

## The Incidence of Dysfunctional Internet Usage in Ghana: An Exploratory Study

William Phanuel Kofi Darbi; Charles Agyei; Francis Atsu; Sussana Adjei-Mensah

Ghana Institute of Mgt & Public Administration Business School, Box AH 50 Achimota-Accra, Ghana

\*E-Mail of the corresponding author: [kdarbi@yahoo.com](mailto:kdarbi@yahoo.com) or [wdarbi@gimpa.edu.gh](mailto:wdarbi@gimpa.edu.gh)

### Abstract

Despite the potential and tremendous opportunities the internet offers for employees to improve their work and productivity, the internet has become a source of unproductiveness given the potential for its misuse. Most of the literature on the dysfunctional use of the internet amongst employees tends to focus solely on advanced economies. Given the fact that the phenomenon of employers placing internet on employees' desktops is relatively new in Ghana and the possible cultural influences on the type and extent of internet use, this paper investigated the non-work-related use of the internet amongst employees of Ghanaian organizations in both the private and public sector. We found that the use of the internet for non-work-related activities amongst Ghanaian employees is widespread and there exists an association between this case of dysfunctional internet usage and man-hour losses. Amongst other things, we recommend that managers employ internet use policies and prohibitions in dealing with the problem since the study found that these interventions are not in place.

**Keywords:** Internet, internet use, Ghana, employee productivity, man-hour losses, employees

### Introduction

Since the end of the Second World War, the world has witnessed a dramatic transformation in the area of communication technology, processing of information and the emergence and subsequent commercialization of the internet. Indeed, the development of desktop computers, lap and palmtops, mobile technology, the internet and the deployment of the World Wide Web has led to the deepening of the integration of the different economies of the world. Though the internet was pioneered in the United States of America, it has now become a global phenomenon. In Ghana, the internet was introduced into the country in 1993 initially by three service providers: Network Computer Systems, Africa Online and Ghana Internet Services in that respective order. With improvements in and easy accessibility to technology, there are currently in Ghana hosts of companies providing internet services and at an improved speed rate than in the past; not to talk about mobile telephone companies providing internet services as part of their overall package. Unlike developed economies such as the US where the technology has been fully developed and utilized to improve upon performance and increase productivity through the establishment of mechanisms to monitor its use and abuse at the workplace, developing ones like Ghana is yet to realize this dream. Ghana as a developing economy is beset with a myriad of problems in relation to performance and productivity especially in the public sector which include government ministries, departments and agencies. Problems such as lateness to work, low wages and salaries, excessive political interference, staff without the requisite skills and training, poor attitude to work, no or minimal supervision and a host of others have significantly contributed to the problem. Indeed, the explosive emergence and the subsequent deployment of the internet has led to the networking of desktop computers in most offices (private and public), a feature which is common to both developed and developing economies, though at different rates and levels. The use of the internet is expected to enhance the work people do and contribute to overall productivity of the organization. It must be noted that the widespread desktop internet access for employees however brings new challenges to management. Some of the most critical issues include: employee productivity; potential liability under sexual harassment laws; and corporate/personal time (Conry-Murray, 2001; Swanson, 2001; Cohen, 2001).

The main objective of this research paper is to investigate the non-work-related use of the internet amongst employees of Ghanaian organizations in the private and public sector. Most of the literature on internet abuse tends to focus solely on the advanced economies. What this research seeks to do differently is to look at a developing

economy like Ghana since the phenomena of placing internet on employees' desk is relatively new and also because the use to which the internet may be put in a developing country may vary from those of the more advanced economies largely because of differences in economic and technological advancement.

The rest of the paper has been structured as follows: the next section reviews previous studies on employee internet use issues. The data and methodology used in this paper is described in the next. Empirical findings are then captured and the final section is dedicated to conclusions and managerial implications based on our findings.

### **Employees and the internet**

Undoubtedly, the internet provides vast opportunities for employees to enhance their knowledge, skills, performance and productivity. The very object and beginnings of the internet goes a long way to attest to this position. According to Young (2004), the internet itself is a neutral device originally designed to facilitate research among academic and military agencies. The internet serves as an information tool for acquiring credible information and reference materials that employees can use to improve their work (Wen and Lin, 1998). It also provides the platform for sharing a wealth of resources and ideas with business partners and associates that may lead to more cost-efficient business solutions. For instance their study showed that a manager was able to complete a detailed market study analysis using resources on the internet and this effort informed the choice of a definite direction. The authors argued that whilst this particular task took only a few hours, a traditional approach would have taken days. The internet also offers employees the benefits of convenience. It markedly combines the two most critical business tools (telephone and the computer) which are the basic equipments for the average professional (Wen and Lin, 1998). Through the magic of the internet employees can conveniently generate and send memos without physically leaving their desks to deliver, distribute or receive them. This can significantly reduce downtime and increase employee productivity at the work place.

