

THE SAME ANTECEDENTS DO NOT FIT ALL ACTIVITIES: AN ACTIVITY-SPECIFIC MODEL OF PERSONAL INTERNET USE IN WORKPLACE

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Abstract

IT devices connected to Internet, such as computers, tablets and smartphones, are commonly used in organizations. At the same time, organizational employees increasingly perform non-work related activities at work by using the IT resources, which is defined as personal Internet use (PIU) in workplace. Multiple models have been developed by previous studies to investigate why employees perform PIU. These studies consider all PIU activities as a uniform behavior. However, literature suggests that there are different types of PIU activities. Therefore, it is with limitations to consider PIU behavior and its antecedents uniformly for all activities, given that PIU behavior may differ significantly when bounded with the different activities. As a first step to close the gap, we examine separately the antecedents of three types of PIU activities: non-work related emailing activities, browsing activities, and online financial activities, to validate our hypothesis that the same antecedent does not explain all PIU activities. Our study contributes to research by demonstrating the necessity to separately examine different types of PIU activities when investigating why employees perform PIU.

Keywords: Personal Internet Use, Distinction, Antecedent, Activity-specificity

1 Introduction

Various IT devices connected to Internet, such as computers, tablets and smart phones, have become commonly used in workplace, which have greatly facilitated employees' work. However, at the same time they also provide a convenient avenue for employees to perform non-work related tasks while at work (Kim&Byrne2011). The term Personal Internet Usage in workplace (PIU) is coined to refer to employees' voluntary acts of engaging in personal activities that are not related to work tasks by using Internet at work (Anandarajan et al. 2002). Examples of PIU include, but are not limited to, surfing general news sites, visiting online social network sites, instant messaging, online shopping, chatting and gaming, online stock trading, sending and receiving non-work related emails, etc. Evidence suggests that PIU is prevalent in organizations (Weatherbee 2010, Wagner et al. 2012). Human resource professionals estimate that employees spend about one hour performing personal activities using Internet at work everyday (Lim & Chen 2012).

Previous studies have proposed multiple models to investigate why employees engage in PIU behaviors. One stream of studies view PIU has negative outcomes in terms loss of productivity and increase of security risks (Blanchard & Henle 2008), and factors such as perceived injustice (Lim 2002), role ambiguity and role conflict (Henle & Blanchard 2008) are identified to be antecedents of PIU from different perspectives. By contrast, another stream of studies view PIU could have positive outcomes to employees and organizations (Oravec 2002, Anandarajan & Simmer 2005); accordingly, factors such as perceived benefit and meeting private demands are identified to be antecedents of PIU (Li et al. 2010, König & Guardia 2014).

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Those studies provide significant implications for understanding PIU. However, most previous studies simply combine all different PIU activities as one single behavior when discussing antecedents of PIU, without taking into account the distinctions among different PIU activities. Few studies (e.g., Blau et al. 2006, Blanchard & Henle 2008) indicate that PIU behaviour might be influenced by different factors with respect to the various PIU activities. However, those studies provide only preliminary evidence and they do not provide theoretical explanations to the differences that are noted. We argue that there are different types of PIU activities and that employees' motivations to perform one type of PIU activity might be different from the motivations of another PIU activity. For instance, the motivation for one to check general news websites for few minutes might be to take a short mental break; whereas the motivation for one to perform online job-hunting might be because he or she perceives injustice from the organization. Therefore, it is imperative to separately examine the antecedents of the different types of PIU activities, to explore how and why different PIU activities have different antecedents, which is missing from the literature.

To fill this research gap, we examine the different effects of the antecedents that are identified by previous studies in explaining different types of PIU activities, and theoretically explain the difference. Specifically, we first discuss the distinctions of three types of PIU activities, namely emailing activities of PIU, browsing activities of PIU, and financial activities of PIU, in terms of cognitive effort required, deviation from organizational norms, as well as technology attributes. We then review the antecedents of PIU that have been identified by previous studies. Based on the distinctions of the different types of PIU activities, and the rationale of the antecedents, we discuss why and how a given antecedent plays different roles in explaining different types of PIU activities.

