

## Social Network Usage of Government Employees in Sri Lanka

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### Abstract

In a modern day workplace social media place's a pivotal role in various areas and provide certain benefits to a company such as easy sharing of information, Attune everyone in the organization to each other's needs and improve the way individuals think collectively etc. Due to that, social networks are associated with the productivity of an organization. Hence, this study was carried out with the following two objectives. They are identifying the factors affected for using social network sites by government employees and the government employees' behavior on social network sites. The sample of this study was selected using two-stage cluster sampling method and it was selected from the Colombo district. Primary data were collected by using the structured interview method. From this study it was discovered that government employee's age is the only factor that affects for using social media sites. More than three quarters of the government employees accessed social networking sites in the office and most of them used SNS's for personal matters. Hence, number of working hours were wasted. Thereby government organizations should create their own set of rules, guidelines and policies to reduce the wasted time. Also monitoring the employee behavior on SNSs is a better way to effectively manage the use of SNSs by government employees.

**Key words:** *Social network sites, productivity, economic impact, wasted time*

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## Introduction

In brief ‘social network’ imply ‘technologies that promote cooperation between individuals using information or data’ or ‘technologies that expedite and ease conversation’ (Harper, 2001). Above definition stands etymologically. Theoretically social network sites can be defined as web-based services that grant individuals to construct a profile within a bounded system, attach a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system (Boyd & Ellison, 2007, p. 211). In accordance with the history, SixDegrees.com is the first substantial social network site which was set in motion in the year 1997 (Boyd & Ellison, 2007, p. 214). After that blogging became very popular and in the year 2004 Facebook was launched as a social network site which only allowed Harvard students (Boyd & Ellison, 2007, p. 218). From September in the year 2005, Facebook was expanded allowing everyone to use it. Currently, gathering with social media sites are ubiquitous event in the world. By January end of the year 2015, 3 billion peoples have used internet. Among them 2.078 billion have active social media accounts (Williams, 2015). According to the Statistics Portal (2015) *Facebook* is the most popular social network with 1.49 billion users. *QQ*<sup>1</sup> and *Whatsapp* secure the second and third places respectively, with 832 and 800 million users.

Broadly, the uses of Social Network Sites (SNSs) can be classified into two groups as personal and professional or business uses (Warnakula & Manickam, 2010). Considering the professional uses, in a modern day workplace social media place’s a pivotal role in various areas. Such as communication, marketing and recruiting new employees, etc. Although social networks provide certain benefits to a company, organization or a firm it also can affect the company productivity in a harming way.

Generally, productivity is measured in terms of labour hours spent by an employee on the given task. As Bernolak’s definition productivity is how much and how well employee produces from given resources (as cited in Aguenza & Som, 2012, p. 50 & Ferreira & Du Plessis, 2010, p. 2). Recent studies, for example, Ferreira & du Plessis (2009), concur that online social

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<sup>1</sup> QQ or Tencent QQ is an instant messaging service developed by Chinese company Tencent Holdings limited. It also known as the world largest social gaming platform.

SNSs can increase partnership between individuals via the creation of communities of practice. The elevated partnerships will inspire knowledge sharing between individuals which can lead to increased productivity. Fahmy (2009) shows that employees who do not use social media sites are 9% less productive than those who uses SNSs. (as cited in Aguenza et al., 2012, p. 23). According to Swartz (2008), corporate social networks cut down on unnecessary e-mails and instant message among co-workers (as cited in Baker et al., 2005, p. 2; Awolusi, 2012. p. 3 & Seman, 2014, p. 31). Thereby SNSs cut down the amount of time it takes for co-workers to contact each other. Consequently SNSs reduce the time that takes for a job to complete. Withal, several studies found that SNSs help to establish strong bonds among co-workers (Diercksen et al., 2013, p. 3; Mason, 2014 & Steinfield et al., 2009, p. 253). Therefore, workplace becomes a comfortable environment for employees. Indirectly it helps to increase job satisfaction hence, the productivity as well (Lazear, 1989; Ichniowski and Shaw, 2005).

