An Examination of the Relationship between Culture and Cyberloafing Using the Hofstede Model

Joseph C. Ugrin, John M. Pearson & Shane M. Nickle

Published online: 01 Feb 2018.

Submit your article to this journal

Article views: 340

View Crossmark data

Routledge
Taylor & Francis Group

An Examination of the Relationship between Culture and Cyberloafing Using the Hofstede Model

Joseph C. Ugrin[a], John M. Pearson[b], and Shane M. Nickle[a]

[a]Department of Accounting, Kansas State University, Manhattan, Kansas, USA; [b]Department of Management, Southern Illinois University Carbondale, Carbondale, Illinois, USA

ABSTRACT

This article explores the relationship between culture and cyberloafing. A survey measuring individuals' propensity to engage in cyberloafing in the workplace was conducted with people from 17 countries representing a wide range of cultures. Tests were performed to explore relationships between participants' propensity to cyberloaf and the cultural dimension ratings for their individual countries of origin. The results show that some types of cyberloafing activity relate significantly with culture. This has potential implications for multinational organizations. Employees from different cultures may have different workplace tendencies.

Introduction

The use of computer resources for personal purposes is common in today's workplace. Employees use computer resources to engage in activities like online shopping, personal investment management, social networking, e-mailing, and viewing online media (Blanchard and Henle 2008; Ugrin and Pearson 2013). When the use of computer resources for personal purposes becomes excessive, it becomes cyberloafing.[1]

Although employees can loaf in a number of ways in the workplace (Block 2001), the Internet seems to exacerbate the loafing problem due to ease of access, perceived privacy, and the volume and nature of activities that can be performed over the Internet that are not otherwise available (Phillips 2006). Some have suggested that a moderate amount of cyberloafing can have positive implications in the workplace by reducing stress and adding variety to daily routines (Lim and Chen 2009) but also tends to correlate with reduced workplace involvement (Liberman et al. 2011). Research suggests that most of an employee's Internet usage at work is dedicated to cyberloafing (Lim and Teo 2005; Whitty and Carr 2006; Ugrin and Pearson 2013). Excessive cyberloafing can also result in lost time and reduced productivity and organizational performance (George 1996), which should be of concern to the business community, particularly

one that becomes more internationally diverse. Despite the evidence that cyberloafing is excessive and can be detrimental to firms, workers commonly view cyberloafing to be a no-harm activity and believe it does not have a significant impact on organizational performance (Ugrin and Pearson 2013).

A number of factors have been shown to antecede cyberloafing and people's ability to self-regulate their cyberloafing activity including organizational factors, perceived workplace norms, and individual factors including demographics, personal traits, and attitudes (e.g., Ugrin, Pearson, and Odom 2008a, 2008b; Vitak, Crouse, and LaRose 2011; Ozler and Polat 2012; Sheikh, Atashgah, and Adibzadegan 2015). One factor that has not been studied is *national culture*. Culture has been correlated with other types of loafing, non-productive workplace behaviors, and lack of organizational commitment and we suspect it will also contribute to peoples' propensity to cyberloaf. Social loafing, for example, has been shown to be more prevalent in western (Karau and Williams 1993) and individualistic cultures (Early 1989). An employee's organizational commitment has also been shown to vary with their culture's level of individualism and power distance (Fisher and Mansell 2009). Although much can be gleaned from the existing literature in similar contexts and considering cyberloafing is a counterproductive workplace behavior much like social loafing (Spector et al. 2005), cyberloafing has distinct elements that make it different than other types of loafing such as perceived privacy, ease of access, and social norms. All of which may lead to unique behaviors with this type of loafing.

This article tests if cyberloafing activity differs across cultures. The research question is tested using a survey of individuals from a number of different countries including Japan, Singapore, India, China, United States, and others. Individuals from each country are separated using the Hofstede Model of Cultural Dimensions, and scored on the model's six dimensions: power distance, individualism versus collectivism, uncertainty avoidance, masculinity versus femininity, short-term versus long-term orientation, and indulgence versus restraint, based on their country of origin. The authors also measure participants' propensity to engage in a number of common types of cyberloafing, and test for relationships between propensity to cyberloaf and the cultural dimension ratings for participants.

The remainder of this article is formatted as follows. First, literature on cyberloafing and culture is examined. The authors then propose a set of hypotheses, discuss the methodology, and present the results. Finally, limitations and implications of the research are discussed and conclusions are drawn.

Background and hypotheses development

Cyberloafing

Internet technologies have altered the workplace by creating a new medium for businesses to operate and for employees to do their work (Whitty and Carr

2006). The Internet has removed barriers of time and space from the workplace, potentially making employees more productive. However, it also creates an opportunity for employees misuse of company time, commonly called cyberloafing (Urbaczewski and Jessup 2002; Lim and Teo 2005; Ugrin and Pearson 2013). Use of the Internet for cyberloafing is common (Blanchard and Henle 2008), but its effects on firms is debatable (Lim and Chen 2012). Regardless, the literature has shown cyberloafing to be pervasive. Research has shown that workers with access to the Internet lose 30% to 40% of their productive capacity due to cyberloafing (Verton 2002), while other research has shown that cyberloafing accounts for, on average, 50% to 60% of employees time on-line (Davis 2001; Greengard, 2012; Griffiths, 2003). Other research has shown that cyberloafing accounts for employees wasting up to 2.5 hours per day in some cases (Mills et al. 2001).

