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Are cyberloafers also innovators?: A study on the relationship between cyberloafing and innovative work behavior

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Abstract

In today's computer dependent business world, cyberloafing, which is briefly defined as personal usage of internet in job environment, is seen as one of the most frequent counterwork behavior, The aim of this study is to find out whether cyberloafing also has some positive effects for the organizations. In this scope, the aim of this research is to define whether cyberloafing has a positive effect on innovative work behavior of employees or not. To test this hypothesis a field study was held at İnönü University/Malatya. 152 employees have filled the survey, consisting of 13 questions other than the demographic variables and the results are evaluated by factor, correlation and regression analyses. As a result a weak positive effect of cyberloafing was found on innovative work behavior. According to these results, we suggest managers to be more tolerant to cyberloafing and try to balance the needs for productivity and needs of employees rather than trying to completely eliminate cyberloafing. As most of the related literature focuses on the negative effects of cyberloafing, this study might bring a new perspective for further cyberloafing studies.

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Keywords: Cyberloafing; Cyberslacking; Innovation; Innovative work behavior.

1. Introduction

In today's business world it is almost impossible to work without computers and internet connection, so it is important to study on cyberloafing since it is the most common action of employees that cause considerable waste of time at work. There are many studies on cyberloafing; some focus on eliminating or reducing it (Henle et al., 2009),

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some focus on understanding the cyberloafing behavior to strike a balance between productivity and needs of employees (de Lara, Tacoronte, Ding, 2006) and some other focus on major causes (Lim, 2002), or consequences of cyberloafing, and the specific cyberloafing behaviors that should be encouraged or discouraged or tolerated to minimize the negative effects of cyberloafing (Askew et al., 2014). Although most of these studies focus on the negative outcomes of cyberloafing, there are also studies claiming that cyberloafing is a positive behavior to reduce the employee stress, recharge their energy and increase their work performance (Baturay and Toker, 2015). They claim that cyberloafing might lead to foster learning environment, flexibility, and creativity (Blanchard and Henle, 2008). Therefrom, in this study we will focus on the relationship between cyberloafing activities and innovative work behavior of employees. It is known that companies having a development strategy based on innovation like Google or Facebook, try to make their employees feel free at work to be innovative. So in this study we will examine whether cyberloafing has a positive effect on innovative work behavior of employees or not.

2. Literature Review

2.1. Cyberloafing

Cyberloafing term is briefly described as personal usage of internet in job environment (Lim, 2002). Besides cyberloafing there are many terms explaining the same or similar behavior like non-work related computing, cyberslacking, cyberbludging, on-line loafing, internet deviance, problematic internet use, personal web usage at work, internet dependency, internet abuse, internet addiction and internet addiction disorder (Kim, and Byrne, 2011). In literature there are studies examining the relationship of cyberloafing with different variables like organizational citizenship (Çınar and Karcioğlu, 2015), work stressor (Sawitri, 2012), justice (Sheikh et al., 2015), etc.

There are also studies on the effects of characteristics of employees and demographic factors (Baturay and Toker, 2015) on cyberloafing. The studies on the reasons of cyberloafing show that employees engaging minor cyberloafing do not think they are doing something inappropriate and most of them justify their behavior because everybody else does it too (Blanchard and Henle, 2008). Another commonly cited argument is, employees think internet has been shifting work to home, more than personal activities to work. Internet made the boundary of work and non-work less distinct (Lim and Teo, 2005). So it is important to understand that most of the employees are not aware of the negative effects of cyberloafing but actually the studies on the economic effects of cyberloafing are stunning and show that the cost of cyberloafing is quite high. Henle et al. (2009) reports that employee productivity decreases 30-40% due to cyberloafing in the U.S.A., which corresponds to \$ 750 million/year according to the researchers' estimation. This cost calculation forces organizations to take precautions against cyberloafing. These precautions might be soft ones like increasing the transparency of computer-mediated activities by facing hallways instead of walls. Besides these soft precautions some organizations have set up internet use policies and intense control mechanisms, or conducted management trainings (Cheng et al., 2014). So it seems clear that researchers should try to understand the cyberloafing behavior and generate useful suggestions for management to reduce the negative effects of cyberloafing while keeping benefit from its positive effects. In this study, only minor cyberloafing activities will be included and serious cyberloafing activities like gambling online or visiting adult oriented sites are omitted.