The remainder of this paper is organized as follows. In the next section, we discuss the distinctions of the different types of PIU activities as the foundation to separately examine different types of PIU activities. In the third section, we review the “key” antecedents of PIU identified by previous studies. In section four, we present our research model and hypotheses. This is followed by the empirical study in section five. We conclude our study in the last section by discussing the implications, limitations of our study as well as future research directions.

2 Distinctions among Various PIU Activities

Previous studies have categorized PIU activities from different perspective. We briefly review the typologies of PIU from literature, and discuss the distinctions of different types of PIU activities. Based on this, we select three types of PIU activities as the dependent variables of our study.

2.1 Distinctions of Different Types of PIU Activities

Table 1 depicts the typologies of PIU from previous studies.

Table 1 Typologies of PIU from Previous Studies

Study	Typologies
Lim (2002)	<ul style="list-style-type: none"> • Browsing activities • Emailing activities
Blau et al. (2006)	<ul style="list-style-type: none"> • Browsing activities • Emailing activities • Interactive activities
Blanchard & Henle (2008)	<ul style="list-style-type: none"> • Serious forms of PIU activities • Minor forms of PIU activities
Mastrangelo et al. (2006)	<ul style="list-style-type: none"> • Non-productive PIU behavior • Counter-productive PIU behavior

Mahatanankoon et al. (2004)	<ul style="list-style-type: none"> • PIU related to e-commerce • PIU related to information seeking • PIU related to interpersonal communication
Anandarajan et al. (2002)	<ul style="list-style-type: none"> • Disruptive PIU • Recreational PIU • Personal learning PIU • Ambiguous PIU
Doorn (2011)	<ul style="list-style-type: none"> • Development behavior • Recovery behavior • Deviant behavior • Addiction behavior
Anandarajan et al. (2011)	<ul style="list-style-type: none"> • Hedonic behavior • Self- development behavior • Citizenship behavior • Work/family behavior

Based on the typologies above, we theoretically propose that different PIU activities vary in terms of three aspects, namely 1) perceived acceptability, 2) technology attributes and 3) cognitive effort involved, which are discussed as follows.

First, empirical evidence consistently suggests that some PIU activities are perceived to be more destructive to employees and organizations than some other PIU activities. For example, Anandarajan et al. (2002) proposed two dimensions to understand PIU, namely opportunities versus threats, suggesting that different PIU activities have different extent to threat organizational interests. Similarly, Mastrangelo (2006) categorized PIU activities to be counterproductive PIU and non-productive PIU, implying that employees perceived different PIU activities to have different harmfulness to organizations. This is consistent with Lim & Chen (2009) who suggested that employees perceive entertainment-related PIU activities (such as online games, online shopping) to yield more serious consequences to work performance compared to non-work related emailing activities. Following the same logic, Blanchard and Henle (2008) categorize PIU activities into serious forms and minor forms. Accordingly, we propose that some PIU activities are perceived by employees to be less acceptable than some other PIU activities, depending on the norms of different organizations.

Second, some typologies of PIU are based on the differences of communication technologies involved. For instance, Lim (2002) categorized PIU activities into emailing activities and browsing activities, implying that the used communication technology is an important dimension to categorize PIU activities. Studies from communication field suggest that employees' intention to use a communication technology is associated with the attributes of the technology. For instance, Olivine & Louis (2009) suggest that college students prefer instant messengers as a communication tool with friends compared with e-mails, because of the incorporated multi-functions (e.g., webcam, free to design interface by users) and synchronicity of instant messengers compared with e-mails. These different technology attributes further provide different gratifications to users. For example, Anabel & Alyson (2010) found that Facebook was more frequently used for learning about social activities occurring in one's social network, whereas instant messaging is used more toward relationship maintenance and development.