A number of factors have been shown to antecede cyberloafing and people's ability to self-regulate their cyberloafing activity including organizational factors; perceived workplace norms; and individual factors including demographics, personal traits, and attitudes. For example, Ugrin, Pearson, and Odom (2008a) found that young managers are more prone to cyberloafing as they have Internet access and perceived privacy. Vitak, Crouse, and LaRose (2011) found age and gender to be correlated with cyberloafing activity. Sheikh, Atashgah, and Adibzadegan (2015) found that cyberloafing is influenced by employees' attitudes, social norms, and privacy. In addition, factors such as employee boredom, engagement, and lack of self-control can also lead to more cyberloafing (Ugrin, Pearson, and Odom 2008b; Mercado, Giordano, and Dilchert 2017). Workplace attitudes correlate with cyberloafing (Liberman et al. 2011) as do attitudes about opportunities (Mercado, Giordano, and Dilchert 2017), among other things (Ozler and Polat 2012). As a means of reducing cyberloafing, research has found that potential sanctions and social stigmas that may arise from being labeled a cyberloafer can be effective deterrents (Ugrin and Pearson 2013).

Culture and the relationship with cyberloafing

Culture is an important factor in human behavior and cultural values play a critical role in influencing judgement and decision-making (David and Linda 2013). Geert Hofstede (1980) developed the most commonly used framework for comprehending culture and its link to people's behavior, the Hofstede Model of Cultural Dimensions. Hofstede developed his framework while working at IBM in the late 1970s. He formulated the four-dimensional model of culture after examining the workplace behaviors and attitudes of over 100,000 employees in 66 countries. He defines national culture as " … the collective programming of the mind which distinguishes the members of one group or category of people from another" (Hofstede, Hofstede, and

Minkov 1991, 5). The original model differentiated cultures based on power distance, individualism versus collectivism, masculinity versus femininity, and uncertainty avoidance. Hofstede has since added three more dimensions: long-term versus short-term orientation, indulgence versus restraint, and monumentalism versus self-effacement (Hofstede, Hofstede, and Minkov 2010). Each dimension used in this study and the expected relationship between each dimension and cyberloafing are discussed in more detail below.[2]

Power distance

Power distance can be defined as the extent in which the less powerful members of a society accept and expect that the power within the society, its organizations, its groups, and its institutions, be inequitably distributed. It is a measure of how a society copes with inequalities among and between people. Hofstede concluded that people in societies exhibiting a large degree of power distance accept a hierarchical order in which everybody has a place, which needs no further justification. He also concluded that in societies with low power distance, people strive to equalize the distribution of power and demand justification for inequalities of power (Hofstede 2001).

Literature has shown that employees commonly engage in activities that equalize power, including cyberloafing. For example, in a study examining the relationship between organizational justice and cyberloafing, Lim (2002) set up an experiment to discover if individuals that perceive some form of injustice by their employer are more likely to cyberloaf. Lim separated organizational justice into three different types: (a) distributive justice, which refers to fairness of outcomes; (b) procedural justice, which refers to the perceived fairness of the process used to determine outcome allocation; and (c) interactional justice, which refers to the quality of interpersonal treatment. Lim concluded that employees who perceive an imbalance in the relationship with their employer are motivated to use what Sykes and Matza (1957) described as "neutralization techniques," to justify their engagement in deviant behaviors (Lim 2002).[3] Lim found distributive justice, procedural justice, and interactional justice to be significantly and negatively associated with the *metaphor of the ledger*, a technique for neutralizing injustice. Metaphor of the ledger proposes that people feel they are "entitled to indulge in deviant behaviors insofar as they have accrued good credits in the past that can be cashed in later to excuse misbehaviors they engaged in" (Lim 2002, 210). Lim also found that neutralization through the metaphor of the ledger has a significantly positive correlation with an employee's tendency to cyberloaf, meaning that when employees perceived some form of injustice within their job, one way to restore balance is through cyberloafing.

Consistent with Hofstede's conclusion that individuals from low power distance cultures strive to equalize power and Lim's findings that

cyberloafing is one way employees neutralize power, we hypothesize that individuals from low power distance cultures will be more likely to engage in cyberloafing.

> H1:   Individuals from low power distance cultures will be more likely to engage in cyberloafing than individuals from high power distance cultures.

Individualism versus collectivism

Hofstede defines individualistic cultures as " … a society in which the ties between individuals are loose: everyone is expected to look after himself/herself and his/her immediate family only." He further defines a collectivist culture as "a society in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetimes continue to protect them in exchange for unquestioning loyalty" (Hofstede 2001, 210). This individualist versus collectivist dimension focuses on whether peoples' self-image is defined as "I" or "we."

