




INTERNET ABUSE INTENTION AT WORKPLACE AMONG EMPLOYEES: A MALAYSIAN PERSPECTIVE

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ABSTRACT

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This study examines the factors that contribute to internet abuse intention among employees of SMEs in the services sector in Malaysia. Modified Theory of Planned Behaviour (TPB) model has been adopted as the theoretical framework. Primary data has been collected from 500 SMEs' employees who have access to the internet at their workplace through self-administered survey questionnaire. Attitude, subjective norms, perceived behavioural control, moral norms and external locus of control are positively related to internet abuse intention. This research has included the additional variables, moral norms (internal variable) and external locus of control (external variable) to enhance the TPB model. This research will contribute to the employers who intend to reduce the internet abuse behaviour of their employees in the workplace and as a reference for future researchers on similar topics.

Contribution/Originality: This study added two more variables, external locus of control and moral norms to extend the original TPB model. From the management perspective, it would help to enhance the work productivity of Malaysian SMEs by planning various measures to avoid internet abuse intention among employees.

1. INTRODUCTION

Young (2006) has stated that the internet was seen as one of the things that can influence our daily life because internet users are likely to spend most of their leisure time in the cyber community. Internet abuse can be defined as an individual's inability to restrain his or her internet usage, and may eventually result in a feeling of distress and causes their daily activities to be functionally impaired (Shapira *et al.*, 2003). Small and Medium Enterprises (SMEs) are legally independent companies that have contributed 21.4% to the overall GDP growth in the services sector in Malaysia for the year 2015 according to the official website of SME Corporation Malaysia. The occurrence of internet abuse in a workplace may jeopardize the organization regarding increase in infrastructure and internal security costs, as well as possible risks related to organization's civil and legal liabilities (Conlin, 2000; Verespej, 2000). This concern has become a serious issue in many countries, of which Malaysia is one of them. It is believed that this 'plague' has infected a great number of employees in Malaysia and this situation is worsening day by day. Internet abuse can be a hidden activity and the growing availability of various internet facilities in the workplace is making it easier for misuse of the internet to occur in many different forms.

In this research, internet abuse is defined as the personal use of internet for non-work-related activities during working hours through electronic devices such as computer and mobile phone. This study mainly focuses on investigating the factors that cause the internet abuse intention among employees of SMEs which includes all the micro, small and medium-sized enterprises in the services sector.

1.1. Problem Statement

The internet abuse can be seen as an intensifying issue in Malaysia. Therefore, it is important to acknowledge the existence of this problem. Cheng (2013) reported in the Star Online that employees in Malaysia with regular working hours of 9 a.m. to 5 p.m. spend a total of 4 hours being productive. Rosli *et al.* (2015) mentioned that the internet abuse phenomenon is affecting small and medium enterprises (SMEs) in Malaysia. By referring to SME Corporation Malaysia (2015/16) there has been a sharp increase in Information and Communication Technology (ICT) adoption among the SMEs in Malaysia in recent years. Rosli *et al.* (2015) further stated that it is possible for employers to encounter lawsuits if their employees have used the company network to access pornography or to post inappropriate comments in various online forums. Numerous studies have addressed these concerns. However, these studies have some deficiencies. In a similar study, Jamaluddin *et al.* (2015) have distributed their questionnaires by using the convenience sampling method to only 12 organizations in Kuala Lumpur and Melaka. We have extended the research to cover four States in Malaysia, which were Selangor, WPKL, Johor and Perak as these States have the highest rankings in the total SME establishments.

2. LITERATURE REVIEW

2.1. Theory of Planned Behaviour

Theory of Planned Behaviour (TPB) explains how attitudes and social norms of individuals may affect their intention to behave in a particular way (Pee *et al.*, 2008). TPB is a model extended from the Theory of Reasoned Action (TRA) (Ajzen, 1991). The main assumption of both TRA and TPB models is that individuals are rational in considering their behaviours and actions. TPB has been widely applied and cited by many past researches (Morris *et al.*, 2012b). It is well accepted as a model with a strong predictive function and as a well established model to forecast intention. Attitude, subjective norms and perceived behavioural control are the variables of the TPB model. Attitude is the possibility of carrying out a certain action derived from the belief and the outcome assessment (Henle *et al.*, 2010). Subjective norm is the influence derived from the perception of those who are important to the individual in performing an act (Tan *et al.*, 2015). Perceived behavioural control is which an individual belief that he or she can overmaster the personal resources to perform certain behaviour (Ko and Jin, 2017).

