psychopathol. 1994;6(4):653–76. doi:10.1017/S0954579400004727.
65. Agarwal R, Karahanna E. Time flies when you're having fun: cognitive absorption and beliefs about information technology usage. MIS Q. 2000;24(4):665–94. doi:10.2307/3250951.
66. Rehman MS. Exploring the impact of human resources management on organizational performance: a study of public sector organizations. J Bus Stud Q. 2011;2:1–16.
67. Rehman MS, Waheed A. An empirical study of impact of job satisfaction on job performance in the public sector organizations. Interdiscip J Contemp Res Bus. 2011;2:167–81.
68. Kock N. Which is the best way to measure job performance: self-perceptions or official supervisor evaluations? Int J e-Collab. 2017b;13:1–9.
69. Martin MA. Bootstrap hypothesis testing for some common statistical problems: a critical evaluation of size and power properties. Comput Stat Data Anal. 2007;51(12):6321–42. doi:10.1016/j.csda.2007.01.020.
70. Rosenthal R, Rosnow RL. Essentials of behavioral research: Methods and data analysis. Boston (MA): McGraw Hill; 2007.
71. Robert CP, Casella G. Monte Carlo statistical methods. New York (NY): Springer; 2010.
72. Cohen J. Statistical power analysis for the behavioral sciences. Hillsdale (NJ): Lawrence Erlbaum; 1988.
73. Kock N, Hadaya P. Minimum sample size estimation in PLS-SEM: the inverse square root and gamma-exponential methods. Inf Syst J (Forthcoming). 2018;28:227–61. doi:10.1111/isj.v28.1.
74. Kock N, Carmona J, Moqbel M. Media naturalness and compensatory adaptation: counterintuitive effects on correct rejections of

deceitful contract clauses. IEEE Trans Prof Commun. 2015;58 (4):381–95. doi:10.1109/TPC.2016.2519318.
75. Lowry PB, Gaskin J. Partial least squares (PLS) structural equation modeling (SEM) for building and testing behavioral causal theory: when to choose it and how to use it. IEEE Trans Prof Commun. 2014;57(2):123–46. doi:10.1109/TPC.2014.2312452.
76. Kock N. WarpPLS 5.0 User Manual. Laredo (TX): ScriptWarp Systems; 2015a.
77. Kock N, Chatelain-Jardón R. Surprise-enhanced and technology-mediated learning: a two-country study. Cogn Technol Work. 2016;18(1):105–19. doi:10.1007/s10111-015-0349-8.
78. Kock N, Moqbel M, Jung Y, Syn T. Do older programmers perform as well as young ones? Exploring the intermediate effects of stress and programming experience. Cognition, Technology & Work; forthcoming. New York, NY: Springer. https://link.springer.com/article/10.1007/s10111-018-0479-x
79. Kock N, Lynn GS. Lateral collinearity and misleading results in variance-based SEM: an illustration and recommendations. J Assoc Inf Syst. 2012;13(7):546–80. doi:10.17705/1jais.
80. Kock N. Using WarpPLS in e-collaboration studies: descriptive statistics, settings, and key analysis results. Int J e-Collab. 2011;7:1–18.
81. Kock N, Verville J. Exploring free questionnaire data with anchor variables: an illustration based on a study of IT in healthcare. Int J Healthcare Inf Syst Inf. 2012;7(1):46–63. doi:10.4018/IJHISI.
82. Kock N. A note on how to conduct a factor-based PLS-SEM analysis. Int J e-Collab. 2015c;11:1–9.
83. Kock N. Structural equation modeling with factors and composites: a comparison of four methods. Int J e-Collab. 2017a;13:1–9.
84. Kock N. Advanced mediating effects tests, multi-group analyses, and measurement model assessments in PLS-based SEM. Int J e-Collab. 2014;10:1–13.
85. Hair JF, Black WC, Babin BJ, Anderson RE. Multivariate data analysis. Upper Saddle River (NJ): Prentice Hall; 2009.
86. Fornell C, Larcker DF. Evaluating structural equation models with unobservable variables and measurement error. J Mark Res. 1981;18(1):39–50. doi:10.1177/002224378101800104.
87. Nunnaly J. Psychometric theory. New York (NY): McGraw Hill; 1978.
88. Nunnally JC, Bernstein IH. Psychometric theory. New York (NY): McGraw-Hill; 1994.
89. Kock N. Common method bias in PLS-SEM: A full collinearity assessment approach. Laredo (TX): ScriptWarp Systems; 2015b.
90. Maksum A, Hamid R, Muda I. The impact of treasurer's experience and knowledge on the effectiveness of the administration and preparation of the accountability reporting system in North Sumatera. Asian J Finance Accounting. 2014;6 (2):301–18. doi:10.5296/ajfa.v6i2.6341.
91. Neira B, Corey J, Barber BL. Social networking site use: linked to adolescents' social self-concept, self-esteem, and depressed mood. Aust J Psychol. 2014;66(1):56–64. doi:10.1111/ajpy.12034.
92. Kasabov E. Unknown, surprising, and economically significant: the realities of electronic word of mouth in Chinese social networking sites. J Bus Res. 2016;69(2):642–52. doi:10.1016/j.jbusres.2015.08.036.
93. Wang JL, Jackson LA, Gaskin J, Wang HZ. The effects of social networking site (SNS) use on college students' friendship and well-being. Comput Human Behav. 2014;37(1):229–36. doi:10.1016/j.chb.2014.04.051.