2.2. Innovative Work Behavior

The organizations that can keep up with the changing environment conditions are the ones that are able to innovate (Turgut, 2014). Innovation is accepted as one of the most important driving forces of development, change and differentiation. So in this sense, innovation can be accepted as a fundamental indicator for compatibility of organizations and countries (Öğüt et al., 2014).

Innovation that plays an important role for the survival of the organizations, is defined as creation of business models, management techniques, strategies and organizational structures besides new products or services (McGuirk, et al., 2015; Turgut and Beğenirbaş, 2013). One of the most effective methods of developing the ability of innovation of organizations is developing the employees' creativity and ability of producing new ideas, namely innovation behavior. Human capital is the basis for innovation and evaluating the employees in this way is a key strategy for

managers to cope with global competition and environmental uncertainties, to reach their objectives and high performance level (Afşar, 2015; Taştan and Davoudi, 2015; Wisse et al., 2015).

Innovative work behavior is defined by Janssen (2000) as a work role, conscious creation, promotion and implementation of new ideas to provide benefit for a group or organization. This behavior is a process to create new problem-solving applications. This process starts with identifying the problem, finding solutions, and implementing these solutions in the organization (Turgut and Beğenirbaş, 2013: 108). Amon and Kolvereid (2005) define innovative work behavior as the ability to take the initiative for new products, new markets, new processes and new combinations (Dhar, 2015). To implement this behavior the core skill is the creativity of employees (Kessel, et al., 2015). But innovation work behavior has a broader meaning than creativity because creativity is only the ability to develop new ideas but innovative behavior also includes the implementation of these ideas (Yunus, et al., 2014).

In the related literature, there are many studies on the relationship of innovative work behavior with several different variables like demographic factors, personality, organizational justice, psychological contract, intrinsic motivation, rewards, leadership styles, organizational climate and organizational culture (Afşar, 2015; Taştan and Davoudi, 2015). In this study the relationship of innovation behavior with cyberloafing was examined and the hypothesis “cyberloafing has a positive effect on innovative work behavior” was tested.

3. Methodology

3.1. The Universe and Sample of the Research

To test the model a scale composed of 13 questions, besides demographic variables was used. The questionnaires were applied to 152 employees selected randomly at İnönü University/Malatya/Turkey.

3.2. Data Collection

In addition to demographic variables, two scales were used to measure cyberloafing and innovation work behavior of employees. In demographic factors form; age, gender, education level, the experience in that job and also in the current organization, position and the status of personnel were considered. The scales for measuring the variables are given in Table 1.

Table 1: Scales for Measuring Variables

Variable	Source of Scale	Sample Item
Cyberloafing	Created by Lim (2002), developed by Blanchard and Henle (2008) and adapted/translated to Turkish by Kaplan and Çetinkaya (2014) – a 7 item 5 points Likert Scale.	“Check non-work email at work”
Innovative Work Behavior	Created by Scott and Bruce (1994) and adapted/translated to Turkish by Çalışkan and Akkoç (2012) – a 6 item 5 points Likert Scale.	“I research new technologies, processes, techniques and generate new ideas.”

3.3. Data Analysis

In this study first demographic variables were examined by frequency analysis, then the relationships between the sub-items were examined by correlation analysis and finally the effect of cyberloafing on innovative work behavior was studied by regression analysis.

4. Findings

4.1. Demographic Factors

The frequency analysis of demographic factors is given in Table 2. Due to these results, 44.1% of the participants are female, %55,9 of the participants are man, 38,2% of them are between the ages 26-35, 35.5% is undergraduate, 59.9% have an experience more than 10 years, 50.7% are working at their current organization for more than 10 years, 65.1% are permanent staff and 57.2% work in officer position.

Table 2: Descriptive Statistics Based on Demographic Variables

Gender	#	%	Age	#	%
Female	67	44,1	16-25	15	9,9
Male	85	55,9	26-35	58	38,2
Total	152	100,0	36-45	52	34,2
Education	#	%	46-55	19	12,5
High school	15	9,9	55+	8	5,3
Two-year degree	39	25,7	Total	152	100,0
Undergraduate	54	35,5	Experience at career (years)	#	%
Graduate	19	12,5	0-1	11	7,2
Doctorate	25	16,4	2-5	24	15,8
Total	152	100,0	6-10	26	17,1
Experience in the current experience	#	%	10+	91	59,9
0-1	16	10,5	Total	152	100,0
2-5	32	21,1	Position	#	%
6-10	27	17,8	Manager	8	5,3
10+	77	50,7	Chief	19	12,5
Total	152	100,0	Officer	87	57,2
Personnel	#	%	Blue-collar	38	25,0
Contracted	53	34,9	Total	152	100,0
Permanent	99	65,1			
Total	152	100,0			

4.2. The Validity and Reliability

Although the validity and reliability of the measures chosen were already tested the tests are updated due to the time and sample differences. The results of these tests are given in Table 3 for cyberloafing and Table 4 for innovative work behavior.