Even though above studies showed that SNSs increase the workplace, productivity it could decrease the productivity levels as well. For example, social networking has contributed to reduce the average person's heed stretched for 12 minutes to five in the last decade (Munene & Nyaribo, 2013, p. 144). According to Diercksen et al. (2013) employees in the United Kingdom use SNSs 40 minutes per day. In addition, Diercksen concludes that 57% of employees used social network sites for personal matters during work hours. Because of that wasted time, cost the firm more than \$2.25 Billion (Diercksen et al., 2013, p. 4). Also Social network site abuse hinders productivity. For instance, Ashmore and Herman (2006) concur that 25 employees who worked in the south Californian automobile club delayed their response to requests for roadside assistant because they were engaged in posting sexual harassment messages on myspace.com (as cited in Chen et al., 2008, p. 88). Furthermore, according to the CTHR<sup>1</sup> social network and workplace productivity survey social network sites blur the boundary between personal life and work (Career Times Online Limited, 2012). Considering Sri Lankan context, studies regarding Sri Lankan employee and social networks

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<sup>1</sup> CTHR.hk is an extension of the spearheading career and recruitment portal CTgoodjobs.hk, with a keen focus on serving the information and professional-development needs of the human resources profession.

are very few. Warnakula & Manickam (2010) have conducted a research on the subject of Sri Lankan employee behaviours in online social networking sites. However, ninety-eight of the sample units belongs to the 25-35 age group.

This studies elucidate that social network sites can both increase and decrease the productivity, yet most of the surveys and researches do not quantitatively measure the economic impact of it. Thereby this study was carried out with the following objectives: (1) Factors affected for having or not having a social network site account, (2) To identify the Sri Lankan government employee's behavior on social network sites, (3) to measure the economic burden of social network usage of government employees in Sri Lanka.

To archive the objectives following hypotheses were constructed.

1.  $H_0a$ : Registered member of a SNS and the gender of the employee variables are independent.
2.  $H_0b$ : Registered member of a SNS and age of the employee variables are independent.
3.  $H_0c$ : Registered member of a SNS and the education status of the employee variables are independent.
4.  $H_0d$ : Registered member of a SNS and the monthly salary of the employee variables are independent.
5.  $H_0e$ : Registered member of a SNS and the job type of the employee variable are independent.
6.  $H_0f$ : Registered member of a SNS and the geographical area of the employee studied school variables are independent.
7.  $H_0g$ : Registered member of a SNS and the ownership of the school which employee studied variables are independent.
8.  $H_0$ : There is no correlation between time spent at workplace by employees and whether the workplace offer free internet access to employees.

9.  $H_1$ : There is a correlation between time spent at workplace by males or females and whether the workplace offer free internet access to employees.

## **Methods & Materials**

### **Sample and data collection**

Primary data was collected by using structured interview method. The sample of this study was selected using two-stage cluster sampling method. And it was selected from the Colombo district since there are a large number of government offices in Colombo district more than in any other district in Sri Lanka. In the first stage of sampling process government offices such as ministries, authorities and departments were listed down. From that list 8 offices (Ministry of Housing and Construction, Ministry of Cultural Affairs, Sri Lanka Port Authority, Department of Census and Statistics, Auditor General's Department, Department of Posts, Department of Railways, Ministry of ) were selected which spread across Colombo district. In the second stage, 10% of employees randomly selected from each of those 8 offices. Thus a Total of 142 employees selected as the sample.

### **Data analysis**

The collected data analyzed using SPSS, R and MS-Excel software. To identify the relationship between variables, chi-square test of independence and Fishers Exact test were used. Technically, when the chi-square test of independence assumption (the value of the *expected cell frequency* should be 5 or more in at least 80% of the cells) was violated, Fishers Exact test was used to identify the relationship between variables. Further, to quantitatively measure the relationship between categorical variables binary logit regression model was used.