Research has shown a relationship between individualism and unethical behavior. For example, in the field of accounting, Smith and Hume (2005) conducted an experiment using accounting professionals to test if Hofstede's cultural dimensions of individualism and power distance relate to ethical decision making. They found that accountants in individualistic societies are more likely to adhere to personal beliefs even if the results of their actions may be detrimental to the company. The findings also showed that accountants in collectivistic societies are more likely to bypass their own beliefs for the benefit of the organization. Smith and Hume (2005) concluded that when individuals from collectivist cultures strongly feel they must follow a course of action that is beneficial to the company, they might not view their actions as a compromise to their own beliefs. In a study out of the area of consumer ethics, Swaidan (2012) examined how the level of individualism/collectivism an individual exhibits affects how likely that individual is to make questionable choices. Swaidan hypothesized and found that individuals who score high on the collectivism dimension reject questionable activities more than individuals who score low on the same scale.

Both of those studies suggest that individuals who tend to be more individualistic or are part of individualist societies tend to be more tolerant of questionable activities than those who are collectivist (Smith and Hume 2005; Swaidan 2012). Although cyberloafing is commonly viewed to be acceptable, there is certainly an illicit element through potential detriment to one's company. Employees from individualist cultures are more likely to overlook that possibility because of their focus on their own personal gratification. Thus, we expect some degree of difference in the cyberloafing activities of individuals from individualist and collectivist cultures. The authors

hypothesize (H2) that participants from more individualist cultures will be more likely to engage in cyberloafing.

> H2:   Individuals from individualist cultures will be more likely to engage in cyberloafing than individuals from collectivist cultures.

Masculinity versus femininity

Masculine societies value success, assertiveness, competition, material rewards, money, and work. Feminine cultures are embodied by concern for others, cooperation, cultural preservation, and quality of life (Hofstede 2001). Theoretically, we expect that cyberloafing will be less likely to occur in masculine cultures as it may impede on performance. In more feminine cultures that place a higher value on quality of life, the use of computer resources for personal purposes at work will be more acceptable and used as a means of balancing work and life, and we expect to see more cyberloafing behavior.

Some support for our argument can be conjectured from Swaidan's (2012) research. Swaidan found that individuals who scored high in a masculinity scale are more likely to reject no-harm questionable activities more than individuals who score more feminine and are less likely to reject and potentially engage in no-harm questionable activities. Swaidan's conclusion was that 'no-harm' activities were not perceived to be wrong by individuals that are more feminine. This has significant implications for cyberloafing as literature has shown that individuals perceive various types of cyberloafing activities to be more or less abusive (wrong) than others and those perceptions influence behavior and the effect of deterrence mechanisms on the behavior (Ugrin and Pearson 2013).

The authors hypothesize (H3) that participants from more feminine cultures will be more likely to engage in cyberloafing.

> H3:   Individuals from feminine cultures will be more likely to engage in cyberloafing than individuals from masculine cultures.

Uncertainty avoidance

Uncertainty avoidance measures how individuals within a group or society are affected by uncertainty. It measures a culture's preference for strict rules. Countries that have a high level of uncertainty avoidance prefer rigid laws and codes of conduct and have little tolerance for nonconformity. These countries tend to have long traditions, have little diversity, and are slow to change. Countries that have a low level of uncertainty avoidance tend to have looser laws and codes of ethics and are more comfortable with risk taking and nonconformity. These countries tend to be more recently established and have a greater degree of diversity (Hofstede 2001).

Salter and Niswander (1995) found that individuals from higher uncertainty avoidance cultures are less likely to self-regulate. They rely more on legal controls or strongly held cultural beliefs. Swaidan (2012) showed that individuals who score high on the uncertainty avoidance scale reject illegal activities more than individuals who score low in uncertainty avoidance but are more likely to engage in *no-harm* questionable activities. Cyberloafing is commonly viewed to be a no-harm activity (Ugrin and Pearson 2013). Individuals from high uncertainty avoidance cultures will be less inclined to challenge that belief. Thus, it is expected that individuals from high uncertainty avoidance cultures will be more likely to have engaged in cyberloafing.

H4: Individuals from cultures with high uncertainty avoidance will be more likely to engage in cyberloafing than individuals from cultures with low uncertainty avoidance.

Long-term versus short-term orientation

Short-term orientation (STO) refers to whether individuals of a society value and place more emphasis on the past or present and focus on short-term goals whereas individuals from societies with a long-term orientation (LTO) tend to look to the future and focus on long-term goals. Societies that are more short-term oriented value respect for traditions and are wary of change. Societies that are more long-term oriented value thrift, perseverance towards long-term goals, and a willingness to adapt (Hofstede 2001).

In a somewhat related study, Nevins, Bearden, and Money (2007) set out to see if there is a relationship between individuals' orientation (short-term or long-term) and their work ethic. Nevins, Bearden, and Money (2007) found that individuals who display a LTO, are more likely to have a better work ethic than those that do not. Similarly, the authors propose that individuals with a LTO will be less willing to take time away from normal workplace activities. Even though cyberloafing is typically considered a no-harm activity, it likely does not help the worker and the worker's company achieve long-term goals. Thus, it is expected that individuals with a LTO will be less likely to cyberloaf than individuals with a STO.