Despite its potential and the tremendous opportunities it offers for employees to improve their work and productivity, the internet has become a source of unproductiveness given the potential for its misuse. As with the introduction of any new technology, the internet is yet another that has raised time productivity concerns amongst managers. The case of the introduction of the telephone and the desktop computer has been cited (Alder and Ambrose, 2005a). For instance employees were found to spend unproductive time on phone calls in the case of the telephone whilst concerns has been directed to issues regarding employees playing games that came with Windows applications on the computer. Evidence exists according to (Urbaczewski and Jessup, 2002) of a productivity vacuum occurring immediately following the installation of internet access on worker desktops. The common forms of unproductive, non-work related activities included perusing recreational web pages, emailing friends, shopping, stock trading, chatting or playing games. Research has shown that the tendency for employees to use the internet placed on their desktops for personal non-business purposes can no longer be notional. This reality has gotten managers thinking and assessing the extent of productivity loss whilst contemplating solutions. More than half of executives in a study stated that these negative kinds of internet usage amongst their employees are significantly undermining their productivity (Roman, 1996). Wiesendanger (1993) reported the loss of three hours of wages paid to an employee who spent three working hours surfing the Disney webpage which was non-work related. In a US study, Young and Case (2002) found that four out of five of 670 organisations studied stated that they have caught employees surfing the web for personal use during working hours. Wen and Lin (1998) posit that the drain on employee productivity may translate into thousands of dollars lost each year. Of all the cases that lead to disciplinary action or termination, accessing pornography accounted for 42%, online chatting (13%), gaming (12%), sports (8%), investing (7%) and shopping at work (7%).

With the increasing insurgence and popularity of social networking sites like Facebook, LinkedIn, Myface, badoo etc there seems to be no end in sight for the dysfunctional use of the internet amongst employees. The situation may assume alarming proportions given the new and rapidly growing phenomenon of internet addiction that has generated much interest in the behavioural sciences. Greenfield (1999) found in a study that 6% of online users suffer from internet addiction. Previous internet addiction research showed that online chat rooms, instant messages, interactive games and eBay were the major sites users were hooked unto (Scherer, 1997; Morahan-Martin, 1997).

The afore-mentioned social networking sites have chatting and instant messaging tools which has the potential of addicting employees who have access to internet facilities.

It is consequential to introduce this phenomenon of addiction into the discussion of “the internet and the employee” because of some underlying implications. First, “abuse” which is considered a milder form of addiction (Young, 2004) has turned out to be the dominant theme in most internet and employee productivity research. In essence, the majority (Tabak and Smith, 2005; Urbaczewski and Jessup, 2002; Young and Case, 2002) of the extant literature has studied how the abuse of the internet amongst employees has affected productivity and internet usage policies of organizations. A fresh lease of life needs to be breathed into this research locale for better insight and more targeted remedies. Second, addiction may have dire consequences for the manageability of the problem at hand. Young (2004) described addiction in the traditional sense of the word as being associated with an uncontrollable urge, often accompanied by a loss of control, a preoccupation with use, and continued use despite problems the behaviours causes. The defining tenet which has far reaching connotations for managers is the fact that an addicted employee may continue to engage in the dysfunctional use of the internet even though it may cause him or her problems. To the extent that addition could cause an employee to engage in a non-productive use of the internet at the peril of his or her job, which is the worst punishment that could be meted out by an employer is problematic and could complicate any efforts at finding solutions.

### **Internet use interventions and policies**

Subsequent to the potential for internet misuse, abuse and addiction with its accompanying employee productivity issues, organizations have found and are still exploring different ways of offering the internet to their employees. Organisations are looking for innovative ways of maximizing its productive uses whilst minimizing the non-productive uses amongst employees. Wen and Lin (2008) suggested that there is a great deal of benefit in delivering the internet to the employees’ desktops, there just needs to be a plan, a way of controlling the productivity. At the centre of this effort however is a dilemma which has led to a myriad of interventions in the form of internet use policies, monitoring, blockers etc. Organisations from time to time allocate resources required to pursue strategies to employees and diligently monitor implementation in order to take corrective action. In this breadth, executives have good reasons and the right to employ internet blocking/monitoring/reporting tools and policies to enhance the productive use of internet resources.

However, the question is asked: at what point does an intervention border on employees’ privacy since the debate suggests there could be a thin line? The point has already been made about the fact that employee monitoring is not new to organizations (Wen and Lin, 1998) though they conceded that those technologies are minimal given the amount time that can be wasted on the internet. For instance, unauthorised phone calls by employees have been monitored and reviewed likewise the use of time clocks to monitor hours worked by employees. Remarkably, Urbaczewski and Jessup (2002) and Stanton and Weiss (2003) asked whether the benefits of electronic monitoring will not be outweighed by ill feelings it may generate. They argue that such interventions may constrain creativity and freedom especially if some employees use it occasionally and for short tasks like checking personal emails, stock prices or sports scores. Decreasing employee morale, increasing worker stress and negative job attitudes and working relationships are some of the possible effects of employee monitoring (Firoz et. al., 2006; Corbin, 2000; Zimmerman, 2002). These concerns then raise issues about how flexible the interventions should be in terms of who is monitored and what is monitored. Despite the obvious challenges that may arise from managers implementing strategies to reduce non-productive use of the internet by their employees, research shows that most organizations do implement various strategies. Internet blockers, one of the popular approaches normally limit employees’ access to objectionable material/websites; employers select these objectionable materials/websites that they deem unacceptable to the organization or may take valuable time away from employees’ working hours (Wen and Lin, 1998). The monitoring tools use software like NetNanny and CyberSitter to monitor and get reports on any attempts made to access both restricted and unrestricted websites (Urbaczewski and Jessup, 2002).