### **Model**

Logit regression model created in the following analysis has one categorical dependent variable and one categorical explanatory variable. The variable *accessed or not accessed SNSs from using cell phones at the office* was the Dependent variable and the variable *have or not have free internet access at the office* was the explanatory variable. Explanatory variable have two categories. From those two categories 'not have free internet access at the

office' category selected as the reference category and it was coded as 0. Other category (have free internet access at the office) coded as 1. Therefore, logit model can be written as follows.

$$P(y) = \frac{e^{\beta_0 + \beta_1 x}}{1 + e^{\beta_0 + \beta_1 x}}$$

$\hat{Y}$  = Accessed or not accessed SNS from using cell phones at the office

x = Have free internet access at the office (1)

Reference category = Do not have free internet access at the office (0)

## **Results & Discussion**

### **General Demographic Information's of the surveyed sample**

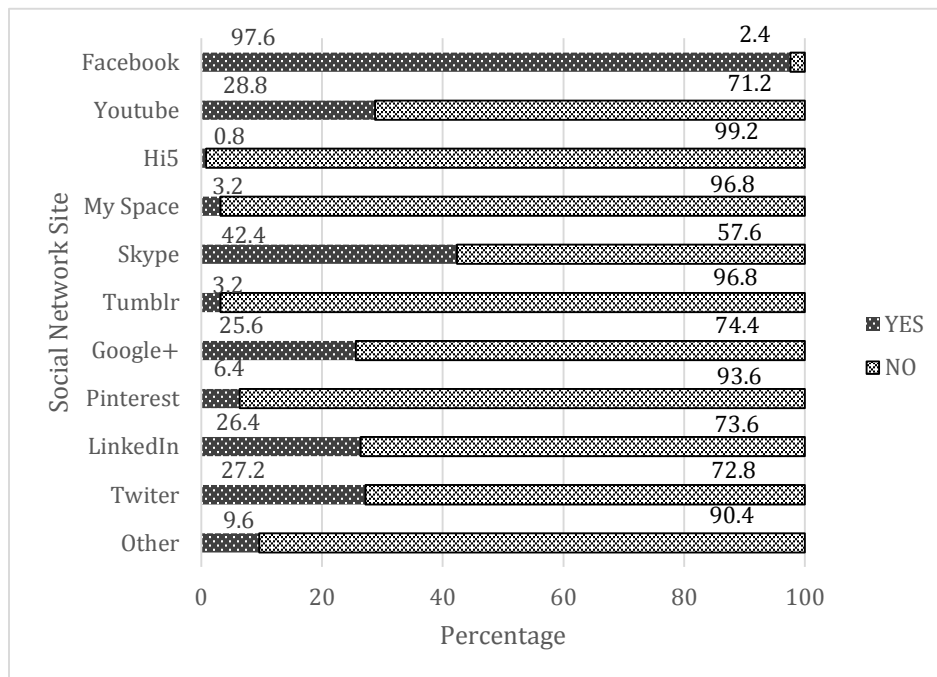
From the surveyed sample of 142 employees 51.4% of them are females and 48.6% of them are males. And those employees belong to following age groups. 15 – 24, 25 – 34, 35 – 44, 45 – 54, 55 – 64 and 64 + age group. There were 12%, 31.7%, 28.2%, 19%, 9.1% and 0% employees respectively in each age group. And the mean age of an employee is  $37.66 \pm 39.30$  years.

Considering the education status, 43.7% of the employees are graduates. 36.6% are secondary educators. 18.3% and 1.4% respectively, have postgraduates and PhDs. The largest percentage of respondents were at non-executive level (55.6%) and 26.8% were at the executive level. Others were included to categories such as top level managers (5.6%), Middle level managers (3.5%) and other (8.5%).

### **Most popular social network sites**

As you can see in the following graph (See Figure 1) Facebook is predominantly popular or most commonly used social network site. 97.6% Out of all the SNSs using government employers have an account in Facebook. And Skype is the second most popular social networking site with 42.4% of users. Although Warnakula & Manickam (2010) found that Hi5 is the second most popular social networking site among employers in Sri Lanka that situation cannot be seen among government employers. Because Hi5 is the least popular (0.8% Users) SNS among government employers in Sri Lanka.