H5: Individuals from cultures with a short-term orientation will be more likely to engage in cyberloafing than individuals from cultures with a long-term orientation.

Indulgence versus restraint

Indulgent societies allow individuals to fulfill needs and hedonistic desires freely, whereas societies steeped in restraint tend to be restrictive (Hofstede, Hofstede, and Minkov 2010). By definition, cyberloafing is an indulgence. It is also an indulgence that can be hard to control and tends to become

habitual as individuals who have cyberloafed in the past tend to loaf more in the future (Woon and Pee 2004; Lee, Lim, and Wong 2005; Ugrin, Pearson, and Odom 2008b). There is little research on the difference between individuals from indulgent societies or those steeped in restraint but it can be expected that individuals from indulgent cultures will be more likely to cyberloaf based on the theoretical definition suggested by Hofstede, Hofstede, and Minkov (2010).

H6: Individuals from cultures that emphasize more indulgence will be more likely to engage in cyberloafing than cultures that emphasize more restraint.

Methodology

Survey data capturing workplace Internet usage was collected from 249 individuals, residing in 17 countries, and enrolled in MBA and executive MBA courses. To test the hypotheses, a series of regressions were performed to examine the relationships between the various dimensions of participants' national cultures and participants' reported engagement in common forms of cyberloafing.

Measures

Participants' propensity to engage in various types of cyberloafing were measured by seven 5-point Likert-scaled items. The items state: "*Thinking about my past behavior at work, what most closely reflects how often you do the following (circle one response for each activity): sending and receiving personal e-mail, gaming, online shopping, investment trading, social networking, reading or watching on-line media, or viewing pornography*" (Appendix A). The items aimed to capture participants' prior engagement in the most common types of cyberloafing reported in other studies (e.g., Siau, Nah, and Teng 2002; Ugrin, Pearson, and Odom 2008b; Ugrin and Pearson 2013). General propensity to cyberloaf was measured by compiling responses to the seven items into a composite score. A Cronbach Alpha was computed to test if the seven items can be reliably combined into a composite score. The alpha value for the seven items is .727, indicating the scale has reasonable reliability for use as a composite rating of participants' general propensity to cyberloaf. The composite score was then used to test the relationship between culture and general propensity to cyberloaf and the relationships between culture and specific types of loafing were tested using participants' responses to the individual items.

Culture was measured using the Hofstede Model of Cultural Dimensions and the dimension scores for each participants' country obtained from the country comparisons available on www.hofstede-insights.com (Hofstede Insights 2017). The Hofstede Model of Cultural Dimensions was developed

by Geert Hofstede after collecting and analyzing the workplace behaviors of over 100,000 IBM employees in over 60 countries' data. Hofstede's cultural dimensions have been utilized in thousands of cultural studies since. We operationalized the culture construct by assigning culture scores to participants for each of the six cultural dimensions, based on each participants' country of origin. Participants from the same country would have the same cultural scores.

Participants

As mentioned, data from two groups of participants were collected. The first set of data was provided by a sample of business students and business professionals throughout Asia by way of executive Master of Business Administration (MBA) courses offered in Singapore by a large public US university. A second set of data was collected from MBA students taking a similar course at the University's main campus in the United States. The sampling resulted in 249 usable responses from individuals in 17 countries. MBA students and executive MBA students in particular are adequate participants. Other studies have shown that MBA students are good proxies for business people, managers, and executives (Heuer, Cummings, and Hutabarat, 1999; Ugrin and Odom 2010).

Results

Culture and cyberloafing

The relationships between cyberloafing and culture, hypotheses H1 through H6, were tested using regression analyses.[4] One regression model for each type of cyberloafing and a composite cyberloafing score were analyzed. The results from all regression analyses are summarized in Table 2.[5]

The results from the individual regression analyses of each type of cyberloafing on the cultural dimensions reveal that power distance has a negative relationship with cyberloafing by way of online shopping ($p < .05$). This supports H1 for online shopping, but not other activities. The findings fail to find any significantly *positive* relationships with individualism as predicted, failing to support H2. Individualism has a negative relationship with online shopping ($p < .05$). The findings show that masculinity has a significantly negative relationship with social networking ($p < .05$) and the composite measure of cyberloafing ($p < .05$). These findings provide evidence to support H3. Uncertainty avoidance has a positive relationship with shopping and social networking ($p < .05$), providing support for H4 for those types of cyberloafing. Long-term orientation has a negative relationship with shopping ($p < .05$), providing partial support for H5. Indulgence had a significant relationship with e-mailing ($p < .05$) and a marginally significant relationship with viewing traditional media ($p < .10$) partially supporting H6.

Table 1. Participant demographics.