A survey by the American Academy of Management in 2001 of 1627 managers revealed that 63% monitor internet use, the study noted that 74% use monitoring software (Young and Case, 2002). The study also showed that other closer monitoring strategies such as checking employees’ email and websites as well as their internet connections

have been adopted by some of the organizations. Similar results to that of the American Academy of Management have been reported elsewhere according to Young and Case (2002). They mentioned a *Vault.com* survey that found that 41% of organizations restrict or monitor internet use; likewise that of *Information week* which revealed that 62% of organizations monitor their employees' internet use.

Internet acceptable use policies also came up strongly as an alternative intervention measure in the literature. These policies range in enforcement from virtually none to continuous monitoring and termination of offenders (Urbaczewski and Jessup, 2002). Establishing good internet use policies will allow organization set guidelines in advance, improve employee productivity and set the tone for what is considered acceptable and unacceptable (Cohen, 1996). This will in effect spell out what the internet use rewards are and what the penalties are. A previous survey suggests that 83% of organizations have internet use policies and there have been instances when the organisations fired employees, issued formal reprimands or given informal warnings as the internet acceptable use policy dictated (Young and Case, 2002). A less popular approach that has hardly received any attention in the literature is the use of self or managerial oversight. It came up in a study of 224 human resources directors where 60% indicated they employ this approach as opposed to 38% who use filtering software (Young and Case, 2002). Perhaps this approach can be combined with the most common approaches in order to present a more comprehensive and formidable arsenal to tackle the problem. The self or managerial oversight approach may well make up for some of the concerns that have arisen with the more traditional electronic monitoring option. Urbaczewski and Jessup (2002) observed that when used in order to provide employees with performance-related feedback and suggestions, electronic monitoring can be acceptable to employees. However when the purpose of the monitoring is to gain compliance with rules and regulations, employees are more likely to see that as a violation of the trust between the two parties and that may negatively affect satisfaction with monitoring. Following these arguments, Wen and Lin (1998) suggested a set of guidelines which provide the basis for organizations to develop their own internet use policies so the desktop internet experience can be mutually rewarding. Ultimately the experience should be productive and satisfying.

### **Proxies for estimating employee office productivity**

Productivity as a fundamental concept in management is usually defined as the ratio between input and output (Kapyla, 2009); it borders on the efficient use of resources. Labour productivity could be defined simply as the hours of work divided by the units of work accomplished (Thomas, 1994); though in reality it denotes a much more complex and diverse set of factors. Often, labour productivity is a key factor contributing to the inability of organizations to achieve their set goals, which includes profits (Enshassi et al., 2006). Hence productivity improvements are seen as a critical success factor and the foundation of profitability within organizations (Kapyla, 2009). Productivity improvement can be achieved in the form of waste elimination (Tangen, 2005). Since labour productivity measures the relationship between real output and the labour resources used in the production of the output (Eldridge et al., 2004), waste elimination could come in the form of using fewer labour resources to achieve the same output or achieving higher outputs with the same labour resources. Invariably all the labour resources in the production process should add value to produced goods and services.

Since scholars and practitioners are yet to come to a universally accepted means of measuring productivity at the workplace especially office productivity, a range of different approaches and metrics of measurement have been adopted (Haynes, 2007). However the elements- time, efficiency and quantity still permeates these approaches since Taylor's work on scientific management (Taylor, 1911). The search for the optimum work method that minimizes resource use through standardized work methods and environments are still relevant today as they were in Taylor's time despite the increasing popularity of social 'people-centred' factors in productivity measurement (see Haynes, 2000). After an extensive literature review, Oseland (1999) supported Sink (1985) and concluded that productivity is largely expressed in terms of efficiency though he acknowledged the complexity of measuring inputs and outputs in today's more service and knowledge-based setting. One measure that is implied in most of the attempts at finding a common metric falls within the employee's hours worked domain. Kaplan and Aronoff (1994) mentioned absence measures and activity logs. Leifer (1998) supports the need to consider such quantifiable and tangible measures. Office of Real Property (1999) having acknowledged the challenges of measuring productivity, proposed amongst

other things the measurement of ‘churn costs’ which include employee downtime, time to execute a move and get a person back up-and-running, space move costs etc. Productivity measures such as absence from work station, interruptions to work, speed and accuracy of work, cycle time from initiation to completion of process have also been suggested (Clements-Croome, 2000). These measures are largely within the employee’s hours worked domain.

Employee downtime could take away a lot of value from the value chain through lower productivity levels which invariably leads to cost inefficiencies within organizations. Employee downtime could be created in so many areas and through so many activities within an organization and in almost all cases; loss of productive hours can be imputed. For instance, employees engaging in non-billable or non-charged jobs, employees engaging in rework; employees taking longer than necessary time to complete a job; employees waiting for work; employees ‘stealing’ time for personal non-work related activities etc. In the final analysis organisations would have to deploy more resources either in the form of paying employees extra for longer hours of work to complete a given task or hiring more employees to achieve the same levels of output.

Paid hours and the productive hours worked have been used to estimate employee productivity in the past though in all cases, the shortcomings of this measure were acknowledged. Eldridge et al. (2004) conceded that any observable difference between output growth and labour hours growth may not entirely be attributable to labour hour inputs; it may include growth or increases in the quantities of non-labour inputs, changes in technologies, improvements in the skills of labour amongst other things. Thomas (1994), also cautioned that labor productivity actually depended on quite diverse factors that go beyond the simplistic arguments that the longer the time an employee spends engaging in productive work, the more productive an employee is. He argued that the employee’s competence and motivation amongst others affect labour productivity.