In the PIU context, we argue that one additional important distinction among the various technologies could be the number of parties required to participate. For instance, when receiving or sending emails, it is necessary to interact with other people (or agent in the case of automatically sending emails). This is also the case for other interactive activities such as instant messaging (Blau et al. 2006). However, this is not the case for browsing activities, since employees are able to perform and accomplish browsing activities without the participation of other people. The number of parties required to

participate is important to understand antecedents of PIU. For instance, as a means of killing time, employees might potentially engage in both instant messaging activity and news surfing activity. However, if there are no friends available online for communication, they are more likely to surf news given that news surfing activity does not require the participation of others. Accordingly, we propose that different PIU activities vary in terms of technology attributes, such as multi-functions, synchronicity and numbers of parties required to participate.

Third, different PIU activities involve different level of cognitive effort. For example, Table 1 presents recreational PIU, recovery PIU and hedonic PIU as apposed to personal learning PIU or self-development PIU, suggesting that PIU activities vary in terms of playfulness and cognitive effort. Previous studies suggest that cognitive effort to use IT has significant impact on individuals' intention to use the IT of interest (Todd & Benbasat 1999, Agarwal & Karahanna 2000). In the PIU context, PIU activities with low cognitive effort such as browsing and social media activities are expected to be preferred by employees for mental recovery and thus facilitate creativity performance compared to other PIU activities with high cognitive effort required such as online-shopping and stock trading, since the latter activities involve decision-making process (Kuem & Siponen 2014). Therefore, we propose that PIU activities should be differentiated based on the cognitive effort involved.

2.2 Three Types of PIU Activities as Dependent Variables

Based on the distinctions that we discussed above, as a first step to separately examine the antecedents of different types of PIU activities, we focus on three types of PIU activities in our study, namely emailing activities of PIU, browsing activities of PIU, and online financial activities of PIU. Emailing activities of PIU are defined as employees' receiving, sending and checking non-work related email activities during work. Browsing activities of PIU are defined as employees' surfing behavior of websites that are neither related to work tasks nor related to personal financial business. Financial activities of PIU are defined as employees' PIU activities that are not related to work but to private business, such as online shopping, booking personal travel or vacation, stock trading or e-bank, etc.

In spite that the three types of PIU activities do not include all PIU activities; they are selected as the dependent variables of our study because of the following reasons. First, these three types of PIU activities indeed show the distinctions that we discussed above. Specifically, personal online financial activities are perceived to have more serious consequences compared with non-work related emails (Lim & Chen 2009). Employees can perform browsing activities without the participation of other parties, which is not the case for non-work related email activities. Personal online financial activities are proposed to require higher level of cognitive effort compared with browsing and social media activities (Kuem & Siponen 2014). Second, these three types of PIU activities are in line with the categories of PIU proposed by previous studies. For instance, as we discussed above, both Lim (2002) and Blau et al. (2006) deem emailing activities and browsing activities as the salient types of PIU activities. Mahatanankoon et al. (2004) proposes e-commerce activities as an important type of PIU activities. Similarly, Kuem & Siponen (2014) considers online shopping (i.e., a specific form of e-commerce PIU activities) to be significantly different from social media (i.e., a specific form of browsing activities in our study) in terms of cognitive load. In addition to online shopping or e-commerce in general, there are also other types of PIU activities that involving employees' personal expense and requiring relatively high cognitive load, such as online stock trading and e-bank, we include all the activities as personal financial business. Therefore, we argue that the three types of PIU are appropriate to exemplify that PUI behaviour is activity-specific.

3 “Key” Antecedents of PIU as Independent Variables

Previous studies have identified multiple antecedents of PIU. While acknowledging the importance of all the previous findings regarding to antecedents of PIU, for the parsimony of our research model, we only review and examine the influence of “key” antecedents on different types of PIU activities. These

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“key” antecedents are selected based on the following criteria. First, we include only those antecedents that are suggested to have direct influence on PIU, this is in line with the similar studies in literature (e.g., Venkatesh et al. 2003). Additionally, these studies account for the majority of studies in literature of PIU. Second, we only include those antecedents that have been empirically validated by more than one study. Based on the selection criteria, the “key” antecedents include perceived injustice (i.e., procedural justice and distributional justice), role ambiguity and role conflict, perceived organizational security policy (i.e., existence of the policy and enforcement of the policy), self-control, perceived benefit, social norm, habit and demographic factors (i.e., age and gender), which are depicted as Table 2.