Figure 1. Most Popular Social Network Site



Source: sample survey, 2015

LinkedIn is the world’s largest business-oriented social networking site. And it is mainly used for professional networking. Yet only ¼ government employees use LinkedIn. But considering the fact that according to Warnakula & Manickam (2010) there were only 5.4% of LinkedIn using employees in the year 2010, it can consider as some sort of a growth.

**Accessing places**

Nearly 4/5 Employees accessed to social network sites at home. Also, approximately ¾ visited SNSs at the office. Because of the fact that employees spent more time at the office and home in a day other SNS accessing places such as internet cafes, free Wi-Fi zones etc. are not commonly used for accessing social network sites.

Table 1. Social network sites accessing places

Accessing Place	Percentage	
	Yes	No
Office	73.4	26.6
Home	79.8	20.2
Other Places	4.8	95.2

Source: Author, 2016

### Frequency of visits

Ashraf & Javed (2104) say that now day's social networking plays a role of daily dairy in every one's life (Ashraf & Javed, 2014, p. 143). This statement can apply to Sri Lankan government employees as well. Because 58.1% of Sri Lankan government employees accessed SNSs more than once a day. And 31.5% accessed SNSs once a day. Which means that 89.6% ( $58.1\% + 31.5 = 89.6\%$ ) of Sri Lankan government employees accessed SNSs at least once a day.

### Time spent in social network sites

Average time spent in social network sites at the office by an employee is equals to 69.83 minutes. But female employees spent more time in social network sites than male employees at the office. While male employee spent 60.48, 95% CI<sup>1</sup> [42.57, 78.44] minutes female employee spent 79.66, 95% CI [53.06, 106.26] minutes per day. Comparing the Time spent in social network sites at the office and home there is only 3.32 minute's difference (See Table 4). Which says that employees spent approximately similar time at the office and home. Even though Sri Lankan government employee's spent averagely more than one hour in SNSs at the office or workplace they spent less than half an hour (23.94 Minutes) in SNSs only to complete job tasks. Hence, approximately 46 minutes wasted by an employee per day.

<sup>1</sup> CI = Confidence Interval



Table 2. Mean time spent in SNSs at different places

Place	Mean Time Spent in SNSs (Minutes)	Std. Error	Confidence Interval (95%)
Office	69.83	8.125	53.91 – 85.76
Home	66.51	6.344	54.08 – 78.94
Other	3.25	2.588	-1.82 – 8.32

Source: Author, 2016

### Factors affected for having or not having a social network site account

86.6% of government employees in Sri Lanka at least have a single registered account on any social network site. Which means that there is a high level of social network usage among government employees in Sri Lanka. Major factors that affecting an employee to have at least a single social network account can be identified using the fisher's exact test results.

Table 3. Fisher's exact test results

Hypothesis number & the Hypothesis name	$p$ -value	Decision
1. $H_0a$	0.141	$p > \alpha, \therefore H_0a$ Accepted.
2. $H_0b$	0.0006427	$p < \alpha, \therefore H_0b$ Rejected.
3. $H_0c$	0.242	$p > \alpha, \therefore H_0c$ Accepted.
4. $H_0d$	0.761	$p > \alpha, \therefore H_0d$ Accepted.
5. $H_0e$	0.773	$p > \alpha, \therefore H_0e$ Accepted.
6. $H_0f$	0.067	$p > \alpha, \therefore H_0f$ Accepted.
7. $H_0g$	0.330	$p > \alpha, \therefore H_0g$ Accepted.

Note.  $\alpha = 0.05$ 

Source: Author, 2016

Therefore, the only reason affected for having or not having a registered social network site account is the age of the employee. But Cramer's  $V^1$  (0.387,  $p = 0.000$ ) value suggest that there is a weak association between the variable registered member of a SNS and the variable age of the employee. Thereby it can conclude that even though the age of the employee is the only reason affected for having or not having a registered social network site account it does not affect drastically or powerfully.