Despite these challenges, the Bureau of Labour Statistics (BLS) produces quarterly productivity statistics for the US economy, industries and some foreign countries using this measure as an input into their calculations (Eldridge et al., 2004). This level of examination is considered macro (Kapyla, 2009); however their approach can be described as an aggregation of micro-level data into macro-level information. The BLS usually surveys individual workers at the establishment and household levels. Kapyla (2009) in a comprehensive productivity research study described the micro-level perspective as related to a single organization, department, unit, process or individual employee.

### **Conceptual Framework and Data**

The paper employs the Pearson's Chi-Square methodology by Pearson (1900) to investigate the association between Dysfunctional internet usage and man-hour losses in both private and public sector organisations in of Ghana. Pearson (1900) proposed two main application of the methodology namely tests of goodness of fit and tests of independence. The test of goodness of fit explores the difference between an expected (theoretical) and observed frequency distributions, whereas test of independence determines the independence of two attributes with some class. We use the test of independence in our investigations. We consider the two attributes (usage and man-hour losses) in the study with four classes ( $r$  rows) for usage and four classes ( $c$  columns) for man-hour losses. We define  $U_1, U_2, U_3, U_4$  as class 1, 2, 3 and 4 of attribute-usage respectively.  $M_1, M_2, M_3, M_4$  as class 1, 2, 3 and 4 of attribute-man-hour losses respectively. We present the above in a contingency table as shown below:

**Table 1: A Contingency Table for Usage and Man-hour losses**

		<b>Man-hour losses</b>				
		$M_1$	$M_2$	$M_3$	$M_4$	<b>Total</b>
<b>Internet Usage</b>	$U_1$	$O_{11}$	$O_{12}$	$O_{13}$	$O_{14}$	$\sum U_1$
	$U_2$	$O_{21}$	$O_{22}$	$O_{23}$	$O_{24}$	$\sum U_2$
	$U_3$	$O_{31}$	$O_{32}$	$O_{33}$	$O_{34}$	$\sum U_3$
	$U_4$	$O_{41}$	$O_{42}$	$O_{43}$	$O_{44}$	$\sum U_4$
<b>Total</b>		$\sum M_1$	$\sum M_2$	$\sum M_3$	$\sum M_4$	$N$

where  $O_{ij}$  is the observed frequency/value for  $U_i$  and  $M_j$  as defined above and the corresponding expected or theoretical frequency(value) calculated from Table 3.1 by the formula:

$$E_{ij} = (\sum U_i \sum M_j) / N \tag{3.1}$$

and  $N$  is the sample size (responses).

We set the hypotheses as follows:

**Null Hypothesis:**

Dysfunctional Internet Usage and Man-hour Losses are Independent (No association)

**Alternative: Hypothesis**

Dysfunctional Internet Usage and Man-hour Losses are Dependent (some level of association)

The test statistic ( $\chi^2$ ) given by:

$$\chi^2_{cal} = \sum_i^r \sum_j^c ((O_{ij} - E_{ij})^2 / E_{ij}) \tag{3.2}$$

where there are,  $\lambda = (r - 1)(c - 1)$  degrees of freedom. The critical value is given by:

$$\chi^2_{crit} = \chi^2_{(\alpha, \lambda)}$$

where  $\alpha$  is the significance level

Employing a convenience sampling technique, a total of 1000 employees has been chosen out of which 870 questionnaires were completed and returned (87 percent response rate).

**Data Analysis and Discussion**

**Dysfunctional Internet usage and Man-hour losses**

Sequel to the main objective of our studies, we utilize the test of independence methodology in chapter three using the sample data: 870 employees. The dysfunctional internet usage is in terms of the number of hours an employee spends on websites considered not relevant to their work in a day. We have categorized the hours into classes as follows: Class I1 (zero hours), class I2 (from 1min to 3hours), class I3 (from 4 to 6 hours) and class I4 (7 to 8 hours). Similarly, the man-hour losses are measured in terms of the total number of paid labour hours per employee per day less the total number of hours of employee uptime per day. Put another way, man-hour losses is measured in terms of the number of hours of wages lost to employees who engage in non-work related internet activities (class M1 for 8 hours, class M2 for between 7 and 5 hours, class M3 for between 4 and 2 hours and class M4 for 1 hour and below). We calculate the expected values of employees using equation (3.1)

**Table 2 : Expected and Observed Values for Employees Contingency Table**

		<i>Man-Hour Losses</i>					
		<i>M1</i>	<i>M2</i>	<i>M3</i>	<i>M4</i>	<i>Total</i>	
<i>Internet Usage</i>	<i>I1</i>	150.00	81.00	31.00	24.00	286.00	
		189.68	48.65	27.29	20.38		
	<i>I2</i>	375.00	39.00	25.00	10.00	449.00	
		297.79	76.38	42.84	32.00		
	<i>I3</i>	27.00	15.00	13.00	13.00	68.00	
		45.10	11.57	6.49	4.85		
	<i>I4</i>	25.00	13.00	14.00	15.00	67.00	
		44.44	11.40	6.39	4.77		
	<b>Total</b>		577.00	148.00	83.00	62.00	870.00
	<i>Chi-Sq = 160.041, DF = 9, P-Value = 0.000</i>						

Using equation (3.2), we calculate statistics the test as given below:

$$\chi_{cal}^2 (Employees) = (150 - 189.60)^2 / 189.60 + (81 - 48.65)^2 / 48.65 + \dots + (15 - 4.77)^2 / 4.77$$

$$= 160.041$$

Considering the p-value of employees (0.000), we fail to accept the null hypothesis at a significance level of 1%. We conclude that there exists some level of association between dysfunctional internet usage and man-hour losses in corporate Ghana.