Table 2A Summary of Antecedents of PIU

Antecedents of PIU From the Negative Viewpoint	
Perceived Injustice	<ul style="list-style-type: none"> • Distributional Injustice, Interactional Injustice, Procedural Injustice (<i>Lim 2002, Zoghbi 2006, Zoghbi 2007, Zoghbi 2009, Jia et al. 2013</i>) • Procedural Injustice, Distributional Injustice (<i>Ahamadi et al. 2011</i>)
Role Problems	<ul style="list-style-type: none"> • Role Ambiguity and Role Conflict (<i>Henle & Blanchard 2008, RuningSawitri 2012</i>)
Self-Regulation	<ul style="list-style-type: none"> • Self-Control (<i>Ugrin et al. 2008</i>) • Self-Regulation (<i>Prasad et al. 2010</i>)
Antecedents From the Positive Viewpoint	
Perceived Benefit	<ul style="list-style-type: none"> • Private Demand (<i>Köng & Guardia 2014</i>) • Perceived Benefit (<i>Li et al. 2010</i>) • Perceived Utility of Internet Use (<i>Garrett & Dansiger 2008</i>)
Other Factors influencing PIU	
Perceived Organizational Security Policy	<ul style="list-style-type: none"> • Existence of Security Policies: (<i>Ugrin et al. 2008, Henle et al. 2009, Shepherd & Klein 2012, Messarra et al. 2011</i>) • Enforcement of Security Policies: (<i>Ugrin et al. 2008</i>)
Social Norm	<ul style="list-style-type: none"> • Perceptions of the Norms (<i>Blanchard & Henle 2008</i>) • Personal Norms (<i>Li et al. 2010</i>) • Perceived PIU of Co-worker (<i>Liberian et al. 2011</i>)
Habit	<ul style="list-style-type: none"> • Habit (<i>Lee et al. 2005, Chun & Bock 2006, Moody & Siponen 2013</i>)
Demographic Factors	<ul style="list-style-type: none"> • Age and Gender (<i>Vitak et al. 2011, Jia et al. 2013</i>)

For the parsimony of our research model, we select the antecedents that were identified from destructive and constructive perspectives as our independent variables, namely, perceived injustice, role problems, self-regulation, and perceived benefits. Other factors are included as control variables.

4 Research Model and Hypotheses

In this section, we discuss the hypothetical relationships of the four independent variables and the three dependent variables that we focus on.

Perceived Injustice

Perceived injustice was proposed as an antecedent of PIU based on the social exchange theory (Lim 2002, Zoghbi 2007). Exchange theorists suggest that people are concerned about their input to relationships and the outcomes they receive from the relationships (Cropanzano & Mitchell 2005). In

organizational context, when employees perceive injustice, they are more likely to reduce their work effort as a response to maintain their psychological balance of their exchange relationship with the organization. In this sense, performing PIU activities is a means for employees to reduce their work effort, and thus perceived injustice was proposed to be antecedents of PIU.