However, the determinants of intention are not bound by the three factors of the TPB model (Ajzen, 1991). According to Huang and Chen (2015) the TPB has overlooked on the explicit motivational content as a possible enticement of intention to perform an actual behaviour. Many other determinants may influence behaviour. Many researchers have modified the TPB model. The addition of external locus of control and moral norms is used in this study to fill the lack of the original TPB model.

2.2. Internet Abuse Intention

Internet abuse intention can be defined as any voluntary act of an employee to use the company's internet to browse web sites and examine personal e-mail during their working hours (Lim, 2002). Harrison *et al.* (1997) stated that intention construct has been adopted by many studies, as it can predict the actual behaviour accurately. Theory of Planned Behaviour (TPB) model proposed by Ajzen (1985) suggests that people will behave according to their intentions and perceptions of control over the behaviour. Similarly, the study by Woon and Pee (2004) has examined the effects of job satisfaction, affect, social factors, perceived consequences, habit, and facilitating conditions on internet abuse intention and all the factors were found to influence the internet abuse intention, which

eventually lead to the behaviour of internet abuse. Moreover, Francis *et al.* (2004) mentioned that although the relationship between an individual's intention and actual behaviour is imperfect, intention can be utilized as an understudy measure of behaviour. Hence, this study proposes to determine what factors will cause the internet abuse intention.

2.3. External Locus of Control

External locus of control is where a person believes that his or her future success is due to external causes (Rotter, 1966). Some researchers have found that it may significantly affect the decision to perform a certain behaviour (Chonko *et al.*, 2002; Hume *et al.*, 2006). According to Poškus (2015) by integrating moral norms, it can aid to curb the lack of regards towards an individual's moral aspects to behaviour.

2.4. Moral Norms

Moral norms refer to an individual's belief in moral righteousness when performing certain behaviour. The addition of moral norms has resulted in an increase in intention towards certain behaviours (Taneja, 2006). According to the study of Botetzagias *et al.* (2015) moral norms have an extensive positive effect on the intention. In his study, moral norms were the second most important predictor to explain the recycling intention. An individual may be determined to act morally when there are internal feelings regarding the moral obligation for particular actions. Gino *et al.* (2011) explained that moral identity has moderated the relationship between self-regulatory resource depletion and dishonesty, in which such relationship has been weaker for the participants with high moral identity. Moral norms are closely associated with an individual's consideration in terms of self-moral worth instead of the outcomes of the behaviour (Huang and Chen, 2015).

2.5. The Relationship between Attitudes and Internet Abuse Intention

Attitudes have been found to be a substantial factor in the prediction of behaviour (Glasman and Albarracin, 2006). Lau *et al.* (2003) found that an individual's attitude towards internet abuse does play a role in internet abuse intention and behaviours. Individuals with positive attitudes towards internet abuse are more likely to commit internet abuse at work (Liberman *et al.*, 2011; Lim and Chen, 2012; Askew *et al.*, 2014). Hence, the hypothesis is developed as below:

H1: There is a positive relationship between attitudes and internet abuse intention.

2.6. The Relationship between Subjective Norms and Internet Abuse Intention

Based on the past studies of Henle *et al.* (2010); Moody and Siponen (2013) and Tan *et al.* (2015) subjective norms is a significant independent variable that will positively influence the intention of an individual to perform certain behaviour. Therefore, the following hypothesis is formulated:

H2: There is a positive relationship between subjective norms and internet abuse intention.

2.7. The Relationship between Perceived Behavioural Control (PBC) and Internet Abuse Intention

The past studies of Ko and Jin (2017); Liao *et al.* (2010) have shown that higher level of PBC will result in a greater intention to avoid Internet misuse on the employees' perspective. This leads to the following hypothesis:

H3: There is a positive relationship between perceived behavioural control and internet abuse intention.