Several studies find empirical evidence for positive productivity effects of ICT at the firm level (Brynjolfsson and Hitt 1996, Lichtenberg 1995, Greenan and Mairesse 2000, Licht and Moch 1999). Despite its potential and the tremendous opportunities it offers for employees to improve their work and productivity our result shows that the use of the internet for non-work related purposes is widespread in Ghana which is affecting employee productivity. This

finding is consistent with earlier theories and empirical studies conducted in western contexts (see Currid, 1996; Magid, 1996; Hayes, 1995; Urbaczewski and Jessup, 2002). Roman (1996) for instance found that 55% of 150 executives said time spent accessing the internet for non-business purposes undermined employee productivity whilst Wiesendanger (1993) reported the loss of three hours of wages paid to an employee who spent three working hours surfing the Disney webpage which was non-work related. Some scholars have quantified the drain on employee productivity as thousands of dollars lost each year (Wen and Lin, 1998).

Unproductive use of the internet or internet abuse (Siau et al., 2002), is a form of deviant computer behavior that includes cyberslacking and cyberloafing (Lim, 2002). Almost all our respondents admitted using the internet for unproductive use or abusing it in one way or the other. It is instructive to note that 66.2% spent between one to three hours on the internet for unproductive use, 17.1% between four to six hours, 9.5% between seven to eight hours and 7.2% more than eight in that order. In a related study, Lavoie and Pychyl (2001) found that more than 50% of respondents admitted to spending 47% of their time on the Internet procrastinating, a modern form of cyberslacking in which an individual waste time and company resources by entertaining oneself on the Internet when one should be working (Marron, 2000).

Cyberslacking, a modern form of procrastination, consists of wasting time and company resources by entertaining oneself on the Internet when one should be working (Marron, 2000). Lavoie and Pychyl (2001) found that more than 50% of respondents admitted to spending 47% of their time on the Internet procrastinating. Cyberloafing, on the other hand, is a more general construct, referring to "any voluntary act of employees' using their companies' Internet access during office hours to surf non-job related web sites for personal purposes and to check personal e-mail" (Lim, 2002; p. 677). This finding may partly be attributed to the fact that the internet provides an unprecedented amount of resources that borders on peoples' wants and needs and for as long as these wants and needs have to be met people will go any length. A study by Greenfield (1999) found that 6% of online users suffer from internet addiction.

Second, the tendency to use the internet placed on employees' desk for non-work related purposes may arise out of ignorance rather than misdemeanor or aptly put cyberloafing. Employees are not made to appreciate the extent of productivity losses as a result of their dysfunctional use of the internet because managers have not consciously recorded and documented these losses for the benefit of employees and therefore their own internet use policies.

### ***Common unproductive sites visited***

We asked respondents which internet sites they frequently visited for unproductive personal purposes. The results in Table 3 showed that employees visited quite a number of sites which are not work-related. The most unproductive internet use which we ranked 1 is personal emails followed by social networking sites, online chatting and file transfer. Given the relative frequencies of all the common unproductive sites visited these four seem to stand out. Employees hardly use the internet for the purposes of making purchases, managing travel, coordinating social events. No respondent uses the internet to check stocks.



**Table 3: Website Visits and Rankings**

<i>Types</i>	<i>Total</i>	<i>Age Group</i>				
		<i>18-25</i>	<i>25-34</i>	<i>35-49</i>	<i>50-59</i>	<i>60+</i>
<i>Personal Email</i>	218	48	91	76	16	4
<i>SNS</i>	174	35	76	56	13	2
<i>Chatting</i>	157	36	71	64	9	1
<i>File transfer</i>	131	17	32	20	2	0
<i>Voice calls</i>	44	9	18	14	8	0
<i>Play Games</i>	35	7	14	11	3	0
<i>Job search</i>	33	6	13	11	2	0
<i>Video Calls</i>	26	5	12	8	2	0
<i>Music Downloads</i>	24	5	10	8	2	0
<i>Purchases</i>	11	2	4	4	1	0
<i>Travel Mgt</i>	9	2	4	3	4	0
<i>Coordinate social events</i>	8	2	3	3	1	0
<i>Check stocks</i>	0	0	0	0	0	0
<i>Porn Websites</i>	0	0	0	0	0	0
<b><i>Total</i></b>	<b>870</b>	<b>174</b>	<b>348</b>	<b>278</b>	<b>63</b>	<b>7</b>

Our finding on the common unproductive use or internet sites visited produced mixed results. Unlike the Young and Case (2002) who reported watching pornography and stocks as some of the problematic areas which accounted for 40% and 7% respectively of cases that led to disciplinary action or termination our study did not find any cases related to these two. In Ghana for cultural reasons respondents may rather withhold information on watching pornographic materials at work even in cases of anonymity and that could have led to this observation. The finding on checking of stocks is rather straight forward; the stock market in Ghana is not well developed hence very unpopular amongst the generality of the Ghanaian working class. The study also found personal email to be the most abused contrary to chatting and game playing observed by Young and Case (2002); however chatting according to our study was found to be similarly highly abused ranking third. Online chatting provides a more private, convenient and cheaper means of real-time communication and that makes it very susceptible for abuse. Social networking sites (SNS) which most previous studies failed to report was ranked second only to personal emails as one of the most common non-productive use of the internet at the workplace. We can argue that the popularity of SNS soared from the early 2000s after most of these earlier studies were done. For example, one of the most popular SNSs- Facebook was launched in February 2004, LinkedIn was created in December 2002 and Myface in August 2003 [www.wikipedia.org].