## **Government employee behaviour on social network sites**

### **Reasons for using social network sites**

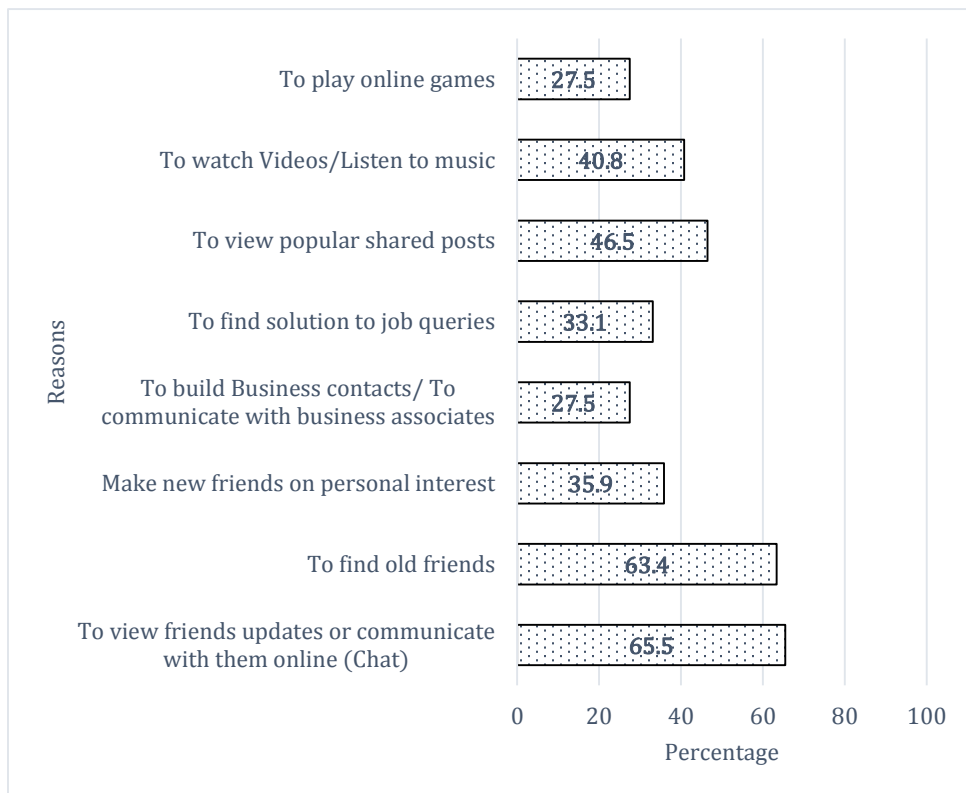
Most of the SNS using government employees do not have work-related objectives or reasons for using social network sites. As you can see in the bellow graph 65.5% and 63.4% of employees used SNSs respectively to view friends update or communicate with them online (Chat) and to find old friends.

Social networks allow organizations to reach out to select groups or individuals and to target them personally. Businesses can encourage their customers to become connections or friends, offering special discounts that would be exclusive to online contacts. This personal touch is not only appreciated, but may give the business access to that customer's own network of contacts.

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<sup>1</sup> Cramer's  $V$  is a measure of association for a  $m \times n$  contingency table. Cramer's  $v$  represents an attempt to create a function of  $\chi^2$  that takes the value in the interval between 0 and 1 (Upton & cook, 2005, p. 89). And it is calculated using  $[\chi^2/(n)(L - 1)]^{1/2}$  formula. Where  $\chi^2$  is the chi-square test statistic;  $n$  is the total number in the sample and  $L$  is the minimum value of the row totals and column totals from the contingency table (Corder & Foreman, 2014. p. 186). If the Cramer's  $V$  value is greater than 0.5 then there is a powerful association between variables (Morgan et al., 2004, p. 103).