Appendix A: Measurement instrument

The question-statements below were used for data collection related to the indicators of the latent variables. Most were answered on Likert-type scales going from "1: Strongly disagree" to "5: Strongly agree." The measurement scale for the amount of time per day using social network sites (SNSU1) employed a similar scale: "1: Less than 10 minutes," "2: 10–30 minutes," "3: 31–60 minutes," "4: 1–2 hours," "5: 2–3 hours," and "6: More than 3 hours." The measurement for job performance (PERF), based on self-reported performance indicators, was validated against actual performance evaluation scores received from immediate supervisors.

Usefulness (USEF)
- USEF1: The use of social networking tools such as Facebook helps me be more useful in my job.
- USEF2: The use of social networking tools helps me be more efficient in my job.
- USEF3: The use of social networking tools helps me be more productive.
- USEF4. The use of social networking tools helps increase my work performance.

Ease of use (EOU)
- EOU1: Social networking tool/s are easy to use.
- EOU2: I learned to use social networking tool/s quickly.
- EOU3: The use of social networking tool/s is easy.

Enjoyment (ENJ)
- ENJ1: I enjoy using social networking tool/s.
- ENJ2: I have fun using social networking tool/s.
- ENJ3: I found using social networking tool/s to be enjoyable.

Social networking site use (SNSU)
- SNSU1: In the past week, on average, approximately how much time per day have you spent on social network sites' accounts?
- SNSU2: My social networking sites' account/s are/is a part of my everyday activity.
- SNSU3: I am proud to tell people I'm on social networking sites such as Facebook.
- SNSU4: Social networking sites have become part of my daily routine.
- SNSU5: I feel out of touch when I haven't logged onto social networking sites for a while.
- SNSU6: I feel I am part of the social networking sites community.

Organizational commitment (COM)
- COM1: I would be very happy to spend the rest of my career with this organization.
- COM2: I feel a strong sense of belonging to my organization.
- COM3: I feel "emotionally attached" to this organization.
- COM4: Even if it were to my advantage, I do not feel it would be right to leave my organization.
- COM5: I would feel guilty if I left my organization now.

Job satisfaction (SAT)
- SAT1: I am very satisfied with my current job.
- SAT2: My present job gives me internal satisfaction.
- SAT3: My job gives me a sense of fulfillment.
- SAT4: I am very pleased with my current job.
- SAT5: I will recommend this job to a friend if it is advertised/announced.

Job performance (PERF)
- PERF1: My performance in my current job is excellent.
- PERF2: I am very satisfied with my performance in my current job.
- PERF3: I am very happy with my performance in my current job.

It is important to note that the latent variables were measured in a reflective way, whereby a high level of indicator redundancy is to be expected.[84] This leads to question-statements that, while sounding quite similar, are not indistinguishable from one another. In other words, while indicators are expected to be redundant with other indicators associated with the same latent variable, and to have the same general meaning, they are not expected to be collinear. This can be tested by calculating indicator variance inflation factors and comparing then against the collinearity threshold of 10.[76] We did this, and all indicator variance inflation factors were found to be well below 10.

As noted above, the measurement scale for the amount of time per day using social network sites (SNSU1) was based on gradually increasing intervals from "Less than 10 minutes" to "More than 3 hours". We decide to measure this indicator in such a fashion based on our past experience conducting research on social networking site use, where the use of a corresponding ratio scale led to an excessively skewed distribution. Readers are referred to Appendix B, where they will see that the SNSU1 indicator performed as expected, and similarly to other indicators associated with the same latent variable.

The measurement of job performance (PERF) was validated through two steps. In the first step, we created two models containing two variables, PERFself and PERFsupv, and conducted linear and nonlinear analyses. In the second step, the indicators of these two variables were combined into one latent variable, for which validity and reliability assessments were conducted. This two-step validation process follows the framework proposed by Kock,[68] where each of the steps is discussed in detail.