#### ***Age, Gender and internet usage***

We wanted to find out whether particular age groups and gender tend to abuse the internet more than others. Our study found out that the age group 25-34 (348) representing 40% were more likely followed by the group 35-49(278) representing 32%. The older age group 50-59(63) and above 60(7) representing only 8% are the least likely as presented in Table 4.

Despite the fact that the emergence of ICT and the internet has provided limitless opportunities in almost all areas of human endeavors, it is also significant to note that it has become one of the major forces in this era of globalization that tend to create disparities amongst groups and societies from socio – economic perspectives. It is instructive to note the difference between gender roles and sex roles as both affects our worldview. Whilst sex roles are biologically derived, that of gender is a social construct. This means that men and women are socially prepared for different task and therefore will influence the way men and women will see and embrace technology. For instance, there exist gender differences in the perception and use of e-mail (Gefen and Straub, 1997). Our studies revealed different patterns in terms of the usage of the internet at the workplace and its impact on productivity. From Table 3, it showed that more women are likely to use the internet for personal email and chatting compared to men. On the other hand, more men are likely to use the internet for the playing of games and also for downloading music as opposed to their female counterparts. This supports a previous study by Daniel (2005) conducted on middle and high school students in the USA in which it revealed that both males and females are competent in using computer. Again, it showed that females are more likely to use the internet to e-mail friends and family than males. On the hand, as in similar studies, males are likely to use the internet for entertainment and games (Daniel, 2005). Also, Thompson (2001) examined demographic variables connected with internet usage activities (defined in terms of messaging, browsing, his findings revealed that males were more likely to engage in downloading and purchasing activities while females were more likely to engage in messaging activities.

In terms of the relationship between age and internet usage, the Strait Times Report of 1996 indicated that users of the internet tend to be young adults. Again, Eurostat website pointed to the fact that “the lowest share of regular internet users was in the age group 55 – 74 years.” As per our table labeled age group, those who tend to use the internet most are the young adults whilst the intensity tend to diminish as one grows older. Our findings also revealed that young users tend to engage in messaging (chatting and emails) and also downloading activities. This supports an earlier research by Thompson (2001) in which he stated that young users tend to engage in messaging and downloading activities to a greater extent than older users. What is significant here is that purchases and travel management did not feature prominently as in other studies due to the fact that Ghana like other developing countries do not have well-developed credit and debit card systems for internet transactions.

**Company internet use intervention and policy**

As shown in Table 4, we asked respondents to indicate whether their organisations have put in place any specific internet use interventions and policies to check any form of internet misuse, abuse and addiction with its accompanying employee productivity issues. Majority (652) representing 75% indicated that there were no such measures in place within their organisations; only 218 representing 25% reported the existence of one form of intervention or the other.

**Table 4: Age, Gender, and Internet Restrictions distribution**

<b>Panel A: Age Group</b>					
	<b>Age 18-24</b>	<b>25-34</b>	<b>35-49</b>	<b>50-59</b>	<b>Above 60</b>
<i>Number</i>	174	348	278	63	7
<i>Percentage</i>	20.0	40.0	32.0	7.2	0.8

  

<b>Panel B: Gender Distribution</b>		
	<b>Male</b>	<b>Female</b>
<i>Number</i>	418	452
<i>Percentage</i>	48	52

---

**Panel C: Company Internet Policy Restrictions**

---

	<i>Yes</i>	<i>No</i>
<i>Number</i>	218	652
<i>Percentage</i>	25.1	74.9

---

Given the potential for misuse of the internet, earlier studies rather than recommending a complete denial of internet access have recommended the need for management to put in place intervening strategies (see Tabak and Smith, 2005). Hence, there is some concession to the fact that the internet delivers benefits and when managed well using appropriate tools could enhance productivity. Productivity improvements have been observed in a Korean company after an employee internet policy was introduced (see Kim, 2006). Contrary to a series of observations by Young and Case (2002) where 83%, 41% and 62% of organisations studied had internet use policies as to what constitutes acceptable and unacceptable use (Cohen, 1996), only 25% of Ghanaian organisations in the survey have put in place one form of intervention or the other. A lot of ethical and privacy concerns have been raised about employee internet monitoring and this has in some cases contributed to the non-existence or ineffectiveness of these interventions (Alder et. al.2008; Miller and Weckert, 2000; Martin and Freeman, 2003). This might not necessarily be the case in our study; placing the internet on employees' desktop is a relatively new phenomenon in Ghana and as with any new technology adoption, it's a matter of time that we get to experience and appreciate its shortcomings before we contemplate appropriate remedies. Yet another reason for the low levels of restriction and monitoring by organisations in Ghana may be the unpopularity of hourly/wage and performance based pay systems as a result those in the managerial positions in Ghana have either taken for granted or not realized the extent to which the use of the internet for non-productive activities can impact negatively on employee productivity and thus cost of operations.