Figure 2. Reasons for using social network sites



Source: Author, 2016

Hence, SNSs are very powerful business contact building media. But most of the government organizations in the selected sample aren't business oriented organizations. Due to that matter only 27.5% of employees used SNSs as a business contact building media.

**Social network site access from using cell phones**

As a percentage 13.4% of the government employees don't have free internet access. Nevertheless, employees don't stop accessing to social network sites because they have not free internet access at the office. Instead of using office internet connection most of those employees who worked in an office which has totally restricted internet access used cell phones to access SNSs(63.7%). Hence, there is a relationship between accessing SNSs from using cell phones and whether the organization offer free internet access or not. This relationship can be identified using following logistic regression model.

Table 4. The relationship between free internet access variable and social network site access from cell phones variable

	$\beta$	S.E.	Wald	df	Sig.	Exp. ( $\beta$ )
Have Free Internet - Access	1.617	.778	4.319	1	.038	.198
Constant	-.398	.197	4.068	1	.044	.672

*Note.* Reference category = Do not have free internet access, Wald = Wald Statistic,

Exp. ( $\beta$ ) = Exponential beta, S.E. = Standard Error

Source: Author, 2016

Because  $\chi^2 = 5.957 > \chi_{0.05,1}^2 = 3.94$  ( $P = 0.015 < \alpha = 0.05$ ) overall the model is significant. Comparing the government employees working in a workplace where they do not have free internet access with the government employees where they have free internet access at the workplace, the probability of accessing to SNSs using cell phones when government employees have free internet access is equals to 0.1176. But when they do not have free internet access, the probability of accessing SNSs using cell phones is 0.4018. This indicates that even if government organizations restricted the internet access, it does not stop employee's access to SNSs at the office. In year 2012 a research company called Forrester gave a hint about this situation by estimating that in 2016 there will be 350 million employees who owns a smartphone and 57% of these employees, which are about 200 million employees, will bring the smartphone to work (as cited in Pitichat, 2013, p. 2).

And there is a significant point-biserial correlation<sup>1</sup> between the time spent at the workplace by employees and whether the workplace offer free internet access to employees or not.

<sup>1</sup> The point-biserial correlation is a statistical procedure to measure the relationship between a discrete dichotomous variable and an interval scale variable (Corder & Foreman, 2014, p. 150). The value of this correlation coefficient takes in the interval between -1 to +1 (Upton & Cook, 2005, p. 39).

Table 5. Point-biserial correlation between the time spent at the workplace by employees and whether the workplace offer free internet access to employees or not

Variables	Time Spent at the office (Minutes)
Is your company or organization offer you free internet access (Yes/No)	Pb. Correlation - 0.206*
N	Sig. (2-tailed) 0.024
	N 121

*Note.* Pb. Correlation – Point-biserial correlation

Source: Author, 2016

The point-biserial correlation coefficient was significant ( $r_{pb} = -0.206, p < 0.05$ ). Based on that it can state that there is a negative weak relationship between the time spent at the workplace by employees and whether the workplace offer free internet access to employees or not.

### Conclusions

This study revealed that employee age is the only factor that affected for having or not having a social network site account. But it is not drastically affected for having or not having a SNS account. In workplace approximately 3 out of 4 employees accessed to SNSs. Which means that there is a high level of SNS usage among government employees at the office. Even though certain government offices have totally restrict internet access employees used mobile phones to access SNSs as an alternative to that. Most of the employees used SNSs for personal matters such as to find old friends and to view friend updates or communicate with them online. Using SNSs for professional matters is at a lower level when compare to using it for personal matters. Study results manifest that level of social network usage among government employees is high. And most of the employees use it only to personal matters. Hence wasted time at the office is also high. Due to that it is important to find a method for effectively using wasted time to increase productivity. There is no national social media usage policy in Sri Lanka regarding government employee engagement in SNSs. Thereby government organizations should create their own set of rules, guidelines and policies to reduce the wasting time. Also monitoring the employee behavior on SNSs is a better way to effectively manage the use of SNSs by the government employees.

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