However, we argue that not all PIU activities meet employees' motivation to reduce their work effort. For instance, as we discussed earlier, non-work related emailing activities require participation of other parties, and it usually takes very short time for employees to check, receive and send emails. In this sense, employees hardly engage in non-work related emailing activities for a long time, and they are not able to do non-work related emailing activities whenever they would like, given it require the participation of other parties. Therefore, non-work related email activities are not suitable for employees to reduce their work effort. Accordingly, we propose the following hypothesis:

H1a: *Employees' perception of injustice from organizations is not associated with their emailing activities of PIU.*

By contrast, browsing activities require no participation of other parties. Furthermore, browsing activities also require relatively low cognitive efforts. Therefore, it is easy for employees to spend long time on these activities as an escape from work tasks due to the perceived injustice. Accordingly, the following hypothesis is proposed:

H1b: *Employees' perception of injustice from organizations is positively associated with their browsing activities of PIU.*

In terms of employees' personal online financial activities, PIU activities such as stock trading, online shopping are less acceptable by organizations compared with other PIU activities such as surfing news websites (Lim & Chen 2009), therefore, performing these activities serve better employees to retaliate organizations due to perceived injustice, and maintain their psychological balance. Accordingly, we propose the following hypothesis:

H1c: *Employees' perception of injustice from organizations is positively associated with their financial activities of PIU.*

Role Ambiguity and Role Conflict

Role ambiguity and role conflict were proposed by previous studies as the antecedents of PIU based on the rationale that, role ambiguity and role conflict as work stressors trigger employees' motivation to perform PIU as their coping strategy (Henle & Blanchard 2008). Coping is defined as "the cognitive and behavioral efforts exerted to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Beaudry & Pinsonneault 2005). According to coping theory (Lazarus & Folkman 1984), when encountering a certain event, individuals would first evaluate the potential consequence of this event, and then take either problem-focused coping efforts which aims at dealing with the issue itself or emotion-focused coping efforts that aims at changing the perception of the event without altering the situation itself (e.g., acceptance, distancing and escaping efforts). In this sense, engaging in PIU activities would serve as emotion-focused coping efforts of employees to deal with the work stressors such as role ambiguity and role conflict, as Griffiths (2010) suggests that Internet provide an ideal means to escape from reality.

We argue that non-work related email activities are not ideal means for emotion-focused coping, due to the requirements for the participation of other parties and the lower feasibility to long duration. By contract, it is easier for employees to engage in browsing and social media activities for a long time. Therefore, the following hypothesis is proposed.

H2a: *Role ambiguity and role conflict is not associated with employees' emailing activities of PIU.*

H2b: *Role ambiguity and role conflict is positively associated with employees' browsing activities of PIU.*

In terms of personal online financial activities, on the one hand, online financial activities such as stock trading, online shopping and e-bank activity usually serve some particular purposes; people seldom perform these activities aimlessly. On the other hand, these activities require relatively higher cognitive effort; therefore, it is not appropriate for employees to choose as an emotion-focused coping means. Taken together, we propose the following hypothesis:

H2c: *Role ambiguity and role conflict are positively associated with employees' financial activities of PIU.*

Self-Regulation

Multiple studies have suggested the importance of self-regulation (aka. self-control) in PIU context (Ugrin et al. 2008, Zoghbi 2011, Wagner et al. 2012). Self-regulation is the ability of an individual to control his emotions, behaviors and desires in order to obtain some reward or avoid some punishment. According to counteractive control theory (Trope & Fishbach 2000), individuals exercise their self-regulation when they confront the conflict between temptations with short-term benefit and their long-term goals. Therefore, self-regulation is supposed to be invoked when people engage in deviant behaviors or engage in behaviors that are not in line with their long-term goal. In PIU context, we argue that self-regulation is involved when employees engage in PIU activities that they perceive to be deviant. As we discussed earlier, employees perceive deviance of non-work related email activities is low, and the perceived deviance personal financial activities is high. Therefore, we propose the following hypotheses:

H3a: *Employees' self-regulation is not associated with their emailing activities of PIU.*

H3c: *Employees' self-regulation is negatively associated with their financial activities of PIU.*

In terms of browsing activities of PIU, although these activities were perceived by employees to be less deviant than personal financial activities, we argue that due to the lower cognitive effort and high playfulness of these activities, it is very easy for employees to spend long time on these activities. To some extent, the longer duration of these activities, the less consistent to employees' long-term goal. Accordingly, employees with high self-regulation would perform these activities less than those with low self-regulation. In this sense, we propose the following hypothesis:

H3b: *Employees' self-regulation is negatively associated with their browsing activities of PIU.*

Perceived Benefit

Pursuing various utilities is suggested to be an important motivation for employees to perform PIU (D'Abate 2005, Garrett & Danziger 2008, Li et al. 2010, König & Guardia 2014). The rationale behind this motivation is rational choice theory (Paternoster & Simpson 1996), which suggests that individuals make their decisions based on their evaluation of perceived reward and cost. In PIU context, due to the fading physical boundary between work and non-work, it happens for employees to deal with work issues at home, it also happens in some cases that employees dealing with some personal issues at work. It becomes easier for employees to switch between work issues and non-work issues without physically leaving from office. In this sense, engaging in some PIU activities provides convenience with employees in terms of saving time, better meeting private demand without affecting work performance, interesting work life, etc. We argue that all the three types of PIU activities have potential to provide with positive utilities and benefits to employees, the following hypotheses are proposed:

H4a: *Employees' perceived benefit of engaging in PIU is positively associated with their emailing activities of PIU.*

H4b: *Employees' perceived benefit of engaging in PIU is positively associated with their browsing and activities of PIU.*

H4c: *Employees’ perceived benefit of engaging in PIU is positively associated with their financial activities of PIU.*

The hypotheses above are depicted as our research model in Figure 1 below.

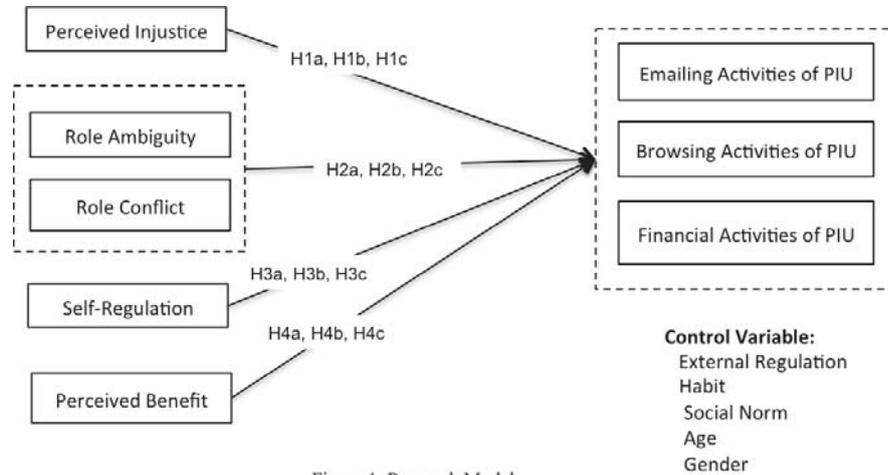


Figure 1. Research Model

5 Research Methodology

We plan to validate our research model by collecting data through a survey. Specifically, the measurement of all constructs involved would be adapted from previous studies that demonstrated the reliability and validity. All constructs would be measured by using seven-point Likert scales ranging from “strongly disagree” to “strongly agree”. The data would be analyzed using a structural equation modeling approach, such as PLS or LISREL. The common method bias would be examined if all data are collected via survey.

6 Conclusion

With the commonly usage of IT devices connected with Internet, it is more and more frequently reported that employees engage in PIU activities in workplace, for which several positive and negative impacts have been recorded and theorized. This paper argues that the different PIU activities should not be treated uniformly, as previous studies did, because they are triggered by different motivations and have different implications for work performance. In order to fill this gap, we separately examine three types of PIU activities, namely, emailing activities of PIU, browsing activities of PIU and financial activities of PIU. Based on the distinctions of these types of PIU activities, we propose different antecedents for the three types of PIU behaviors. We would further conduct empirical investigation to validate the hypotheses so as to demonstrate that scholars should consider these distinctions when examining antecedents of different PIU activities and related interventions. Our theory also has practical implications that organizations could consider to develop different security policies for different types of PIU activities.

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