2.8. The Relationship between Moral Norms and Internet Abuse Intention

Several previous empirical studies have concluded that there is a significant relationship between moral norms and the intention to certain behaviour. According to Botetzagias *et al.* (2015) moral norms have an extensive positive effect on the intention, similar to the study of Taneja (2006). Gino *et al.* (2011) explained that impaired

moral norms are positively related to the intention of performing an immoral act. Hence, the following hypothesis is suggested:

H4: There is a positive relationship between immoral norms and internet abuse intention

2.9. The Relationship between External Locus of Control (ELOC) and Internet Abuse Intention

Past studies by Vitak *et al.* (2011) and Chak and Leung (2004) have agreed that individuals with external locus of control will have lower self-control ability over internet use and they tend to spend more time on the internet. Similarly, Davis *et al.* (2002) have concluded that people who possess high ELOC are more likely to be involved in internet abuse at work. With this, the following hypothesis is developed:

H5: There is a positive relationship between external locus of control and internet abuse intention

2.10. Proposed Research Model

The proposed research model is shown in Figure 1.

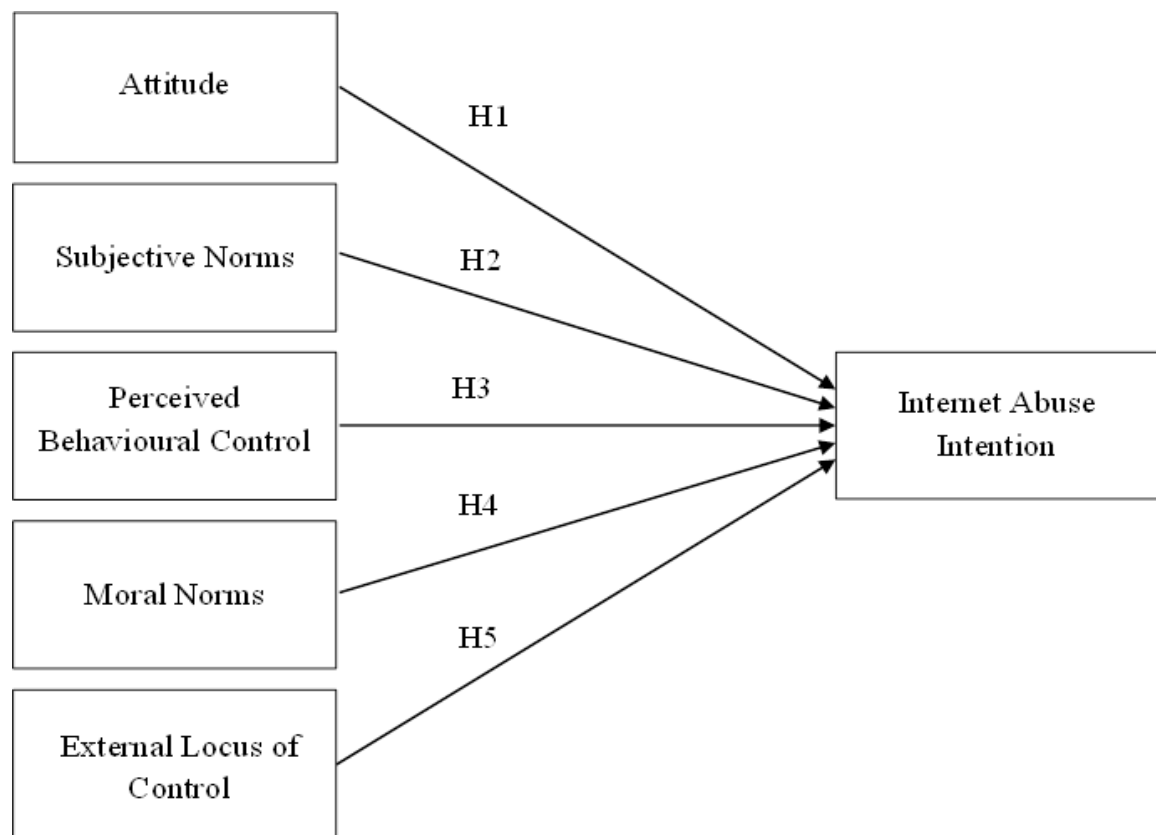


Figure-1. Proposed research model.

Source: Adopted from: Ajzen (1985); Ajzen and Driver (1992); Jamaluddin *et al.* (2015)

3. METHODOLOGY

3.1. Research Design

The quantitative data collection technique is applied in this research as numerical data gathered from questionnaire survey are measurable and quantifiable (Zikmund *et al.*, 2010). According to Sedgwick (2014) cross-sectional study is adopted when all the measurements are acquired at a single point in time. Cross-sectional studies are also used to identify commonness, and it is quick and easy (Mann, 2003). Hence, data for this research were collected on 3 months basis from 3rd October 2016 to 10th January 2017 by using the cross-sectional approach.