Table 3: Factor Analysis and Averages for Cyberloafing

Measure	Items	Factor Load	Average	St. Dev.
Cyberloafing	Check my personal information at work (S2.5)	,800	3,5658	1,05900
	Check non-work email at work (S2.1)	,769	3,4605	1,18423
	Send non-work email at work (S2.3)	,757	3,0461	1,19789
	Visit social media sites at work (facebook, twitter, etc.)(S2.4)	,684	3,2566	1,31470
	Shop online at work (S2.7)	,646	3,0263	1,16771
	Visit sports sites at work (S2.6)	,611	2,7434	1,40244
	Visit news sites at work (S2.2)	,459	3,8487	1,00172
Total			3,1703	,18651

KMO	,803
Chi-Square	325,218
Total variance	47,480
Cronbach's α	,807

As seen in Table 3, KMO value of cyberloafing is 0,803, which shows that cyberloafing scale fits perfectly to factor analysis and is single dimension. The explained variance is found as 47,480 %, so the scale is suitable for measuring the related variable. The Cronbach's Alpha value was found as 0.807 for cyberloafing scale, consisting 7 questions. According to this result, we can conclude that the reliability of the scale is high (Alpar, 2003: 382). The average of the scale is at medium level ($\bar{X} = 3,1703$).

Table 4: Factor Analysis and Averages for Innovative Work Behavior

Measure	Items	Factor Load	Average	St. Dev.	
Innovative Work Behavior	I produce creative ideas. (S1.2)	,838	3,8092	,93308	
	I research new technologies, processes, techniques and generate new ideas. (S1.1)	,814	3,8355	,96594	
	I research sources for new ideas and allocate them. (S1.4)	,791	3,6447	,95187	
	I make plans and schedules for the implementation of new ideas. (S1.5)	,780	3,5724	,93923	
	I encourage and support the ideas of other employees. (S1.3)	,759	3,9276	,92143	
	I am innovative. (S1.6)	,648	4,0197	,92407	
	Total			3,7606	,10825
	KMO		,790		
	Chi-Square		442,329		
	Total Variance		59,904		
Cronbach's α		,865			

As seen in Table 3, KMO value of cyberloafing is 0,790, which shows that innovative work behavior scale fits perfectly to factor analysis and is single dimension. The explained variance is 59,904 %, so the scale is suitable for measuring the related variable. The Cronbach's's Alpha value was found as 0.865 for work behavior scale consisting 6 questions. According to this result, we can conclude that the reliability of the scale is high (Alpar, 2003: 382). The average of the scale is slightly above the medium level ($\bar{X} = 3,7606$).

4.3. The Relationships Between Items

Correlation analysis was used to test the relationship between 7 questions of cyberloafing and 6 questions of innovative work behavior. The results are shown in Table 5.

Table 5: Correlation between the Items

N=152	S2.1	S2.2	S2.3	S2.4	S2.5	S2.6	S2.7
S1.1	,061	,275**	,016	,080	,130	,135	,080
S1.2	,001	,104	,044	,057	,141	,052	,004
S1.3	,053	,284**	-,083	,058	,148	,100	,039
S1.4	,105	,131	,066	,042	,128	,100	-,021
S1.5	,214**	,156	,084	,143	,118	,203*	,071
S1.6	,137	,475**	-,205*	,078	,205*	,086	,042

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

There is a weak positive (correlation coefficient ,275**) relationship between 1stitem of innovation work behavior (I research new technologies, processes, techniques and generate new ideas) and 2nditem of cyberloafing (Visit news sites at work). There is a weak positive (correlation coefficient ,284**) relationship between 3rditem of innovation work behavior (I encourage and support ideas of other employees) and 2nditem of cyberloafing (Visit news sites at work).

There is a weak positive (correlation coefficient ,214**) relationship between 5thitem of innovation work behavior (I make plans and schedules for implementation of new ideas) and 2nditem of cyberloafing (Check non-work email at work). The 5thitem of innovation work behavior also has a weak positive (correlation coefficient ,203**) relationship with 6thitem of cyberloafing (Visit sports sites at work).