**Conclusion and Managerial Implications**

The internet provides an unlimited opportunity for employee productivity. However, our study showed that in Ghana as a result of its abuse productivity is ultimately affected at the workplace.

In this paper, irrespective of one's demographic status, all the respondents reported of abusing the internet in one way or the other. Hence, any intervening policies and mechanisms should be multidimensional and multifaceted and should not be targeted at any one particular age group or gender though the young adults need closer monitoring because of their higher tendency to use the internet for non-productive activities. Since only 25% of the respondents admitted that they have in place one form of intervention or the other in their workplace, we recommend that managers in Ghana should take the abuse of the internet seriously as this can lead to loss of thousands, if not millions of Ghana Cedis. They should therefore put in place internet use policies and mechanisms that seek to prevent employees from engaging in such negative and unproductive practices and also measure and record productivity losses that may arise. This to a large extent can include the amount of time one can spend in terms of surfing the internet for personal purposes and at what specific time of the day. It should also include websites that are prohibited.

In relation to these, policies on internet usage should be communicated to employees and at the same time posted at vantage areas of the workplace; possibly where they take their breaks and also restrooms. Since in Ghana the issue of privacy is not so much of a problem unlike the case of other studies in more advanced economies, managers can install software devices that tend to block or monitor prohibited sites and also track the activities of employees anytime they visit the net. Managers however need to bear in mind that studies (Alge, 2001; Urbaczewski and Jessup, 2002) have shown that employees' are more willing to be monitored for as long as they are involved in the choice and design of the monitoring system and more so when used in order to provide employees with performance-related feedback and suggestions.

## References

- Alder, G. S. and Ambrose M. L. 2005a. Towards Understanding Fairness Judgments Associated with Computer Performance Monitoring: an integration of the feedback, justice, and monitoring research', *Human Resource Management Review* 15, 43-67.
- Alder, G. S., Schminke, M., Noel, T. W. and Kuenzi, M. 2008. Employee reactions to internet monitoring: the moderating role of ethical orientation, *Journal of Business Ethics*, 80(3) pp. 481-498.
- Alge, B. J. 2001. Effects of computer surveillance on perceptions of privacy and procedural justice', *Journal of Applied Psychology* 86, pp. 797-804.
- Brynjolfsson, E. and Hitt, L.M. 1998. Beyond the productivity paradox. *Commun. ACM*, 41(8) pp. 49-55.
- Clements-Croome, D. 2000. "Indoor environment and productivity", in Clements-Croome, D. (Ed.), *Creating the Productive Workplace*, E & FN Spon, London, pp. 3-17.
- Cohen, A. 2001. Worker Watchers, *Fortune* 143(13), 70-75.
- Conry-Murray, A 2001. 'Special report? the pros and cons of employee surveillance. *Network Magazine*. February 5, 2001, <http://www.networkmagazine.com/article/NMG20010125S0011>. Donaldson, Thomas: 2001
- Corbin, D. E. 2000. Keeping a Virtual Eye on Employees, *Occupational Health & Safety* 69, 24-28.
- Currid, C. 1996. Somebody out there is watching you. *Windows Magazine*, 57.
- Daniel, A.J. 2005, "An exploration of middle and high school students' perceptions of deviant behavior when using computers and the internet", *The Journal of Technology Studies*, 16(2), pp. 70-80.
- Eldridge, L. P., Manser, M.E, Otto, P.F. 2004. Alternative measures of supervisory employee hours & productivity growth, *Monthly Review, Office of Productivity and Technology, Bureau of Labour Statistics*, April.
- Enshanssi, A., Mohamed, S., Mayer, P. and Abed, K. 2007. Benchmarking masonry labour productivity, *International Journal of Productivity and Performance Management*, 56(4), pp. 358-368.
- Firoz, N. M., Taghi R. and Souckova. J. 2006. E-mails in the workplace: the electronic equivalent of 'DNA' evidence', *Journal of American Academy of Business* 8, 71-78.
- Gefen, D. & Straub, D.W. 1997. Gender differences in the perception and use of E-mail: An extension to the technology acceptance model. *MIS Quarterly*, 21(4), 389.
- Greenan, N. & Mairesse, J. 2000. Computers and productivity in France: Some evidence, *Economics of Innovation and New Technology* 9(3), pp.275-315.
- Greenfield, D. 1999. *Virtual addiction: Help for netheads, cyberfreaks, and those who love them*. Oakland, CA: New Harbinger.
- Hayes, M. 1995. Working online, or wasting time? *Info. Week*, May, 38-48.
- Haynes, B. P. 2007. An evaluation of office productivity measurement, *Journal of Corporate Real Estate*, 9(3) pp. 144-155.