3.2. Population

The target population of this study is all the employees of SMEs in Malaysia who have the access to the internet in the workplace. As retrieved from the official website of SME Corporation Malaysia, the Economic Census 2011 reported that SMEs accounted for 97.3%, which amounted to 645,136 of total business establishments in 2010. Selangor, WPKL, Johor and Perak are the four States with the highest rankings in the total SMEs establishments. Hence, our focus narrows down to the services sector in these four States.

3.3. Sampling

The sample is used as it is unfeasible to test data from every single element and that it may, at times, produce more reliable results than the entire population (Sekaran and Bougie, 2013). Taking a sample also requires lower cost (Cooper and Schindler, 2008).

The cluster random sampling method is used in this study. The researchers classify the population into groups, called clusters which often naturally occur in the population (Teddlie and Yu, 2007). The population was put into clusters by the States. The sample was further selected from the four clusters by utilizing simple random sampling, where each of the population has equal chances to be selected (Cooper and Schindler, 2008). The Comprehensive Business Directory for Small & Medium Enterprises Malaysia has been used as the sampling frame.

The minimum requirement for population of above 500,000 is 384 samples (Krejcie and Morgan, 1970). Our population size is 645,136. Hence, 500 questionnaires have been distributed to our target respondents.

3.4. Research Instrument

Self-administered questionnaire was used in this study, because it is convenient, less time consuming and does not have any specific skill requirement compared to semi-structured and in-depth interview. In addition, this survey method can also be delivered to a numerous respondents at the same time (Hair *et al.*, 2011).

3.5. Constructs Measurement

Table-1. Measurement of Variables.

Variables		Measure	Scale of Measurement
Personal Profile	Gender	Nominal	
	Age	Ordinal	
	Highest Education Completed	Nominal	
	Working Experience	Ordinal	
	The Time of Internet Usage during Working Hours	Ordinal	
Company Profile	Age of Firm	Ordinal	
	Category of Services Sector	Nominal	
	Occupational Status	Nominal	
Independent Variables	Attitudes	Interval	5-point Likert Scale
	Subjective Norms	Interval	5-point Likert Scale
	Perceived Behavioural Control	Interval	5-point Likert Scale
	Moral Norms	Interval	5-point Likert Scale
	External Locus of Control	Interval	5-point Likert Scale
Dependent Variable	Internet Abuse Intention among Employees of SMEs in the Services Sector	Interval	5-point Likert Scale

Table 1 shows the measurement of each variable contained in the questionnaire. 5-point Likert scale was employed in this study. 5-point Likert scale ranged from (1) "Strongly disagree" to (5) "Strongly agree". 5-point Likert scale is convenient for the respondents to view and choose based on the list of scale descriptors (Maringka, 2012).

4. DATA ANALYSIS

SAS Enterprise Guide 7.1 was used in this study to analyse the data collected from survey questionnaire.

4.1. Pilot Test

It is important to conduct the pilot test before distributing the questionnaires in a large number. Thabane *et al.* (2010) defined a pilot test as an investigation way to test the feasibility of procedures and methods that may be useful for the following large scale study. It is sufficient to examine the validity of survey if 20 respondents participate in the pilot test (Arain *et al.*, 2010). Hence, 20 target respondents were selected to conduct the pilot test and this took place at SMEs in Ipoh, Perak State. Table 2 below shows the reliability test result. It shows that the Cronbach's Alpha values of the variables fell within the range of 0.708978 to 0.908125. Consequently, we can conclude that our survey questionnaires had met the acceptable level of reliability test which is more than 0.7 to test the validity of a survey.

Table-2. Cronbach's Alpha Values of Pilot Test.

Variables	Number of Items	Cronbach's Alpha
Attitudes	4	0.781524
Subjective Norms	6	0.860152
Perceived Behavioural Control	4	0.763889
Moral Norms	4	0.708978
External Locus of Control	12	0.808045
Internet Abuse Intention	7	0.908125

Table-3. Summary of demographic profile.