There is a positive (correlation coefficient ,475**) relationship between 6thitem of innovation work behavior (I am innovative) and 2nditem of cyberloafing (Check non-work email at work). The 6thitem of innovation work behavior also has a weak positive (correlation coefficient ,205**) relationship with 5thitem of cyberloafing (Check my personal information at work) and negative weak relation (correlation coefficient -,205**) with 3rd sub variable (Send non-work email at work).

4.4. The Relationship Between Innovative Work Behavior and Cyberloafing

Regression analysis is used for defining the effect of cyberloafing on innovative work behavior. The results are shown in Table 6.

Table 6: The Results of Regression Analysis

Variables	Coefficients	St. Er.	Beta	T	Significance
Constant	,001	,080		,008	,994
Cyberloafing	,183	,080	,184	2,284	,024
Regression Equation	Innovative Work Behavior = 0,001+ 0,183*Cyberloafing				

P<0.05 significance level.

As a result of the analysis, it is concluded that there is a weak significant positive effect of cyberloafing on innovative work behavior [$r=0,184$; $r^2=0,034$; corrected $r^2=0,027$; $F(1,149)=5,218$; $p=0,024$].

5. Conclusion and Discussion

In this study we tried to measure the cyberloafing and innovative work behavior levels of employees at İnönü University/Malatya/Turkey and examine the relationship of these variables. As cyberloafing is accepted as an undesired behavior at work, the participants of the questionnaire might underreport their cyberloafing behaviors but still survey method is one of the most valid methods to measure these variables. Most of the related literature focuses on the negative effects of cyberloafing and it is obvious that managers should try to reduce the negative effects of cyberloafing by setting policies containing periodic monitoring (Henle et al., 2009) or train employees, since most of them are not aware of the costs of cyberloafing and do not think they are doing something wrong.

So it is important to study cyberloafing to minimize its negative effects but this study shows that it might also has positive effects like increasing the innovative work behavior so it should not be eliminated completely. There are studies supporting these results and claiming that there is a positive relationship between social and informational cyberloafing with innovative behavior (Yoğun, 2015; Van Doorn, 2011). This study contributes to the strategic management literature by claiming that management should be aware of the positive effects of cyberloafing as well as its negative sides. According to these results the managers should consider cyberloafing as a break for employees to think innovative and be aware that measuring actual work hours may not be the correct measure for productivity. They should define the limits of acceptable cyberloafing and not see personal usage of internet as a total “loafing” or

“slacking”. Also employees trying to increase their own productivity could benefit from this study to understand the cyberloafing factors affecting innovative work behavior positively and negatively.

In this study, only minor cyberloafing activities were included. For further studies the effect of serious cyberloafing activities like gambling online on innovative work behavior might be researched. The sample might be enlarged or the survey might be applied to private sector to benchmark the results.