	Total (_n_) = 249
Gender	
Male	153
Female	96
Age	
18–24	46
25–29	33
30–34	54
35–39	52
40–44	29
45–49	22
50 or older	13

Home Country and Cultural Dimension Scores by Country						
	PD[a]	INDV[b]	MAS[c]	UA[d]	STO[e]	IND[f]	(_n_) = 249
United States	40	91	62	46	26	68	26
France	68	71	43	86	63	48	14
Singapore	74	20	48	8	72	46	132
Japan	54	46	95	92	88	42	6
India	77	48	56	40	51	26	35
Malaysia	100	26	50	36	41	57	14
Australia	36	90	61	51	21	71	3
Philippines	94	32	64	44	27	42	7
China	80	20	66	30	87	24	2
Thailand	64	20	43	64	32	45	2
Bangladesh	80	20	55	60	47	20	2
Indonesia	78	14	46	48	62	38	1
South Africa	49	65	63	49	34	63	1
Saudi Arabia	95	25	60	80	36	52	1
Mexico	81	30	69	82	24	97	1
Nigeria	80	30	60	55	13	84	1
El Salvador	66	19	40	94	20	89	1
Min	36	14	34	8	13	20	
Max	100	91	95	94	88	97	
Mean	71.7	36.6	52.4	28.5	59.1	46.5	
(Std. Dev.)	14.2	24.5	9.1	25.3	18.3	12.5	

[a](PD) Power Distance.
[b](INDV) Individualism.
[c](MAS) Masculinity.
[d](UA) Uncertainty-Avoidance.
[e](STO) STO vs. LTO.
[f](IND) Indulgence.

As mentioned, the composite cyberloafing score that represented participants' overall propensity to cyberloaf was regressed on the six cultural dimensions. Masculinity shows a significantly negative relationship with the composite cyberloafing score suggesting more feminine cultures are associated with more cyberloafing in general ($p < .05$).[6]

Discussion and limitations

The results support our propositions in many respects and suggest that culture has a relationship to cyberloafing behavior. Overall, our

Table 2. Standardized coefficients for regression tests of the relationship between cultural dimensions and cyberloafing.[a,d,e]

Independent Variable	Expected Sign	Gaming Beta	Shopping Beta	Investing Beta	Social Networking Beta	E-mailing Beta	Porn Beta	Media Beta	Cyber-loafing Composite
					Standardized Regression Coefficients[a,d,e]				
(H1) Power Distance	(−)	−.024	−.327[b]	.082	.104	.101	.136	.115	.039
(H2) Individualism	(+)	−.020	−.481[b]	−.062	.070	.204	.027	.051	−.029
(H3) Masculinity	(−)	−.111	−.119	.012	−.205[b]	−.123	.095	−.106	−.136[b]
(H4) Uncertainty-Avoidance	(+)	.075	.204[b]	.012	.213[b]	.156	−.155	.131	.159
(H5) STO vs. LTO	(−)	−.059	−.276[b]	.009	.156	.135	.040	.067	.035
(H6) Indulgence	(+)	.021	.056	.066	.081	.191[b]	.003	.146[c]	.127
Multiple R		.051	.106	.051	.219	.135	.036	.086	.135
Adj. R^2		.019	.076	.019	.193	.106	.003	.056	.106

[a]$N = 249$ for all tests.
[b]$P < .05$.
[c]$P < .10$.
[d]All regressions equations include variables to control for age and gender.
[e]The table represents results for centered data.

findings suggest that individuals from more feminine cultures are more likely to cyberloaf.

To further analyze the relationship between feminine cultures and cyberloafing we draw from the research of Swaidan (2012) and conjecture that individuals in more feminine cultures are more likely to cyberloaf because they view loafing to be less deviant. Evidence is provided to support supposition with an open-ended debriefing item that was given at the end of the survey that asked participants to provide general feedback about their feelings associated with the use of Internet technologies for personal purposes at work (Appendix B). Three raters were used (two of the authors and an independent person) to code the responses as either (1) the participant feels cyberloafing is abusive or (0) the participant feels cyberloafing is not abusive. Examples of responses coded 1 (feels cyberloafing is abusive) are, "As these facilities are provided for work, people should not use them as personal use unless it is required by some special reasons. Especially, during the working hours, people should not use them as personal use," and "In my opinion, if any employee is constantly abusing company resources for personal internet access, this means the employee does not have enough job in hand to do." Examples of responses coded 2 (feels cyberloafing is not abusive) are, "Personal use of computer or internet should not be totally prohibited. It should be allowed subject to cost, privilege, legality of use and time," and "Personal use should be allowed up to a certain limit as long as it does not affect your work." A t-test of mean differences shows that the abusive group comes from more masculine cultures (mean masculinity rating = 60.363; std. dev. = 17.896) and the nonabusive group tends to come from more feminine cultures (mean masculinity rating = 50.500; std. dev. = 8.284; $t = -2.522$, $p < .05$). This provides additional insight into why individuals from more feminine cultures engaged in a greater amount of cyberloafing overall; they do not view it to be abusive.

Taken as a whole, our findings suggest that cyberloafing activities vary across cultures. Considering cyberloafing's potential to affect production and reputation negatively, among other things, a practical point of view would suggest that employers, particularly multinational firms, should be aware of the potential for cyberloafing. Overall, cyberloafing was strongest in feminine cultures. The regression models were particularly strong when examining online shopping and social networking, as online shopping was strongest in low power distant, short-term oriented, and highly uncertain cultures, and social networking was most prevalent in feminine and uncertainty avoidant cultures. Firms might want to consider these propensities when trying to mitigate cyberloafing, crafting policies, and designing deterrence mechanisms. Researchers may want to build on this research by exploring the effects of deterrence in different cultures. A line of research exploring the effects of deterrence mechanisms on cyberloafing currently exists and could be extended.