Profile	Category	Frequency	Percent (%)
Gender	Female	226	56.50
	Male	174	43.50
Age	Below 20	82	20.50
	20-29	242	60.50
	30-39	42	10.50
	40 and above	34	8.50
Highest education completed	UPSR/PMR/SPR/SPM	23	5.75
	STPM	33	8.25
	Diploma	126	31.50
	Bachelor's Degree	209	52.25
	Master's Degree	9	2.25
Working experience	Up to 5	215	53.75
	6-10	99	24.75
	11-20	56	14.00
	More than 20	30	7.50
Time of internet usage	Up to 1 hour	150	37.50
	1-5 hours	227	56.75
	More than 5 hours	23	5.75
Age of firm	Less than 10	179	44.75
	10 or more	221	55.25
Category of service sector	Wholesale & retailer	56	14.00
	Food & beverages	27	6.75
	Transportation & storage	5	1.25
	Hotels & restaurants	38	9.50
	Professional & ICT services	118	29.50
	Private education & healthcare	82	20.50
	Entertainment & manufacturing services	74	18.50
Occupational Status	Managerial	7	1.75
	Non-managerial	393	98.25

5. DESCRIPTIVE ANALYSIS

5.1. Demographic Profile of the Respondents

Table 3 shows the demographic profile of the respondents. Overall, most of the respondents are females aged 20 to 29 with Bachelor's Degree qualification, who have working experience up to 5 years and are using the internet for 1 to 5 hours at work.

5.2. Central Tendencies Measurement of Constructs

Based on Table 4, the constructs have the mean values in the range of 2.29250 to 3.50500. The results indicate that the constructs are dispersed between disagree to agree. This table also lists out the standard deviations which delegate the dispersion of the data of every item. We can obtain the information that the lowest standard deviation is 0.84482 while the highest figure is 1.17176.

Table-4. Central Tendencies Measurement of Constructs.

Variables	Items	Mean	Standard Deviation
Attitudes	AT 1	2.50750	1.10135
	AT 2	2.49750	1.14160
	AT 3	2.69250	1.05865
	AT 4	2.37250	1.06846
Subjective Norms	SN 1	3.50500	1.01368
	SN 2	3.47000	0.99578
	SN 3	2.93250	1.03713
	SN 4	2.78000	0.95859
	SN 5	2.29250	0.84482
	SN 6	2.34000	0.93626
Perceived Behavioural Control	PBC 1	3.02250	1.09086
	PBC 2	2.55500	0.85663
	PBC 3	3.18750	1.14701
	PBC 4	3.19750	1.12546
Moral Norms	MN 1	2.69000	1.07087
	MN 2	2.37750	1.04053
	MN 3	2.61000	0.95927
	MN 4	2.63000	0.97235
External Locus of Control	ELOC 1	2.87000	1.04922
	ELOC 2	2.61250	0.94847
	ELOC 3	2.68750	1.01608
	ELOC 4	3.18000	1.02236
	ELOC 5	2.60750	1.00547
	ELOC 6	2.60250	0.93363
	ELOC 7	2.61750	0.96878
	ELOC 8	2.75250	1.02414
	ELOC 9	2.79250	1.04267
External Locus of Control	ELOC 10	2.82500	0.90078
	ELOC 11	2.58000	0.92777
	ELOC 12	2.61000	1.04673
Internet Abuse Intention	IAI 1	3.02000	1.17176
	IAI 2	3.29500	0.99773
	IAI 3	3.34500	0.98915
	IAI 4	2.98000	1.15453
	IAI 5	2.99500	1.13499
	IAI 6	2.67750	0.97513
	IAI 7	2.73500	0.95502

5.3. Normality and Reliability Test

The outcome of the variable's items based on the normality test and reliability test is shown in Table 5.

Table-5. Normality and reliability test results.