- Haynes, B.P., Matzdorf, F., Nunnington, N., Ogunmakin, C., Pinder, J. and Price, I. 2000. Does property benefit occupiers: an evaluation of the literature”, Report No. 1, available at: [www.occupier.org](http://www.occupier.org)
- Kaplan, A. and Aronoff, S. 1994. Productivity paradox: workplace settings for knowledge work”, *Facilities*, 14(3/4), pp. 6-14.
- Kapyla J. Jaaskelainen, A and Lonnqvist, A. 2009. Identifying future challenges for productivity research: evidence from Finland. *International Journal of Productivity and Performance Management*, 59(7) pp. 607-623.
- Kim, S. 2006. Economics of employee internet management: the bottom line, *Managing Library Finances* 19, 124-138.
- Leifer, D. 1998. “Evaluating user satisfaction: case studies in Australia”, *Facilities*, 16
- Licht, G. and Moch, D.1999. Innovation and information technology in services, *The Canadian Journal of Economics* Vol. 32(2), 363-383.
- Lichtenberg, F. 1995. The output contributions of computer equipment and personnel: A firm-level analysis. *Economics of Innovation and New Technology*, 3 (4), pp. 201-217.
- Lim, V. K. 2002. The IT way of loafing on the job: cyberloafing, neutralizing and organizational justice', *Journal of Organizational Behavior* 23, pp. 675-694.
- Magid, L. 1996. Protection or control. *Info. Week* June, 126.
- Marron, K. 2000. Attack of the cyberslackers', *The Globe and Mail*
- Martin, K. and Freeman, R. E. 2003. Some problems with employee monitoring, *Journal of Business Ethics* 43, pp. 353-361.
- Miller, S and Weckert, J. 2000. Privacy, the work place and the internet, *Journal of Business Ethics*, 28(3), pp. 255-265.
- Morahan-Martin, J. 1997. Incidence and correlates of pathological Internet use. *Paper presented at the 105th Annual Meeting of the American Psychological Association*, August, Chicago.
- Office of Real Property. 1999. Workplace evaluation study: introducing the cost per person model, *US Government Office of Government wide Policy*, Washington, DC.
- Oseland, N. (1999), Environmental factors affecting office worker performance: A review of evidence; *technical memoranda* TM24: London: CIBSE.
- Pearson, K. (1900). On the criterion that a given system of deviations from the probable in the case of a correlated system of variables is such that it can be reasonably supposed to have arisen from random sampling. *Philosophical Magazine Series 5* 50 (302): 157-175
- Roman, L.A. 1996. Survey: employees traveling in cyberspace while on the clock, *Memphis Business Journal*, pp. 2-3
- Scherer, K. 1999. College life online: Healthy and unhealthy Internet use. *Paper presented at the 104th Annual Meeting of the American Psychological Association*, August, Chicago.
- Siau, K., Nah, F. F. and Teng, L. 2002, 'Acceptable internet use policy', *Communications in the ACM* 45, 75-79.

Sink, D. 1985. *Productivity Management: planning, measurement and evaluation, control and improvement*, Wiley, Chichester.

Stanton, J. M., & Weiss, E. M. 2003. Organisational databases of personnel information: contrasting the concerns of human resource managers and employees. *Behaviour and Information Technology*, 22(5), pp. 291-304.

Swanson, S. 2001. Beware: employee monitoring is on the rise, *Information Week*, August, <http://www.informationweek.com/story/IWK20010816S0010>.

Tabak, F. and Smith, W. P. 2005. Privacy and electronic monitoring in the workplace: a model of managerial cognition and relational trust development, *Employee Responsibilities and Rights Journal* 17, pp. 173-189.

Tabak, F. and Smith, W. P. 2005. Privacy and electronic monitoring in the workplace: a model of managerial cognition and relational trust development, *Employee Responsibilities and Rights Journal* 17, 173-189.

Tangen, S. 2005. Demystifying productivity and performance, *International Journal of Productivity and Performance Management*, 54(1), pp. 34-46.

Taylor, F.W. 1911. *Principles of scientific management*, Harper and Brothers, New York, NY.

Thomas, R.H. 1994. Effects of scheduled overtime on labor productivity, *Journal of Construction Engineering and Management*, 118(1) pp. 60-67.

Thompson S. and Teo, H. 2001. Demographic and motivation variables associated with internet usage activities", *Internet Research*, 11(2), pp.125 – 137

Urbaczewski, A. and Jessup, L.M. 2002, 'Does electronic monitoring of employee internet usage work?' *Communications in the ACM* 45, pp. 80-83.

Wen, H. J. and Lin, B. 1998. Internet and employee productivity", *Management Decision*, Vol. 36(6), pp.395 – 398.

Wiesendanger, B. 1993. "Electronic delivery and feedback systems come of age", *Public Relations Journal*, No. 1, pp. 10-14.

Young K. S. and Case, C. J. 2002. Employee internet management: current business practices and out comes', *CyberPsychology and Behavior* 5, pp. 355-361.

Young, K.S. 2004. Internet addiction: a new clinical phenomenon and its consequences, *American Behavioural Scientist*, 48(4), 402-415.

Zimmerman, E.: 2002. HR must know when employee surveillance crosses the line', *Workforce* 81(2), pp. 38-45.

This academic article was published by The International Institute for Science, Technology and Education (IISTE). The IISTE is a pioneer in the Open Access Publishing service based in the U.S. and Europe. The aim of the institute is Accelerating Global Knowledge Sharing.

More information about the publisher can be found in the IISTE's homepage:

<http://www.iiste.org>

## CALL FOR PAPERS

The IISTE is currently hosting more than 30 peer-reviewed academic journals and collaborating with academic institutions around the world. There's no deadline for submission. **Prospective authors of IISTE journals can find the submission instruction on the following page:** <http://www.iiste.org/Journals/>

The IISTE editorial team promises to review and publish all the qualified submissions in a **fast** manner. All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Printed version of the journals is also available upon request of readers and authors.

### IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