This study has limitations that should be acknowledged, the first of which is inherent in our survey methodology. Surveys are commonly used to assess behavior but self-reported information can suffer from bias or halo effects as individuals may not be willing to reveal their true behaviors or intentions, particularly in relation to socially unacceptable activities. However, as the current authors and others have shown, cyberloafing is usually viewed to be a no-harm activity and socially acceptable. Thus, it is expected that any bias is limited with, perhaps, the exception of responses related to pornography. Few participants indicated having viewed pornography in the workplace. The most effective way to mitigate that limitation would be to observe actual behavior. Secondly, the Hofstede model has been criticized because it assumes some degree of heterogeneity among people from a particular country, which may not be true for countries with significant subgroups. The model has also been criticized because it was initially developed by examining employees at IBM, and some argue that IBM's organizational culture could have influenced results when Hofstede developed the model. Some suggest the model is too parsimonious and national culture is more complex (McSweeney 2002). However, others have revisited those typical critiques and have found little evidence to suggest IBM's organizational culture is confounding results, and they have argued that the parsimony of the model is an advantage (Williamson 2002). The third limitation of this study is the authors' attribution of the country level cultural ratings to individual participants and reliance on Hofstede's assertion that culture is collective and consistent. There is a potential that the country level ratings are not representative of all individuals, particularly in a small sample where the power of culturally based relationships is diminished (Taras, Kirkman, and Steel 2010). The final limitation is that our sample size is relatively small. Considering the small sample size, post-hoc tests of statistical power using GPower 3.1 for multiple regressions using the results from regression on the composite cyberloafing score were performed. The authors computed power using effect size (F^2) = .156, alpha = 0.05, eight predictors (six cultures, gender, and age), and a sample size of 249. The resultant power is >.80. Cohen (1988) suggests that research should have power of at least .8 or an 80% probability of detecting an effect when an effect is there and less than a 20% probability of a type II error. Even though the sample size is small, there is strong statistical power.

Future research

Future researchers could test the authors' observations more robustly by testing the bounds of central tendencies assumed by this study and most cultural studies. Researchers can do so by examining cultural factors by individual. Researchers could also break countries into smaller groupings as large countries may have distinct subgroups. Researchers may also want to test the

effects of corporate culture and the effects of globalism and diversity, which may blur the cultural characteristics of multinational companies. Future researchers may want to explore how to mitigate cultural effects on cyberloafing. Researchers could use experimental and quasi-experimental methods to test how deterrence mechanisms and acceptable use policies affect cyberloafing activities in different cultures. Researchers could also test if the implementation of such mechanisms influence employee morale differently across cultures.

Conclusion

In conclusion, this study adds to the conversations on cyberloafing and national culture. Cyberloafing is a worldwide phenomenon and the findings show that its pervasiveness can at least, in part, be attributed to national culture. This finding is potentially important to firms across the globe and future researchers. The finding that culture does impact a nonproductive workplace behavior such as cyberloafing suggests that organizations may have to provide different training programs or sanctions depending on the cultures in which that organization operates. Firms should recognize that "one size does not fit all."

Notes

1. Other names for cyberloafing in the literature are cyberslacking, non-work-related computing or information systems misuse.
2. Country data for the monumentalism versus self-effacement dimension is not currently available and is not used in this study.
3. Lim (2002) states that cyberloafing constitutes an unproductive use of time because it detracts employees from carrying out and completing their main job duties and therefore can be considered a deviant workplace activity for the purpose of the study.
4. Structural equation modeling was not used because of limited sample size, which would result in higher beta error. McQuitty (2004) suggests at least 10 participants per free parameter or a minimum of 200 participants for SEM use.
5. The raw data for the exogenous variables (the cultural dimensions) suffered from collinearity. The raw data were "centered" to reduce collinearity following the procedure outlined in Aiken and West (1991). The centered data for the cultural dimensions were used in all tests.
6. Results are not significantly different when excluding data from countries with only one or two responses and when excluding data from countries with less than 14 observations. Thus, all tests of all data are included in the analyses.

References

Aiken, L., and S. West. 1991. *Multiple regression: Testing and interpreting interactions.* Newbury Park, CA: Sage.

Blanchard, A., and C. Henle. 2008. Correlates of different forms of cyberloafing: The role of norms and external locus of control. *Computers in Human Behavior* 24:1067–84. doi:10.1016/j.chb.2007.03.008.

Block, W. 2001. Cyberslacking, business ethics and managerial economics. *Journal of Business Ethics* 33 (3):225–32.

Cohen, J. 1988. *Statistical power analysis for the behavioral sciences*. 2nd ed. Hillsdale, NJ: Earlbaum.

David, M., and J. Linda. 2013. *Culture and psychology*. 5th ed. Belmont, CA: Wadsworth Cengage Learning.