Variables	Items	Skewness	Kurtosis	Cronbach's Alpha
Attitudes	AT1	0.39946181	-0.5421384	0.768405
	AT2	0.57503342	-0.4366396	
	AT3	0.35910357	-0.4385287	
	AT4	0.6015685	-0.1606513	
Subjective Norms	SN1	-0.2820901	-0.6846571	0.863805
	SN2	-0.1616874	-0.6957375	
	SN3	-0.162499	-0.5601624	
	SN4	-0.1651653	-0.4561792	
	SN5	0.84482428	0.71372807	
	SN6	0.17654328	-0.6061998	
Perceived Behavioural Control	PBC1	-0.0330911	-0.7244839	0.716514
	PBC2	0.68169843	0.65920146	
	PBC3	-0.2118418	-0.7017688	
	PBC4	-0.182927	-0.656897	
Moral Norms	MN1	0.31063654	-0.4297022	0.873437
	MN2	0.7249599	0.11548903	
	MN3	0.30048894	-0.0422283	
	MN4	0.43563958	0.15925461	
External Locus of Control	ELOC1	-0.0781101	-0.6068377	0.917609
	ELOC2	0.01044776	-0.733672	
	ELOC3	-0.0350603	-0.8563913	
	ELOC4	-0.6212038	-0.5395088	
	ELOC5	0.16395194	-0.6465681	
	ELOC6	0.10793057	-0.4686707	
	ELOC7	0.09723095	-0.5115234	
	ELOC8	0.06049548	-0.5776493	
	ELOC9	0.05021973	-0.3944218	
	ELOC10	-0.2477434	0.40046885	
	ELOC11	-0.1502351	-0.8179248	
	ELOC12	0.22667449	-0.4056079	
Internet Abuse Intention	IAI1	0.00802593	-0.7469387	0.922997
	IAI2	0.00562481	-0.7659748	
	IAI3	-0.0012469	-0.8587949	
	IAI4	0.05878287	-0.7463937	
	IAI5	0.00983694	-0.6891257	
	IAI6	0.04749629	-0.7308225	
	IAI7	-0.0036081	-0.7612842	

Past studies have suggested that the satisfactory range of skewness and kurtosis in every variable is between ± 1 (Byrne, 2001; Fotopoulos and Psomas, 2009). The skewness values range of our research is between -0.6212038 to 0.84482428 whereas the kurtosis values range is between -0.8587949 to 0.71372807. The absolute value for skewness and kurtosis test is ± 1 . Hence, all the variables in this research have passed the normality test.

This study has employed reliability test for each variable. According to Webb *et al.* (2006) variables are treated as reliable if the Cronbach's Alpha has reached a value of 0.7. Therefore, the assumptions of reliability for all the items in table 5 are considered as reliable.

5.4. Pearson's Correlation Analysis

Table 6 shows that the correlation values between the independent variables show a positive correlation ranging from 0.11364 to 0.42751. The dependent variable has a positive relationship with all the independent variables which ranged from 0.29019 to 0.61047. Since none of the correlation values are higher than 0.90, no multicollinearity problem has been revealed in this research (Hair *et al.*, 2009). Moreover, significant relationships exist between the variables as all the variables have p-values that are less than 0.05.

Table-6. Pearson Correlation Coefficients.

Variables	AT	SN	PBC	MN	ELOC	IAI
AT	1.00000					
SN	0.20041					
	<.0001					
PBC	0.15042	0.21417				
	0.0026	<.0001				
MN	0.16382	0.42751	0.11364			
	0.0010	<.0001	0.0230			
ELOC	0.20124	0.39967	0.20757	0.24381		
	<.0001	<.0001	<.0001	<.0001		
IAI	0.46626	0.60904	0.29019	0.61047	0.53900	1.00000
	<.0001	<.0001	<.0001	<.0001	<.0001	

5.5. Multiple Linear Regression

R² value is presented in table 7 with a value of 0.6932. This signifies that five factors adopted in this study can explain about 69.32% of the changes in the intention of abusing internet among employee and the other 30.68% is comprised of other variables that are not included in this research.

Table-7. Model summary.

Model	R ²	Adjusted R ²	Std. error of the estimate
1	0.6932	0.6893	0.48760

As shown in table 8, the F-value demonstrates a value of 178.03 with the significance level of <0.001 which is greater than the value obtained from the F-table, 2.175. Large F-value indicates that the model employed fits this research. Furthermore, p-value with a figure less than 0.05 indicates that at least one of the five independent variables can be used to explain and model the dependent variable. As a conclusion, the relationship between all the five factors and IAI (DV) in this research study is significant.

Table-8. ANOVA results.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	211.63346	5	42.32669	178.03	<.0001
Residual	93.67465	394	0.23775		
Total	305.30811	399			

Table 9 shows that AT (p < 0.0001), SN (p < 0.0001), PBC (p = 0.0015), MN (p < 0.0001) and ELOC (p < 0.0001) have a significant relationship with internet abuse intention. All the independent variables have an impact to influence the internet abuse intention as their p-value is less than 0.05. These results have confirmed that all the hypotheses are supported. The MLR equation for the model is formulated below:

$$IAI = -0.81243 + 0.29616(AT) + 0.31218(SN) + 0.10413(PBC) + 0.38088(MN) + 0.32241(ELOC)$$

Table-9. Multiple linear regression analysis results.