Appendix B: Combined loadings and cross-loadings

Combined loadings and cross-loadings, obtained from a confirmatory factor analysis, are shown in Table B.1. Loadings are shown in shaded cells, and cross-loadings in non-shaded cells. All loadings are significant at the P < .001 level.

Table B.1. Combined loadings and cross-loadings.

	USEF	EOU	ENJ	SNSU	COM	SAT	PERF
USEF1	.883	.116	−.057	−.008	.066	.089	−.154
USEF2	.938	−.087	.054	−.046	−.056	.012	.081
USEF3	.911	.004	−.004	−.016	.028	−.104	.059
USEF4	.922	−.034	−.033	.022	−.074	.016	.043
EOU1	.043	.914	.056	−.035	−.003	.013	.020
EOU2	−.031	.903	−.154	.087	−.033	−.021	−.080
EOU3	−.018	.952	−.018	−.055	.058	.020	−.033
ENJ1	.000	.033	.944	.000	−.083	.093	−.026
ENJ2	.012	−.079	.965	−.026	.041	−.085	.045
ENJ3	−.037	−.038	.962	−.025	.005	.006	−.015
SNUS1	−.061	.094	−.047	.818	−.037	−.062	−.035
SNUS2	.015	−.154	.005	.758	−.006	.006	.133
SNUS3	.032	.126	−.160	.846	−.030	.014	−.024
SNUS4	−.016	.006	−.098	.852	.020	.008	.029
SNUS5	−.144	−.054	−.033	.837	.093	−.152	.020
SNUS6	.106	−.048	.231	.759	−.102	.187	−.076
COM1	.047	.261	−.383	.121	.791	.095	−.174
COM2	−.051	−.105	.158	.007	.835	.067	.038
COM3	−.011	−.061	.016	.025	.835	−.211	.065
COM4	−.050	−.055	.148	−.050	.759	−.219	.013
COM5	.000	.014	−.030	−.159	.765	−.095	−.094
SAT1	−.001	−.096	.182	−.028	−.143	.880	−.002
SAT2	.000	−.020	−.016	.008	.050	.935	.015
SAT3	−.004	.069	−.090	−.019	.025	.930	−.059
SAT4	−.027	−.023	−.023	.046	−.016	.937	.032
SAT5	.050	.091	−.029	−.027	−.205	.797	−.054
PERF1	.081	.183	−.181	−.033	.128	−.083	.885
PERF2	−.029	−.140	.112	.044	−.143	.020	.955
PERF3	−.016	−.116	.061	.009	−.048	.016	.951

USEF = usefulness; EOU = ease of use; ENJ = enjoyment; SNSU = social networking site use; COM = organizational commitment; SAT = job satisfaction; PERF = job performance.

Appendix C: Correlations among latent variables and coefficients

Correlations among latent variables and square roots of their average variances extracted (in shaded cells) are shown at the top part of Table C.1. Square roots of average variances extracted are shown in shaded cells. Several latent variable coefficients and test results are provided at the bottom part of Table C.1.

Table C.1. Correlations among latent variables and various coefficients.

	USEF	EOU	ENJ	SNSU	COM	SAT	PERF
USEF	.914	.176	.387	.410	.188	.045	−.050
EOU	.176	.923	.654	.242	.237	.199	.488
ENJ	.387	.654	.957	.502	.357	.233	.284
SNSU	.410	.242	.502	.813	.207	.100	.049
COM	.188	.237	.357	.207	.798	.747	.493
SAT	.045	.199	.233	.100	.747	.898	.475
PERF	−.050	.488	.284	.049	.493	.475	.931
Composite reliability	.953	.945	.971	.921	.897	.954	.951
Cronbach's alpha	.934	.914	.955	.897	.859	.939	.923
Q^2	-	-	.521	.430	.577	.052	.344
Full collinearity VIF	1.387	2.329	2.699	1.650	2.911	3.115	2.029
Skewness	.150	−.952	−.764	−.392	−.478	−1.090	−1.031
Excess kurtosis	−.811	1.261	.865	−.393	.072	1.310	2.264
Normal (Jarque–Bera)?	Yes	No	No	Yes	No	No	No
Normal (robust Jarque–Bera)?	Yes	No	No	Yes	No	No	No

VIF = variance inflation factor; USEF = usefulness; EOU = ease of use; ENJ = enjoyment; SNSU = social networking site use; COM = organizational commitment; SAT = job satisfaction; PERF = job performance.