Davis, R. 2001. Cyberslacking: Internet abuse in the workplace. http://www.internetaddiction.ca/cyberslacking.htm (accessed June 1, 2013).

Early, C. 1989. Social loafing and collectivism: A comparison of the United States and the People's Republic of China. *Administrative Science Quarterly* 34 (4):565–81.

Fisher, R., and A. Mansell. 2009. Commitment across cultures: A meta-analytical approach. *Journal of International Business Studies* 40 (8):1339–58. doi:10.1057/jibs.2009.14.

George, J. 1996. Computer-based monitoring: Common perceptions and empirical results. *MIS Quarterly* 20 (9):459–80. doi:10.2307/249564.

Griffiths, M. 2003. Internet abuse in the workplace: Issues and concerns for employers and employment counselors. *Journal of Employment Counseling* 40:87–96.

Greengard, S. 2012. The high cost of cyberslacking Workforce. 12:22–24.

Heuer, M., J. Cummings, and W. Hutabarat. 1999. Cultural stability or change among managers in Indonesia? *Journal of International Business Studies* 30 (3):599–10. doi:10.1057/palgrave.jibs.8490085.

Hofstede, G. 1980. *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage Publications.

Hofstede, G. 2001. *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. 2nd Edition, Thousand Oaks, CA: Sage Publications.

Hofstede, G., G. Hofstede, and M. Minkov. 1991. *Cultures and organizations: Software of the mind intercultural cooperation and its importance for survival*. New York, NY: McGraw-Hill.

Hofstede, G., G. Hofstede, and M. Minkov. 2010. *Cultures and organizations: Software of the mind intercultural cooperation and its importance for survival*. 3rd ed. New York, NY: McGraw-Hill.

Hofstede Insights. 2017. The Hofstede Center. https://www.hofstede-insights.com. (accessed November 16, 2017).

Karau, S., and K. Williams. 1993. Social loafing: A meta-analytic review and theoretical integration. *Journal of Personality and Social Psychology* 65 (4):681–706. doi:10.1037//0022-3514.65.4.681.

Lee, O., K. Lim, and W. Wong. 2005. Why employees do non-work related computing an exploratory investigation through multiple theoretical perspectives. Paper presented at the 35th Hawaii International Conference on System Sciences, Big Island, HI, USA, January 3–6.

Liberman, B., Seidman, G., McKenna K., and Buffardi, L. 2011. Employee job attitudes and organizational characteristics as predictors of cyberloafing. *Computers in Human Behavior* 27:2192–99. doi:10.1016/j.chb.2011.06.015.

Lim, V. 2002. The IT way of loafing on the job: Cyberloafing, neutralizing and organizational justice. *Journal of Organizational Behavior* 23:675–94. doi:10.1002/job.161.

Lim, V., and D. Chen. 2009. Cyberloafing at the workplace: Gain or drain? *Behaviour and Information Technology* 31:1–11.

Lim, V., and T. Teo. 2005. Prevalence, perceived seriousness, justification and regulation of cyberloafing in Singapore: An exploratory study. *Information and Management* 42: 1081–83. doi:10.1016/j.im.2004.12.002.

Lim, V. K. G., and D. J. Q. Chen. 2012. Cyberloafing at the Workplace: Gain or Drain on Work? *Behaviour & Information Technology* 31:343–353.

McQuitty, S. 2004. Statistical power and structural equation models in business research. *Journal of Business Research* 57 (2):175–83. doi:10.1016/s0148-2963(01)00301-0.

McSweeney, B. 2002. Hofstede's model of national cultural differences and their consequences: A triumph of faith—A failure of analysis. *Human Relations* 55 (1):89–118. doi:10.1177/0018726702551004.

Mercado, B., C. Giordano, and S. Dilchert. 2017. A meta-analytic investigation of cyberloafing. *Career Development International* 22 (5):546–64. doi:10.1108/cdi-08-2017-0142.

Mills, J. E., Hu, B., Beldona S., and Clay, J. 2001. Cyberslacking! A liability issue for wired workplaces Cornell Hotel and Restaurant Administration Quarterly. 42:34–47.

Nevins, J., W. Bearden, and B. Money. 2007. Ethical values and long-term orientation. *Journal of Business Ethics* 71:261–74. doi:10.1007/s10551-006-9138-x.

Ozler, D., and G. Polat. 2012. Cyberloafing phenomenon in organizations: Determinants and impacts. *International Journal of eBusiness and eGovernment Studies* 4:2.

Phillips, J. 2006. The psychology of Internet use and misuse. *Advances in Management Information Systems* 7:41–62.

Salter, S., and F. Niswander. 1995. Cultural influence on the development of accounting systems internationally: A test of Gray's (1988) theory. *Journal of International Business Studies* 26 (2):379. doi:10.1057/palgrave.jibs.8490179.

Sheikh, A., M. Atashgah, and M. Adibzadegan. 2015. The antecedents of cyberloafing: A case study in an Iranian copper industry. *Computers in Human Behavior* 51:172–79. doi:10.1016/j.chb.2015.04.042.

Siau, K., F. Nah, and L. Teng. 2002. Acceptable Internet use policy. *Communications of the ACM* 45 (1):75–79. doi:10.1145/502269.502302.