Unstandardized Coefficients								Supported/Not supported
Model	Par. Est	Std. Est	t	Sig.	Tolerance	Var.Inf.	Hypo.	
Intercept	-0.81243	0.14186	-5.73	<.0001	-	0		
AT	0.29616	0.03018	9.81	<.0001	0.92828	1.07726	H ₁	Supported
SN	0.31218	0.03895	8.02	<.0001	0.70698	1.41447	H ₂	Supported
PBC	0.10413	0.03248	3.21	0.0015	0.92781	1.07780	H ₃	Supported
MN	0.38088	0.03156	12.07	<.0001	0.80602	1.24066	H ₄	Supported
ELOC	0.32241	0.03781	8.53	<.0001	0.80783	1.23789	H ₅	Supported

6. DISCUSSION, CONCLUSION AND IMPLICATIONS

6.1. Discussion of Major Findings

The results show that attitudes, subjective norms, perceived behavioural control, external locus of control and immoral norms are positively related to internet abuse intention. Attitudes achieved a p-value of <0.0001 which illustrates attitudes is positively related to the intention of abusing the internet among employees of SMEs in the services sector in Malaysia. The results statistically prove that there is a significant relationship between attitudes and internet abuse intention since the p-value is below 0.05. According to Rosli *et al.* (2015) an undesirable attitude led by emotional instability, introversion and non-conscientious are significantly correlated with internet abuse intention. In accordance to the study of Liberman *et al.* (2011) attitudes towards internet abuse behaviours are positively related to internet abuse. In addition, past studies have also determined that involvement, beliefs and commitment as several aspects of attitudes can be a strong determinant to explain the willingness of employees to commit an act of computer abuse (Lee and Lee, 2002).

Subjective norms show a positive relationship and significant impact on the internet abuse intention towards the employees of SMEs in the services sector of Malaysia. The result of the p-value for this variable is less than 0.0001. This implies that the internet abuse intention is affected by subjective norms of the respondents since the p-value is less than 0.05. Generally, the higher an individual's subjective norm is, the greater the internet abuse intention. The result generated by this study conforms to the researches by Moody and Siponen (2013) and Henle *et al.* (2010). Moody and Siponen (2013) results showed that the personal self-concept is important for the intention of internet abuse, and the self-concept is mostly influenced by the supervisor and peer culture. Moreover, Henle *et al.* (2010) have found that subjective norms are one of the causes for organizational misbehaviour, including time theft.

Perceived behavioural control (PBC) as one of the independent variables in our research also satisfied the requirement of p-value < 0.05 . Thus, the result shows that PBC has a positive relationship with IAI among employees of services sector in Malaysia. However, it is the highest p-value figure comparable to other variables due to the p-value figure for other independent variables are $<.0001$. The findings for this variable are aligned with Liao *et al.* (2010) which indicates that the more the user comprehends the mechanisms of internet abuse, the higher probability that the user gets the thoughts to internet abuse. Research by Taneja (2006) also established that this variable had a significant relationship towards internet abuse intention.

In the context of this study, Immoral norm has a positive and significant relationship with IAI. The p-value generated from the MLR analysis has shown a value of $<.0001$ which is below 0.05. This illustrates the significant relationship between the MN and the intention to internet abuse by the employees of services sector in Malaysia. Generally, the greater the MN of employees, the lower the IAI. Several past studies can back this result. In the study of Taneja (2006) it has been found that MN of user has a significant effect on the intention of usage of information system (IS) assets adversely. According to the research done by Godin *et al.* (2005) MN has an important impact on whether people endorse their intentions. In another study, MN has been proved to have a significant impact on the intention of knowledge sharing (Huang and Chen, 2015).

There is a significant relationship between ELOC and the IAI among the employees of services sector in Malaysia. The p-value generated from the MLR analysis shows a value of $<.0001$ which is lower than 0.05. This indicates that the hypothesis is supported and it means ELOC has a positive relationship with IAI. The greater the ELOC of employees, the higher the IAI among employees of services sector in Malaysia. Our result is supported by the study of Blanchard and Henle (2008) which proved that employees with high ELOC will have higher chance of abusing internet as they believed that the probability of getting caught on the action of internet abuse action during working hours was purely by chance or because they were unlucky from the employees' perspective. Moreover, past researchers also concluded that ELOC will influence employees' internet addictions and finally lead to internet abuse (Chen *et al.*, 2008). Bellamy and Hanewicz (2002) did a similar study and found that ELOC is related to an increased risk of internet abuse.