References

- Afsar B., Badirb Y., Khan M. M. (2015), Person–job fit, person–organization fit and innovative work behavior: The mediating role of innovation trust, *Journal of High Technology Management Research*, 26, 105–116.
- Alpar, C. R. (2003), Uygulamalı Çok Değişkenli İstatistiksel Yöntemlere Giriş 1, 2. Baskı, Nobel Yayınevi, Ankara.
- Amo, B., Kolvareid, L., 2005. Organisational strategy, individual personality and innovation behavior. *J. Enterp. Cult.* 13 (1), 7–19.
- Askew K., Bukner J., Taing M., Ilie A., Bauer J. and Coovert M. (2014), Explaining cyberloafing: The role of theory planned behavior, *Computers in Human Behavior*, 36, 510-519.
- Baturay M.H., Tokar S. (2015), An investigation of the impact of demographic on cyberloafing from an educational setting angle, *Computers in Human Behavior*, 50, 358-366.
- Blanchard A. and Henle C.A. (2008), Correlates of different forms of cyberloafing: the role of norms and external locus of control, *Computers in Human Behavior*, 24, 1067-1084.
- Çalışkan A. and Akkoç İ., (2012), The effects of Entrepreneurship Behavior and Innovative Behavior on Job Performance: Mediating Role of Environmental Uncertainty, *Çağ Üniversitesi Sosyal Bilimler Dergisi*, 9 (1), 1-29.
- Cheng L., Wenli L., Zhai Q., and Smyth R. (2014), Understanding personal use of the internet at work: An integrated model of neutralization techniques and general deterrence theory, *Computers in Human Behavior*, 38, 220-228.
- De Lara, P.Z.M., Tacoronte, D.V. and Ding J.M.T. (2006), Do current anti-cyberloafing disciplinary practices have a replica in research findings_ A study of the effects of coercive strategies on workplace internet misuse. *Internet Research*, 16 (4), 450-467.
- Dhar R.L., (2015), The effects of high performance human resource practices on service innovative behaviour, *International Journal of Hospitality Management*, 51 67–75.
- Henle C.A., Kohut G., Booth R. (2009), Designing electronic use policies to enhance employee perceptions of fairness and to reduce cyberloafing: an empirical test of justice theory, *Computers in Human Behavior*, 25, 902-910.
- Janssen, O. (2000). “Job Demands, Perceptions Of Effort-Reward Fairness and Innovative Work Behavior”, *Journal of Occupational and Organizational Psychology*, 73, 287-302.
- Kaplan M. and Çetinkaya A.Ş., (2014), Meaningful differences between demographic features and cyberloafing: case in hotel business, *Anatolia: Turizm Araştırmaları Dergisi*, 25 (1), 26-34.
- Kessel M., Hannemann W.H., Kratzerb J., (2012), Innovative work behavior in healthcare: The benefit of operational guidelines in the treatment of rare diseases, *Health Policy*, 105, 146– 153.
- Kim S.J. and Byrne S. (2011), Conceptualizing personal web usage in work contexts: A preliminary framework, *Computers in Human Behavior*, 27, 2271-2283.
- Lim, V., Teo T. (2005), Prevalence, perceived seriousness, justification and regulation of cyberloafing in Singapore: An exploratory study, *Information & Management*, 42, 1081-1093.
- Lim, V.K.G. (2002), The IT way of loafing on the job: Cyberloafing, neutralizing and organizational justice. *Journal of Organizational Behavior*, 23 (5), 675-694.
- McGuirk H., Lenihan H., Hart M. (2015). Measuring the impact of innovative human capital on small firms’ propensity to innovate, *Research Polic*, 44 (4), 965–976.
- Öğüt A., Aksay K., Erbil C. (2014). İşletme Yönetiminde Yenilikçilik Paradigmasının Değişimi: Yenilikçilik Kültürü Bileşenlerinin Bibliyografik Taraması ve Derlenmesi, 2. Örgütsel Davranış Kongresi, 80-89.
- Sawitri, H.S.R., (2012) Role of internet experience in moderating influence of work stressor on cyberloafing, *Procedia – Social Behavioral Sciences*, 57, 320-324.
- Sheikh, A., Atashgah M.S. and Adibzadegan M. (2015), The antecedents of cyberloafing: A case study in an Iranian copper industry, *Computers in Human Behavior*, 51, 172-129.
- Taştan Bal Ş., Davoudi, S. M. M. (2015), An Examination of the Relationship between Leader-Member Exchange and Innovative Work Behavior with the Moderating Role of Trust in Leader: A Study in the Turkish, Context, 3rd International Conference on Leadership, Technology and Innovation Management, *Procedia - Social and Behavioral Sciences*, 181, 23 – 32.
- Turgut E., Begenirbaş M., (2013). “Çalışanların Yenilikçi Davranışları Üzerinde Sosyal Sermaye ve Yenilikçi İklimin Rolü: Sağlık Sektöründe Bir Araştırma”, *KHO Bilim Dergisi*, 23(2), 101-124.
- Turgut H., (2014), Algılanan Örgütsel Desteğin İşletme Performansına Etkisinde İç Girişimciliğin Aracılık Rolü, *İşletme Araştırmaları Dergisi*, 6/3, 29-62.
- Van Doorn, O.N. (2011), Cyberloafing: A multi-dimensional construct placed in a theoretical framework Master Thesis. Department Industrial Engineering and Innovation Sciences Eindhoven University of Technology, The Netherlands.
- Wisse B., Barelds D., Rietzschel E.F. (2015), How innovative is your employee? The role of employee and supervisor Dark Triad personality traits in supervisor perceptions of employee innovative behavior, *Personality and Individual Differences*, 82, 158–162.
- Yoğun A.E. (2015), Cyberloafing and innovative work behavior among banking sector employees, *International Journal of Business and Management Review*, 3 (10), 61-71.
- Yunus O. M., Bustaman H. A., Wan M.R., Wan F.A. (2014), Conducive Business Environment: Local Government Innovative Work Behavior, *Procedia - Social and Behavioral Sciences*, 129, 214 – 220.