Smith, A., and E. Hume. 2005. Linking culture and ethics: A comparison of accountants' ethical belief systems in the individualism/collectivism and power distance contexts. *Journal of Business Ethics* 62:209–20. doi:10.1007/s10551-005-4773-1.

Spector, P., L. Penney, K. Bruursema, A. Goh, and S. Kessler. 2005. The dimensionality of counterproductivity: Are all counterproductive behaviours created equal? *Journal of Vocational Behavior* 68:446–60. doi:10.1016/j.jvb.2005.10.005.

Swaidan, Z. 2012. Culture and consumer ethics. *Journal of Business Ethics* 108:201–12. doi:10.1007/s10551-011-1070-z.

Sykes, G., and D. Matza. 1957. Techniques of neutralization: A theory of delinquency. *American Sociological Review* 22:664–70. doi:10.2307/2089195.

Taras, V., B. Kirkman, and P. Steel. 2010. Examining the impact of culture's consequences: A three-decade, multilevel, meta-analytic review of Hofstede's cultural value dimensions. *Journal of Applied Psychology* 95:405–39.

Ugrin, J., and M. Odom. 2010. Exploring the Sarbanes-Oxley act and intentions to commit financial statement fraud: A general deterrence perspective. *Journal of Accounting and Public Policy* 29 (5):439–58. doi:10.1016/j.jaccpubpol.2010.06.006.

Ugrin, J., and J. Pearson. 2013. The effects of sanctions and stigmas on cyberloafing. *Computers in Human Behavior* 29:812–20. doi:10.1016/j.chb.2012.11.005.

Ugrin, J., J. Pearson, and M. Odom. 2008a. Profiling cyber-slackers in the workplace: Demographic, cultural and work related factors. *Journal of Internet Commerce* 6 (3): 75–89. doi:10.1300/j179v06n03_04.

Ugrin, J., J. Pearson, and M. Odom. 2008b. Cyber-slacking: Self-control, prior behavior, and the impact of deterrence measures. *Review of Business Information Systems* 12 (1):75–88. doi:10.19030/rbis.v12i1.4399.

Urbaczewski, A., and L. Jessup. 2002. Does electronic monitoring of employee Internet usage work? *Communications of the ACM* 45 (1):80–83. doi:10.1145/502269.502303.

Verton, D. 2002. *The hacker diaries*. New York, NY: McGraw-Hill.

Vitak, J., J. Crouse, and R. LaRose. 2011. Personal internet use at work: Understanding cyberslacking. *Computers in Human Behavior* 27:1751–59. doi:10.1016/j.chb.2011.03.002.

Whitty, M., and A. Carr. 2006. New rules in the workplace: Applying object-relations theory to explain problem Internet and email behaviour in the workplace. *Computers in Human Behavior* 22:235–50. doi:10.1016/j.chb.2004.06.005.

Williamson, D. 2002. Forward from a critique of Hofstede's Model of National Culture. *Human Relations* 55 (11):1373–95. doi:10.1177/00187267025511006.

Woon, I., and L. Pee. 2004. Behavioral factors affecting Internet abuse in the workplace—An empirical investigation. Paper presented at the Third Annual Workshop on HCI Research in MIS, Washington, DC, December 10–11.

Appendix A (dependent variable measures)

Thinking about my past behavior at work, what most closely reflects how often you do the following (Circle one response for each activity):

Activity	Never				Often
1. Sending and receiving personal e-mail	1	2	3	4	5
2. Gaming	1	2	3	4	5
3. On-line shopping	1	2	3	4	5
4. Investment trading	1	2	3	4	5
5. Social networking	1	2	3	4	5
6. Reading (or watching) on-line media	1	2	3	4	5
7. Viewing pornography	1	2	3	4	5

Appendix B (supplemental survey items)

1. Which of the following best describes your present employment status? (Select one):
   - Full time (35 hours or more a week)
   - Part time (Less than 35 hours a week)
   - Not employed
2. If employed: What is your current job function in your organization? (Select one):
   - Senior level/Executive management
   - Mid-level management such as department manager, supervisor, or director
   - Non-management
   - Other (please input)

3. What best represents how you are paid at your job? (Select one):
   - Salary
   - Hourly
4. How long have you been employed at your present employer? (Select one):
   - 0 to 4 years
   - 5 to 8 years
   - 13 to 16 years
   - Greater than 16 years
5. Is there a written policy that regulates Internet use at your workplace? (Select one):
   - Yes
   - No
   - Not sure
6. Please provide some general feedback about your feelings and opinions about the acceptability of Internet usage for personal purposes at work?

Appendix C (demographic items)

1. What is your gender? (Circle one)
   - Male
   - Female
2. What is your age? (Circle one)
   - 18–24
   - 25–29
   - 30–34
   - 35–39
   - 40–44
   - 45–49
   - 50 or older
3. What is your race? (Circle one)
   - Caucasian/White
   - Black/African American
   - Hispanic/Latino
   - Asian/Pacific Islander
   - Middle Eastern
   - Rather not say
4. What is your home country? (Please input)