6.2. Theoretical Implications

Theoretically, this research examined the importance of Modified Theory of Planned Behaviour (TPB) model in finding out the factors that will contribute to Internet Abuse Intention among employees of SMEs in the services sector in Malaysia. The proposed conceptual framework focused on how the five independent variables, Attitudes, Subjective Norms, Perceived Behavioural Control, Moral Norms, and External Locus of Control could affect the Internet Abuse Intention. Undoubtedly, the Modified TPB model is the valid theory in explaining the Internet Abuse Intention of the employees of SMEs in Malaysia. Consequently, the Modified TPB model is suggested to the future researchers in conducting any research relevant to Internet Abuse Intention.

According to [Hasbullah et al. \(2014\)](#) the existing TPB model (Attitudes, Subjective Norms, Perceived Behavioural Control) lacks external factors. Hence, this research has included the additional variables, moral norms (internal variable) and external locus of control (external variable) to enhance the TPB model.

6.3. Practical Implication

Firstly, many of the past studies have analysed the internet abuse intention among adolescents, generation X and generation Y but not in the workplace. Therefore, here is a study about internet abuse intention in the workplace and it had narrowed down the scope into only on SMEs in the services sector so that this research is more specific to this target respondents.

Internet abuse intention among employees had created serious productivity matters and legal issues towards the organizations. From the consequences of this research, employers will have a clearer guideline to handle the occurrence of employee's internet abuse intention. On the other hand, employers will also able to manage this issue in a proper and efficient way. By understanding the factors of internet abuse intention among employees, employers also can plan appropriate measures to deal with this issue.

6.4. Limitations and Recommendations for Future Research

Several limitations have been noticed in this study. Firstly, our research focused on the services sector and four States in Malaysia only due to the cost and time saving reasons. There are many sectors such as construction and manufacturing sectors in Malaysia which have not been considered. Besides that, Malaysia consists of thirteen States and only the employees in four States were covered in our research. It is suggested that future researchers study the internet abuse intention among employees in other sectors and other States in Malaysia, as employees from different sectors and different States may show different internet abuse intention.

In addition, our study has generally focused on all the micro, small and medium-sized SMEs. Future researchers are suggested to carry out their study by specializing on the size of SMEs selected. Employees in different sizes of SMEs may behave differently for the intention of abusing internet in the workplace. Besides, the targeted respondents in this study were mainly located in the middle and south Malaysia. It is strongly suggested that similar research be conducted to investigate the factors of internet abuse intention of employees in north Malaysia as they might have a different mindset for internet abuse compared to employees of the middle and south Malaysia.

Moreover, self-administered survey questionnaire method has been adopted to collect all the data for this research. It is a self-report method as target respondents are assumed to respond to the questionnaires accurately. However, there is a possibility that people might answer the questionnaires incorrectly. Besides, collecting back the self-administered survey questionnaire may be time-consuming and there is also a chance that researchers cannot collect back their survey questionnaire. The face-to-face interview method is recommended to collect reliable and accurate data as interviewers are allowed to take advantage of social or nonverbal cues to gain additional information from the interview ([Emans, 1986](#)).

Also, a cross-sectional study was applied to this research due to the insufficiency of research time and low-cost budget. Cross-sectional study is adopted when all the measurements are acquired at a single point in time (Sedgwick, 2014). The result can be irrelevant in the future as the information obtained from this research may be outdated. Future researchers can adopt longitudinal study to investigate the similar issue as the research can be carried out in a longer period instead of just focusing on a single point in time. Hedeker and Gibbons (2006) commented that information can be provided with more detail by applying longitudinal study.

7. CONCLUSION

In brief, this research has achieved and fulfilled all of its objectives and research questions. It proved that the relationship between all variables are statistically significant and all of the proposed hypotheses have been accepted. This research also concludes that all of the independent variables (i.e AT, SN, PBC, MN and ELOC) have significant influence on the internet abuse intention among employees of SMEs in the services sector in Malaysia.

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